HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army POL (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

REMOVAL

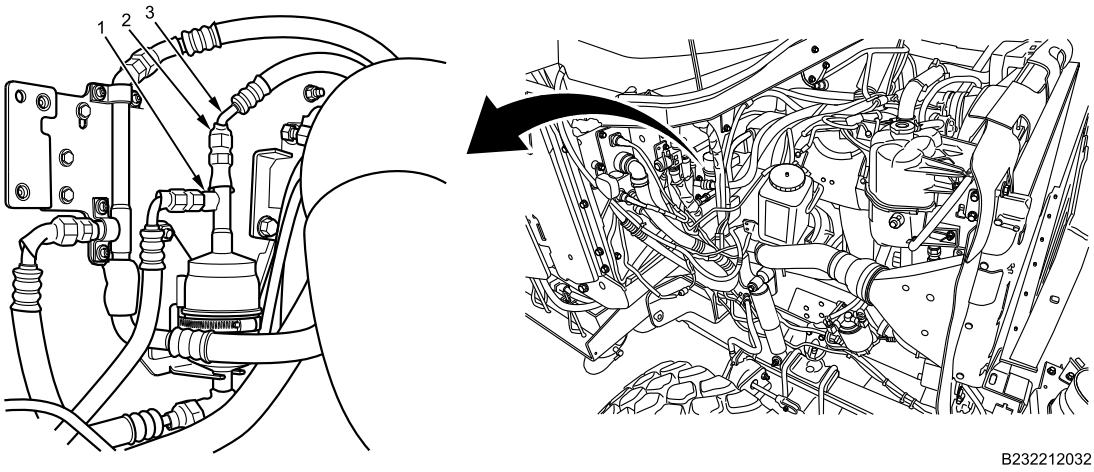


Figure 1. Left Condenser Outlet Hose Fitting at HVAC Filter.

1. Remove heatshrink tubing (Figure 1, Item 2) from condenser outlet hose (Figure 1, Item 3) at HVAC filter tee (Figure 1, Item 1).
2. Remove and discard cable lock straps from condenser outlet hose (Figure 1, Item 3).

NOTE

Avoid spilling PAG oil when disconnecting condenser outlet hose.

3. Disconnect condenser outlet hose (Figure 1, Item 3) from HVAC filter tee (Figure 1, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

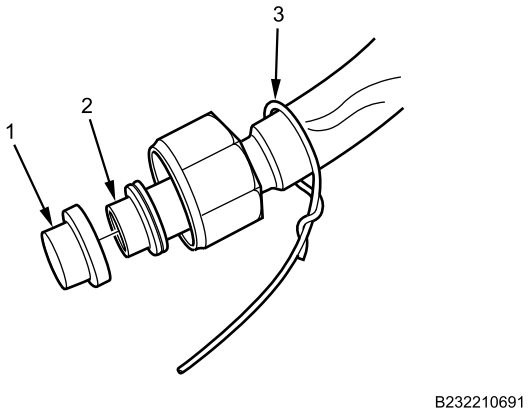


Figure 2. Condenser Outlet Hose.

CAUTION

Ensure cap is securely taped on tee end of condenser outlet hose to avoid contaminating condenser line. Failure to comply may result in damage to HVAC components and equipment.

4. Using tape, securely attach cap (Figure 2, Item 1) to HVAC filter tee end of condenser outlet hose (Figure 2, Item 2).
5. Securely attach wire (Figure 2, Item 3) to end of condenser outlet hose.

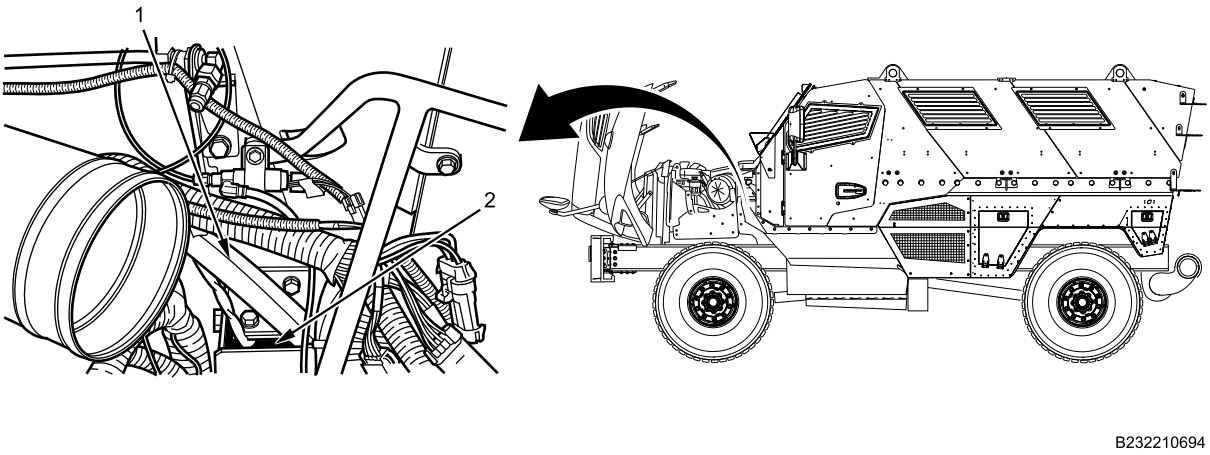


Figure 3. Left Front Opening to Cab Double-Floor.

6. Position HVAC filter tee end of condenser outlet hose (Figure 3, Item 1) near left front cab double-floor compartment opening (Figure 3, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

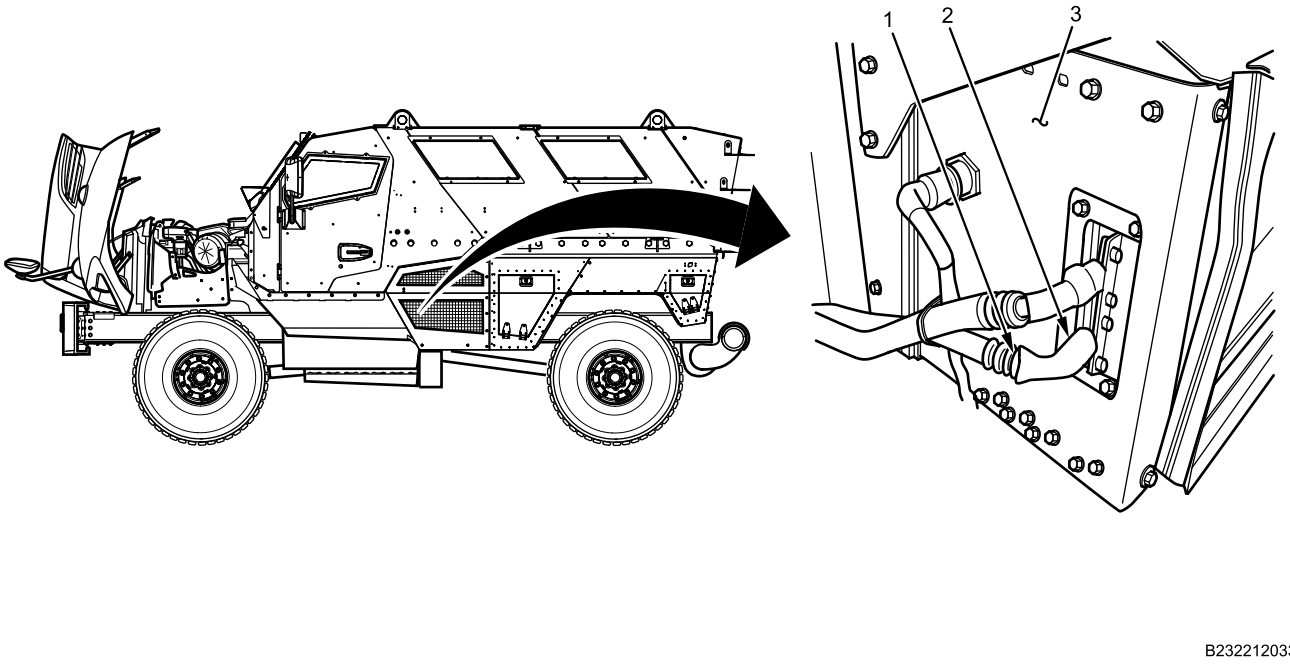


Figure 4. Left Condenser Outlet Hose Fitting.

7. Remove heatshrink tubing (Figure 4, Item 2) from condenser outlet hose (Figure 4, Item 1) at condenser (Figure 4, Item 3).

NOTE

Avoid spilling PAG oil when removing condenser outlet hose.

8. Disconnect condenser outlet hose (Figure 4, Item 1) from condenser (Figure 4, Item 3) and tape end of condenser outlet hose.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

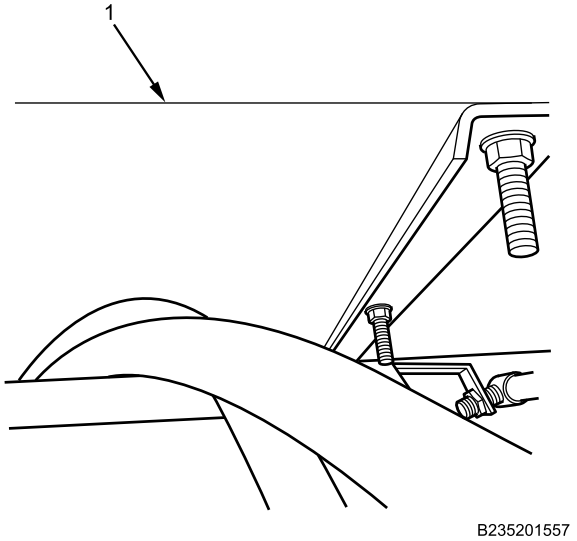


Figure 5. Left Rear Opening to Cab Double-Floor.

NOTE

Do not remove wire from or pull wire completely through cab double-floor compartment. Wire must remain in vehicle to aid in installation of condenser outlet hose.

9. Pull condenser outlet hose (Figure 4, Item 1) towards condenser (Figure 4, Item 3) and from under floor (Figure 5, Item 1) until condenser outlet hose is removed from vehicle.

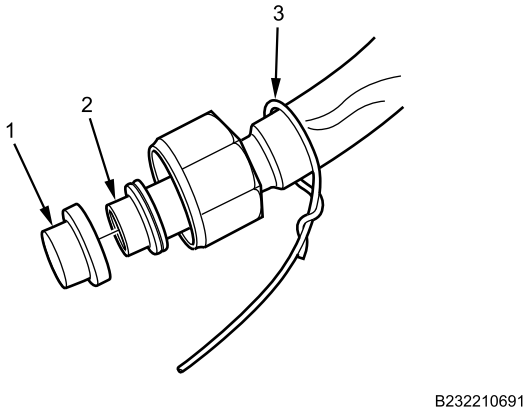


Figure 6. Condenser Outlet Hose.

10. Disconnect wire (Figure 6, Item 3) from HVAC filter tee end of condenser outlet hose (Figure 6, Item 2).
11. Remove tape and cap (Figure 6, Item 1) from HVAC filter tee end of condenser outlet hose (Figure 6, Item 2).
12. Remove tape from condenser end of condenser outlet hose (Figure 6, Item 2).
13. Drain PAG oil from condenser outlet hose (Figure 6, Item 2) into liquid measure.
14. Record amount of PAG oil drained from condenser outlet hose and discard PAG oil.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

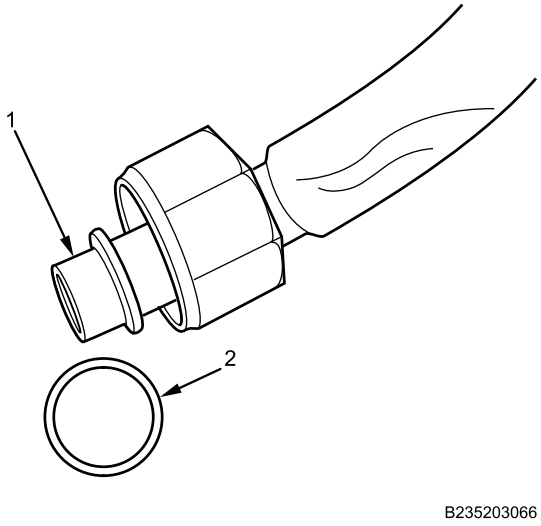


Figure 7. Condenser Hose.

1. Remove O-ring (Figure 7, Item 2) from condenser end of condenser outlet hose (Figure 7, Item 1). Discard O-ring.
2. Coat new O-ring (Figure 7, Item 2) with PAG oil and install on condenser end of condenser outlet hose (Figure 7, Item 1).

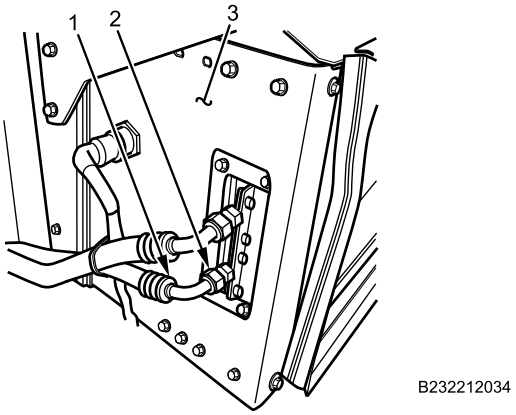


Figure 8. Condenser Hose.

3. Install condenser outlet hose (Figure 8, Item 1) on condenser (Figure 8, Item 3) and finger-tighten condenser outlet hose fitting (Figure 8, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

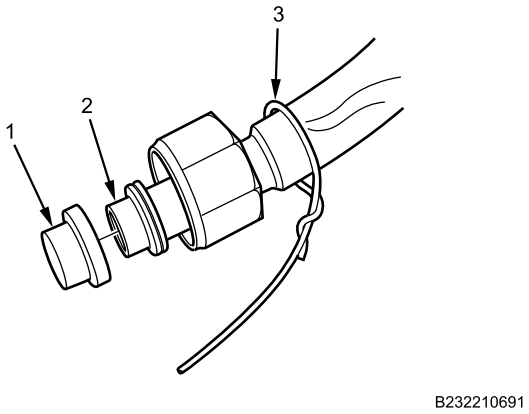


Figure 9. Condenser Hose.

CAUTION

Ensure cap is securely taped on tee end of condenser outlet hose to avoid contaminating condenser lines. Failure to comply may result in damage to HVAC components and equipment.

4. Using tape, securely attach cap (Figure 9, Item 1) to HVAC filter tee end of condenser outlet hose (Figure 9, Item 2).
5. Securely attach wire (Figure 9, Item 3) to end of condenser outlet hose.

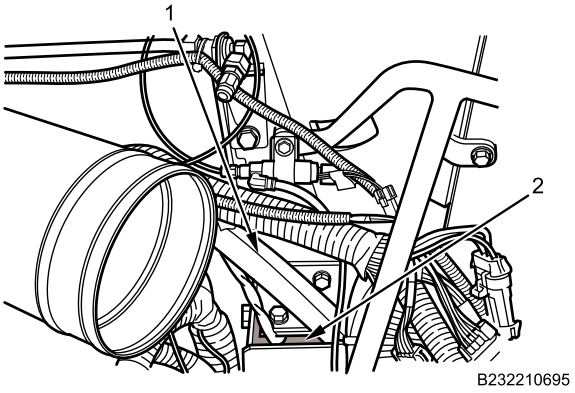


Figure 10. Condenser Hose.

6. From engine compartment, pull wire attached to condenser outlet hose (Figure 10, Item 1) through cab double-floor rear opening (Figure 10, Item 2) until slack in condenser outlet hose is removed.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

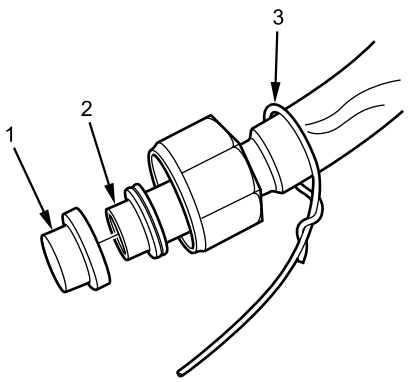


Figure 11. Condenser Hose.

7. Remove tape and cap (Figure 11, Item 1) from HVAC filter end of condenser outlet hose (Figure 11, Item 2).
8. Disconnect wire (Figure 11, Item 3) and position end of condenser outlet hose (Figure 11, Item 3) near HVAC filter tee fitting.

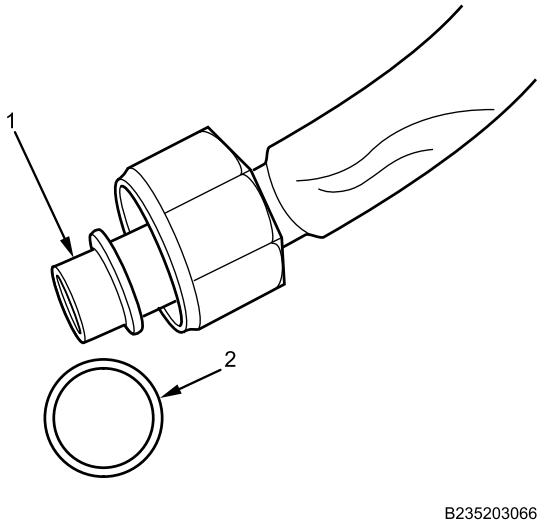


Figure 12. Condenser Hose.

9. Remove and discard O-ring from HVAC filter tee end of condenser outlet hose (Figure 12, Item 1).
10. Add clean PAG oil, equal to amount drained, to HVAC filter tee end of condenser outlet hose (Figure 12, Item 1).
11. Coat new O-ring (Figure 12, Item 2) with PAG oil and install on HVAC filter tee end of condenser outlet hose (Figure 12, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

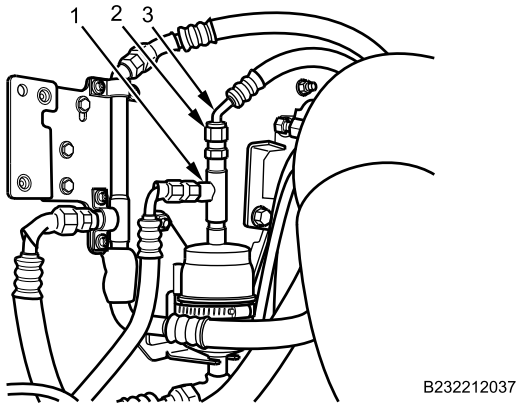


Figure 13. Left HVAC Condenser Hose at Tee.

12. Connect condenser outlet hose (Figure 13, Item 3) to HVAC filter tee (Figure 13, Item 1) and finger-tighten condenser outlet hose fitting (Figure 13, Item 2).
13. Tighten both condenser inlet hose fittings securely.
14. Install new cable lock straps where removed.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install 3-way valve (if required) (WP 0727).
2. Evacuate and recharge HVAC system (WP 0707).
3. Install air cleaner housing (WP 0257).
4. Install air conditioning A/C condenser panel (WP 0672).
5. Install exterior fuel tank armor door (WP 0605).
6. Close and secure engine hood (TM 9-2355-106-10).
7. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Measure, liquid, 2 qt (WP 0795, Item 71)
Gloves, rubber (WP 0795, Item 38)
Cap and plug set (WP 0795, Item 23)

Materials/Parts
Faceshield, industrial (WP 0794, Item 16)
Lubricating oil (WP 0794, Item 31)
Tape (WP 0794, Item 51)
Wire (WP 0794, Item 57)
O-ring - (2) (WP 0796, Item 37)
Cable lock strap - (3) (WP 0796, Item 124)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
HVAC system evacuated and discharged (WP 0707)
Air Conditioning A/C condenser panel removed (WP 0672)
Right side engine armor panel removed (WP 0599)
Exterior battery box armor door removed (WP 0604)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



The temperature of liquid refrigerant is -20°F (-29°C). Wear full faceshield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army POL (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

REMOVAL

NOTE

Record location of cable lock straps before removing condenser outlet hose to aid in installation.

1. Remove heatshrink tubing (Figure 1, Item 2) from condenser outlet hose (Figure 1, Item 1) at condenser (Figure 1, Item 3). Remove and discard cable lock straps as necessary.

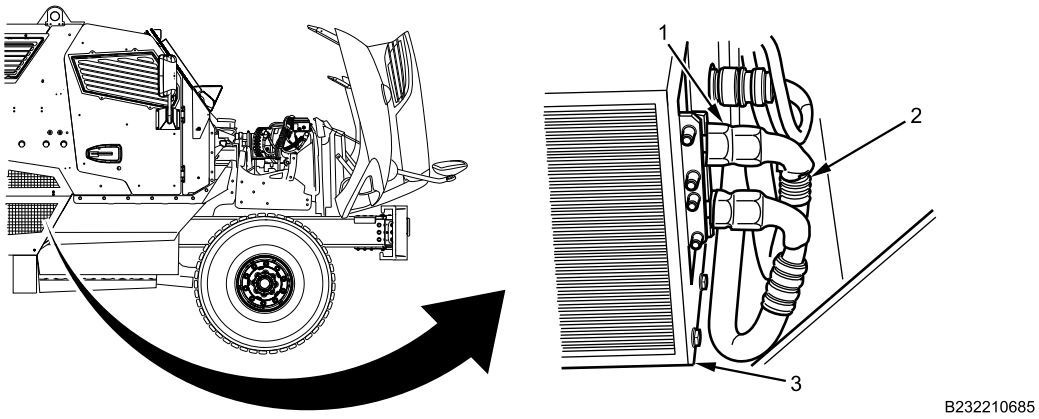


Figure 1. Right HVAC Condenser Hose Fittings.

2. Disconnect condenser outlet hose (Figure 1, Item 1) from condenser.
3. Drain PAG oil from condenser outlet hose (Figure 1, Item 1) into liquid measure.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

4. Remove heatshrink tubing (Figure 2, Item 1) from condenser outlet hose (Figure 2, Item 3) at tee (Figure 2, Item 2).

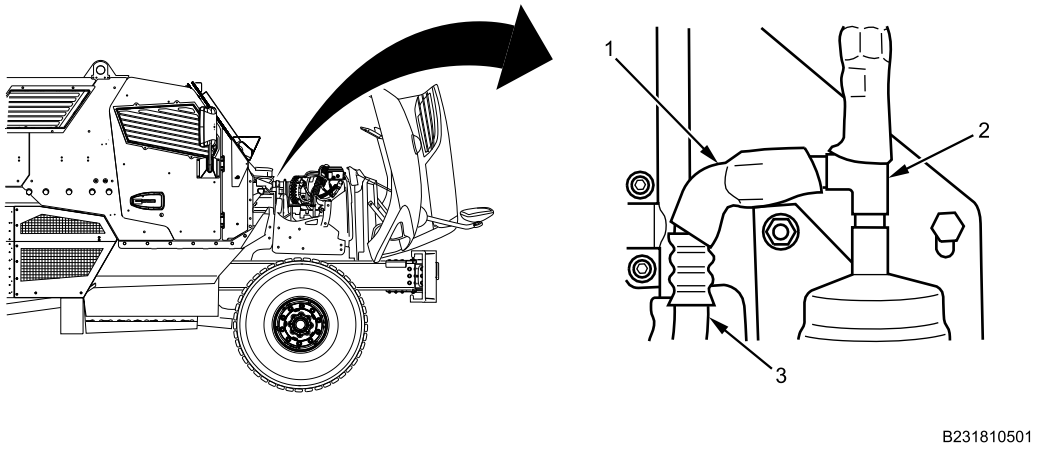


Figure 2. Right HVAC Condenser Hose at Filter.

5. Disconnect condenser outlet hose (Figure 2, Item 3) from tee (Figure 2, Item 2).
6. Remove and discard two O-rings from condenser outlet hose.
7. Cap and plug both ends of condenser outlet hose.

CAUTION

Ensure caps are taped onto ends of condenser outlet hose securely. Failure to comply may allow condenser outlet hose to become contaminated and result in damage to equipment.

8. Securely connect end of mechanics wire at condenser to front end of condenser outlet hose (Figure 2, Item 3) at engine compartment.
9. From end of condenser outlet hose at condenser, pull condenser outlet hose and wire into cab double-floor engine compartment opening (Figure 3, Item 1) and out rear opening (Figure 4, Item 1) toward condenser.

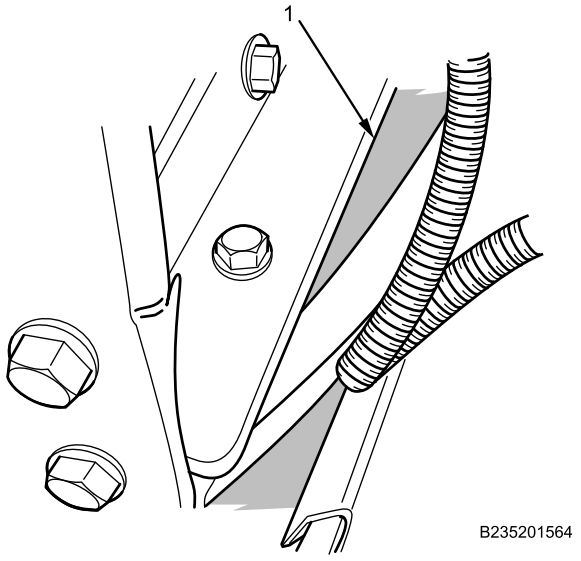


Figure 3. Right Front Opening to Cab Double-Floor.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

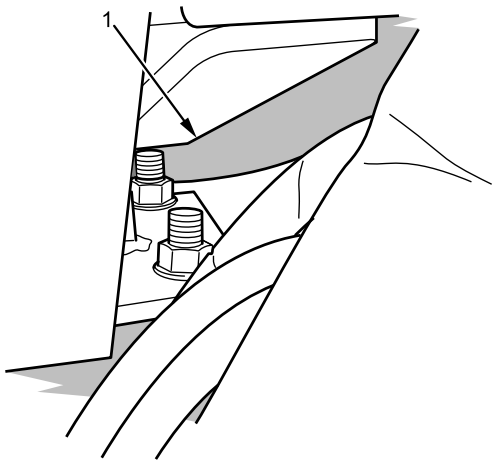


Figure 4. Right Rear Opening to Cab Double-Floor.

10. Disconnect mechanic's wire from condenser outlet hose.
11. Drain remaining oil from condenser outlet hose into measured container.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

CAUTION

Ensure caps are taped onto ends of condenser outlet hose securely. Failure to comply may allow condenser outlet hose to become contaminated and result in damage to equipment.

1. Securely connect end of mechanic's wire at condenser to front end of condenser outlet hose.
2. From engine compartment, pull wire and condenser outlet hose into cab double-floor rear opening (Figure 5, Item 1) and out of engine compartment opening (Figure 6, Item 1).

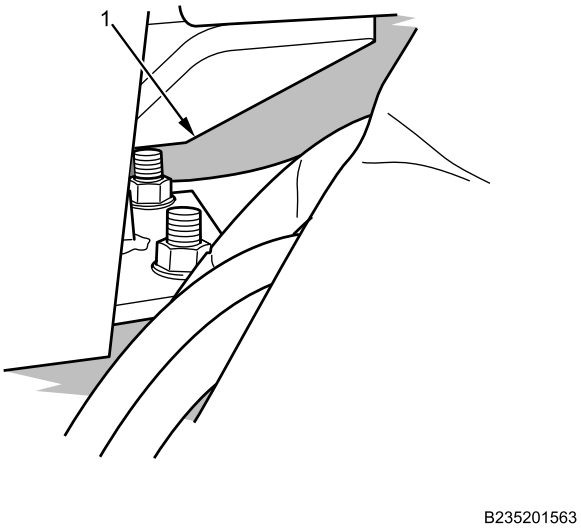


Figure 5. Right Rear Opening to Cab Double-Floor.

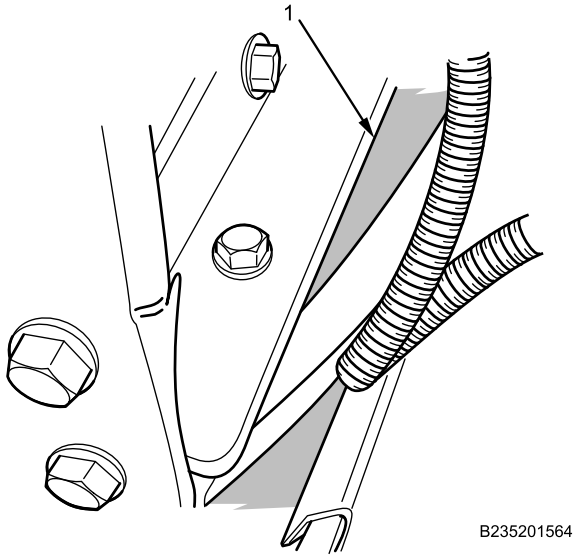


Figure 6. Left Front Opening to Cab Double-Floor.

3. Disconnect mechanic's wire from condenser outlet hose.
4. Remove cap and plug from both ends of condenser outlet hose.
5. Coat new O-rings with PAG oil and install one O-ring on each end of condenser outlet hose.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

6. Connect condenser outlet hose (Figure 7, Item 2) to condenser (Figure 7, Item 3) and finger-tighten (Figure 7, Item 1).

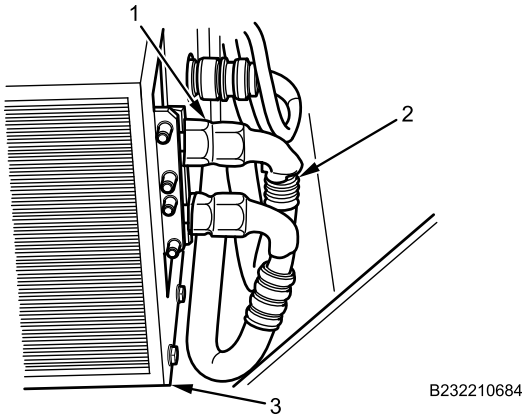


Figure 7. Right HVAC Condenser Hose Fittings.

7. Add clean PAG oil, equal to amount drained from condenser outlet hose (Figure 7, Item 2), to other end of condenser outlet hose.
8. Connect condenser outlet hose (Figure 8, Item 3) to tee (Figure 8, Item 2) and finger tighten nut (Figure 8, Item 1).

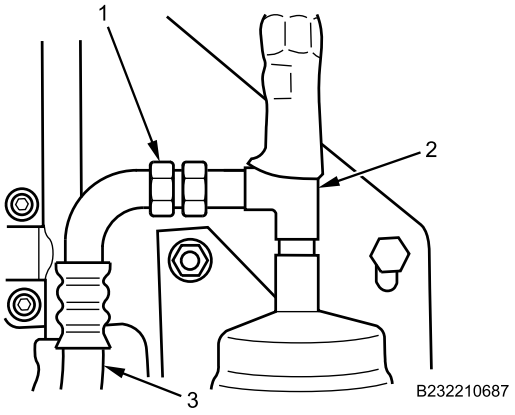


Figure 8. Right HVAC Condenser Hose at Tee.

9. Tighten condenser outlet hose fittings securely.
10. Install new cable lock straps where removed.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT-SIDE CONDENSER OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Evacuate and recharge HVAC system (WP 0707).
2. Install Air Conditioning A/C condenser panel (WP 0672).
3. Install right side engine armor panel (WP 0599).
4. Install battery box armor door (WP 0604).
5. Close and secure engine hood (TM 9-2355-106-10).
6. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Gloves, rubber (WP 0795, Item 38)
Measure, liquid, 2 qt (WP 0795, Item 71)

Materials/Parts
Faceshield, industrial (WP 0794, Item 16)
Lubricating oil (WP 0794, Item 31)
Tubing (WP 0794, Item 56)
O-ring - (2) (WP 0796, Item 36)
Cable lock strap - (6) (WP 0796, Item 134)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
HVAC system evacuated and discharged (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



The temperature of liquid refrigerant is -20°F (-29°C). Wear full faceshield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army Petroleum, Oil, and Lubricants (POL) (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

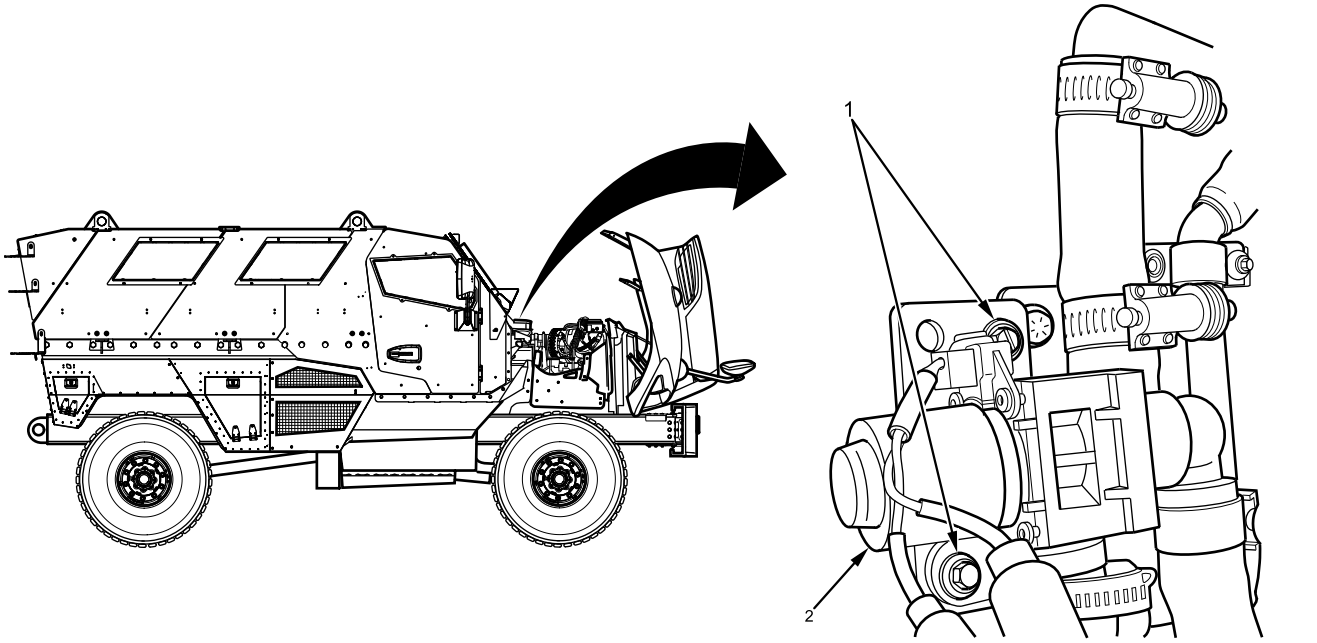
Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

REMOVAL

1. Remove two screws and flat washers (Figure 1, Item 1) and position 3-way valve (Figure 1, Item 2) aside.



B235210595

Figure 1. 3-Way Valve.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

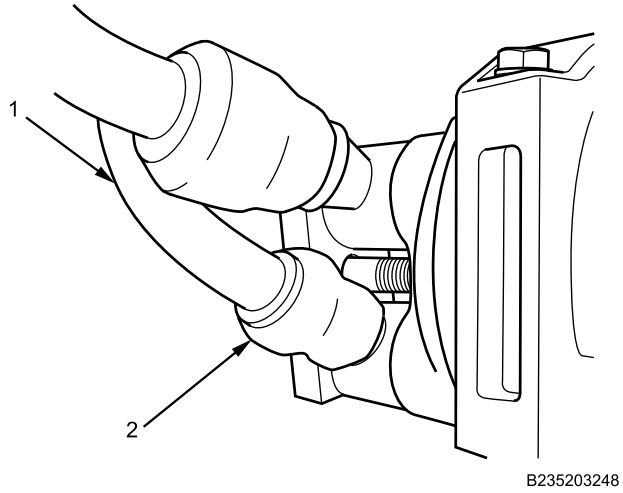


Figure 2. Compressor Discharge Hose Heat Shrink Tubing.

2. Remove heat shrink tubing (Figure 2, Item 2) from compressor discharger hose (Figure 2, Item 1) and outlet.

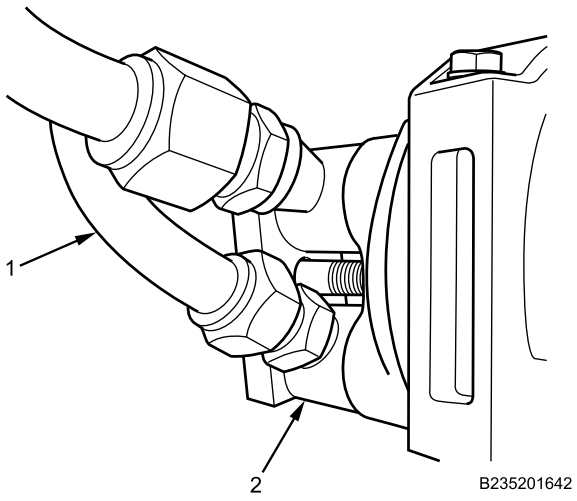


Figure 3. HVAC Compressor Discharge Hose at Compressor.

3. Disconnect HVAC compressor discharge hose (Figure 3, Item 1) from HVAC compressor outlet (Figure 3, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

4. Remove heatshrink tubing (Figure 4, Item 3) from compressor discharge hose (Figure 4, Item 2) at t-fitting (Figure 4, Item 1).

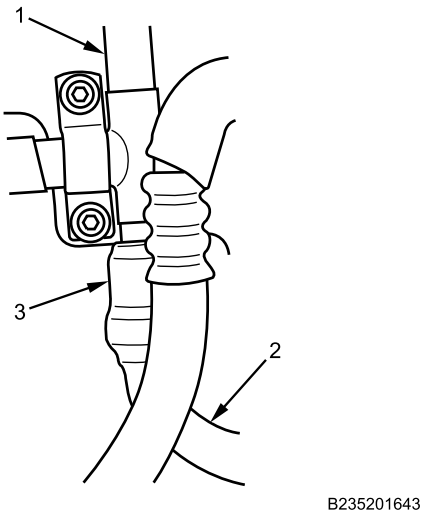


Figure 4. HVAC Compressor Discharge Hose at T-fitting.

5. Remove HVAC compressor discharge hose (Figure 4, Item 2). Avoid spilling PAG oil. Remove and discard cable lock straps as needed.
6. Drain PAG oil from compressor discharge hose (Figure 4, Item 2) into liquid measure.
7. Remove O-rings from HVAC compressor discharge hose (Figure 4, Item 2). Discard O-rings.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install heat shrink tubing on each end of compressor discharge hose.
2. Coat new O-rings with PAG oil and install one O-ring on each end of HVAC compressor discharge hose.

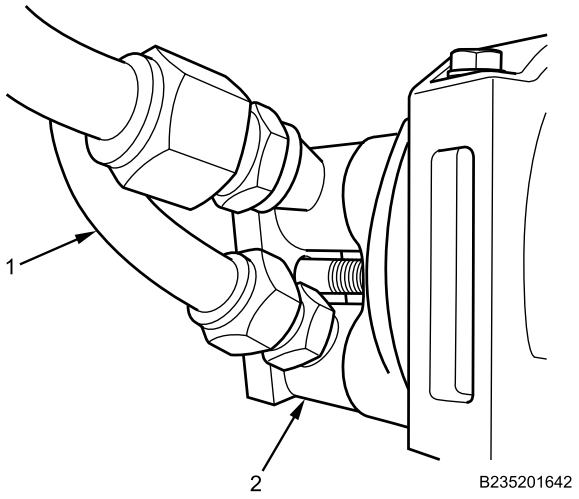


Figure 5. HVAC Compressor Discharge Hose at Compressor.

3. Connect HVAC compressor discharge hose (Figure 5, Item 1) to HVAC compressor outlet (Figure 5, Item 2) and finger-tighten.
4. Add clean PAG oil, equal to amount drained from compressor discharge hose, to end of compressor discharge hose at tee.

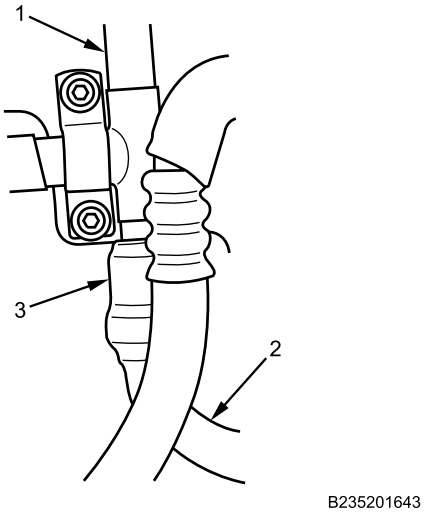


Figure 6. HVAC Compressor Discharge Hose at T-fitting.

5. Connect HVAC compressor discharge hose (Figure 6, Item 2) to t-fitting (Figure 6, Item 1) and finger-tighten.
6. Tighten HVAC compressor discharge hose fittings securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Never use open flame to apply heat to heatshrink tubing. Allow heatshrink tubing to cool before handling. Failure to comply may result in serious injury to personnel.

7. Apply heat to heat shrink tubing (Figure 7, Item 2) at compressor discharge outlet until secure over hose (Figure 7, Item 1) and fitting.

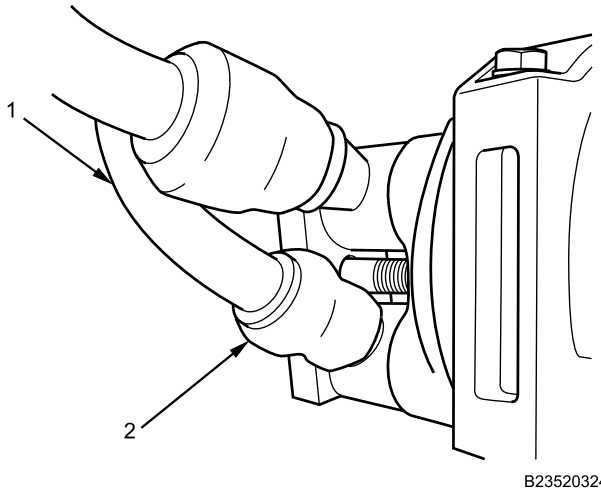


Figure 7. Compressor Discharge Outlet Heat Shrink Tubing

8. Apply heat to heat shrink tubing (Figure 8, Item 3) at tee until secure over hose (Figure 8, Item 2) and fitting.

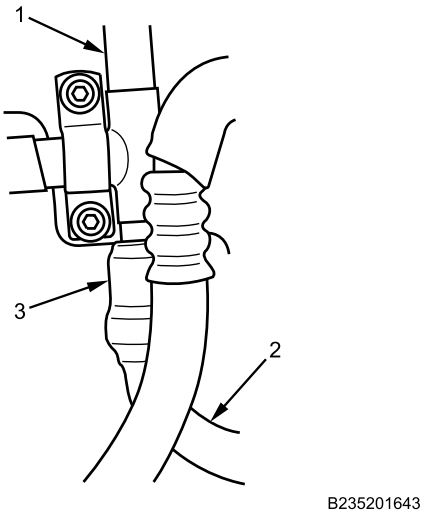


Figure 8. HVAC Compressor Discharge Hose at Tee.

9. Install new cable lock straps where removed.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) COMPRESSOR DISCHARGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

10. Install 3-way valve (Figure 9, Item 2) with two screws and flat washers (Figure 9, Item 1) and tighten securely.

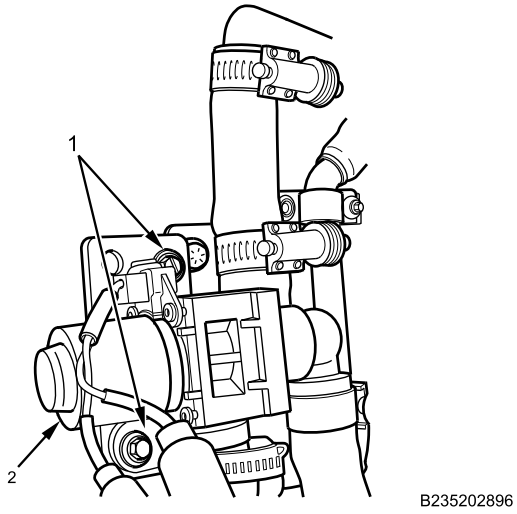


Figure 9. 3-Way Valve.

11. Install all cable lock straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Evacuate and recharge HVAC system (WP 0707).
2. Close and secure engine hood (TM 9-2355-106-10).
3. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) SERVICE PORT/SCHRADER VALVE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
Refrigeration Ordnance Service Tool Kit (WP 0795, Item 85)
Gloves, rubber (WP 0795, Item 38)

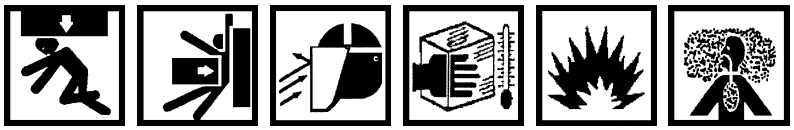
Materials/Parts
Faceshield, industrial (WP 0794, Item 16)
Lubricating oil (WP 0794, Item 31)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
HVAC system refrigerant recovered (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) SERVICE PORT/SCHRADER VALVE REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army POL (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) SERVICE PORT/SCHRADER VALVE REMOVAL AND INSTALLATION - (CONTINUED)

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army POL (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

REMOVAL

WARNING

Do not remove Schrader valve if HVAC system is charged with refrigerant. Removing Schrader valve in charged HVAC systems will cause a sudden release of high pressure refrigerant. Failure to comply may result in damage to equipment and serious injury or death to personnel.

NOTE

This procedure applies to either high-side or low-side service ports.

1. Remove protective cap (Figure 1, Item 3) from service port (Figure 1, Item 1).

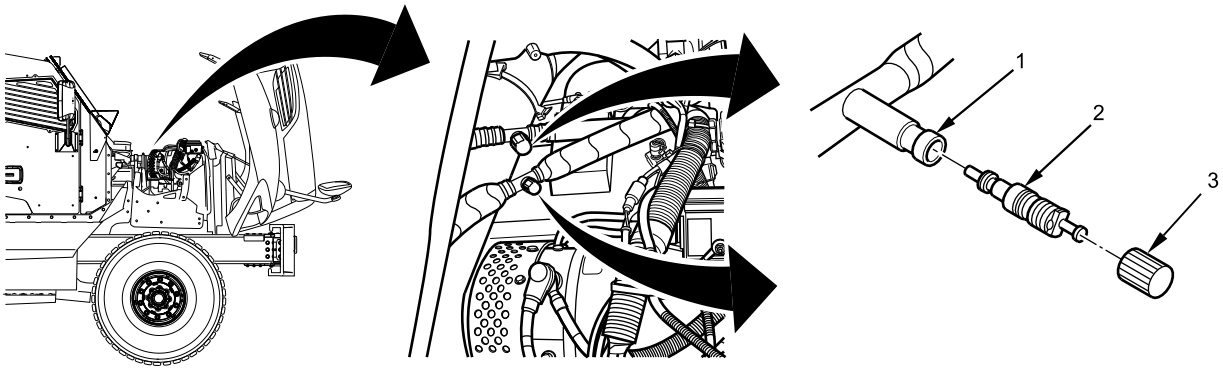


Figure 1. HVAC Service Port.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) SERVICE PORT/SCHRADER VALVE REMOVAL AND INSTALLATION - (CONTINUED)

2. Using core removal tool, turn Schrader valve core (Figure 1, Item 2) counterclockwise and remove from service port (Figure 1, Item 1).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) SERVICE PORT/SCHRADER VALVE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

CAUTION

Do not drop or allow Schrader valve to come in contact with dirt or sand. Failure to comply may contaminate HVAC system and result in damage to HVAC components.

NOTE

This procedure applies to either high-side or low-side service ports.

1. Coat Schrader valve core (Figure 2, Item 2) with PAG oil.

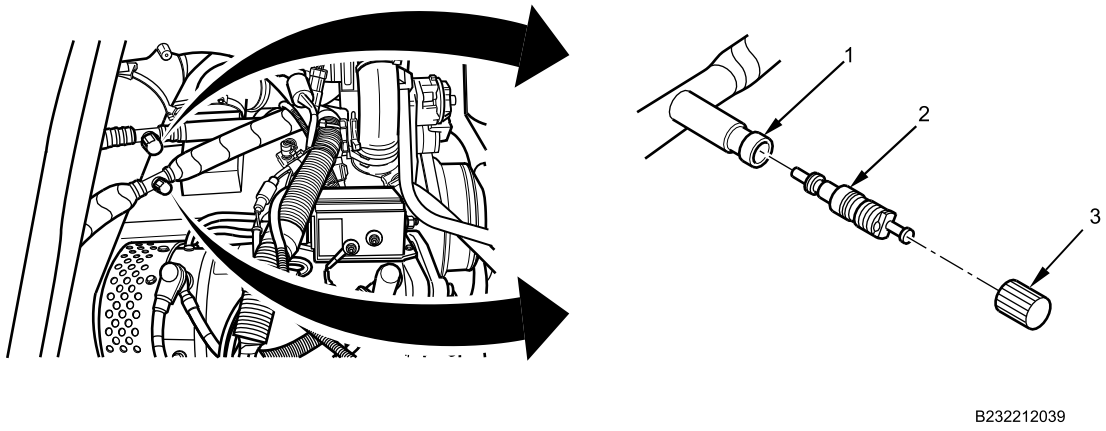


Figure 2. HVAC Service Port.

2. Insert Schrader valve core (Figure 2, Item 2) in service port (Figure 2, Item 1).
3. Using core removal tool, turn Schrader valve core clockwise and tighten securely.
4. Install and tighten protective cap (Figure 2, Item 3) on service port (Figure 2, Item 1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Evacuate and recharge HVAC system (WP 0707).
2. Engine hood closed and secured (TM 9-2355-106-10).
3. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) WATER DRAINAGE HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

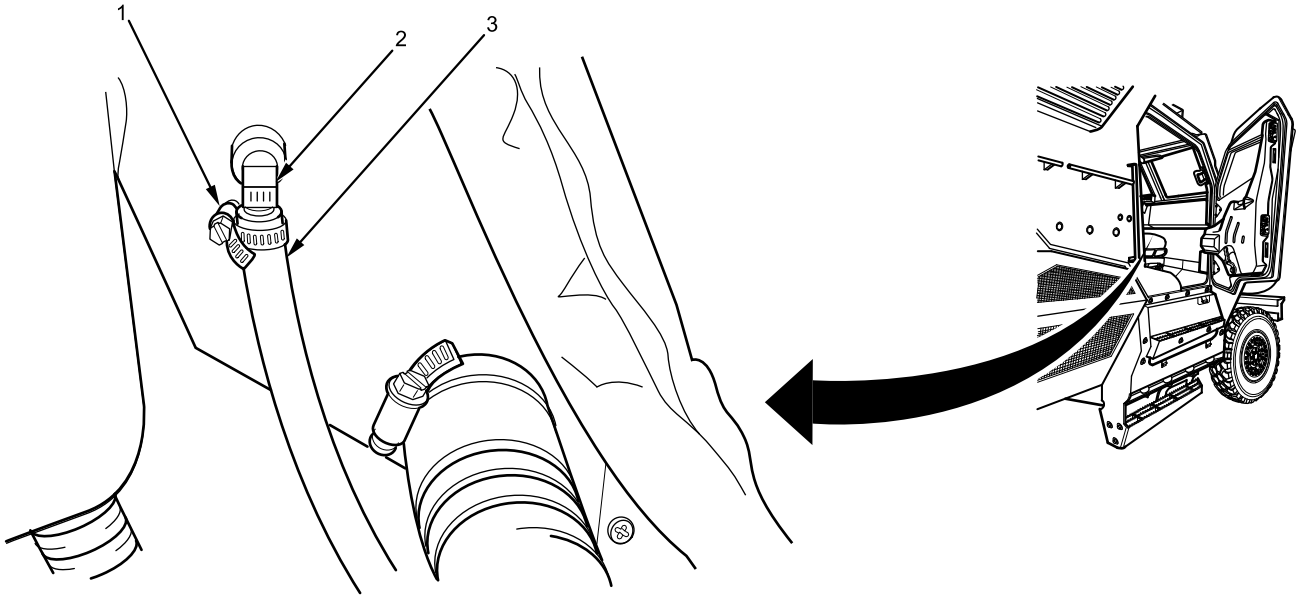
Materials/Parts
Clamp - (2) (WP 0796, Item 44)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

REMOVAL

1. Loosen clamp (Figure 1, Item 1) and remove hose (Figure 1, Item 3) from drain fitting (Figure 1, Item 2).



B235210594

Figure 1. HVAC Water Drainage Hose Upper End.

2. Loosen clamp (Figure 2, Item 2) and remove hose (Figure 2, Item 1) from drain fitting (Figure 2, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) WATER DRAINAGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

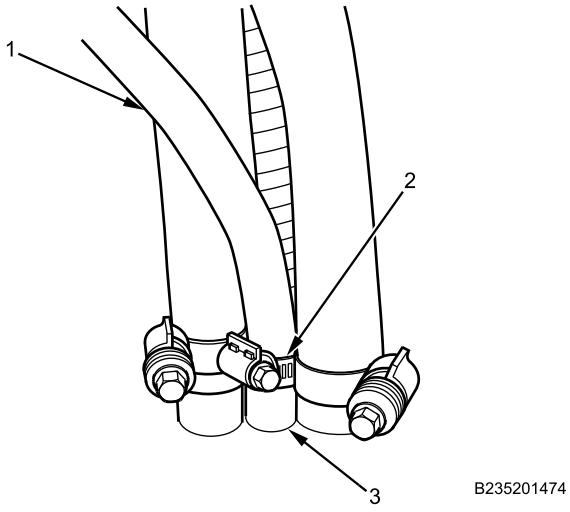


Figure 2. HVAC Water Drainage Hose Lower End.

3. Discard clamps (Figure 2, Item 1) and (Figure 2, Item 2).

END OF TASK

INSTALLATION

1. Position new clamp (Figure 3, Item 1) on hose (Figure 3, Item 3).

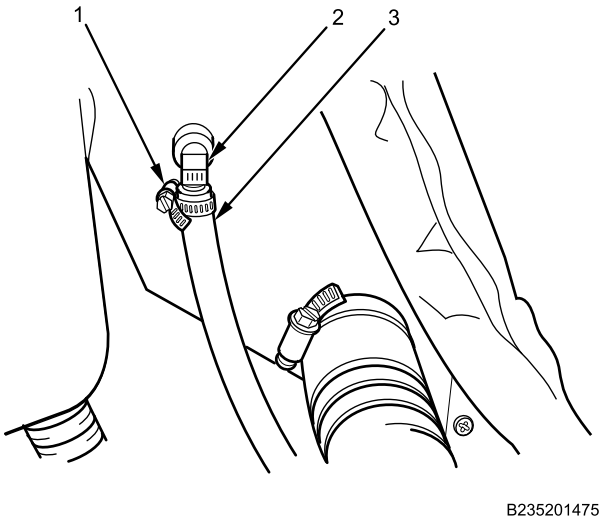


Figure 3. HVAC Water Drainage Hose Upper End.

2. Install hose (Figure 3, Item 3) on drain fitting (Figure 3, Item 2) and tighten clamp (Figure 3, Item 1) securely.
3. Position new clamp (Figure 4, Item 2) on hose (Figure 4, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) WATER DRAINAGE HOSE REMOVAL AND INSTALLATION - (CONTINUED)

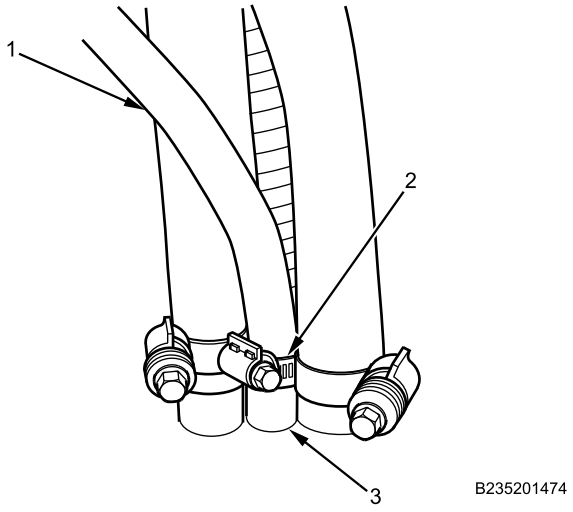


Figure 4. HVAC Water Drainage Hose Lower End.

4. Install hose (Figure 4, Item 1) on drain fitting (Figure 4, Item 3) and tighten clamp (Figure 4, Item 2) securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Check for leaks.
4. Turn engine off (TM 9-2355-106-10).
5. Turn MAIN POWER switch off (TM 9-2355-106-10).
6. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FRESH AIR INLET TUBE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

REMOVAL

1. Loosen two hose clamps (Figure 1, Item 3) on fresh air inlet tube (Figure 1, Item 1).

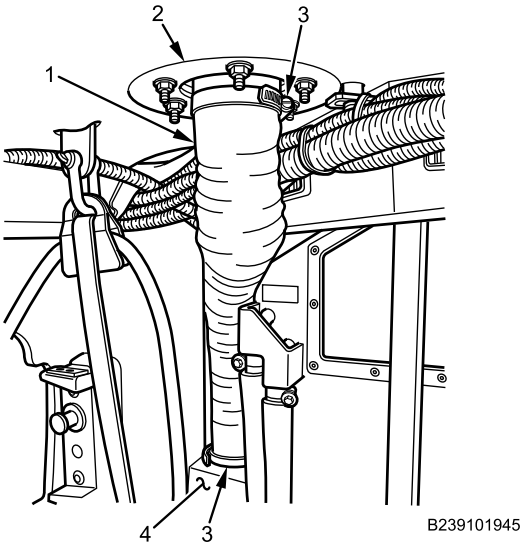


Figure 1. Fresh Air Inlet Tube.

2. Remove fresh air inlet tube (Figure 1, Item 1) from fresh air inlet flange (Figure 1, Item 2) and HVAC/Life Support System (LSS) box (Figure 1, Item 4).
3. Remove two hose clamps (Figure 1, Item 3) from fresh air inlet tube (Figure 1, Item 1).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FRESH AIR INLET TUBE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install hose clamps (Figure 2, Item 3) on fresh air inlet tube (Figure 2, Item 1). Do not tighten.

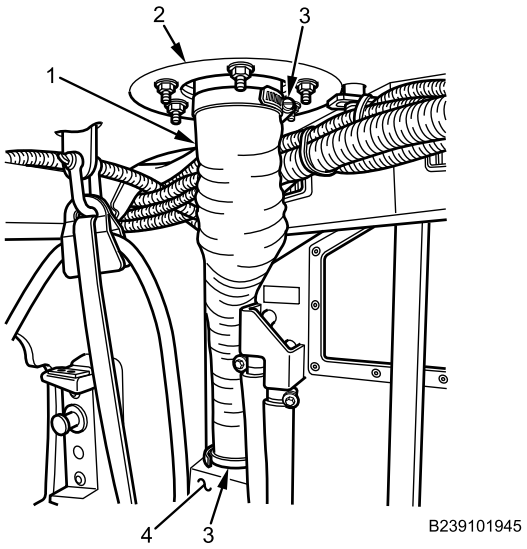


Figure 2. Fresh Air Inlet Tube.

2. Position fresh air inlet tube (Figure 2, Item 1) on fresh air inlet flange (Figure 2, Item 2). Do not tighten.
3. Position air inlet tube (Figure 2, Item 1) on HVAC/LSS box (Figure 2, Item 4).
4. Tighten two hose clamps (Figure 2, Item 3) securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DUST TUBE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Life Support System (LSS) control switch off (TM 9-2355-106-10)

WARNING



NBC system maintenance procedures require at least two personnel due to risk of medical emergency from possible exposure to NBC agents. Maintenance must be performed by properly trained, authorized personnel with proper safety equipment and protective clothing. Make sure batteries are disconnected and area is well ventilated. Do not smoke or allow open flame near vehicle. Never operate system with cover or panel removed. Failure to comply may result in serious injury or death to personnel.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DUST TUBE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

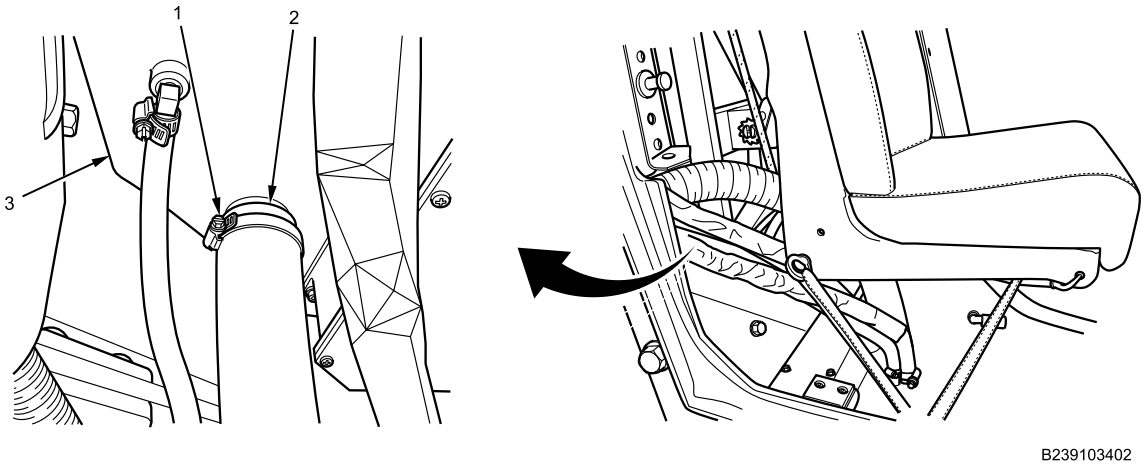


Figure 1. External Dust Tube at Forward Side of Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Box.

NOTE

Dust tubes are routed from forward side of HVAC box, behind and under right front passenger seat.

1. Loosen hose clamp (Figure 1, Item 1) from external dust tube (Figure 1, Item 2) at HVAC box (Figure 1, Item 3).
2. Pull external dust tube (Figure 1, Item 2) away from connection on HVAC/LSS box (Figure 1, Item 3).

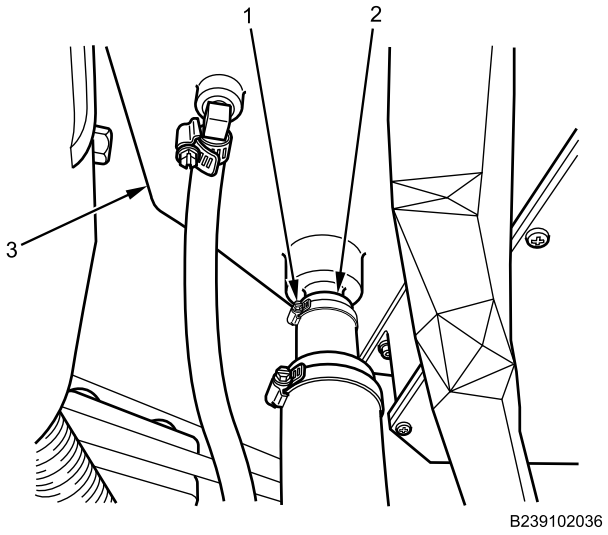


Figure 2. Dust Tube at Forward Side of HVAC/LSS Box.

3. Loosen hose clamp (Figure 2, Item 1) from dust tube (Figure 2, Item 2).
4. Remove dust tube (Figure 2, Item 2) from connection on HVAC/LSS box (Figure 2, Item 3).

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DUST TUBE REMOVAL AND INSTALLATION - (CONTINUED)

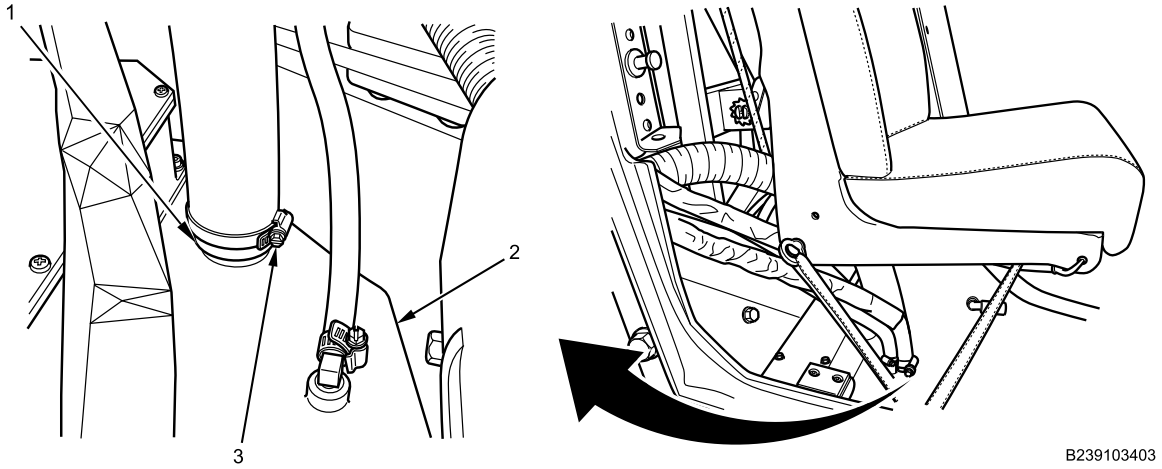


Figure 3. External Dust Tube at Floor Under Right Front Seat.

5. Loosen hose clamp (Figure 3, Item 3) from external dust tube (Figure 3, Item 2).
6. Pull external dust tube (Figure 3, Item 2) from connection on floor (Figure 3, Item 1).

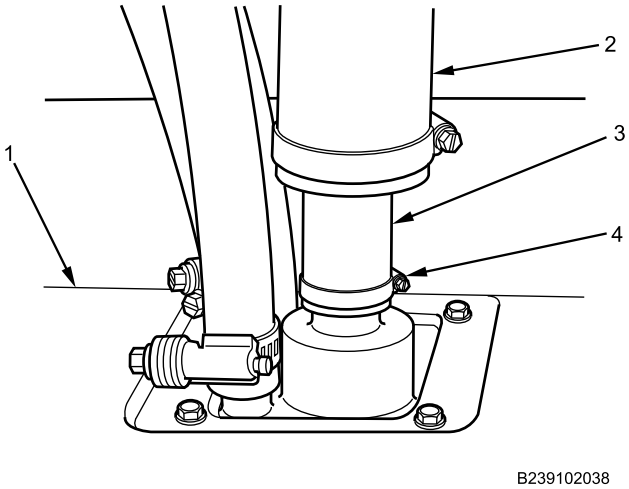


Figure 4. Dust Tube at Floor Under Right Front Seat.

7. Remove external dust tube (Figure 4, Item 2) from dust tube (Figure 4, Item 3).
8. Loosen hose clamp (Figure 4, Item 4) from dust tube (Figure 4, Item 3).
9. Remove dust tube (Figure 4, Item 3) from connection on floor (Figure 4, Item 1).

END OF TASK

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DUST TUBE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

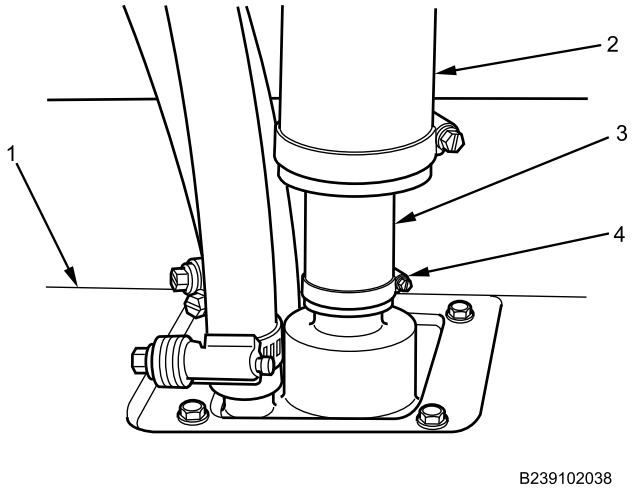


Figure 5. Dust Tube at Floor Under Right Front Seat.

NOTE

Dust tubes are routed from forward side of HVAC box, behind and under right front passenger seat.

1. Install dust tube (Figure 5, Item 3) on connection at floor (Figure 5, Item 1) with hose clamp (Figure 5, Item 4) and tighten securely.
2. Slide external dust tube (Figure 5, Item 2) over dust tube (Figure 5, Item 3).

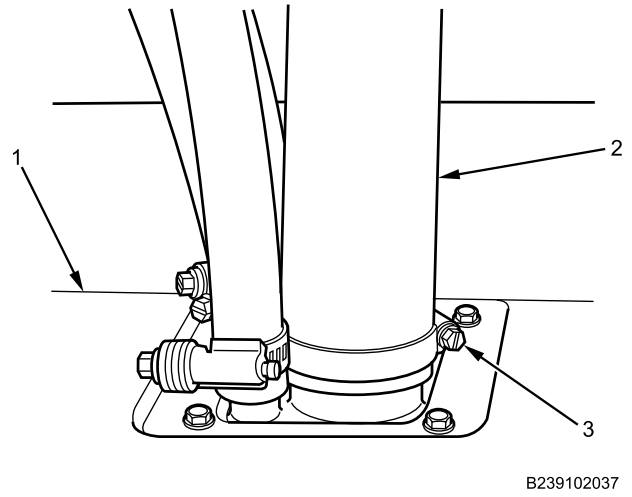


Figure 6. External Dust Tube at Floor Under Right Front Seat.

3. Install external dust tube (Figure 6, Item 2) on connection at floor (Figure 6, Item 1) with hose clamp (Figure 6, Item 3) and tighten securely.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DUST TUBE REMOVAL AND INSTALLATION - (CONTINUED)

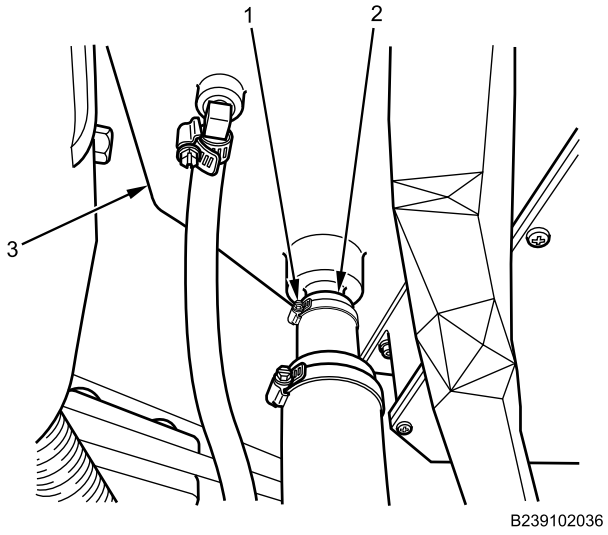


Figure 7. Dust Tube at Forward Side of HVAC/LSS Box.

4. Install dust tube (Figure 7, Item 2) on connection at HVAC/LSS box (Figure 7, Item 3) with hose clamp (Figure 7, Item 1) and tighten securely.

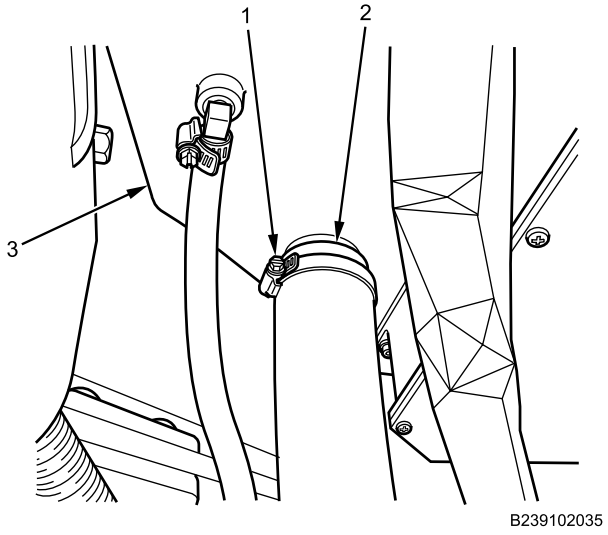


Figure 8. External Dust Tube at Forward Side of HVAC/LSS Box.

5. Install external dust tube (Figure 8, Item 2) on connection at HVAC/LSS box (Figure 8, Item 3) with hose clamp (Figure 8, Item 1) and tighten securely.

END OF TASK

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) DUST TUBE REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Turn on HVAC/LSS (TM 9-2355-106-10).
4. Check dust tube for air leaks.
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) REFRIGERANT FILTER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Gloves, rubber (WP 0795, Item 38)
Cap and Plug Set (WP 0795, Item 23)

Materials/Parts
Lubricating oil (WP 0794, Item 31)
Faceshield, industrial (WP 0794, Item 16)
O-ring (WP 0796, Item 35)
O-ring - (2) (WP 0796, Item 34)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Right side engine armor plate removed (WP 0599)
HVAC system refrigerant recovered (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) REFRIGERANT FILTER REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) REFRIGERANT FILTER REMOVAL AND INSTALLATION - (CONTINUED)

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army POL (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

REMOVAL

CAUTION

Do not allow dirt to contaminate HVAC lines or HVAC filter. Failure to comply may result in damage to HVAC components and equipment.

1. Remove and discard heatshrink tubing from three HVAC lines (Figure 1, Item 1).

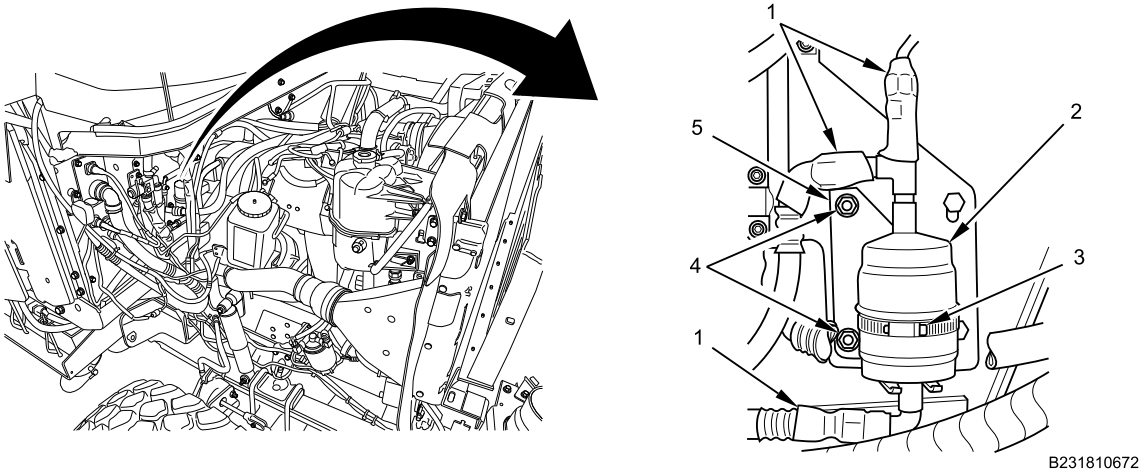


Figure 1. HVAC Filter.

2. Disconnect HVAC lines (Figure 1, Item 1) from HVAC filter (Figure 1, Item 2).
3. Cap and plug HVAC lines (Figure 1, Item 1).
4. Loosen filter clamp (Figure 1, Item 3) and remove HVAC filter (Figure 1, Item 2) from bracket (Figure 1, Item 5).
5. Remove two bracket nuts (Figure 1, Item 4) and bracket (Figure 1, Item 5).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) REFRIGERANT FILTER REMOVAL AND INSTALLATION - (CONTINUED)

6. Remove O-rings (Figure 2, Item 2) from ends of HVAC lines (Figure 2, Item 1). Discard O-rings.

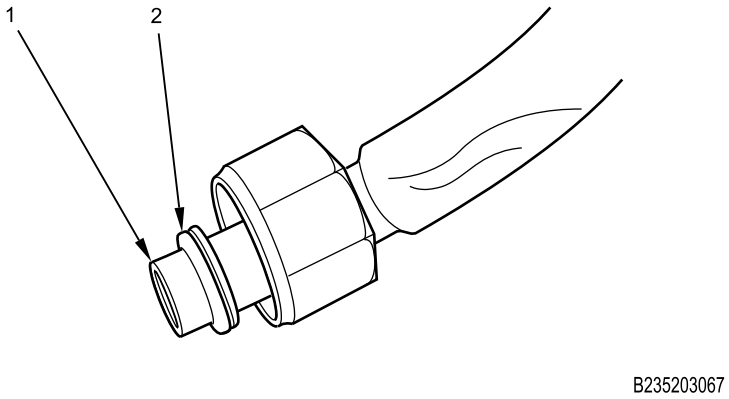


Figure 2. O-Ring Removal.

END OF TASK

INSTALLATION

1. Coat new O-rings (Figure 3, Item 2) with PAG oil.

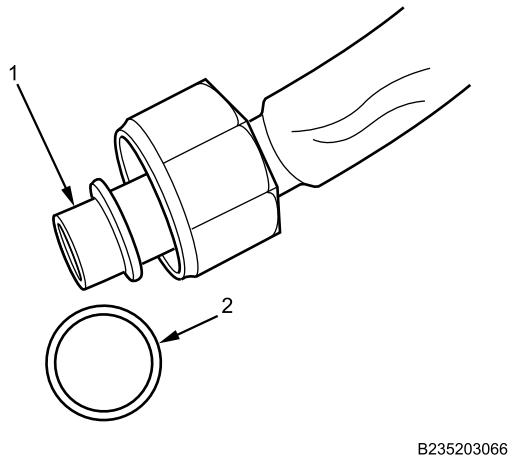


Figure 3. O-Ring Installation.

2. Remove cap and plug from ends HVAC lines(Figure 3, Item 1) and install new O-rings(Figure 3, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) REFRIGERANT FILTER REMOVAL AND INSTALLATION - (CONTINUED)

3. Install HVAC filter (Figure 4, Item 2) on bracket (Figure 4, Item 5) with filter clamp (Figure 4, Item 3). Tighten filter clamp.

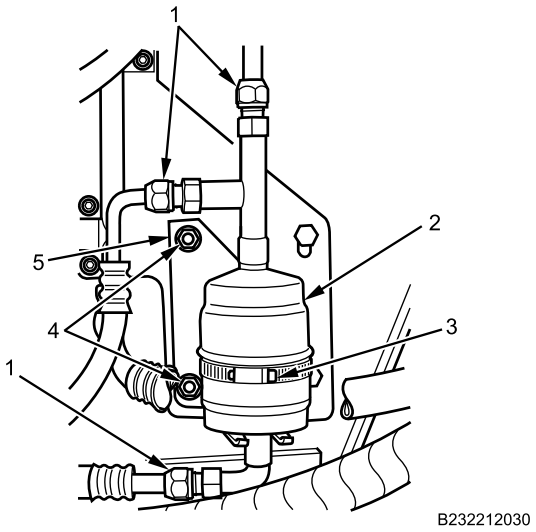


Figure 4. HVAC Filter.

4. Install bracket (Figure 4, Item 5) with two nuts (Figure 4, Item 4). Tighten bracket nuts.
5. Install HVAC lines (Figure 4, Item 1) on HVAC filter and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Evacuate and recharge HVAC system (WP 0707).
2. Install right side engine armor plate (WP 0599).
3. Close and secure engine hood (TM 9-2355-106-10).
4. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Gloves, rubber (WP 0795, Item 38)
Cap and Plug Set (WP 0795, Item 23)

Materials/Parts
Faceshield, industrial (WP 0794, Item 16)
Lubricating oil (WP 0794, Item 31)
Tags (WP 0794, Item 49)
Locknuts - (4) (WP 0796, Item 135)
O-ring - (2) (WP 0796, Item 34)

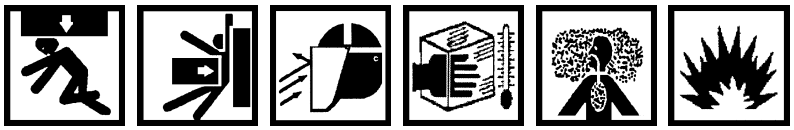
Personnel Required
Maintainer (HVAC Certified) - (1)
Maintainer - (1)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Air conditioning (A/C) condenser panel removed (WP 0672)
HVAC system discharged (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army Petroleum, Oil, and Lubricants (POL) (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

CAUTION

To prevent damage to test equipment, make sure test equipment is clear of all moving parts in the engine compartment. Failure to comply may result in damage to equipment.

NOTE

Left side shown, right side similar.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

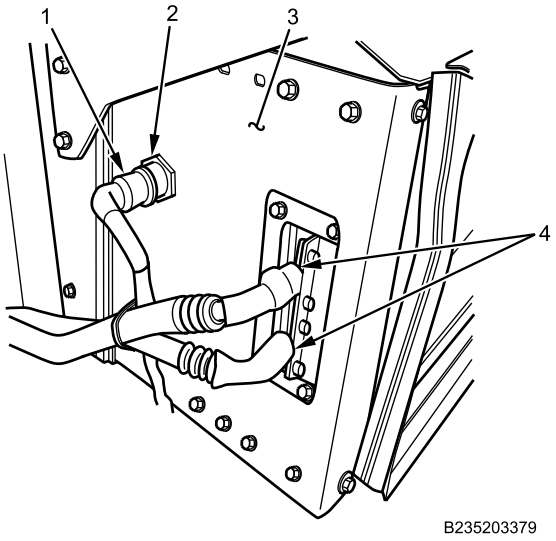


Figure 1. HVAC Condenser Lines.

1. Disconnect fan electrical connector (Figure 1, Item 1) from condenser housing (Figure 1, Item 3).
2. Remove fan harness connector retaining nut (Figure 1, Item 2) from condenser housing (Figure 1, Item 3).
3. Remove heatshrink tubing from HVAC lines (Figure 1, Item 4).

NOTE

Ensure to tag HVAC lines prior to removal to aid in installation.

4. Disconnect HVAC lines (Figure 1, Item 4) from HVAC condenser housing (Figure 1, Item 3). Remove and discard O-rings.
5. Cap and plug HVAC lines (Figure 1, Item 4).

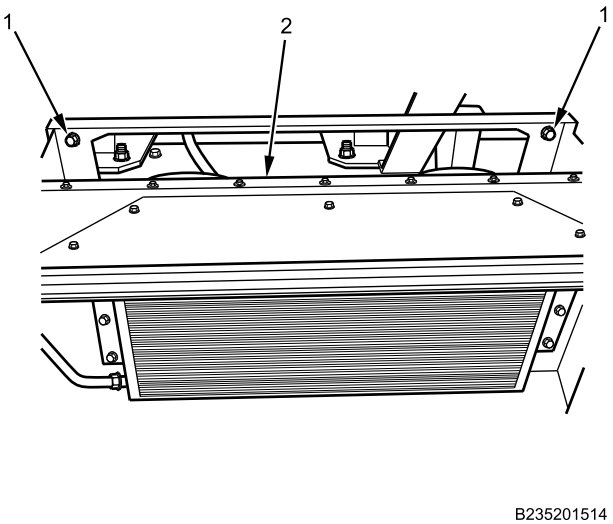


Figure 2. HVAC Condenser Unit.

6. Support HVAC condenser unit (Figure 2, Item 2) with straps or stands.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

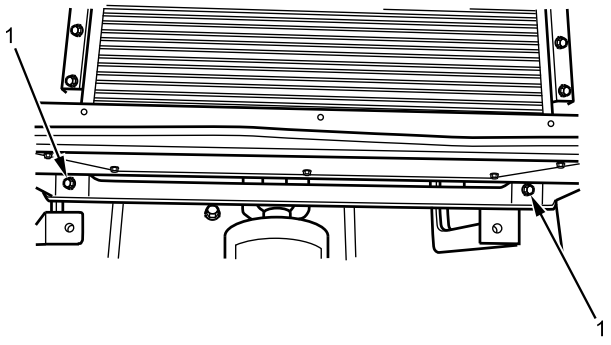


Figure 3. HVAC Condenser Unit.

7. Remove four bolts (Figure 2, Item 1)(Figure 3, Item 1), washers, and locknuts attaching HVAC condenser unit (Figure 2, Item 2) to vehicle. Discard locknuts.
8. With assistant, remove HVAC condenser unit (Figure 2, Item 2) and place on flat surface with condenser facing down.

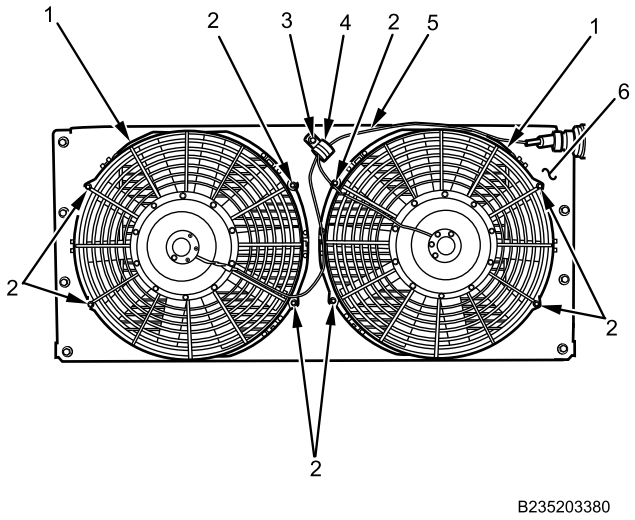


Figure 4. HVAC Condenser Fan Assembly.

9. Remove screw (Figure 4, Item 3), lockwasher, washer, and wiring harness clip (Figure 4, Item 4) from condenser unit (Figure 4, Item 6). Discard lockwasher.
10. Remove eight bolts (Figure 4, Item 2), lockwashers, and washers attaching HVAC fans (Figure 4, Item 1) to A/C condenser unit (Figure 4, Item 6). Discard lockwashers.
11. Remove HVAC fans (Figure 4, Item 1) and wiring harness (Figure 4, Item 5) from condenser unit (Figure 4, Item 6).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

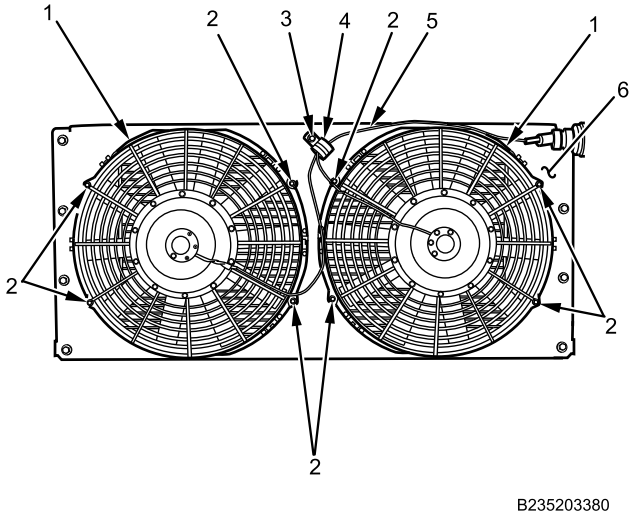


Figure 5. HVAC Condenser Fan Assembly.

1. With HVAC condenser unit (Figure 5, Item 6) laying on flat surface, position HVAC fans (Figure 5, Item 1) on HVAC condenser unit.
2. Install HVAC fans (Figure 5, Item 1) on HVAC condenser unit (Figure 5, Item 6) with eight bolts (Figure 5, Item 2), new lockwashers, and washers and tighten bolts securely.
3. Position wiring harness (Figure 5, Item 5) on HVAC condenser unit (Figure 5, Item 6).
4. Install wiring harness clip (Figure 5, Item 4) on condenser unit (Figure 5, Item 6) with screw (Figure 5, Item 3) and tighten securely.

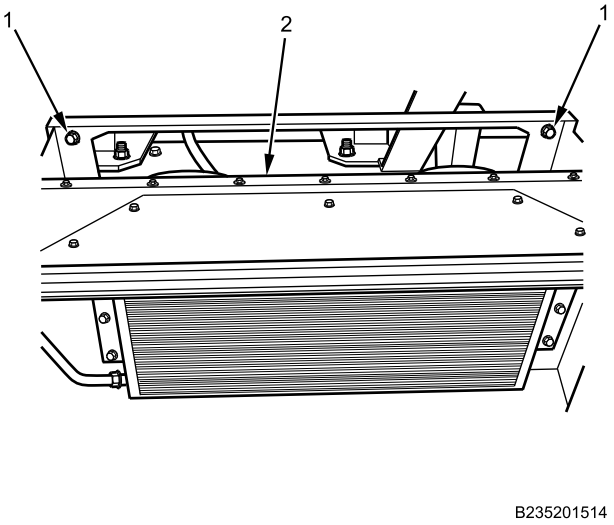


Figure 6. HVAC Condenser Unit.

5. With assistant, position HVAC condenser unit (Figure 6, Item 2) on vehicle and support with straps or stands.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

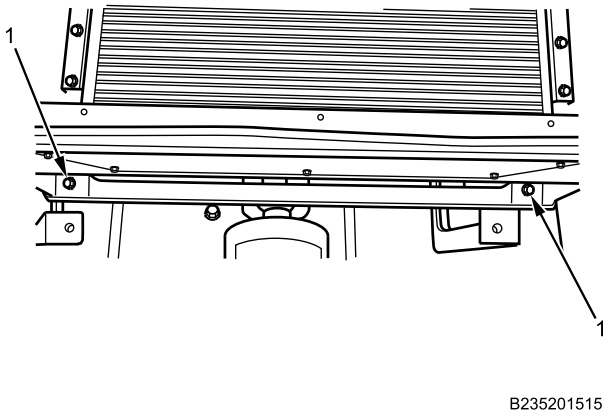


Figure 7. HVAC Condenser Unit.

6. Install HVAC condenser unit (Figure 6, Item 2) on vehicle with four bolts (Figure 6, Item 1) and (Figure 7, Item 1), washers, and new locknuts. Tighten bolts securely.

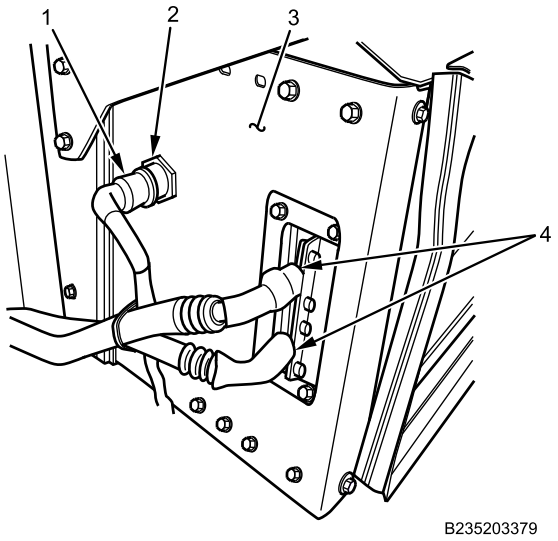


Figure 8. HVAC Condenser Lines.

7. Remove cap and plug from ends of HVAC lines (Figure 8, Item 4).
8. Lubricate new O-rings with PAG oil and install on HVAC lines (Figure 8, Item 4).
9. Install HVAC lines (Figure 8, Item 4) on condenser unit (Figure 8, Item 3) and tighten securely.

NOTE

Fan harness connector has alignment pin that goes into condenser housing unit.

10. Install fan harness connector retaining nut (Figure 8, Item 2) on condenser housing unit (Figure 8, Item 3) and tighten securely.
11. Connect fan electrical connector (Figure 8, Item 1).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONDENSER REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Charge HVAC system (WP 0707).
2. Check for leaks (TM 9-2355-106-10).
3. Turn MAIN POWER switch on (TM 9-2355-106-10).
4. Start engine (TM 9-2355-106-10).
5. Verify HVAC system operation (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Install A/C condenser panel (WP 0672).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

AIR CONDITIONER CONDENSER FAN ASSEMBLY REMOVAL AND INSTALLATION

INITIAL SETUP:

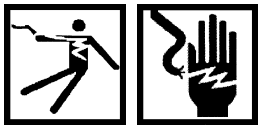
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (9) (WP 0796, Item 168)
Grease (WP 0794, Item 22)
Gloves (WP 0794, Item 18)
Goggles, industrial (WP 0794, Item 20)
Faceshield, industrial (WP 0794, Item 16)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Air Conditioning (A/C) condenser panel removed (WP 0672)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

AIR CONDITIONER CONDENSER FAN ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

Left side shown; right side similar.

1. Disconnect condenser control harness connector (Figure 1, Item 1) from condenser fan assembly harness connector (Figure 1, Item 3).

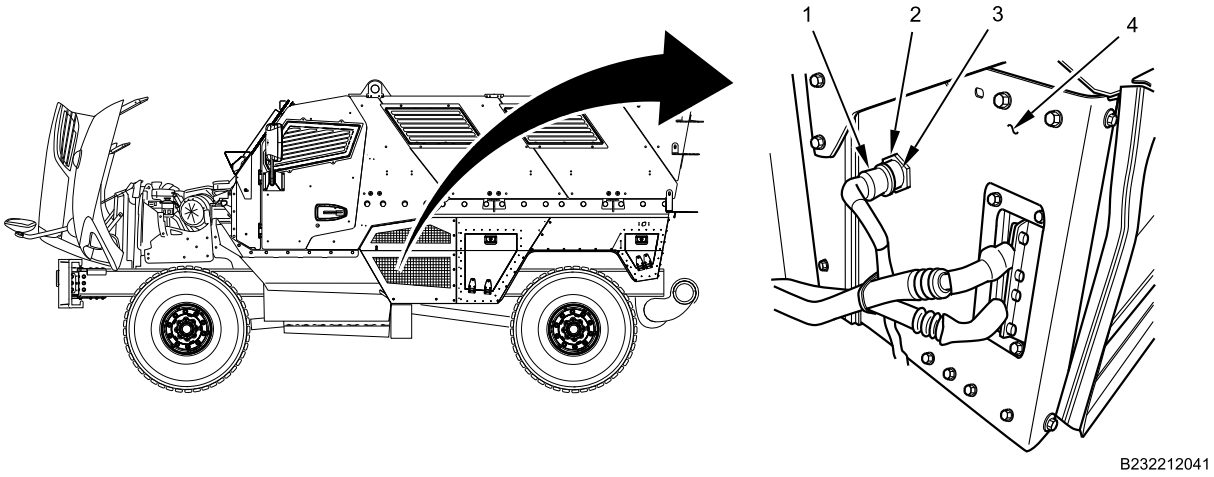


Figure 1. Condenser Fan Assembly Harness Connection.

2. Remove condenser fan assembly harness connector retaining nut (Figure 1, Item 2) from condenser fan assembly harness connector (Figure 1, Item 3).
3. Remove condenser fan assembly harness connector (Figure 1, Item 3) from condenser housing (Figure 1, Item 4)

AIR CONDITIONER CONDENSER FAN ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

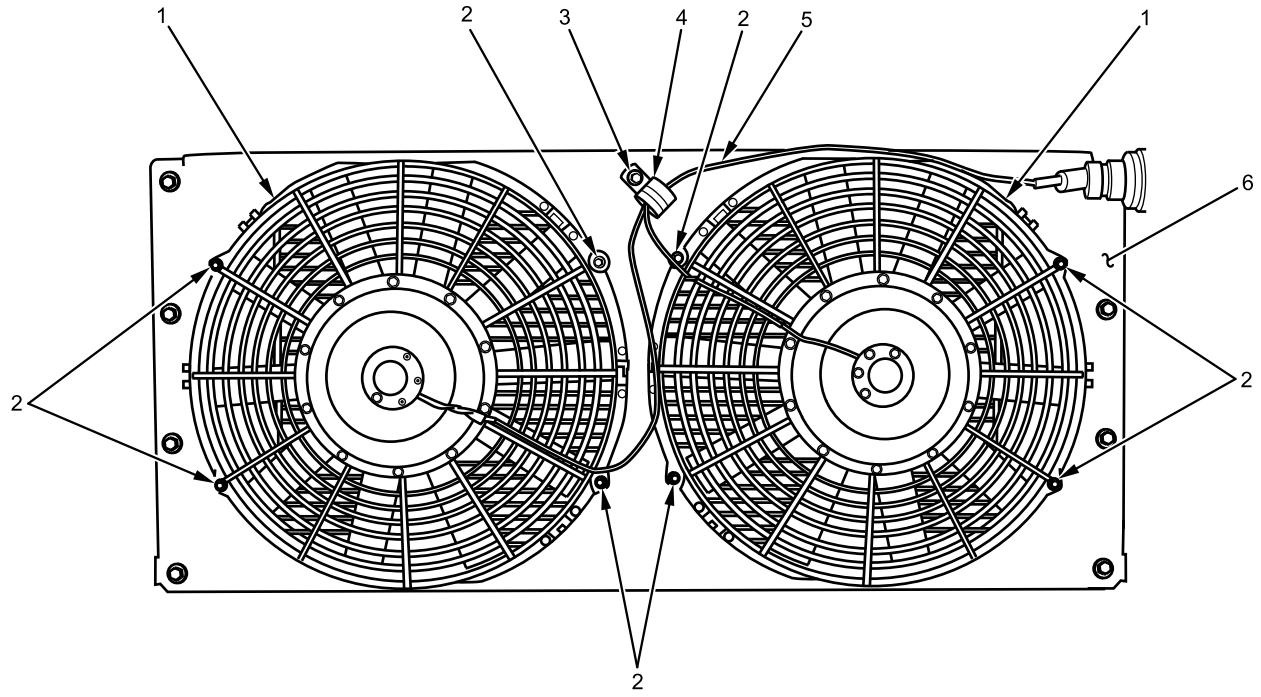


Figure 2. Condenser Fan Assembly.

NOTE

Condenser fan assembly is mounted to back side of condenser housing.

Left side shown; right side similar.

4. Remove retaining bolt, lockwasher, flat washer (Figure 2, Item 3), and harness clip (Figure 2, Item 4) from condenser fan assembly harness (Figure 2, Item 5).
5. Remove eight bolts, lockwashers, flat washers (Figure 2, Item 2), and condenser fan assembly (Figure 2, Item 1) from condenser housing (Figure 2, Item 6).
6. Discard lockwashers.

END OF TASK

AIR CONDITIONER CONDENSER FAN ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

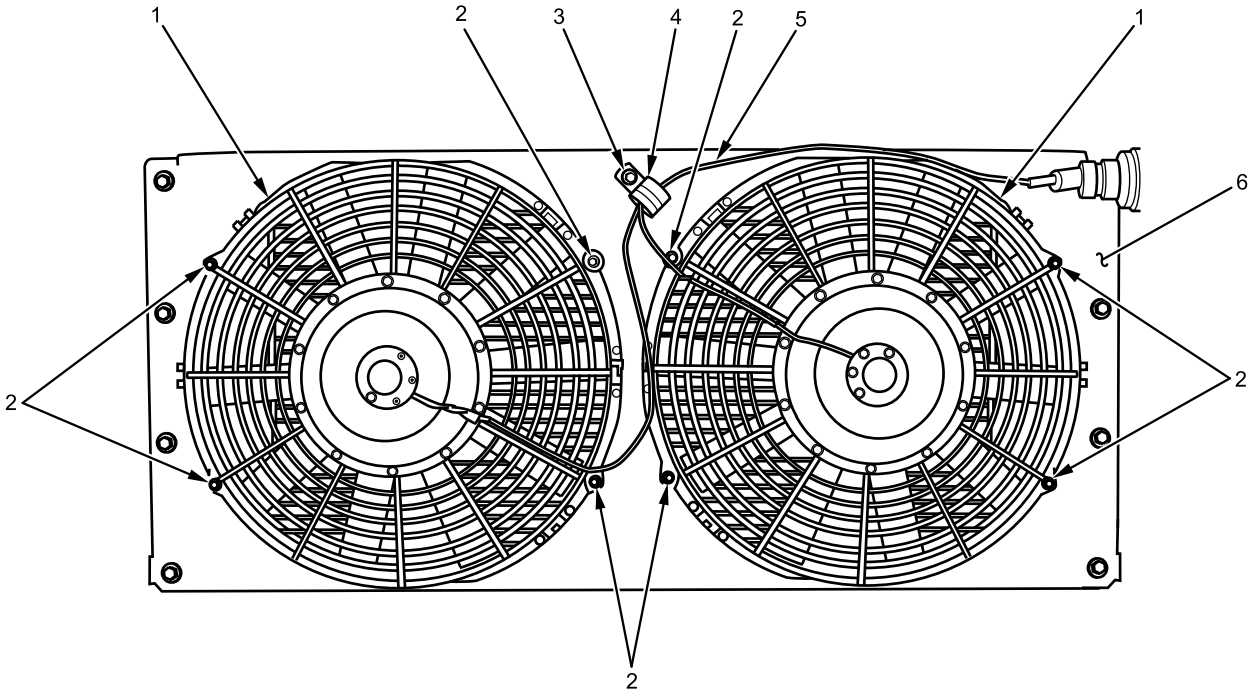
Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full-face shield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

NOTE

Apply dielectric grease to air conditioner condenser fan assembly harness connection.

Apply corrosion preventive compound to all bolt threads.

Left side shown; right side similar



B230003761

Figure 3. Condenser Fan Assembly.

AIR CONDITIONER CONDENSER FAN ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

1. Install condenser fan assembly (Figure 3, Item 1) on condenser housing (Figure 3, Item 6) with eight flat washers, new lockwashers, and bolts (Figure 3, Item 2). Tighten bolts securely.
2. Install condenser fan assembly harness (Figure 3, Item 5) with harness clip (Figure 3, Item 4), flat washer, new lockwasher, and bolt (Figure 3, Item 3). Tighten bolt securely.

NOTE

Left side shown; right side similar

3. Position condenser fan assembly harness connector (Figure 4, Item 3) in condenser housing (Figure 4, Item 4).

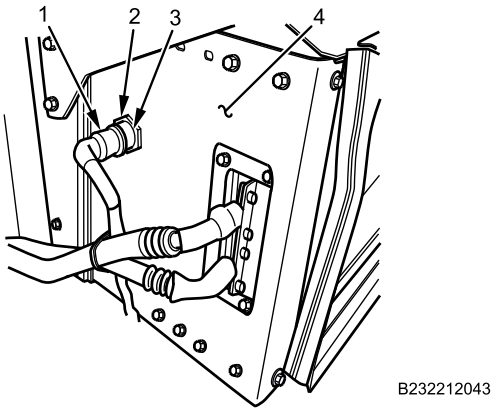


Figure 4. Condenser Fan Assembly Harness Connection.

4. Install condenser fan assembly harness connector retaining nut (Figure 4, Item 2) on condenser fan assembly harness connector (Figure 4, Item 3) and tighten securely.
5. Connect condenser control harness connector (Figure 4, Item 1) to condenser fan assembly harness connector (Figure 4, Item 3).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install air conditioning A/C condenser panel (WP 0672).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

ENGINE WATER OUTLET PIPE AND ELBOW REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5-gal. capacity (WP 0795, Item 75)

Materials/Parts
Antifreeze (WP 0794, Item 5)
Gloves (WP 0794, Item 18)
Faceshield, industrial (WP 0794, Item 16)
Goggles, industrial (WP 0794, Item 20)
Rag (WP 0794, Item 39)
Dispenser, sealant (WP 0794, Item 14)
Sealing compound (WP 0794, Item 44)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Cooling system drained (WP 0277)
Alternator removed (WP 0289)
Alternator bracket removed (WP 0290)

ENGINE WATER OUTLET PIPE AND ELBOW REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Wear safety goggles and work gloves while servicing cooling system. Label all connections and reference areas before removing parts. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Engine components become extremely hot during normal operation. Allow engine to cool completely prior to performing maintenance. Use extreme care when working in close quarters in engine compartment. Stay clear of rotating parts. Wear safety goggles, work gloves, and long sleeves or shop coat. Failure to comply may result in serious injury or death to personnel.

Cooling system components become pressurized and extremely hot during normal operation. To prevent serious injury from hot coolant or scalding steam, use the following safety procedure when removing radiator cap, surge tank cap, or deaeration cap:

• Allow engine to cool for 15 minutes.

• Wrap a thick cloth around cap to be removed.

• Loosen cap slowly one-quarter to one-half turn counterclockwise, and pause to allow pressure to release.

• Continue to turn cap counterclockwise to remove.

• Ensure all personnel stay clear of radiator while engine is running. Air in radiator will be released, which may cause hot coolant to spray out. Failure to comply may result in serious injury to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

ENGINE WATER OUTLET PIPE AND ELBOW REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Position clean drain pan under engine water outlet pipe assembly (Figure 1, Item 10).

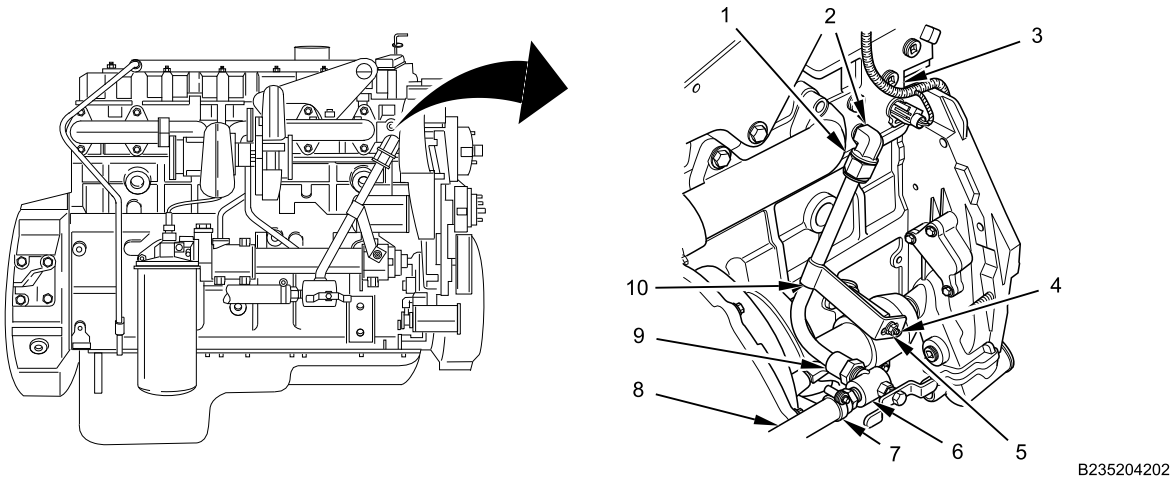


Figure 1. Engine Water Outlet Pipe Assembly.

2. Loosen hose clamp (Figure 1, Item 7) and remove shutoff valve (Figure 1, Item 6) from rubber heater hose (Figure 1, Item 8).
3. Remove shutoff valve (Figure 1, Item 6) from fixed connector (Figure 1, Item 9). Clean threads of any loose sealing compound.
4. Remove connector (Figure 1, Item 1) from elbow (Figure 1, Item 2).
5. Remove nut (Figure 1, Item 5) from stud (Figure 1, Item 4).
6. Remove engine water outlet pipe assembly (Figure 1, Item 10).
7. Mark orientation of elbow (Figure 1, Item 2) on cylinder head (Figure 1, Item 3).
8. Remove elbow (Figure 1, Item 2) from cylinder head (Figure 1, Item 3). Clean threads of any loose sealing compound.

END OF TASK

ENGINE WATER OUTLET PIPE AND ELBOW REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Sealing compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full faceshield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

1. Apply sealing compound to threads of elbow (Figure 2, Item 2) and install elbow into cylinder head (Figure 2, Item 1) by hand until snug.

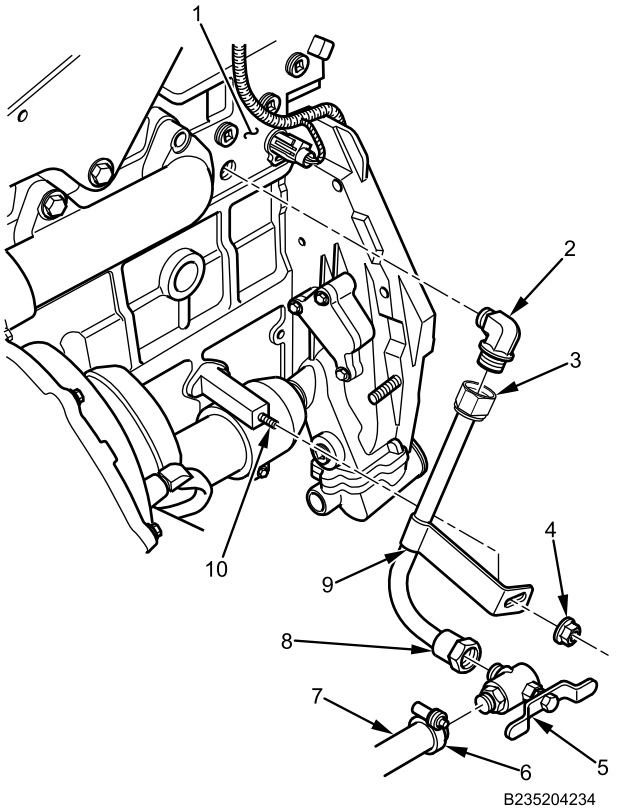


Figure 2. Engine Water Outlet Pipe Assembly.

ENGINE WATER OUTLET PIPE AND ELBOW REMOVAL AND INSTALLATION - (CONTINUED)

2. Tighten elbow (Figure 2, Item 2) until approximately 1/8 turn short of orientation mark on cylinder head (Figure 2, Item 1).
3. Place connector (Figure 2, Item 3) on elbow (Figure 2, Item 2) and hand tighten.
4. Tighten elbow (Figure 2, Item 2) until engine water outlet pipe assembly (Figure 2, Item 9) aligns with stud (Figure 2, Item 10).
5. Install and tighten nut (Figure 2, Item 4) securely.
6. Tighten connector (Figure 2, Item 3) securely.
7. Apply sealing compound to threads of shutoff valve (Figure 2, Item 5) and install into connector (Figure 2, Item 8). Tighten valve until other end of valve aligns with rubber heater hose (Figure 2, Item 7).
8. Install shutoff valve (Figure 2, Item 5) into rubber heater hose (Figure 2, Item 7) and tighten hose clamp (Figure 2, Item 6) securely.
9. Remove drain pan and recycle contents back into cooling system prior to topping off.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install alternator bracket (WP 0290).
2. Install alternator (WP 0289).
3. Fill cooling system (WP 0277).
4. Close engine hood (TM 9-2355-106-10).
5. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT OUTLET HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5-gal. capacity (WP 0795, Item 75)

Materials/Parts
Goggles, industrial (WP 0794, Item 20)
Gloves (WP 0794, Item 19)
Wire (WP 0794, Item 57)
Cable lock strap - (6) (WP 0796, Item 134)
Clamp - (2) (WP 0796, Item 140)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Engine coolant drained (WP 0277)
Belly armor removed (WP 0606)
Right air conditioning (A/C) condenser panel removed (WP 0672)

WARNING



Cooling system components become pressurized and extremely hot during normal operation. To prevent serious injury from hot coolant or scalding steam, use the following safety procedure when removing radiator cap, surge tank cap, or deaeration cap:

• Allow engine to cool for 15 minutes.

• Wrap a thick cloth around cap to be removed.

• Loosen cap slowly one-quarter to one-half turn counterclockwise, and pause to allow pressure to release.

• Continue to turn cap counterclockwise to remove.

• Ensure all personnel stay clear of radiator while engine is running. Air in radiator will be released, which may cause hot coolant to spray out. Failure to comply may result in serious injury to personnel.

Wear safety goggles and work gloves while servicing cooling system. Label all connections and reference areas before removing parts. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

REMOVAL

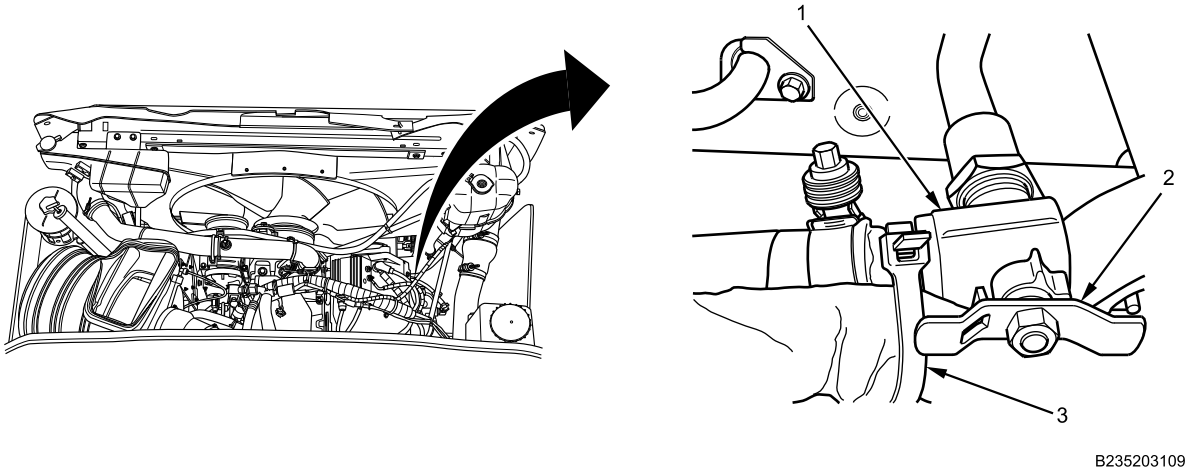


Figure 1. Heater Coolant Engine Outlet Valve.

1. Close outlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap (Figure 1, Item 3) if necessary.

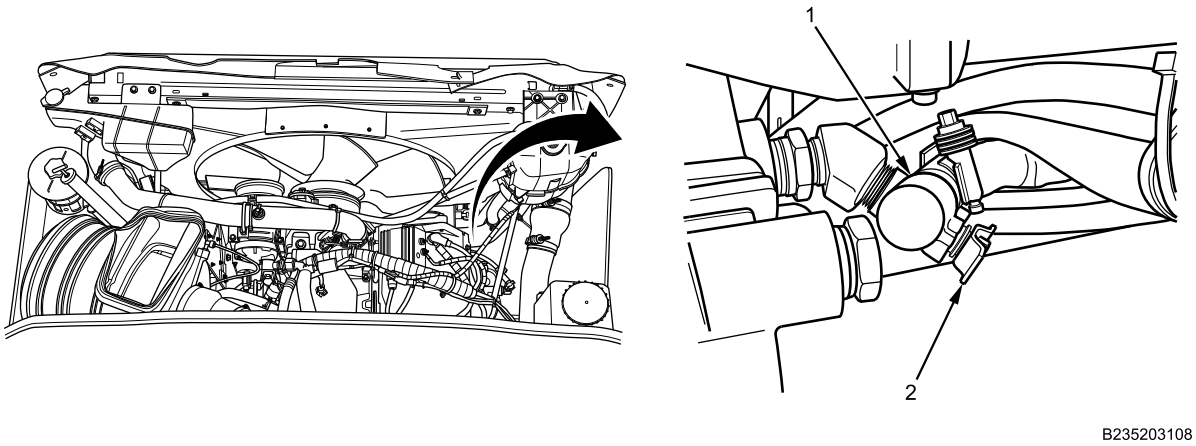


Figure 2. Heater Coolant Engine Inlet Valve.

2. Close inlet valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

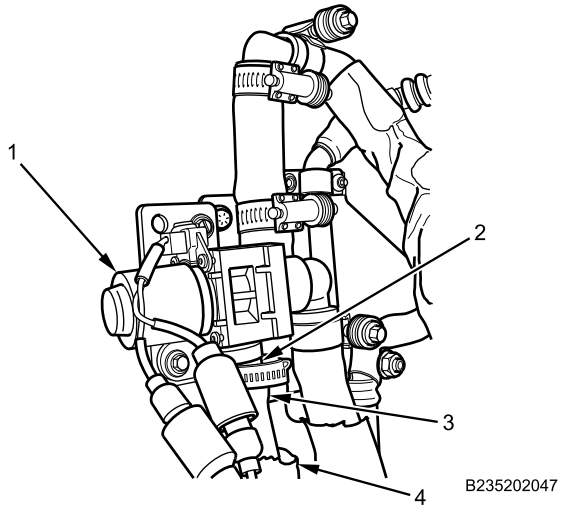


Figure 3. Outlet Hose at 3-Way Valve.

3. Loosen clamp (Figure 3, Item 2) and disconnect hose (Figure 3, Item 3) and heat shielding (Figure 3, Item 4) from 3-way valve (Figure 3, Item 1). Remove clamp from hose. Discard clamp.

NOTE

Placing cap on hose will prevent coolant from draining out of hose until hose is lowered to drain pan.

4. Place cap on end of end of hose (Figure 3, Item 3).
5. Securely connect mechanic's wire to end of hose (Figure 3, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

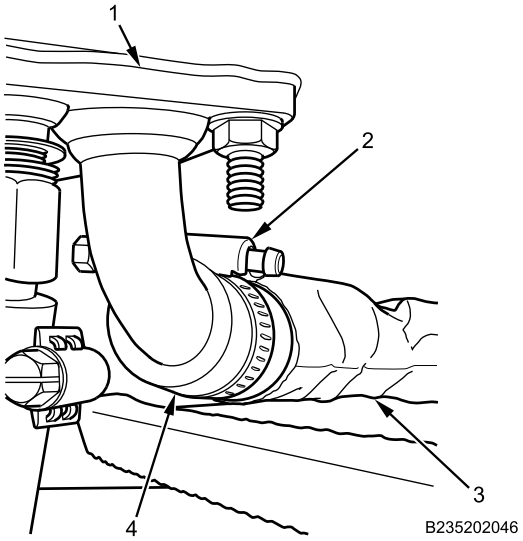


Figure 4. Outlet Hose at Dust Plate.

NOTE

Dust plate is located under cabin floor, below right front seat.

6. Pull hose (Figure 4, Item 4), heat shielding (Figure 4, Item 3), and mechanic's wire towards dust plate (Figure 4, Item 1), guiding hose next to transmission for draining into pan.
7. Position drain pan under hose (Figure 4, Item 4), remove cap from hose, and allow all coolant to drain into pan.
8. Loosen clamp (Figure 4, Item 2) and disconnect hose (Figure 4, Item 4) and heat shielding (Figure 4, Item 3) from dust plate (Figure 4, Item 1). Remove clamp from hose. Discard clamp.
9. Remove hose (Figure 4, Item 4) and heat shielding (Figure 4, Item 3) from vehicle. Disconnect mechanic's wire. Remove heat shielding (Figure 4, Item 3) from hose (Figure 4, Item 4).

END OF TASK

INSTALLATION

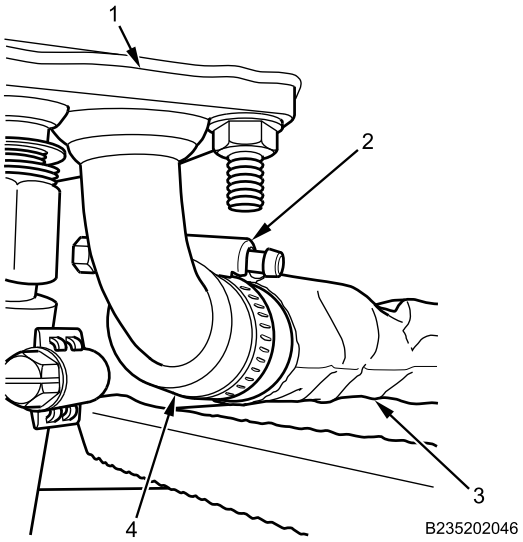


Figure 5. Outlet Hose at Dust Plate.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

1. Install heat shielding (Figure 5, Item 3) on hose (Figure 5, Item 4).
2. Securely connect mechanic's wire to end of hose (Figure 5, Item 4) at dust plate location.

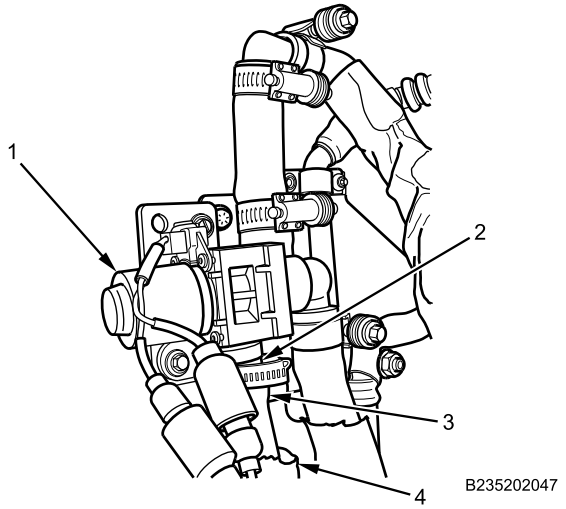


Figure 6. Outlet Hose at 3-Way Valve.

3. From 3-way valve (Figure 6, Item 1), pull mechanic's wire, hose (Figure 6, Item 3), and heat shielding (Figure 6, Item 4) to 3-way valve (Figure 6, Item 1). Disconnect mechanic's wire.
4. Position new clamp (Figure 6, Item 2) on hose (Figure 6, Item 3).
5. Connect hose (Figure 6, Item 3) and heat shielding (Figure 6, Item 4) to 3-way valve (Figure 6, Item 1) with clamp (Figure 6, Item 2) and tighten securely.
6. Position new clamp (Figure 5, Item 2) on hose (Figure 5, Item 4).
7. Connect hose (Figure 5, Item 4) and heat shielding (Figure 5, Item 3) to dust plate (Figure 5, Item 1) with clamp (Figure 5, Item 2) and tighten securely.

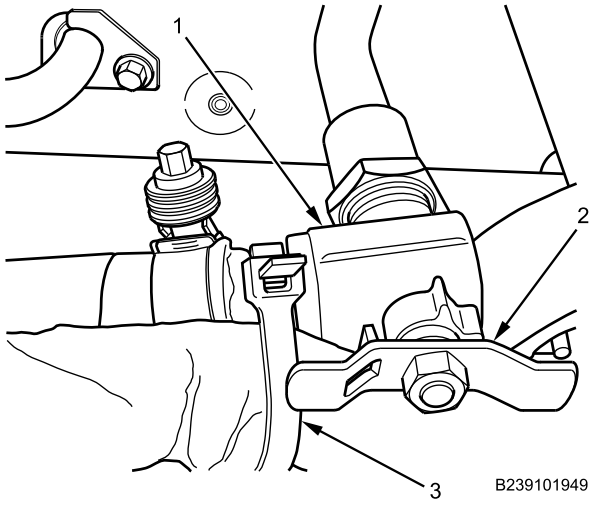


Figure 7. Heater Coolant Engine Outlet Valve.

8. Open valve (Figure 7, Item 1) by turning handle (Figure 7, Item 2) counterclockwise. Install new cable lock strap (Figure 7, Item 3) if removed.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

9. Install all cable lock straps and tighten securely.

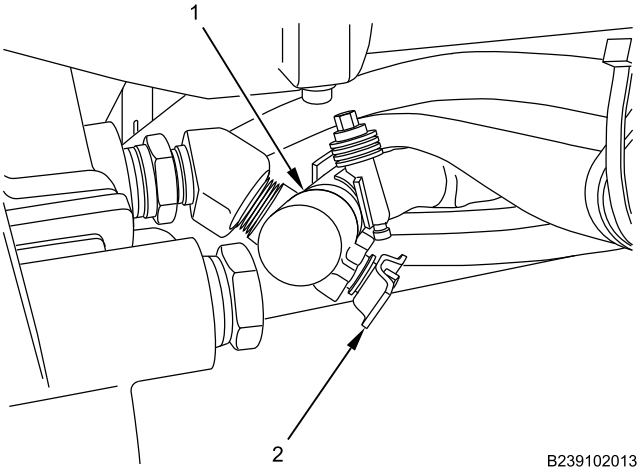


Figure 8. Heater Coolant Engine Inlet Valve.

10. Open valve (Figure 8, Item 1) by turning handle (Figure 8, Item 2) counterclockwise.
11. Remove drain pan.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill cooling system (WP 0277).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Turn engine on (TM 9-2355-106-10).
4. Start vehicle, run up to operating temperature, check for coolant leaks (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Install right A/C condenser panel (WP 0672).
8. Install belly armor (WP 0606).
9. Close and secure engine hood (TM 9-2355-106-10).
10. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5-gal. capacity (WP 0795, Item 75)

Materials/Parts
Antifreeze (WP 0794, Item 5)
Cable lock strap (WP 0796, Item 145)
Clamp - (5) (WP 0796, Item 140)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Engine coolant drained (WP 0277)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Cooling system components become pressurized and extremely hot during normal operation. To prevent serious injury from hot coolant or scalding steam, use the following safety procedure when removing radiator cap, surge tank cap, or deaeration cap:

• Allow engine to cool for 15 minutes.

• Wrap a thick cloth around cap to be removed.

• Loosen cap slowly one-quarter to one-half turn counterclockwise, and pause to allow pressure to release.

• Continue to turn cap counterclockwise to remove.

• Ensure all personnel stay clear of radiator while engine is running. Air in radiator will be released, which may cause hot coolant to spray out. Failure to comply may result in serious injury to personnel.

Wear safety goggles and work gloves while servicing cooling system. Label all connections and reference areas before removing parts. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid in installation.

REMOVAL

1. Close outlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap (Figure 1, Item 3) if necessary.

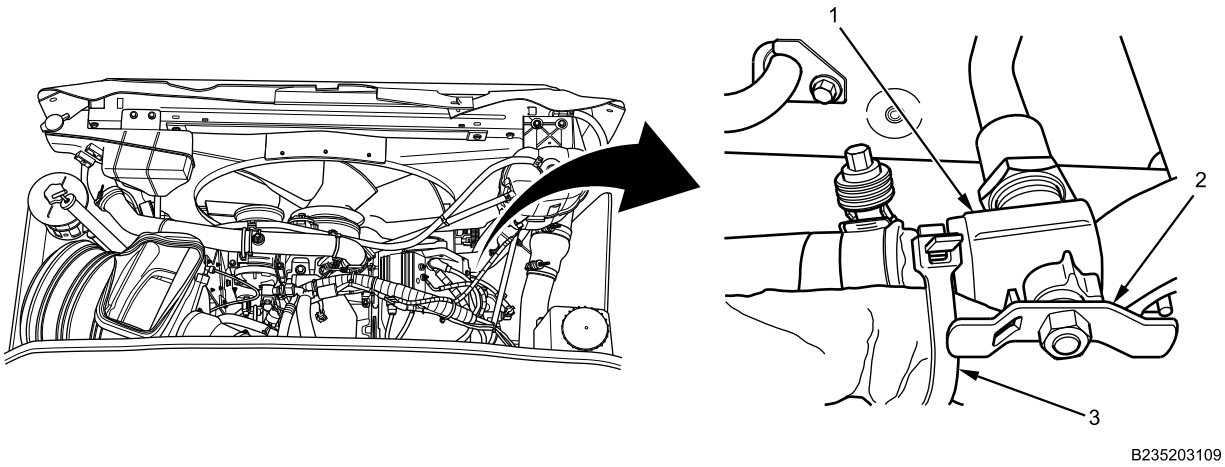


Figure 1. Heater Coolant Engine Outlet Valve.

2. Close inlet valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.

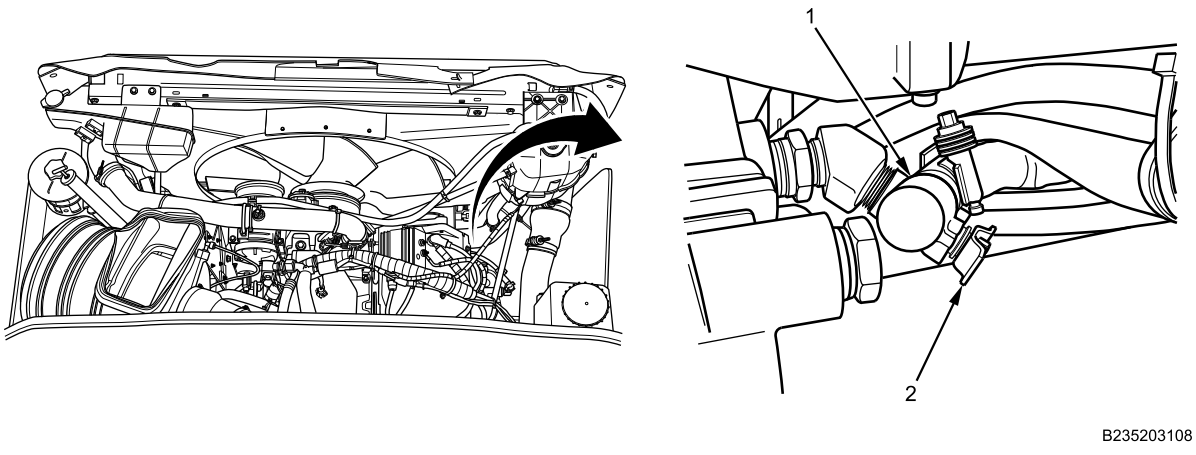


Figure 2. Heater Coolant Engine Inlet Valve.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION - (CONTINUED)

3. Disconnect 3-way valve electrical connectors (Figure 3, Item 7) from engine wiring harness (Figure 3, Item 6).

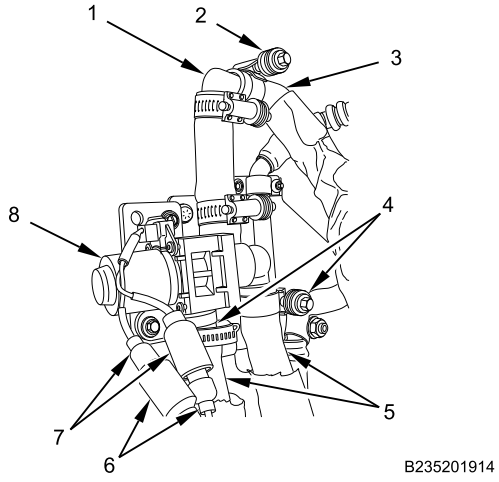


Figure 3. HVAC 3-Way Valve.

4. Position drain pan under 3-way valve (Figure 3, Item 8).

NOTE

Note location and orientation of hoses at 3-way valve to aid installation.

5. Loosen clamp (Figure 3, Item 2) and remove hose (Figure 3, Item 3) from elbow (Figure 3, Item 1). Allow coolant to drain into drain pan. Remove clamp from hose. Discard clamp.
6. Loosen clamps (Figure 3, Item 4) and remove hoses (Figure 3, Item 5) from 3-way valve (Figure 3, Item 8). Allow coolant to drain into drain pan. Remove clamps from hoses. Discard clamps.
7. Remove two bolts (Figure 4, Item 2) and remove 3-way valve (Figure 4, Item 3) and bracket from plate (Figure 4, Item 1).

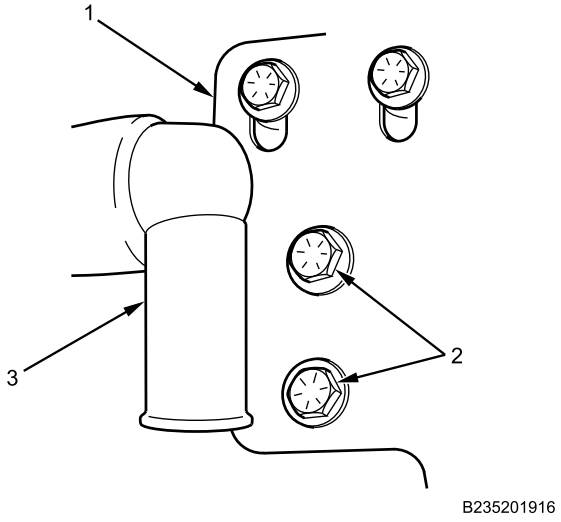


Figure 4. 3-Way Valve Bracket Bolts.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION - (CONTINUED)

8. Loosen clamps (Figure 5, Item 4) and separate hose (Figure 5, Item 2) from elbow (Figure 5, Item 3) and 3-way valve (Figure 5, Item 5). Remove clamps from hose. Discard clamps.

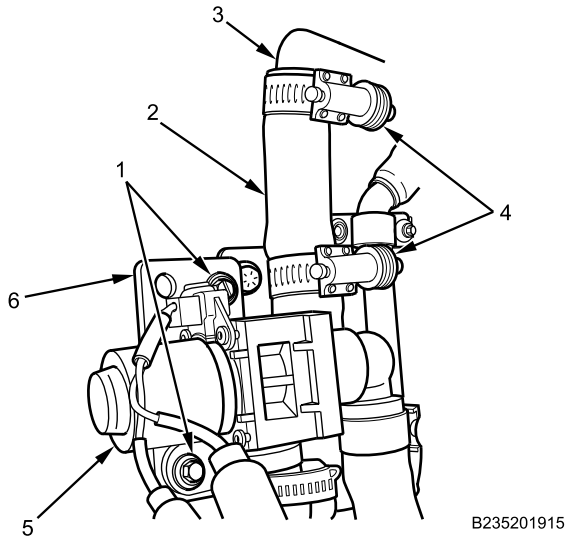


Figure 5. 3-Way Valve and Hose.

9. Remove two bolts and washers (Figure 5, Item 1) and separate bracket (Figure 5, Item 6) from 3-way valve (Figure 5, Item 5).

END OF TASK

INSTALLATION

1. Install bracket (Figure 6, Item 6) on 3-way valve (Figure 6, Item 5) with two bolts and washers (Figure 6, Item 1) and tighten securely.

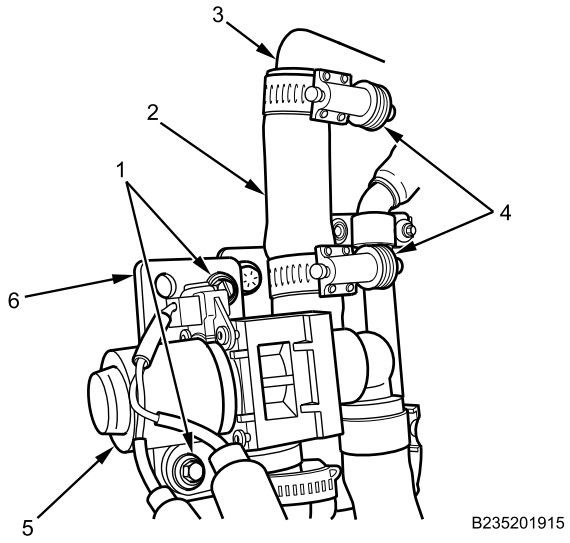


Figure 6. 3-Way Valve and Hose.

2. Position new clamps (Figure 6, Item 4) on hose (Figure 6, Item 2) and connect hose to elbow (Figure 6, Item 3) and 3-way valve (Figure 6, Item 5). Tighten clamps securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION - (CONTINUED)

3. Position 3-way valve bracket behind plate (Figure 7, Item 1) and install 3-way valve (Figure 7, Item 3) and bracket with two bolts (Figure 7, Item 2). Tighten securely.

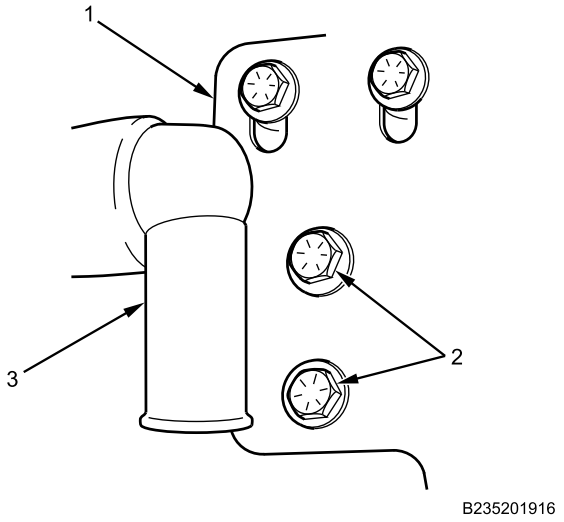


Figure 7. 3-Way Valve Bracket Bolts.

4. Position new clamps (Figure 8, Item 4) on hoses (Figure 8, Item 5) and connect hoses to 3-way valve (Figure 8, Item 8). Tighten clamps securely.

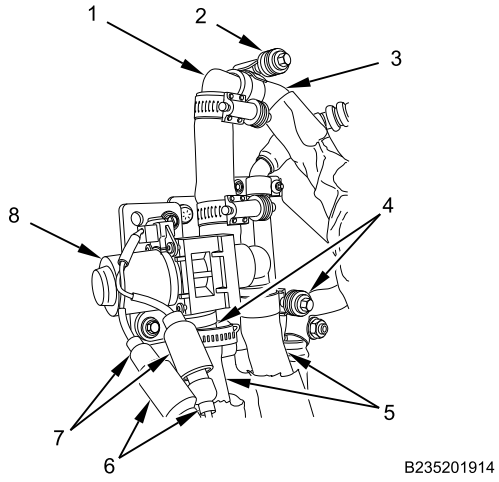


Figure 8. HVAC 3-Way Valve.

5. Position new clamp (Figure 8, Item 2) on hose (Figure 8, Item 3) and connect hose to elbow (Figure 8, Item 1) Tighten clamp securely.
6. Connect electrical connectors (Figure 8, Item 7) to engine harness (Figure 8, Item 6).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION - (CONTINUED)

7. Open outlet valve (Figure 9, Item 1) by turning handle (Figure 9, Item 2) counterclockwise. Install new cable lock strap (Figure 9, Item 3) if removed.

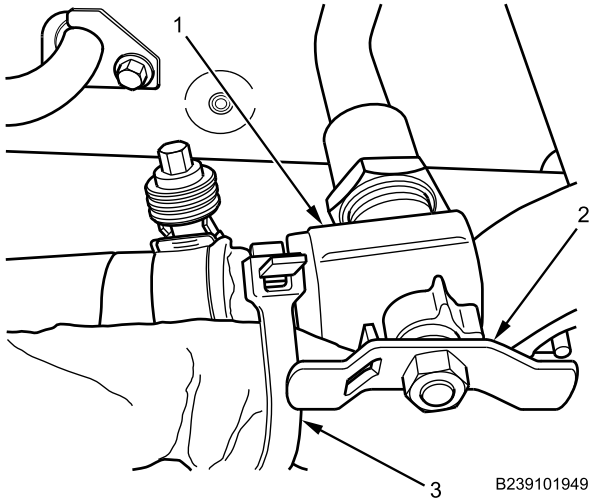


Figure 9. Heater Coolant Engine Outlet Valve.

8. Install all cable lock straps and tighten securely.
9. Remove drain pan.
10. Open inlet valve (Figure 10, Item 1) by turning handle (Figure 10, Item 2) counterclockwise.

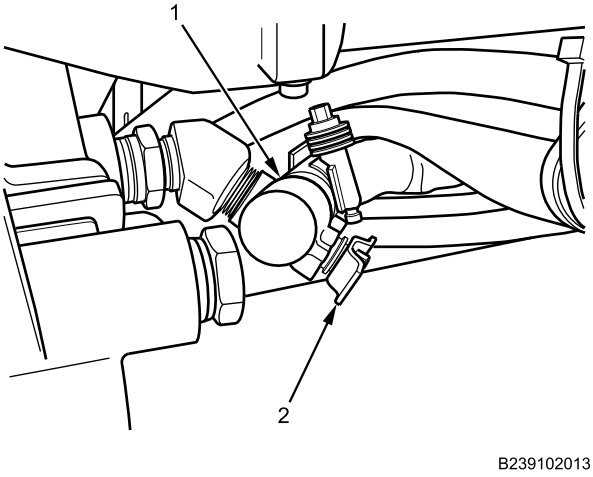


Figure 10. Heater Coolant Engine Inlet Valve.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Fill cooling system (WP 0277).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Turn engine on (TM 9-2355-106-10).
4. Verify correct HVAC system operation (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Close and secure engine hood (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CABIN HEATER HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5-gal. capacity (WP 0795, Item 75)

Materials/Parts
Cable lock strap - (1) (WP 0796, Item 134)
Clamp, screw - (4) (WP 0796, Item 140)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Cooling system drained (WP 0277)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Cooling system components become pressurized and extremely hot during normal operation. To prevent serious injury from hot coolant or scalding steam, use the following safety procedure when removing radiator cap, surge tank cap, or deaeration cap:

• Allow engine to cool for 15 minutes.

• Wrap a thick cloth around cap to be removed.

• Loosen cap slowly one-quarter to one-half turn counterclockwise, and pause to allow pressure to release.

• Continue to turn cap counterclockwise to remove.

• Ensure all personnel stay clear of radiator while engine is running. Air in radiator will be released, which may cause hot coolant to spray out. Failure to comply may result in serious injury to personnel.

Wear safety goggles and work gloves while servicing cooling system. Label all connections and reference areas before removing parts. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CABIN HEATER HOSE REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

This procedure applies to either of two heater hoses. Note hose routing prior to removal for proper installation.

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

Heater coolant engine outlet valve is located on front right side of engine below alternator. Note hose routing prior to removal to facilitate installation.

REMOVAL

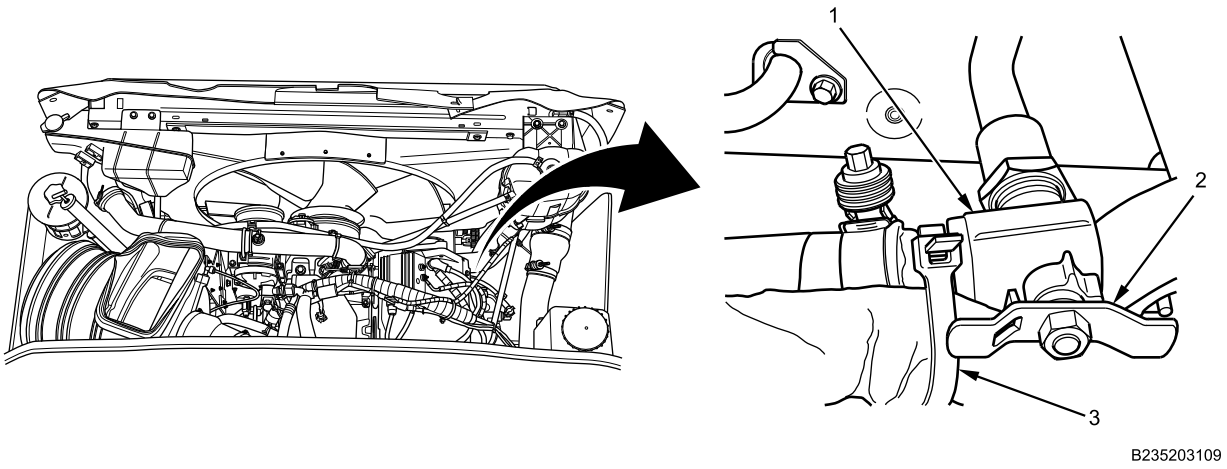


Figure 1. Heater Coolant Engine Outlet Valve.

1. Close valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap (Figure 1, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CABIN HEATER HOSE REMOVAL AND INSTALLATION - (CONTINUED)

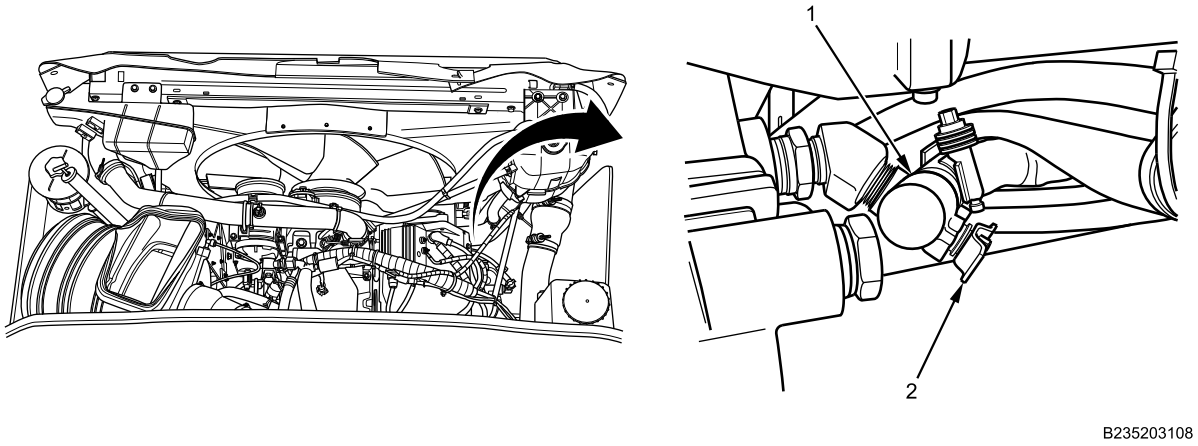


Figure 2. Heater Coolant Engine Inlet Valve.

NOTE

Heater coolant engine inlet valve is located on front right side of engine below alternator.

2. Close valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.

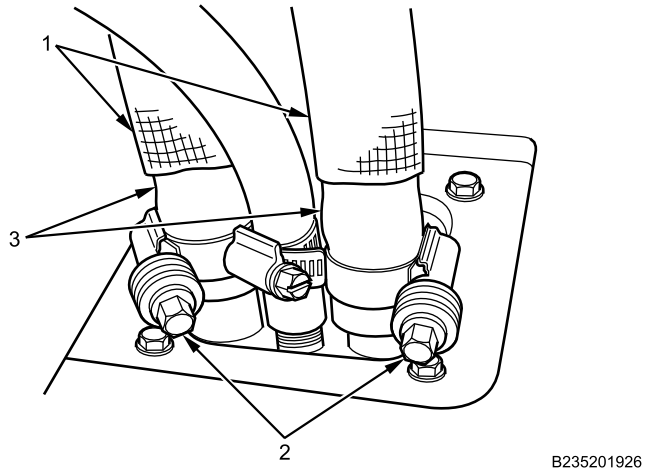


Figure 3. Heater Hose Connections at Floor.

3. Position drain pan near heater hose connections at floor.
4. Loosen clamps (Figure 3, Item 2), disconnect heater hoses (Figure 3, Item 3) from cabin floor, and allow coolant to drain into drain pan. Remove clamps from heater hoses. Discard clamps.
5. Remove cable lock strap securing heat shield (Figure 3, Item 1) to heater hoses (Figure 3, Item 3). Discard cable lock strap.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CABIN HEATER HOSE REMOVAL AND INSTALLATION - (CONTINUED)

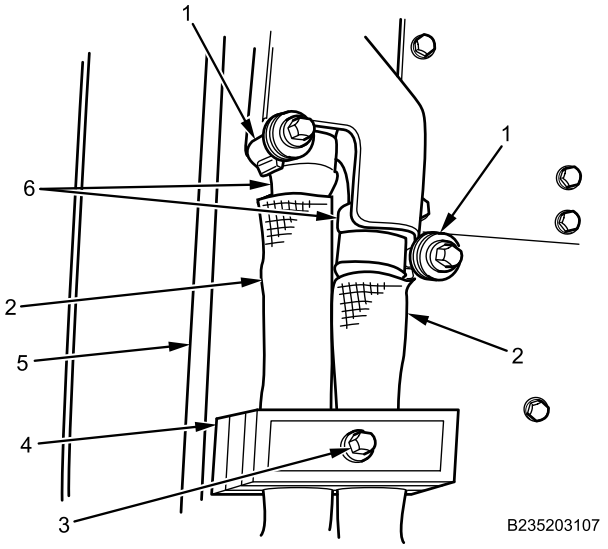


Figure 4. Heater Hose Connections at Life Support System (LSS) Box.

6. Remove bolt (Figure 4, Item 3) and washer from support block (Figure 4, Item 4).
7. Loosen clamps (Figure 4, Item 1) and disconnect heater hoses (Figure 4, Item 6) from LSS box (Figure 4, Item 5). Remove clamps from heater hoses. Discard clamps.
8. Remove heat shields (Figure 4, Item 2) from heater hoses (Figure 4, Item 6).

END OF TASK

INSTALLATION

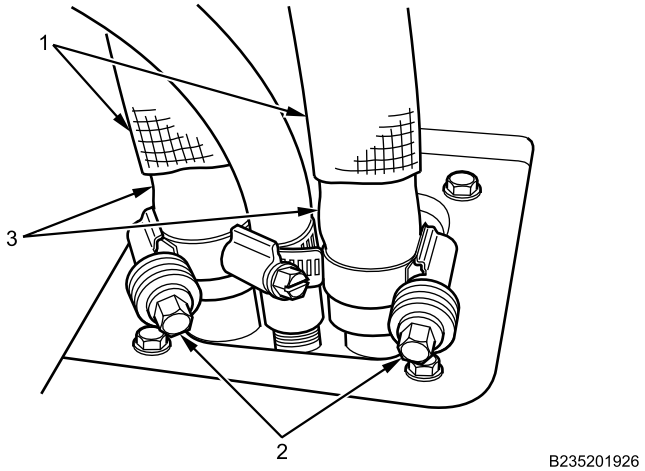


Figure 5. Heater Hose Connections at Floor.

1. Install heat shield (Figure 5, Item 1) on heater hoses (Figure 5, Item 3).
2. Position new clamps (Figure 5, Item 2) on end of heater hoses (Figure 5, Item 3) and connect heater hoses to cabin floor. Tighten clamps securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CABIN HEATER HOSE REMOVAL AND INSTALLATION - (CONTINUED)

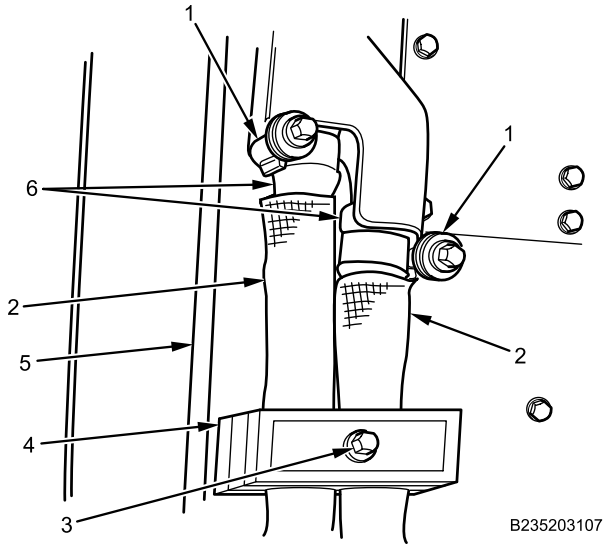


Figure 6. Heater Hose Connections at LSS Box.

3. Position new clamps (Figure 6, Item 1) on end of heater hoses (Figure 6, Item 6) and connect heater hose to LSS box (Figure 6, Item 5). Tighten clamp securely.
4. Install support block (Figure 6, Item 4) over heater hoses (Figure 6, Item 6) and heat shields (Figure 6, Item 2) with bolt (Figure 6, Item 3) and washer. Tighten bolt securely.

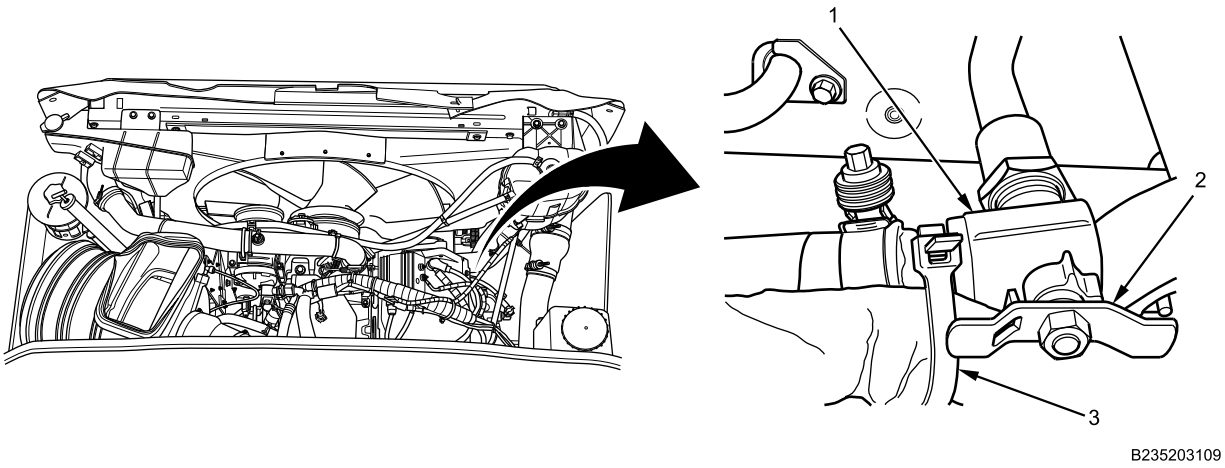


Figure 7. Heater Coolant Engine Outlet Valve.

5. Open valve (Figure 7, Item 1) by turning handle (Figure 7, Item 2) counterclockwise.
6. Install new cable lock strap (Figure 7, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CABIN HEATER HOSE REMOVAL AND INSTALLATION - (CONTINUED)

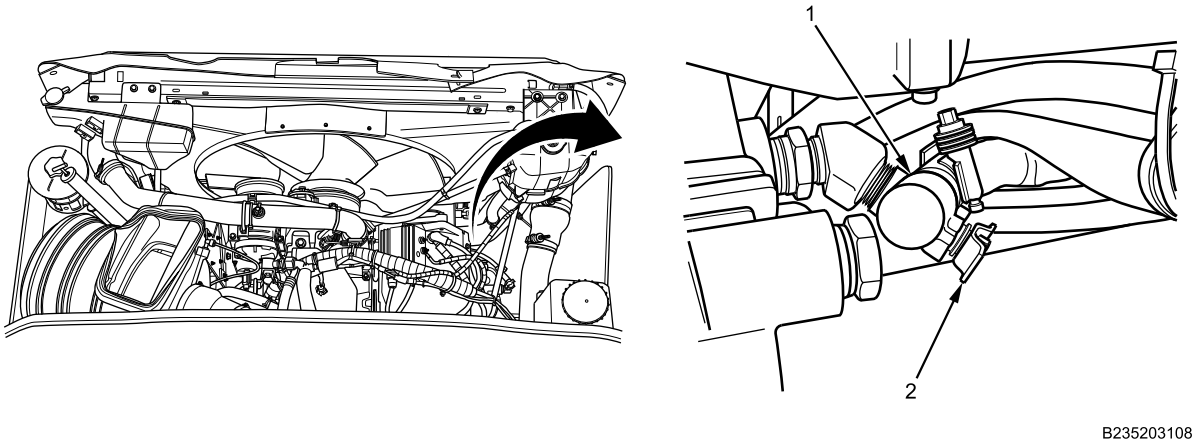


Figure 8. Heater Coolant Engine Inlet Valve.

7. Open valve (Figure 8, Item 1) by turning handle (Figure 8, Item 2) counterclockwise.
8. Install all cable lock straps and tighten securely.
9. Remove drain pan.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill cooling system (WP 0277).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Turn engine on (TM 9-2355-106-10).
4. Verify correct HVAC system operation (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Close and secure engine hood (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT OUTLET HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5 gal. capacity (WP 0795, Item 75)

Materials/Parts
Gloves (WP 0794, Item 19)
Goggles, industrial (WP 0794, Item 20)
Wire (WP 0794, Item 57)
Cable lock strap - (6) (WP 0796, Item 120)
Clamp - (2) (WP 0796, Item 140)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0277
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Batteries disconnected (WP 0404)
Right AC condenser panel removed (WP 0672)
Right engine armor plate removed (WP 0599)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Engine components become extremely hot during normal operation. Allow engine to cool completely prior to performing maintenance. Use extreme care when working in close quarters in engine compartment. Stay clear of rotating parts. Wear safety goggles, work gloves, and long sleeves or shop coat. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Remove and discard cable lock strap (Figure 1, Item 3).

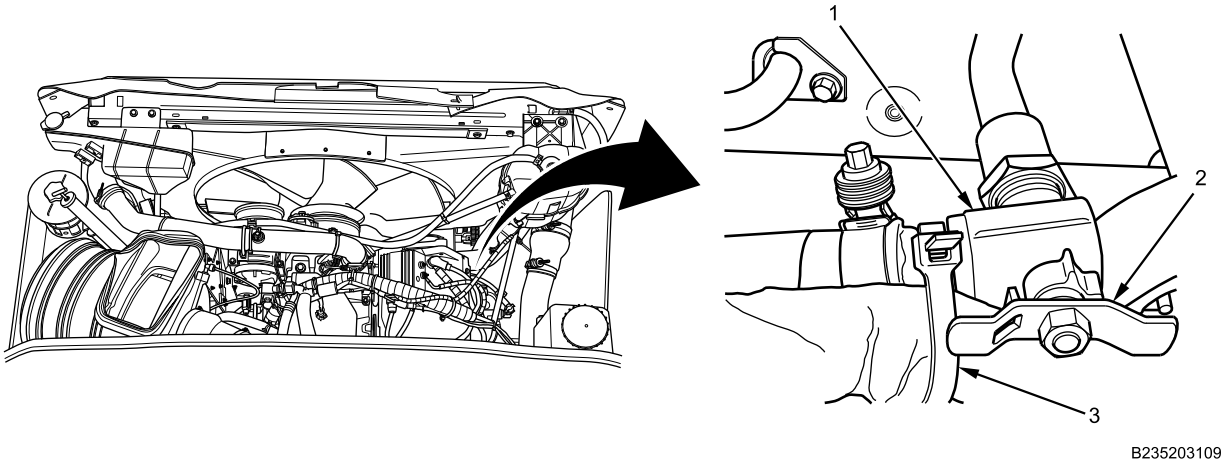


Figure 1. Heater Coolant Engine Outlet Valve.

2. Close heater coolant engine outlet valve (Figure 1, Item 1) by turning valve handle (Figure 1, Item 2) clockwise.
3. Close heater coolant engine inlet valve (Figure 2, Item 1) by turning valve handle (Figure 2, Item 5) clockwise.

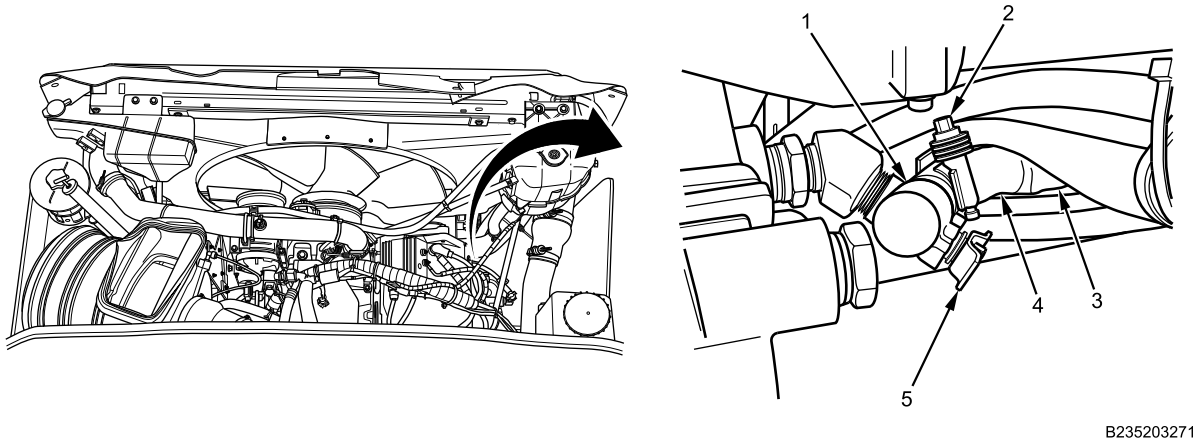


Figure 2. Heater Coolant Engine Inlet Valve.

4. Position drain pan under engine inlet valve (Figure 2, Item 1).
5. Loosen clamp (Figure 2, Item 2) and disconnect fuel-fired heater inlet hose (Figure 2, Item 4) and heat shielding (Figure 2, Item 3) from valve (Figure 2, Item 1). Allow coolant to drain into drain pan. Remove and discard clamp (Figure 2, Item 2) from fuel-fired heater inlet hose.
6. Disconnect fuel-fired heater harness connection (Figure 3, Item 5) and set aside.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

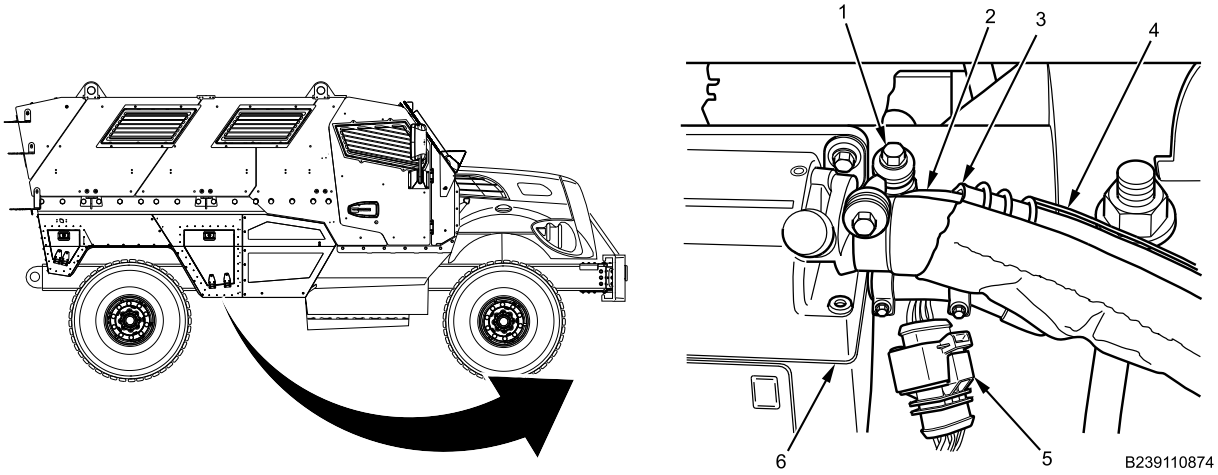


Figure 3. Hose Connections at Fuel-Fired Heater.

7. Loosen clamp (Figure 3, Item 1) and disconnect fuel-fired heater outlet hose (Figure 3, Item 2) and heat shielding (Figure 3, Item 3) from fuel-fired heater (Figure 3, Item 6). Remove and discard clamp (Figure 3, Item 1) from fuel-fired heater outlet hose.
8. Securely connect mechanic's wire (Figure 3, Item 4) to end of fuel-fired heater outlet hose (Figure 3, Item 2) near fuel-fired heater (Figure 3, Item 6).
9. From engine compartment, pull fuel-fired heater outlet hose (Figure 3, Item 2), heat shielding (Figure 3, Item 3), and mechanic's wire (Figure 3, Item 4) into engine compartment. Remove and discard cable strap locks as necessary. Disconnect mechanic's wire (Figure 3, Item 4) from fuel-fired heater outlet hose.
10. Remove heat shielding (Figure 3, Item 3) from fuel-fired heater outlet hose (Figure 3, Item 2).

END OF TASK

INSTALLATION

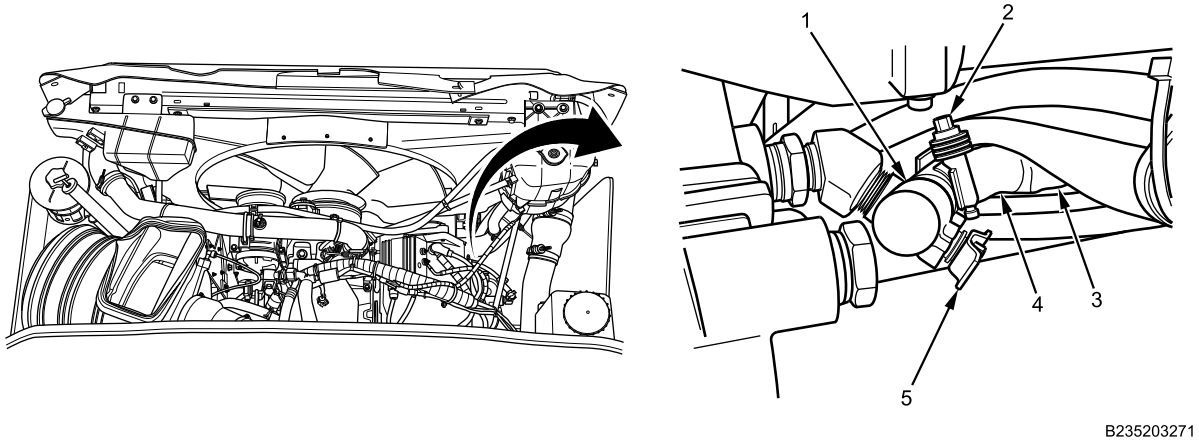


Figure 4. Fuel-Fired Heater Outlet Hose.

1. Install heat shielding (Figure 4, Item 4) on fuel-fired heater outlet hose (Figure 4, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

2. Securely tie end of mechanic's wire (Figure 5, Item 3) at engine compartment to fuel-fired heater outlet hose (Figure 5, Item 1).

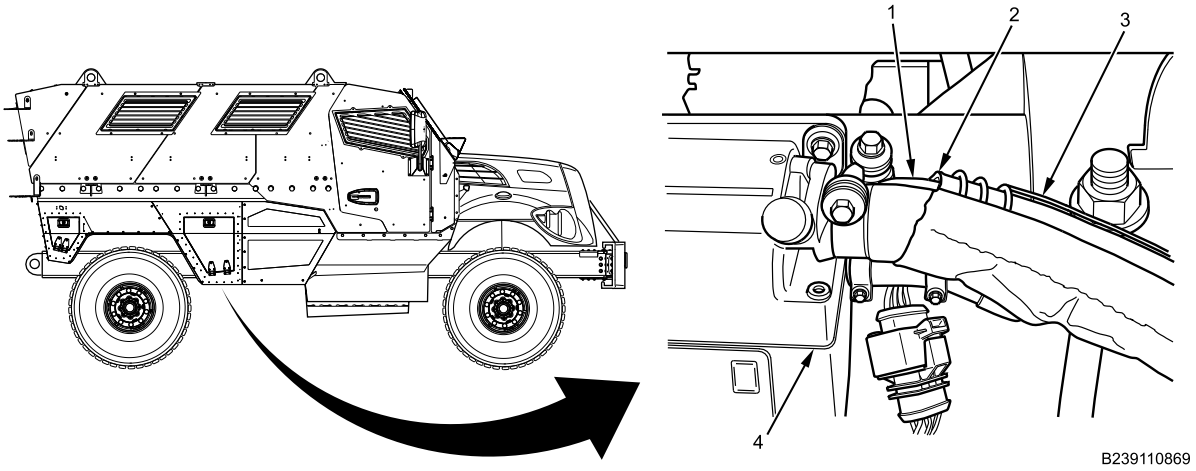


Figure 5. Fuel-Fired Heater Outlet Hose.

3. From fuel-fired heater (Figure 5, Item 4), pull mechanic's wire (Figure 5, Item 3), fuel-fired heater outlet hose (Figure 5, Item 1), and heat shielding (Figure 5, Item 2) to fuel-fired heater. Disconnect mechanic's wire from fuel-fired heater outlet hose.
4. Position new clamp (Figure 6, Item 1) on end of fuel-fired heater outlet hose (Figure 6, Item 2).

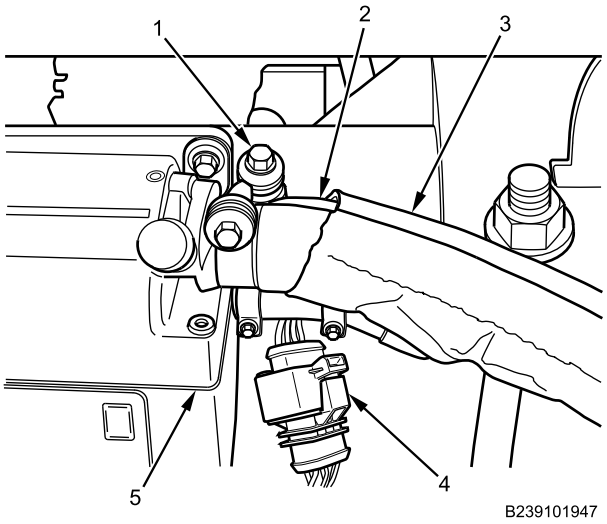


Figure 6. Hose Connections at Fuel-Fired Heater.

5. Connect fuel-fired heater outlet hose (Figure 6, Item 2) and heat shielding (Figure 6, Item 3) to fuel-fired heater (Figure 6, Item 5) with clamp (Figure 6, Item 1) and tighten securely.
6. Connect fuel-fired heater harness connection (Figure 6, Item 4).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

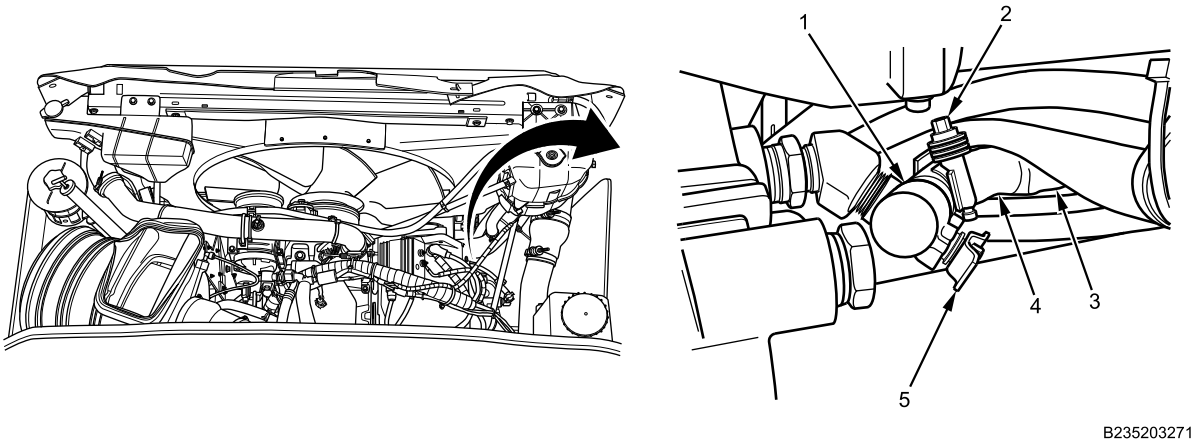


Figure 7. Heater Coolant Engine Inlet Valve Installation.

7. Position new clamp (Figure 7, Item 2) on fuel-fired outlet hose (Figure 7, Item 4).
8. Connect fuel-fired outlet hose (Figure 7, Item 4) and heat shielding (Figure 7, Item 3) to valve (Figure 7, Item 1) with clamp (Figure 7, Item 2) and tighten securely.
9. Open heater coolant engine valve (Figure 7, Item 1) by turning valve handle (Figure 7, Item 5) counterclockwise.
10. Open heater coolant engine outlet valve (Figure 8, Item 1) by turning valve handle (Figure 8, Item 2) counterclockwise.

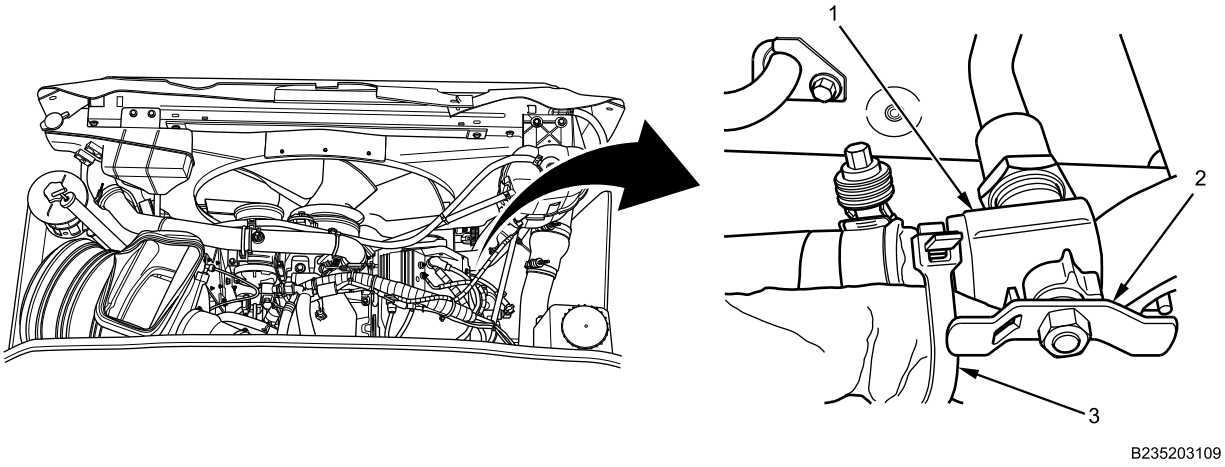


Figure 8. Heater Coolant Engine Outlet Valve.

11. Remove drain pan.
12. Install new cable lock straps (Figure 8, Item 3) where removed.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT OUTLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Fill cooling system (WP 0277).
2. Install right A/C condenser panel (WP 0672).
3. Install right engine armor plate (WP 0599).
4. Turn MAIN POWER switch on (TM 9-2355-106-10).
5. Verify correct HVAC operation (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Close and secure engine hood (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT INLET HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5 gal. capacity (WP 0795, Item 75)

Materials/Parts
Cable lock strap - (6) (WP 0796, Item 120)
Clamp - (2) (WP 0796, Item 140)
Goggles, industrial (WP 0794, Item 20)
Gloves (WP 0794, Item 19)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Right side engine armor plate removed (WP 0599)

REMOVAL

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Engine components become extremely hot during normal operation. Allow engine to cool completely prior to performing maintenance. Use extreme care when working in close quarters in engine compartment. Stay clear of rotating parts. Wear safety goggles, work gloves, and long sleeves or shop coat. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

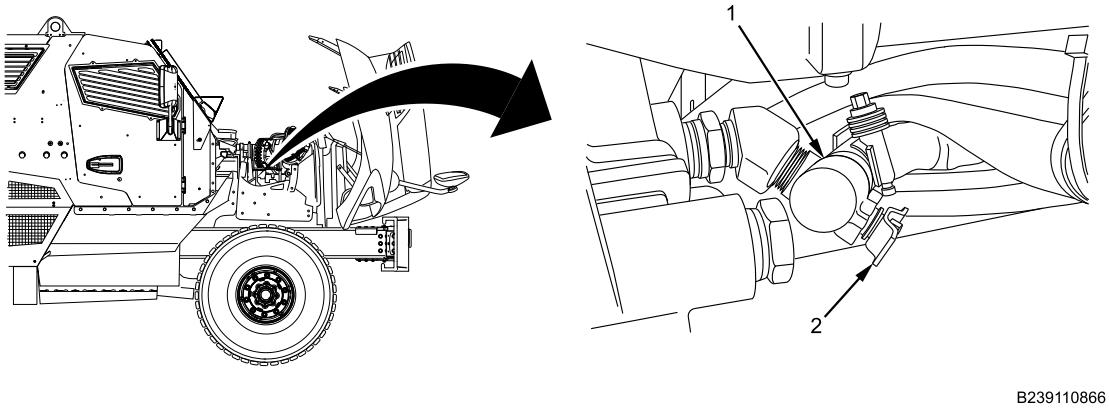


Figure 1. Inlet Valve To Water Pump From Heater.

1. Close inlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise.

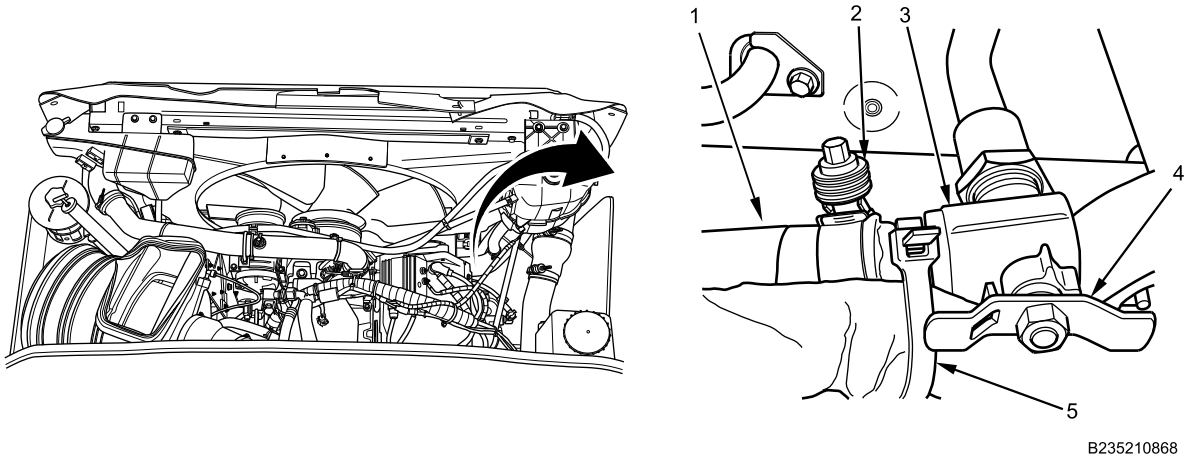


Figure 2. Inlet Hose To Engine From Heater.

2. Position drain pan under inlet valve (Figure 2, Item 3).
3. Remove and discard cable lock straps (Figure 2, Item 5) as necessary.
4. Close inlet valve (Figure 2, Item 3) by turning inlet valve handle (Figure 2, Item 4) clockwise.
5. Loosen clamp (Figure 2, Item 2) and disconnect hose (Figure 2, Item 1) from inlet valve (Figure 2, Item 3). Allow coolant to drain into drain pan. Remove clamp from hose. Discard clamp.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

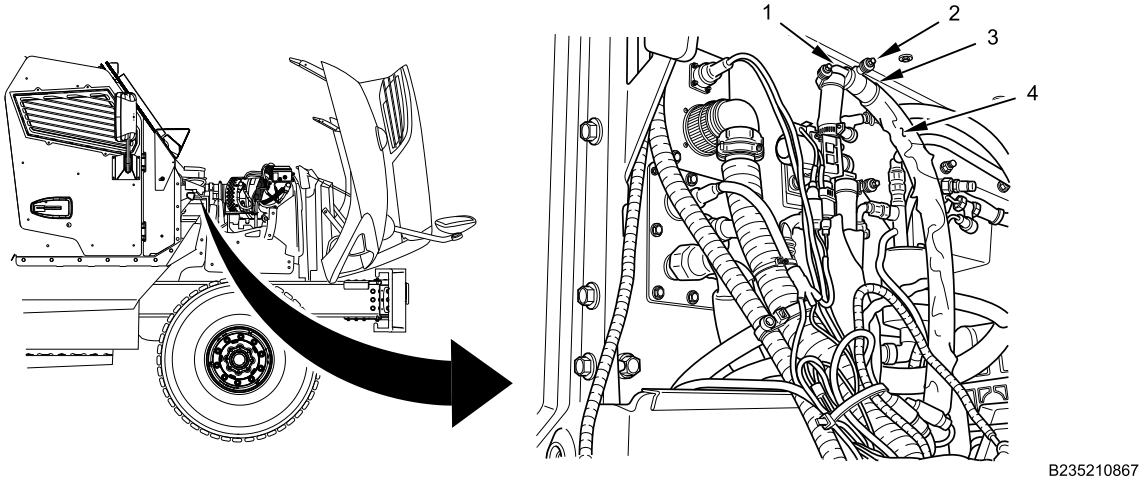


Figure 3. 3-Way Valve.

6. Loosen clamp (Figure 3, Item 2) and disconnect hose (Figure 3, Item 3) from elbow (Figure 3, Item 1). Remove hose. Remove clamp from hose. Discard clamp.
7. Remove heat shielding (Figure 3, Item 4) from hose (Figure 3, Item 3).

END OF TASK

INSTALLATION

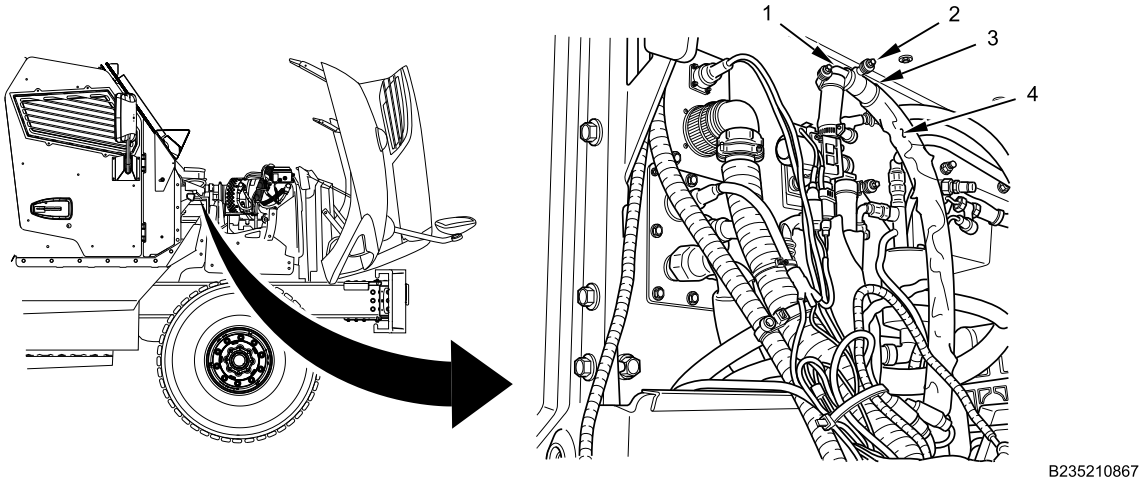


Figure 4. 3-Way Valve.

1. Install heat shielding (Figure 4, Item 4) on hose (Figure 4, Item 3).
2. Position new clamp (Figure 4, Item 2) on hose (Figure 4, Item 3).
3. Connect hose (Figure 4, Item 3) to elbow (Figure 4, Item 1) with clamp (Figure 4, Item 2) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

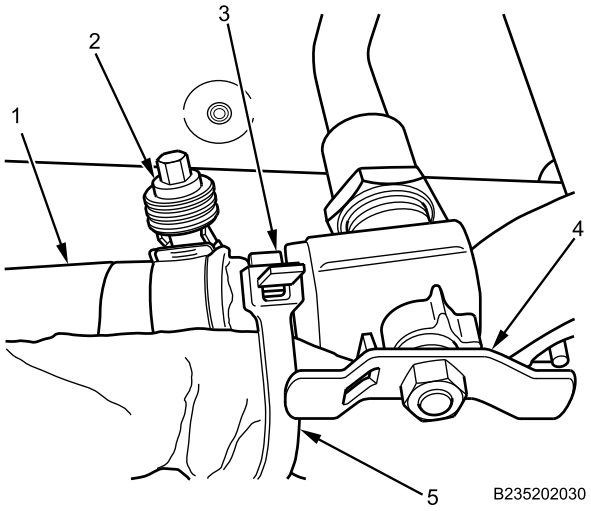


Figure 5. Inlet Hose To Engine From Heater.

4. Position new clamp (Figure 5, Item 2) on hose (Figure 5, Item 1).
5. Connect hose (Figure 5, Item 1) to inlet valve (Figure 5, Item 3) and tighten clamp (Figure 5, Item 2) securely.
6. Open inlet valve (Figure 5, Item 3) by turning inlet valve handle (Figure 5, Item 4) counterclockwise.
7. Install new cable lock straps (Figure 5, Item 5) where removed.

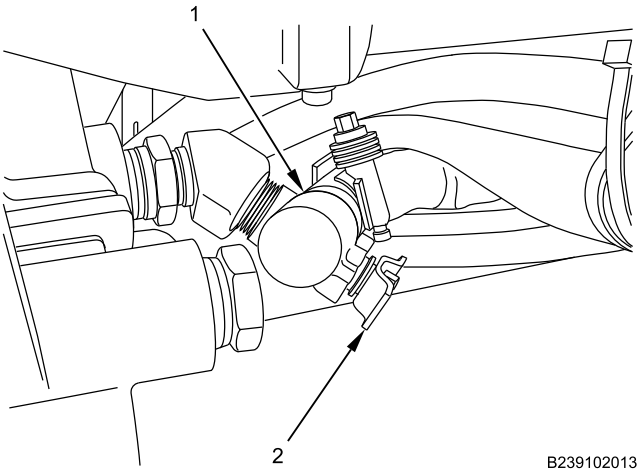


Figure 6. Inlet Valve To Water Pump From Heater.

8. Open inlet valve (Figure 6, Item 1) by turning handle (Figure 6, Item 2) counterclockwise.
9. Remove drain pan.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill cooling system (WP 0277).
2. Install right side engine armor plate (WP 0599).
3. Close and secure engine hood (TM 9-2355-106-10).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) 3-WAY VALVE COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

4. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5 gal. capacity (WP 0795, Item 75)

Materials/Parts
Wire (WP 0794, Item 57)
Cable lock strap - (6) (WP 0796, Item 120)
Clamp, screw - (5) (WP 0796, Item 140)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0277
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Batteries disconnected (WP 0404)
Right A/C condenser panel removed (WP 0672)
Right side engine armor plate removed (WP 0599)

REMOVAL

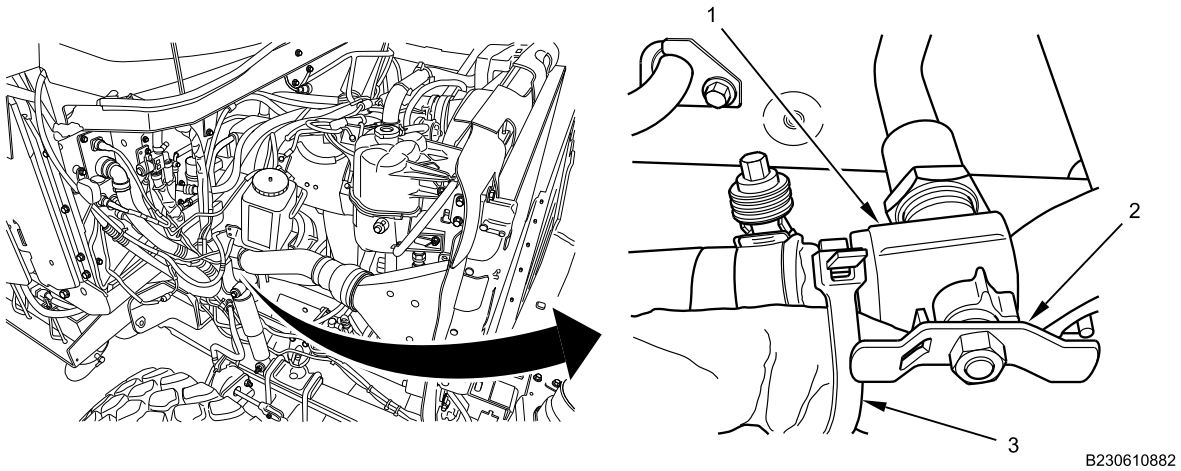


Figure 1. Heater Coolant Engine Outlet Valve.

1. Close outlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap (Figure 1, Item 3) if necessary.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

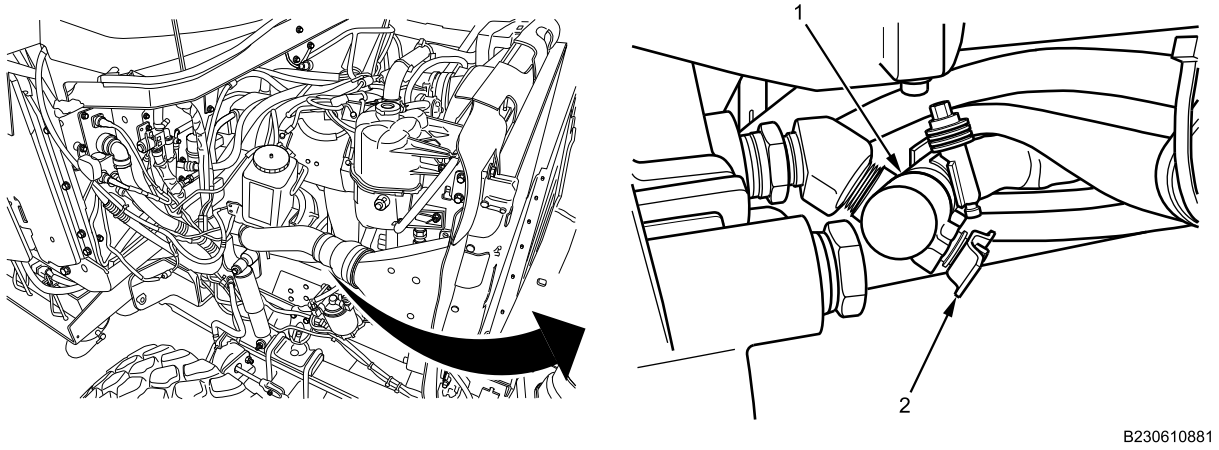


Figure 2. Heater Coolant Engine Inlet Valve.

2. Close inlet valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.
3. Position drain pan under fuel-fired heater hose connections.
4. Disconnect harness connector (Figure 3, Item 4) and set aside.

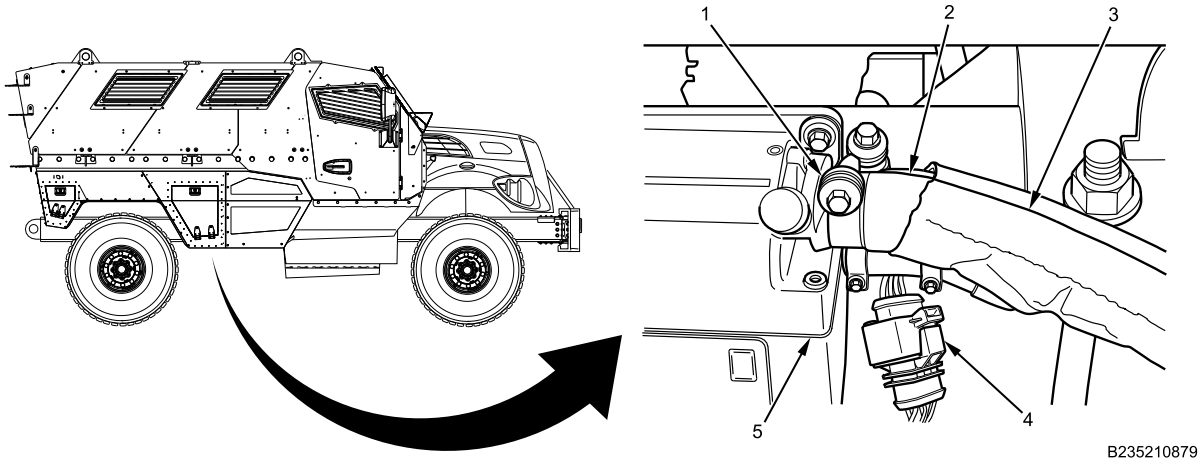


Figure 3. Fuel-Fired Heater Hose Connections.

5. Loosen clamp (Figure 3, Item 1) and disconnect hose (Figure 3, Item 2) and heat shielding (Figure 3, Item 3) from fuel-fired heater (Figure 3, Item 5). Allow coolant to drain into drain pan. Remove and discard clamp (Figure 3, Item 1) from hose (Figure 3, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

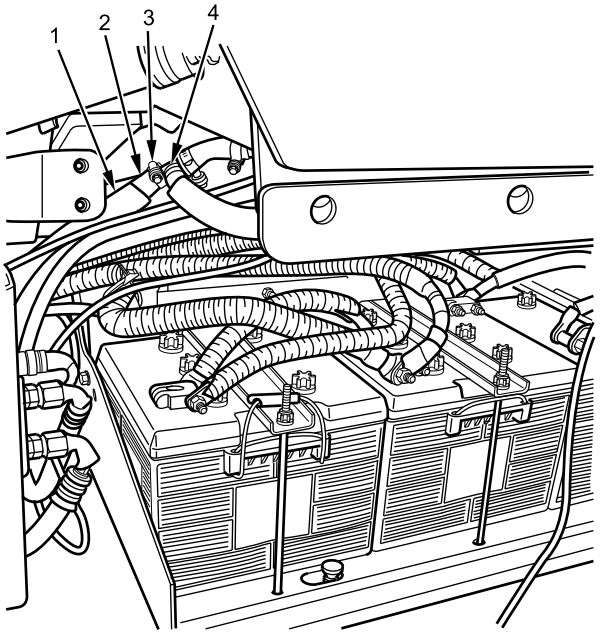


Figure 4. Fuel-Fired Heater Inlet Hose at Penetration Dust Plate.

6. Loosen clamp (Figure 4, Item 3), disconnect hose (Figure 4, Item 2) and heat shielding (Figure 4, Item 1) from tee (Figure 4, Item 4), and remove hose and heat shielding (Figure 4, Item 1). Remove and discard clamp (Figure 4, Item 3) and heat shielding (Figure 4, Item 1) from hose.

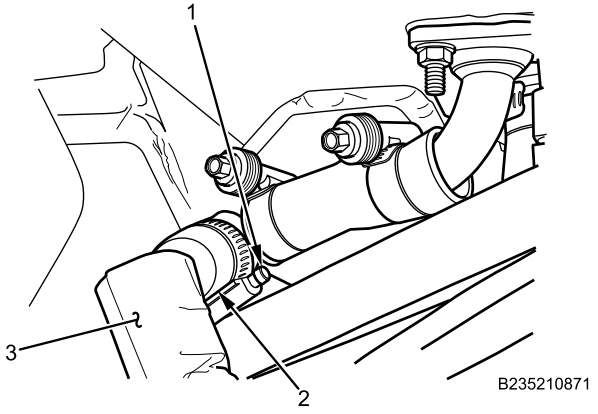


Figure 5. Fuel-Fired Heater Hose Tee.

7. Loosen clamp (Figure 5, Item 1) and disconnect hose (Figure 5, Item 2) and heat shielding (Figure 5, Item 3) from tee.
8. Securely connect mechanic's wire to hose (Figure 5, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

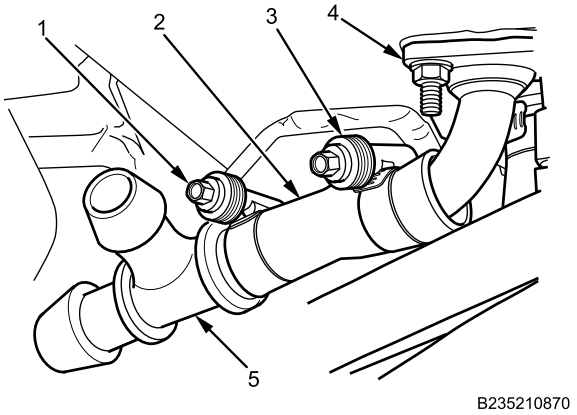


Figure 6. Fuel-Fired Hose Tee and Dust Plate.

9. Loosen clamps (Figure 6, Item 1 and 3) and separate hose (Figure 6, Item 2) from tee (Figure 6, Item 5) and dust plate (Figure 6, Item 4).

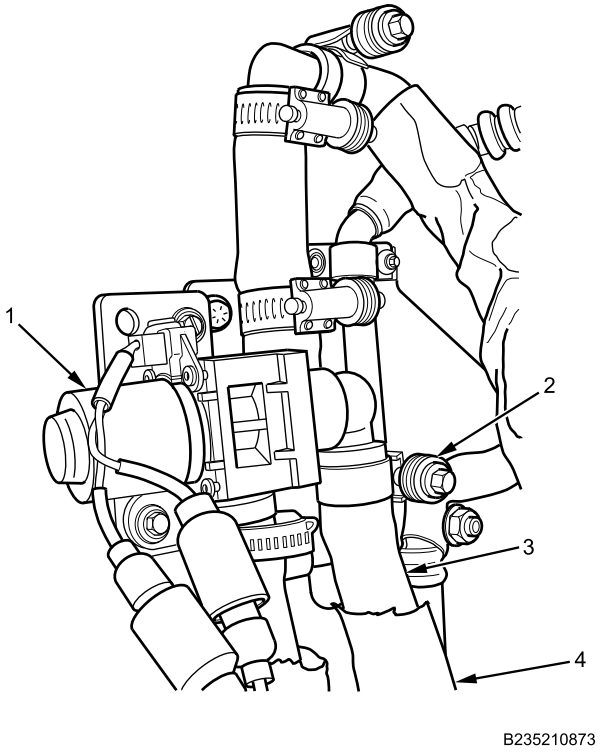


Figure 7. Fuel-Fired Heater Inlet Hose at 3-Way Valve.

10. Loosen clamp (Figure 7, Item 2) and disconnect inlet hose (Figure 7, Item 3) and heat shielding (Figure 7, Item 4) from 3-way valve (Figure 7, Item 1). Remove and discard clamp (Figure 7, Item 2) from hose.
11. Remove and discard cable lock straps as necessary.
12. From engine compartment, pull inlet hose (Figure 7, Item 3), heat shielding, and mechanic's wire to engine compartment. Remove mechanic's wire and heat shield from hose.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

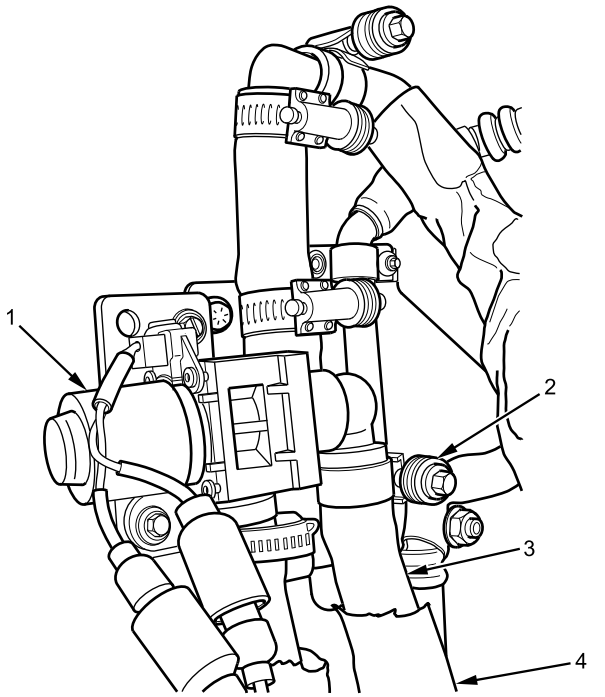


Figure 8. Fuel-Fired Heater Inlet Hose at 3-Way Valve.

1. Install heat shielding (Figure 8, Item 4) on inlet hose (Figure 8, Item 3).
2. Securely connect mechanic's wire at engine compartment to inlet hose (Figure 8, Item 3).
3. From dust plate, pull mechanic's wire, inlet hose (Figure 8, Item 2), and heat shielding to dust plate. Remove mechanic's wire.
4. Position new clamp (Figure 8, Item 1) on inlet hose (Figure 8, Item 2).
5. Connect inlet hose (Figure 8, Item 2) and heat shielding (Figure 8, Item 3) to 3-way valve (Figure 8, Item 1) with clamp (Figure 8, Item 2) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

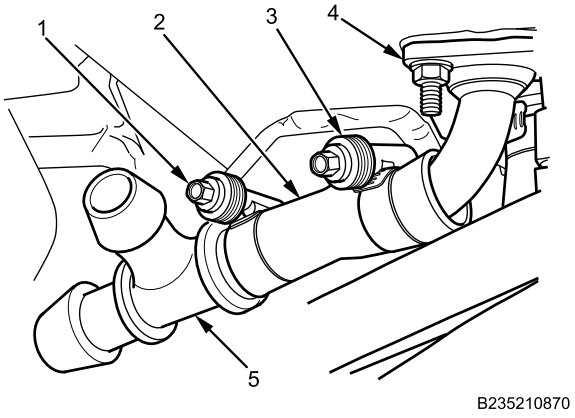


Figure 9. Fuel-Fired Heater Inlet Hose at Penetration Dust Plate.

6. Position new clamp (Figure 9, Item 1 and 3) on each end of hose (Figure 9, Item 2).
7. Connect hose (Figure 9, Item 2) to tee and dust plate (Figure 9, Item 4) with clamps (Figure 9, Item 1 and 3) and tighten securely.

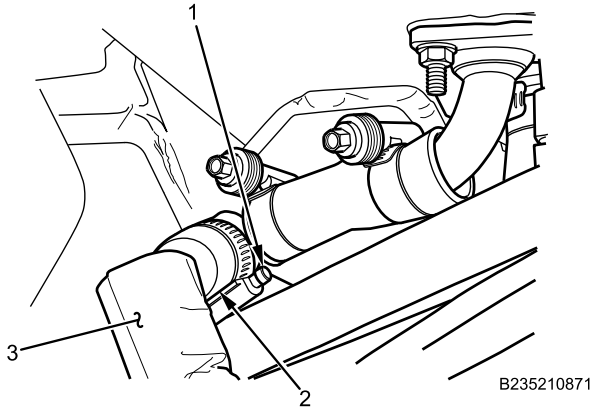


Figure 10. Fuel-Fired Heater Hose Tee.

8. Position new clamp (Figure 10, Item 1) on inlet hose (Figure 10, Item 2).
9. Connect inlet hose (Figure 10, Item 2) and heat shielding to tee with clamp (Figure 10, Item 1) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

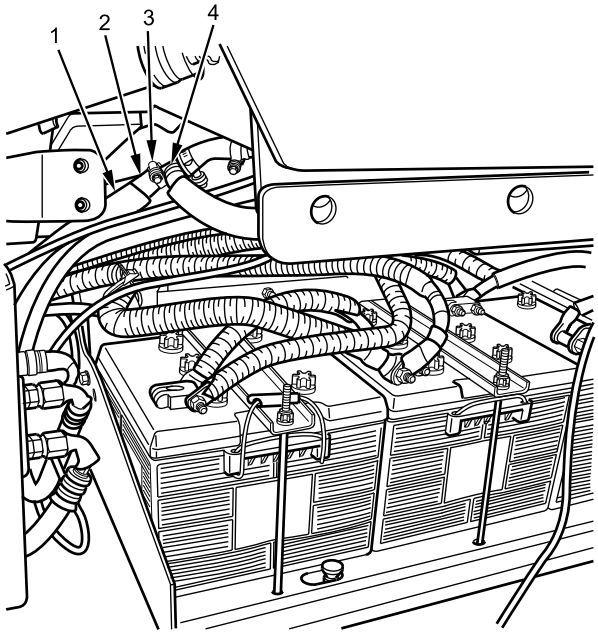


Figure 11. Fuel-Fired Heater Inlet Hose.

10. Connect hose (Figure 11, Item 2) and heat shielding (Figure 11, Item 1) to tee (Figure 11, Item 4) with clamp (Figure 11, Item 3) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

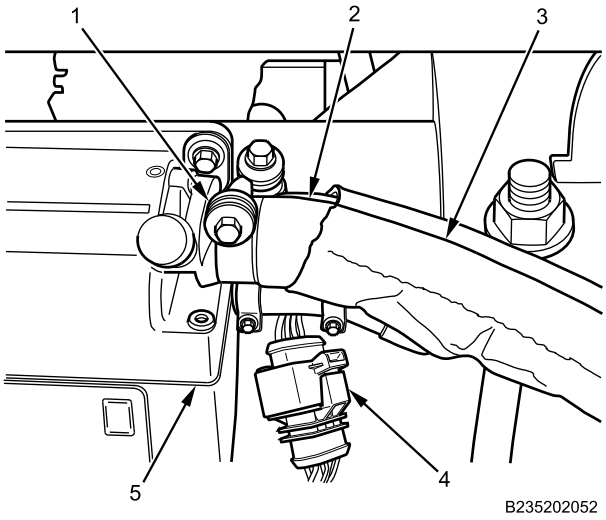


Figure 12. Fuel-Fired Heater Hose Connections.

11. Position new clamp (Figure 12, Item 1) on hose (Figure 12, Item 2).
12. Connect hose (Figure 12, Item 2) and heat shielding (Figure 12, Item 3) to fuel-fired heater (Figure 12, Item 5) with clamp (Figure 12, Item 1) and tighten securely.
13. Connect harness connector (Figure 12, Item 4).
14. Remove drain pan.

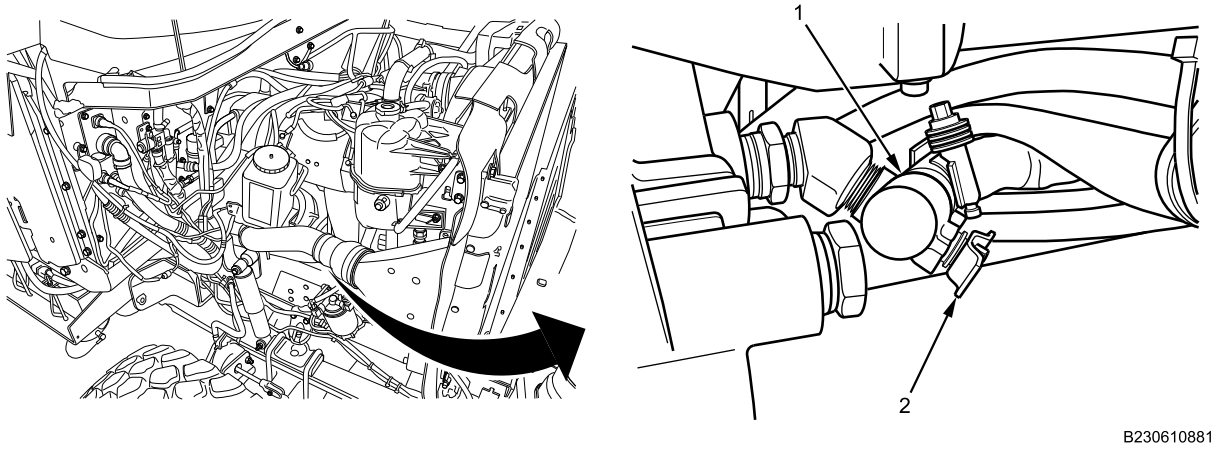


Figure 13. Heater Coolant Engine Inlet Valve.

15. Open valve (Figure 13, Item 1) by turning handle (Figure 13, Item 2) counterclockwise.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) FUEL-FIRED HEATER COOLANT INLET HOSE REMOVAL AND INSTALLATION - (CONTINUED)

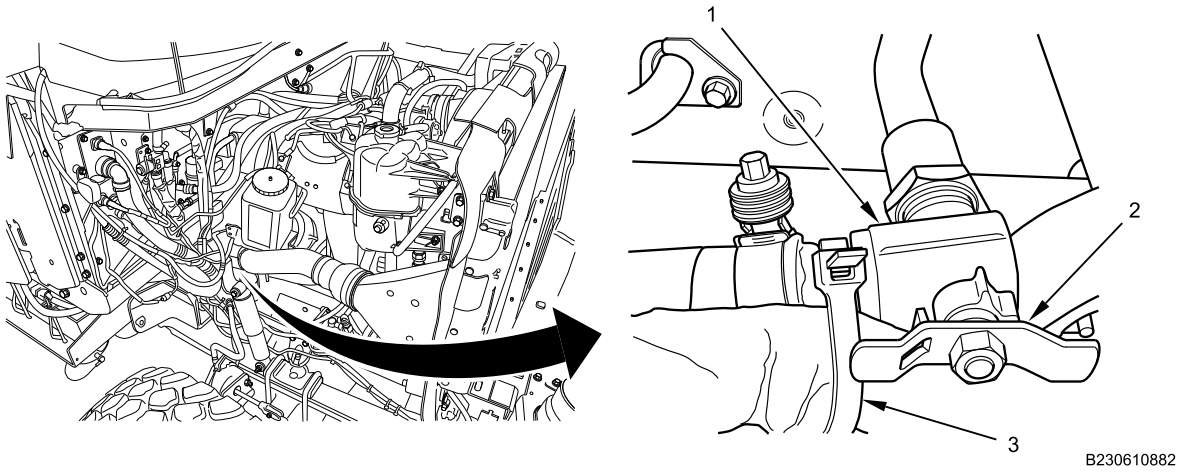


Figure 14. Heater Coolant Engine Outlet Valve.

16. Open valve (Figure 14, Item 1) by turning handle (Figure 14, Item 2) counterclockwise. Install new cable lock straps (Figure 14, Item 3) where necessary if removed.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill cooling system (WP 0277).
2. Install right front vent panel (WP 0672).
3. Install right side engine armor plate (WP 0599).
4. Close battery box cover (TM 9-2355-106-10).
5. Close and secure engine hood (TM 9-2355-106-10).
6. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FUEL-FIRED HEATER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain (WP 0795, Item 75)

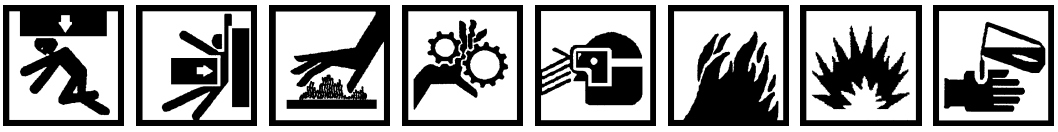
Materials/Parts
Compound (WP 0794, Item 13)
Faceshield, industrial (WP 0794, Item 16)
Gloves (WP 0794, Item 19)
Goggles, industrial (WP 0794, Item 20)
Grease (WP 0794, Item 22)
Cable lock strap - (1) (WP 0796, Item 120)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Right air conditioning (A/C) condenser panel removed (WP 0672)

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Engine components become extremely hot during normal operation. Allow engine to cool completely prior to performing maintenance. Use extreme care when working in close quarters in engine compartment. Stay clear of rotating parts. Wear safety goggles, work gloves, and long sleeves or shop coat. Failure to comply may result in serious injury or death to personnel.

Fuel is flammable and can explode. Keep all open flames, flammable materials, ignition sources, and sparks away from diesel fuel and keep fire extinguisher nearby. Do not smoke when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. Failure to comply may result in serious injury or death to personnel.

Be alert at all times for the smell of fuel. Hot engines and components can ignite fuel. If fuel smell is detected while operating vehicle, shut down vehicle immediately. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Store diesel fuel in an approved container clearly marked DIESEL FUEL or JP-8, accordingly. Dispose of fuel in an approved container clearly marked DIESEL FUEL or JP-8, accordingly, in accordance with standard operating procedures.

Never use diesel fuel or JP-8 to clean parts. Fuel is highly flammable. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Dispose of used parts, rags, containers, and engine fluids in accordance with standard operating procedures. Failure to comply may result in serious injury to personnel.

Cooling system components become pressurized and extremely hot during normal operation. To prevent serious injury from hot coolant or scalding steam, use the following safety procedure when removing radiator cap, surge tank cap, or deaeration cap:

• Allow engine to cool for 15 minutes.

• Wrap a thick cloth around cap to be removed.

• Loosen cap slowly one-quarter to one-half turn counterclockwise, and pause to allow pressure to release.

• Continue to turn cap counterclockwise to remove.

• Ensure all personnel stay clear of radiator while engine is running. Air in radiator will be released, which may cause hot coolant to spray out. Failure to comply may result in serious injury to personnel.

Wear safety goggles and work gloves while servicing cooling system. Label all connections and reference areas before removing parts. Failure to comply may result in damage to equipment and serious injury or death to personnel.

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

REMOVAL

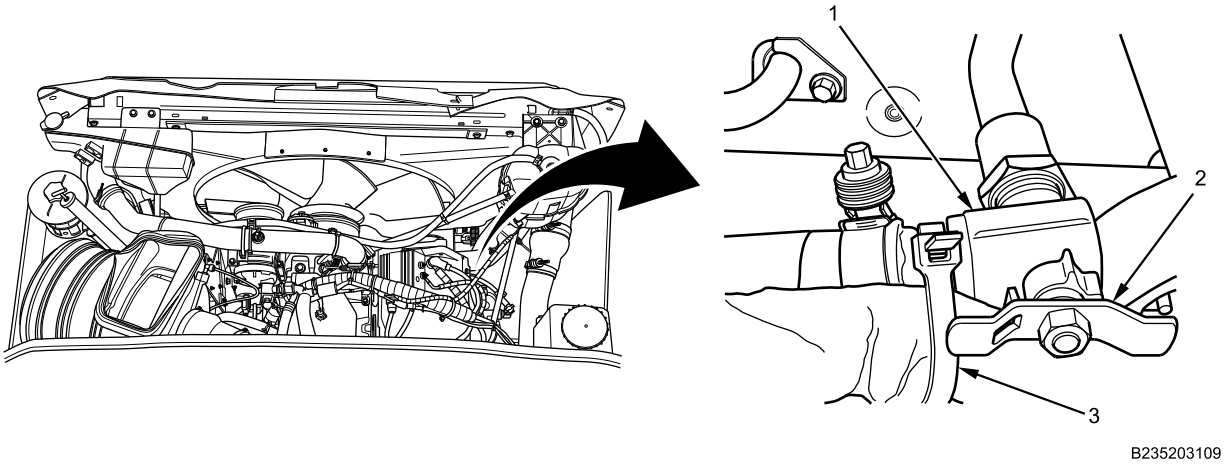


Figure 1. Heater Coolant Engine Outlet Valve.

1. Close outlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap (Figure 1, Item 3) if necessary.

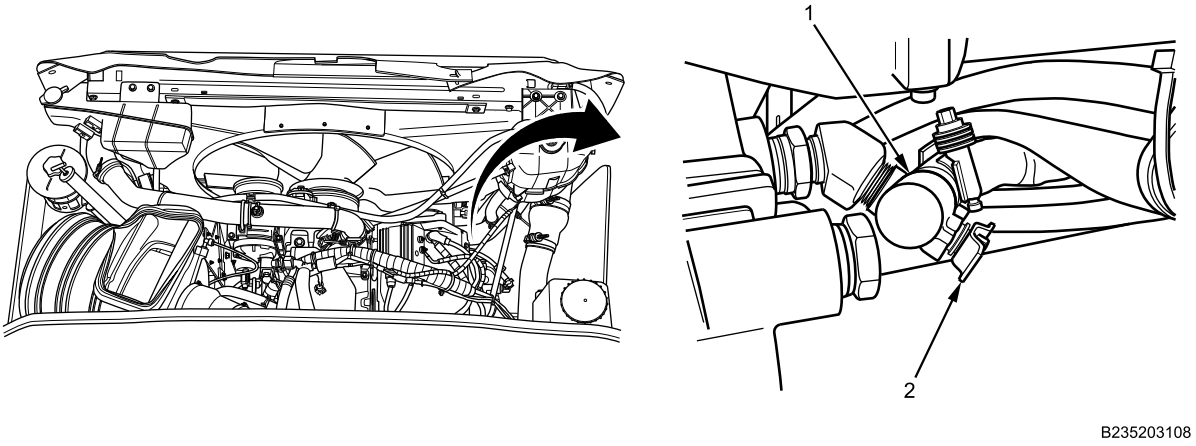


Figure 2. Heater Coolant Engine Inlet Valve.

2. Close inlet valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

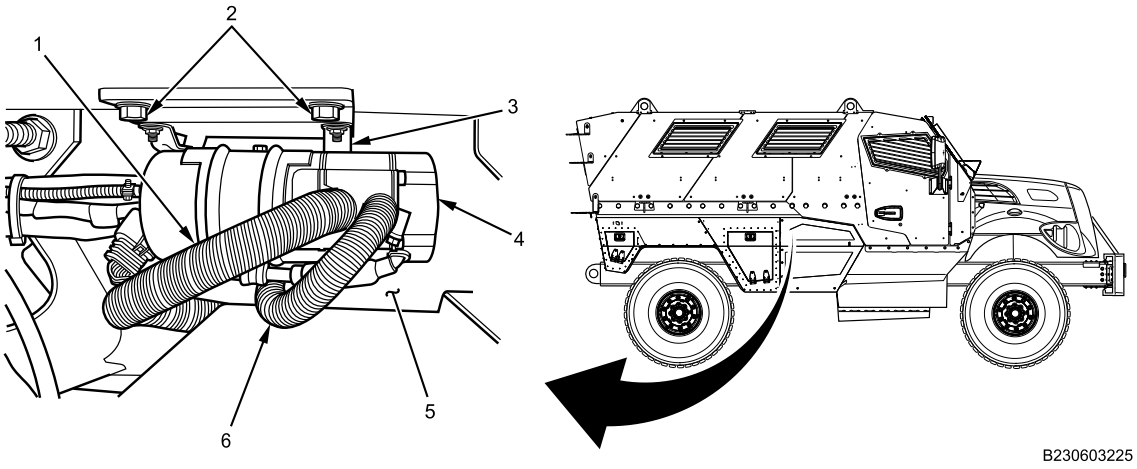


Figure 3. Fuel-Fired Heater Mounted.

NOTE

Label all hoses, lines, and electrical connections before removal of heater.

Plug all hose, line, and heater fluid openings to avoid excess spillage.

3. Loosen clamp on exhaust hose (Figure 3, Item 1) and remove exhaust hose from heater (Figure 3, Item 4).
4. Loosen clamp on intake air hose (Figure 3, Item 6) and remove intake air hose from heater (Figure 3, Item 4).
5. Remove two bolts and nuts (Figure 3, Item 2) from fuel-fired heater support on frame rail (Figure 3, Item 5).

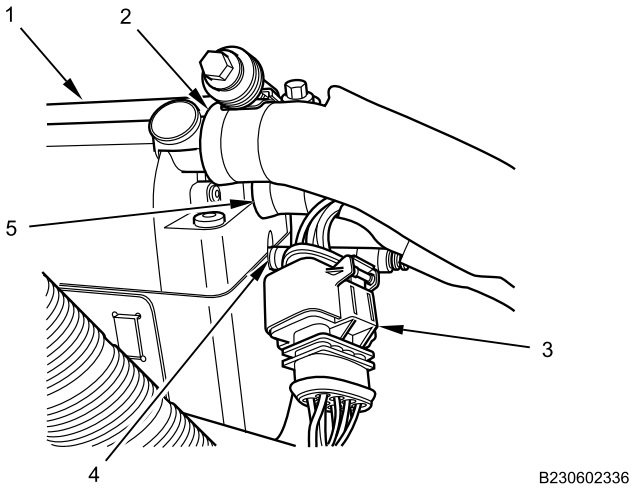


Figure 4. Fuel-Fired Heater Coolant Hoses.

6. Disconnect electrical connector (Figure 4, Item 3) from heater (Figure 4, Item 1).
7. Place drain pan under fuel-fired heater (Figure 4, Item 1)
8. Loosen clamp on coolant inlet hose, (Figure 4, Item 2) and remove coolant inlet hose from heater (Figure 4, Item 1).
9. Loosen clamp on coolant outlet hose, (Figure 4, Item 5) and remove coolant outlet hose from heater (Figure 4, Item 1).
10. Loosen clamp on fuel line, (Figure 4, Item 4) and remove fuel line from heater (Figure 4, Item 1).

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

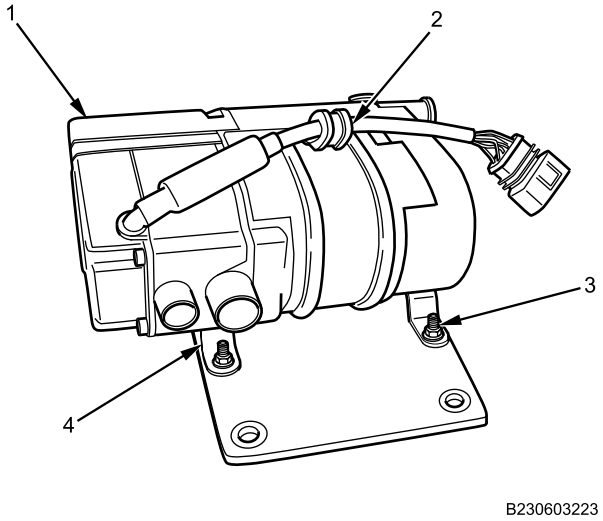


Figure 5. Fuel-Fired Heater.

11. Remove four bolts, nuts, and washers (Figure 5, Item 3) from heater mounting bracket (Figure 5, Item 4). Remove bracket with heater (Figure 5, Item 1) from frame rail.
12. Remove center safety bolt securing heater (Figure 5, Item 1) and wiring harness clamp (Figure 5, Item 2) to mounting bracket (Figure 5, Item 4).

NOTE

There are two center safety bolts. One must be removed (outboard), while the other one (inboard) only needs to be loosened.

13. Loosen second center safety bolt (inboard) and separate heater (Figure 5, Item 1) from bracket.

END OF TASK

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full faceshield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

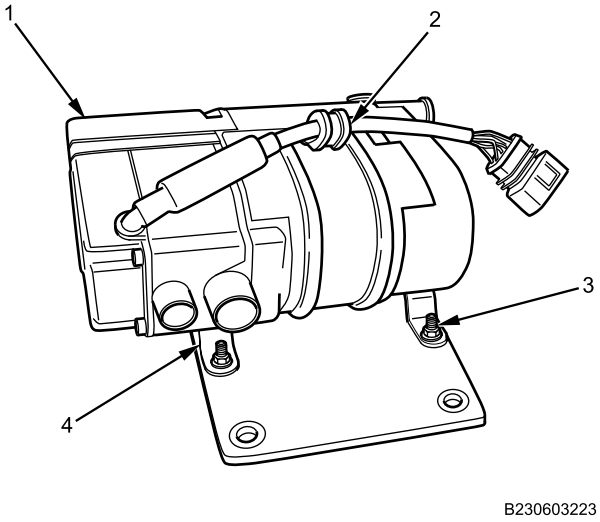


Figure 6. Fuel-Fired Heater.

1. Position fuel-fire heater (Figure 6, Item 1) into mounting bracket (Figure 6, Item 4).
2. Install center safety bolt securing heater (Figure 6, Item 1) and wiring harness clamp (Figure 6, Item 2) to mounting bracket (Figure 6, Item 4). Tighten second safety bolt securely (bolt is hidden).
3. Apply corrosion preventive compound on four fuel-fired heater bracket mounting bolts.
4. Install fuel-fired heater (Figure 6, Item 1) with mounting bracket (Figure 6, Item 4) on support bracket with four bolts, nuts, and washers (Figure 6, Item 3). Tighten bolts securely.

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

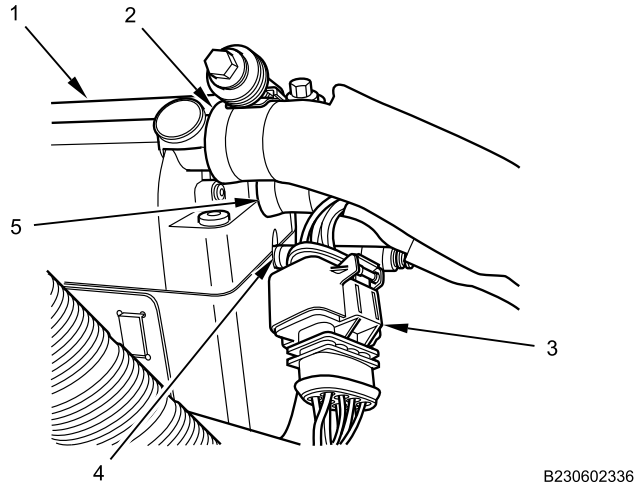


Figure 7. Fuel-Fired Heater Coolant Hoses.

5. Install fuel line (Figure 7, Item 4) on heater (Figure 7, Item 1). Tighten line clamp securely.
6. Install coolant inlet hose (Figure 7, Item 2) on heater (Figure 7, Item 1). Tighten hose clamp securely.
7. Install coolant outlet hose (Figure 7, Item 5) on heater (Figure 7, Item 1). Tighten hose clamp securely.
8. Apply dielectric grease on heater electrical connector (Figure 7, Item 3).
9. Install electrical connector (Figure 7, Item 3) on heater electrical harness.
10. Apply corrosion preventive compound on two fuel-fired heater mounting bolts.

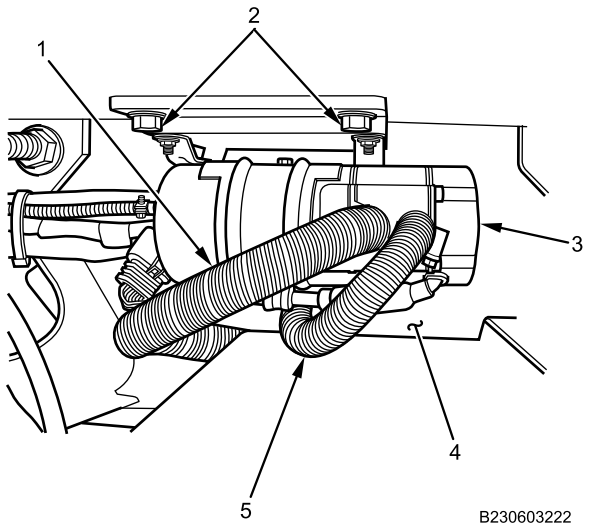


Figure 8. Fuel-Fired Heater Mounted.

11. Install support bracket with two bolts and nuts (Figure 8, Item 2) on frame rail (Figure 8, Item 4).
12. Install intake air hose (Figure 8, Item 5) on heater (Figure 8, Item 3). Tighten hose clamp securely.
13. Install exhaust hose (Figure 8, Item 1) on heater (Figure 8, Item 3). Tighten hose clamp securely.

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

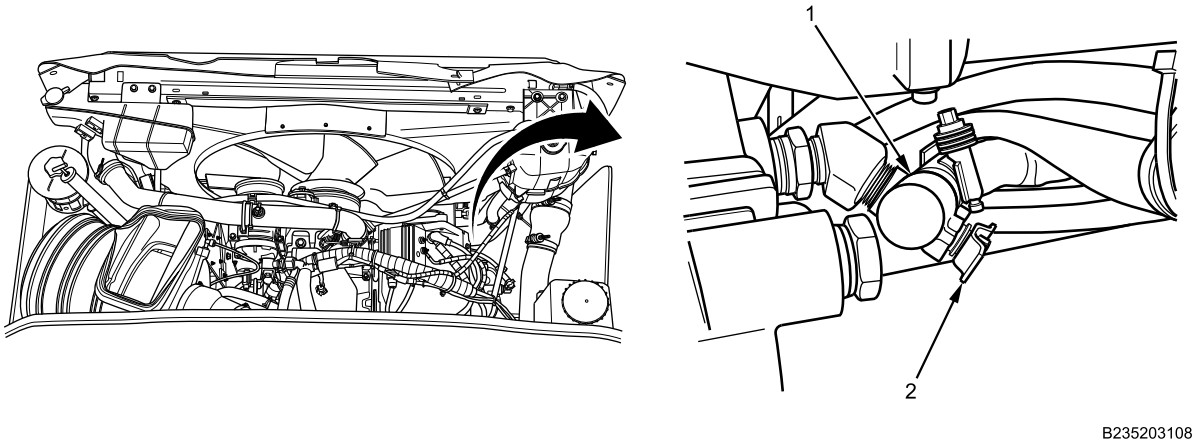


Figure 9. Heater Coolant Engine Inlet Valve.

14. Open inlet valve (Figure 9, Item 1) by turning handle (Figure 9, Item 2) counterclockwise.

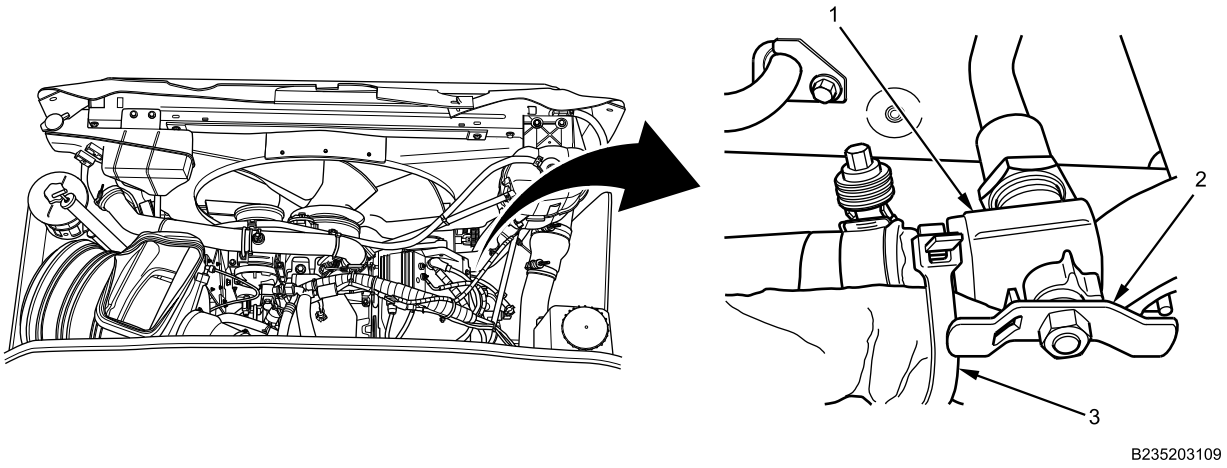


Figure 10. Heater Coolant Engine Outlet Valve.

15. Open outlet valve (Figure 10, Item 1) by turning handle (Figure 10, Item 2) counterclockwise. Install new cable lock strap (Figure 10, Item 3) if removed.
16. Check radiator coolant level.

FUEL-FIRED HEATER REMOVAL AND INSTALLATION - (CONTINUED)

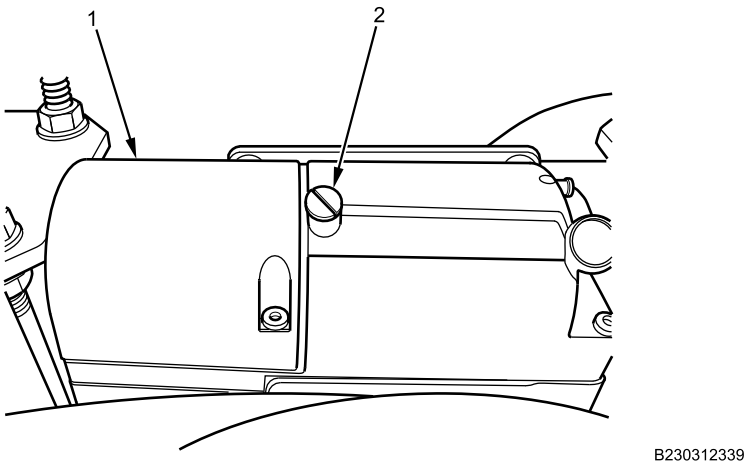


Figure 11. Fuel-Fired Heater Bleed Screw.

17. Bleed air from heater (Figure 11, Item 1) by opening bleed screw (Figure 11, Item 2) on top of heater. Close bleed screw after a solid stream of coolant is visible at heater.
18. Install all cable lock straps and tighten securely.
19. Remove drain pan.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install right A/C condenser panel (WP 0672).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Turn engine on (TM 9-2355-106-10).
4. Verify fuel-fired heater operation (TM 9-2355-106-10).
5. Check for leaks with engine running (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Close and secure engine hood (TM 9-2355-106-10).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION

INITIAL SETUP:

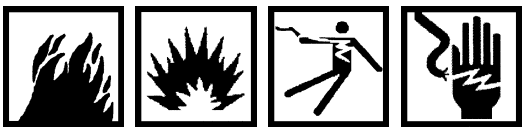
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Drain pan (WP 0795, Item 75)

Materials/Parts
Gloves (WP 0794, Item 18)
Goggles, industrial (WP 0794, Item 20)
Faceshield, industrial (WP 0794, Item 16)
Compound (WP 0794, Item 13)
Cable lock strap - (9) (WP 0796, Item 120)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Belly armor removed (WP 0606)

WARNING



Fuel is flammable and can explode. Keep all open flames, flammable materials, ignition sources, and sparks away from diesel fuel and keep fire extinguisher nearby. Do not smoke when working with fuel. Do not work on fuel system when engine is hot. Fuel can be ignited by hot engine. Failure to comply may result in serious injury or death to personnel.

Be alert at all times for the smell of fuel. Hot engines and components can ignite fuel. If fuel smell is detected while operating vehicle, shut down vehicle immediately. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Store diesel fuel in an approved container clearly marked DIESEL FUEL or JP-8, accordingly. Dispose of fuel in an approved container clearly marked DIESEL FUEL or JP-8, accordingly, in accordance with standard operating procedures.

Never use diesel fuel or JP-8 to clean parts. Fuel is highly flammable. Failure to comply may result in damage to equipment and serious injury or death to personnel.

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION - (CONTINUED)

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

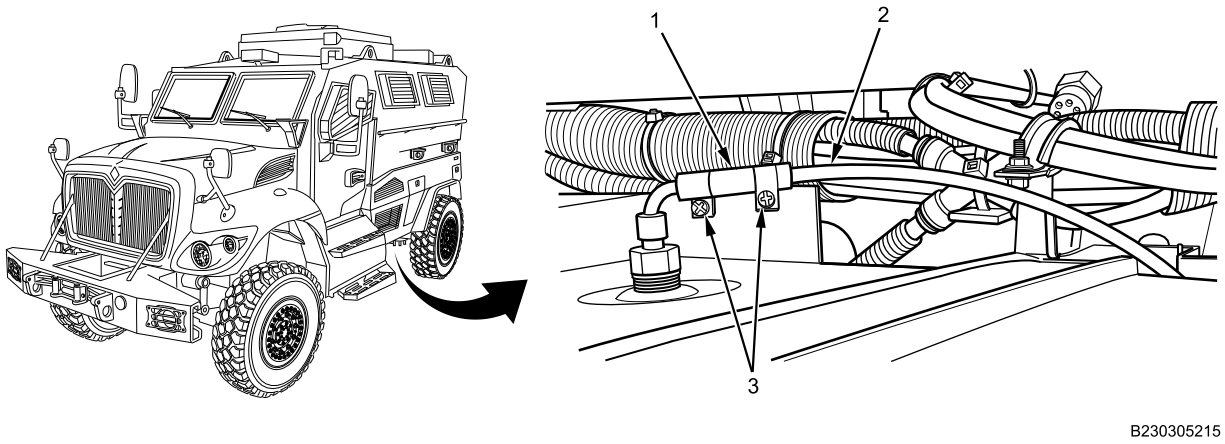


Figure 1. Fuel Tank Connection.

1. Loosen fuel hose clamps (Figure 1, Item 3). Remove fuel line hose (Figure 1, Item 1) and fuel hose clamps (Figure 1, Item 3).
2. Drain fuel from fuel line tubing (Figure 1, Item 2) into drain pan.

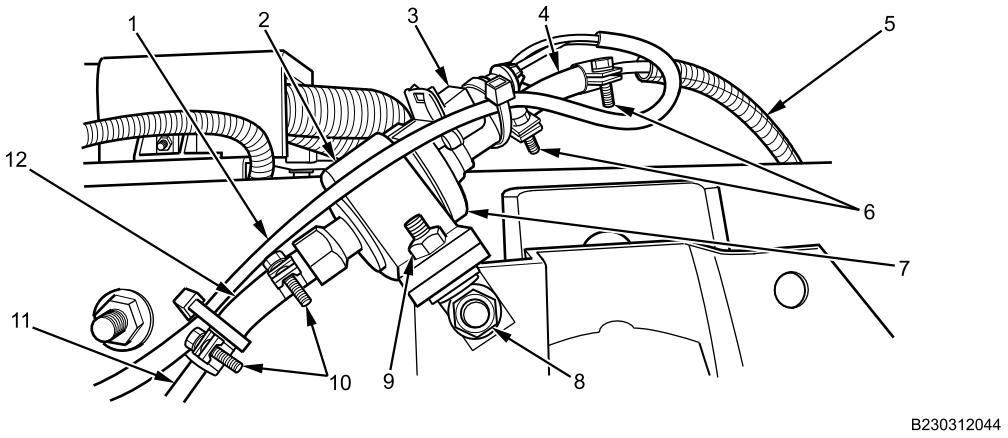


Figure 2. Fuel-Fired Heater Fuel Pump.

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION - (CONTINUED)

3. Disconnect harness connector (Figure 2, Item 3) on fuel-fired heater fuel pump electrical harness (Figure 2, Item 1).
4. Loosen fuel hose clamps (Figure 2, Item 6). Remove fuel line hose (Figure 2, Item 4) and fuel hose clamps (Figure 2, Item 6).
5. Drain fuel from fuel line tubing (Figure 2, Item 5) into drain pan.
6. Loosen fuel hose clamps (Figure 2, Item 10). Remove fuel line hose (Figure 2, Item 12) and fuel hose clamps (Figure 2, Item 10).
7. Drain fuel from fuel line tubing (Figure 2, Item 11) into drain pan.
8. Remove fuel pump bracket extension nut (Figure 2, Item 8) and fuel-fired heater fuel pump bracket (Figure 2, Item 2).
9. Remove fuel-fired heater fuel pump bracket nut (Figure 2, Item 9).
10. Remove fuel-fired heater fuel pump (Figure 2, Item 7) from fuel-fired heater fuel pump bracket (Figure 2, Item 2).
11. Loosen fuel line hose clamps (Figure 3, Item 3). Remove fuel line hose (Figure 3, Item 1) and fuel hose clamps (Figure 3, Item 3) from inlet for fuel-fired heater (Figure 3, Item 4).

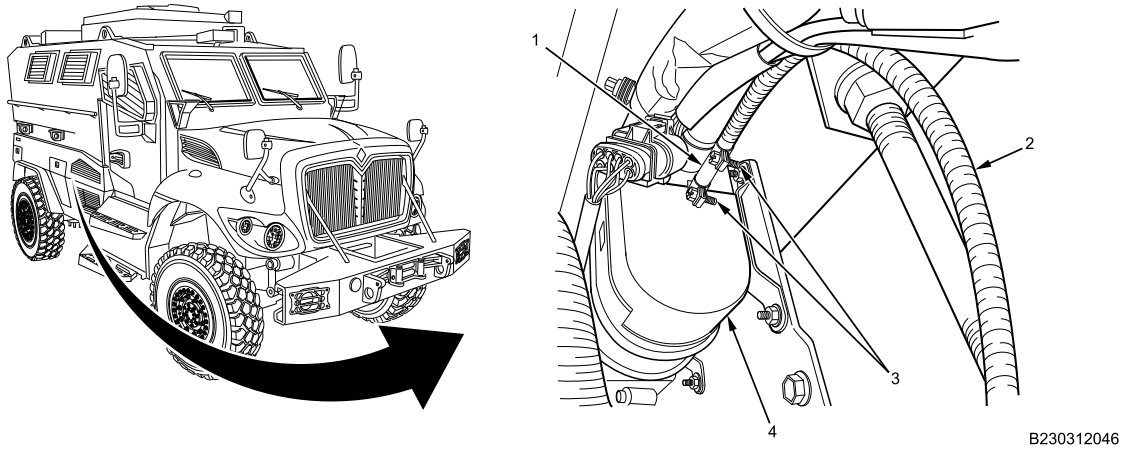


Figure 3. Fuel-Fired Heater Fuel Line Connection.

12. Drain fuel from fuel line tubing (Figure 3, Item 2) into drain pan.

NOTE

Note routing of fuel line tubing to aid installation.

13. Remove fuel line tubing from vehicle (Figure 3, Item 2).
14. Remove drain pan.

END OF TASK

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full-face shield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

NOTE

Apply corrosion preventive compound to all fuel hose clamp threads and fuel-fired heater fuel pump bracket bolts.

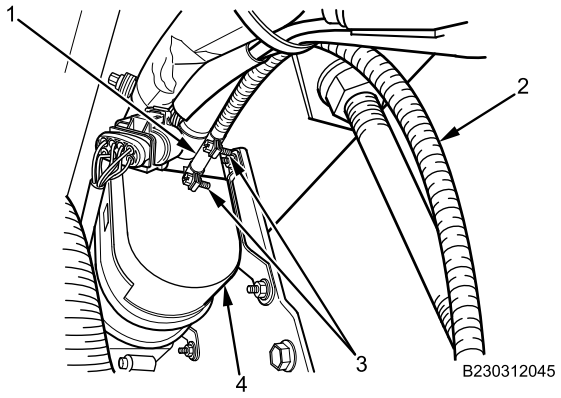


Figure 4. Fuel-Fired Heater Fuel Line Connection.

1. Position fuel line hose (Figure 4, Item 1) and fuel hose clamps (Figure 4, Item 3) on fuel line tubing (Figure 4, Item 2) and inlet for fuel-fired heater (Figure 4, Item 4). Tighten clamps securely.
2. Route fuel line tubing (Figure 4, Item 2).

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION - (CONTINUED)

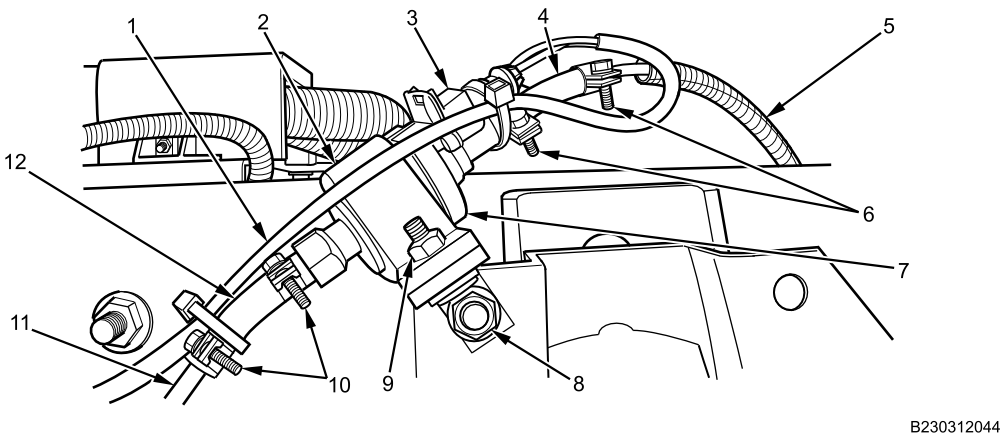


Figure 5. Fuel-Fired Heater Fuel Pump.

3. Install fuel-fired heater fuel pump bracket extension with nut (Figure 5, Item 8).
4. Install fuel-fired heater fuel pump (Figure 5, Item 7) on fuel-fired heater fuel pump bracket (Figure 5, Item 2).
5. Install fuel-fired heater fuel pump bracket (Figure 5, Item 2) with nut (Figure 5, Item 8). Tighten bracket and bracket extension nuts securely.
6. Position fuel line hose (Figure 5, Item 12) and fuel hose clamps (Figure 5, Item 10) on fuel line tubing (Figure 5, Item 11) and inlet for fuel pump (Figure 5, Item 7). Tighten clamps securely.
7. Position fuel line hose (Figure 5, Item 4) and fuel hose clamps (Figure 5, Item 6) on fuel line tubing (Figure 5, Item 5) and outlet for fuel pump (Figure 5, Item 7). Tighten clamps securely.

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

8. Apply dielectric grease to fuel-fired heater fuel pump electrical harness connector (Figure 5, Item 3).
9. Connect harness connector (Figure 5, Item 3) to fuel-fired heater fuel pump electrical harness (Figure 5, Item 1).

FUEL-FIRED HEATER FUEL PUMP AND FUEL LINE REMOVAL AND INSTALLATION - (CONTINUED)

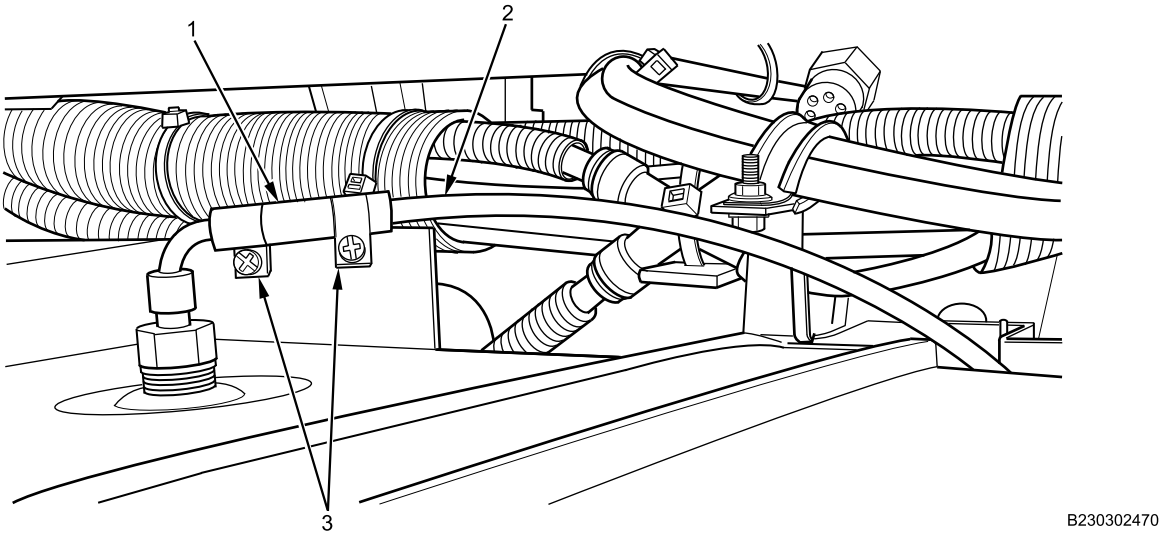


Figure 6. Fuel Tank Connection.

10. Position fuel line hose (Figure 6, Item 1) and fuel hose clamps (Figure 6, Item 3) on fuel line tubing (Figure 6, Item 2) and fuel tank outlet. Tighten clamps securely.
11. Install new cable lock straps.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Verify fuel-fired heater operation (TM 9-2355-106-10) and inspect for leaks.
3. Turn engine off (TM 9-2355-106-10).
4. Turn MAIN POWER switch off (TM 9-2355-106-10).
5. Install belly armor (WP 0606).
6. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

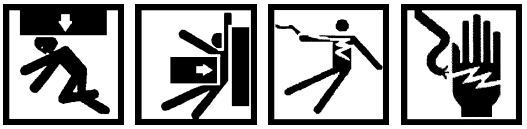
Materials/Parts
Grease (WP 0794, Item 22)
Cable lock strap - (5) (WP 0796, Item 124)
Cable lock strap - (12) (WP 0796, Item 134)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Belly armor removed (WP 0606)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

Fuel fired heater is located on outside of right frame rail in front of right rear wheel.

Note location of cable lock straps prior to removal to aid in installation.

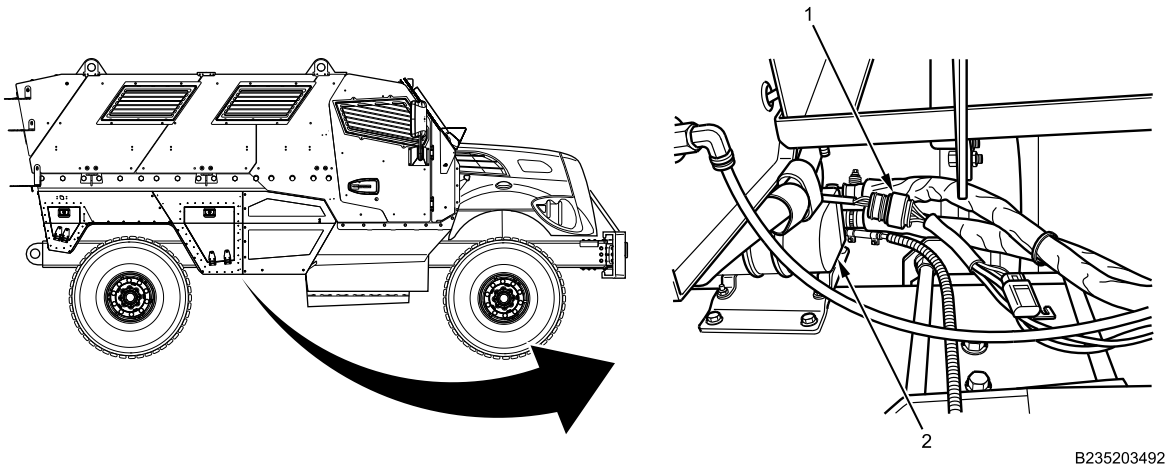


Figure 1. Fuel Fired Heater Connector.

1. Disconnect electrical connector (Figure 1, Item 1) from fuel fired heater (Figure 1, Item 2).

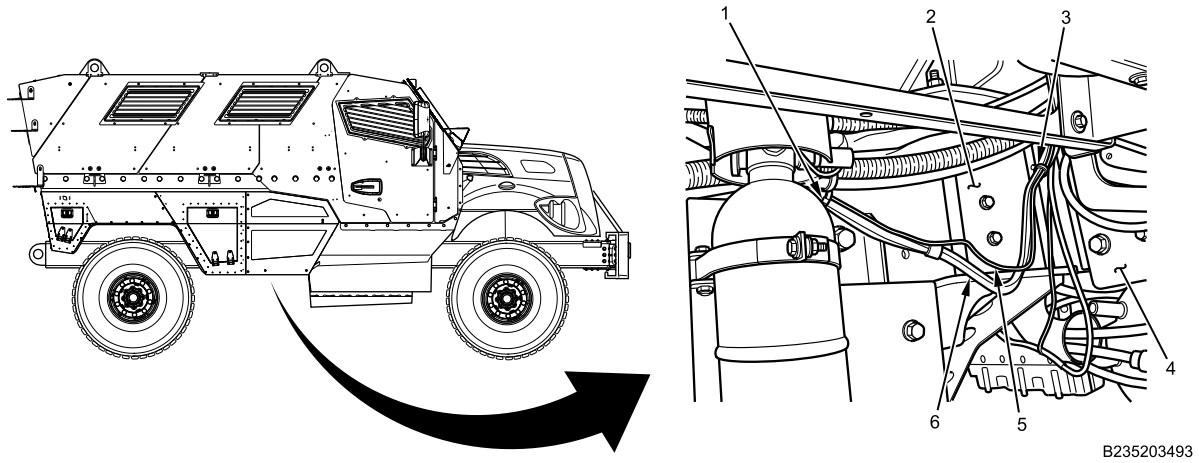


Figure 2. Fire Suppression System (FSS) Harness.

2. On outside of right frame rail (Figure 2, Item 2) directly behind battery box (Figure 2, Item 4), remove and discard two cable lock straps (Figure 2, Item 1 and 3) to separate fuel fired heater harness (Figure 2, Item 6) from fire suppression system (FSS) harness (Figure 2, Item 5).

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

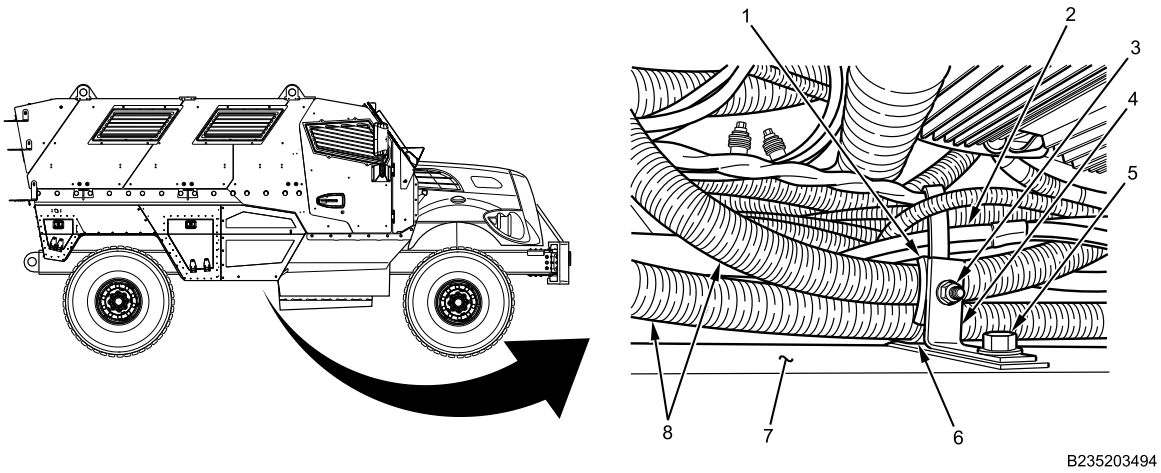


Figure 3. Frame Bracket.

3. Between battery box and outside of right frame rail (Figure 3, Item 7), remove and discard cable lock strap (Figure 3, Item 6) from saddle clamp (Figure 3, Item 1) bolted to bracket (Figure 3, Item 4) on frame.
4. Remove nut (Figure 3, Item 3) and saddle clamp (Figure 3, Item 1) from bracket (Figure 3, Item 4).
5. Remove nut, bolt (Figure 3, Item 5) from bracket on frame rail (Figure 3, Item 7).
6. Separate fuel fired heater harness (Figure 3, Item 2) from main harnesses (Figure 3, Item 8).

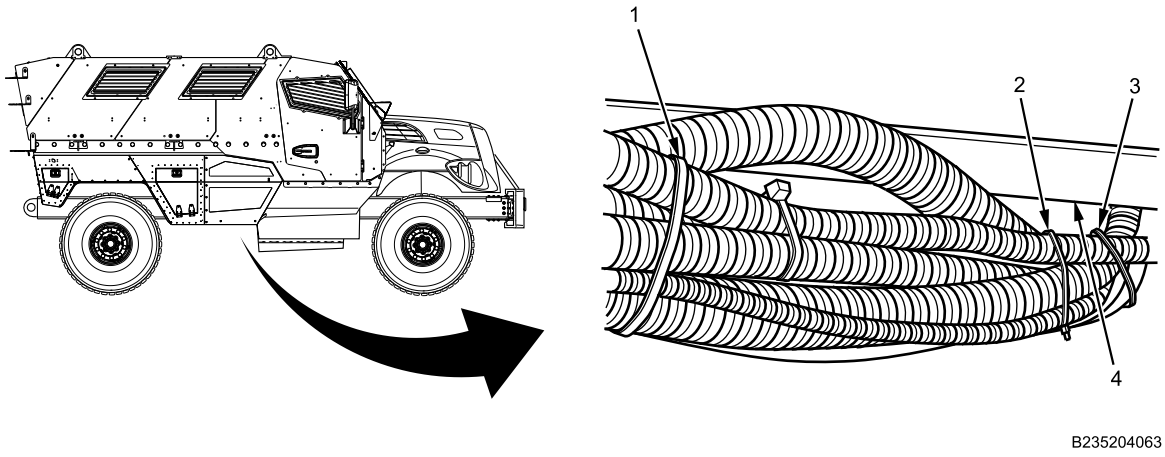


Figure 4. Main Harness, Right Side.

7. Inboard of right frame rail (Figure 4, Item 4) next to transmission bellhousing, remove and discard three cable lock straps (Figure 4, Item 1, 2 and 3).

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

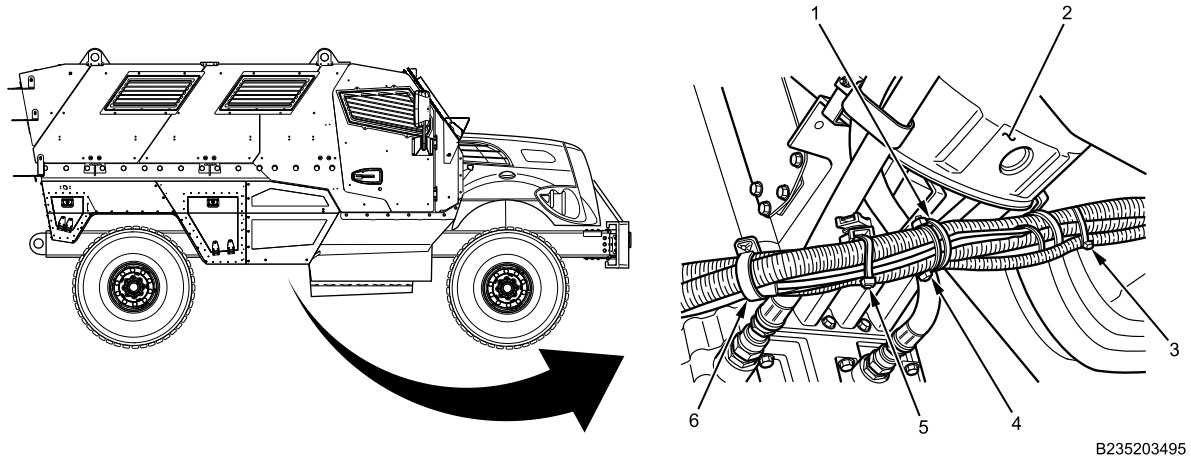


Figure 5. Transmission Bellhousing.

8. Under transmission bellhousing (Figure 5, Item 2), remove and discard five cable lock straps (Figure 5, Item 1, 3, 4, 5 and 6) from main harness assembly.

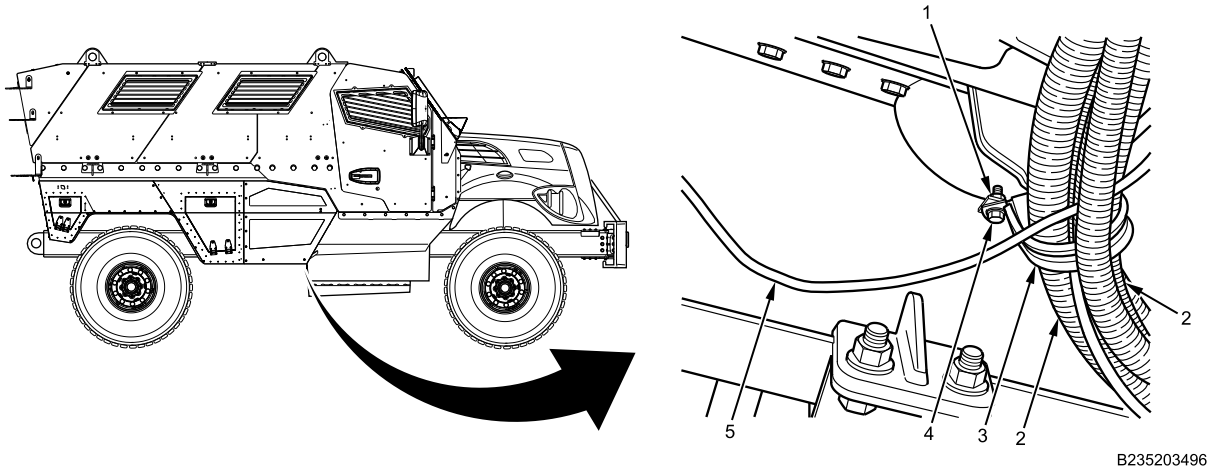


Figure 6. Fuel Fired Heater Harness.

9. Remove nut (Figure 6, Item 1), bolt (Figure 6, Item 4), and harness loop (Figure 6, Item 3).
10. Separate fuel fired heater harness (Figure 6, Item 5) from main harness assembly (Figure 6, Item 2).

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

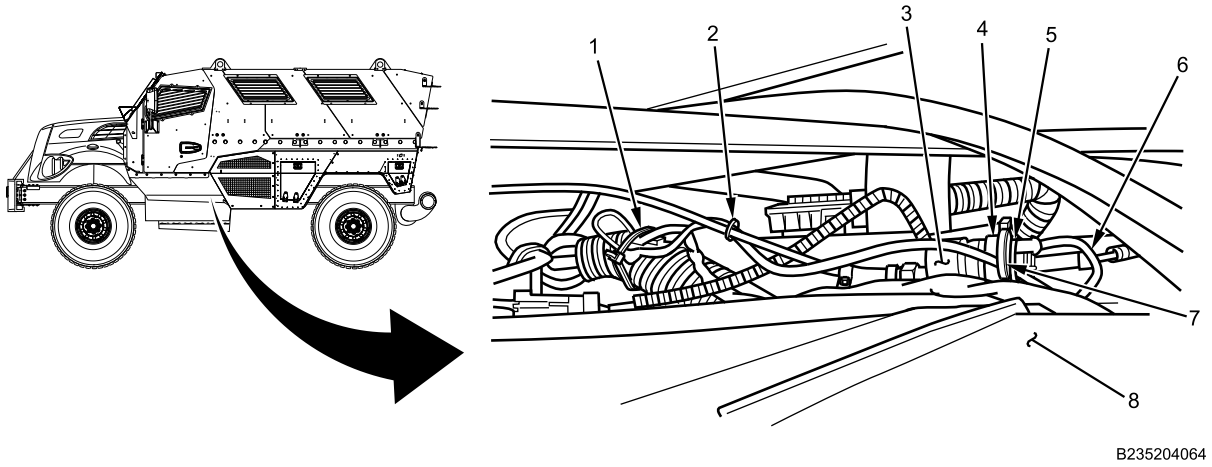


Figure 7. Fuel Pump Connector.

11. At rear of fuel tank (Figure 7, Item 8), remove and discard three cable lock straps (Figure 7, Item 1, 2 and 7) from fuel fired heater fuel pump (Figure 7, Item 3).
12. Press down on wire locking device (Figure 7, Item 4) and disconnect fuel fired heater fuel pump connector (Figure 7, Item 5).
13. From under vehicle, pull fuel fired heater fuel pump connector (Figure 7, Item 5) and harness (Figure 7, Item 6) to bellhousing area.

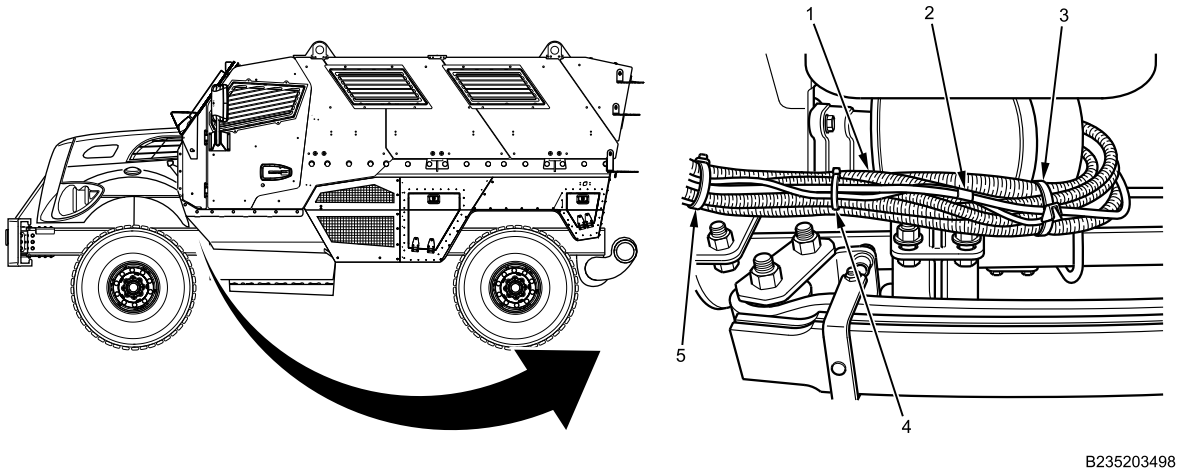


Figure 8. Main Harness Near Starter.

14. Following main harness assembly (Figure 8, Item 1) forward from transmission bellhousing, remove and discard three cable lock straps (Figure 8, Item 3, 4 and 5) from main harness assembly
15. Separate fuel fired heater harness (Figure 8, Item 2) from main harness assembly (Figure 8, Item 1).

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

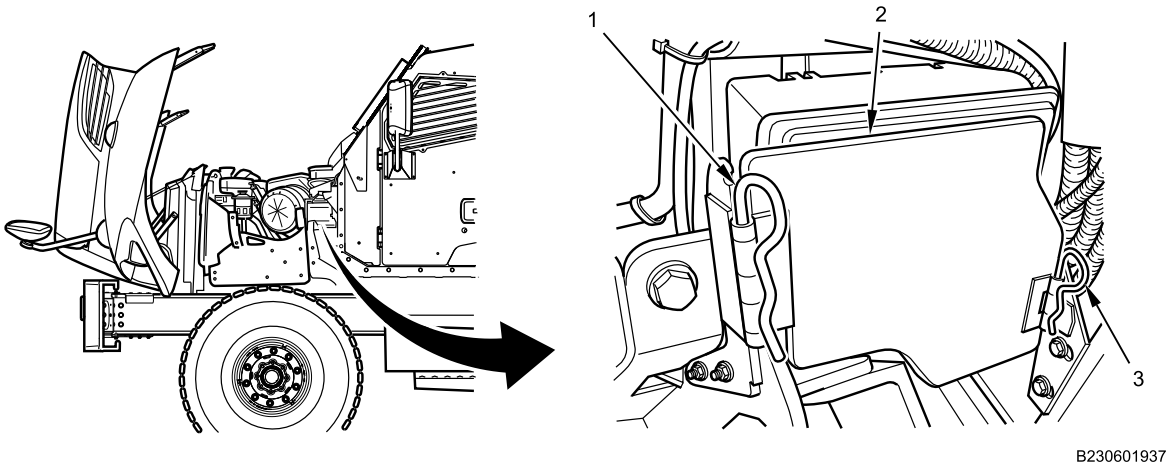


Figure 9. Power Distribution Center (PDC) Armor.

16. Remove power distribution center (PDC) armor clips (Figure 9, Item 1 and 3) and PDC armor (Figure 9, Item 2).

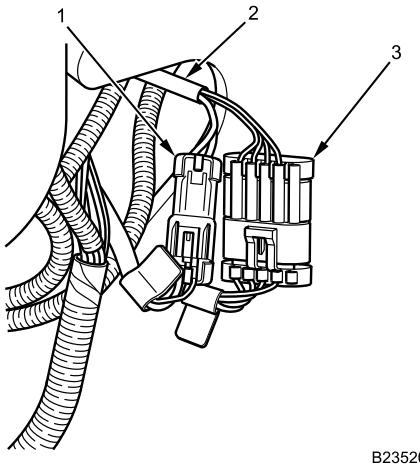


Figure 10. Fuel Fired Heater and Fuel Fired Heater Fuel Pump Harness Connectors at PDC.

17. Below PDC, disconnect fuel fired heater connector (Figure 10, Item 1) and fuel fired heater fuel pump connector (Figure 10, Item 3) from harness (Figure 10, Item 2).
18. From under vehicle, remove fuel fired heater harness from vehicle.

END OF TASK

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

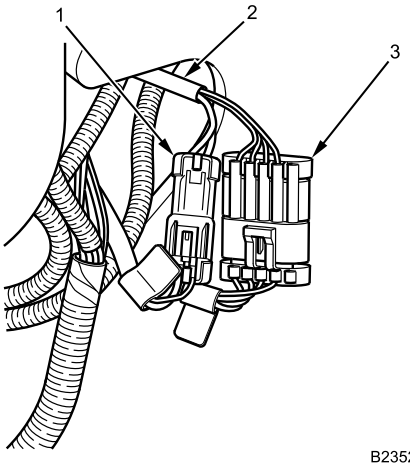


Figure 11. Fuel Fired Heater and Fuel Fired Heater Fuel Pump Harness Connectors at PDC.

1. From under vehicle, push fuel fired heater harness connectors up toward PDC. With maintainer assistance positioned above vehicle, pull connectors up toward PDC.

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

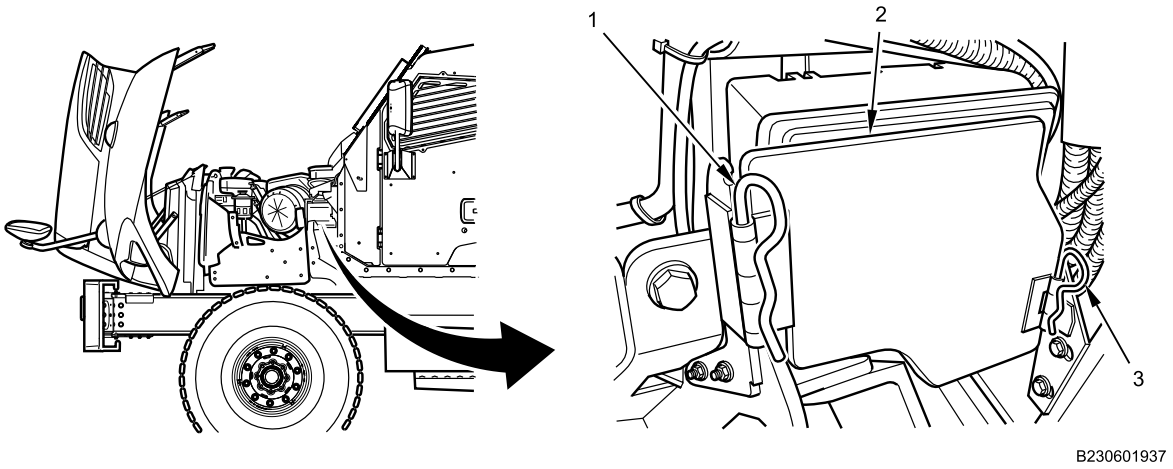


Figure 12. PDC Armor Plate.

2. Below PDC, connect fuel fired heater (Figure 11, Item 1) and fuel fired heater fuel pump (Figure 11, Item 3) on harness (Figure 11, Item 2).

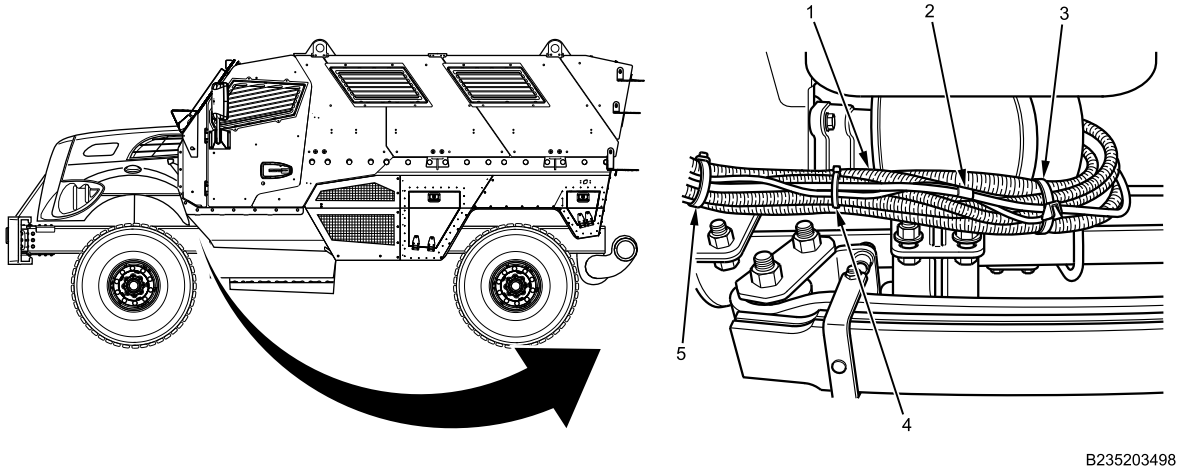


Figure 13. Main Harness Near Starter.

3. Install PDC armor plate (Figure 12, Item 2) and clips (Figure 12, Item 1 and 3).
4. Following main harness assembly (Figure 13, Item 1) forward from transmission bellhousing, install three new cable lock straps (Figure 13, Item 3, 4 and 5) fastening main harness assembly, fuel fired heater, and fuel fired heater harness (Figure 13, Item 2) together.

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

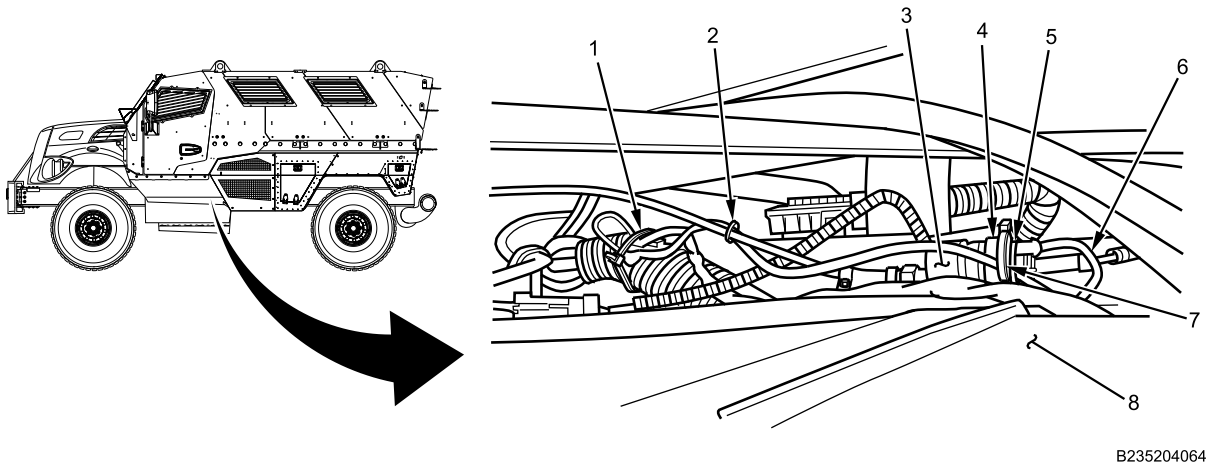


Figure 14. Fuel Pump Connector.

5. From under vehicle, and with maintainer assistance positioned above vehicle, push fuel fired heater fuel pump connector over top of left frame rail and route it to fuel fired heater fuel pump area.
6. Connect fuel fired heater fuel pump connector (Figure 14, Item 5), making sure wire locking device (Figure 14, Item 4) pops up and locks connector in place. Pull backward on connector to make sure it is properly locked.
7. At rear of fuel tank area (Figure 14, Item 8), install three new cable lock straps (Figure 14, Item 1, 2 and 7) fastening fuel fired heater harness (Figure 14, Item 6) to fuel fired heater fuel pump (Figure 14, Item 3).

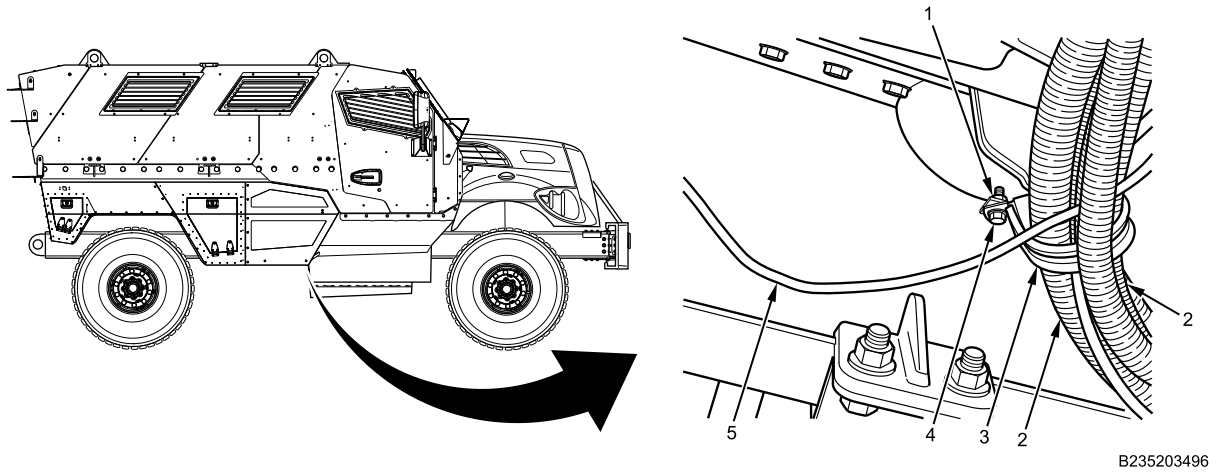


Figure 15. Fuel Fired Heater Harness.

NOTE

Note fuel fired heater fuel pump connector and harness exits the main harness assembly between two brackets bolted to bottom of transmission bellhousing.

8. Position main harness assembly (Figure 15, Item 2) along with fuel fired heater harness (Figure 15, Item 5) in harness loop (Figure 15, Item 3), and install bolt (Figure 15, Item 4) and nut (Figure 15, Item 1) through harness loop and bracket. Tighten nut and bolt securely.

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

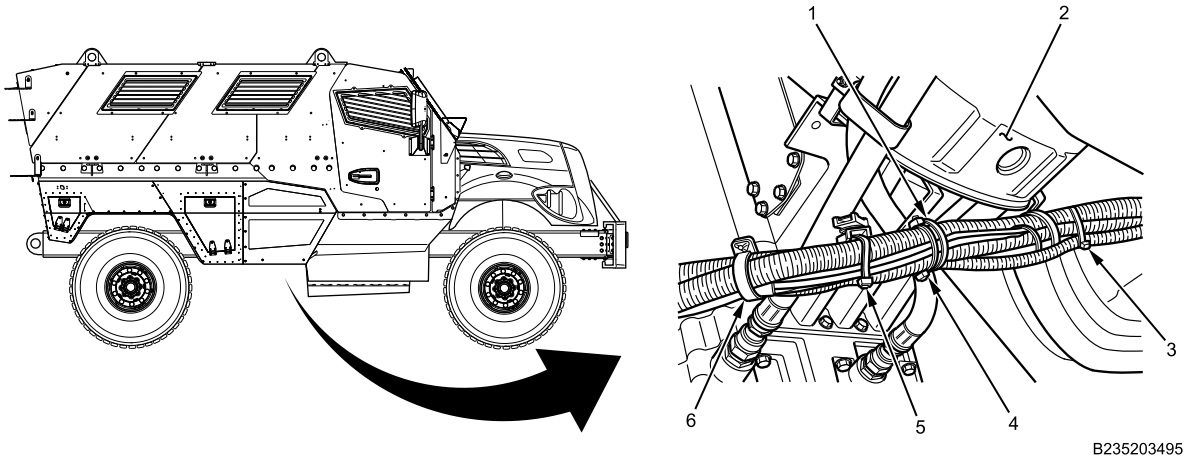


Figure 16. Transmission Bellhousing.

9. From under transmission bellhousing (Figure 16, Item 2), install five new cable lock straps (Figure 16, Item 1, 3, 4, 5 and 6) fastening main harness assembly to fuel fired heater harness.
10. From under vehicle, push fuel fired heater harness under right frame rail, and with maintainer assistance, pull harness rearward between frame rail and battery box until it reaches fuel fired heater.

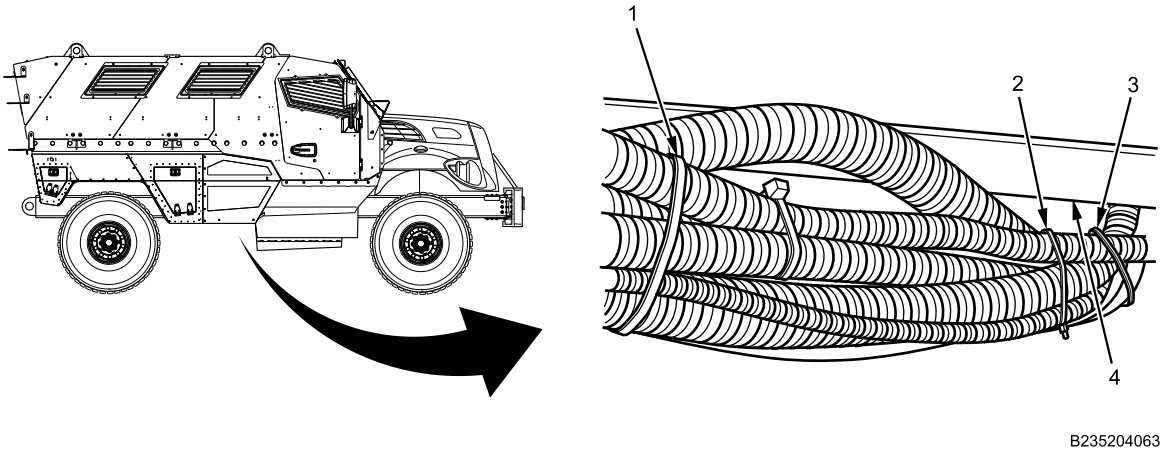


Figure 17. Main Harness, Right Side.

11. Inboard of right frame rail (Figure 17, Item 4) next to transmission bellhousing, install three cable lock straps (Figure 17, Item 1, 2 and 3), fastening all harnesses together.

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

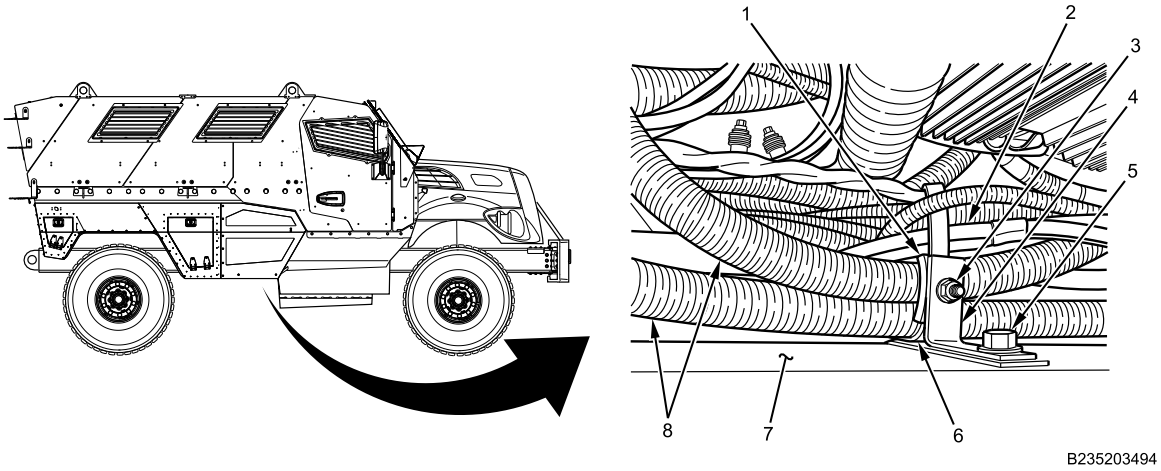


Figure 18. Frame Bracket.

12. Install nut (Figure 18, Item 3) and saddle clamp (Figure 18, Item 1) onto bracket and install nut, bolt (Figure 18, Item 5) and bracket (Figure 18, Item 4) on frame rail. Tighten nuts securely.
13. Between battery box and outside of right frame rail (Figure 18, Item 7), install new cable lock strap (Figure 18, Item 6) around main harnesses (Figure 18, Item 8), fuel fired heater harness (Figure 18, Item 2), and through saddle clamp (Figure 18, Item 1) bolted to bracket (Figure 18, Item 4) on frame.

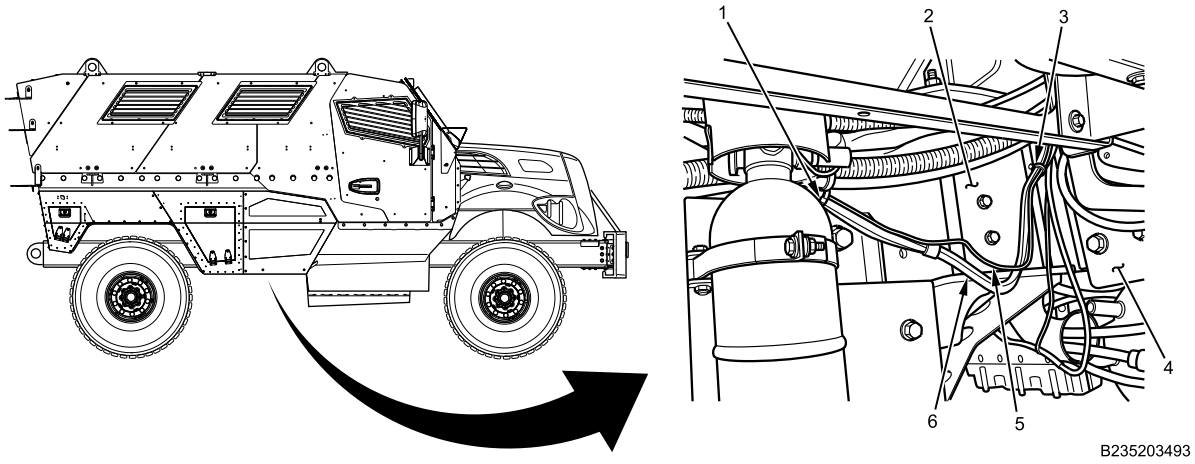


Figure 19. FSS Harness.

14. On outside of right frame rail (Figure 19, Item 2) directly behind battery box (Figure 19, Item 4), install two new cable lock straps (Figure 19, Item 1 and 3) fastening fuel fired heater harness (Figure 19, Item 6) to FSS harness (Figure 19, Item 5).

FUEL FIRED HEATER AND FUEL FIRED HEATER FUEL PUMP HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

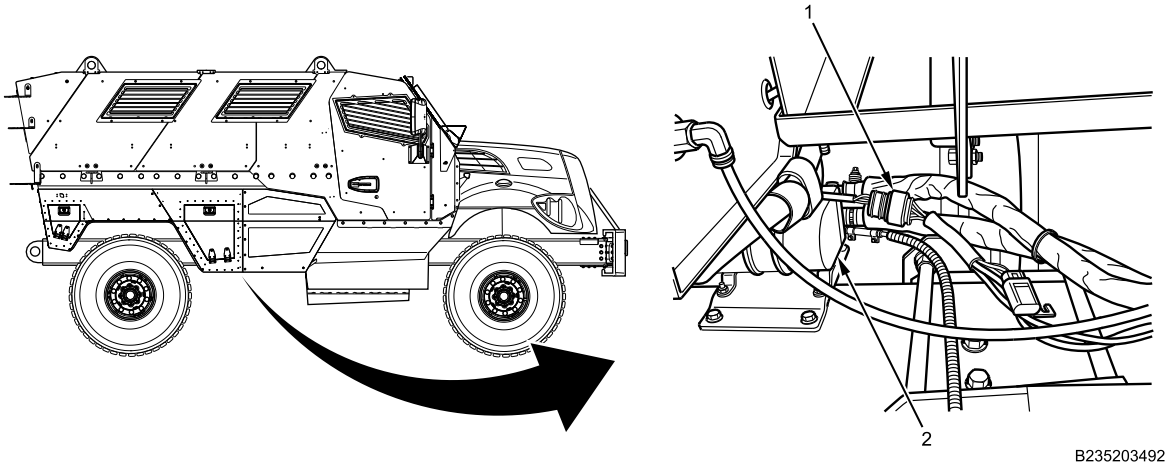


Figure 20. Fuel Fired Heater Connector.

NOTE

The microprocessor relay with the two-pin connector, located in the fuel fired heater harness, is not fastened to frame rail.

15. Connect eight-pin connector (Figure 20, Item 1) to fuel fired heater (Figure 20, Item 2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close engine hood (TM-9-2355-106-10).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Verify operation of fuel fired heater (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Install belly armor (WP 0606).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FUEL-FIRED HEATER TIMER CONTROL REMOVAL AND INSTALLATION

INITIAL SETUP:

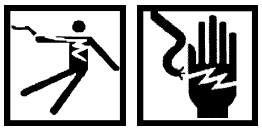
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Instrument Panel (IP) storage bin removed (WP 0563)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

NOTE

The fuel-fired heater timer system consists of a dash-mounted on/off switch and a timer.

FUEL-FIRED HEATER TIMER CONTROL REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Disconnect pigtail (Figure 1, Item 1) from fuel-fired heater timer switch (Figure 1, Item 4).

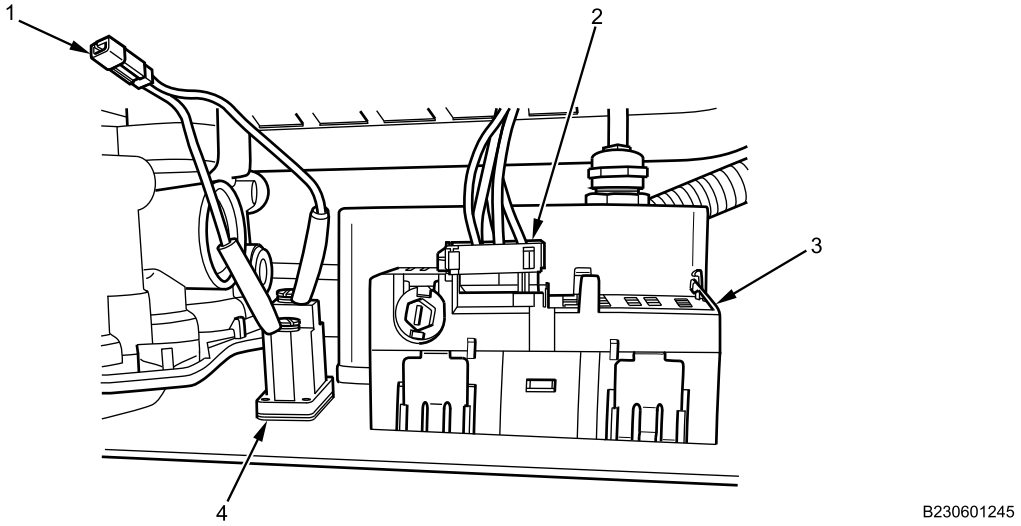


Figure 1. Fuel-Fired Heater Timer Control Switch and Timer Wiring.

2. Disconnect connector (Figure 1, Item 2) from rear of fuel-fired heater timer control (Figure 1, Item 3).
3. Remove nut (Figure 2, Item 4), star washer (Figure 2, Item 3) and lock tab (Figure 2, Item 2) from fuel-fired heater timer control switch (Figure 2, Item 1).

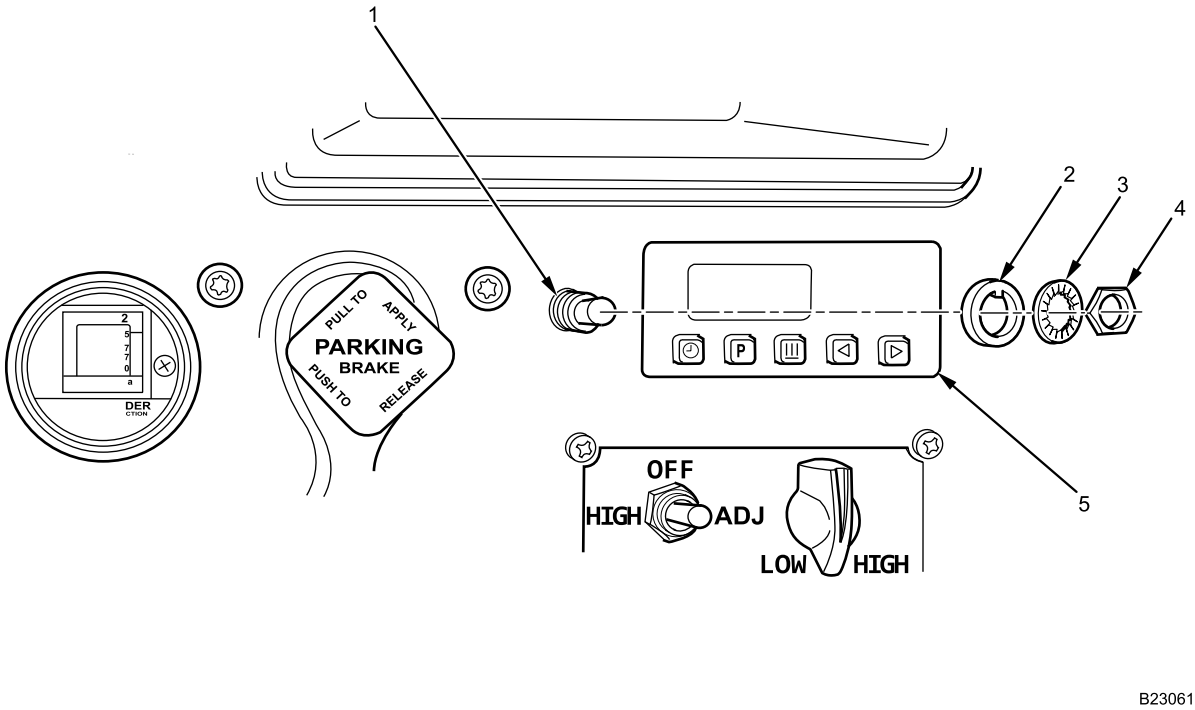


Figure 2. Fuel-Fired Heater Timer Switch and Control.

4. Push fuel-fired heater timer control (Figure 2, Item 5) from back side to remove from IP trim center trim panel.

END OF TASK

FUEL-FIRED HEATER TIMER CONTROL REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING

Dielectric grease is harmful to skin and eyes. If lubricant contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Position fuel-fired heater timer control (Figure 3, Item 5) on IP center trim panel and push into IP center trim panel to secure.

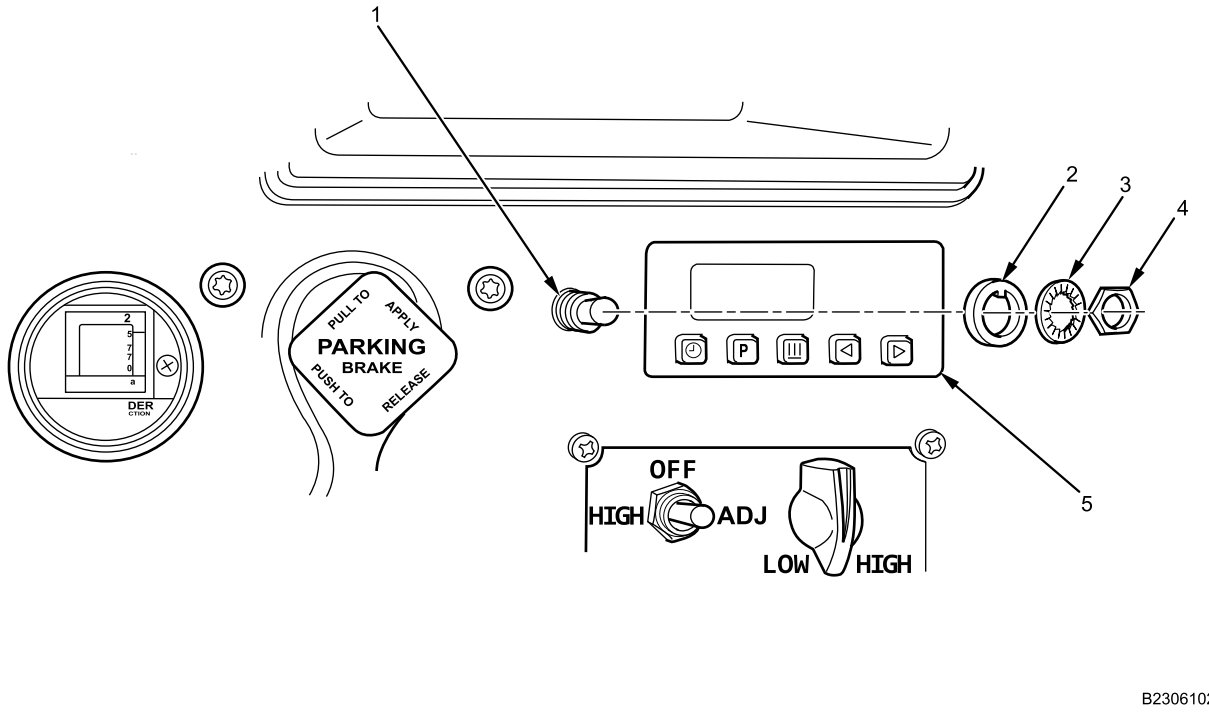


Figure 3. Fuel-Fired Heater Timer Switch and Control.

2. Position fuel-fired heater timer control switch (Figure 3, Item 1) on IP center trim panel.
3. Install lock tab (Figure 3, Item 2), star washer (Figure 3, Item 3), and nut (Figure 3, Item 4) on control switch (Figure 3, Item 1). Tighten securely.
4. Connect fuel-fired heater timer control connector (Figure 4, Item 2) to rear of fuel-fired heater timer control (Figure 4, Item 3).

FUEL-FIRED HEATER TIMER CONTROL REMOVAL AND INSTALLATION - (CONTINUED)

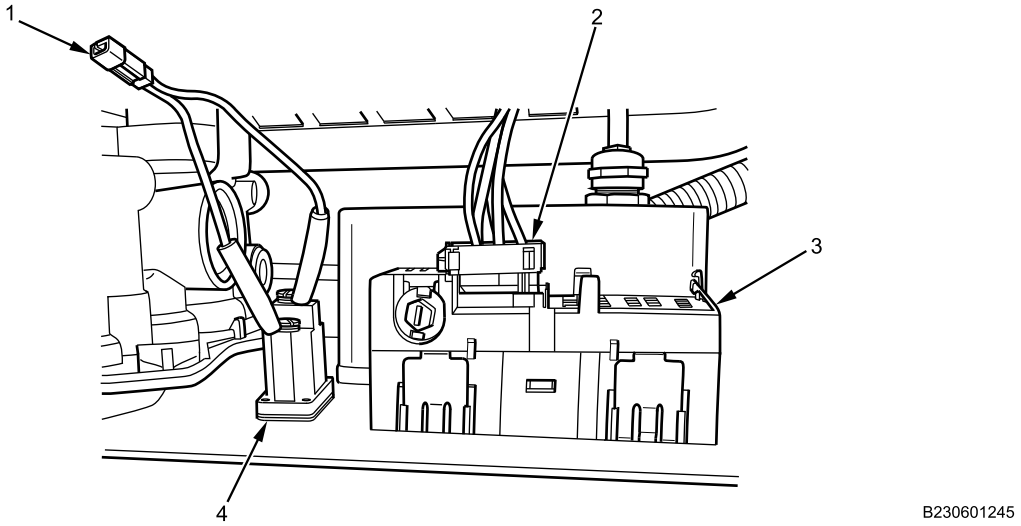


Figure 4. Fuel-Fired Heater Timer Control Switch and Timer Wiring.

5. Connect pigtail (Figure 4, Item 1) on fuel-fired heater timer control switch (Figure 4, Item 4).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install IP storage bin (WP 0563).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Verify fuel-fired heater timer control operation (TM 9-2355-106-10).
4. Turn engine off (TM 9-2355-106-10).
5. Turn MAIN POWER switch off (TM 9-2355-106-10).
6. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) DISABLE AND ENABLE

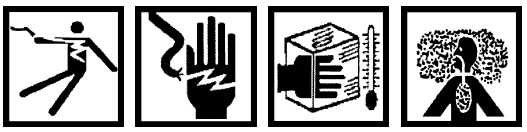
INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off. Failure to comply may result in discharging of system and serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) DISABLE AND ENABLE - (CONTINUED)

REMOVAL

1. Disconnect connector (Figure 1, Item 2) from FSS control box (Figure 1, Item 1) to disable FSS system. Position FSS harness (Figure 1, Item 3) aside.

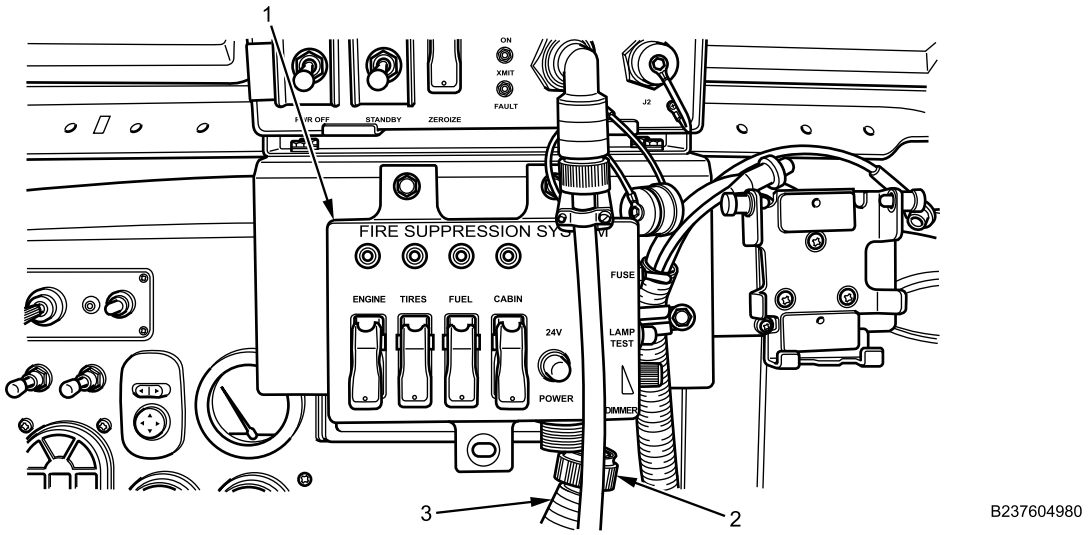


Figure 1. Fire Suppression System (FSS) Harness Removal.

END OF TASK

INSTALLATION

1. Position FSS harness (Figure 1, Item 3) on FSS control box (Figure 1, Item 1) and connect connector (Figure 1, Item 2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CONTROL UNIT REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
FSS Disabled (WP 0736)

WARNING



Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, master battery disconnect switch is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) CONTROL UNIT REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Disconnect electrical cable (Figure 1, Item 3) from FSS control unit (Figure 1, Item 1).

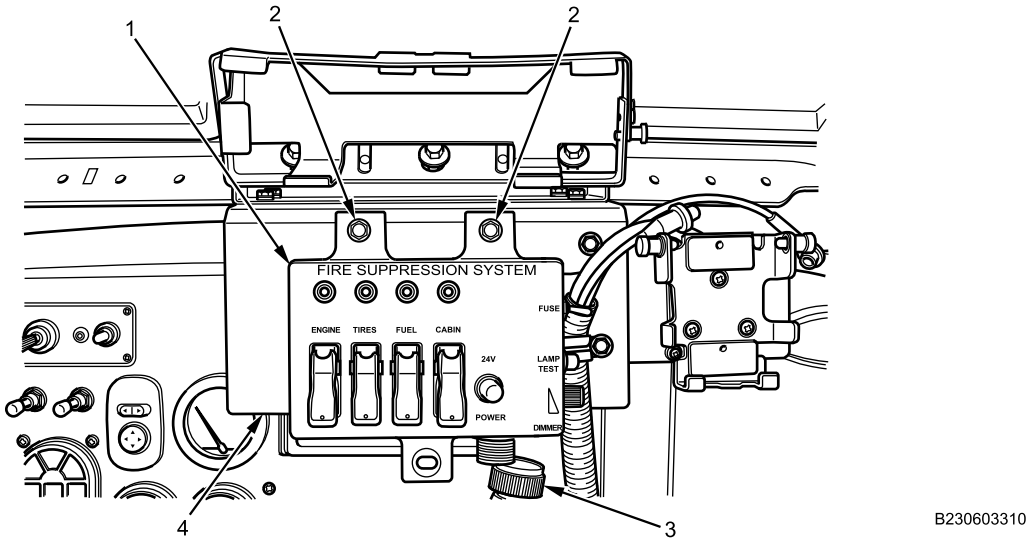


Figure 1. FSS Control Unit.

2. Remove two bolts (Figure 1, Item 2) securing FSS control unit (Figure 1, Item 1) to bracket (Figure 1, Item 4).
3. Remove FSS control unit (Figure 1, Item 1).

END OF TASK

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Position FSS control unit (Figure 2, Item 1) on bracket (Figure 2, Item 4).

FIRE SUPPRESSION SYSTEM (FSS) CONTROL UNIT REMOVAL AND INSTALLATION - (CONTINUED)

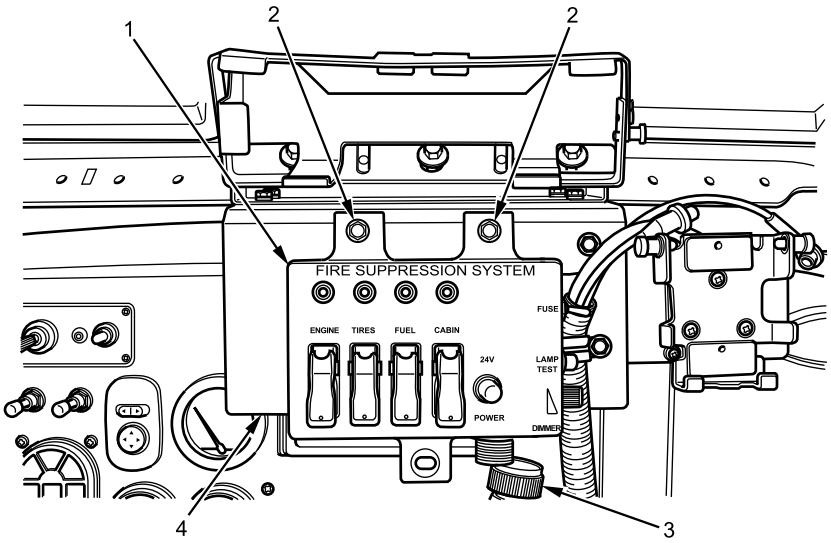


Figure 2. FSS Control Unit.

2. Install two bolts (Figure 2, Item 2) securing FSS control unit to bracket, Tighten bolts securely.
3. Connect electrical cable (Figure 2, Item 3) on FSS control unit (Figure 2, Item 1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Press lamp test button on FSS control unit to verify operation (TM 9-2355-106-10).
4. Turn MAIN POWER switch off (TM 9-2355-106-10).
5. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CONTROL UNIT BRACKET REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (3) (WP 0796, Item 179)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Fire suppression system (FSS) control unit removed (WP 0737)

REMOVAL

1. Pull out on pin (Figure 1, Item 2) and tilt communication bracket (Figure 1, Item 1) upwards, if equipped.

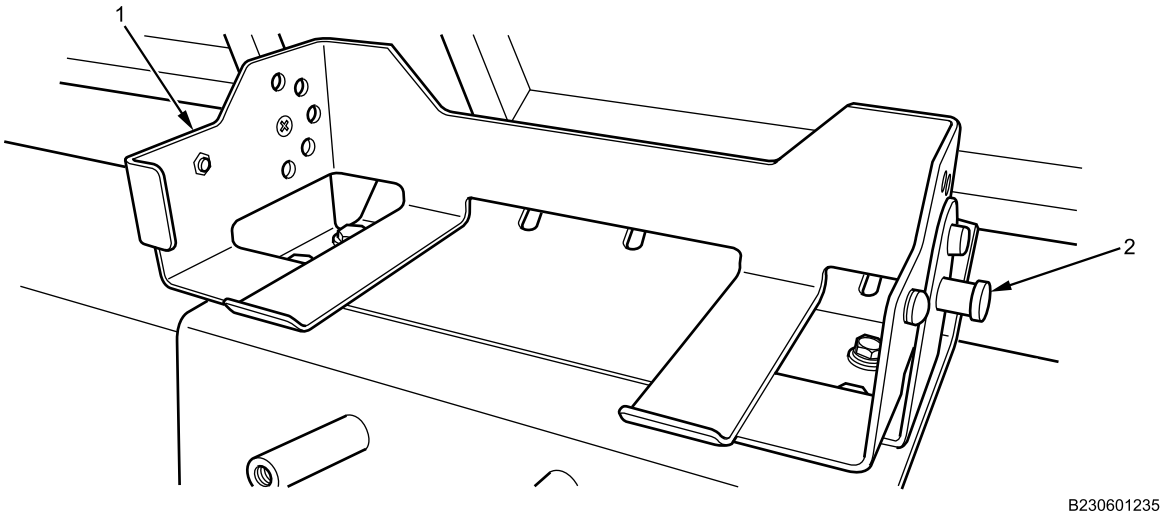


Figure 1. Communication Bracket.

2. Remove three bolts, lockwashers, and washers (Figure 2, Item 1) securing FSS control bracket (Figure 2, Item 2) to cross-vehicle equipment bracket (Figure 2, Item 3). Discard lockwashers.

FIRE SUPPRESSION SYSTEM (FSS) CONTROL UNIT BRACKET REMOVAL AND INSTALLATION - (CONTINUED)

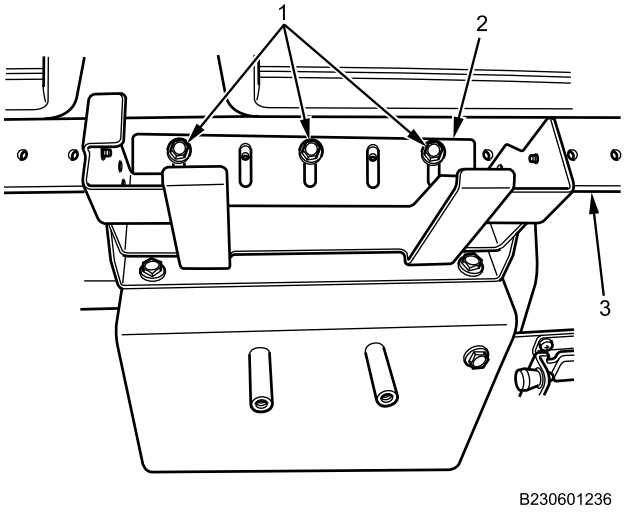


Figure 2. FSS Bracket Bolts.

3. Remove FSS control bracket (Figure 2, Item 2).

END OF TASK

INSTALLATION

1. Install three bolts, washers, and new lockwashers (Figure 3, Item 1) securing FSS control bracket (Figure 3, Item 2) to cross-vehicle equipment bracket (Figure 3, Item 3). Tighten bolts securely.

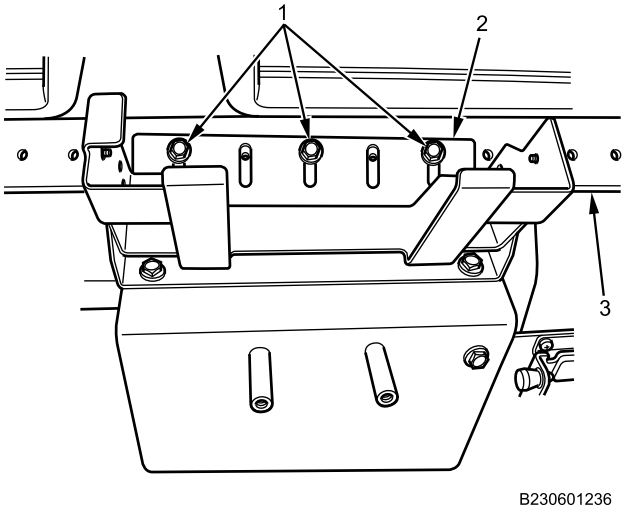


Figure 3. FSS Bracket Bolts.

2. Pull out on pin (Figure 4, Item 2) and tilt communication bracket (Figure 4, Item 1) down to level position, if equipped.

FIRE SUPPRESSION SYSTEM (FSS) CONTROL UNIT BRACKET REMOVAL AND INSTALLATION - (CONTINUED)

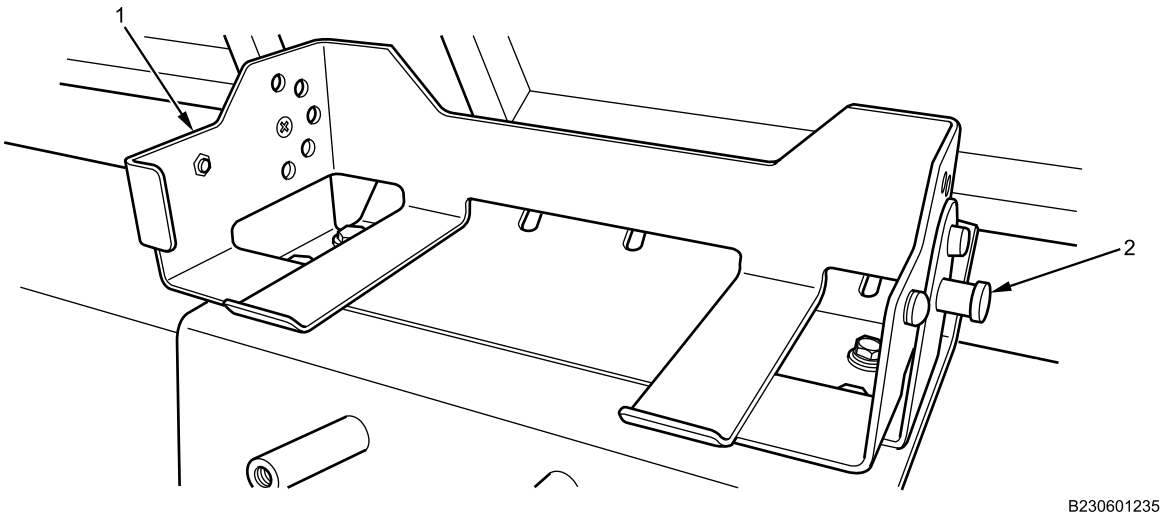


Figure 4. Communication Bracket.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install FSS control unit (WP 0737).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Lockwashers - (4) (WP 0796, Item 23)
Cable lock strap - (8) (WP 0796, Item 120)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Right cabin door secured safely open (WP 0608)
FSS disabled (WP 0736)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Use caution when working around Fire Suppression System (FSS). Do not release extinguisher cylinder mounting straps, and do not bump or strike extinguisher. Disturbing the pyrotechnic actuator or pressure switch may cause extinguisher to discharge accidentally. Extinguisher cylinder can move violently when discharging. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Cabin door must be secured in the open position by using heavy duty winch straps to prevent accidental closure during vehicle maintenance. Pull door hinge pin prior to securing door open. Failure to comply may result in serious injury or death to personnel.

Use the appropriate lifting strap sling or chain hoist for the type of load. Always clean and inspect lifting strap slings and chain hoists prior to use. Inspect for damage such as wear, corrosion, elongation, tears, or punctures. Replace lifting strap slings or chain hoists that are damaged. Failure to comply may result in component damage and death or injury to personnel.

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

Note harness routing to aid in installation.

REMOVAL

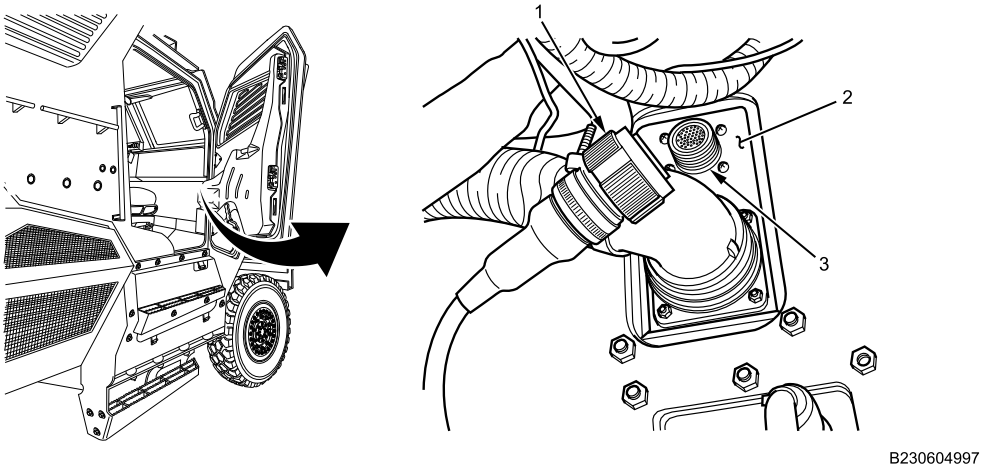


Figure 1. Interior Pass-Through Plate Connection.

1. Disconnect FSS cabin harness connector (Figure 1, Item 1) from FSS chassis harness connector (Figure 1, Item 3) at pass-through plate (Figure 1, Item 2).

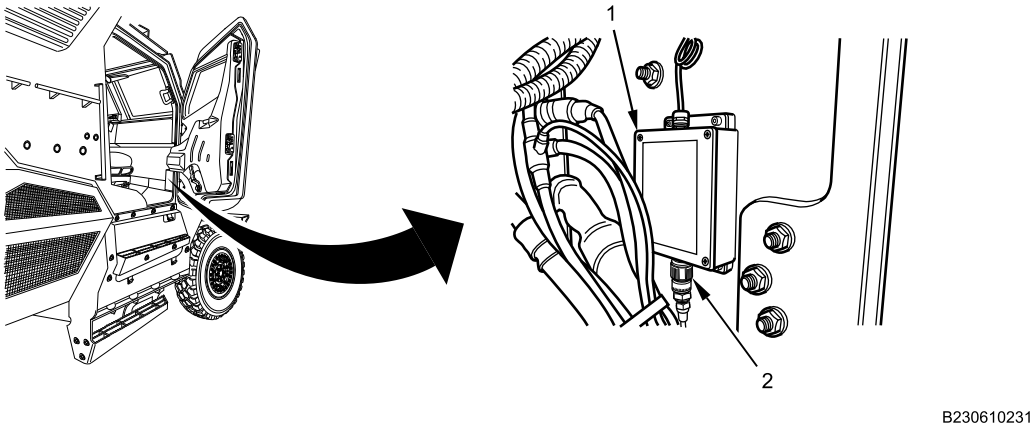


Figure 2. FSS Control Unit.

2. Disconnect FSS cabin harness connector (Figure 2, Item 2) from FSS control unit (Figure 2, Item 1).

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

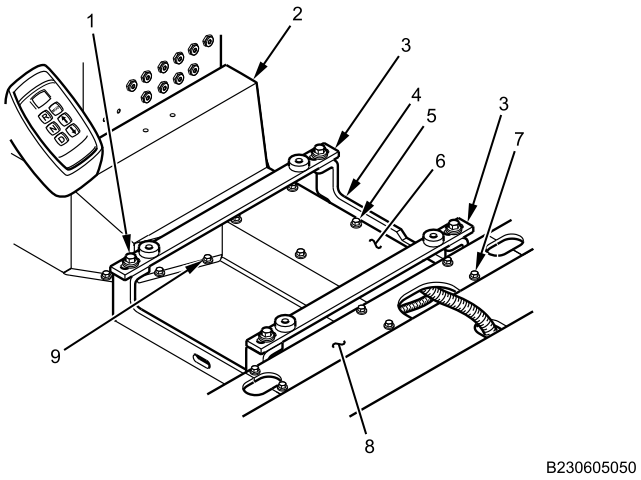


Figure 3. Power Distribution Module (PDM) Harness Electrical Storage Shield and Duct Covers.

3. Remove four bolts (Figure 3, Item 1), lockwashers, and flat washers, and remove two crossbars (Figure 3, Item 3) mounted to center mounting brackets (Figure 3, Item 4). Discard lockwashers.
4. Remove eight bolts (Figure 3, Item 9) and PDM harness electrical storage shield (Figure 3, Item 2).
5. Remove six bolts (Figure 3, Item 5) and electrical harness storage duct center cover (Figure 3, Item 6).
6. Remove six bolts (Figure 3, Item 7) and electrical harness storage duct rear center cover (Figure 3, Item 8).

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

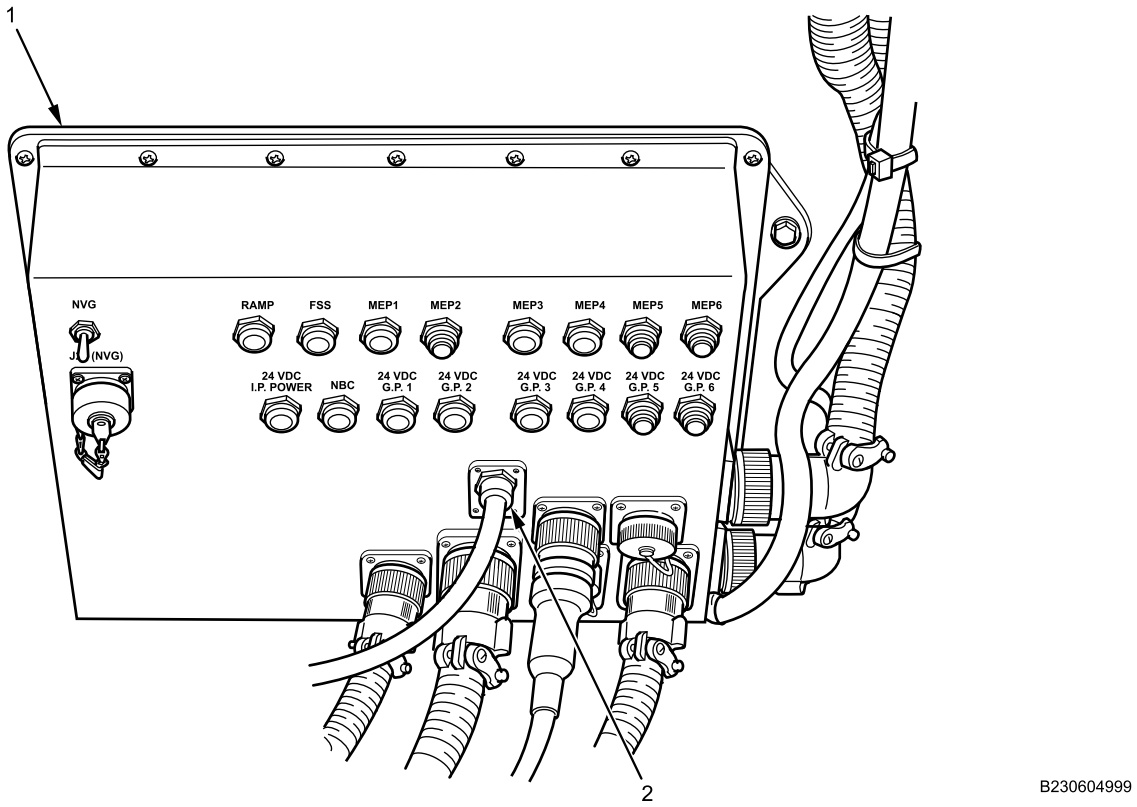


Figure 4. FSS Connector.

7. Disconnect FSS harness connector (Figure 4, Item 2) from PDM (Figure 4, Item 1).

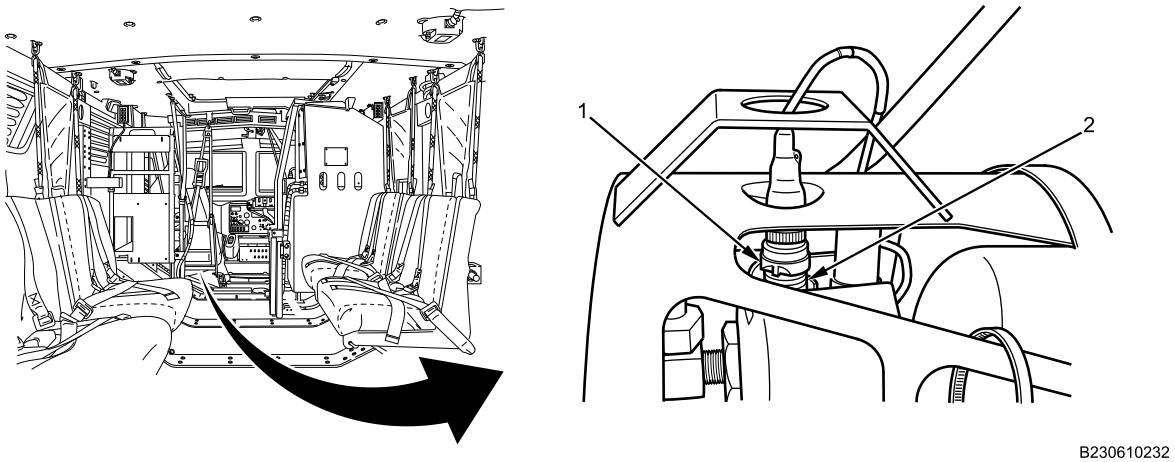


Figure 5. FSS Cabin Cylinder Connection.

8. Disconnect FSS cabin harness connector (Figure 5, Item 1) from FSS cabin cylinder (Figure 5, Item 2).
9. Remove and discard cable lock straps. Remove FSS cabin harness from vehicle.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all FSS chassis harness connectors before installation.

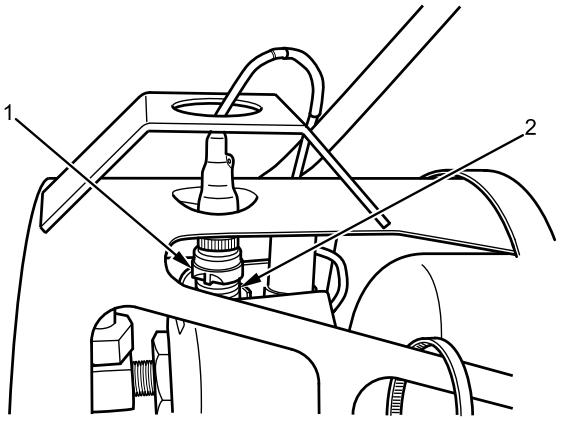


Figure 6. FSS Cabin Cylinder Connection.

1. Position FSS cabin harness in vehicle. Connect FSS cabin harness connector (Figure 6, Item 1) to FSS cabin cylinder (Figure 6, Item 2).

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

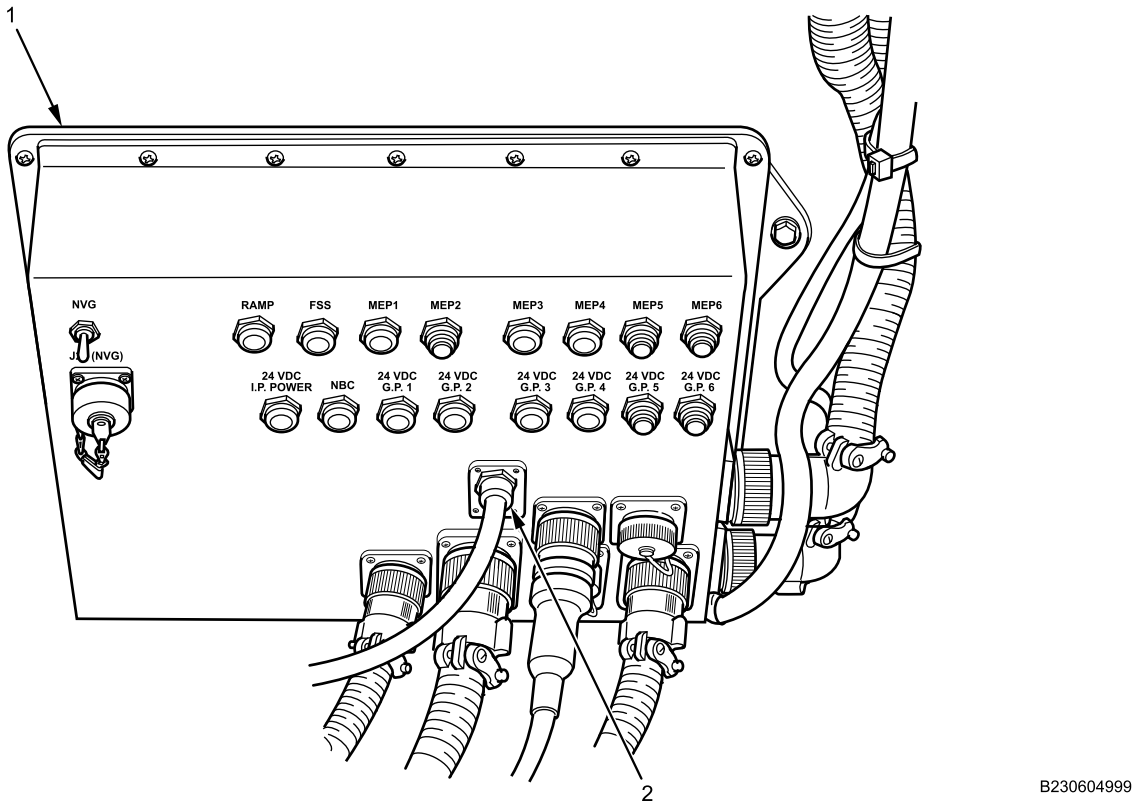


Figure 7. FSS Connector.

2. Connect FSS harness connector (Figure 7, Item 2) to PDM (Figure 7, Item 1).

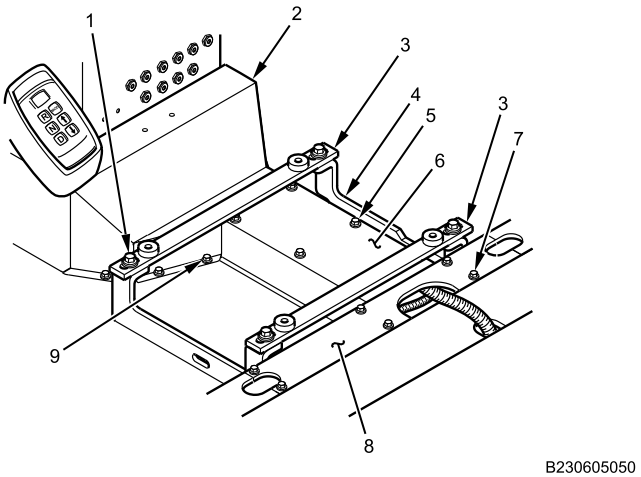


Figure 8. PDM Harness Electrical Storage Shield and Duct Covers.

NOTE

To facilitate alignment of crossbar boltholes, loosen center mounting bracket bolts on floor.

3. Install electrical harness storage duct rear center cover (Figure 8, Item 8) with six bolts (Figure 8, Item 7). Tighten bolts securely.

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

4. Install electrical harness storage duct center cover (Figure 8, Item 6) with six bolts (Figure 8, Item 5). Tighten securely.
5. Install PDM harness electrical storage shield (Figure 8, Item 2) with eight bolts (Figure 8, Item 9). Tighten bolts securely.
6. Install two crossbars (Figure 8, Item 3) on center mounting brackets (Figure 8, Item 4) with four bolts (Figure 8, Item 1), flat washers, and new lockwashers. Tighten bolts securely.

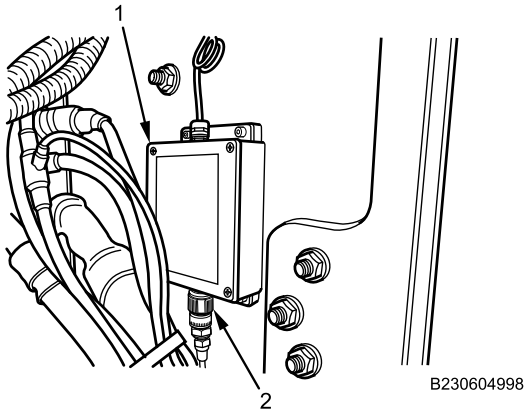


Figure 9. FSS Control Unit.

7. Connect FSS cabin harness connector (Figure 9, Item 2) to FSS control unit (Figure 9, Item 1).

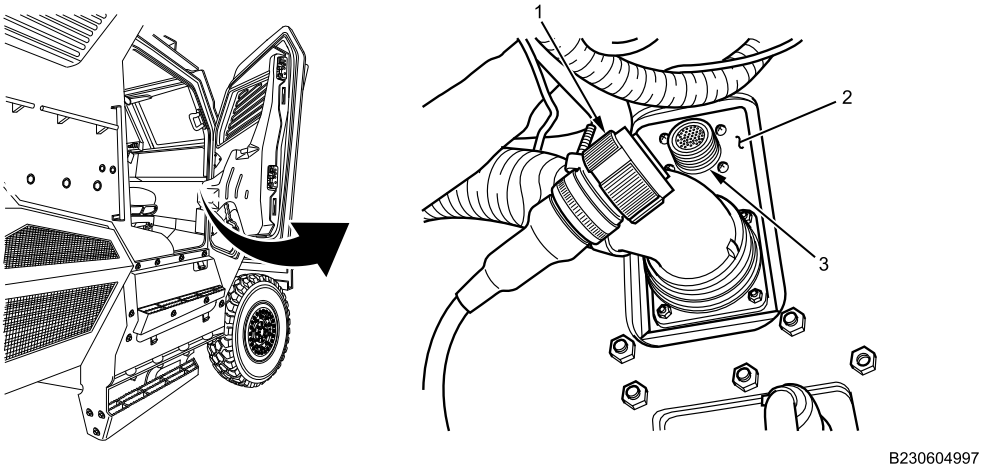


Figure 10. Interior Pass-Through Plate Connection.

8. Connect FSS cabin harness connector (Figure 10, Item 1) to FSS chassis harness connector (Figure 10, Item 3) at pass-through plate (Figure 10, Item 2).
9. Install all cable lock straps and tighten securely.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) CABIN HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0741).
2. Close right cabin door (WP 0608).
3. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Cable lock strap - (8) (WP 0796, Item 120)
Cable lock strap - (3) (WP 0796, Item 136)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Right cabin door secured safely open (WP 0608)
Hood open and secured (TM 9-2355-106-10)
FSS disabled (WP 0736)
Instrument Panel (IP) right side closeout removed (WP 0580)
Left rear stowage box removed (WP 0676)
Belly armor removed (WP 0606)
Left Air Conditioning (A/C) condenser panel removed (WP 0672)
Right Air Conditioning (A/C) condenser panel removed (WP 0672)

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Cabin door must be secured in the open position by using heavy duty winch straps to prevent accidental closure during vehicle maintenance. Pull door hinge pin prior to securing door open. Failure to comply may result in serious injury or death to personnel.

Use the appropriate lifting strap sling or chain hoist for the type of load. Always clean and inspect lifting strap slings and chain hoists prior to use. Inspect for damage such as wear, corrosion, elongation, tears, or punctures. Replace lifting strap slings or chain hoists that are damaged. Failure to comply may result in component damage and death or injury to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, master MAIN POWER switch is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

Do not release extinguisher cylinder mounting straps when disconnecting or connecting FSS electrical harness. Disturbing the pyrotechnic actuator or pressure switch may cause extinguisher to discharge accidentally. Extinguisher cylinder can move violently when discharging. Failure to comply may result in damage to equipment and serious injury or death to personnel.

REMOVAL

NOTE

Record location of cable lock straps to aid in installation.

Note routing of FSS chassis harness on underside of hood before removal to aid in installation.

1. Disconnect FSS chassis harness connector (Figure 1, Item 2) from FSS engine compartment sensor (Figure 1, Item 1).
2. Remove and discard cable lock straps (Figure 1, Item 4) from FSS chassis harness (Figure 1, Item 3) on inside of engine hood (Figure 1, Item 5).

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

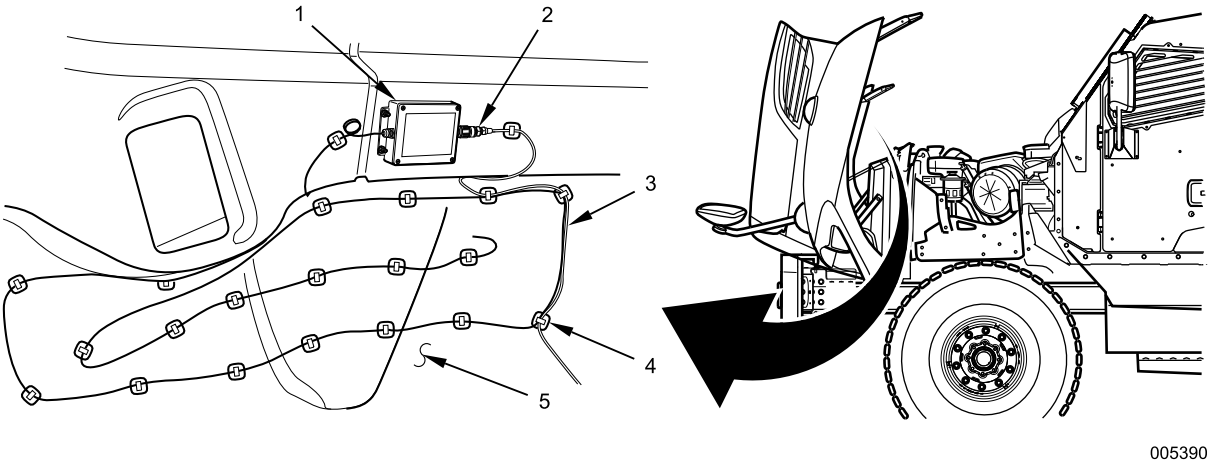


Figure 1. FSS Engine Compartment Sensor Connection.

NOTE

FSS engine extinguisher bottle is located on right side of vehicle on frame rail.

3. Disconnect FSS chassis harness connector (Figure 2, Item 2) from FSS engine extinguisher cylinder (Figure 2, Item 1).

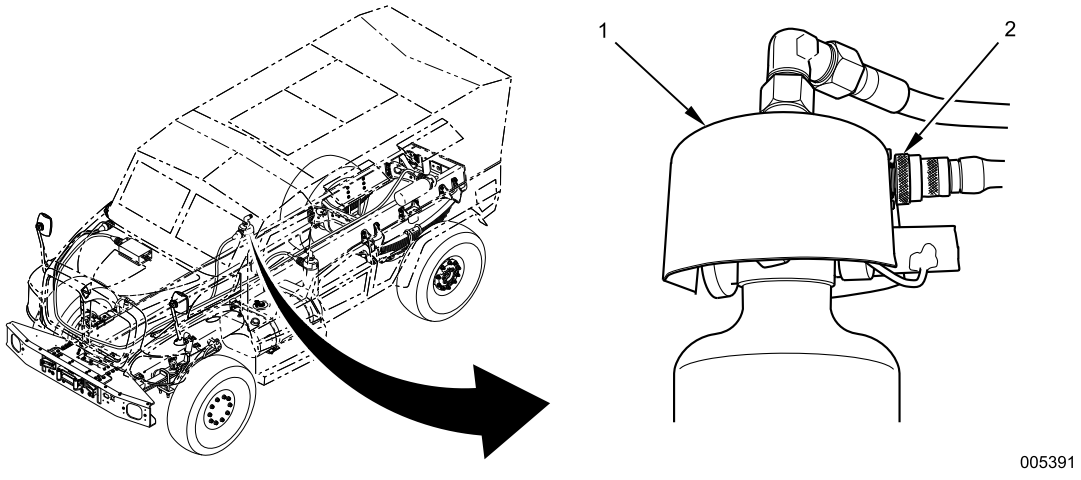


Figure 2. FSS Cylinder Connection.

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

4. Disconnect FSS chassis harness connector (Figure 3, Item 2) from FSS fuel tank extinguisher cylinder (Figure 3, Item 1).

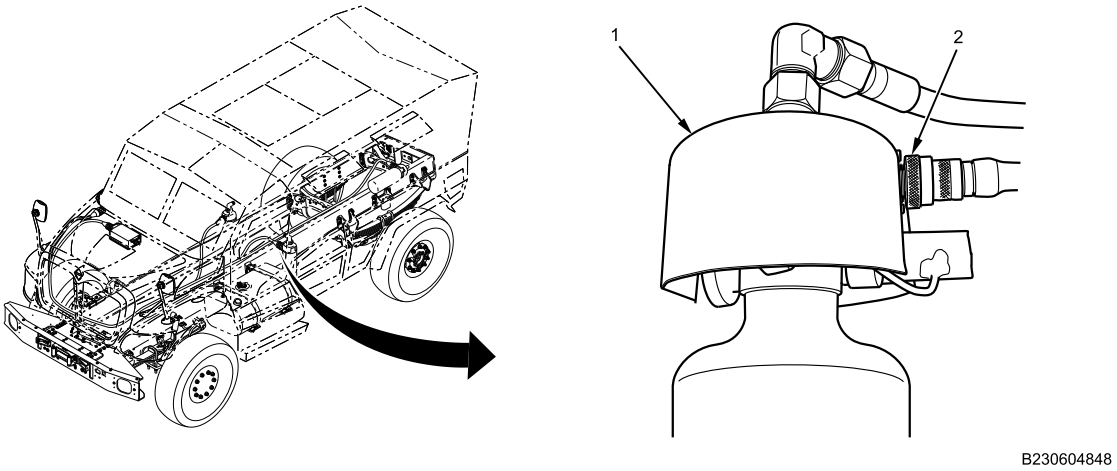


Figure 3. FSS Fuel Tank Extinguisher Cylinder Connection.

5. Disconnect FSS chassis harness connector (Figure 4, Item 2) from FSS tire extinguisher cylinder (Figure 4, Item 1) and remove FSS chassis harness (Figure 4, Item 3).

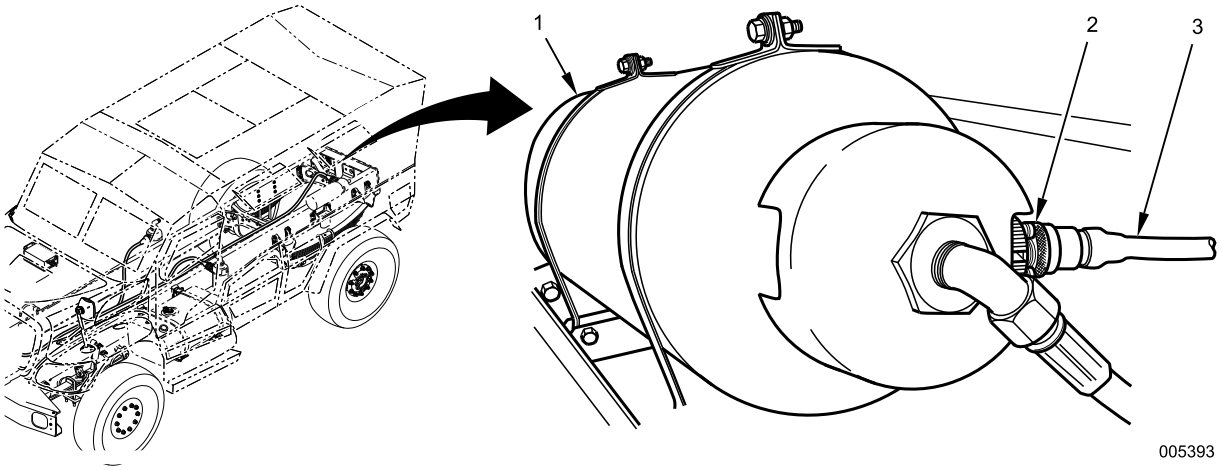


Figure 4. FSS Tire Extinguisher Cylinder Connection.

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

6. Disconnect FSS cabin harness connector (Figure 5, Item 1) from FSS chassis harness connector (Figure 5, Item 4).
7. With assistant on exterior side of pass-through plate, remove four nuts (Figure 5, Item 2) from interior side of pass-through plate (Figure 5, Item 3).

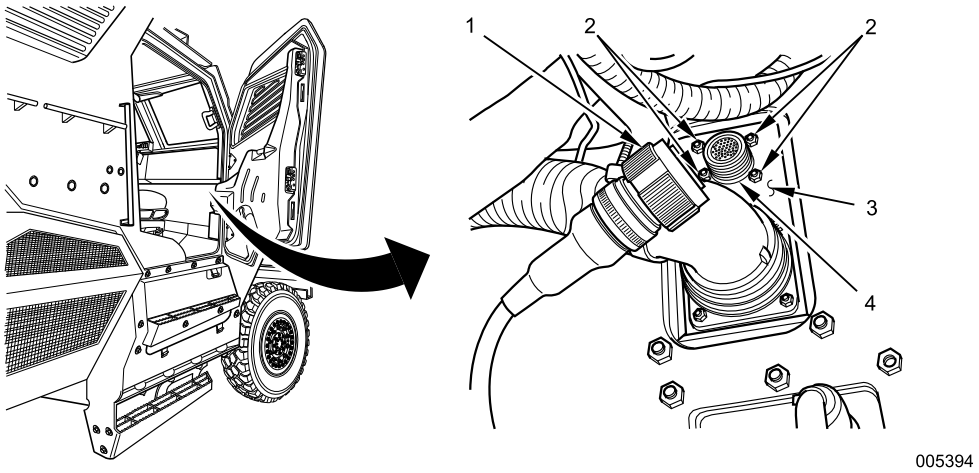


Figure 5. Interior Side of Pass-Through Plate.

8. With assistant on interior side of pass-through plate, remove four screws (Figure 6, Item 3) (one hidden) from exterior FSS chassis harness connector (Figure 6, Item 1).
9. Remove FSS chassis harness (Figure 6, Item 2) from exterior side of pass-through plate (Figure 6, Item 4).

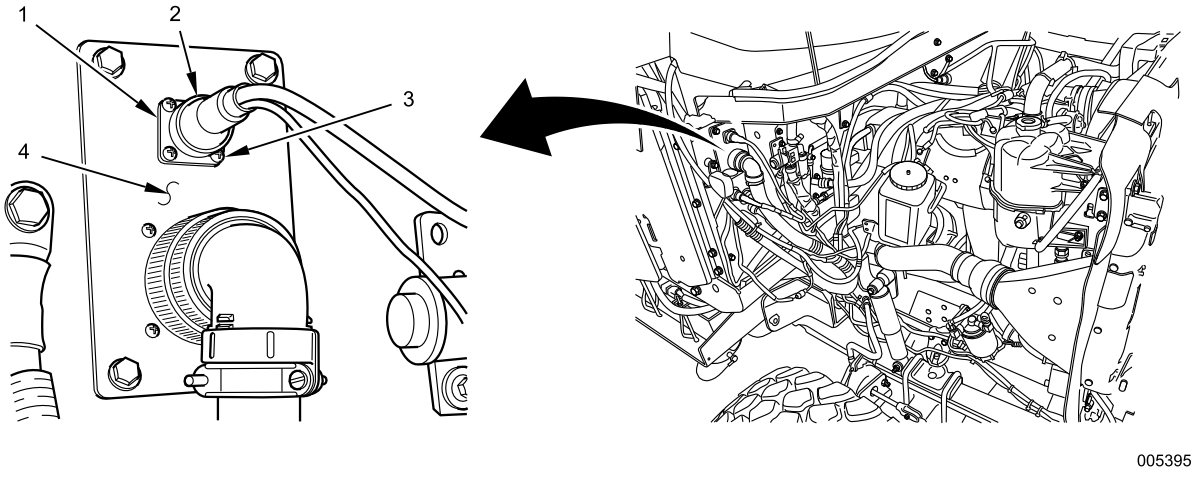


Figure 6. Exterior Side of Pass-Through Plate.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to FSS chassis harness connectors before installation.

1. Position FSS chassis harness (Figure 7, Item 2) on exterior side of pass-through plate (Figure 7, Item 4).
2. Install four screws (Figure 7, Item 3) (one hidden) on FSS chassis harness connector (Figure 7, Item 1).

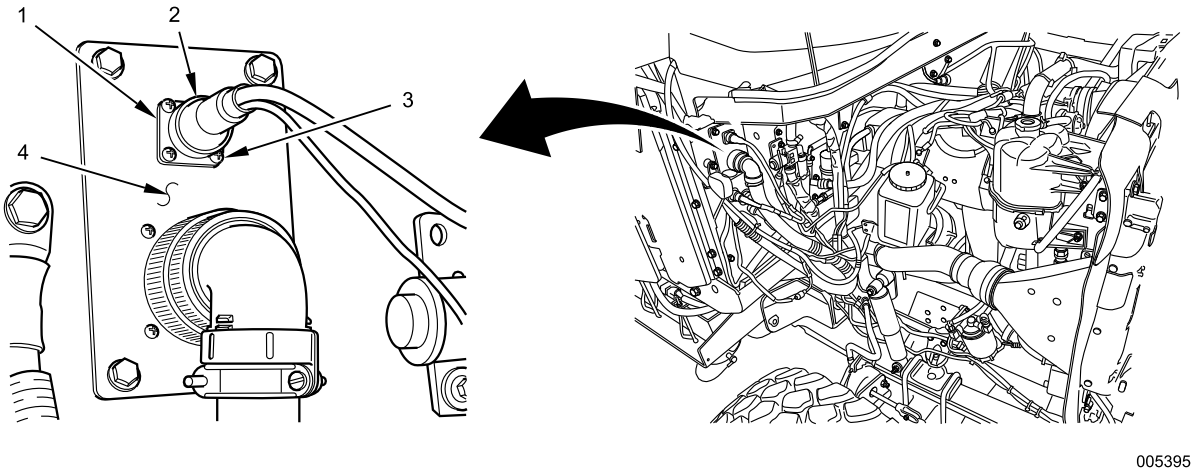


Figure 7. Exterior Side of Pass-Through Plate.

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

3. With assistant on exterior side of pass-through plate, install four nuts (Figure 8, Item 2) on interior side of pass-through plate (Figure 8, Item 3). Tighten nuts securely.
4. Connect FSS cabin harness connector (Figure 8, Item 1) to FSS chassis harness connector (Figure 8, Item 4).

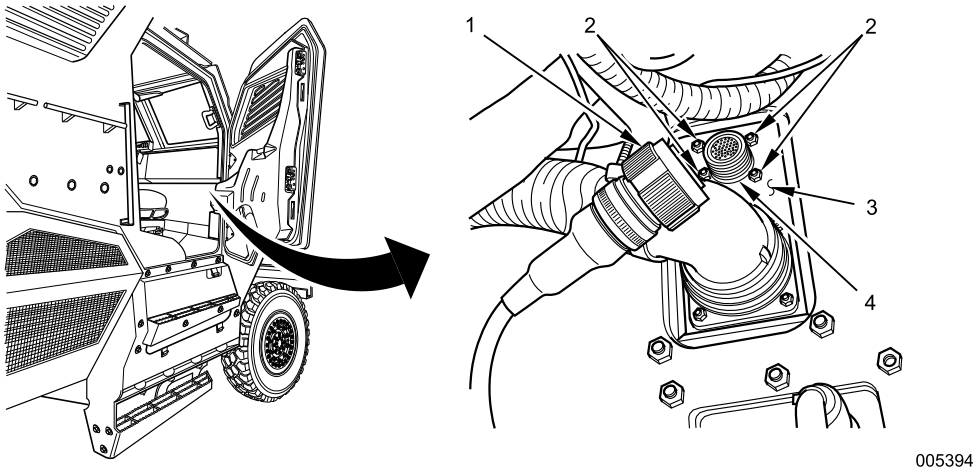


Figure 8. Interior Side of Pass-Through Plate.

5. Position FSS chassis harness (Figure 9, Item 3). Connect FSS chassis harness connector (Figure 9, Item 2) to FSS tire extinguisher cylinder (Figure 9, Item 1).

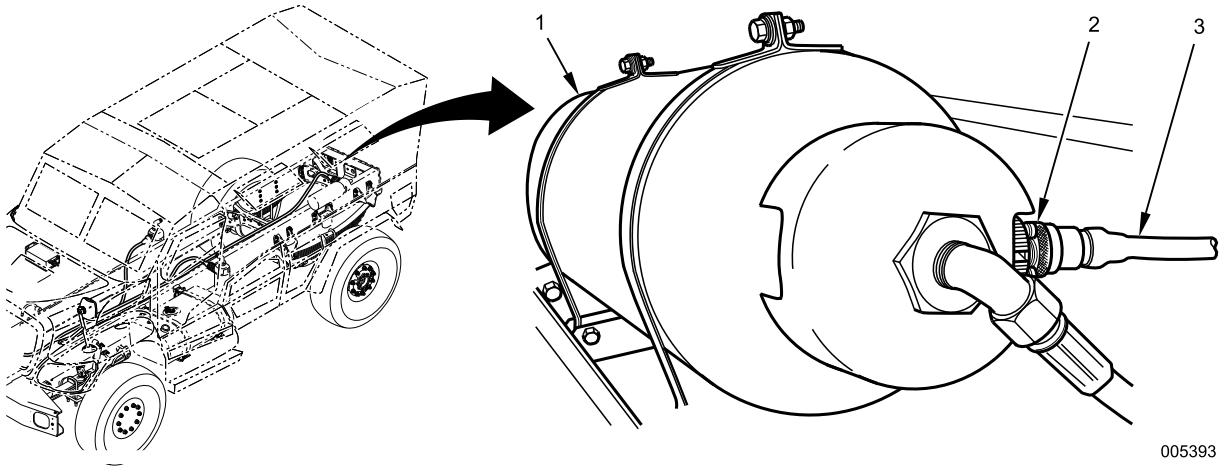


Figure 9. FSS Tire Extinguisher Cylinder Connection.

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

6. Connect FSS chassis harness connector (Figure 10, Item 2) to FSS fuel tank extinguisher cylinder (Figure 10, Item 1).

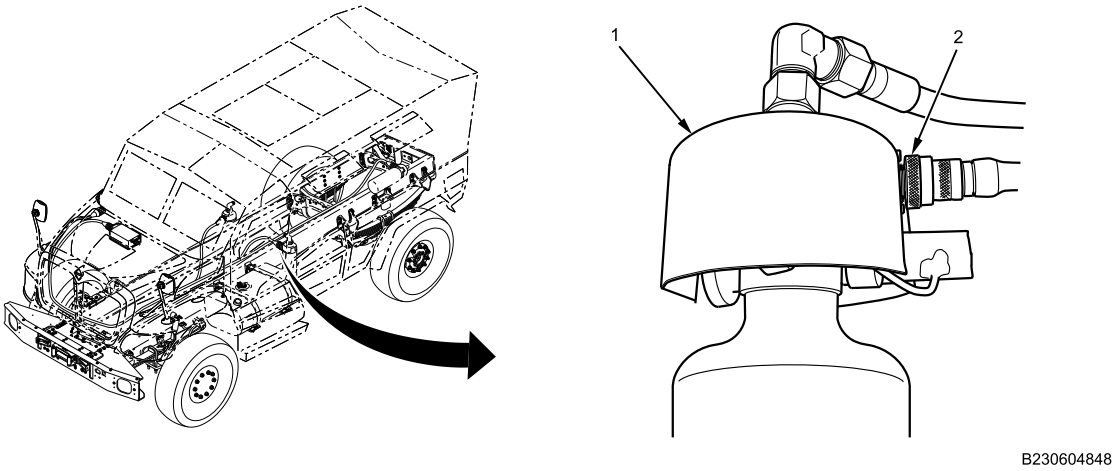


Figure 10. FSS Fuel Tank Extinguisher Cylinder Connection.

7. Connect FSS chassis harness connector (Figure 11, Item 2) to FSS engine extinguisher cylinder (Figure 11, Item 1).

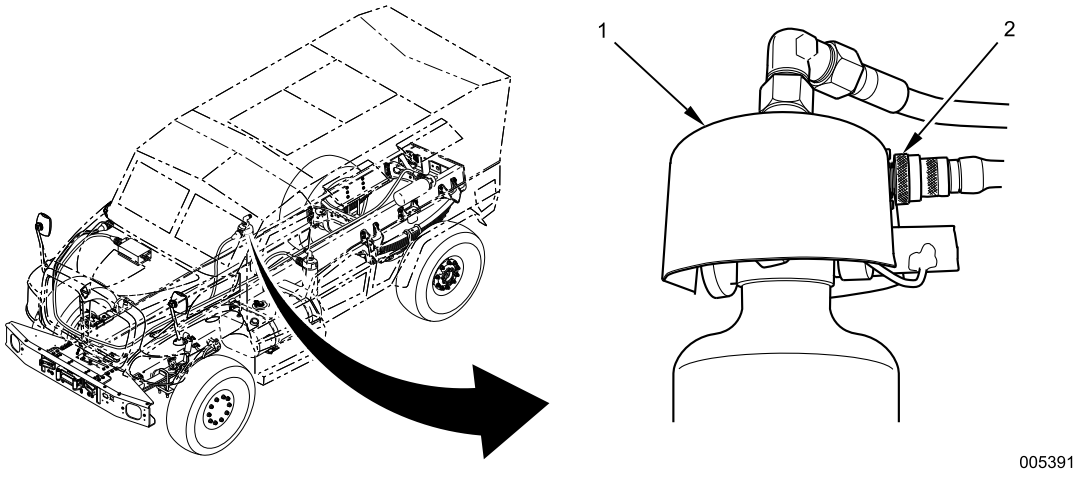


Figure 11. FSS Engine Extinguisher Cylinder Connection.

8. Connect FSS chassis harness connector (Figure 12, Item 2) to FSS engine compartment sensor (Figure 12, Item 1).

FIRE SUPPRESSION SYSTEM (FSS) CHASSIS HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

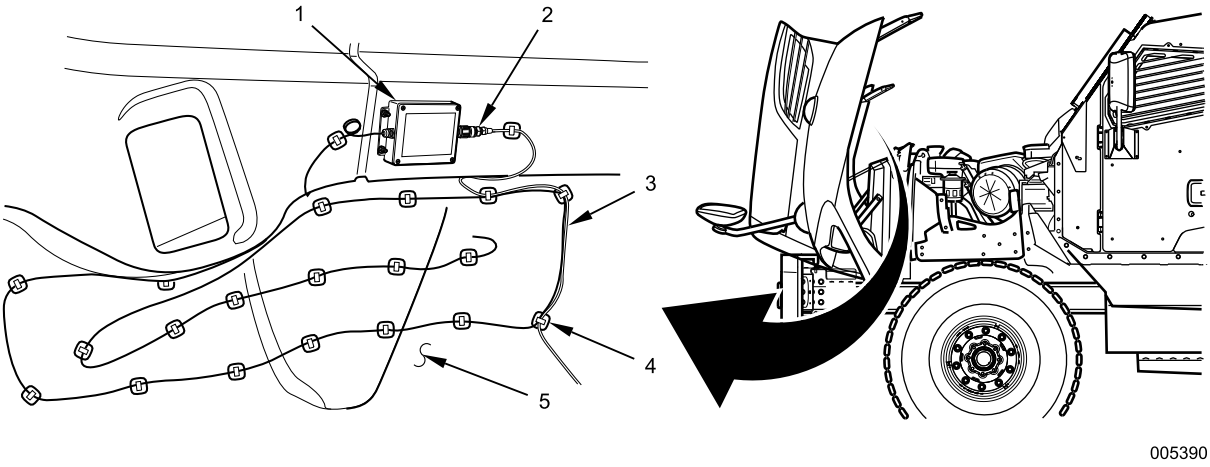


Figure 12. FSS Engine Compartment Sensor Connection.

9. Install cable lock straps as noted in removal.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install left A/C condenser panel (WP 0672).
2. Install right A/C condenser panel (WP 0672).
3. Install left rear stowage box (WP 0676).
4. Install IP right side closeout (WP 0580).
5. Enable FSS (WP 0736).
6. Install belly armor (WP 0606).
7. Close engine hood (TM 9-2355-106-10).
8. Close right cabin door (WP 0608).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) ENGINE COMPARTMENT SENSOR REMOVAL AND INSTALLATION

INITIAL SETUP:

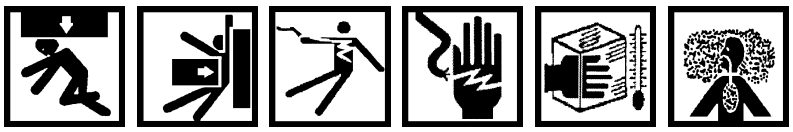
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Cable lock strap (WP 0796, Item 120)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Hood open and secured (TM 9-2355-106-10)
Disable FSS (WP 0736)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) ENGINE COMPARTMENT SENSOR REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

Note routing of FSS engine sensor wire before removal. Draw a diagram if necessary to ensure proper location is maintained on installation.

Do not cut or damage FSS engine sensor wire when removing cable lock straps from retainers.

1. Remove two electrical connectors (Figure 1, Item 3) from FSS engine compartment sensor (Figure 1, Item 2).

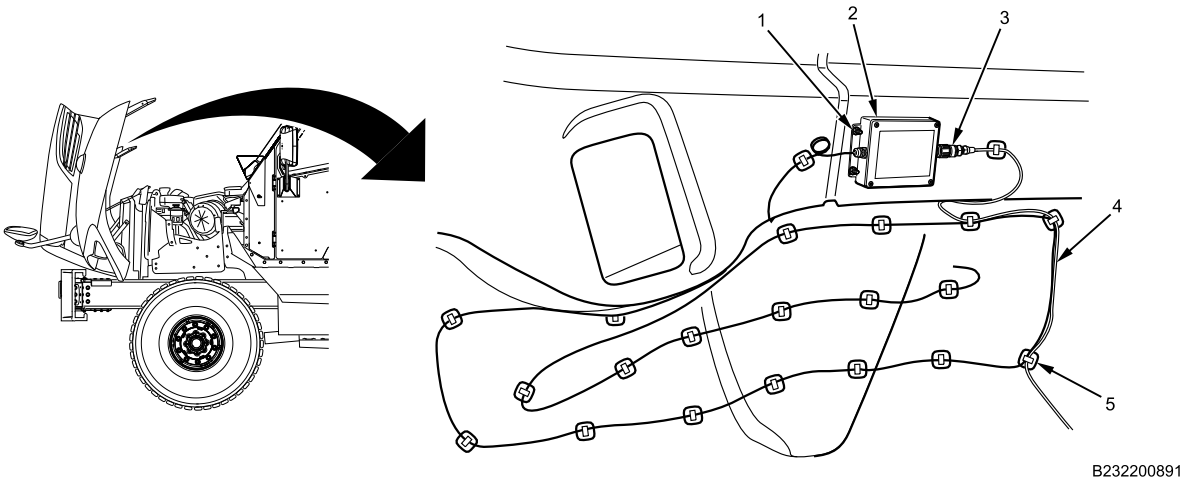


Figure 1. FSS Engine Compartment Sensor Connections.

2. Remove all cable lock straps (Figure 1, Item 5) from engine sensor wire (Figure 1, Item 4).
3. Remove four bolts and locknuts (Figure 1, Item 1) securing FSS engine compartment sensor (Figure 1, Item 2) to hood.
4. Remove FSS engine compartment sensor (Figure 1, Item 2) from bottom of hood.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) ENGINE COMPARTMENT SENSOR REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Position FSS engine compartment sensor (Figure 1, Item 2) on bottom of hood.
2. Install four bolts and locknuts (Figure 1, Item 1) to FSS engine compartment sensor (Figure 1, Item 2). Tighten bolts securely.
3. Install two electrical connectors (Figure 1, Item 3) on FSS engine compartment sensor (Figure 1, Item 2).
4. Carefully install engine sensor wire (Figure 1, Item 4) on bottom of hood, securing engine sensor wire to all retainers (Figure 1, Item 5) with cable lock straps.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Close engine hood (TM 9-2355-106-10).
3. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CABIN SENSOR REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Fire Suppression System (FSS) Disable and Enable (WP 0736)
A-pillar Cover Trim Removed (WP 0642)
Cabin Roof Moldings Removed (WP 0583)

REMOVAL

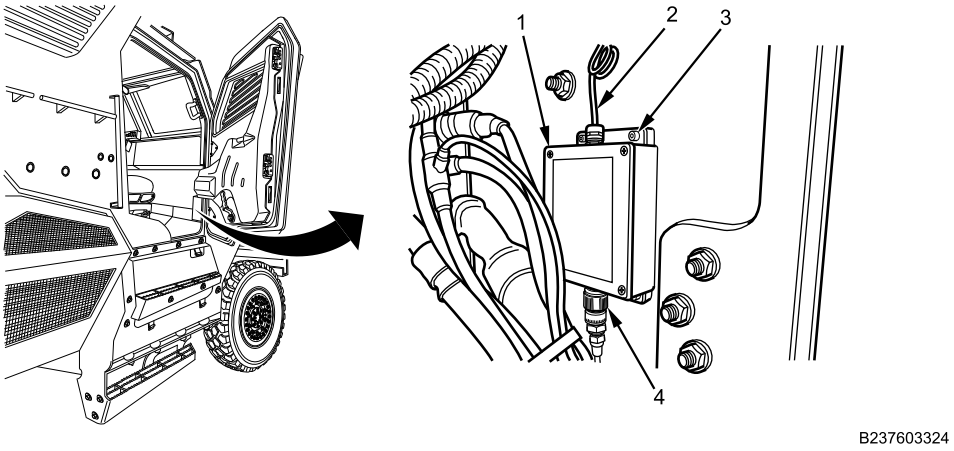


Figure 1. FSS Cabin Compartment Sensor Connections.

1. Remove lower connector (Figure 1, Item 4) from FSS cabin compartment sensor (Figure 1, Item 1).
2. Remove four screws (Figure 1, Item 3) securing FSS cabin compartment sensor (Figure 1, Item 1) to right lower hinge pillar.

CAUTION

Do not allow sharp bends in FSS sensor tubing. Damage to sensor tubing could result.

NOTE

Tubing is part of sensor and is not removable.

Note routing of FSS sensor tubing to aid in installation.

3. Remove FSS sensor tubing (Figure 1, Item 2) from A-pillar and cabin wiring harness roof channels. Remove sensor (Figure 1, Item 1).

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) CABIN SENSOR REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to electrical connector.

1. Position FSS sensor tubing (Figure 2, Item 2) inside cabin wiring harness roof channels as noted during removal.

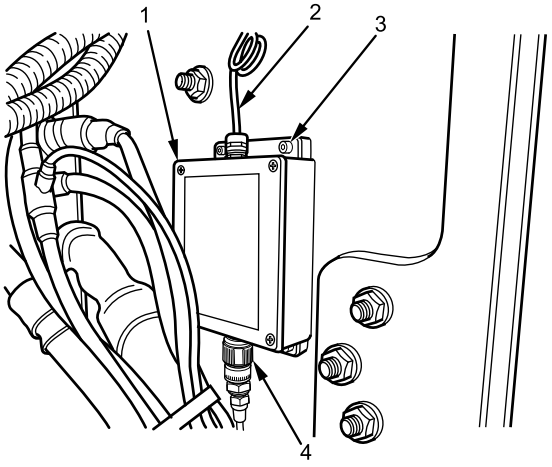


Figure 2. FSS Cabin Compartment Sensor Installation.

2. Position FSS cabin compartment sensor (Figure 2, Item 1) on right lower hinge pillar.
3. Install four screws (Figure 2, Item 3). Tighten screws securely.
4. Install electrical connector (Figure 2, Item 4) on FSS cabin compartment sensor (Figure 2, Item 1).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install cabin roof moldings (WP 0583).
2. Enable FSS (WP 0736).
3. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK CYLINDER REMOVAL AND INSTALLATION

INITIAL SETUP:

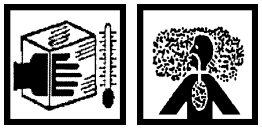
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM-9-2355-106-10)
Transmission set in NEUTRAL (N) (TM-9-2355-106-10)
Engine off (TM-9-2355-106-10)
MAIN POWER switch off (TM-9-2355-106-10)
Wheels chocked (TM-9-2355-106-10)
FSS disabled (WP 0736)

WARNING



Replace fire extinguisher immediately after use, even if only partly used. Failure to comply may result in serious injury or death to personnel.

Some fire suppression systems have a safety pin to install before disconnecting lines. Check to see if system uses a safety pin and install it before disconnecting lines. When disconnecting the extinguisher lines, use extreme caution. Do not disturb the pyrotechnic actuator and pressure switch; this will cause the extinguisher to discharge automatically. Failure to comply may result in damage to equipment and serious injury or death to personnel.

FSS extinguisher can move violently when discharging. Ensure extinguisher is properly secured during use. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Before installing FSS extinguisher, verify correct part number is being installed. Check for visible damage to the canister, such as dents, cracked plastic, chips, or scratches where hoses connect. If damage is visible anywhere, do not use; contact your supervisor. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

FSS fuel tank cylinder is located on left side of vehicle on frame rail.

1. Remove FSS chassis harness connector (Figure 1, Item 2) and hose (Figure 1, Item 1) from FSS fuel tank cylinder.

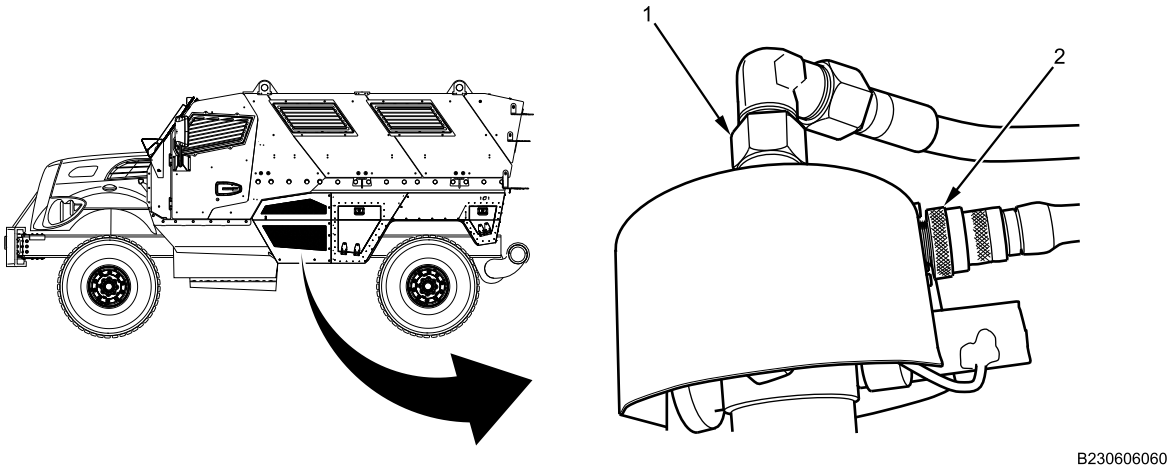


Figure 1. FSS Fuel Tank Cylinder Connections.

2. Remove nuts and bolts (Figure 2, Item 1) from mounting strap bracket (Figure 2, Item 3) of FSS fuel tank cylinder(Figure 2, Item 2) .
3. Remove FSS fuel tank cylinder (Figure 2, Item 2).

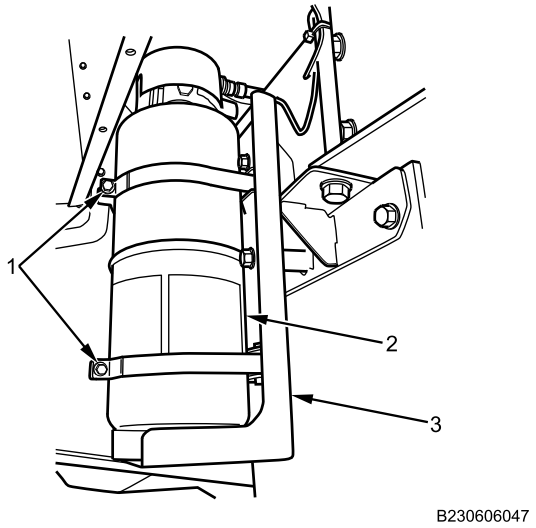


Figure 2. FSS Engine Cylinder Mount.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connectors.

1. Position FSS fuel tank cylinder (Figure 3, Item 2) on mounting strap bracket (Figure 3, Item 3).
2. Install nuts and bolts (Figure 3, Item 1) on mounting strap bracket (Figure 3, Item 3) of FSS fuel tank cylinder (Figure 3, Item 2) and tighten securely.

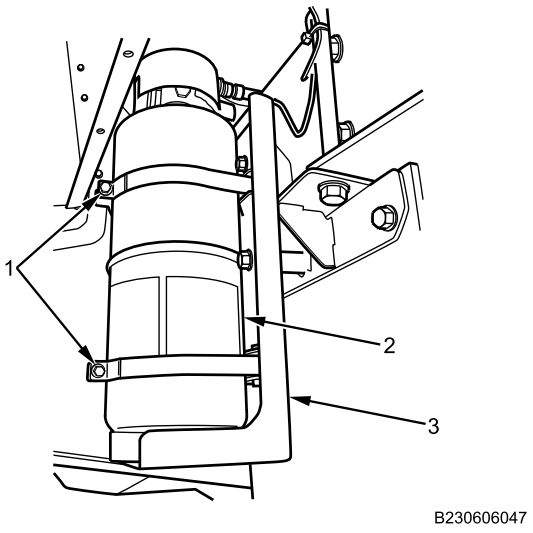


Figure 3. FSS Fuel Tank Cylinder Mount.

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

3. Install FSS chassis harness connector (Figure 4, Item 2) and hose (Figure 4, Item 1) on FSS fuel tank cylinder and tighten securely.

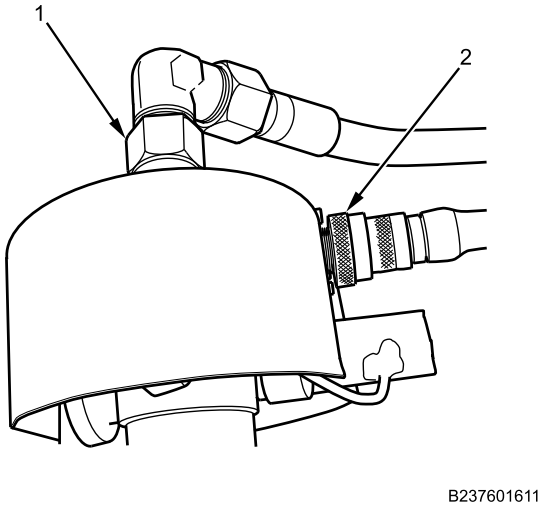


Figure 4. FSS Fuel Tank Cylinder Connection.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Remove wheel chocks (TM-9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION

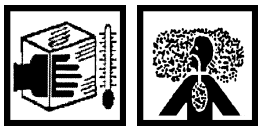
INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Belly armor removed (WP 0606)
FSS disabled (WP 0736)

WARNING



Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

NOTE

The FSS fuel tank dispersion unit is located above fuel tank and inboard of frame rail.

The FSS fuel tank dispersion unit and pipe system consists of nozzles, fittings, pipes, and hoses that are connected to the FSS fuel tank cylinder. If system is being serviced due to damage, replace necessary components, noting their respective routing and locations for reference.

REMOVAL

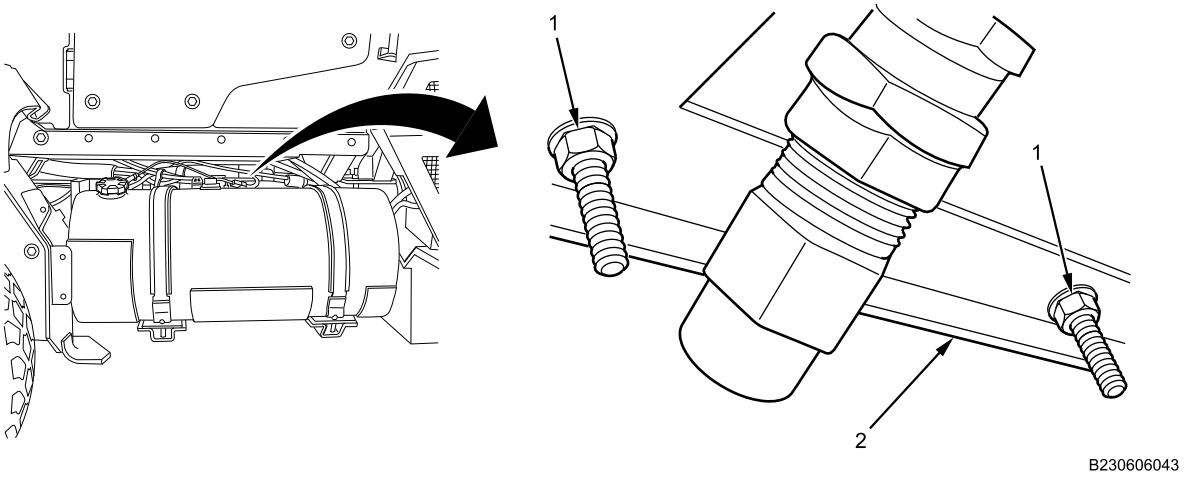


Figure 1. Fuel Tank FSS Bracket.

1. Remove two nuts (Figure 1, Item 1) securing fuel tank FSS bracket (Figure 1, Item 2) to floor.

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

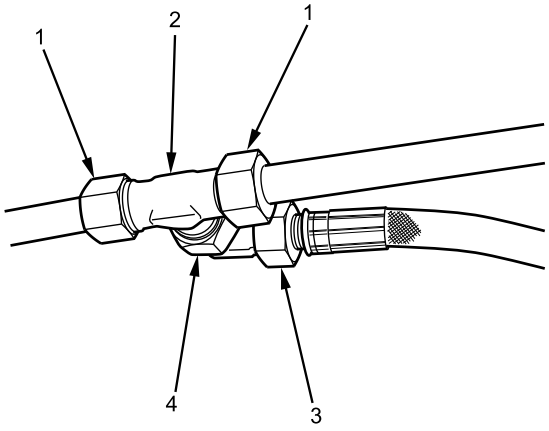


Figure 2. FSS Fuel Tank Dispersion Unit Hose.

2. Remove nut (Figure 2, Item 3) from elbow (Figure 2, Item 4) and remove bracket from vehicle.
3. Remove nuts (Figure 2, Item 1) from T (Figure 2, Item 2) if pipes are being serviced.

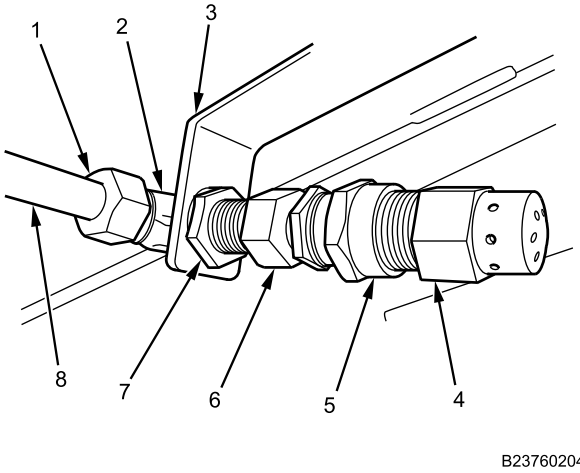


Figure 3. FSS Fuel Tank Dispersion Unit and Pipe, (Rear Nozzle Shown, Front Nozzle Similar).

4. Hold fitting (Figure 3, Item 2) and remove adapter (Figure 3, Item 6) securing fittings (Figure 3, Item 5).
5. Separate nozzle (Figure 3, Item 4) from fitting if nozzle is being replaced.
6. Loosen nut (Figure 3, Item 1) and remove pipe (Figure 3, Item 8) from fitting (Figure 3, Item 2).
7. Remove nut (Figure 3, Item 7) securing fitting (Figure 3, Item 2) and remove from bracket (Figure 3, Item 3).

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

NOTE

Transfer parts as necessary if only a section of FSS fuel tank dispersion unit and pipe is being replaced.

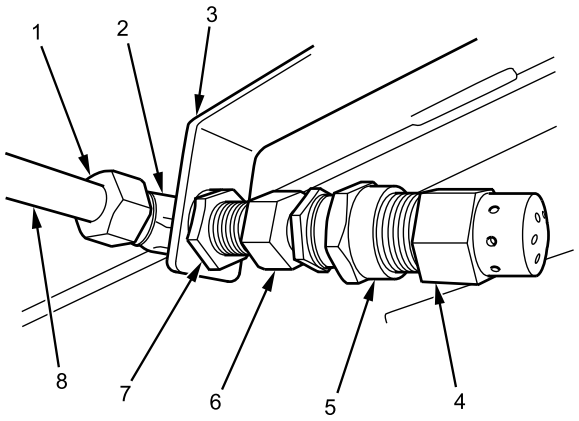


Figure 4. FSS Fuel Tank Dispersion Unit and Pipe, (Rear Nozzle Shown, Front Nozzle Similar).

1. Position fitting (Figure 4, Item 2) on bracket (Figure 4, Item 3). Install nut (Figure 4, Item 7) and tighten securely.
2. Install pipe (Figure 4, Item 8) and nut (Figure 4, Item 1) on fitting (Figure 4, Item 2) and tighten securely.
3. Assemble nozzle (Figure 4, Item 4) on fitting (Figure 4, Item 5) if removed.
4. Install adapter (Figure 4, Item 6) on fitting (Figure 4, Item 2) and tighten securely.

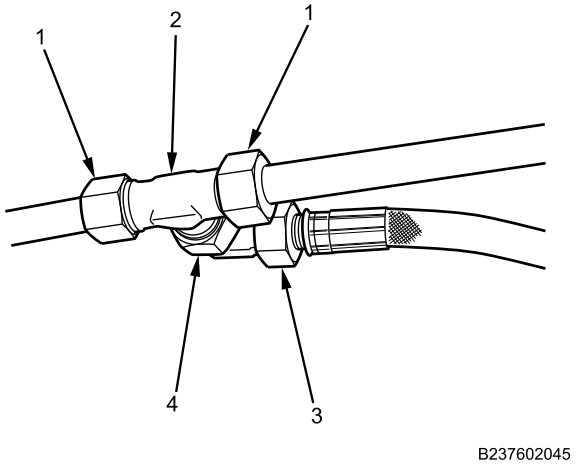


Figure 5. FSS Fuel Tank Dispersion Unit Hose.

5. Install nut (Figure 5, Item 3) from hose to elbow (Figure 5, Item 4) and tighten securely.
6. Install nuts (Figure 5, Item 1) on T (Figure 5, Item 2) as necessary and tighten securely.

FIRE SUPPRESSION SYSTEM (FSS) FUEL TANK DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

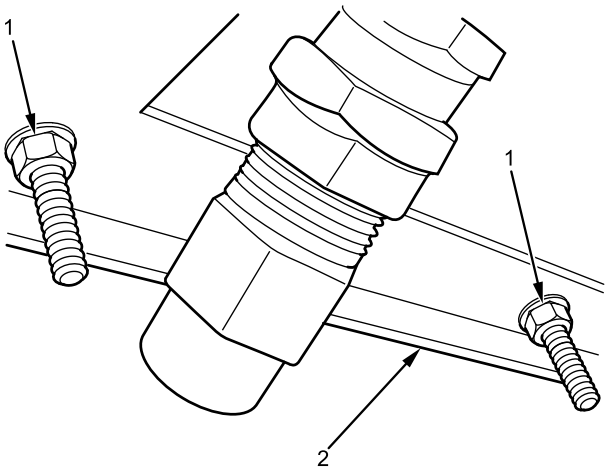


Figure 6. Fuel Tank FSS Bracket.

WARNING



Antiseize compound can cause skin, eye, and respiratory irritation. Inhalation can cause difficulty breathing, dizziness, headache, and nausea. Wear eye protection and use only with adequate ventilation. Do not use near heat, sparks, or open flame. Wash hands and eyes after using compound. In case of skin contact, wash affected area with soap and water, and seek medical attention if irritation persists. If compound contacts eyes, flush eyes with water for at least 15 minutes, and obtain medical attention if irritation persists. In case of accidental ingestion, do not induce vomiting. Slowly drink 1-2 glasses of water or milk, and seek medical attention. Store compound in a closed container away from heat. Dispose of it in accordance with standard operating procedures. Failure to comply may result in injury to personnel.

7. Apply corrosion preventive compound to nozzle bracket assembly bolts (Figure 6, Item 1).
8. Position fuel tank FSS bracket (Figure 6, Item 2) to floor and install two nuts (Figure 6, Item 1) and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install belly armor (WP 0606).
2. Enable FSS (WP 0736).
3. Remove wheel chocks (TM-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CABIN CYLINDER REMOVAL AND INSTALLATION

INITIAL SETUP:

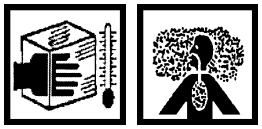
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
FSS disabled (WP 0736)

WARNING



Replace fire extinguisher immediately after use, even if only partly used and confirm that replacement extinguisher is correct part number and chemical agent before installing. Failure to comply may result in serious injury or death to personnel.

Some fire suppression systems have a safety pin to install before disconnecting lines. Check to see if system uses a safety pin and install it before disconnecting lines. When disconnecting the extinguisher lines, use extreme caution. Do not disturb the pyrotechnic actuator and pressure switch; this will cause the extinguisher to discharge automatically. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Fire Suppression System (FSS) extinguisher can move violently when discharging. Ensure extinguisher is properly secured during use. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Before installing Fire Suppression System (FSS) extinguisher, verify correct part number is being installed. Check for visible damage to the canister, such as dents, cracked plastic, chips, or scratches where hoses connect. If damage is visible anywhere, do not use; contact your supervisor. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) CABIN CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Remove connector (Figure 1, Item 2) from FSS control unit (Figure 1, Item 1) to disable FSS system.

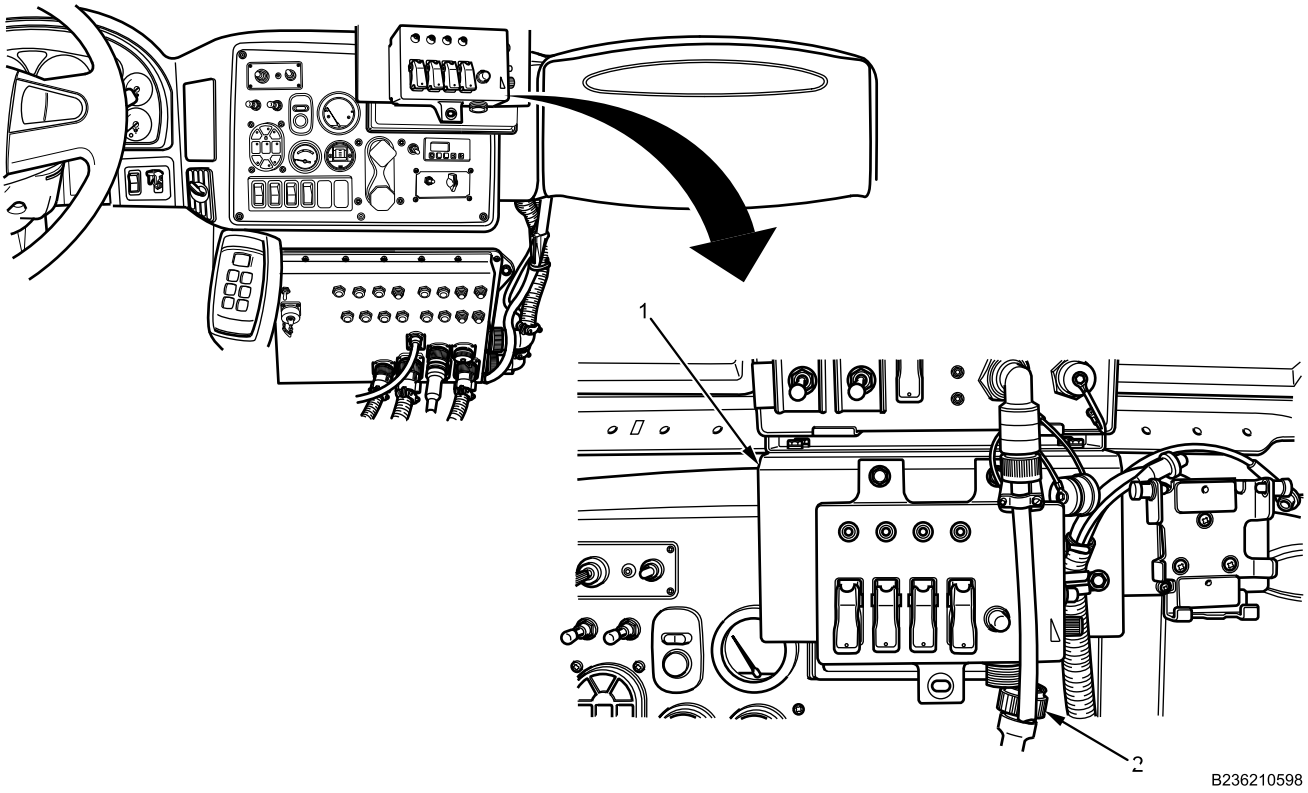


Figure 1. FSS Control Unit.

2. Remove electrical connector (Figure 2, Item 1) from FSS cabin cylinder and guide through hole (Figure 2, Item 2) in shield.

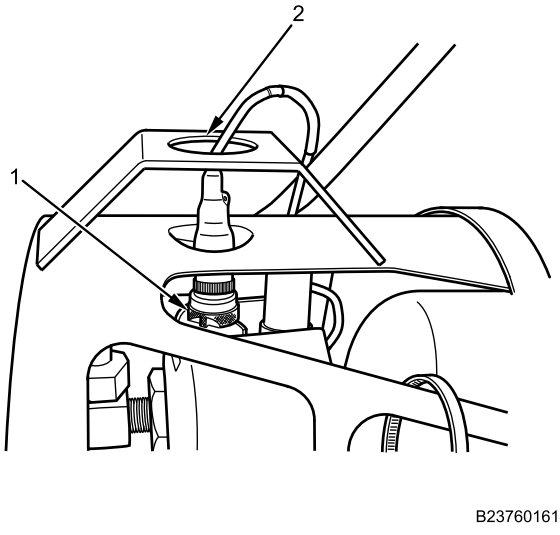


Figure 2. FSS Cabin Cylinder Electrical Connector.

3. Loosen bolt (Figure 3, Item 3) on FSS cabin cylinder shield strap.

FIRE SUPPRESSION SYSTEM (FSS) CABIN CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

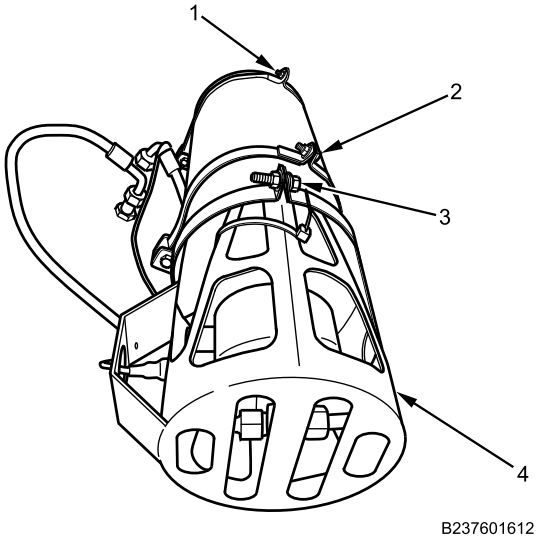


Figure 3. FSS Cabin Cylinder Connections Shield.

4. Remove cylinder shield (Figure 3, Item 4) from FSS cabin cylinder.
5. Remove nuts and bolts (Figure 3, Item 1 and 2) from FSS cabin cylinder mounting straps.
6. Hold cylinder fitting (Figure 4, Item 3) and remove hoses (Figure 4, Item 1 and 2) from FSS cabin cylinder.

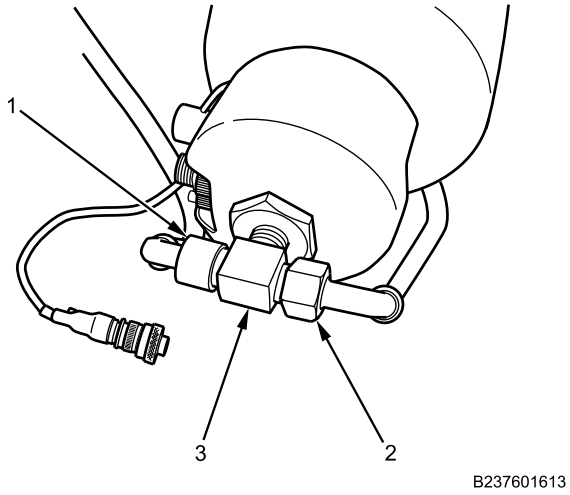


Figure 4. FSS Cabin Cylinder Hoses.

7. Remove FSS cabin cylinder.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) CABIN CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connectors.

1. Position FSS cabin cylinder on floor bracket.
2. Hold cylinder fitting (Figure 5, Item 3) and install hoses (Figure 5, Item 1 and 2) on FSS cabin cylinder. Do not tighten hoses at this time.

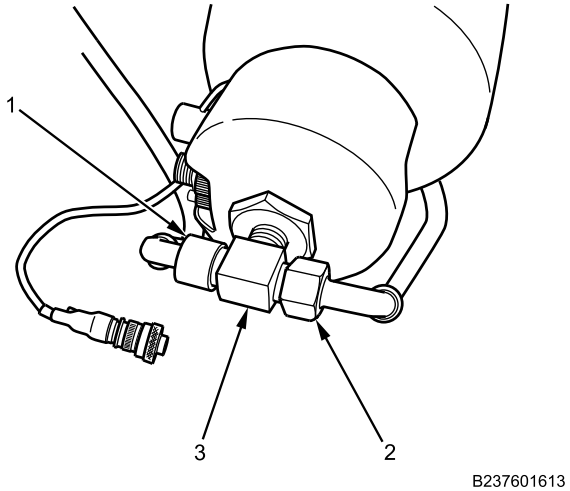


Figure 5. FSS Cabin Cylinder Hoses.

3. Install nuts and bolts (Figure 6, Item 1 and 2) on FSS cabin cylinder mounting straps and tighten securely.

FIRE SUPPRESSION SYSTEM (FSS) CABIN CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

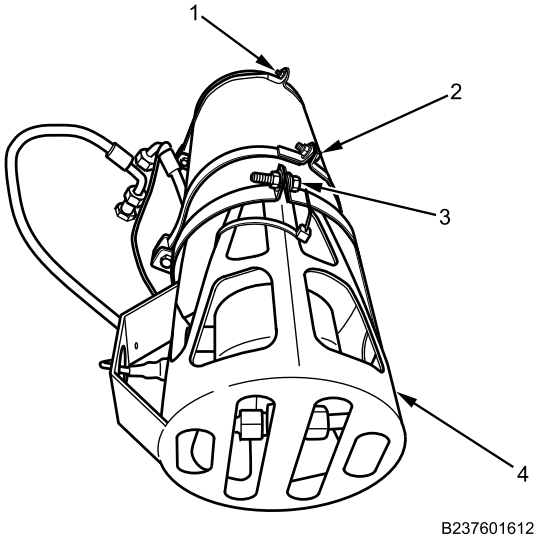


Figure 6. FSS Cabin Cylinder Connections Shield.

4. Install cylinder shield (Figure 6, Item 4) on FSS cabin cylinder.
5. Slide cylinder shield strap over cylinder shield and tighten bolt (Figure 6, Item 3) securely.
6. Tighten cylinder hose fittings (Figure 6, Item 1 and 2) securely.
7. Guide electrical connector (Figure 7, Item 1) through hole (Figure 7, Item 2) in shield and install connector on FSS cabin cylinder.

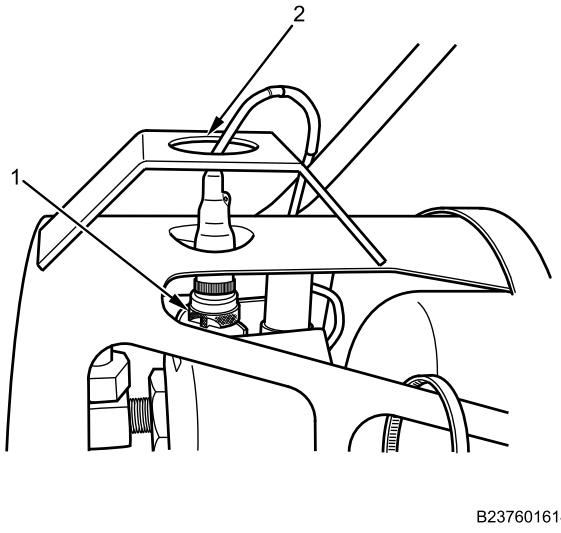


Figure 7. FSS Cabin Cylinder Electrical Connector.

FIRE SUPPRESSION SYSTEM (FSS) CABIN CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

8. Install connector (Figure 8, Item 2) on FSS control unit (Figure 8, Item 1).

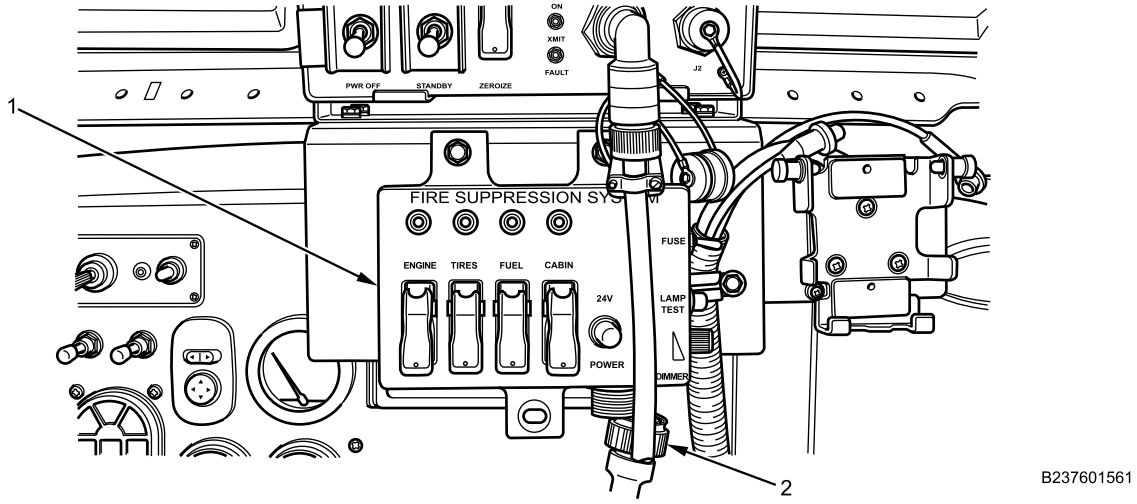


Figure 8. FSS Control Unit.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) CABIN/CREW DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION

INITIAL SETUP:

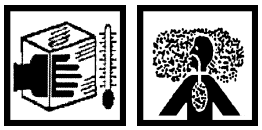
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Cable lock strap (WP 0796, Item 120)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM-9-2355-106-10)
Transmission set in NEUTRAL (N) (TM-9-2355-106-10)
Engine off (TM-9-2355-106-10)
MAIN POWER switch off (TM-9-2355-106-10)
Wheels chocked (TM-9-2355-106-10)
FSS disabled (WP 0736)

WARNING



Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

NOTE

The FSS cabin/crew dispersion unit and pipe system consists of nozzles, fittings, pipes, and hoses that are connected to the FSS cabin/crew cylinder. If system is being serviced due to damage, replace necessary components, noting their respective routing and locations for reference.

FIRE SUPPRESSION SYSTEM (FSS) CABIN/CREW DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Hold fitting (Figure 1, Item 3) and remove adapter (Figure 1, Item 4) securing nozzle (Figure 1, Item 5). Separate nozzle from fitting if nozzle is being replaced.

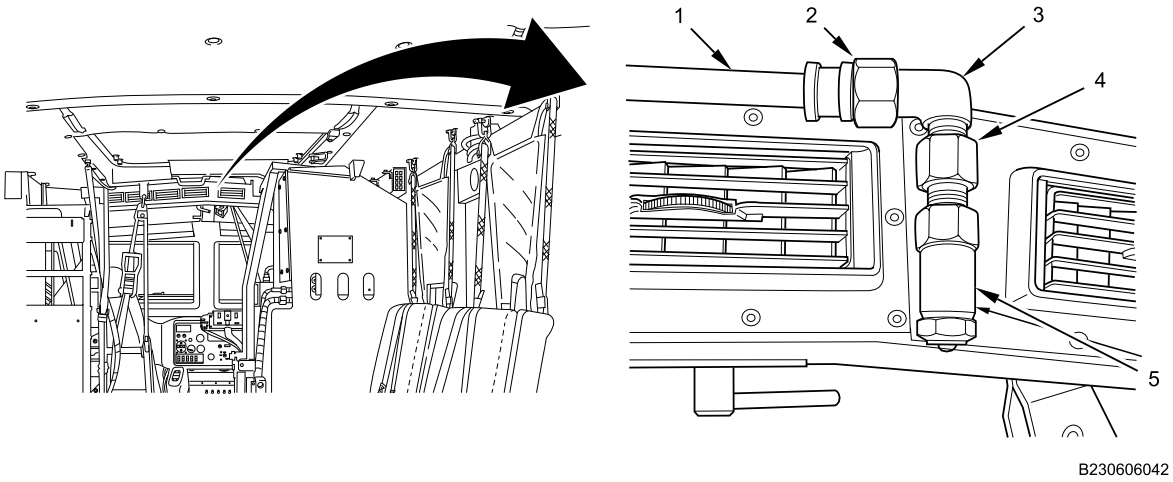


Figure 1. Front FSS Cabin/Crew Dispersion Unit and Pipe.

2. Loosen nut (Figure 1, Item 2) and remove fitting (Figure 1, Item 3) from pipe (Figure 1, Item 1).
3. Loosen nut (Figure 2, Item 6) and remove from fitting (Figure 2, Item 5).

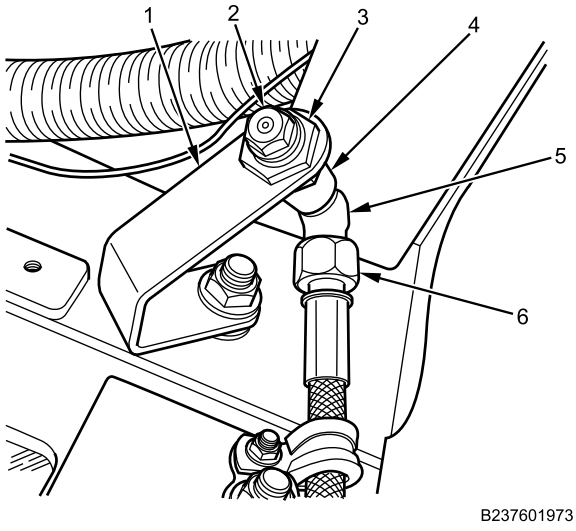


Figure 2. Rear FSS Cabin/Crew Dispersion Unit and Pipe (Right Side Shown, Left Side Similar).

4. Remove nut (Figure 2, Item 3) securing fitting (Figure 2, Item 4) to bracket (Figure 2, Item 1).
5. Remove nozzle (Figure 2, Item 2) from fitting (Figure 2, Item 4) if nozzle is being replaced.

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) CABIN/CREW DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

NOTE

Transfer parts as necessary if only a section of FSS cabin/crew dispersion unit and pipe is being replaced.

1. Install nozzle (Figure 3, Item 2) on fitting (Figure 3, Item 4) if removed and tighten securely.

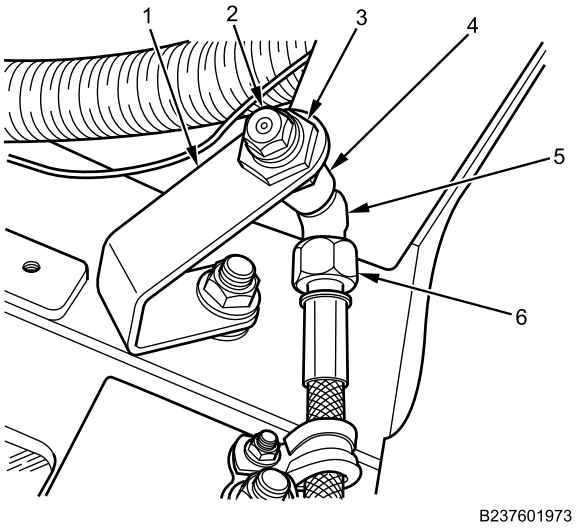


Figure 3. Rear FSS Cabin/Crew Dispersion Unit and Pipe (Right Side Shown, Left Side Similar).

2. Position fitting (Figure 3, Item 4) on bracket (Figure 3, Item 1).
3. Install nut (Figure 3, Item 3) on fitting (Figure 3, Item 4) and tighten securely.
4. Install nut (Figure 3, Item 6) on fitting (Figure 3, Item 5) and tighten securely.

FIRE SUPPRESSION SYSTEM (FSS) CABIN/CREW DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

5. Install nozzle (Figure 4, Item 5) on adapter (Figure 4, Item 4) and tighten securely.

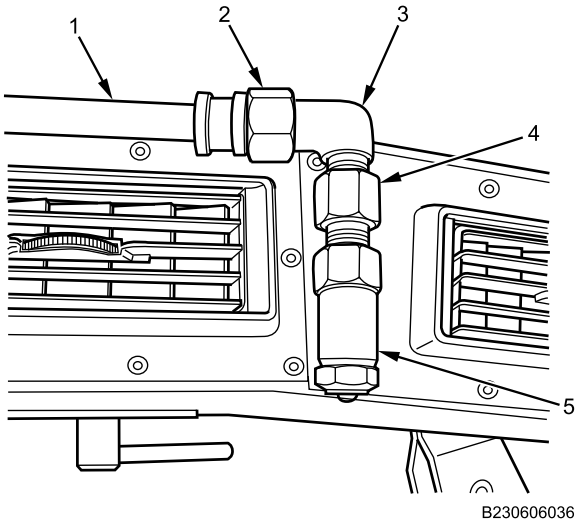


Figure 4. Front FSS Cabin/Crew Dispersion Unit and Pipe.

6. Install adapter (Figure 4, Item 4) on fitting (Figure 4, Item 3) and tighten securely.
7. Install pipe (Figure 4, Item 1) with nut (Figure 4, Item 2) on fitting (Figure 4, Item 3) and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Remove wheel chocks (TM-9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) TIRE CYLINDER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

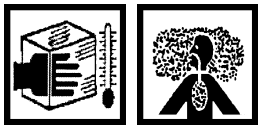
Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
FSS disabled (WP 0736)
Left side rear stowage box removed (WP 0676)

REMOVAL

WARNING



Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, master MAIN POWER switch is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

Replace fire extinguisher immediately after use, even if only partly used. Failure to comply may result in serious injury or death to personnel.

Some fire suppression systems have a safety pin to install before disconnecting lines. Check to see if system uses a safety pin and install it before disconnecting lines. When disconnecting the extinguisher lines, use extreme caution. Do not disturb the pyrotechnic actuator and pressure switch; this will cause the extinguisher to discharge automatically. Failure to comply may result in damage to equipment and serious injury or death to personnel.

FSS extinguisher can move violently when discharging. Ensure extinguisher is properly secured during use. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Before installing FSS extinguisher, verify correct part number is being installed. Check for visible damage to the canister, such as dents, cracked plastic, chips, or scratches where hoses connect. If damage is visible anywhere, do not use; contact your supervisor. Failure to comply may result in damage to equipment and serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) TIRE CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

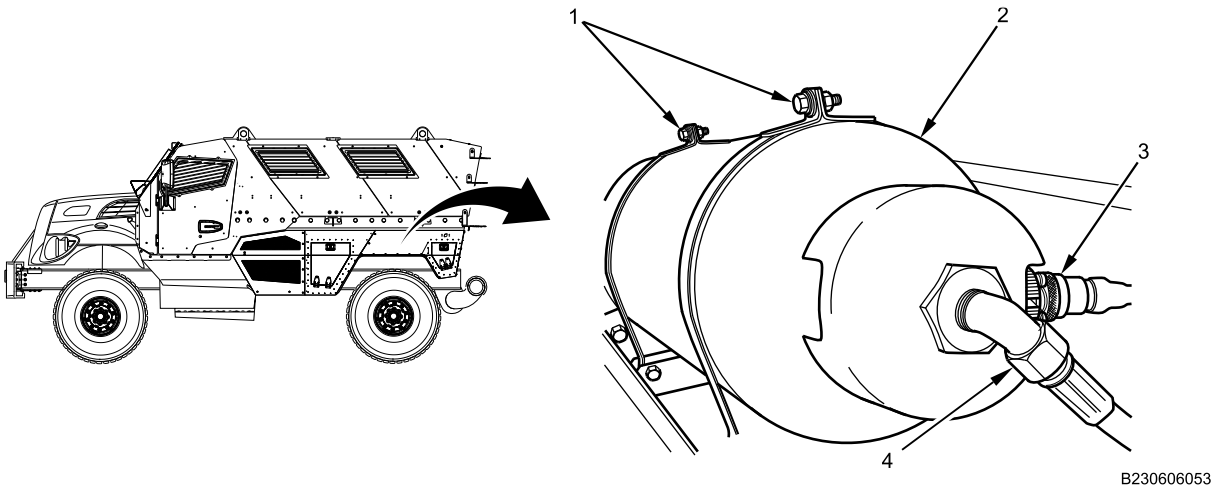


Figure 1. FSS Tire Cylinder Connections.

1. Remove electrical connector (Figure 1, Item 3) and hose (Figure 1, Item 4) from cylinder (Figure 1, Item 2).
2. Remove nuts and bolts (Figure 1, Item 1) from FSS tire cylinder mounting straps.
3. Remove FSS tire cylinder (Figure 1, Item 2).

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) TIRE CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connectors.

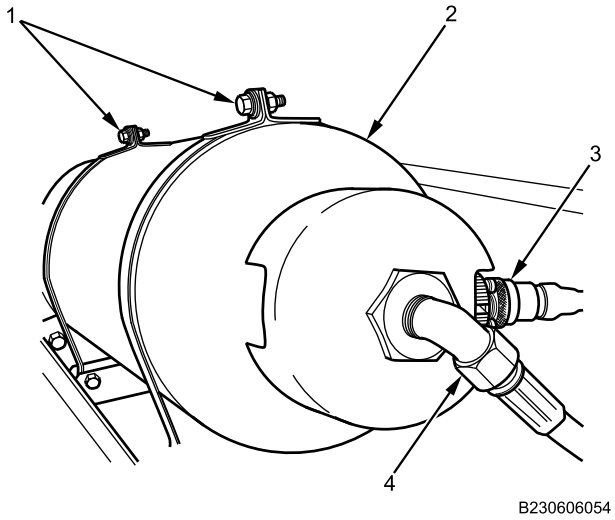


Figure 2. FSS Tire Cylinder Connections.

1. Install electrical connector (Figure 2, Item 3) and hose (Figure 2, Item 4) on cylinder (Figure 2, Item 2).
2. Position FSS tire cylinder on bracket.
3. Install nuts and bolts (Figure 2, Item 1) on FSS tire cylinder mounting straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install left side rear stowage box (WP 0676).
2. Enable FSS (WP 0736).
3. Remove wheel chocks (TM-9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) FRONT TIRE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION

INITIAL SETUP:

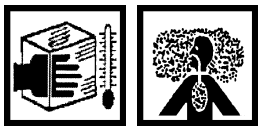
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Compound (WP 0794, Item 13)
Gloves (WP 0794, Item 18)
Faceshield, industrial (WP 0794, Item 16)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
FSS disabled (WP 0736)

WARNING



Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

NOTE

The FSS front tire dispersion unit and pipe system consists of nozzles, fittings, pipes, and hoses that are connected to the FSS tire cylinder. If system is being serviced due to damage, replace necessary components, noting their respective routing and locations for reference.

Right side shown, left side similar.

FIRE SUPPRESSION SYSTEM (FSS) FRONT TIRE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Remove compression nut (Figure 1, Item 8) connecting pipe (Figure 1, Item 7) to hose (Figure 1, Item 9).

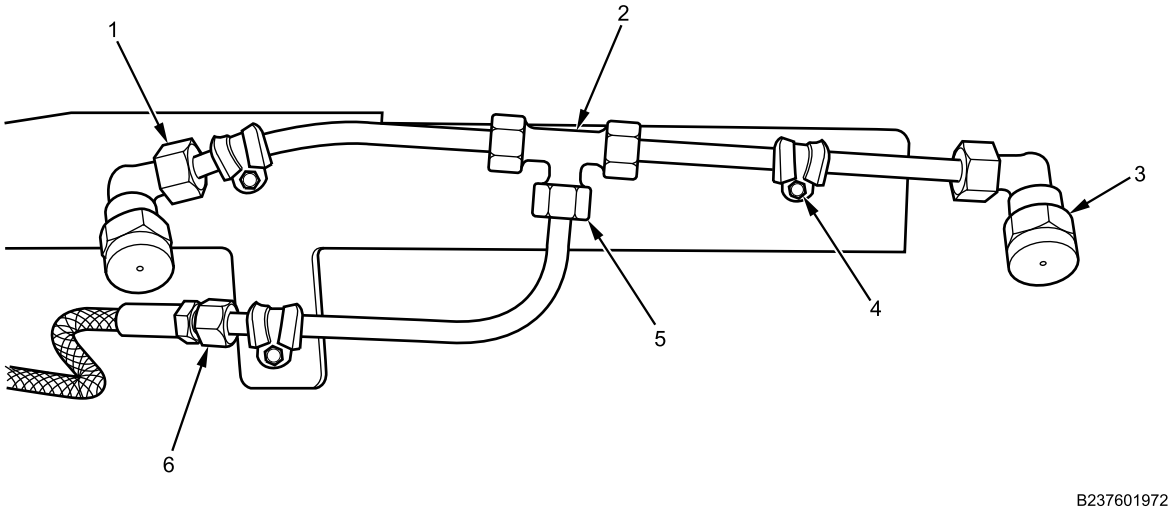


Figure 1. FSS Front Tire Dispersion Unit and Pipe.

2. Remove three screws (Figure 1, Item 4) securing pipe assembly to bracket (Figure 1, Item 5).
3. Remove nozzle (Figure 1, Item 3) if nozzles are being replaced.
4. Remove pipe and elbows being serviced from T (Figure 1, Item 2) by loosening nuts (Figure 1, Item 1 and 6) if pipe is being replaced.

END OF TASK

INSTALLATION

WARNING



Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full-face shield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

NOTE

Transfer parts as necessary if only a section of FSS front tire dispersion unit and pipe is being replaced.

1. Install pipe (Figure 2, Item 7) on T (Figure 2, Item 2) and tighten compression nut (Figure 2, Item 6) securely.

FIRE SUPPRESSION SYSTEM (FSS) FRONT TIRE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

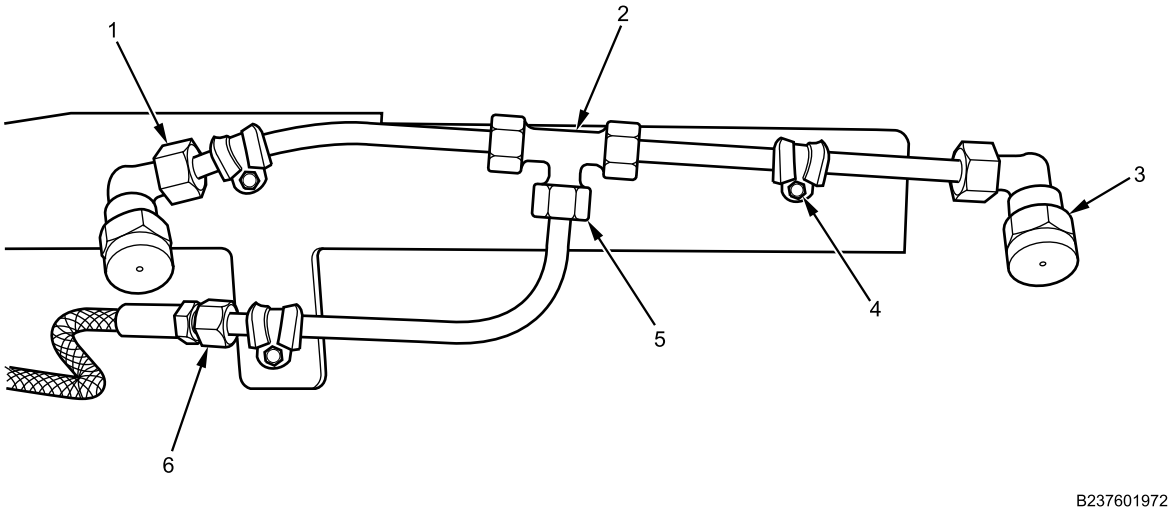


Figure 2. FSS Front Tire Dispersion Unit and Pipe.

2. Install elbow (Figure 2, Item 1) on pipe and tighten securely.
3. Install nozzle (Figure 2, Item 3) on elbow (Figure 2, Item 1) and tighten securely.
4. Position pipe assembly on bracket (Figure 2, Item 5). Apply corrosion preventive compound to three screws (Figure 2, Item 4) and install. Tighten securely.
5. Install pipe (Figure 2, Item 7) on hose (Figure 2, Item 9) and tighten compression nut (Figure 2, Item 8) securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Remove wheel chocks (TM-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) REAR TIRE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION

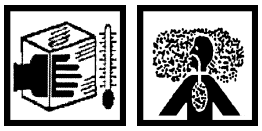
INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
FSS disabled (WP 0736)

WARNING



Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

NOTE

The FSS rear tire dispersion unit and pipe system consists of nozzles, fittings, pipes, and hoses that are connected to the FSS tire cylinder. If system is being serviced due to damage, replace necessary components, noting their respective routing and locations for reference.

Right side of FSS Rear Tire Dispersion Unit shown; left side similar.

FIRE SUPPRESSION SYSTEM (FSS) REAR TIRE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Remove compression nut (Figure 1, Item 1) connecting pipe to hose.

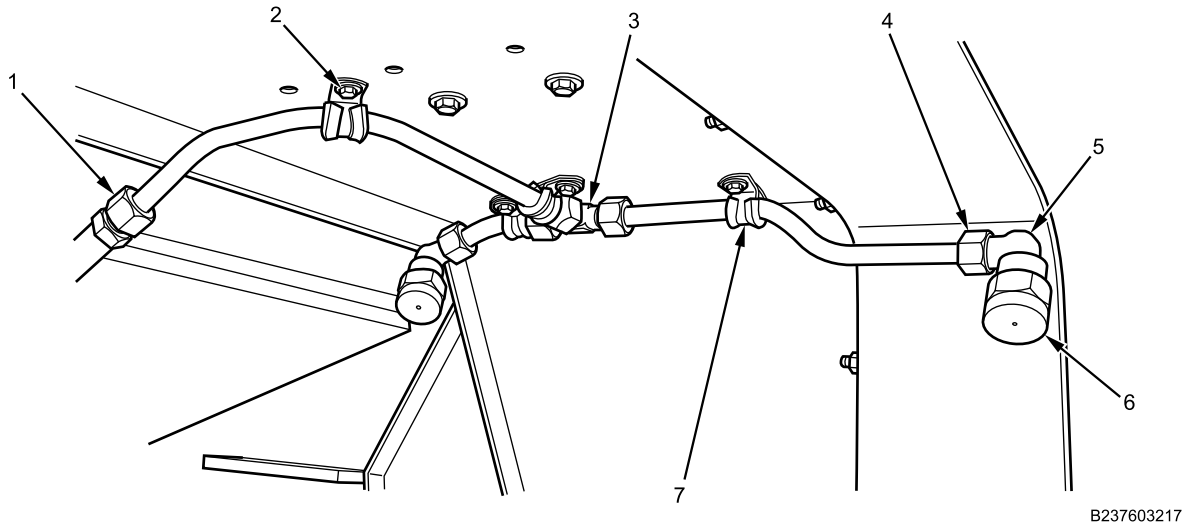


Figure 1. FSS Rear Tire Dispersion Unit and Pipe.

2. Remove four bolts (Figure 1, Item 2) securing pipe clamps (Figure 1, Item 7) to wheel well.
3. Remove nozzle (Figure 1, Item 6) from elbow (Figure 1, Item 5) if nozzle is being serviced.
4. Remove elbow (Figure 1, Item 5) from pipe by loosening nut (Figure 1, Item 4).
5. Remove pipe being serviced from T-fitting (Figure 1, Item 3) if pipe is being replaced.

END OF TASK

INSTALLATION

NOTE

Transfer parts as necessary if only a section of FSS rear tire dispersion unit and pipe is being replaced.

1. Install pipes to T-fitting (Figure 2, Item 3) as necessary.

FIRE SUPPRESSION SYSTEM (FSS) REAR TIRE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

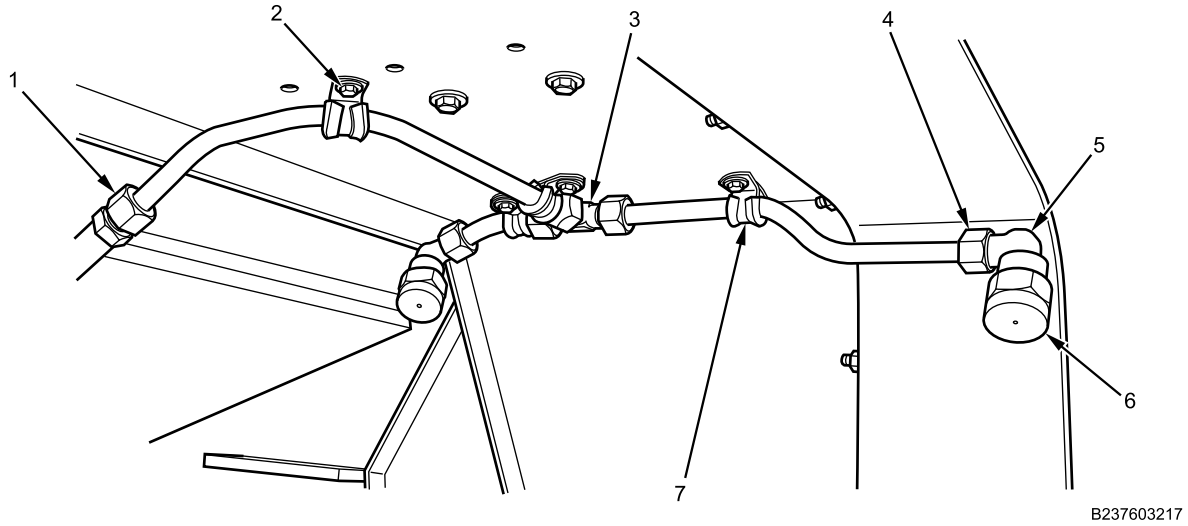


Figure 2. FSS Rear Tire Dispersion Unit and Pipe.

2. Install pipe on hose and tighten compression nut (Figure 2, Item 1) securely.
3. Install elbow (Figure 2, Item 5) on pipe and tighten securely.
4. Install nozzle (Figure 2, Item 6) on elbow (Figure 2, Item 5).
5. Position pipe assembly on wheel well. Install four bolts (Figure 2, Item 2) and pipe clamps (Figure 2, Item 7). Tighten bolts securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) ENGINE CYLINDER REMOVAL AND INSTALLATION

INITIAL SETUP:

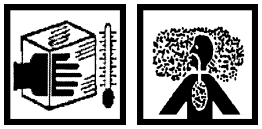
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM-9-2355-106-10)
Transmission set in NEUTRAL (N) (TM-9-2355-106-10)
Engine off (TM-9-2355-106-10)
MAIN POWER switch off (TM-9-2355-106-10)
Wheels chocked (TM-9-2355-106-10)
FSS disabled (WP 0736)

WARNING



Replace fire extinguisher immediately after use, even if only partly used. Failure to comply may result in serious injury or death to personnel.

Some fire suppression systems have a safety pin to install before disconnecting lines. Check to see if system uses a safety pin and install it before disconnecting lines. When disconnecting the extinguisher lines, use extreme caution. Do not disturb the pyrotechnic actuator and pressure switch; this will cause the extinguisher to discharge automatically. Failure to comply may result in damage to equipment and serious injury or death to personnel.

FSS extinguisher can move violently when discharging. Ensure extinguisher is properly secured during use. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Before installing FSS extinguisher, verify correct part number is being installed. Check for visible damage to the canister, such as dents, cracked plastic, chips, or scratches where hoses connect. If damage is visible anywhere, do not use; contact your supervisor. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

FIRE SUPPRESSION SYSTEM (FSS) ENGINE CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

FSS engine cylinder is located on right side of vehicle on frame rail.

1. Remove electrical connector (Figure 1, Item 2) and hose (Figure 1, Item 1) from cylinder.

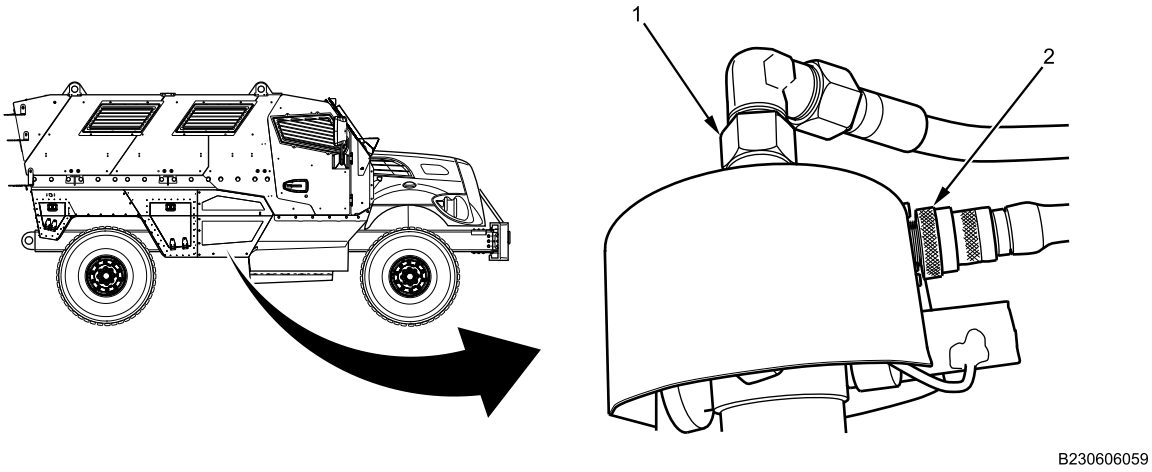


Figure 1. FSS Engine Cylinder Connections.

2. Remove nuts and bolts (Figure 2, Item 1) from mounting strap bracket (Figure 2, Item 3) of FSS engine cylinder (Figure 2, Item 2).

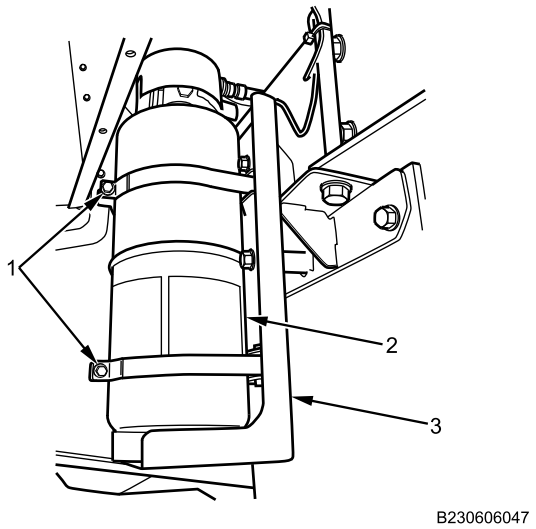


Figure 2. FSS Engine Cylinder Mount.

3. Remove FSS engine cylinder (Figure 2, Item 2).

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) ENGINE CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connectors.

1. Position FSS engine cylinder (Figure 3, Item 2) on mounting strap bracket (Figure 3, Item 3).

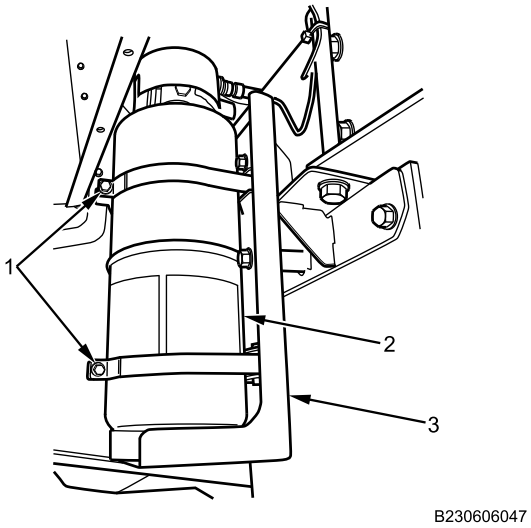


Figure 3. FSS Engine Cylinder Mount.

2. Install nuts and bolts (Figure 3, Item 1) on mounting strap bracket (Figure 3, Item 3) of FSS engine cylinder (Figure 3, Item 2) and tighten securely.

FIRE SUPPRESSION SYSTEM (FSS) ENGINE CYLINDER REMOVAL AND INSTALLATION - (CONTINUED)

3. Install electrical connector (Figure 4, Item 2) and hose (Figure 4, Item 1) on cylinder and tighten securely.

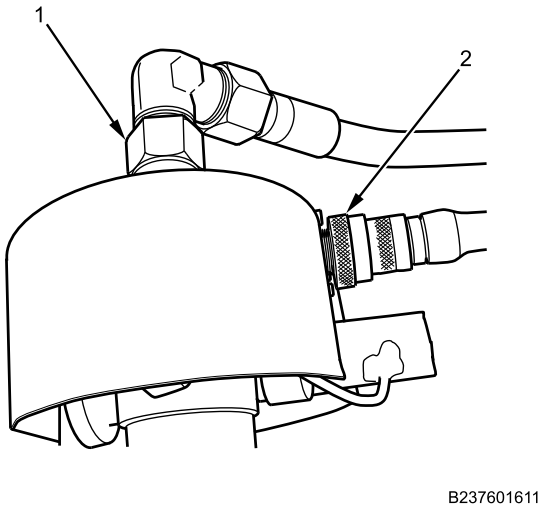


Figure 4. FSS Engine Cylinder Connections.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Enable FSS (WP 0736).
2. Remove wheel chocks (TM-9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

FIRE SUPPRESSION SYSTEM (FSS) ENGINE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION

INITIAL SETUP:

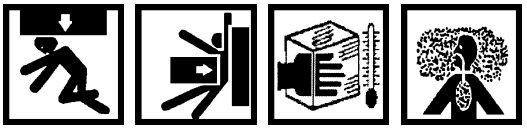
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Cable lock strap (WP 0796, Item 124)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Prior to servicing Fire Suppression System (FSS), make sure FSS power is off, and FSS is disabled. Failure to comply may result in discharging of system and serious injury or death to personnel.

NOTE

The FSS engine dispersion unit and pipe system consists of nozzles, fittings, pipes, and hoses that are connected to the FSS engine cylinder. If system is being serviced due to damage, replace necessary components, noting their respective routing and locations for reference.

Note cable lock strap locations during removal for installation.

FIRE SUPPRESSION SYSTEM (FSS) ENGINE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

Left side shown; right side similar.

1. Hold fitting (Figure 1, Item 4) and loosen nut (Figure 1, Item 5) securing nozzle (Figure 1, Item 6).

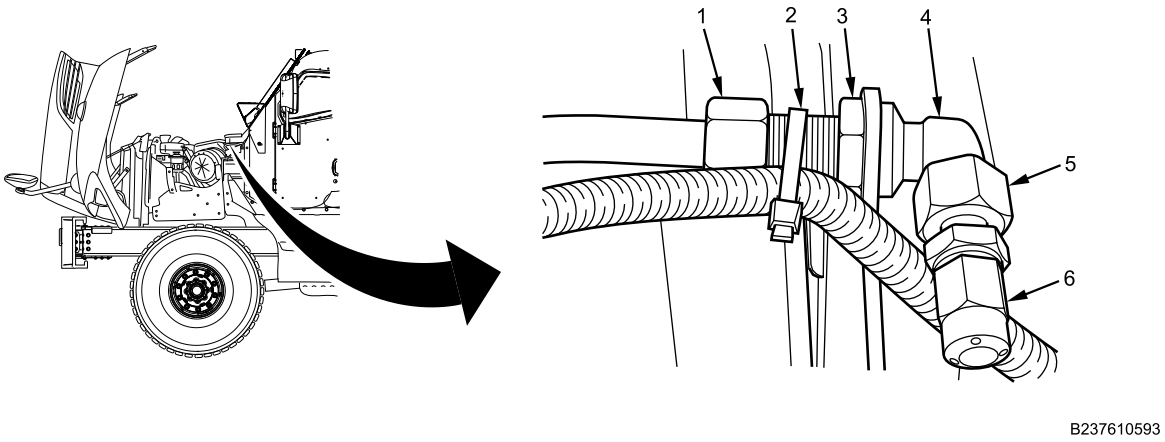


Figure 1. FSS Engine Dispersion Unit and Pipe.

2. Cut and discard cable lock strap (Figure 1, Item 2).
3. Loosen nut (Figure 1, Item 1) securing pipe to fitting (Figure 1, Item 4).
4. Remove nut (Figure 1, Item 3) and remove fitting (Figure 1, Item 4).

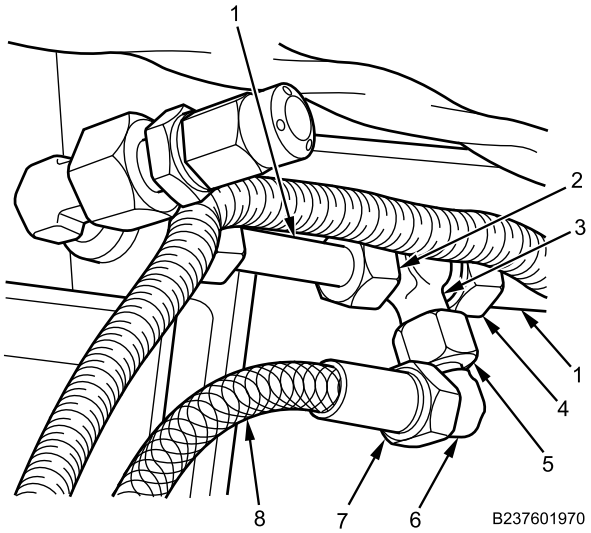


Figure 2. FSS Engine Dispersion Unit and Pipe.

5. Remove hose (Figure 2, Item 8) from fitting (Figure 2, Item 6) by loosening nut (Figure 2, Item 7).
6. Remove pipes (Figure 2, Item 1) from T (Figure 2, Item 3) by loosening nuts (Figure 2, Item 2 and 4).
7. Remove fitting (Figure 2, Item 6) from T (Figure 2, Item 3) by loosening nut (Figure 2, Item 5).

END OF TASK

FIRE SUPPRESSION SYSTEM (FSS) ENGINE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

NOTE

Transfer parts as necessary if only a section of FSS engine dispersion unit and pipe is being replaced.

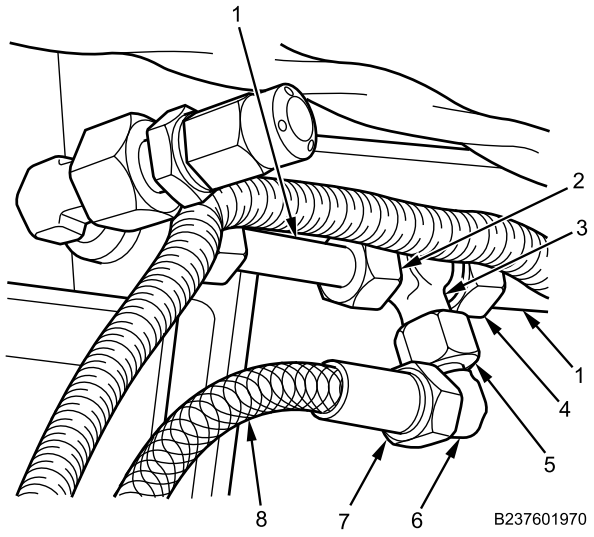


Figure 3. FSS Engine Dispersion Unit and Pipe.

1. Install fitting (Figure 3, Item 6) on T (Figure 3, Item 3) with nut (Figure 3, Item 5). Tighten securely.
2. Install pipes (Figure 3, Item 1) on T (Figure 3, Item 3) with nuts (Figure 3, Item 2 and 4). Tighten securely.
3. Install hose (Figure 3, Item 8) on fitting (Figure 3, Item 6) with nut (Figure 3, Item 7).

FIRE SUPPRESSION SYSTEM (FSS) ENGINE DISPERSION UNIT AND PIPE REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Left side shown; right side similar.

4. Position fitting (Figure 4, Item 4) on bracket. Install nut (Figure 4, Item 3) and tighten securely.

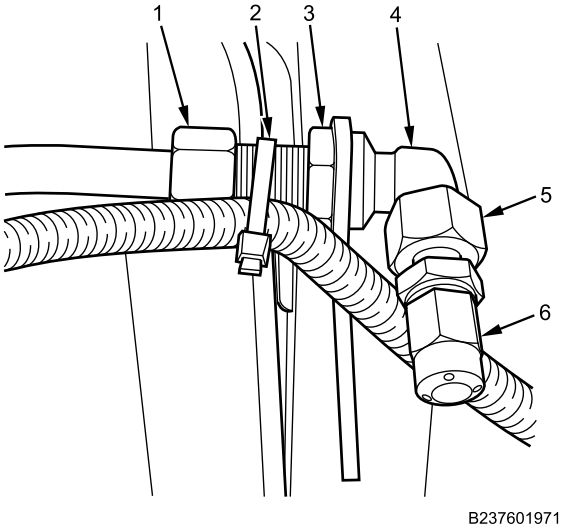


Figure 4. FSS Engine Dispersion Unit and Pipe.

5. Hold fitting (Figure 4, Item 4) and install nut (Figure 4, Item 5) securing nozzle (Figure 4, Item 6) and tighten securely.
6. Install nut (Figure 4, Item 1) on fitting (Figure 4, Item 4) and tighten securely.
7. Install new cable lock strap (Figure 4, Item 2).

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close and secure engine hood (TM 9-2355-106-10).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Cable lock strap (WP 0796, Item 120)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Communications rack removed (WP 0667)
HVAC/LSS defogging air duct removed (WP 0754)
HVAC fresh air inlet tube removed (WP 0720)
HVAC/LSS air duct louvers removed (WP 0753)

REMOVAL

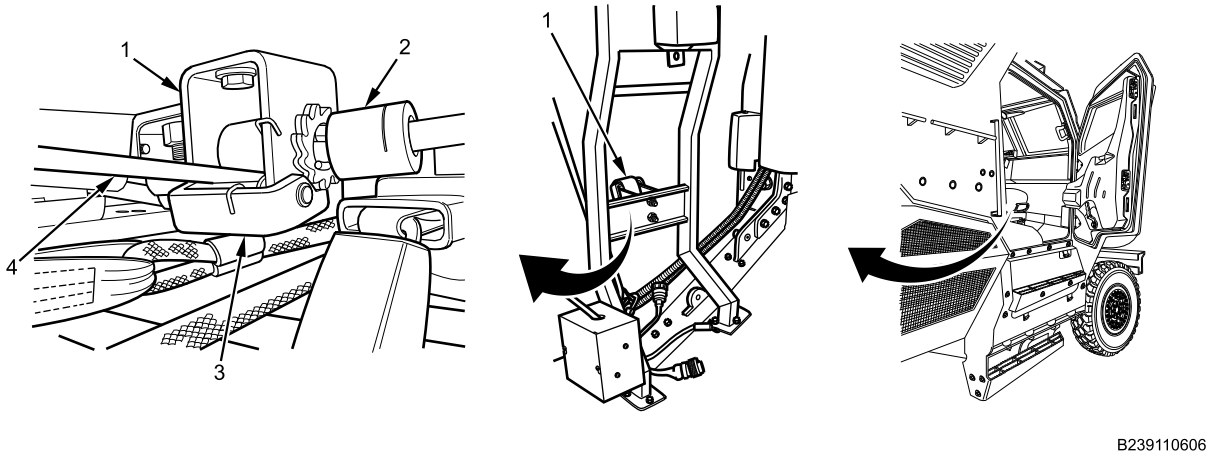


Figure 1. Rear Seat Ratchet.

NOTE

Perform steps 1 through 3 for driver and passenger seats.

1. Release tension on driver and passenger rear seat hanger safety strap (Figure 1, Item 4) by turning nut with socket (Figure 1, Item 2) on ratchet assembly (Figure 1, Item 1). Hold release latch (Figure 1, Item 3) while loosening strap (Figure 1, Item 4).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

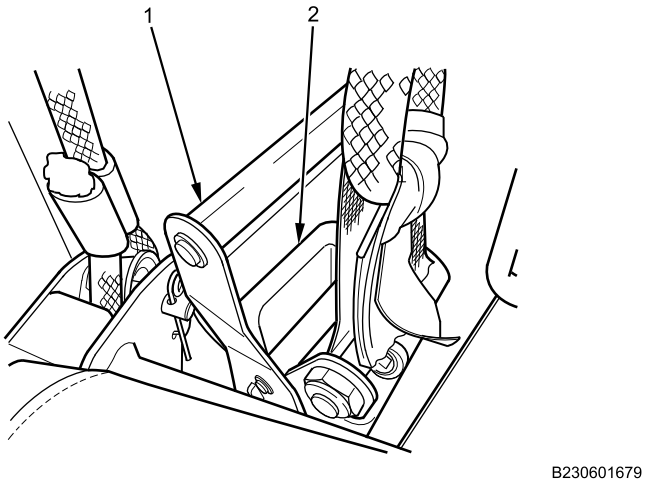


Figure 2. Seat Suspension Lever Position.

2. Place hand on lever (Figure 2, Item 1), lift up on latch (Figure 2, Item 2), and swing handle down.

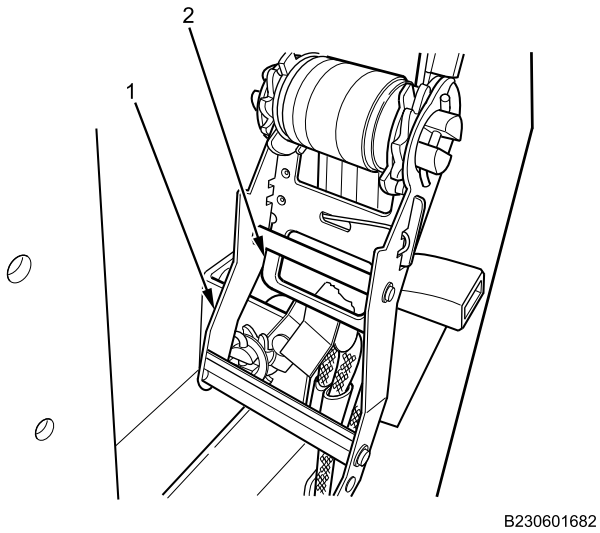


Figure 3. Seat Suspension Lever Release.

3. With handle (Figure 3, Item 1) in down position, pull down on release lever (Figure 3, Item 2) to release tension on seat suspension.
4. Disconnect fire suppression line fitting (Figure 4, Item 2) located above left front seat.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

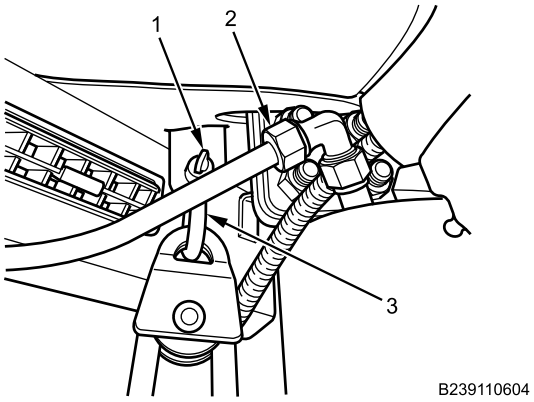


Figure 4. Fire Suppression Fitting.

5. Remove four suspension seat upper pulley block shackle bolts (Figure 4, Item 1) and shackles (Figure 4, Item 3).

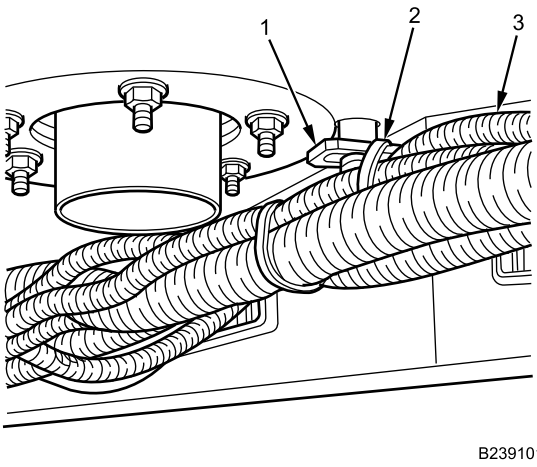


Figure 5. Wire Harness Cable Lock Strap.

6. Cut cable lock strap (Figure 5, Item 2) from main air duct (Figure 5, Item 1) and wire harness (Figure 5, Item 3). Discard cable lock strap.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

7. Remove nine bolts (Figure 6, Item 1) and flat washers from main air duct (Figure 6, Item 2).

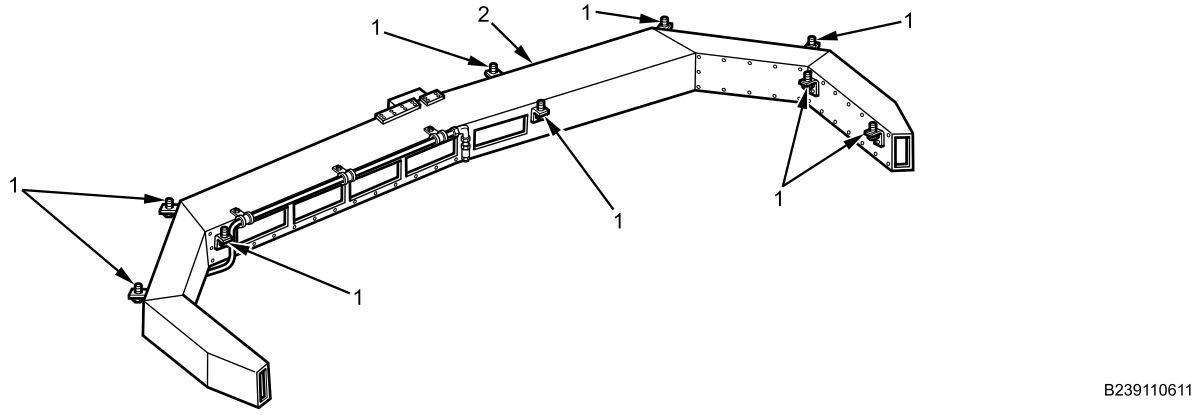


Figure 6. Main Air Duct Removal.

8. Remove main air duct (Figure 6, Item 2) from roof headliner.

END OF TASK

DISASSEMBLY

NOTE

Note position and orientation of fire suppression line prior to removal to aid in installation.

1. Remove three bolts (Figure 6, Item 2) from fire suppression line (Figure 6, Item 1).
2. Remove fire suppression line (Figure 6, Item 1) from main air duct (Figure 6, Item 3).

END OF TASK

ASSEMBLY

1. Position and orientate fire suppression line (Figure 6, Item 1) on main air duct (Figure 6, Item 3) as noted during removal.
2. Install three bolts (Figure 6, Item 2) on fire suppression line (Figure 6, Item 1). Tighten bolts securely.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

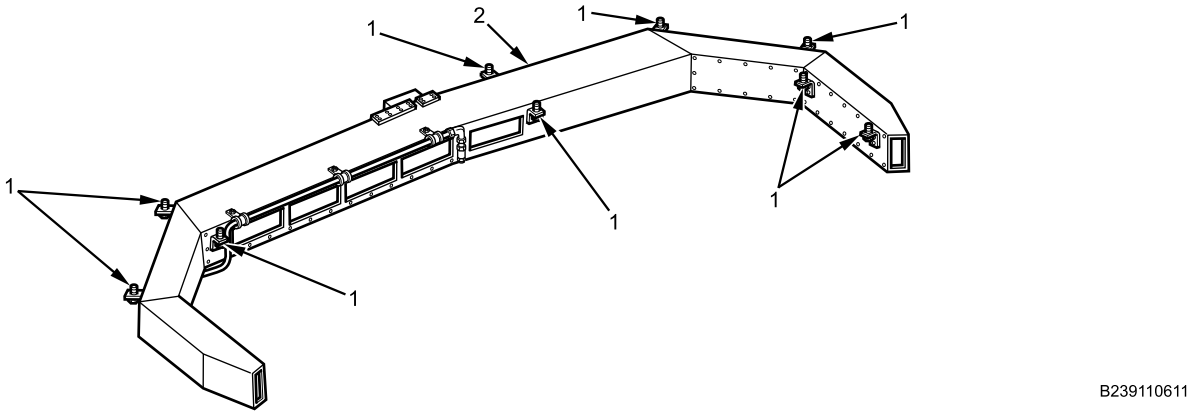


Figure 7. Main Air Duct Installation.

1. Install main air duct (Figure 7, Item 2) on roof headliner with nine bolts (Figure 7, Item 1) and flat washers. Tighten bolts securely.

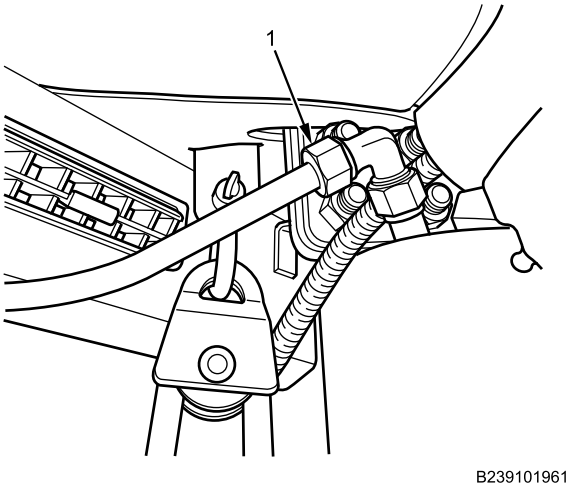


Figure 8. Fire Suppression Fitting.

2. Connect fire suppression line fitting (Figure 8, Item 1) above left front seat. Tighten fitting securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

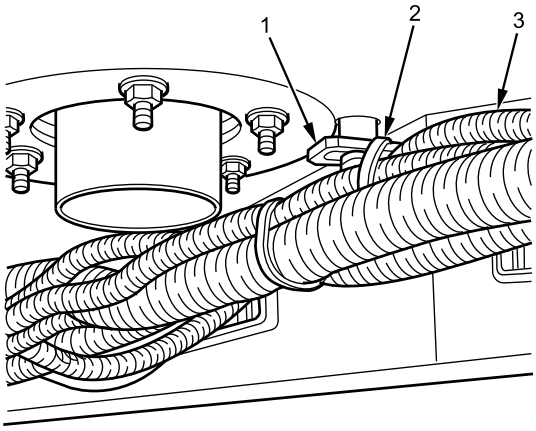


Figure 9. Wire Harness Cable Lock Strap.

3. Install wire harness (Figure 9, Item 3) on main air duct (Figure 9, Item 1) with new cable lock strap (Figure 9, Item 2). Tighten cable lock strap securely.
4. Install four suspension seat upper pulley block shackles (Figure 10, Item 2) to upper pulley blocks (Figure 10, Item 3).

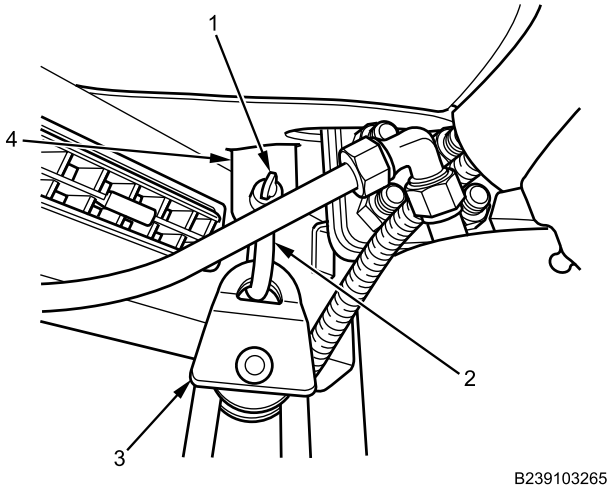


Figure 10. Suspension Seat Shackles.

5. Position pulley block shackles (Figure 10, Item 2) to roof brackets (Figure 10, Item 4) and install shackle bolts (Figure 10, Item 1). Tighten shackle bolts securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Perform steps 6 through 9 for driver and passenger seats.

6. Ensure handle (Figure 11, Item 1) is in down position and pull up on strap to remove slack.

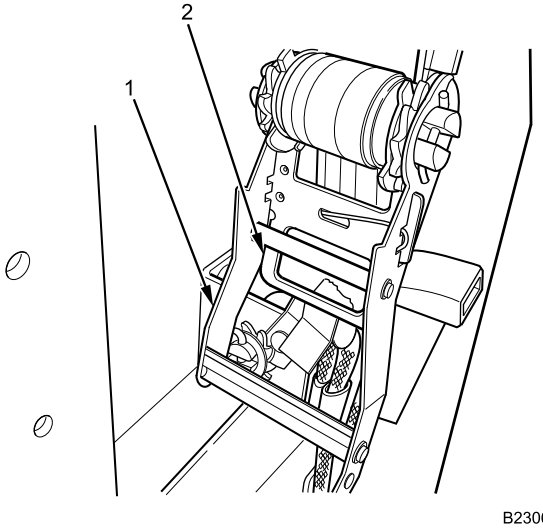


Figure 11. Seat Suspension Lever Position.

7. Pull down on release latch (Figure 11, Item 2) and lift up on handle (Figure 11, Item 1) to begin ratcheting seat suspension handle until rope is tight.

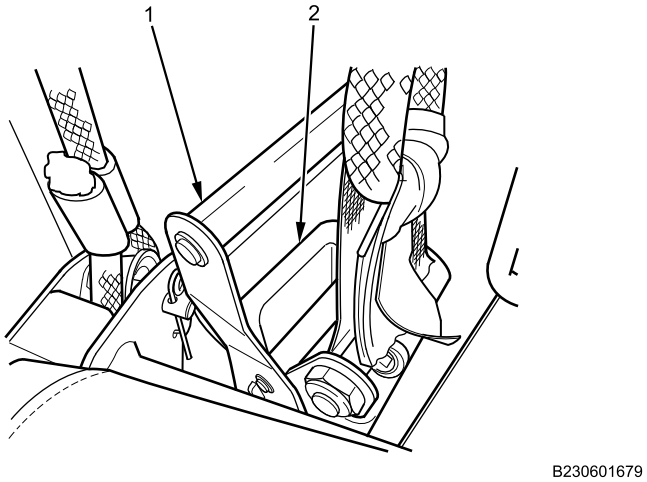


Figure 12. Seat Suspension Lever Engaged.

8. Place handle (Figure 12, Item 1) in up position when rope is tightened and ensure latch (Figure 12, Item 2) is engaged in down position.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

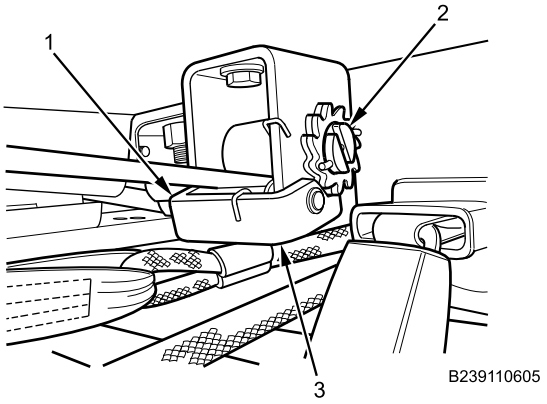


Figure 13. Rear Seat Ratchet.

9. Turn seat ratchet (Figure 13, Item 2) until tight. Ensure latch (Figure 13, Item 1) is engaged.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC/LSS air duct louvers (WP 0753).
2. Install HVAC fresh air inlet tube (WP 0720).
3. Install HVAC/LSS defogging air duct (WP 0754).
4. Install communications rack (WP 0667).
5. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) AIR DUCT LOUVER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) WP 0795, Item 37

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine shut off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

REMOVAL

NOTE

Forward facing right side center louver shown. Other forward facing louvers similar.

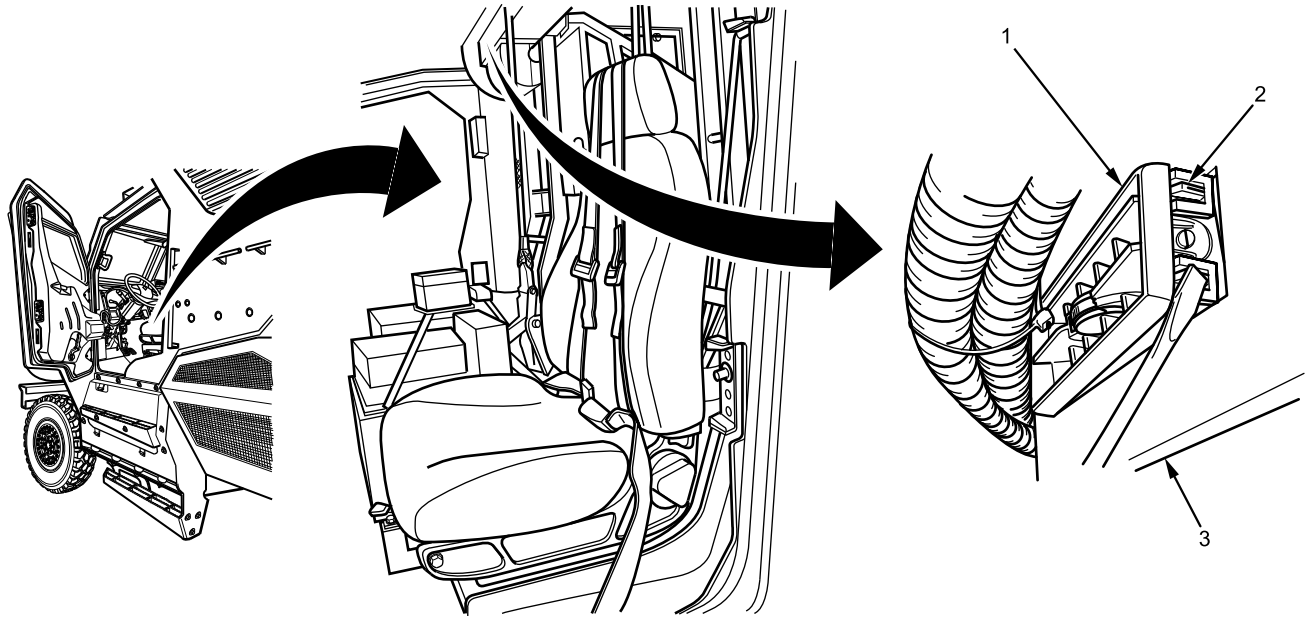


Figure 1. Forward Facing Right Side Center Louver.

1. Carefully disengage retaining tabs (Figure 1, Item 2) on forward facing louver (Figure 1, Item 1) and remove louver from main air duct (Figure 1, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) AIR DUCT LOUVER REMOVAL AND INSTALLATION - (CONTINUED)

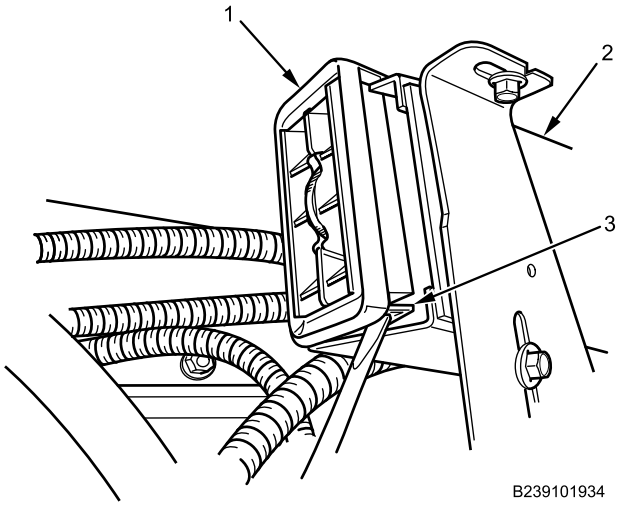


Figure 2. Rear Facing Left Side Louver.

NOTE

Rear facing left side louver shown. Rear facing right side louver similar.

2. Carefully disengage retaining tabs (Figure 2, Item 3) on rear facing side louver (Figure 2, Item 1) and remove louver from main air duct (Figure 2, Item 2).

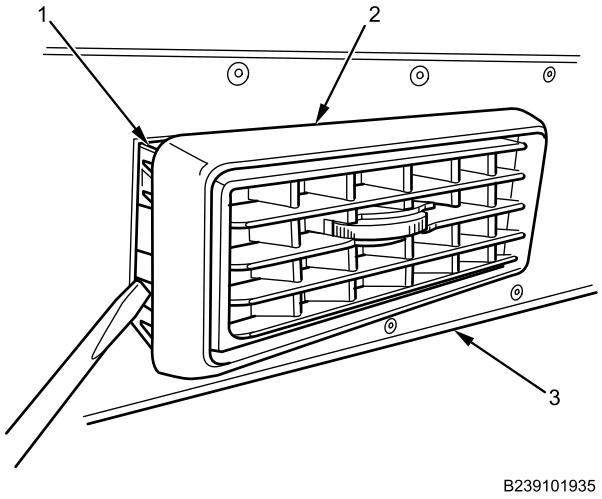


Figure 3. Rear Facing Right Side Center Louver.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) AIR DUCT LOUVER REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Rear facing right side center louver shown. Other rear facing center louver removal similar, except for rear facing louver behind seat suspension mount.

3. Carefully disengage retaining tabs (Figure 3, Item 1) on rear facing center louver (Figure 3, Item 2) and remove louver from main air duct (Figure 3, Item 3).

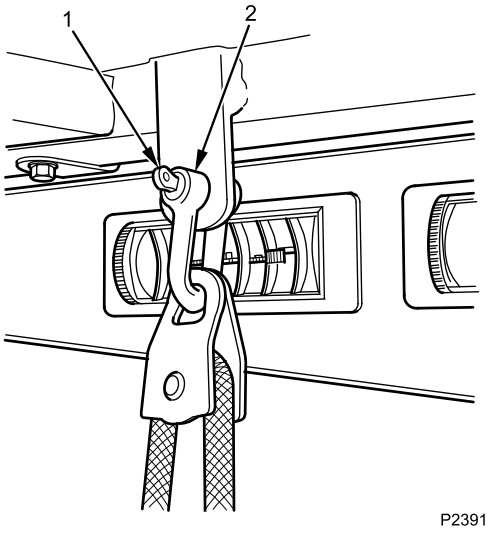


Figure 4. Seat Suspension Mount Clevis and Pin.

4. To remove rear facing louver behind seat suspension mount, release tension on seat suspension (WP 0663) and remove clevis pin (Figure 4, Item 1) and clevis (Figure 4, Item 2).
5. Carefully disengage retaining tabs and remove louver from air duct.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) AIR DUCT LOUVER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

NOTE

Rear facing left side louver shown. Rear facing right side louver similar.

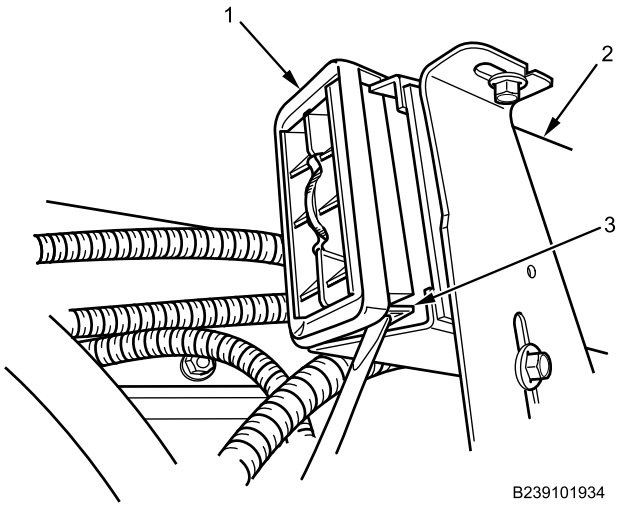


Figure 5. Rear Facing Left Side Louver.

1. Push rear facing side louver (Figure 5, Item 1) into main air duct (Figure 5, Item 2) until retaining tabs (Figure 5, Item 3) engage air duct securely.

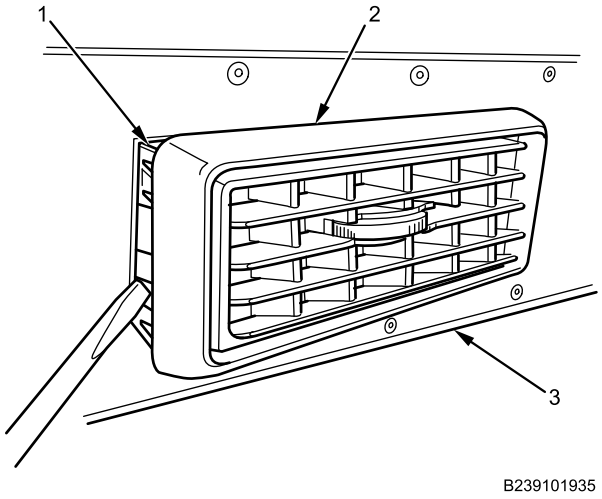


Figure 6. Rear Facing Right Side Center Louver.

NOTE

Rear facing right side center louver shown. Other rear facing center louvers similar, except for rear facing louver behind seat suspension mount.

2. Push rear facing center louver (Figure 6, Item 2) into main air duct (Figure 6, Item 3) until retaining tabs (Figure 6, Item 1) engage air duct securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) AIR DUCT LOUVER REMOVAL AND INSTALLATION - (CONTINUED)

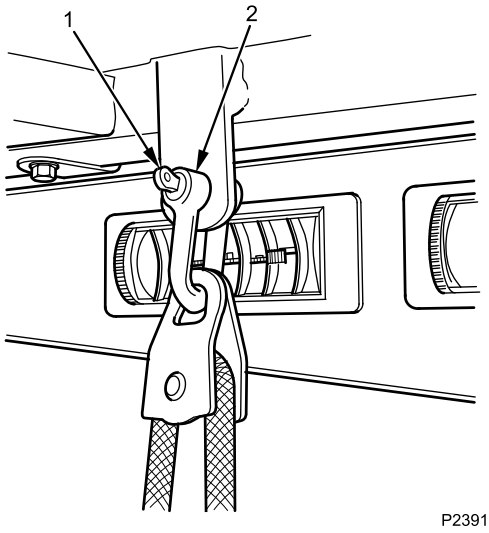


Figure 7. Seat Suspension Mount Clevis and Pin.

3. To install rear facing louver behind seat suspension mount, push louver into air duct until retaining tabs engage air duct securely.
4. Install seat suspension mount clevis (Figure 7, Item 2) and pin (Figure 7, Item 1) and tighten seat suspension (WP 0663).

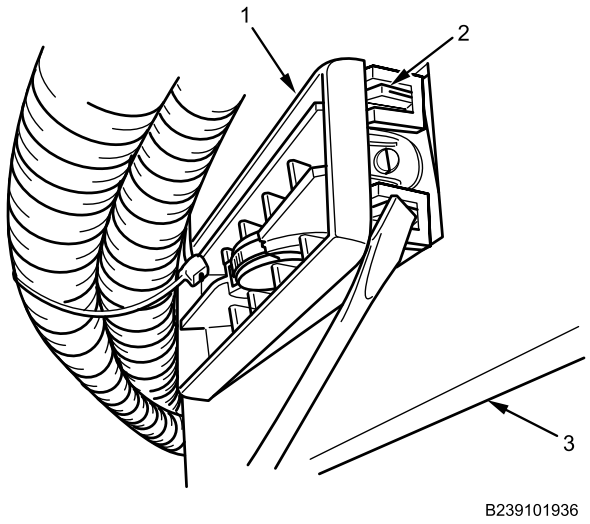


Figure 8. Forward Facing Right Side Center Louver.

NOTE

Forward facing right side center louver shown. Other forward facing louvers similar.

5. Push forward facing louver (Figure 8, Item 1) into main air duct (Figure 8, Item 3) until retaining tabs (Figure 8, Item 2) engage air duct securely.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) AIR DUCT LOUVER REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) DEFOGGING AIR DUCT REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Cable lock strap (WP 0796, Item 120)
Tape (WP 0794, Item 51)
Fasteners (WP 0796, Item 159)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Electronics equipment removed from defogging air duct

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) DEFOGGING AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Loosen Velcro® (Figure 1, Item 7) from defogging air duct (Figure 1, Item 9) and main air duct (Figure 1, Item 8).

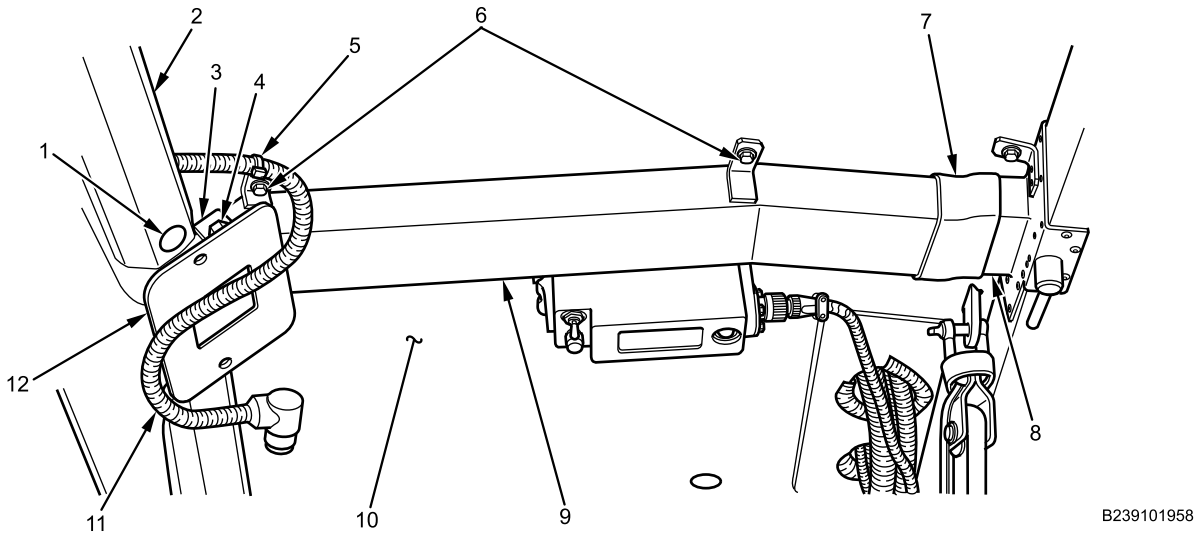


Figure 1. Defogging Air Duct Mounting.

2. Remove duct tape from seam between defogging air duct (Figure 1, Item 9) and main air duct (Figure 1, Item 8).
3. Remove six fasteners (Figure 1, Item 1) from right and left interior windshield trim (Figure 1, Item 2).
4. Remove two nuts (Figure 1, Item 4) from plate support mount (Figure 1, Item 3) and plate assembly mount (Figure 1, Item 12).
5. Remove plate assembly mount (Figure 1, Item 12).
6. Remove right and left interior windshield trim (Figure 1, Item 2) from roof headliner (Figure 1, Item 10).
7. Cut cable lock strap (Figure 1, Item 5) from wire harness (Figure 1, Item 11). Discard cable lock strap.
8. Remove three bolts (Figure 1, Item 6) , spacers, and flat washers from defogging air duct (Figure 1, Item 9).
9. Remove defogging air duct (Figure 1, Item 9) from main air duct (Figure 1, Item 8) and roof headliner (Figure 1, Item 10).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) DEFOGGING AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install defogging air duct (Figure 2, Item 9) on main air duct (Figure 2, Item 8) and roof headliner (Figure 2, Item 10) with three bolts (Figure , Item 6) , spacers, and flat washers. Tighten bolts securely.

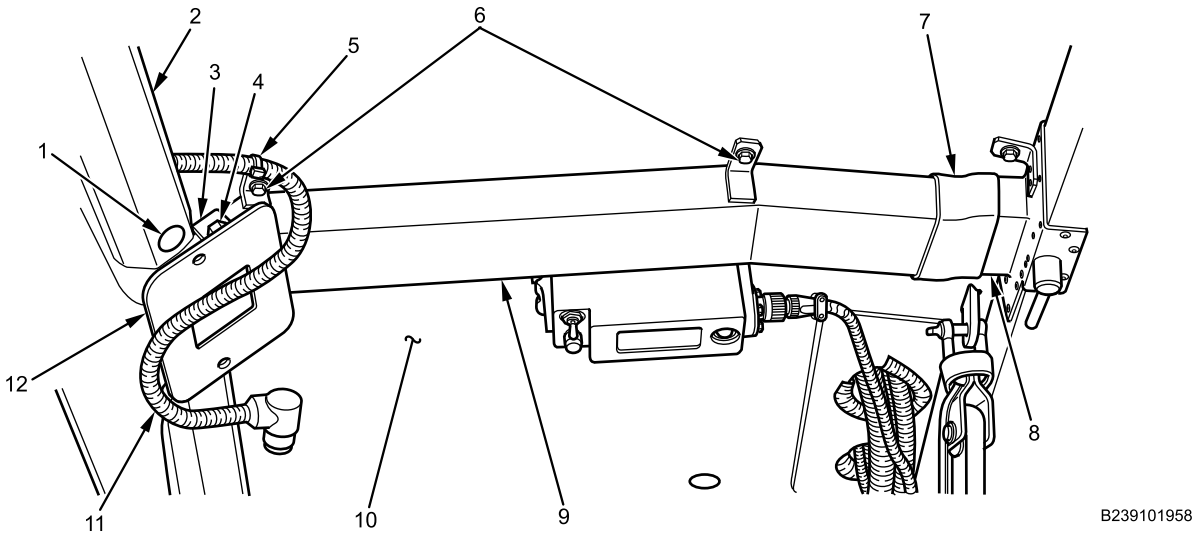


Figure 2. Defogging Air Duct Mounting.

2. Install duct tape at seam between main air duct (Figure 2, Item 8) and defogging air duct (Figure 2, Item 9).
3. Install Velcro® (Figure 2, Item 7) at seam between main air duct (Figure 2, Item 8) and defogging air duct (Figure 2, Item 9).
4. Install right and left interior windshield trim (Figure 2, Item 2) with six fasteners (Figure 2, Item 1).
5. Install plate assembly mount (Figure 2, Item 12) and two nuts (Figure 2, Item 4) to plate support mount (Figure 2, Item 3).
6. Install wire harness (Figure 2, Item 11) on defogging air duct (Figure 2, Item 9) with new cable lock strap (Figure 2, Item 5).
7. Install all cable lock straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

END OF TASK

ADDITIONAL MAINTENANCE TASK

1. Install electronics equipment on defogging air duct.
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) DIFFUSER AIR DUCT REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
HVAC upper panel removed (WP 0767)

CAUTION

Blower motor fan housing is secured using the eight bolts, on the diffuser air duct. Ensure blower motor does not drop when eight bolts are removed.

REMOVAL

1. Remove eight bolts (Figure 1, Item 3), lockwashers (Figure 1, Item 4), and washers (Figure 1, Item 5) from diffuser air duct (Figure 1, Item 6). Discard lockwashers.

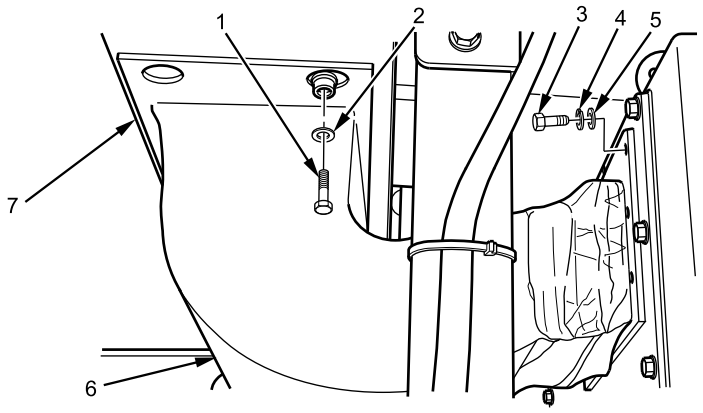


Figure 1. Diffuser Air Duct.

2. Remove four bolts (Figure 1, Item 1) and flat washers (Figure 1, Item 2) from diffuser air duct (Figure 1, Item 5).
3. Remove diffuser air duct (Figure 1, Item 6) from main air duct (Figure 1, Item 7).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) DIFFUSER AIR DUCT REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install diffuser air duct (Figure 2, Item 6) on main air duct (Figure 2, Item 7) with four bolts (Figure 2, Item 1) and flat washers (Figure 2, Item 2) and tighten securely.

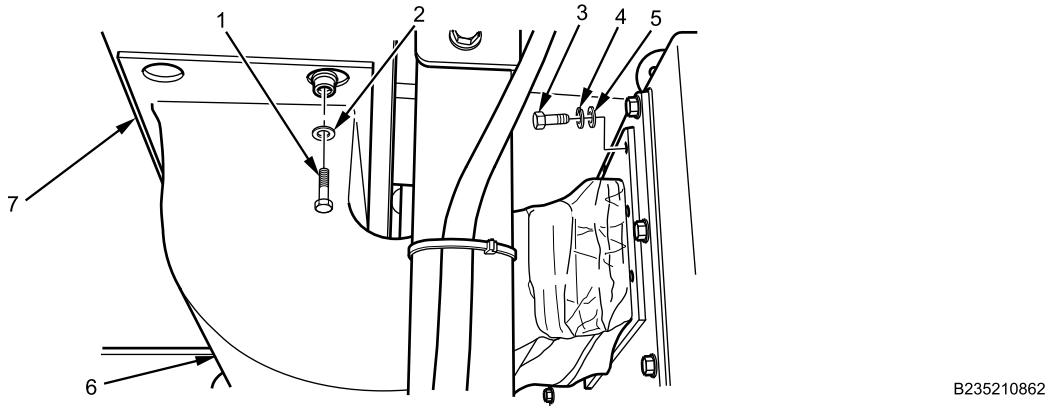


Figure 2. Diffuser Air Duct.

2. Install diffuser air duct (Figure 2, Item 6) on blower mounting panel with eight bolts (Figure 2, Item 3) and new lockwashers (Figure 2, Item 4), and washers (Figure 2, Item 5). Tighten bolts securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC upper panel (WP 0767).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) FRESH AIR INLET FLANGE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Goggles, industrial (WP 0794, Item 20)
Faceshield, industrial (WP 0794, Item 16)
Gasket (WP 0796, Item 180)
Sealing compound (WP 0794, Item 43)
Gloves (WP 0794, Item 18)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Roof armor front spoiler removed (WP 0585)

REMOVAL

1. Loosen hose clamp (Figure 1, Item 2) on fresh air inlet tube (Figure 1, Item 5).

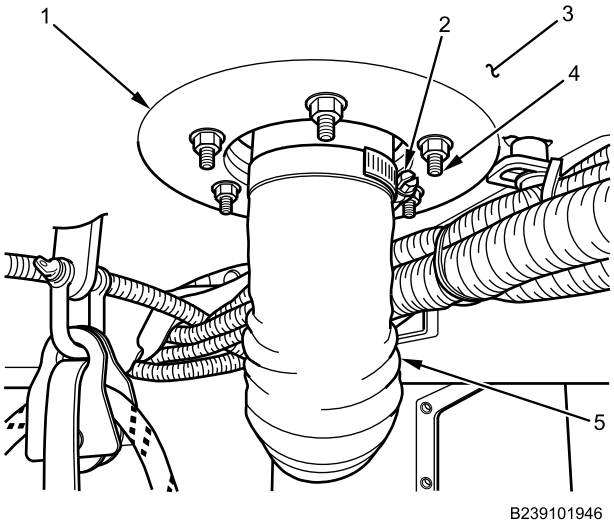


Figure 1. Fresh Air Inlet Flange.

2. Remove fresh air inlet tube (Figure 1, Item 5) from fresh air inlet flange (Figure 1, Item 1).

NOTE

Assistant required to hold bolts on roof while other maintainer removes nuts during next step.

3. With assistant, remove six bolts (Figure 1, Item 4) and nuts from fresh air inlet flange (Figure 1, Item 1).
4. Remove fresh air inlet flange (Figure 1, Item 1) and gasket from roof (Figure 1, Item 3). Discard gasket.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) FRESH AIR INLET FLANGE REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Sealing compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full-face shield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

1. Apply gasket sealer around each bolt hole on gasket (Figure 2, Item 8).

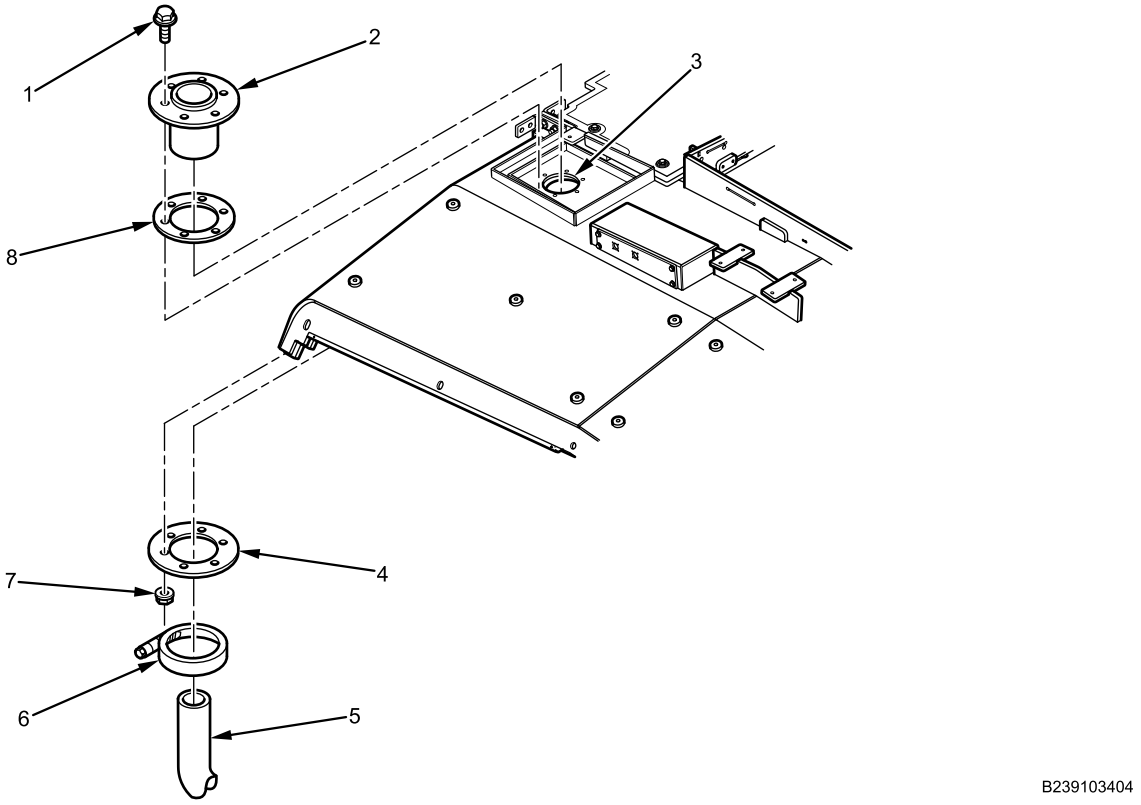


Figure 2. Fresh Air Inlet Flange.

2. Position fresh air inlet flange (Figure 2, Item 2) and gasket (Figure 2, Item 8) on roof (Figure 2, Item 3) with six bolts (Figure 2, Item 1).

NOTE

Assistant required to hold bolts on roof while other maintainer tightens nuts during next step.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) FRESH AIR INLET FLANGE REMOVAL AND INSTALLATION - (CONTINUED)

3. With assistant, install retainer ring (Figure 2, Item 4) with six nuts (Figure 2, Item 7) and tighten securely.
4. Install fresh air inlet tube (Figure 2, Item 5) on fresh air inlet flange (Figure 2, Item 2) with hose clamp (Figure 2, Item 6) and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install roof armor front spoiler (WP 0585).
2. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OVERPRESSURE RELIEF VALVE REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Compound (WP 0794, Item 13)
Gloves (WP 0794, Item 28)
Goggles, industrial (WP 0794, Item 20)
Faceshield, industrial (WP 0794, Item 16)
Gloves (WP 0794, Item 18)
O-ring (WP 0796, Item 126)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

REMOVAL

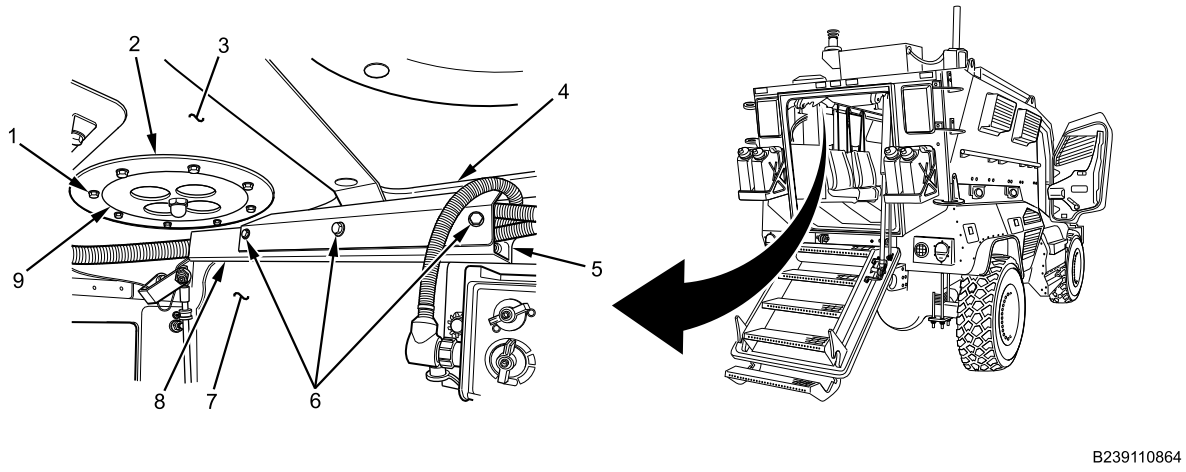


Figure 1. Overpressure Relief Valve Mounting.

1. Remove three bolts (Figure 1, Item 6) and flat washers from wire harness shield cover (Figure 1, Item 4).
2. Remove wire harness shield cover (Figure 1, Item 4) from wire harness shield (Figure 1, Item 8).
3. Remove two nuts (Figure 1, Item 5) from wire harness shield (Figure 1, Item 8). One nut shown. One nut hidden from view.
4. Remove wire harness shield (Figure 1, Item 8) from left rear wall (Figure 1, Item 7).

NOTE

Note orientation of overpressure relief valve prior to removal to aid in proper installation.

5. Remove eight bolts (Figure 1, Item 1) from overpressure relief valve retaining ring (Figure 1, Item 2).
6. Remove overpressure relief valve retaining ring (Figure 1, Item 2) from headliner (Figure 1, Item 3).
7. Remove overpressure relief valve (Figure 1, Item 9) from headliner (Figure 1, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OVERPRESSURE RELIEF VALVE REMOVAL AND INSTALLATION - (CONTINUED)

8. Remove overpressure relief valve shield assembly (Figure 2, Item 2) from roof (Figure 2, Item 1).

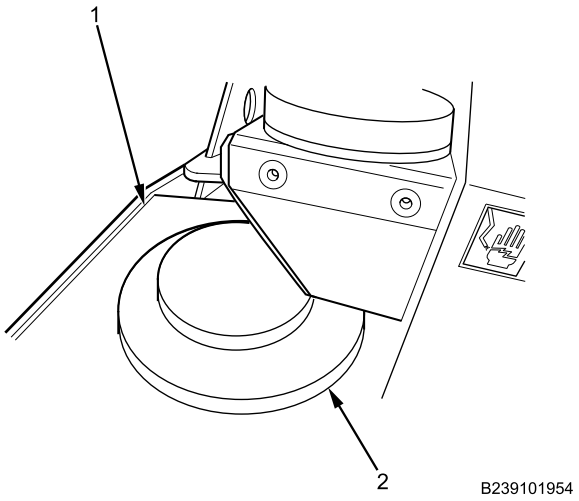


Figure 2. Overpressure Relief Valve Shield Assembly Mounting.

9. Remove three bolts (Figure 3, Item 1) and washers (Figure 3, Item 2) from overpressure relief valve shield assembly (Figure 3, Item 3 and 4).
10. Remove upper shield (Figure 3, Item 3) from lower shield (Figure 3, Item 4).

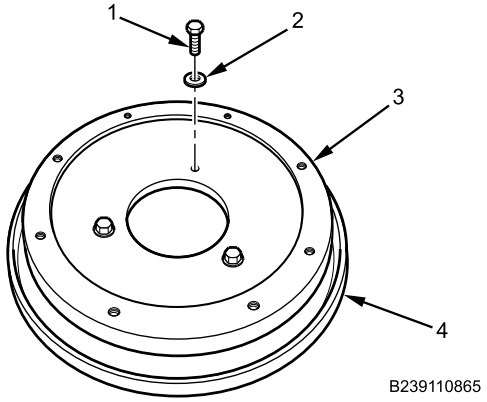
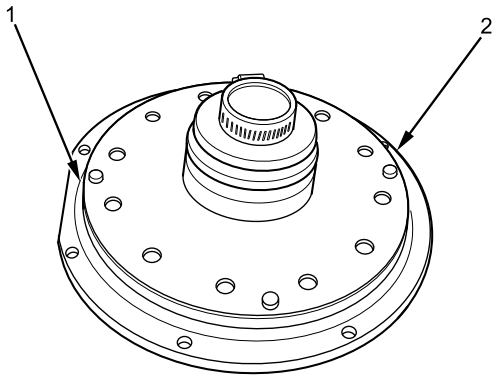


Figure 3. Overpressure Relief Valve Shield Assembly.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OVERPRESSURE RELIEF VALVE REMOVAL AND INSTALLATION - (CONTINUED)

11. Remove O-ring (Figure 4, Item 1) from overpressure relief valve (Figure 4, Item 2). Discard O-ring.



B239101953

Figure 4. Overpressure Relief Valve O-Ring.

END OF TASK

INSTALLATION

WARNING



Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full-face shield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

1. Apply corrosion preventive compound to three bolts (Figure 3, Item 1) and washers (Figure 3, Item 2).
2. Install overpressure relief valve upper shield (Figure 3, Item 3) on overpressure relief valve lower shield (Figure 3, Item 4) with three bolts (Figure 3, Item 1) and washers (Figure 3, Item 2) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OVERPRESSURE RELIEF VALVE REMOVAL AND INSTALLATION - (CONTINUED)

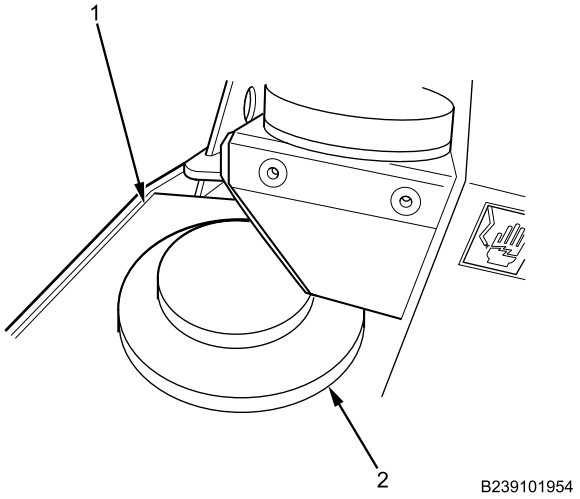


Figure 5. Overpressure Relief Valve Shield Assembly Mounting.

3. Position overpressure relief valve shield assembly (Figure 5, Item 2) on roof (Figure 5, Item 1) with holes aligned.

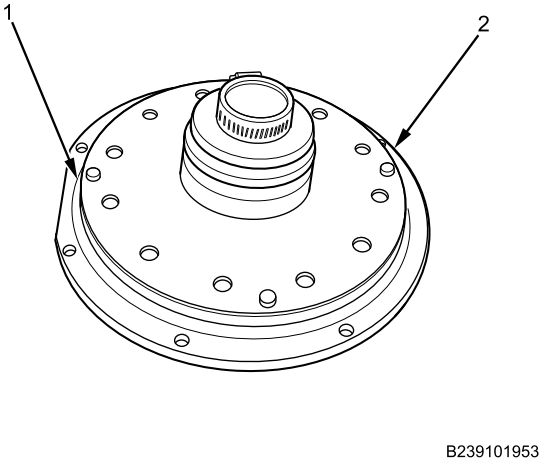


Figure 6. Overpressure Relief Valve O-Ring.

WARNING



Ensure overpressure relief valve O-ring is clean and properly installed on overpressure relief valve. A leaking O-ring could cause outside contaminants to leak into cabin as a result of low cabin pressure. Failure to comply may result in serious injury or death to personnel.

4. Install new overpressure relief valve O-ring (Figure 6, Item 1) in groove of overpressure relief valve (Figure 6, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OVERPRESSURE RELIEF VALVE REMOVAL AND INSTALLATION - (CONTINUED)

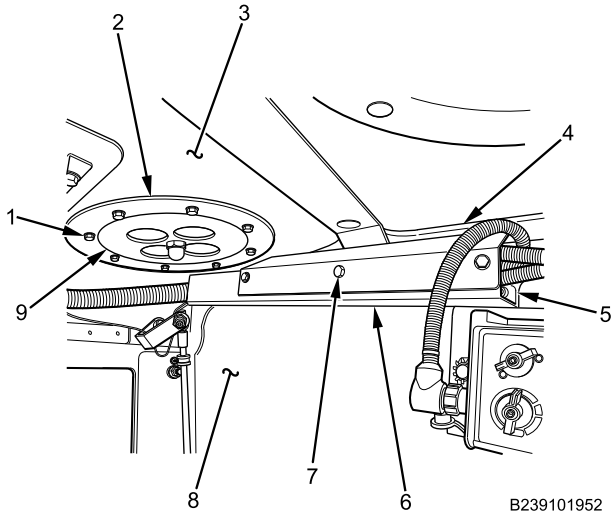


Figure 7. Overpressure Relief Valve Mounting.

WARNING

The headliner must not be pinched between the overpressure relief valve and the roof. The overpressure relief valve must be installed above the headliner to obtain a good seal. Failure to comply may result in serious injury or death to personnel.

Ensure area where overpressure relief valve O-ring contacts vehicle roof is clean. O-ring contact area should also be smooth and free of cracks that could allow cabin pressure loss. Failure to comply may result in serious injury or death to personnel.

5. Apply corrosion preventive compound to eight bolts (Figure 7, Item 1).
6. Install overpressure relief valve (Figure 7, Item 9) above headliner (Figure 7, Item 3), with overpressure relief valve retaining ring (Figure 7, Item 2) and eight bolts (Figure 7, Item 1). Tighten bolts securely.
7. Install wire harness shield (Figure 7, Item 6) on left rear wall (Figure 7, Item 8) with two nuts (Figure 7, Item 5) and tighten securely. One nut shown. One nut hidden from view.
8. Install wire harness shield cover (Figure 7, Item 4) on wire harness shield (Figure 7, Item 6) with three bolts (Figure 7, Item 7) and flat washers and tighten securely.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OVERPRESSURE RELIEF VALVE REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Close all doors and hatches securely (TM 9-2355-106-10).
4. Turn on HVAC/LSS to verify proper cabin pressure (TM 9-2355-106-10).
5. Turn HVAC/LSS off (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Refrigeration Ordnance Service Tool Kit (WP 0795, Item 85)
Measure, liquid, 2 qt (WP 0795, Item 71)

Materials/Parts
Faceshield, industrial (WP 0794, Item 16)
Lubricating oil (WP 0794, Item 31)
Lockwasher - (2) (WP 0796, Item 172)
Lockwasher - (4) (WP 0796, Item 168)
O-ring - (2) (WP 0796, Item 34)
O-ring - (2) (WP 0796, Item 36)
O-ring (WP 0796, Item 171)

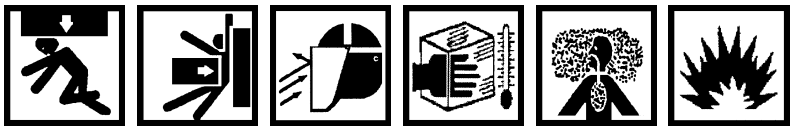
Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
HVAC/Life Support System (LSS) upper panel removed (WP 0767)
HVAC system evacuated and discharged (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army Petroleum, Oil, and Lubricants (POL) (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

REMOVAL

1. Remove heatshrink tubing (Figure 1, Item 1) from receiver/drier inlet hose connection at evaporator assembly (Figure 1, Item 3). Discard heat shrink tubing.

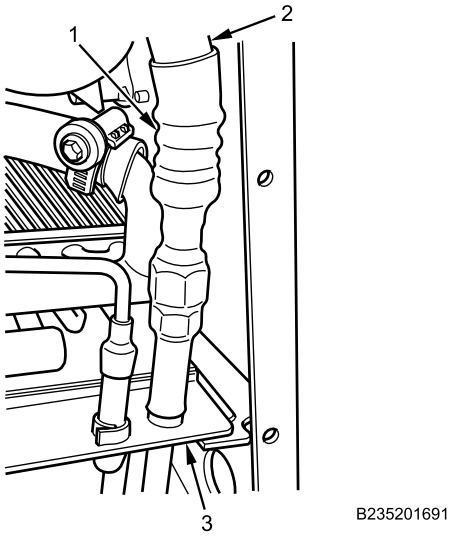


Figure 1. Inlet Hose at Evaporator Assembly.

2. Disconnect receiver/drier inlet hose (Figure 1, Item 2) from evaporator assembly (Figure 1, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

3. Remove heatshrink tubing (Figure 2, Item 2) from receiver/drier inlet hose connection at receiver/drier (Figure 2, Item 3). Discard heat shrink tubing.

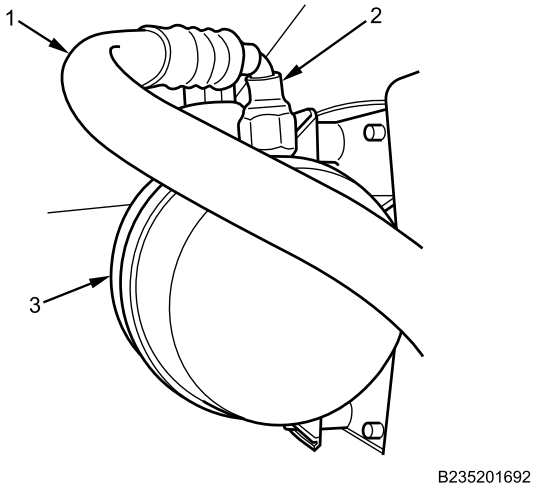


Figure 2. Inlet Hose at Receiver/Drier.

4. Disconnect receiver/drier inlet hose connection at receiver/drier (Figure 2, Item 3) and remove receiver/drier inlet hose (Figure 2, Item 1). Avoid spilling PAG oil.
5. Pour PAG oil from receiver/drier inlet hose (Figure 2, Item 1) into measured container.
6. Remove O-rings from receiver/drier inlet hose (Figure 2, Item 1). Discard O-rings.
7. Disconnect LSS harness connector (Figure 3, Item 2) from bracket (Figure 3, Item 4).

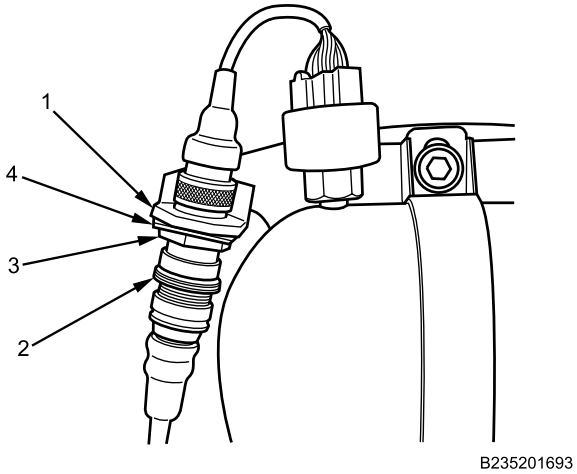


Figure 3. Pressure Switch Connection.

8. Remove nut (Figure 3, Item 3) and remove high pressure switch harness locknut connector (Figure 3, Item 1) from bracket (Figure 3, Item 4).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

9. Remove heatshrink tubing (Figure 4, Item 3) from receiver/drier outlet hose (Figure 4, Item 1) at thermal expansion valve (Figure 4, Item 2). Discard heat shrink tubing.

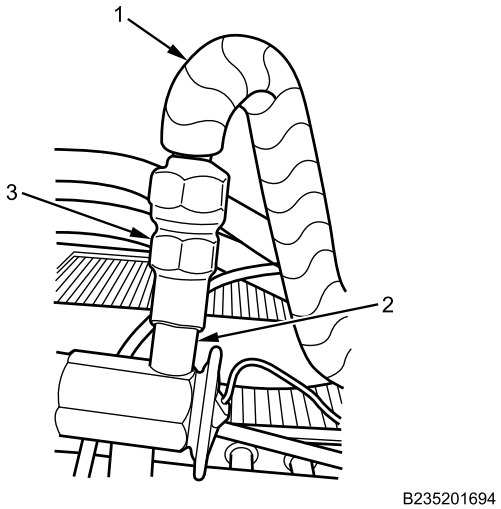


Figure 4. Discharge Hose at Thermal Expansion Valve.

10. Disconnect receiver/drier outlet hose (Figure 4, Item 1) from thermal expansion valve (Figure 4, Item 2).

CAUTION

Avoid contact with heater radiator fins. Failure to comply may result in damage to heater radiator.

11. While supporting receiver/drier (Figure 5, Item 2), remove four bolts (Figure 5, Item 1) and remove receiver/drier. Avoid spilling PAG oil. Discard lockwashers.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

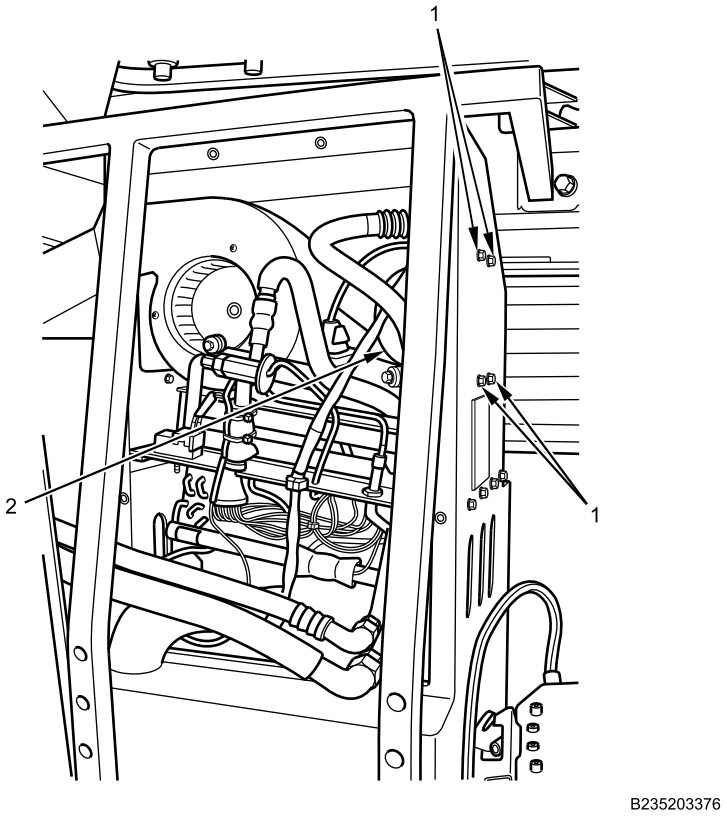


Figure 5. Receiver/Drier Mounting Bolts.

12. Pour PAG oil from receiver/drier and receiver/drier outlet hose into measured container.
13. Remove heatshrink tubing (Figure 6, Item 2) from receiver/drier outlet hose (Figure 6, Item 3) at receiver/drier (Figure 6, Item 1). Discard heat shrink tubing.

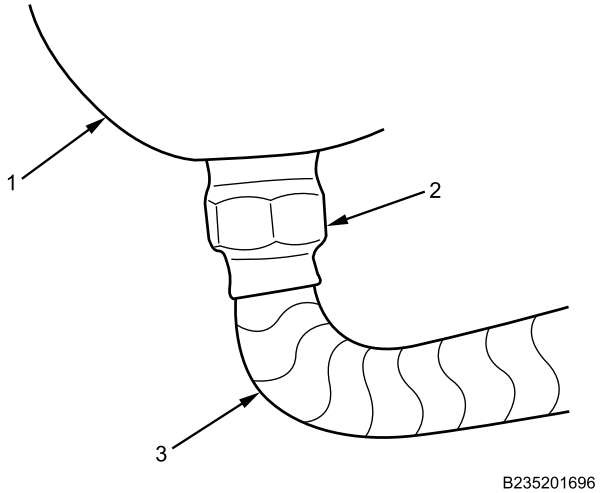


Figure 6. Discharge Hose at Receiver/Drier.

14. Remove receiver/drier outlet hose (Figure 6, Item 3) from receiver/drier (Figure 6, Item 1).
15. Remove O-rings from receiver/drier outlet hose (Figure 6, Item 3). Discard O-rings.
16. Remove HVAC high pressure switch (Figure 7, Item 1) from receiver/drier (Figure 7, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

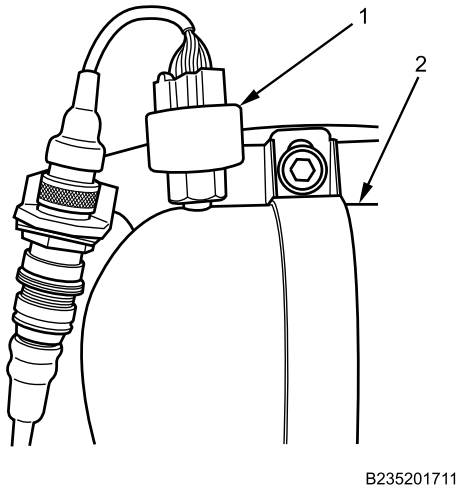


Figure 7. High Pressure Switch.

17. Remove O-ring from HVAC high pressure switch (Figure 7, Item 1). Discard O-ring.
18. Remove two bolts (Figure 8, Item 1), flat washers and lockwashers from clamp (Figure 8, Item 4). Remove clamp and receiver/drier (Figure 8, Item 3) from receiver/drier mounting plate (Figure 8, Item 2). Discard lockwashers.

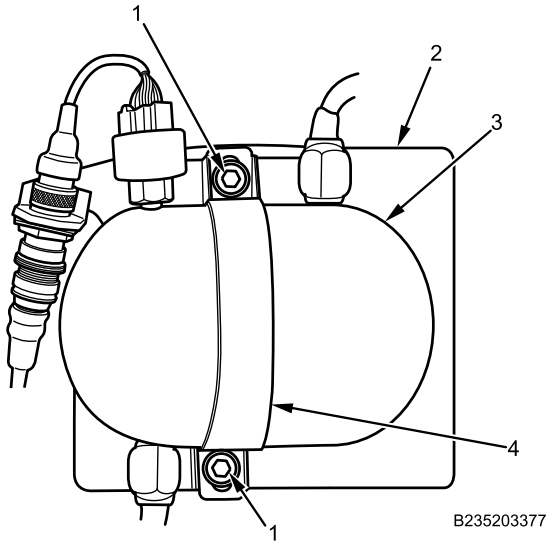


Figure 8. Receiver/Drier Mounting Plate and Clamp.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install receiver/drier (Figure 9, Item 3) on receiver/drier mounting plate (Figure 9, Item 2) with clamp (Figure 9, Item 4), two bolts (Figure 9, Item 1), flat washers, and new lockwashers. Tighten finger-tight.

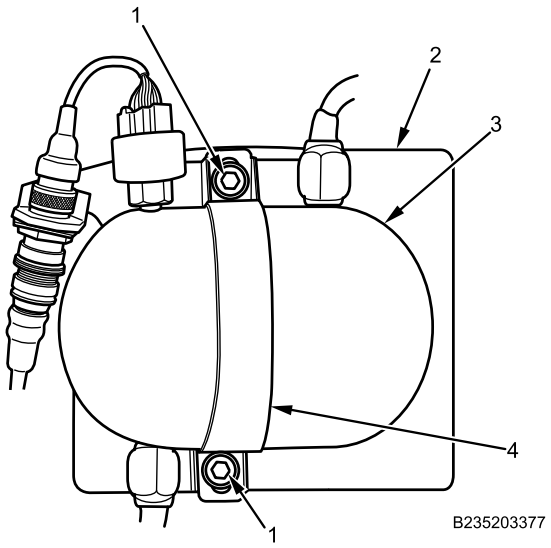


Figure 9. Receiver/Drier Mounting Plate and Clamp.

2. Coat new O-ring with PAG oil and install on HVAC high pressure switch (Figure 10, Item 1).

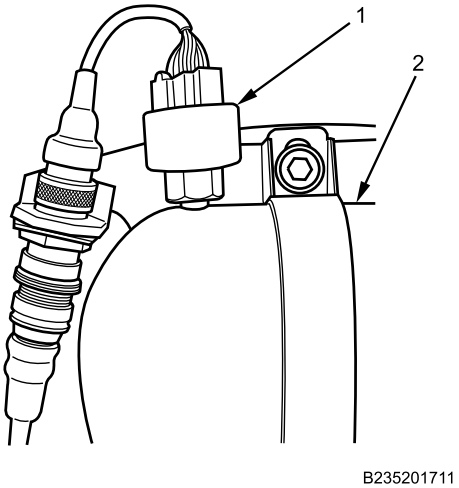


Figure 10. High Pressure Switch.

3. Install HVAC high pressure switch (Figure 10, Item 1) on receiver/drier (Figure 10, Item 2).
4. Coat new O-rings with PAG oil and install one O-ring on each end of receiver/drier outlet hose (Figure 11, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

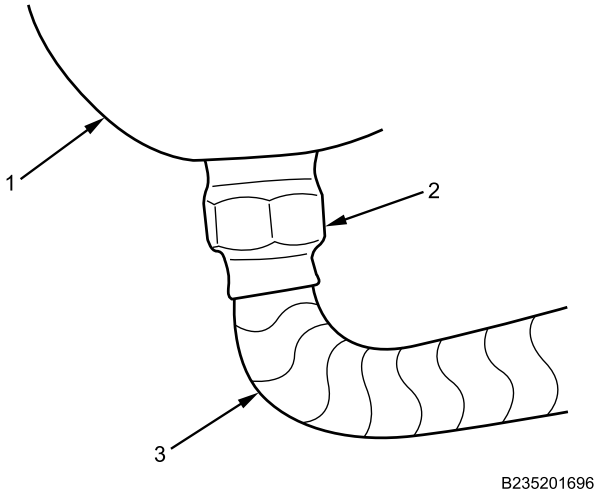


Figure 11. Discharge Hose at Receiver/Drier.

5. Connect receiver/drier outlet hose (Figure 11, Item 3) to receiver/drier (Figure 11, Item 1). Do not tighten fitting (Figure 11, Item 2).
6. Add clean PAG oil, equal to amount drained from receiver/drier and receiver/drier outlet hose (Figure 11, Item 3), to other end of hose.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

CAUTION

Avoid contact with heater core fins. Failure to comply may result in damage to heater core.

7. While supporting receiver/drier (Figure 12, Item 2), loosely install receiver/drier with four bolts (Figure 12, Item 1), flat washers, and new lockwashers and tighten securely.

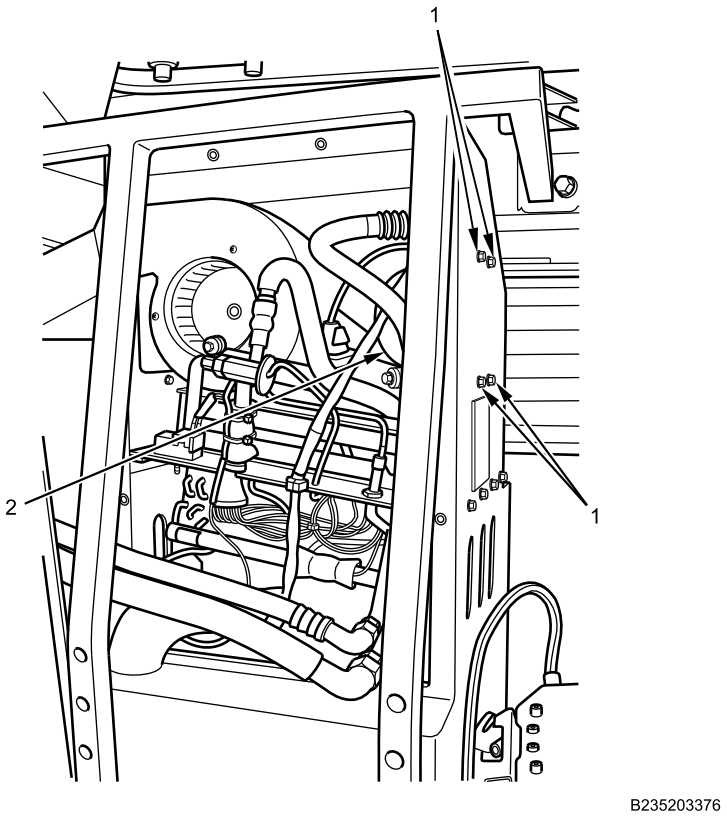


Figure 12. Receiver/Drier Mounting Bolts.

8. Connect receiver/drier outlet hose (Figure 13, Item 1) to thermal expansion valve (Figure 13, Item 2) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

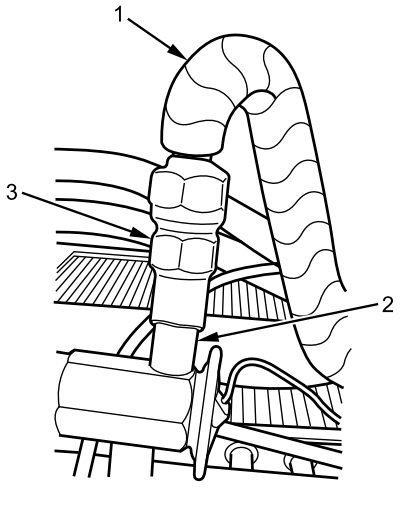


Figure 13. Discharge Hose at Thermal Expansion Valve.

9. Tighten receiver/drier clamp bolts (Figure 13, Item 1) and mounting bolts (Figure 12, Item 1) securely.
10. Tighten receiver/drier outlet hose fitting (Figure 11, Item 2) at receiver/drier (Figure 11, Item 1) securely.

NOTE

Align nipple on connector with grooved slot on bracket.

11. Install HVAC high pressure switch harness locknut connector (Figure 14, Item 1) on bracket (Figure 14, Item 4) with nut (Figure 14, Item 3) and tighten securely.

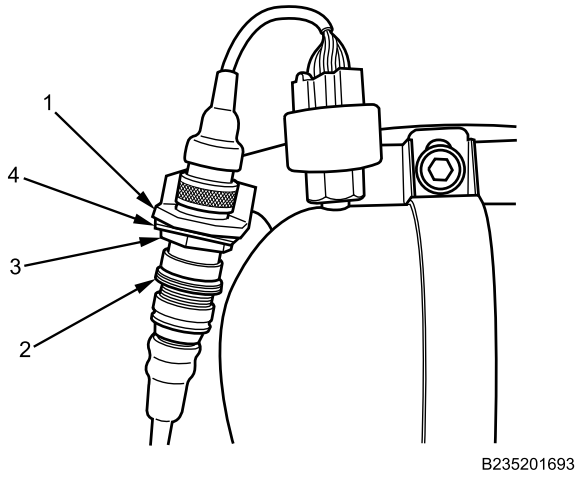


Figure 14. Pressure Switch Connection.

12. Connect LSS harness connector (Figure 14, Item 2) to locknut connector (Figure 14, Item 1).
13. Coat new O-rings with PAG oil and install one O-ring on each end of receiver/drier inlet hose (Figure 15, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

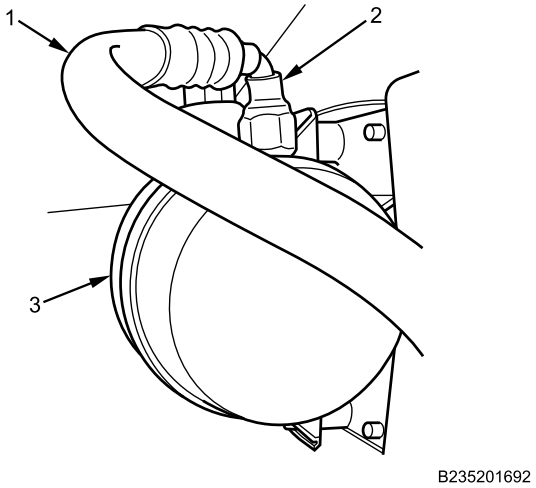


Figure 15. Inlet Hose at Receiver/Drier.

14. Connect receiver/drier inlet hose (Figure 15, Item 1) to receiver/drier (Figure 15, Item 3). Do not tighten fitting (Figure 15, Item 2).
15. Add clean PAG oil, equal to amount drained from receiver/drier inlet hose (Figure 16, Item 2), to other end of hose.

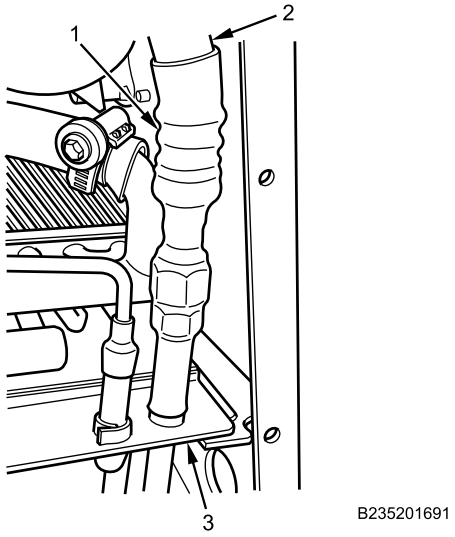


Figure 16. Inlet Hose at Evaporator Assembly.

16. Connect receiver/drier inlet hose (Figure 16, Item 2) to evaporator assembly (Figure 16, Item 3) and tighten securely.
17. Tighten receiver/drier inlet hose fitting (Figure 16, Item 2) at receiver/drier (Figure 16, Item 3) securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Evacuate and recharge HVAC system (WP 0707).
2. Install HVAC/LSS upper panel (WP 0767).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECEIVER/DRIER REMOVAL AND INSTALLATION - (CONTINUED)

3. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Measure, liquid, 2 qt (WP 0795, Item 71)

Materials/Parts
Wire tags (WP 0794, Item 33)
Faceshield, industrial (WP 0794, Item 16)
Gloves (WP 0794, Item 18)
Lubricating oil (WP 0794, Item 31)
Cable lock strap - (6) (WP 0796, Item 134)
O-ring (WP 0796, Item 35)
O-ring (WP 0796, Item 37)
Lockwasher - (8) (WP 0796, Item 168)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0707
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
HVAC/Life Support System (LSS) upper panel removed (WP 0767)
HVAC heater radiator removed (WP 0760)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; containers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen in surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army Petroleum, Oil, and Lubricants (POL) (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

REMOVAL

1. Remove heatshrink tubing (Figure 1, Item 2) from evaporator inlet hose (Figure 1, Item 1) at evaporator inlet hose fitting (Figure 1, Item 3). Discard heatshrink tubing.

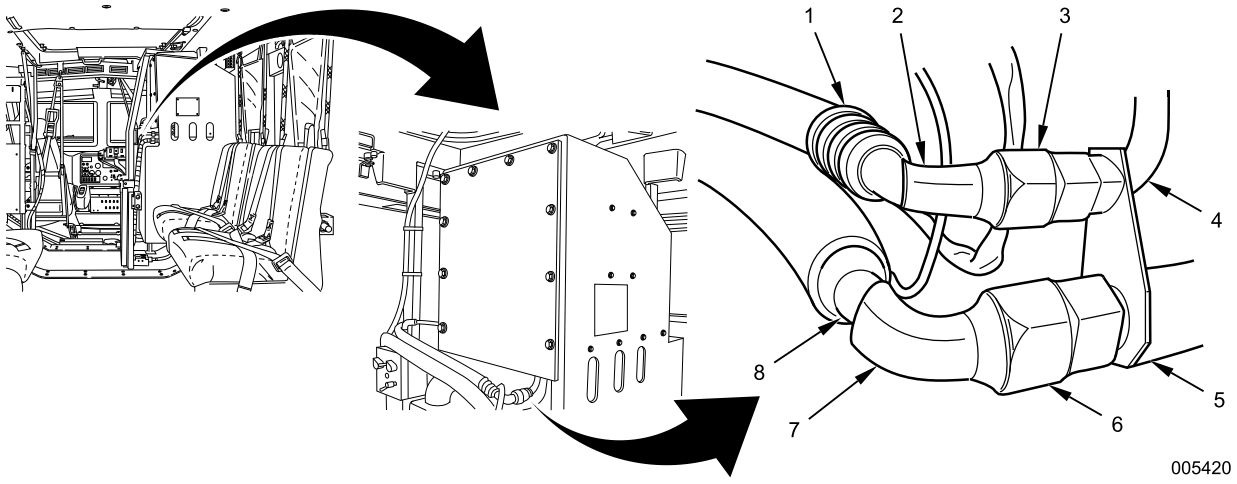


Figure 1. Evaporator Fittings.

2. Disconnect evaporator inlet hose (Figure 1, Item 1) from evaporator inlet (Figure 1, Item 4).
3. Allow PAG oil to drain from evaporator inlet hose (Figure 1, Item 1) into liquid measure.
4. Remove heatshrink tubing (Figure 1, Item 7) from evaporator outlet hose (Figure 1, Item 8) at evaporator outlet hose fitting (Figure 1, Item 6). Discard heatshrink tubing.
5. Disconnect evaporator outlet hose (Figure 1, Item 8) from evaporator outlet (Figure 1, Item 5).
6. Allow PAG oil to drain from evaporator outlet hose (Figure 1, Item 1) into liquid measure.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

7. Remove O-rings (Figure 2, Item 2) from evaporator hose ends (Figure 2, Item 1). Discard O-rings.

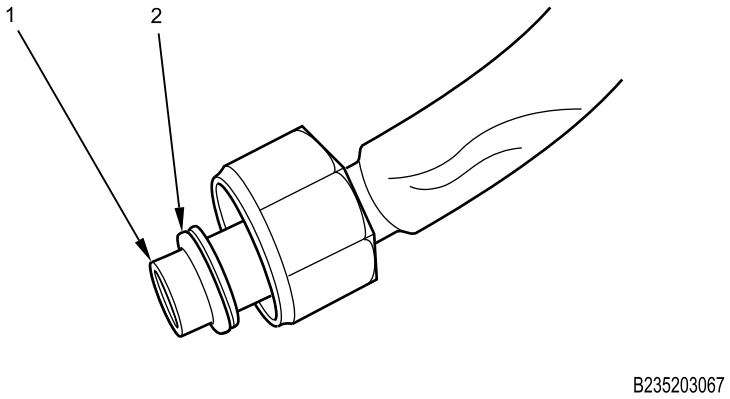


Figure 2. Evaporator Hose With O-Ring Installed.

NOTE

Identify and label HVAC thermostat wire connections before removing to aid in installation.

8. Remove and discard cable lock straps (Figure 3, Item 2).

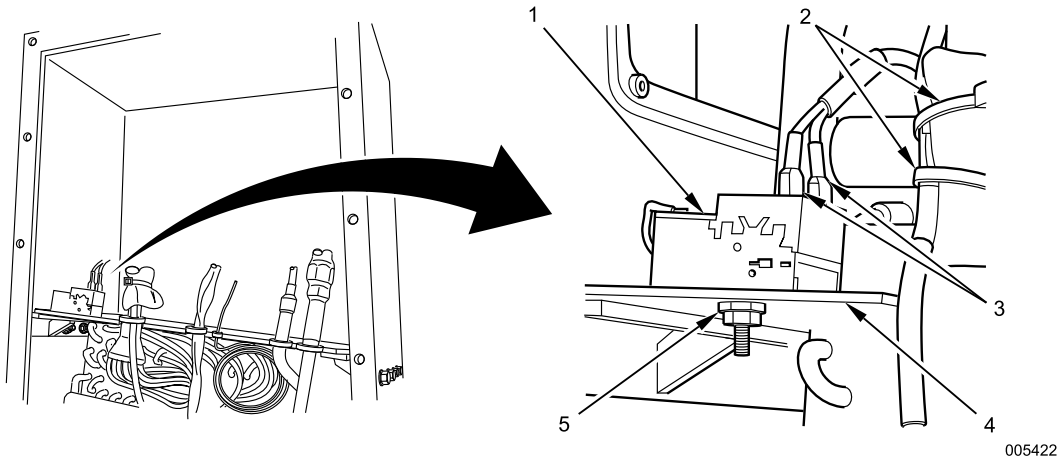


Figure 3. HVAC Thermostat.

9. Disconnect LSS harness connections (Figure 3, Item 3) from HVAC thermostat (Figure 3, Item 1) and set harness aside.
10. Remove nut (Figure 3, Item 5) and HVAC thermostat (Figure 3, Item 1) from evaporator assembly (Figure 3, Item 4).
11. Remove evaporator assembly (Figure 4, Item 1) from mounting brackets (Figure 4, Item 3). Avoid spilling PAG oil.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

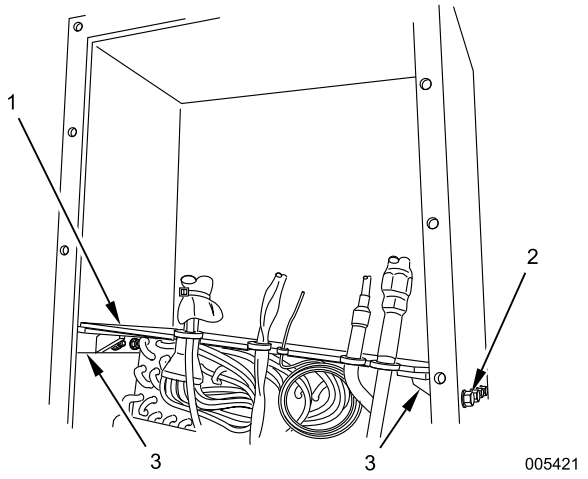


Figure 4. Evaporator Mounting Bracket Bolts.

12. Drain PAG oil from evaporator assembly (Figure 4, Item 1) into measured container.
13. Remove eight evaporator assembly bolts (Figure 4, Item 2), lockwashers, flat washers, and evaporator mounting brackets (Figure 4, Item 3). Discard lockwashers.

END OF TASK

INSTALLATION

1. Install evaporator mounting brackets (Figure 5, Item 3) with eight flat washers, lockwashers, and bolts (Figure 5, Item 2). Tighten mounting bracket bolts securely.

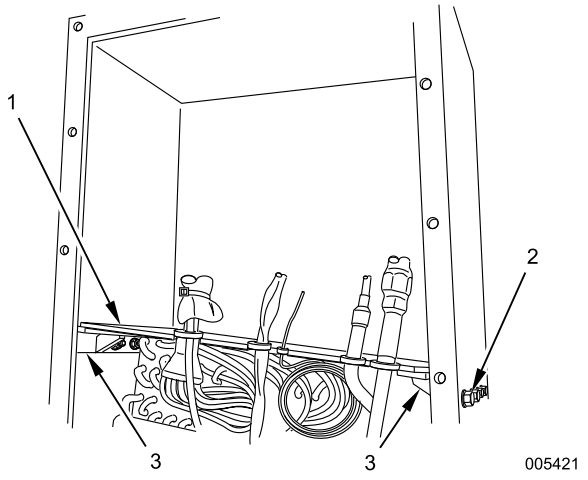


Figure 5. Evaporator Mounting Bracket Bolts.

2. Add clean PAG oil, equal to amount drained from evaporator assembly (Figure 5, Item 1), to evaporator assembly.
3. Position evaporator assembly (Figure 5, Item 1) on evaporator mounting brackets (Figure 5, Item 3). Avoid spilling PAG oil.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

4. Install HVAC thermostat (Figure 6, Item 1) on evaporator assembly (Figure 6, Item 4) with nut (Figure 6, Item 5) and tighten securely.

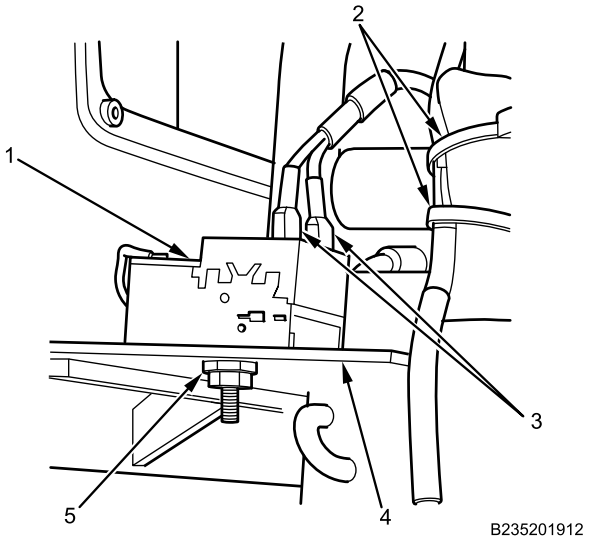


Figure 6. HVAC Thermostat.

5. Connect LSS harness connections (Figure 6, Item 3) to HVAC thermostat (Figure 6, Item 1).
6. Install new cable lock straps (Figure 6, Item 2).
7. Coat new O-rings (Figure 7, Item 2) with PAG oil and install one O-ring on each end of evaporator hose (Figure 7, Item 1).

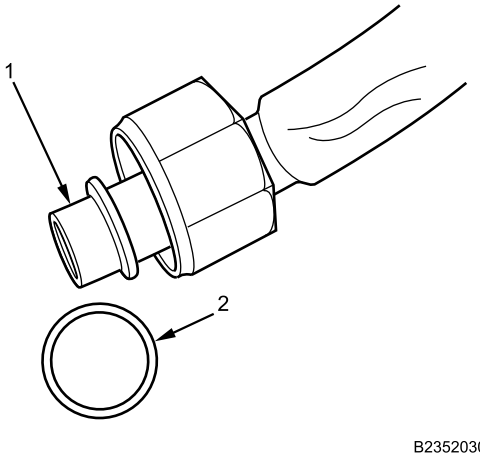


Figure 7. Evaporator Hose With O-Ring Removed

8. Connect evaporator outlet hose (Figure 8, Item 6) to evaporator outlet (Figure 8, Item 4) and tighten evaporator outlet hose fitting (Figure 8, Item 5) securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) MAIN EVAPORATOR ASSEMBLY REMOVAL AND INSTALLATION - (CONTINUED)

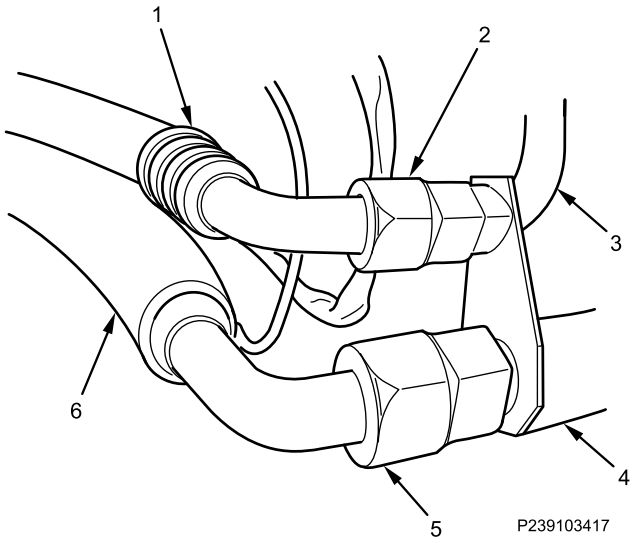


Figure 8. Evaporator Outlet Hose at Evaporator.

9. Connect evaporator inlet hose (Figure 8, Item 1) to evaporator inlet (Figure 8, Item 3) and tighten evaporator inlet hose fitting (Figure 8, Item 2) securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC heater radiator (WP 0760).
2. Evacuate and recharge HVAC system (WP 0707).
3. Install HVAC/LSS upper panel (WP 0767).
4. Turn MAIN POWER switch on (TM 9-2355-106-10).
5. Start engine (TM 9-2355-106-10).
6. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
7. Turn off HVAC/LSS (TM 9-2355-106-10).
8. Turn engine off (TM 9-2355-106-10).
9. Turn MAIN POWER switch off (TM 9-2355-106-10).
10. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5-gal. capacity (WP 0795, Item 75)

Materials/Parts
Cable lock strap - (6) (WP 0796, Item 134)
Clamp - (4) (WP 0796, Item 140)
Lockwasher - (6) (WP 0796, Item 168)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
HVAC/Life Support System (LSS) upper panel removed (WP 0767)
HVAC blower removed (WP 0766)
HVAC receiver/drier removed (WP 0758)

REMOVAL

WARNING



Cooling system components become extremely hot during normal operation. Allow engine to cool completely prior to working on or near radiator. Use extreme care when working in close quarters in engine compartment. Failure to comply may result in serious injury or death to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

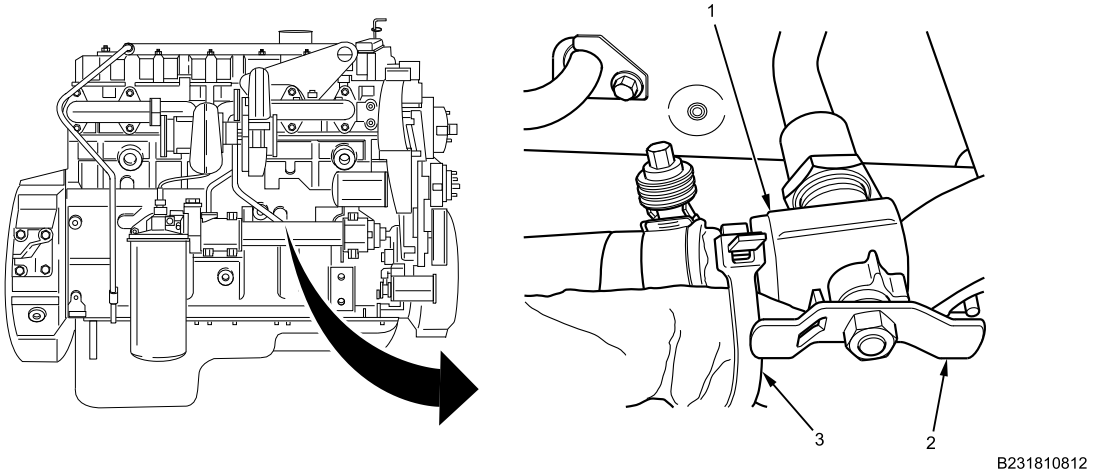


Figure 1. Heater Coolant Engine Outlet Valve.

1. Close outlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap if necessary.

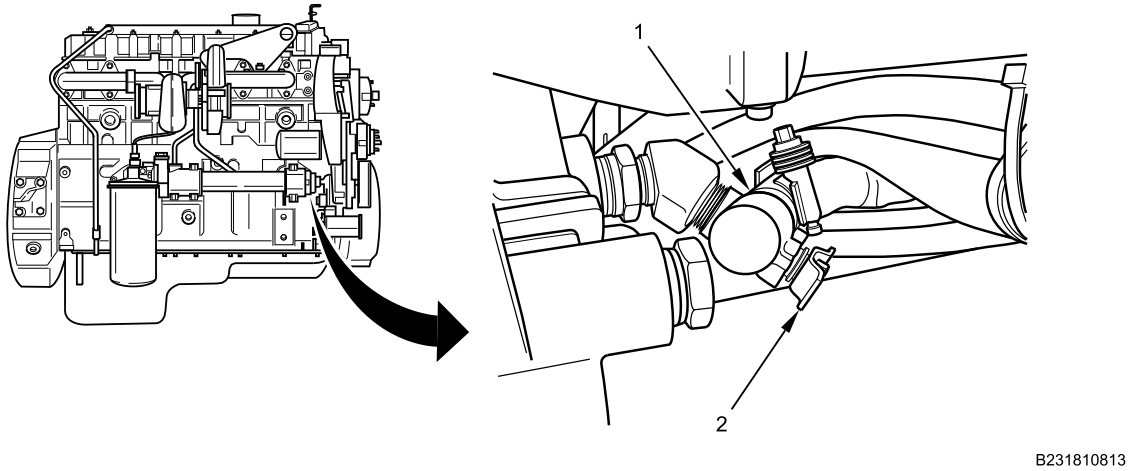


Figure 2. Heater Coolant Engine Inlet Valve.

2. Close inlet valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

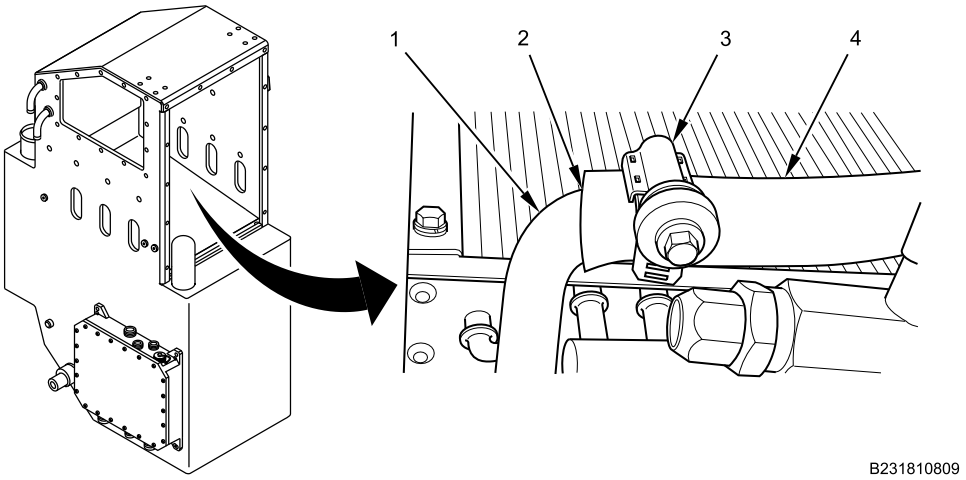


Figure 3. Heater Radiator Outlet Fitting.

3. Position drain pan under heater radiator outlet hose connection (Figure 3, Item 2).
4. Loosen clamp (Figure 3, Item 3), disconnect heater radiator outlet hose (Figure 3, Item 4) from heater radiator outlet fitting (Figure 3, Item 1), and allow coolant to drain into drain pan.

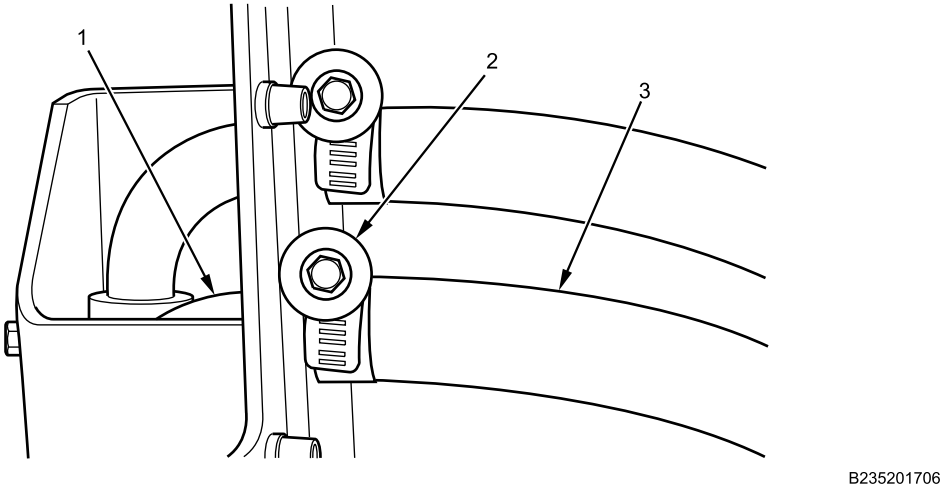


Figure 4. Heater Radiator Outlet Hose Inside LSS Box at Panel.

5. Loosen clamp (Figure 4, Item 2), disconnect heater radiator outlet hose (Figure 4, Item 3) from pipe (Figure 4, Item 1) inside LSS box, and remove heater radiator outlet hose.
6. Remove clamps (Figure 4, Item 2) from heater radiator outlet hose (Figure 4, Item 3). Discard clamps.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

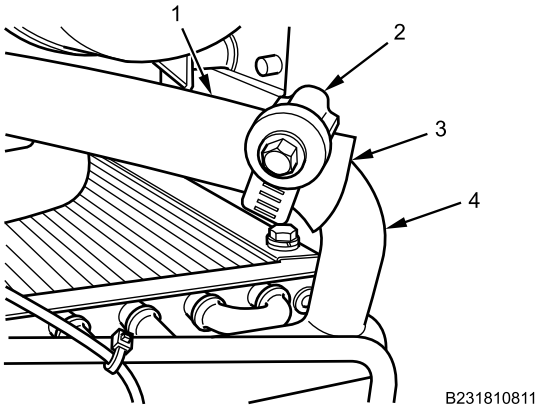


Figure 5. Heater Radiator Inlet Fitting.

7. Position drain pan under heater radiator inlet hose connection (Figure 5, Item 3).
8. Loosen clamp (Figure 5, Item 2), disconnect heater radiator inlet hose (Figure 5, Item 1) from heater radiator inlet fitting (Figure 5, Item 4), and allow coolant to drain into drain pan.

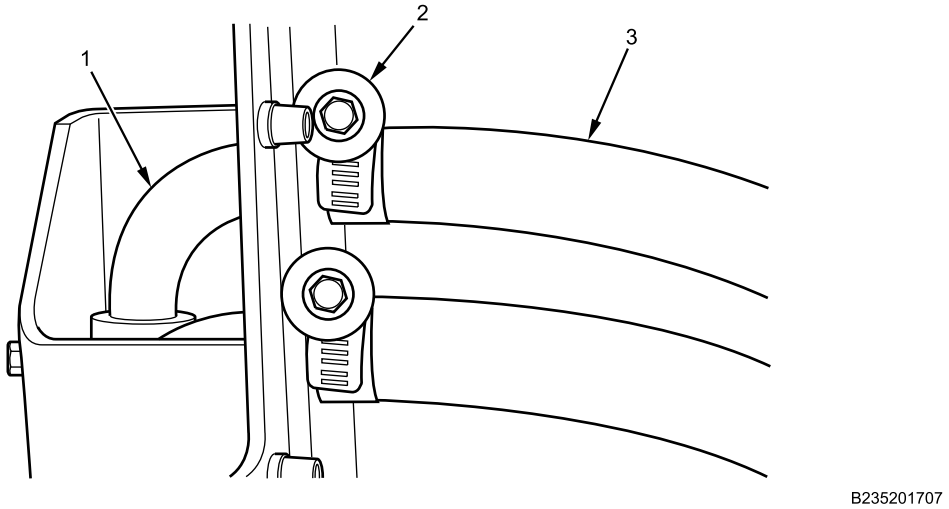


Figure 6. Heater Radiator Inlet Hose Inside LSS Box at Panel.

9. Loosen clamp (Figure 6, Item 2), disconnect heater radiator inlet hose (Figure 6, Item 3) from pipe (Figure 6, Item 1) inside LSS box, and remove heater radiator inlet hose.
10. Remove clamps (Figure 6, Item 2) from heater radiator inlet hose (Figure 6, Item 3). Discard clamps.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

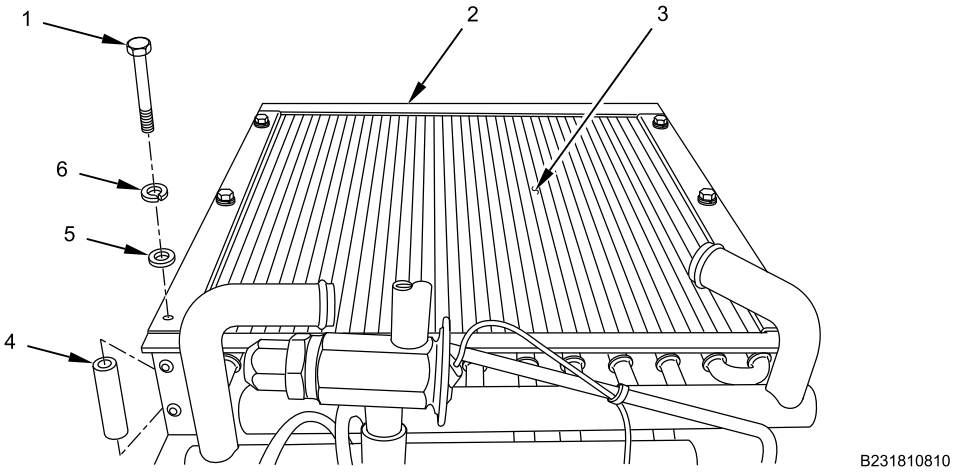


Figure 7. Heater Radiator.

NOTE

Ensure spacers do not fall out during removal of heater radiator.

Take notice of thermostat/freeze switch sensing probe location. The sensing probe that is part of the thermostat/freeze switch may need to be repositioned. The thermostat/freeze switch will not be removed in this procedure.

11. Remove six bolts (Figure 7, Item 1), lockwashers, (Figure 7, Item 6) and washers (Figure 7, Item 5) from heater radiator perimeter (Figure 7, Item 2). Discard lockwashers.
12. Remove heater radiator (Figure 7, Item 3) from LSS box with spacers (Figure 7, Item 4).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

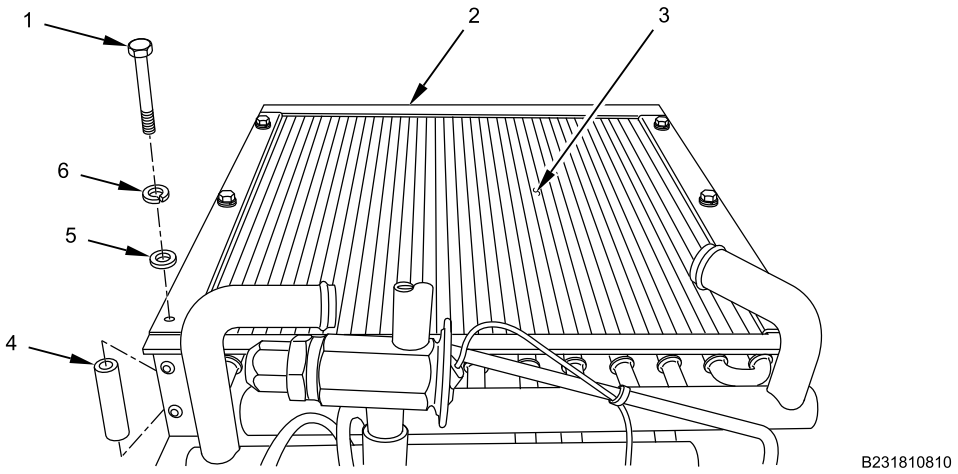


Figure 8. Heater Radiator.

NOTE

Ensure heater radiator spacers are installed prior to heater radiator installation.

Ensure thermostat/freeze switch sensing probe remains in position as noted in removal.

The evaporator core can be moved to aid in installation of heater radiator.

1. Install heater radiator (Figure 8, Item 3) with six bolts (Figure 8, Item 1), new lockwashers (Figure 8, Item 6), washers (Figure 8, Item 5), and spacers (Figure 8, Item 4) on heater radiator perimeter (Figure 8, Item 2) and tighten bolts securely.

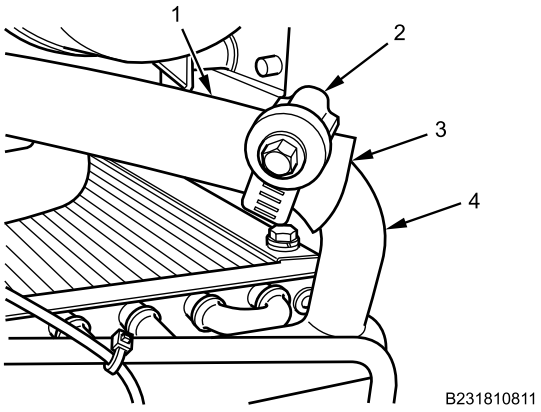


Figure 9. Heater Radiator Inlet Fitting.

2. Position new clamp (Figure 9, Item 2) near heater radiator inlet hose connection (Figure 9, Item 3) at each end of heater radiator inlet hose (Figure 9, Item 1).
3. Connect heater radiator inlet hose (Figure 9, Item 1) to heater radiator inlet fitting (Figure 9, Item 4) with new clamp (Figure 9, Item 2) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

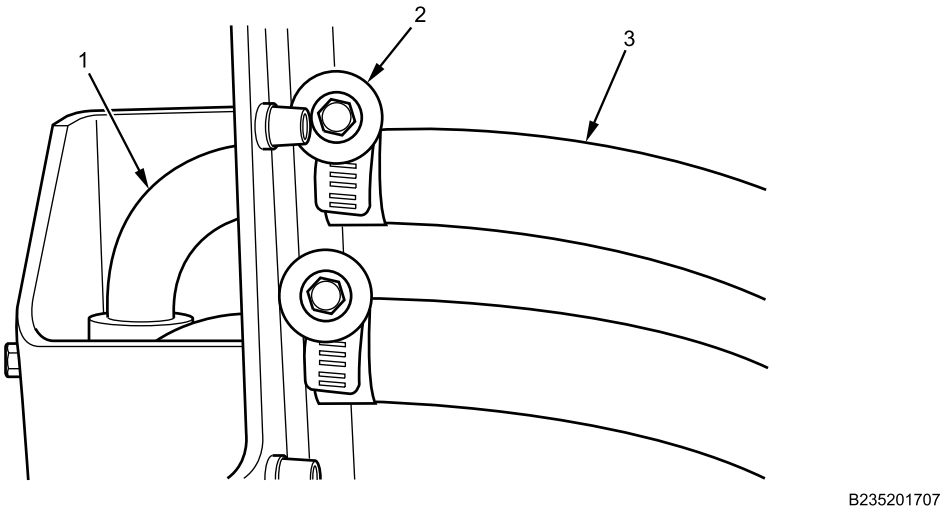


Figure 10. Heater Radiator Inlet Hose Inside LSS Box at Panel.

4. Connect heater radiator inlet hose (Figure 10, Item 3) to pipe (Figure 10, Item 1) inside LSS box with new clamp (Figure 10, Item 2) and tighten securely.

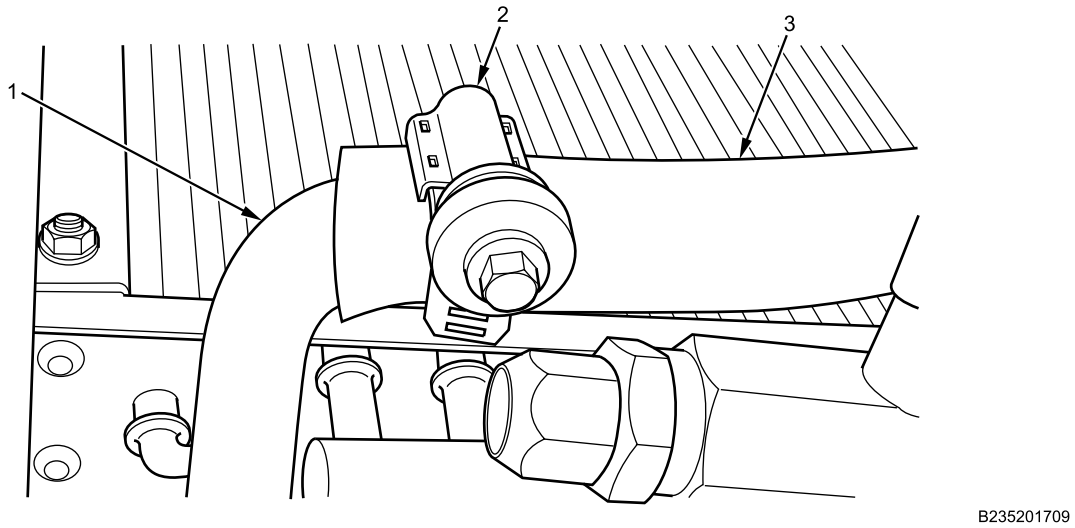


Figure 11. Heater Radiator Outlet Fitting.

5. Position new clamp (Figure 11, Item 2) on each end of heater radiator outlet hose (Figure 11, Item 3).
6. Connect heater radiator outlet hose (Figure 11, Item 3) to heater radiator outlet fitting (Figure 11, Item 1) with new clamp (Figure 11, Item 2) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

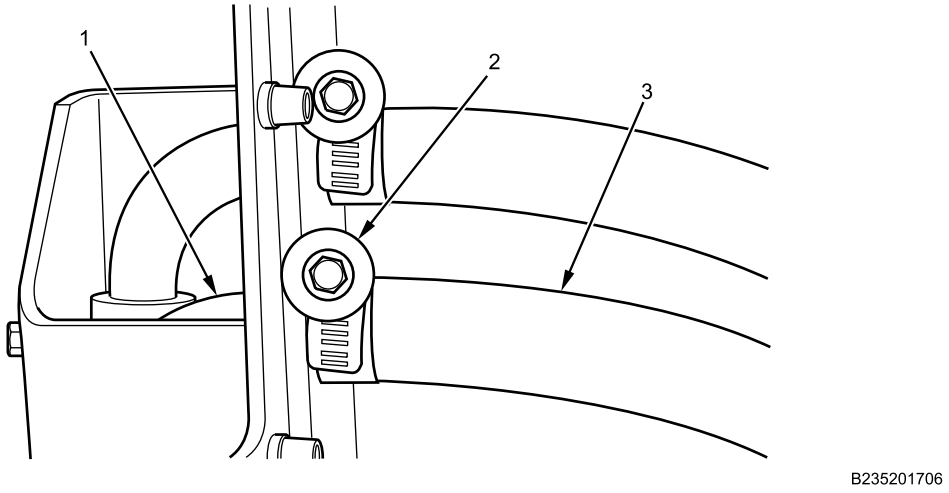


Figure 12. Heater Radiator Outlet Hose Inside LSS Box at Panel.

7. Connect heater radiator outlet hose (Figure 12, Item 3) to pipe (Figure 12, Item 1) inside LSS box with clamp (Figure 12, Item 2) and tighten securely.
8. Remove drain pan.

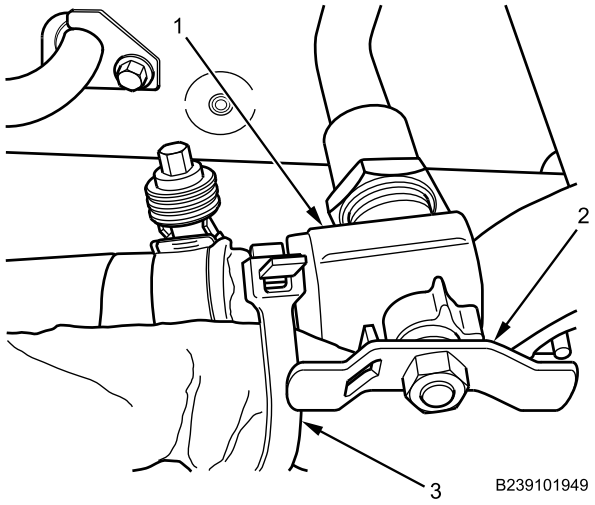


Figure 13. Heater Coolant Engine Outlet Valve.

9. Open outlet valve (Figure 13, Item 1) by turning handle (Figure 13, Item 2) counterclockwise. Install new cable lock strap (Figure 13, Item 3) if removed.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) HEATER RADIATOR REMOVAL AND INSTALLATION - (CONTINUED)

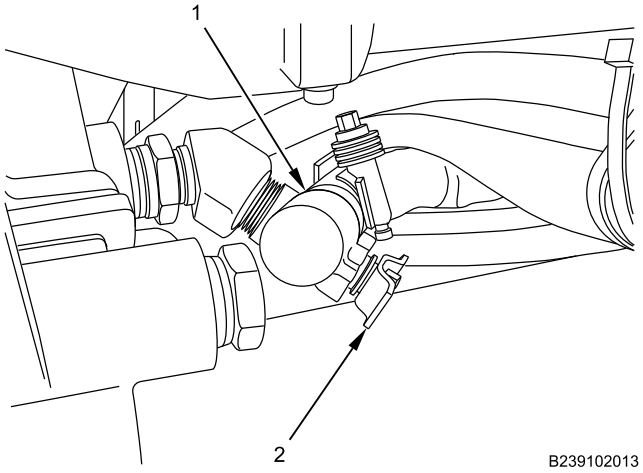


Figure 14. Heater Coolant Engine Inlet Valve.

10. Open inlet valve (Figure 14, Item 1) by turning handle (Figure 14, Item 2) counterclockwise.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC receiver/drier (WP 0758).
2. Install HVAC blower (WP 0766).
3. Fill cooling system (WP 0277).
4. Install HVAC/LSS upper panel (WP 0767).
5. Turn MAIN POWER switch on (TM 9-2355-106-10).
6. Start engine (TM 9-2355-106-10).
7. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
8. Turn off HVAC/LSS (TM 9-2355-106-10).
9. Turn engine off (TM 9-2355-106-10).
10. Turn MAIN POWER switch off (TM 9-2355-106-10).
11. Close and secure engine hood (TM 9-2355-106-10).
12. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Pan, drain, 5-gal. capacity (WP 0795, Item 75)

Materials/Parts
Antifreeze (WP 0794, Item 5)
Compound (WP 0794, Item 13)
Faceshield, industrial (WP 0794, Item 16)
Gloves (WP 0794, Item 18)
Gloves (WP 0794, Item 19)
Goggles, industrial (WP 0794, Item 20)
Grease (WP 0794, Item 22)
Lubricating oil (WP 0794, Item 30)
Wire tags (WP 0794, Item 49)
Clamp - (2) (WP 0796, Item 45)
O-ring (WP 0796, Item 35)
O-ring (WP 0796, Item 37)
Cable lock strap - (4) (WP 0796, Item 134)

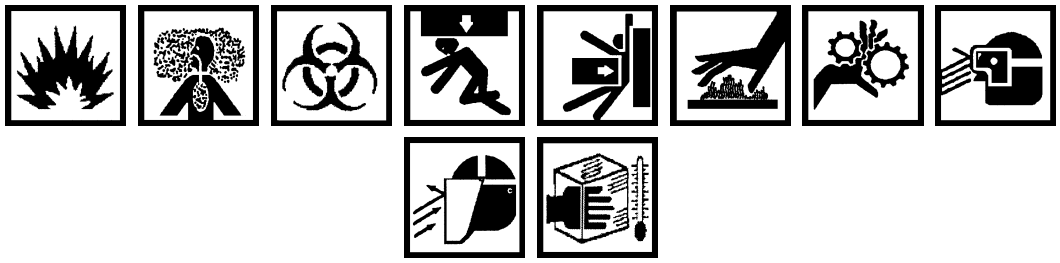
Personnel Required
Maintainer - (3)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine shut off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Hood open and secured (TM 9-2355-106-10)
LSS control switch off (TM 9-2355-106-10)
Nuclear, Biological, and Chemical (NBC) filter access door removed (WP 0762)
HVAC fresh air inlet tube removed (WP 0720)
HVAC/LSS diffuser air duct removed (WP 0755)
Gunner platform/stand removed (WP 0668)
HVAC/LSS operator panel removed (WP 0770)
Climate Control Unit (CCU) box removed (WP 0769)
HVAC water drainage hose removed (WP 0719)
NBC dust tube removed (WP 0721)
HVAC refrigerant recovered (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army Petroleum, Oil, and Lubricants (POL) (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

Refrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.

NBC system maintenance procedures require at least two personnel due to risk of medical emergency from possible exposure to NBC agents. Maintenance must be performed by properly trained, authorized personnel with proper safety equipment and protective clothing. Make sure batteries are disconnected and area is well ventilated. Do not smoke or allow open flame near vehicle. Never operate system with cover or panel removed. Failure to comply may result in serious injury or death to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Engine components become extremely hot during normal operation. Allow engine to cool completely prior to performing maintenance. Use extreme care when working in close quarters in engine compartment. Stay clear of rotating parts. Wear safety goggles, work gloves, and long sleeves or shop coat. Failure to comply may result in serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full faceshield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

NOTE

This procedure applies to either of two heater hoses.

1. Close outlet valve (Figure 1, Item 1) by turning handle (Figure 1, Item 2) clockwise. Remove and discard cable lock strap (Figure 1, Item 3) if necessary.

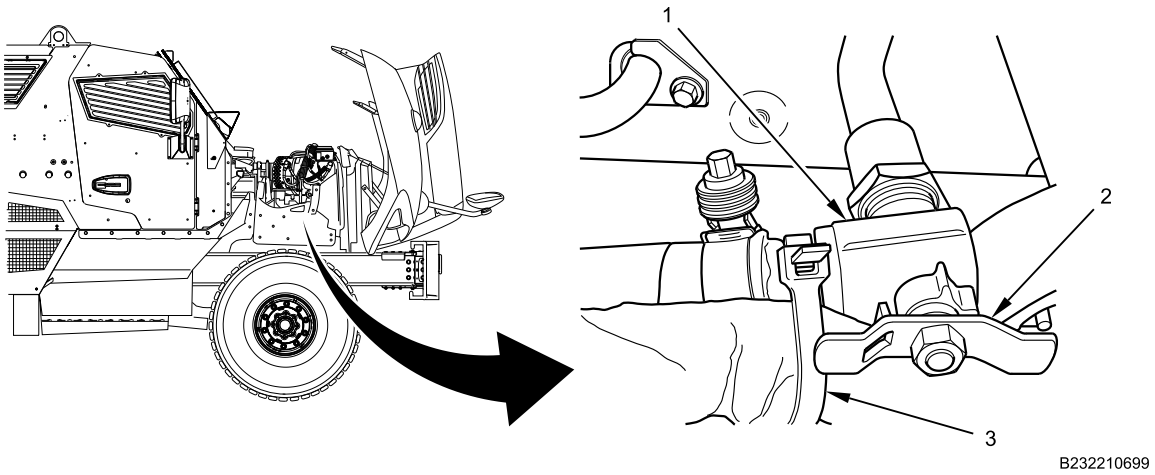


Figure 1. Heater Coolant Engine Outlet Valve.

2. Close inlet valve (Figure 2, Item 1) by turning handle (Figure 2, Item 2) clockwise.

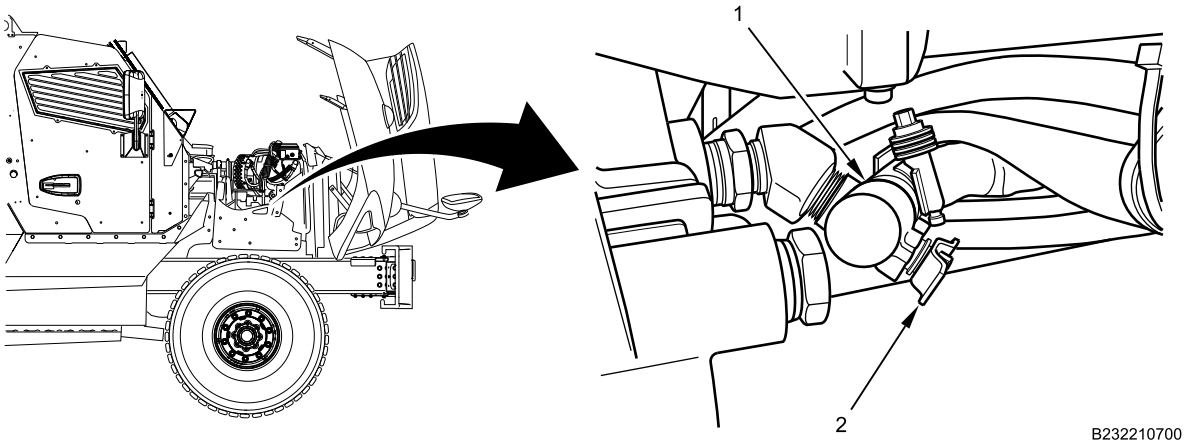


Figure 2. Heater Coolant Engine Inlet Valve.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Note position of heater hoses with wire tags to aid installation.

3. Position drain pan under heater hoses (Figure 3, Item 2).

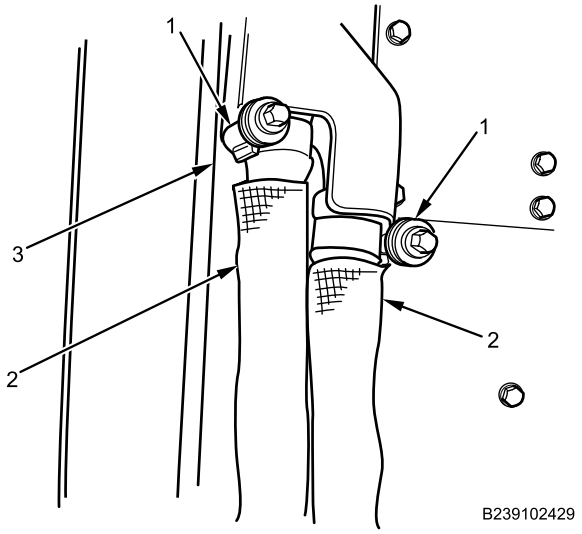


Figure 3. Heater Hoses.

4. Loosen two hose clamps (Figure 3, Item 1) and remove heater hoses (Figure 3, Item 2) from HVAC/LSS box (Figure 3, Item 3). Discard hose clamps.
5. If present, remove heatshrink tubing (Figure 4, Item 2) from evaporator inlet hose (Figure 4, Item 1) at evaporator inlet hose fitting (Figure 4, Item 3). Discard heatshrink tubing.

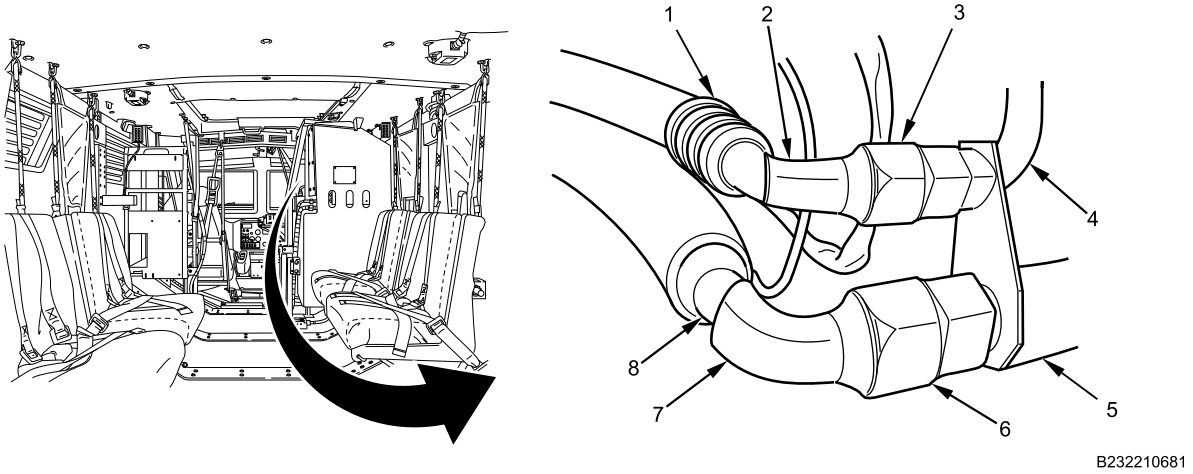
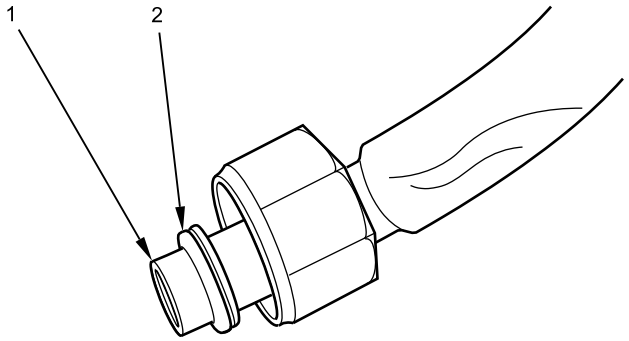


Figure 4. Evaporator Inlet Hose at Evaporator.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

6. Disconnect evaporator inlet hose (Figure 4, Item 1) from evaporator inlet (Figure 4, Item 4).
7. If present, remove heatshrink tubing (Figure 4, Item 7) from evaporator outlet hose (Figure 4, Item 8) at evaporator outlet hose fitting (Figure 4, Item 6). Discard heatshrink tubing.
8. Disconnect evaporator outlet hose (Figure 4, Item 8) from evaporator outlet (Figure 4, Item 5).
9. Remove and discard O-rings (Figure 5, Item 2) from evaporator hose ends (Figure 5, Item 1).

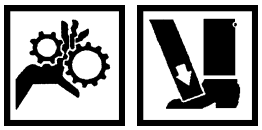


B235203067

Figure 5. Evaporator Hose With O-Ring Installed.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



HVAC box is heavy. Do not attempt to lift or support HVAC box without the assistance of two maintainers. HVAC box can fall when removing fasteners. Wear safety goggles and work gloves. Keep feet and hands away from bottom of HVAC box. Failure to comply may result in damage to equipment and serious injury or death to personnel.

10. With two assistants supporting HVAC/LSS box from inside of vehicle, Remove 22 bolts on outside of vehicle (Figure 6, Item 1) securing HVAC/LSS box.

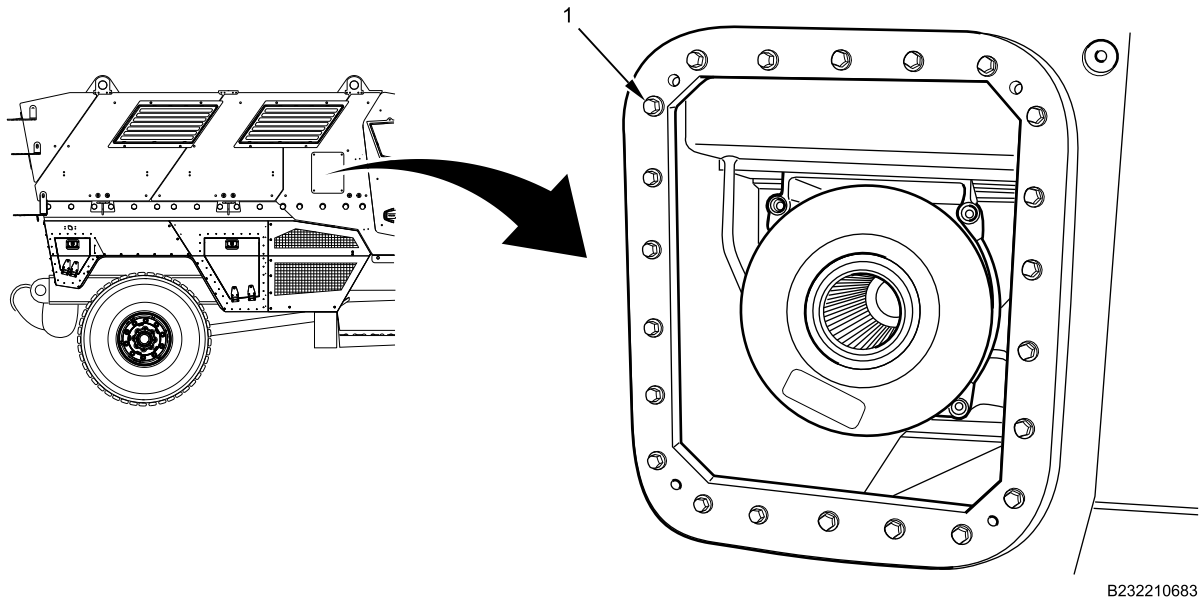


Figure 6. HVAC/LSS Box Mounting.

11. With two assistants, remove HVAC/LSS box.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full faceshield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

1. Ensure seal (Figure 7, Item 2) is completely seated in groove on outboard side of HVAC box (Figure 7, Item 1).

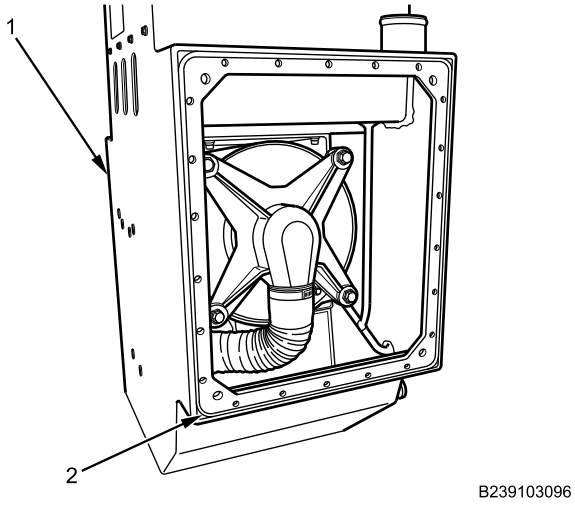


Figure 7. HVAC Box Seal.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Apply corrosion preventive compound to all HVAC/LSS box bolts.

2. With two assistants aligning HVAC/LSS box holes on inside of vehicle, install 22 HVAC/LSS bolts (Figure 8, Item 1) on outside of vehicle. Tighten bolts securely.

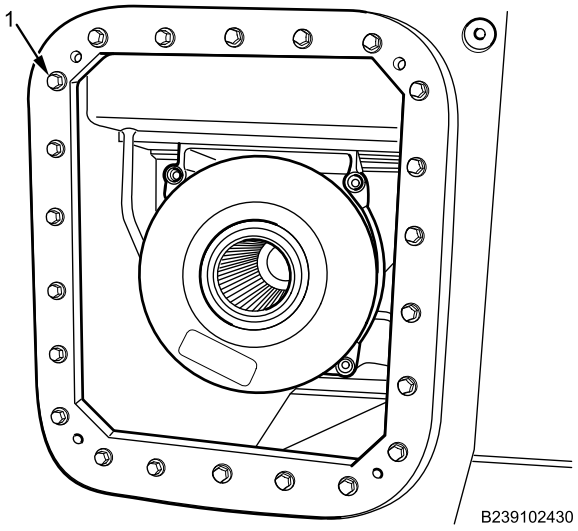


Figure 8. HVAC/LSS Box Mounting.

3. Route HVAC Fresh Air (FA) blower harness (Figure 9, Item 3) from inside NBC filter area through opening (Figure 9, Item 1) in front of HVAC box (Figure 9, Item 2), to aid installation of CCU.

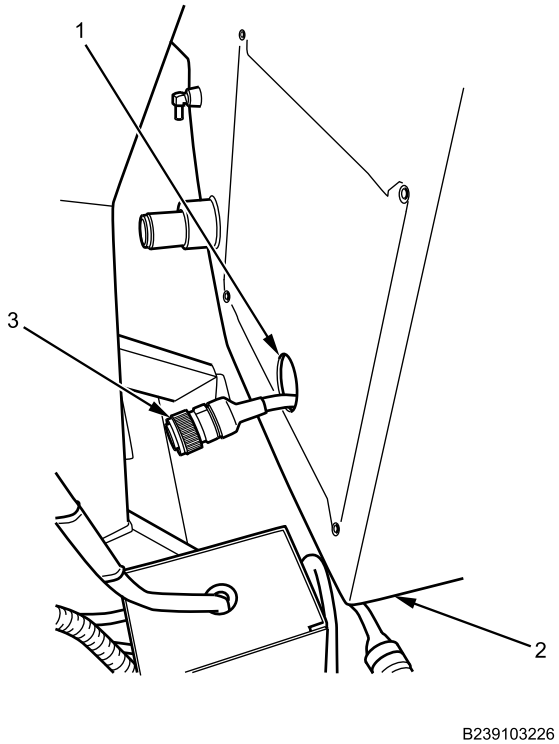


Figure 9. Blower Harness Routing.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

4. Coat new O-rings (Figure 10, Item 2) with PAG oil and install one O-ring on each end of evaporator hose (Figure 10, Item 1).

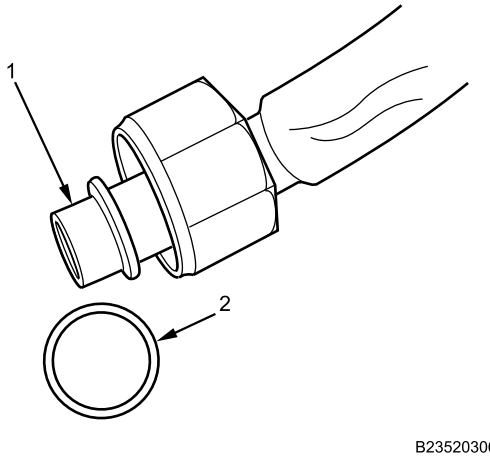


Figure 10. Evaporator Hose With O-Ring Removed

5. Connect evaporator outlet hose (Figure 11, Item 6) to evaporator outlet (Figure 11, Item 4) and tighten evaporator outlet hose fitting (Figure 11, Item 5) securely.

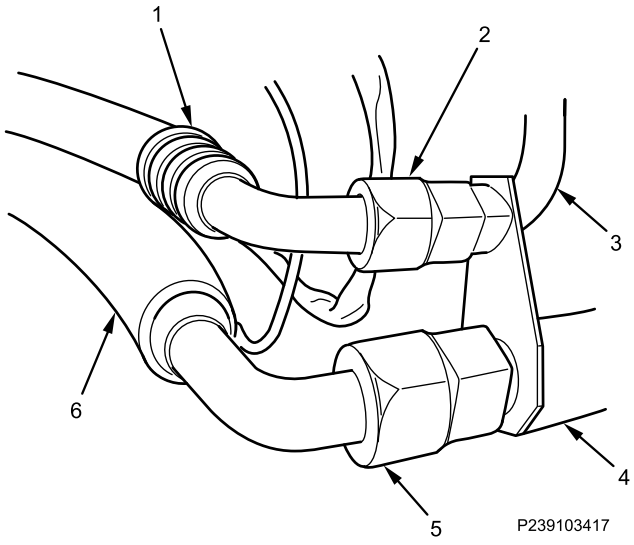


Figure 11. Evaporator Outlet Hose at Evaporator.

6. Connect evaporator inlet hose (Figure 11, Item 1) to evaporator inlet (Figure 11, Item 3) and tighten evaporator inlet hose fitting (Figure 11, Item 2) securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

7. Install two heater hoses (Figure 12, Item 2) on HVAC/LSS box (Figure 12, Item 3) with new hose clamps (Figure 12, Item 1) in positions noted during removal. Tighten hose clamps securely.

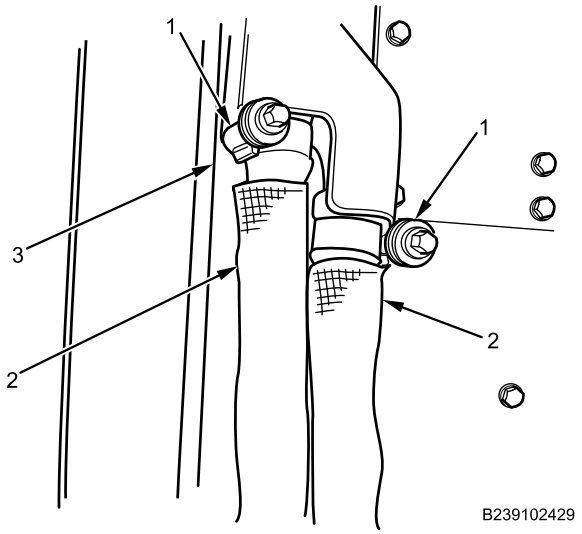


Figure 12. Heater Hoses.

8. Open outlet valve (Figure 13, Item 1) by turning handle (Figure 13, Item 2) counterclockwise. Install new cable lock strap (Figure 13, Item 3) if removed.

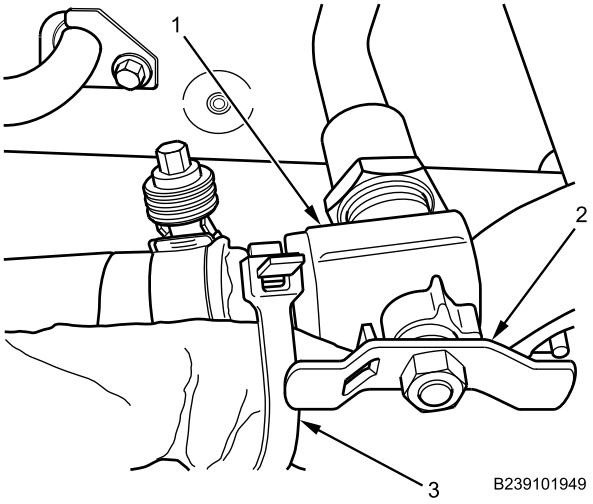


Figure 13. Heater Coolant Engine Outlet Valve.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) BOX REMOVAL AND INSTALLATION - (CONTINUED)

9. Open inlet valve (Figure 14, Item 1) by turning handle (Figure 14, Item 2) counterclockwise.

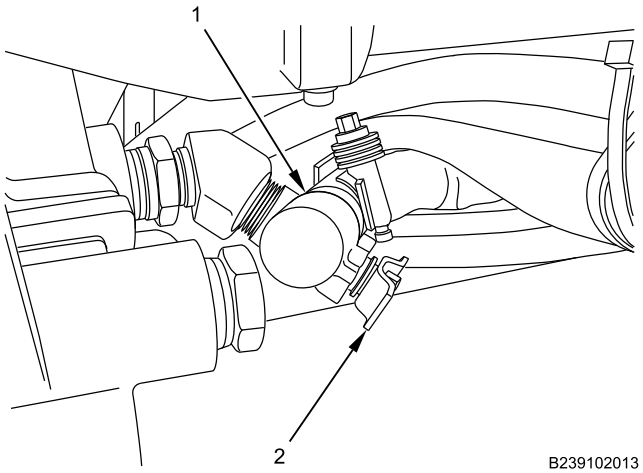


Figure 14. Heater Coolant Engine Inlet Valve.

10. Remove drain pan.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Fill coolant system(WP 0277).
2. Evacuate and recharge HVAC system (WP 0707).
3. Install NBC dust tube (WP 0721).
4. Install HVAC water drain hose (WP 0719).
5. Install CCU box (WP 0769).
6. Install HVAC/LSS operator panel (WP 0770).
7. Install gunner platform/stand (WP 0668).
8. Install HVAC/LSS diffuser air duct (WP 0755).
9. Install NBC filter access door (WP 0762).
10. Install HVAC fresh air inlet tube (WP 0720).
11. Close and secure hood (TM 9-2355-106-10).
12. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Lifting device (Item 67)

Materials/Parts
Compound (WP 0794, Item 13)
Gloves (WP 0794, Item 28)
Goggles, industrial (WP 0794, Item 20)
Faceshield, industrial (WP 0794, Item 16)
Gloves (WP 0794, Item 18)
Lockwasher - (4) (WP 0796, Item 173)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Life Support System (LSS) control switch off (TM 9-2355-106-10)
Exterior body armor right front panel removed (WP 0629)

WARNING



NBC system maintenance procedures require at least two personnel due to risk of medical emergency from possible exposure to NBC agents. Maintenance must be performed by properly trained, authorized personnel with proper safety equipment and protective clothing. Make sure batteries are disconnected and area is well ventilated. Do not smoke or allow open flame near vehicle. Never operate system with cover or panel removed. Failure to comply may result in serious injury or death to personnel.

Armor parts are heavy. Use care when removing or installing. Do not attempt to lift without an assistant and lifting device. Wear gloves. Failure to comply may result in serious injury or death to personnel.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

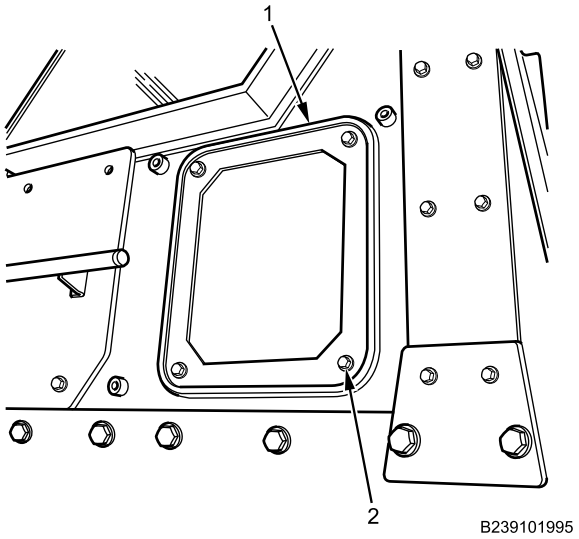


Figure 1. NBC Access Door.

1. Remove four bolts (Figure 1, Item 2) and flat washers from NBC access door (Figure 1, Item 1) and remove access door.

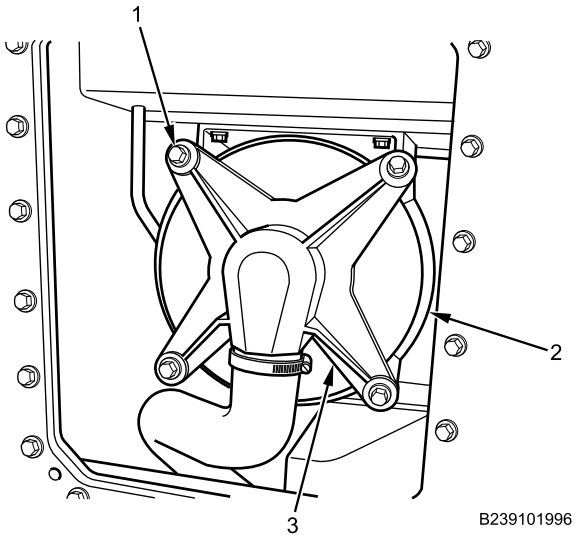


Figure 2. NBC Filter Cover.

2. Remove four bolts (Figure 2, Item 1) and lockwashers from NBC filter cover (Figure 2, Item 3). Discard lockwashers.
3. Remove NBC filter cover (Figure 2, Item 3) from NBC filter housing (Figure 2, Item 2).

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER REMOVAL AND INSTALLATION - (CONTINUED)

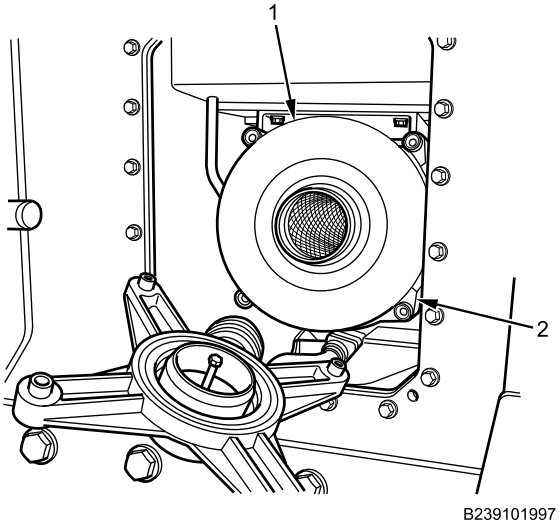


Figure 3. NBC Filter in NBC Filter Housing.

4. Remove NBC filter (Figure 3, Item 1) from NBC filter housing (Figure 3, Item 2).

END OF TASK

INSTALLATION

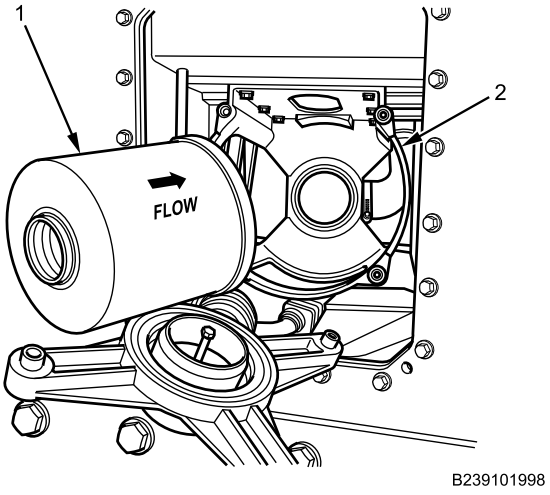


Figure 4. NBC Filter Installation.

1. Insert NBC filter (Figure 4, Item 1) inside NBC filter housing (Figure 4, Item 2), with directional arrow pointed toward interior of vehicle.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER REMOVAL AND INSTALLATION - (CONTINUED)

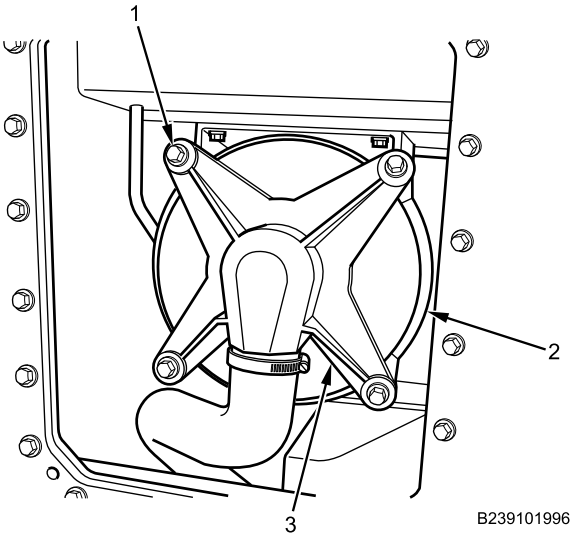


Figure 5. NBC Filter Cover.

2. Install NBC filter cover (Figure 5, Item 3) on NBC filter housing (Figure 5, Item 2) with four bolts (Figure 5, Item 1) and new lockwashers and tighten securely.

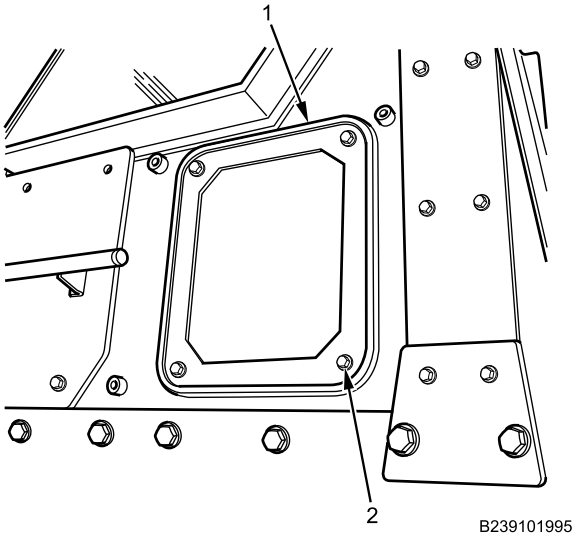


Figure 6. NBC Access Door.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Corrosion preventive compound is toxic. Use only in well-ventilated area. Do not get in eyes; wear chemical safety goggles and full-face shield when using. Avoid contact with skin and wear rubber or plastic, solvent-resistant gloves. In case of contact, remove contaminated clothing and immediately wash area with soap and water. If compound contacts eyes, flush eyes with large amounts of water for at least 15 minutes and get immediate medical attention. If swallowed, do not induce vomiting; contact a physician immediately. Failure to comply may result in serious injury or death to personnel.

3. Apply corrosion preventive compound to four bolts (Figure 6, Item 2).
4. Install NBC access door (Figure 6, Item 1) with four bolts (Figure 6, Item 2) and flat washers and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Close all doors and hatches securely (TM 9-2355-106-10).
4. Turn on Heating Ventilation and Air Conditioning (HVAC)/LSS to verify proper cabin pressure (TM 9-2355-106-10).
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Install exterior body armor right front panel (WP 0629).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER COVER AND HOUSING REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (6) (WP 0796, Item 168)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Heating Ventilating and Air Conditioning/Life Support System (HVAC/LSS) control switch off (TM 9-2355-106-10)
Right side exterior body armor front panel removed (WP 0633)
NBC filter removed (WP 0762)

WARNING



NBC system maintenance procedures require at least two personnel due to risk of medical emergency from possible exposure to NBC agents. Maintenance must be performed by properly trained, authorized personnel with proper safety equipment and protective clothing. Make sure batteries are disconnected and area is well ventilated. Do not smoke or allow open flame near vehicle. Never operate system with cover or panel removed. Failure to comply may result in serious injury or death to personnel.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER COVER AND HOUSING REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Loosen hose clamp (Figure 1, Item 4) and remove NBC filter cover (Figure 1, Item 5) from NBC filter inlet tube (Figure 1, Item 1).

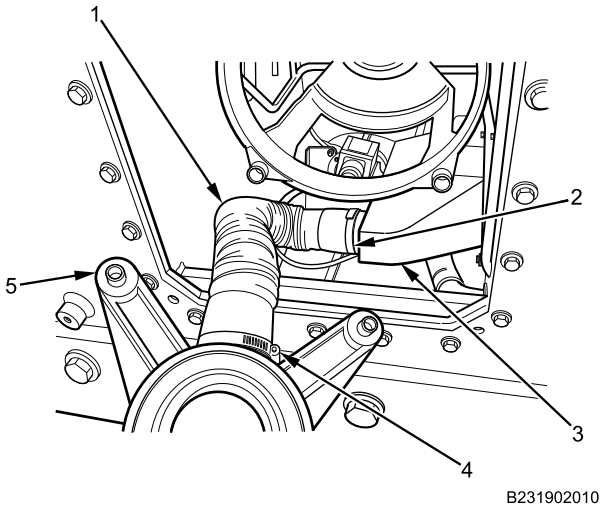


Figure 1. NBC Filter Cover.

2. Loosen hose clamp (Figure 1, Item 2) and remove NBC filter inlet tube (Figure 1, Item 1) from NBC particle separator filter (Figure 1, Item 3).
3. Loosen hose clamp (Figure 2, Item 4).

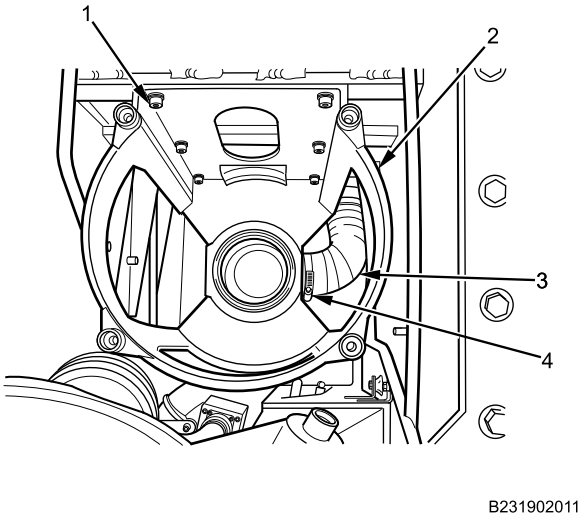


Figure 2. NBC Filter Housing.

4. Remove six allen head bolts (Figure 2, Item 1), lockwashers, and flat washers from NBC filter housing (Figure 2, Item 2). Discard lockwashers.
5. Remove NBC filter housing (Figure 2, Item 2) from NBC filter outlet tube (Figure 2, Item 3).
6. Remove NBC filter housing (Figure 2, Item 2).
7. Loosen hose clamp (Figure 3, Item 1) and remove NBC filter outlet tube (Figure 3, Item 3) from Heating Ventilating and Air Conditioning (HVAC) system inlet tube (Figure 3, Item 2).

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER COVER AND HOUSING REMOVAL AND INSTALLATION - (CONTINUED)

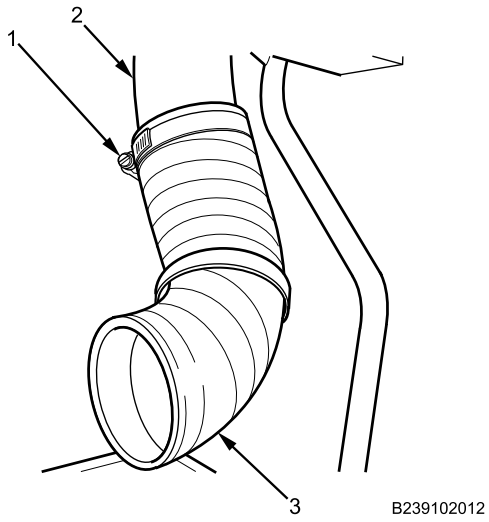


Figure 3. NBC Filter Outlet Tube.

8. Remove two hose clamps (Figure 3, Item 1) from NBC filter outlet tube (Figure 3, Item 3).

END OF TASK

INSTALLATION

1. Install NBC filter outlet tube (Figure 4, Item 3) on HVAC system inlet tube (Figure 4, Item 2) with hose clamp (Figure 4, Item 1) and tighten securely.

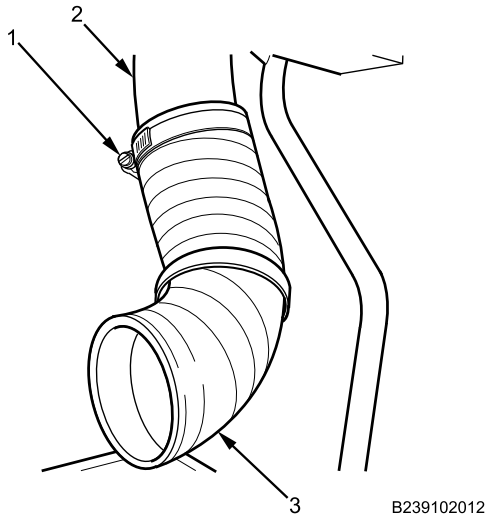


Figure 4. NBC Filter Outlet Tube.

2. Install NBC filter housing (Figure 5, Item 2) on NBC filter outlet tube (Figure 5, Item 3) with hose clamp (Figure 5, Item 4) and tighten securely.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER COVER AND HOUSING REMOVAL AND INSTALLATION - (CONTINUED)

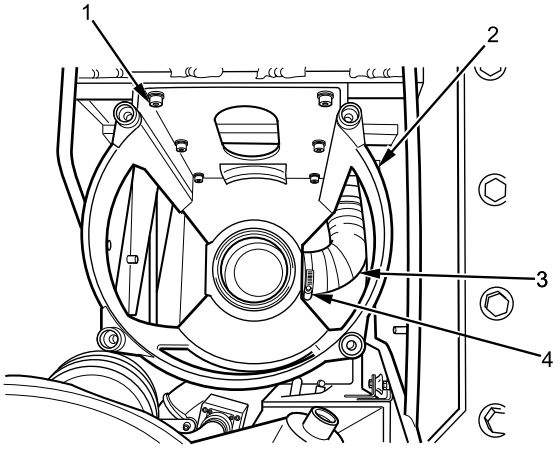


Figure 5. NBC Filter Housing.

3. Install six allen head bolts (Figure 5, Item 1), flat washers, and new lockwashers on NBC filter housing (Figure 5, Item 2) and tighten securely.
4. Position two hose clamps (Figure 6, Item 2 and 4) on NBC filter inlet tube (Figure 6, Item 1).

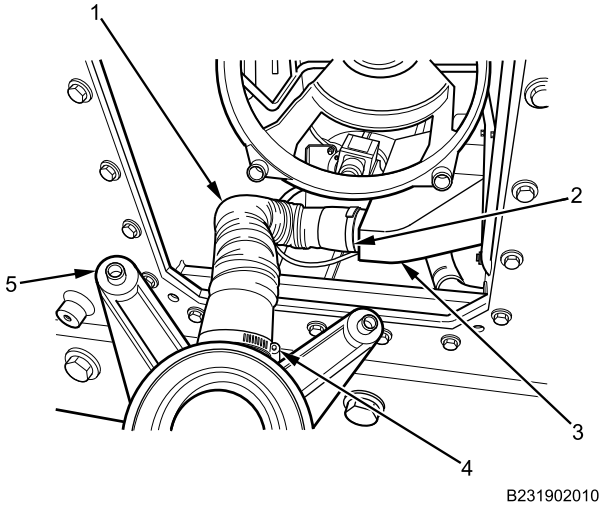


Figure 6. NBC Filter Cover.

5. Install NBC filter inlet tube (Figure 6, Item 1) on NBC particle separator filter (Figure 6, Item 3) and tighten hose clamp (Figure 6, Item 2) securely.
6. Install NBC filter cover (Figure 6, Item 5) on NBC filter inlet tube (Figure 6, Item 1) and tighten hose clamp (Figure 6, Item 4) securely.

END OF TASK

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) FILTER COVER AND HOUSING REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Install NBC filter (WP 0762).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Close all doors and hatches securely (TM 9-2355-106-10).
5. Turn on HVAC/LSS to verify proper cabin pressure (TM 9-2355-106-10).
6. Turn off HVAC/LSS (TM 9-2355-106-10).
7. Turn engine off (TM 9-2355-106-10).
8. Turn MAIN POWER switch off (TM 9-2355-106-10).
9. Install right side exterior body armor front panel (WP 0633).
10. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) PARTICLE SEPARATOR FILTER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwashers - (3) (WP 0796, Item 168)

References

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Life Support System (LSS) control switch off (TM 9-2355-106-10)
Exterior body armor right front panel removed (WP 0629)
NBC filter removed (WP 0762)
NBC filter cover and housing removed (WP 0763)

WARNING



NBC system maintenance procedures require at least two personnel due to risk of medical emergency from possible exposure to NBC agents. Maintenance must be performed by properly trained, authorized personnel with proper safety equipment and protective clothing. Make sure batteries are disconnected and area is well ventilated. Do not smoke or allow open flame near vehicle. Never operate system with cover or panel removed. Failure to comply may result in serious injury or death to personnel.

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) PARTICLE SEPARATOR FILTER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Loosen two hose clamps (Figure 1, Item 2 and 5).

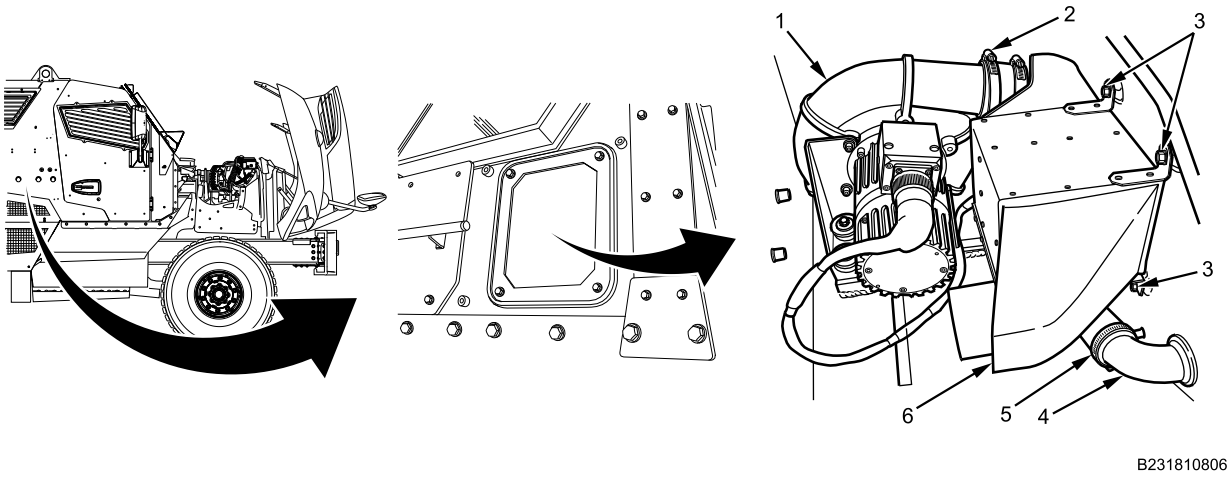


Figure 1. NBC Particle Separator Filter Mounting.

2. Remove three bolts (Figure 1, Item 3), flat washers, and lockwashers from NBC particle separator filter assembly (Figure 1, Item 6). Discard lockwashers.
3. Remove particle separator filter assembly (Figure 1, Item 6) from main blower motor (Figure 1, Item 1) and dust tube (Figure 1, Item 4).

NOTE

Note position and orientation of NBC particle separator filter tubes prior to removal to aid in installation.

4. Remove four hose clamps (Figure 2, Item 2, 3, 5, and 6) from NBC particle separator filter assembly (Figure 2, Item 1).

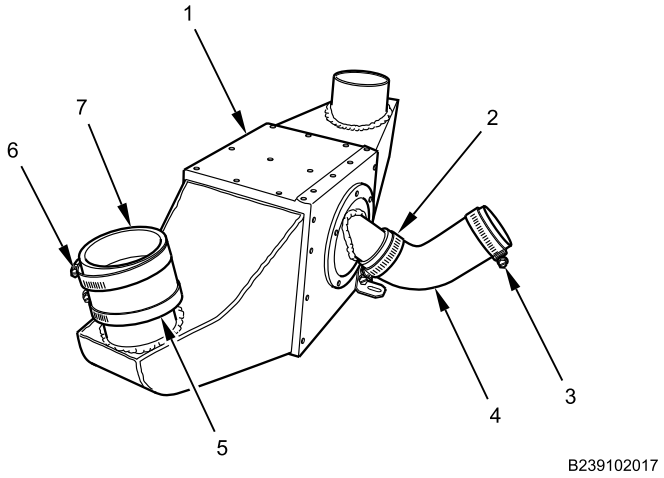


Figure 2. NBC Particle Separator Filter.

5. Remove main blower outlet tube (Figure 2, Item 7) from NBC particle separator filter assembly (Figure 2, Item 1).

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) PARTICLE SEPARATOR FILTER REMOVAL AND INSTALLATION - (CONTINUED)

6. Remove dust outlet tube (Figure 2, Item 4) from NBC particle separator filter assembly (Figure 2, Item 1).

END OF TASK

INSTALLATION

1. Position dust outlet tube (Figure 3, Item 4) on NBC particle separator filter assembly (Figure 3, Item 1) as noted during removal.

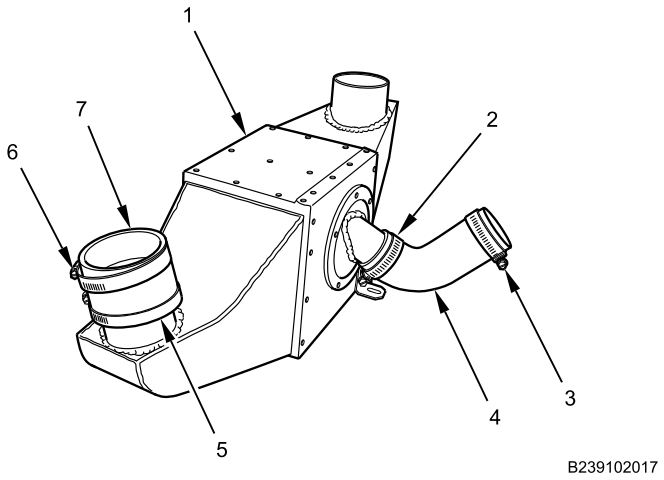


Figure 3. NBC Particle Separator Filter.

2. Position main blower outlet tube (Figure 3, Item 7) on NBC particle separator filter assembly (Figure 3, Item 1) as noted during removal.
3. Install two hose clamps (Figure 3, Item 2 and 5) and tighten securely.
4. Position hose clamp (Figure 3, Item 3) on dust outlet tube (Figure 3, Item 4).
5. Position hose clamp (Figure 3, Item 6) on main blower outlet tube (Figure 3, Item 7).

NUCLEAR, BIOLOGICAL, AND CHEMICAL (NBC) PARTICLE SEPARATOR FILTER REMOVAL AND INSTALLATION - (CONTINUED)

6. Install particle separator filter assembly (Figure 4, Item 6) on main blower motor (Figure 4, Item 1) and dust tube (Figure 4, Item 4) and tighten two hose clamps securely (Figure 4, Item 2 and 5).

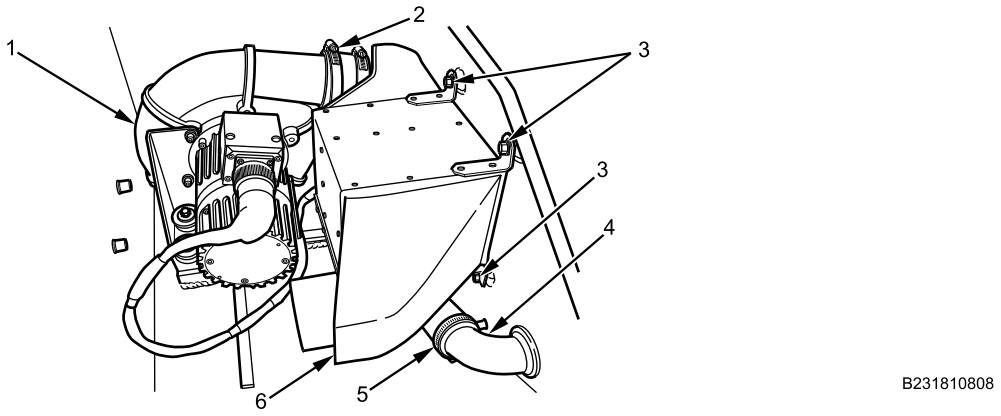


Figure 4. NBC Particle Separator Filter Mounting.

7. Install three bolts (Figure 4, Item 3), flat washers, and new lockwashers on NBC particle separator filter assembly (Figure 4, Item 6) and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install NBC filter cover and housing (WP 0763).
2. Install NBC filter (WP 0762).
3. Turn MAIN POWER switch on (TM 9-2355-106-10).
4. Start engine (TM 9-2355-106-10).
5. Close all doors and hatches securely (TM 9-2355-106-10).
6. Turn on Heating Ventilating and Air Conditioning (HVAC)/LSS to verify proper cabin pressure (TM 9-2355-106-10).
7. Turn off HVAC/LSS (TM 9-2355-106-10).
8. Turn engine off (TM 9-2355-106-10).
9. Turn MAIN POWER switch off (TM 9-2355-106-10).
10. Install right side exterior body armor front panel (WP 0633).
11. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN BLOWER MOTOR AND SUPPORT REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (4) (WP 0796, Item 173)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
LSS control switch off (TM 9-2355-106-10)
Exterior body armor right front panel removed (WP 0629)
Nuclear, Biological, and Chemical (NBC) filter removed (WP 0762)
NBC filter cover and housing removed (WP 0763)
NBC particle separator filter removed (WP 0764)
HVAC/LSS main blower motor wiring harness removed (WP 0778)

REMOVAL

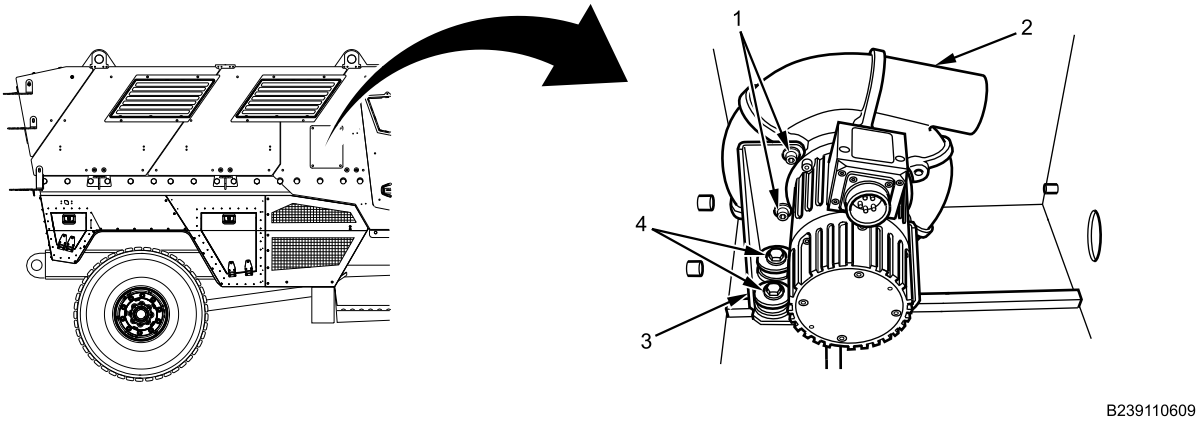


Figure 1. HVAC/LSS Main Blower Motor.

1. Loosen four bolts (Figure 1, Item 4) securing main blower support (Figure 1, Item 3).
2. Remove HVAC/LSS main blower motor (Figure 1, Item 2) and support (Figure 1, Item 3).
3. Remove four Allen head bolts (Figure 1, Item 1), flat washers, and lockwashers from support (Figure 1, Item 3). Discard lockwashers. Two bolts shown.
4. Remove support (Figure 1, Item 3) from HVAC/LSS main blower motor (Figure 1, Item 2).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN BLOWER MOTOR AND SUPPORT REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

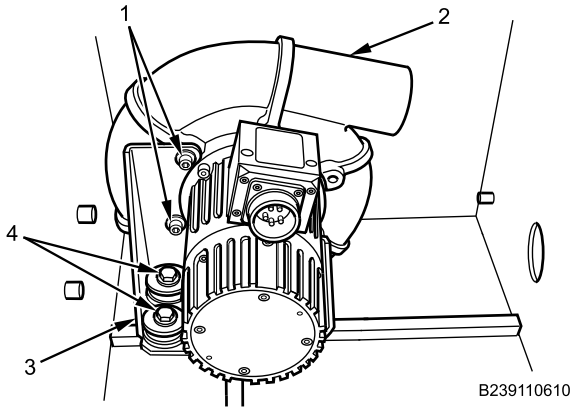


Figure 2. HVAC/LSS Main Blower Motor.

1. Install HVAC/LSS main blower motor (Figure 2, Item 2) on support (Figure 2, Item 3) with four Allen head bolts (Figure 2, Item 1), flat washers, and new lock washers. Tighten bolts securely.
2. Install four bolts (Figure 2, Item 4), eight isolators, and flat washers to main blower support (Figure 2, Item 3).
3. Install HVAC/LSS main blower motor (Figure 2, Item 2) and support (Figure 2, Item 3) into HVAC/LSS housing. Tighten bolts securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC/LSS main blower motor wiring harness (WP 0778).
2. Install NBC particle separator filter (WP 0764).
3. Install NBC filter cover and housing (WP 0763).
4. Install NBC filter (WP 0762).
5. Turn MAIN POWER switch on (TM 9-2355-106-10).
6. Start engine (TM 9-2355-106-10).
7. Close all doors and hatches securely (TM 9-2355-106-10).
8. Turn on HVAC/LSS to verify proper cabin pressure (TM 9-2355-106-10).
9. Turn off HVAC/LSS (TM 9-2355-106-10).
10. Turn engine off (TM 9-2355-106-10).
11. Turn MAIN POWER switch off (TM 9-2355-106-10).
12. Install right side exterior body armor front panel (WP 0629).
13. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER BLOWER REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Refrigeration Ordnance Service Tool Kit (WP 0795, Item 85)

Materials/Parts
Lockwasher - (25) (WP 0796, Item 168)

Personnel Required
Maintainer - (2)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Gunner's platform/stand removed (WP 0668)
HVAC/LSS upper panel removed (WP 0767)
HVAC/LSS diffuser air duct removed (WP 0755)

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER BLOWER REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

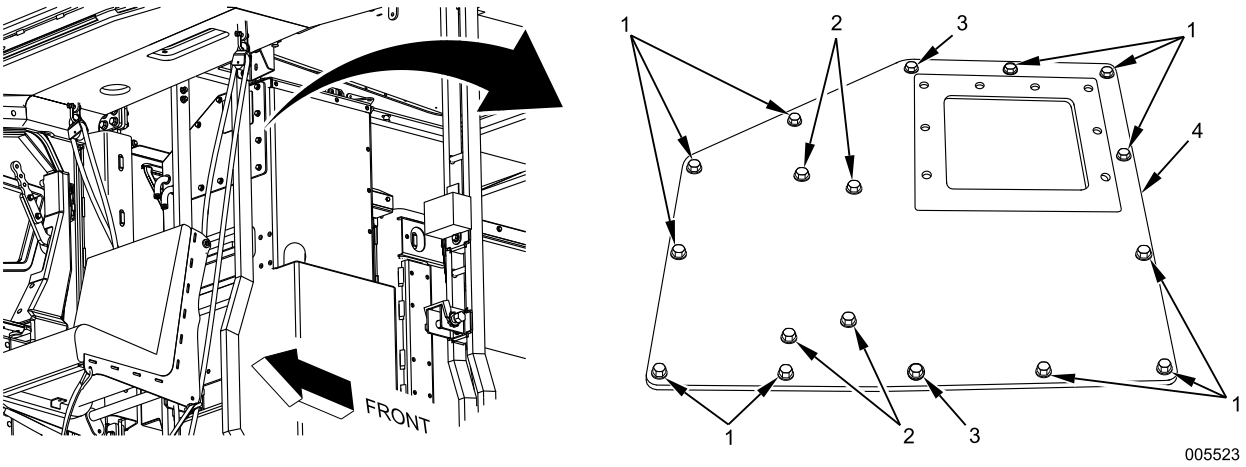


Figure 1. Blower Mounting Panel.

1. Loosen two bolts (Figure 1, Item 3) on blower mounting panel (Figure 1, Item 4).
2. Remove 11 bolts (Figure 1, Item 1), lockwashers, and flat washers from blower mounting panel (Figure 1, Item 4). Discard lockwashers.

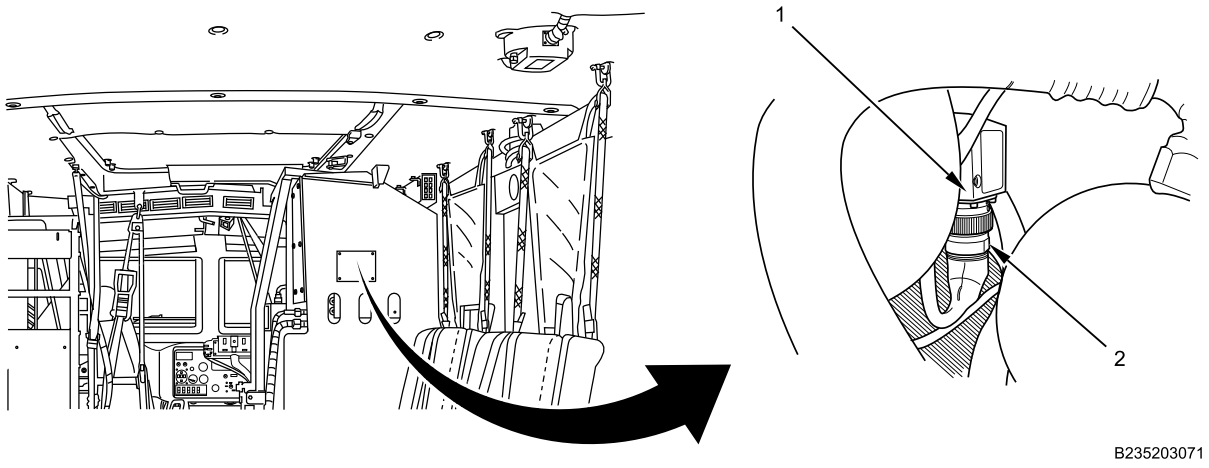


Figure 2. Blower Harness Connector.

CAUTION

Avoid touching heater radiator fins. Failure to comply may result in damage to heater radiator.

3. Disconnect blower motor harness connector (Figure 2, Item 2) from blower motor (Figure 2, Item 1).
4. Loosen four bolts (Figure 2, Item 2) on blower motor mounting panel.
5. With assistant supporting blower assembly, remove six bolts, lockwashers and flat washers (Figure 2, Item 2 and 3) and remove blower mounting panel. Discard lockwashers.
6. Remove blower assembly through blower mounting panel opening.
7. Remove and discard lockwashers from bolts (Figure 2, Item 2) and (Figure 1, Item 1, 2, and 3).

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER BLOWER REMOVAL AND INSTALLATION - (CONTINUED)

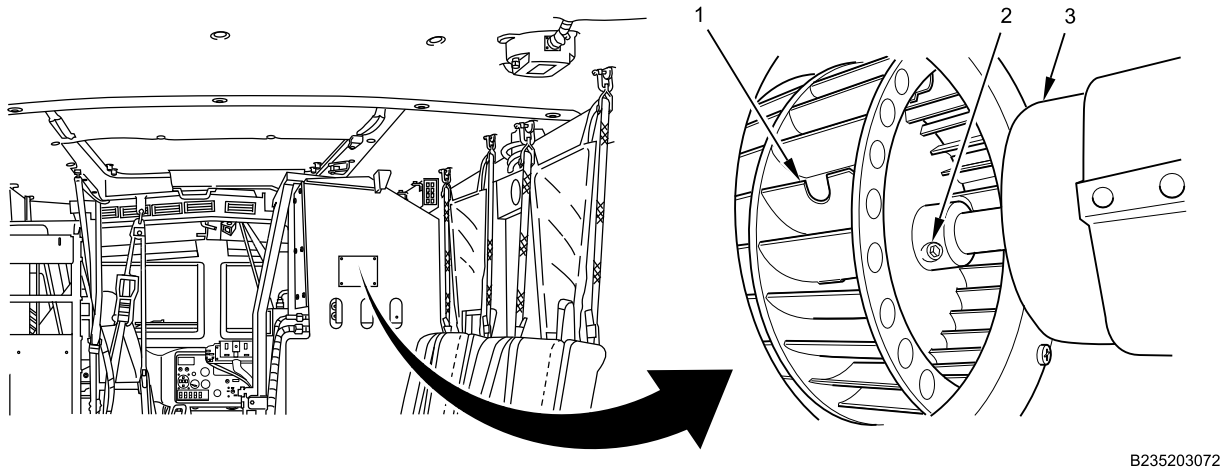


Figure 3. Fan Drive Setscrew.

8. Loosen setscrew (Figure 3, Item 2) and separate fan (Figure 3, Item 1) from blower motor (Figure 3, Item 3).

END OF TASK

INSTALLATION

1. Connect fan (Figure 3, Item 1) to blower motor (Figure 3, Item 3)and tighten setscrew (Figure 3, Item 2) securely.

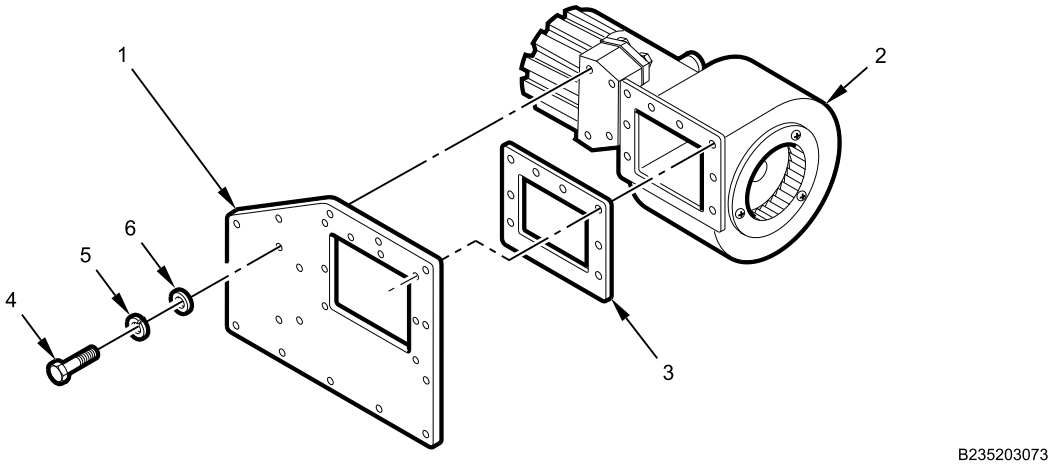


Figure 4. Blower Motor and Mounting Panel.

CAUTION

Avoid touching heater radiator fins. Failure to comply may result in damage to heater radiator.

2. Install blower assembly through blower mounting panel opening.

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER BLOWER REMOVAL AND INSTALLATION - (CONTINUED)

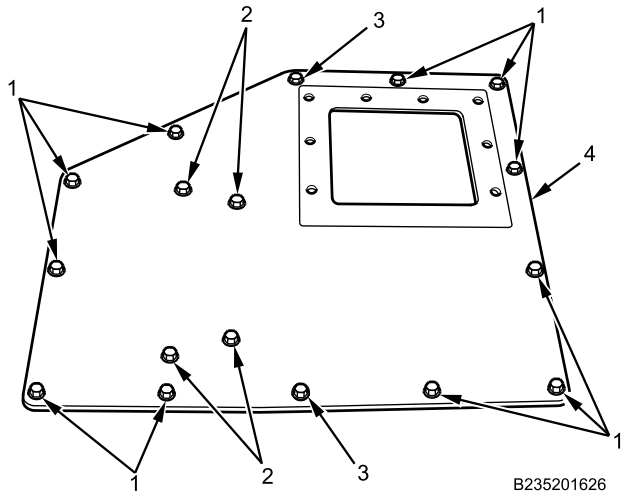


Figure 5. Blower Mounting Panel.

CAUTION

Four bolts (Figure 5, Item 2) are shorter than the rest. Avoid installing long bolts in these locations. Failure to comply may result in damage to components.

3. Loosely install blower mounting panel with two bolts, new lockwashers, and flat washers (Figure 5, Item 3).
4. With assistant supporting blower assembly, loosely install blower motor to mounting plate with four short bolts (Figure 5, Item 2), new lockwashers, and flat washers.

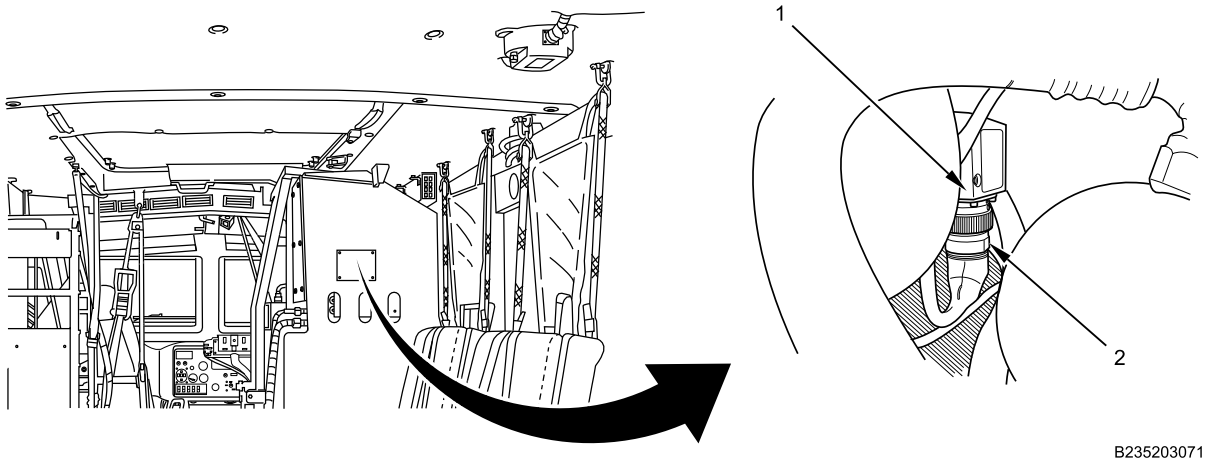


Figure 6. Blower Harness Connector.

5. Connect blower motor harness connector (Figure 6, Item 2) to blower motor (Figure 6, Item 1).
6. Loosely install 11 bolts (Figure 6, Item 1), new lockwashers, and flat washers in blower mounting panel.
7. Tighten bolts (Figure 6, Item 1, 2, and 3) securely.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER BLOWER REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Install diffuser air duct (WP 0755).
2. Install HVAC/LSS upper panel (WP 0767).
3. Install gunner's stand (WP 0668).
4. Turn MAIN POWER switch on (TM 9-2355-106-10).
5. Verify correct blower operation (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER PANEL REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (10) (WP 0796, Item 168)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

REMOVAL

1. Remove 10 bolts (Figure 1, Item 1), lockwashers, and washers and remove HVAC cover panel (Figure 1, Item 2). Discard lockwashers.

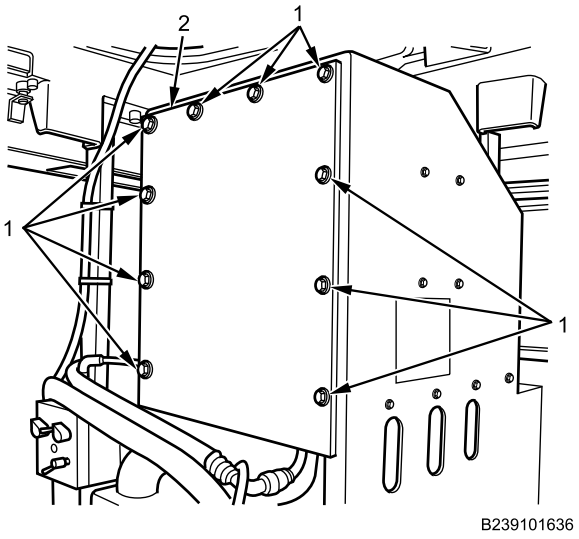


Figure 1. HVAC Cover Panel.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING/LIFE SUPPORT SYSTEM (HVAC/LSS) UPPER PANEL REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install HVAC cover panel (Figure 2, Item 2) with 10 washers, new lockwashers, and bolts (Figure 2, Item 1).

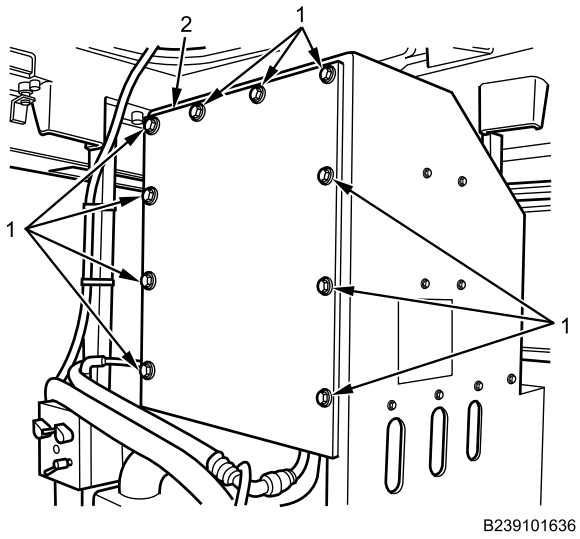


Figure 2. HVAC Cover Panel.

2. Tighten 10 bolts (Figure 2, Item 1) securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECIRCULATED AIR (RA) TEMPERATURE SENSOR REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (2) (WP 0796, Item 168)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
HVAC/LSS upper panel removed (WP 0767)

REMOVAL

1. Disconnect harness connector (Figure 1, Item 2) from RA sensor (Figure 1, Item 1).

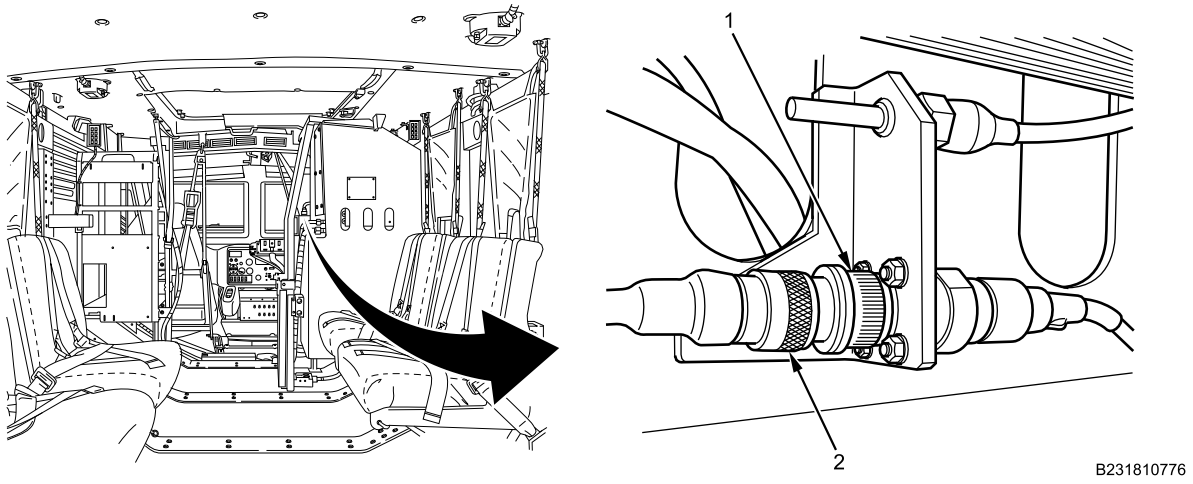


Figure 1. RA Sensor Connector.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECIRCULATED AIR (RA) TEMPERATURE SENSOR REMOVAL AND INSTALLATION - (CONTINUED)

2. Disconnect harness connector (Figure 2, Item 2) from LSS operator panel (Figure 2, Item 1).

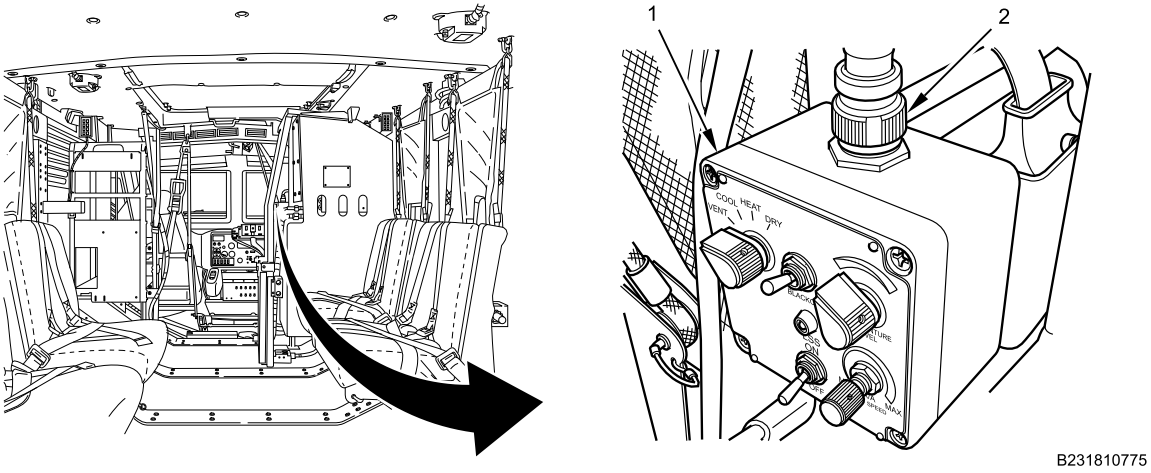


Figure 2. LSS Operator Panel Connector.

3. Remove two bolts (Figure 3, Item 1), lockwashers, flat washers, and clamp from RA sensor. Discard lockwashers.

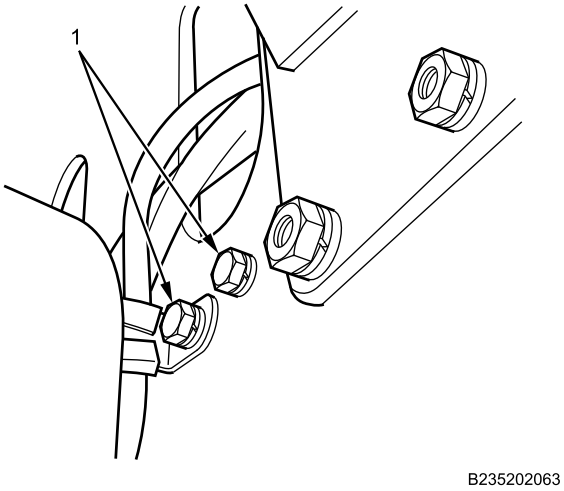


Figure 3. RA Sensor Bolts.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECIRCULATED AIR (RA) TEMPERATURE SENSOR REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Install RA sensor and bracket with two bolts (Figure 4, Item 1), new lockwashers, flat washers, and clamp. Tighten bolts securely.

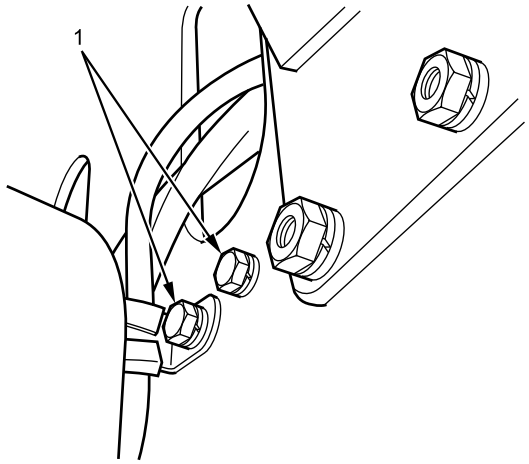


Figure 4. RA Sensor Bolts.

2. Connect harness connector (Figure 5, Item 1).

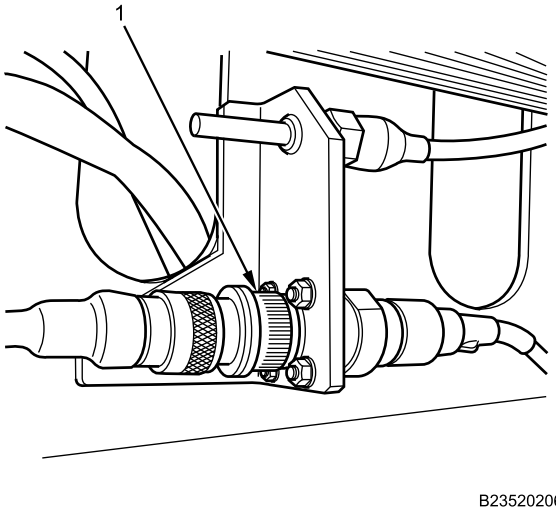


Figure 5. RA Sensor Connector.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RECIRCULATED AIR (RA) TEMPERATURE SENSOR REMOVAL AND INSTALLATION - (CONTINUED)

3. Connect harness connector (Figure 6, Item 2) to LSS operator panel (Figure 6, Item 1).

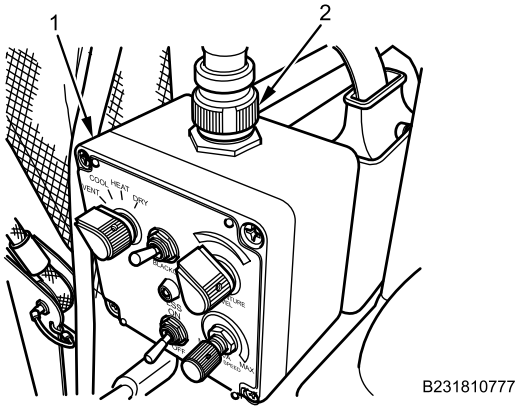


Figure 6. LSS Operator Panel Connector.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC/LSS upper panel (WP 0767).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

CLIMATE CONTROL UNIT (CCU) BOX REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Lockwasher - (4) (WP 0796, Item 168)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine shut off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

REMOVAL

1. Twisting counterclockwise, disconnect Life Support System (LSS) harness connector (Figure 1, Item 4), operating panel harness connector (Figure 1, Item 2), and blower harness connector (Figure 1, Item 3) from top of CCU box (Figure 1, Item 1).

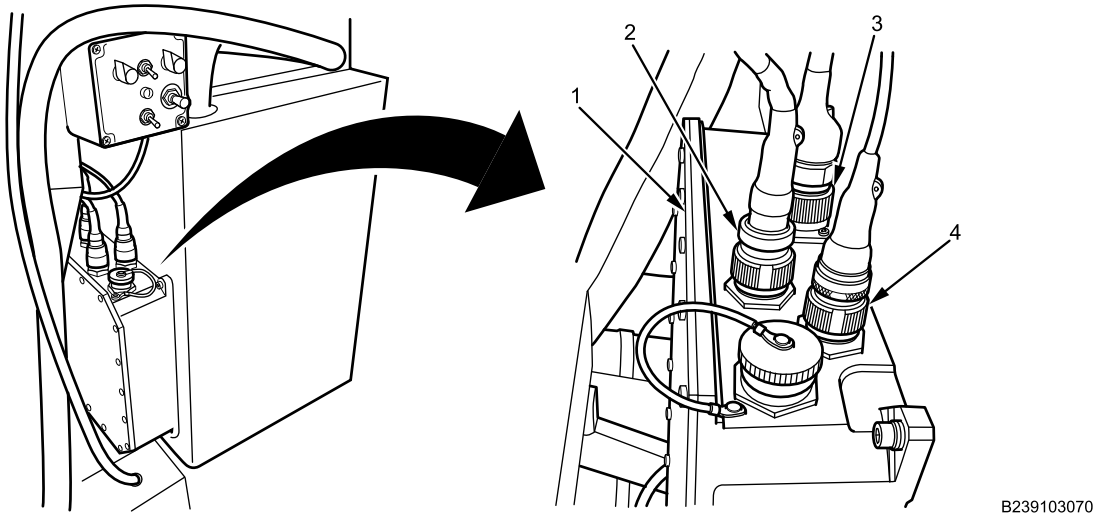


Figure 1. CCU Box Upper Connections.

CLIMATE CONTROL UNIT (CCU) BOX REMOVAL AND INSTALLATION - (CONTINUED)

2. Twisting clockwise, disconnect Heating Ventilating and Air Conditioning (HVAC)/LSS control wiring harness connector (Figure 2, Item 2) and HVAC/LSS control power wiring harness connector (Figure 2, Item 3) from bottom of CCU box (Figure 2, Item 1).

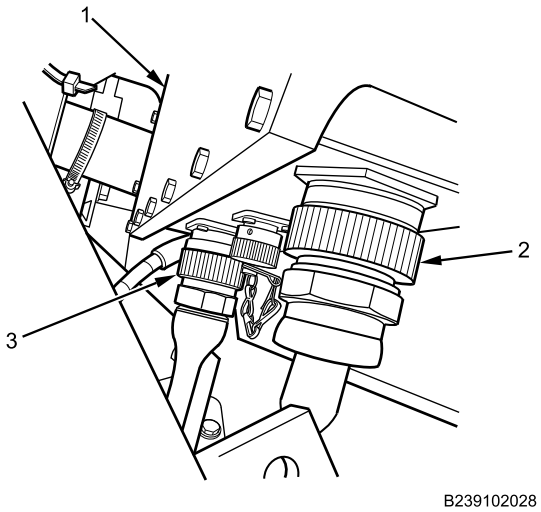


Figure 2. CCU Box Lower Connections.

3. Remove bolt (Figure 3, Item 2), flat washer, and ground wire (Figure 3, Item 3) from bottom of CCU box (Figure 3, Item 1).

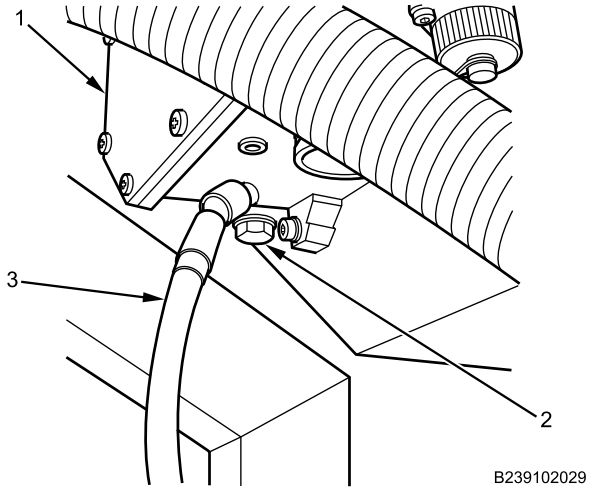


Figure 3. CCU Box Ground.

4. Remove four hex head screws (Figure 4, Item 1), lockwashers, and flat washers from CCU box (Figure 4, Item 2). Discard lockwashers.

CLIMATE CONTROL UNIT (CCU) BOX REMOVAL AND INSTALLATION - (CONTINUED)

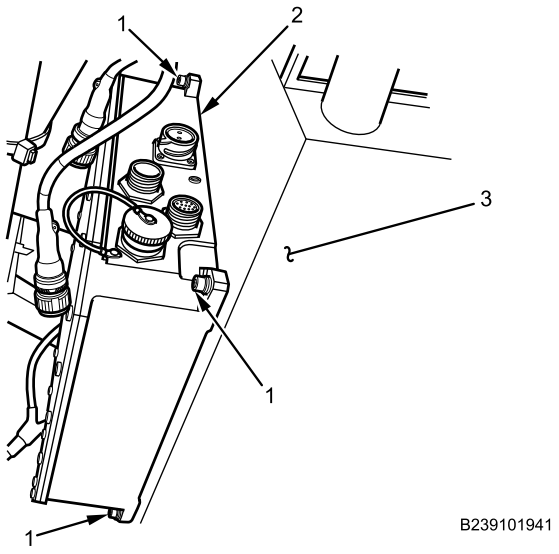


Figure 4. CCU Box Mounting.

5. Position CCU box (Figure 4, Item 2) away from HVAC/LSS box (Figure 4, Item 3).
6. Twisting counterclockwise, remove electrical connector (Figure 5, Item 3) from side of CCU box (Figure 5, Item 1).

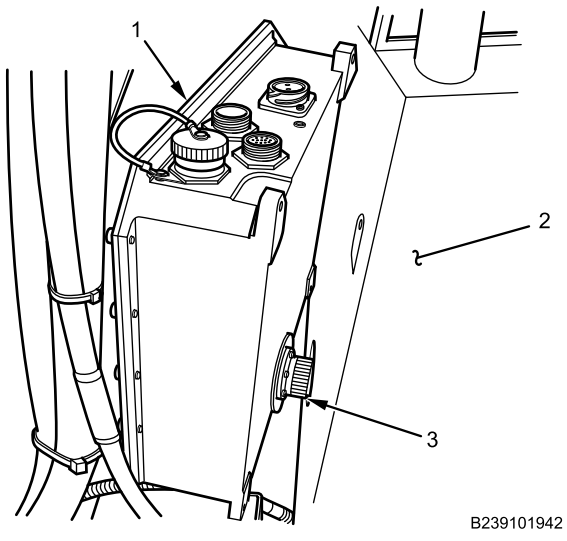


Figure 5. CCU Box Side Connector.

7. Remove CCU box (Figure 5, Item 1) from HVAC/LSS box (Figure 5, Item 2).

END OF TASK

CLIMATE CONTROL UNIT (CCU) BOX REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

1. Position CCU box (Figure 6, Item 1) in front of HVAC/LSS box (Figure 6, Item 2).

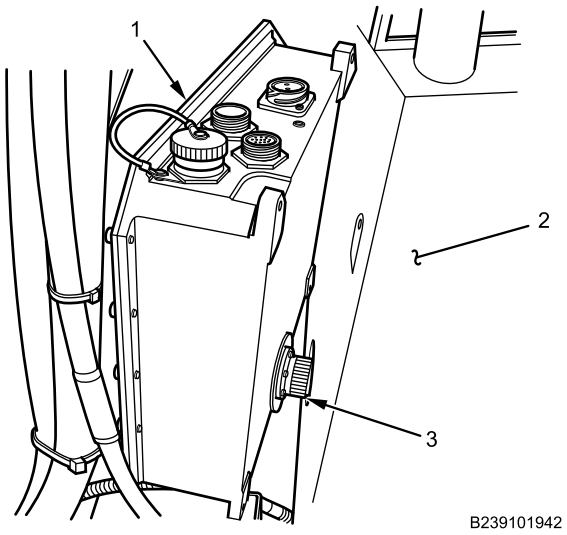


Figure 6. CCU Box Side Connector.

2. Connect electrical connector (Figure 6, Item 3) on side of CCU box (Figure 6, Item 1) by twisting connector clockwise until secure.
3. Install CCU box (Figure 7, Item 2) on HVAC/LSS box (Figure 7, Item 3) with four bolts (Figure 7, Item 1), flat washers, and new lockwashers, and tighten securely.

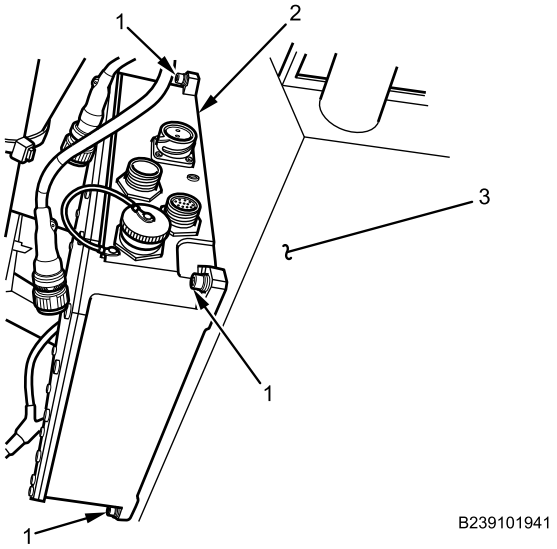


Figure 7. CCU Box Mounting.

4. Connect HVAC/LSS control in wiring harness connector (Figure 8, Item 2) and HVAC/LSS control power wiring harness connector (Figure 8, Item 3) on bottom of CCU box (Figure 8, Item 1) by twisting clockwise until secure.

CLIMATE CONTROL UNIT (CCU) BOX REMOVAL AND INSTALLATION - (CONTINUED)

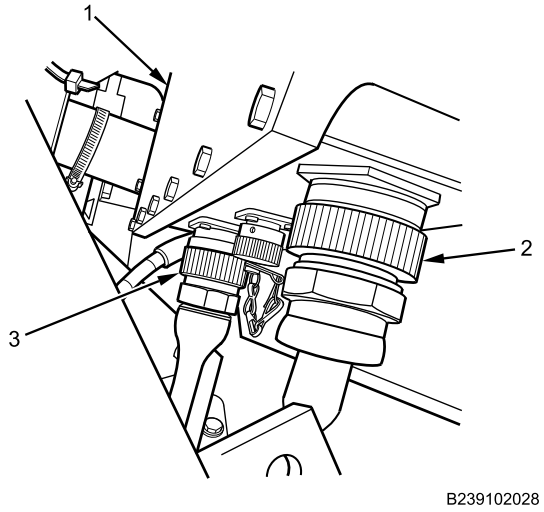


Figure 8. CCU Box Lower Connections.

5. Install ground wire (Figure 9, Item 3) on CCU box (Figure 9, Item 1) with bolt (Figure 9, Item 2) and flat washer, and tighten securely.

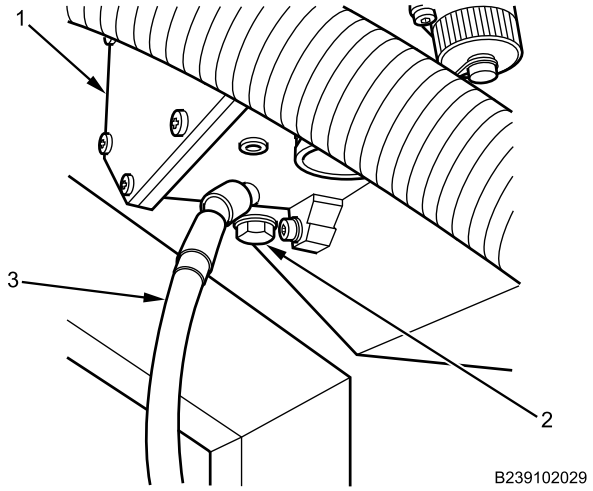


Figure 9. CCU Box Ground.

CLIMATE CONTROL UNIT (CCU) BOX REMOVAL AND INSTALLATION - (CONTINUED)

6. Connect LSS harness connector (Figure 10, Item 4), operating panel harness connector (Figure 10, Item 2), and blower harness connector (Figure 10, Item 3) on CCU box (Figure 10, Item 1) by twisting clockwise until secure.

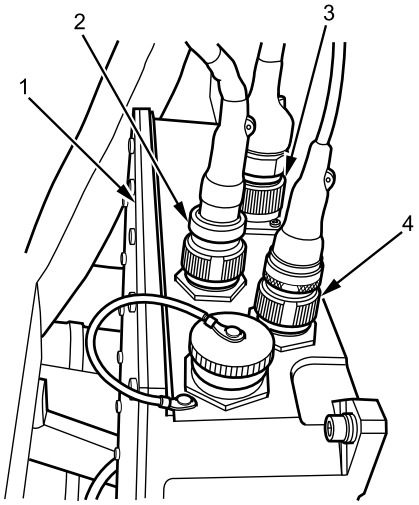


Figure 10. CCU Box Upper Connections.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Close all doors and hatches securely (TM 9-2355-106-10).
4. Turn on HVAC/LSS to verify proper operation (TM 9-2355-106-10).
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OPERATOR PANEL REMOVAL AND INSTALLATION

INITIAL SETUP:

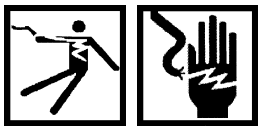
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

NOTE

Note routing of wiring harness for proper installation.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OPERATOR PANEL REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

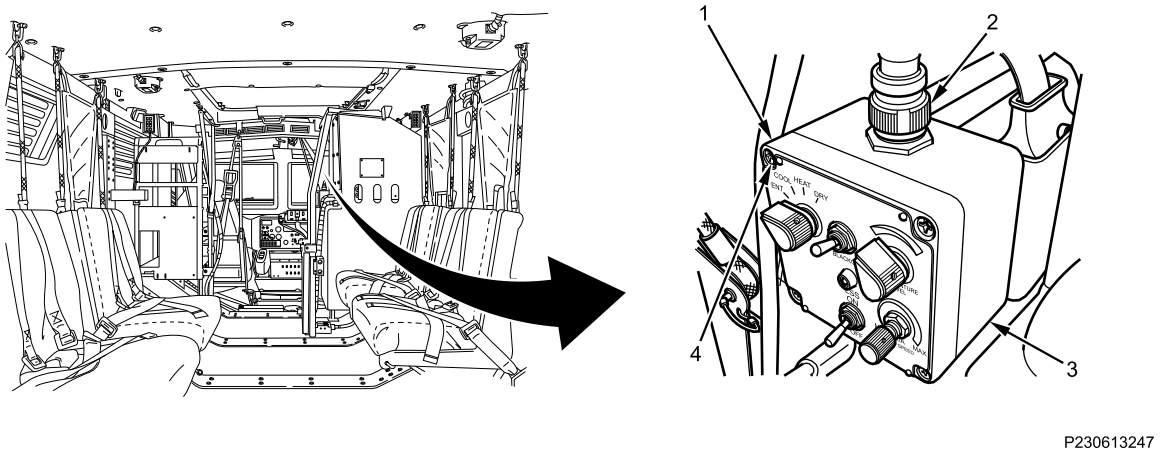


Figure 1. LSS Operator Panel.

1. Remove LSS operator panel wiring harness connector from LSS operator panel housing (Figure 1, Item 3) by turning connector collar (Figure 1, Item 2) counterclockwise.
2. Loosen four screws (Figure 1, Item 4) in LSS operator panel (Figure 1, Item 1) until they disengage from the LSS operator panel housing (Figure 1, Item 3).
3. Position LSS operator panel (Figure 1, Item 1) away from LSS operator panel housing (Figure 1, Item 3).

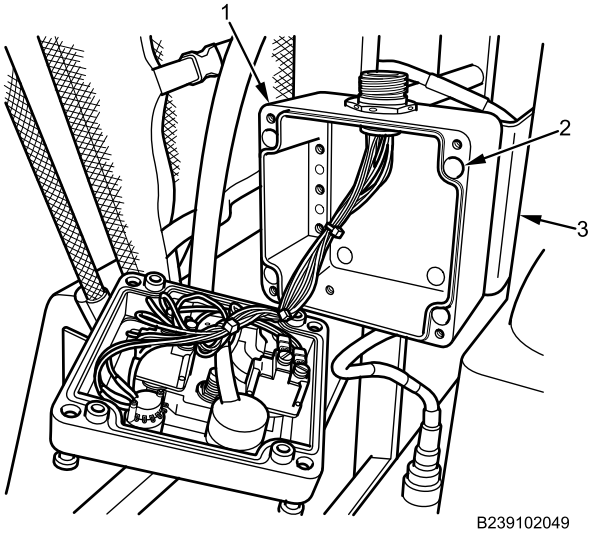


Figure 2. LSS Operator Panel Housing.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OPERATOR PANEL REMOVAL AND INSTALLATION - (CONTINUED)

4. Remove four bolts (Figure 2, Item 2) from LSS operator panel housing (Figure 2, Item 1). Bolts hidden from view.
5. Remove LSS operator panel housing (Figure 2, Item 1) from bracket (Figure 2, Item 3).

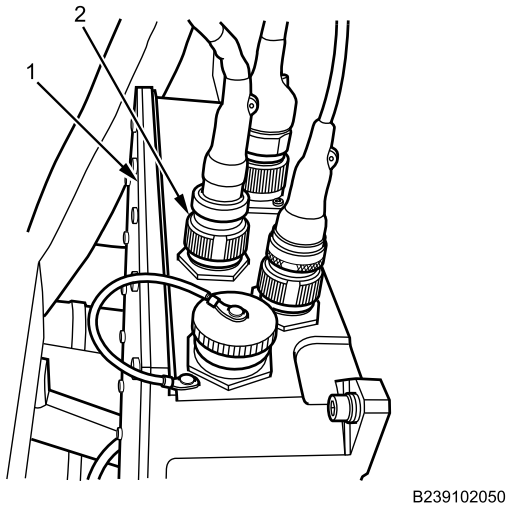


Figure 3. LSS Operator Panel Wiring Harness.

6. Remove LSS operator panel wiring harness connector (Figure 3, Item 2) from Climate Control Unit (CCU) box (Figure 3, Item 1) by turning connector collar counterclockwise.
7. Remove LSS operator panel wiring harness from CCU box (Figure 3, Item 1).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OPERATOR PANEL REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical contacts before installation.

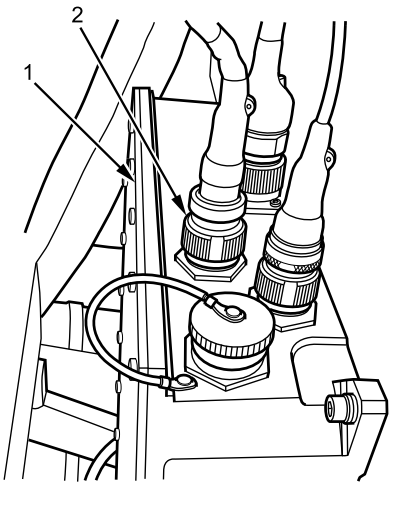


Figure 4. LSS Operator Panel Wiring Harness.

1. Install LSS operator panel wiring harness connector (Figure 4, Item 2) on CCU box (Figure 4, Item 1) by turning connector collar clockwise. Tighten collar securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OPERATOR PANEL REMOVAL AND INSTALLATION - (CONTINUED)

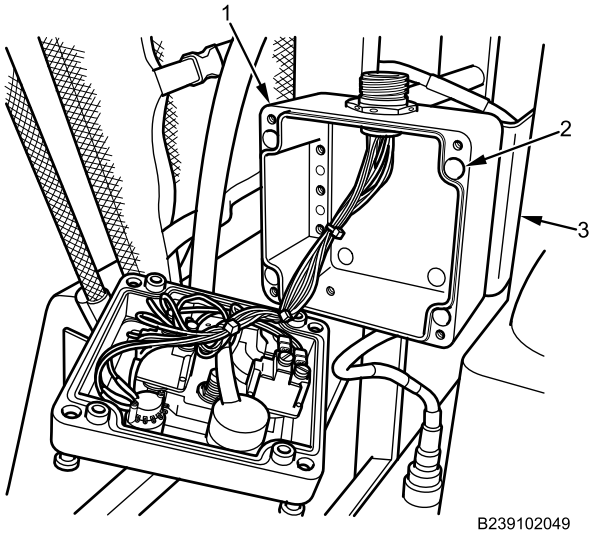


Figure 5. LSS Operator Panel Housing.

2. Install LSS operator panel housing (Figure 5, Item 1) on bracket (Figure 5, Item 3) with four bolts (Figure 5, Item 2) and tighten securely. Bolts hidden from view.

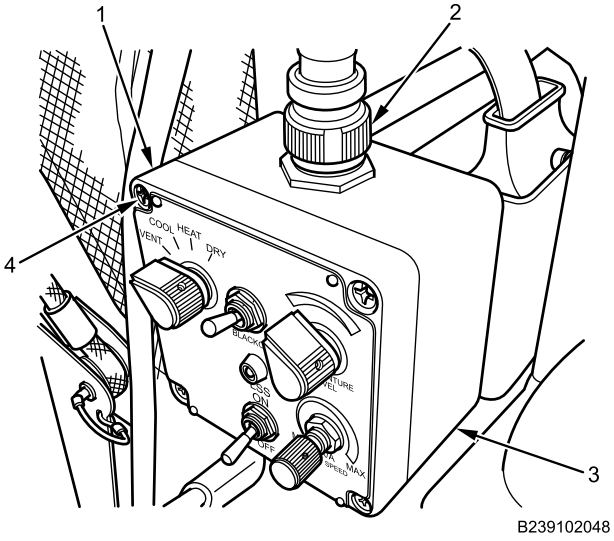


Figure 6. LSS Operator Panel.

3. Install LSS operator panel (Figure 6, Item 1) on LSS operator panel housing (Figure 6, Item 3) with four screws (Figure 6, Item 4). Tighten screws securely.
4. Install LSS operator panel wiring harness connector (Figure 6, Item 2) on LSS operator panel housing (Figure 6, Item 3) by turning connector collar clockwise. Tighten collar securely.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) OPERATOR PANEL REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
4. Turn off HVAC/LSS (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LOW PRESSURE SWITCH REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Gloves (WP 0795, Item 38)

Materials/Parts
Grease (WP 0794, Item 22)
Goggles, industrial (WP 0794, Item 20)
Face shield, industrial (WP 0794, Item 16)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
HVAC system recovered (WP 0707)

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LOW PRESSURE SWITCH REMOVAL AND INSTALLATION - (CONTINUED)

WARNING



Do not install or remove air-conditioning testing or charging equipment while engine is running. Wait 30 seconds after engine shutdown to allow high side and low side pressures to equalize. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

The temperature of liquid refrigerant is -20°F (-29°C). Wear full face shield, protective rubberized gloves, and protective clothing when working with refrigerant. If refrigerant contacts skin, remove all contaminated clothing. Treat skin as though it were frostbitten or frozen and seek immediate medical attention. If refrigerant contacts eyes, do not rub them. Flush eyes with cold water for at least 15 minutes to gradually increase temperature above freezing point. Seek immediate medical attention. Failure to comply may result in serious injury or death to personnel.

Do not expose refrigerant containers, empty or full, to open flames or temperatures above 125°F (52°C). Do not discard empty containers where they may be subject to heat from a trash burner; conRefrigerant becomes a poisonous gas in the presence of heat. Do not smoke or allow any type of flame in immediate area while servicing air conditioning system. Never weld, solder, steam clean, or use excessive heat on any part of the air conditioning system while charged/pressurized. Failure to comply may result in damage to equipment and serious injury or death to personnel.tainers may explode. Failure to comply may result in damage to equipment and serious injury or death to personnel.

R-134a refrigerant must not be mixed with air and then pressurized. When mixed with large quantities of air and pressurized, R-134a becomes combustible. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Refrigerant evaporates very quickly and may displace oxygen surrounding work area, especially in a small or enclosed area. This can cause suffocation or brain damage. If leak occurs, avoid breathing refrigerant vapor and thoroughly ventilate area before continuing service. If personnel breathe refrigerant vapors, obtain immediate medical assistance. Failure to comply may result in serious injury or death to personnel.

Federal and state laws require that refrigerant be recovered and recycled. Refrigerant must be recovered from system with authorized recommended equipment before any work can be performed on unit. Always use approved recycling equipment to prevent accidental discharge. Failure to comply may result in damage to equipment and environment, and serious injury or death to personnel.

Do not check compressor oil level when HVAC system is charged with refrigerant. Never open the high side hand valve of the manifold gauge set while HVAC system is operating. If hot, high pressure refrigerant is forced through gauge to refrigerant supply cylinder, which could rupture. Do not disconnect HVAC lines from compressor. Release of refrigerant may cause damage to equipment or environment and serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LOW PRESSURE SWITCH REMOVAL AND INSTALLATION - (CONTINUED)

Do not use parts other than those specified for the system being serviced. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Accidental or intentional introduction of liquid contaminants into the environment is a violation of state, federal, and military regulations. Store, install, and dispose of containers in accordance with standard operating procedures. Refer to Army Petroleum, Oil, and Lubricants (POL) (para. 1-8) for information concerning storage, use, and disposal of liquid contaminants. Failure to comply may result in damage to environment and serious injury or death to personnel.

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

CAUTION

To prevent damage to test equipment, make sure test equipment is clear of all moving parts in the engine compartment. Failure to comply may result in damage to equipment.

REMOVAL

1. Disconnect electrical connectors (Figure 1, Item 2) from engine harness (Figure 1, Item 1).

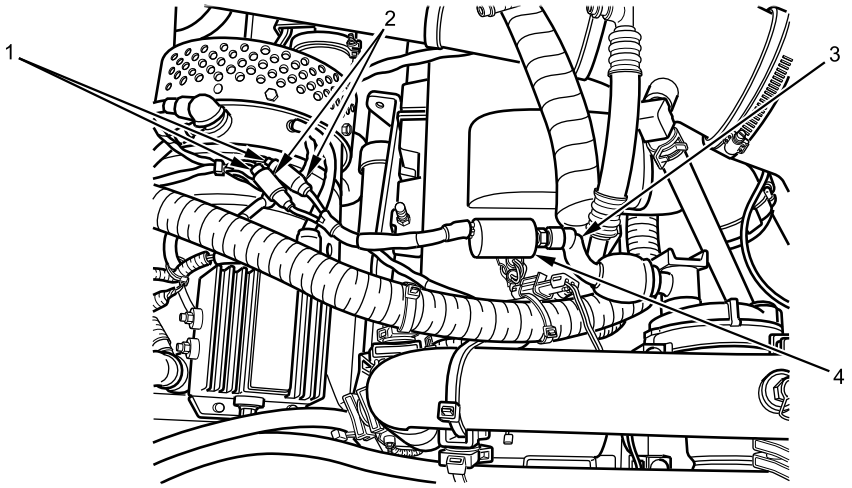


Figure 1. HVAC Low Pressure Switch.

2. Remove switch (Figure 1, Item 4) from HVAC line (Figure 1, Item 3).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LOW PRESSURE SWITCH REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Ensure HVAC line (Figure 2, Item 3) and switch (Figure 2, Item 4) are clean and dry.

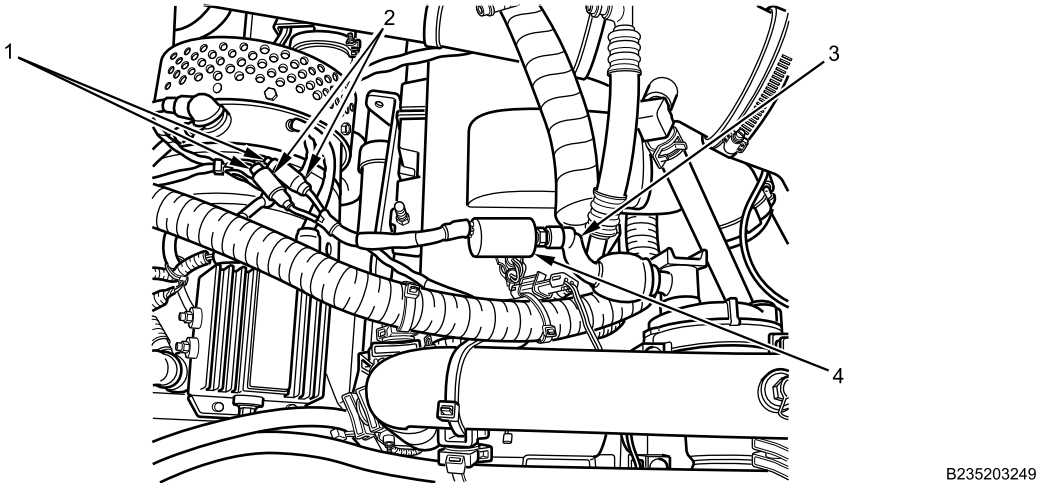


Figure 2. HVAC Low Pressure Switch.

2. Install switch (Figure 2, Item 4) on HVAC line (Figure 2, Item 3). Tighten securely.
3. Connect electrical connectors (Figure 2, Item 2) to engine harness (Figure 2, Item 1).

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LOW PRESSURE SWITCH REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Recharge HVAC system (WP 0707).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Verify HVAC system operation (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

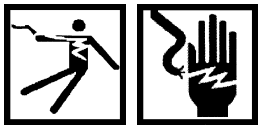
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Wire (WP 0794, Item 57)
Cable lock strap - (4) (WP 0796, Item 134)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Air Conditioning A/C condenser panel removed (WP 0672)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Disconnect harness connector (Figure 1, Item 1) from condenser (Figure 1, Item 2).

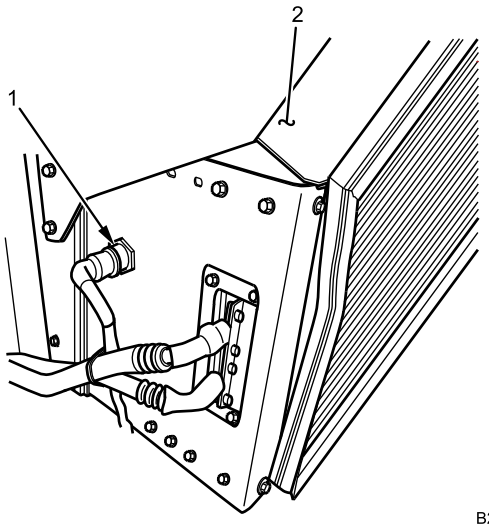


Figure 1. Left Condenser.

2. Disconnect harness connections (Figure 2, Item 2) from left side condenser wiring harness (Figure 2, Item 1) at engine compartment.

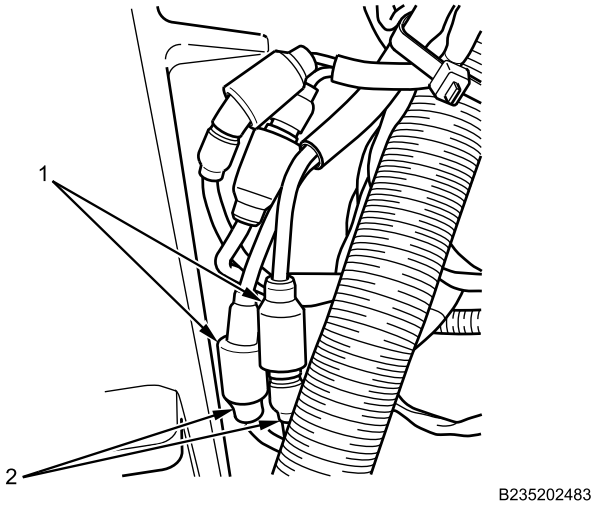


Figure 2. Left Condenser Harness Connectors.

3. Connect mechanic's wire securely to harness in engine area.
4. Pull harness and mechanic's wire to condenser.
5. Disconnect mechanic's wire from harness.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Connect mechanic's wire securely to end of engine harness at condenser.
2. Pull mechanic's wire and harness to engine compartment. Disconnect mechanic's wire from harness.
3. Connect harness connector (Figure 3, Item 1) to condenser (Figure 3, Item 2).

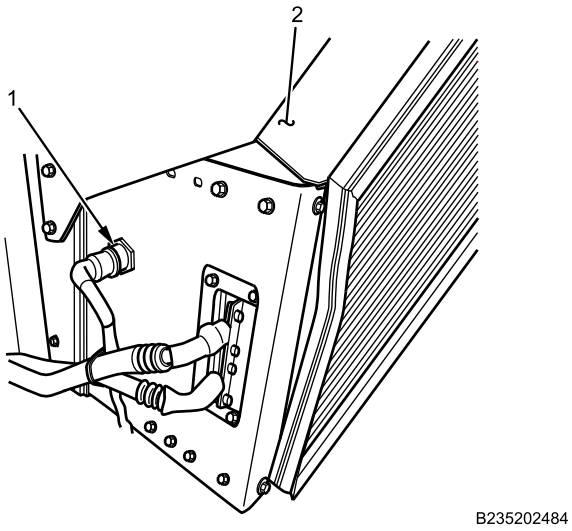


Figure 3. Left Condenser.

4. Connect harness connectors (Figure 4, Item 2) to left side condenser wiring harness connector (Figure 4, Item 1) at engine compartment.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) LEFT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

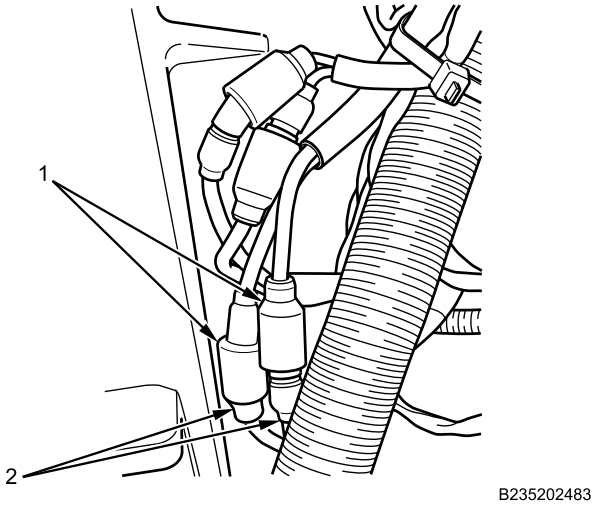


Figure 4. Left Condenser Harness Connectors.

5. Install new cable lock straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
4. Turn off HVAC/LSS (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Install Air Conditioning A/C condenser panel (WP 0672).
8. Close engine hood (TM 9-2355-106-10).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

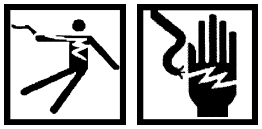
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Wire (WP 0794, Item 57)
Cable lock strap - (6) (WP 0796, Item 134)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Air Conditioning A/C condenser panel removed (WP 0672)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Disconnect harness connector (Figure 1, Item 1) from condenser (Figure 1, Item 2).

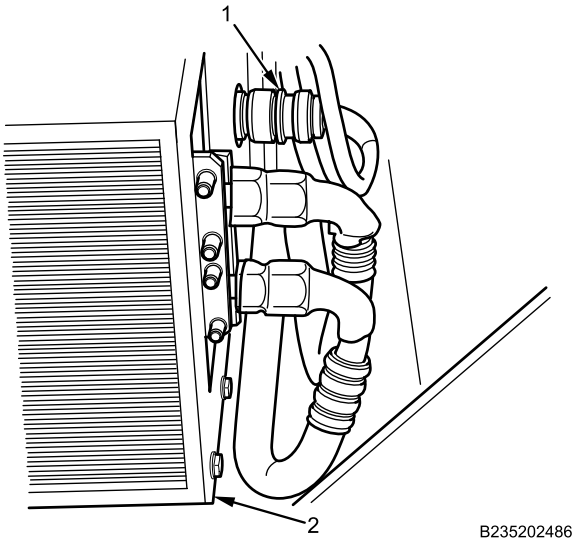


Figure 1. Right Condenser.

2. Connect mechanic's wire to harness connector (Figure 1, Item 1).
3. Disconnect harness connections (Figure 2, Item 2) at engine compartment from right side condenser wiring harness connectors (Figure 2, Item 1).

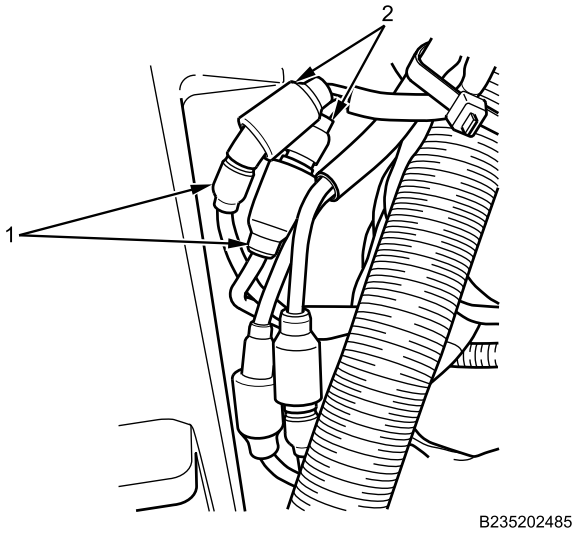


Figure 2. Right Condenser Harness Connectors.

4. Pull harness and mechanic's wire to engine compartment.
5. Disconnect mechanic's wire from harness.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical contacts before installation.

1. Connect mechanic's wire securely to condenser end of harness at engine compartment.
2. Pull mechanic's wire and harness to condenser. Disconnect mechanic's wire from harness.
3. Connect harness connector (Figure 3, Item 1) to condenser (Figure 3, Item 2).

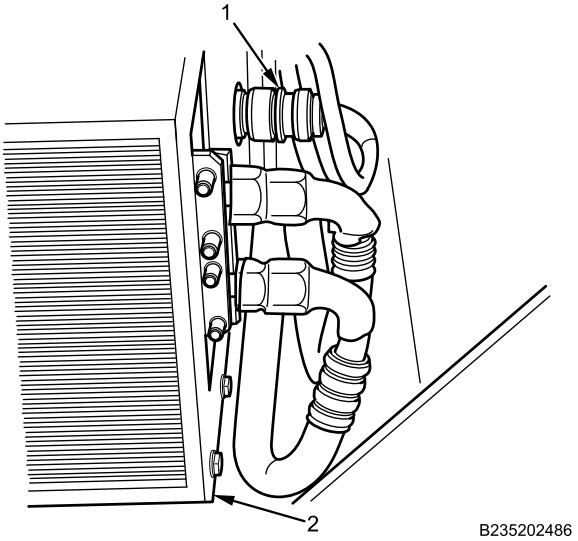


Figure 3. Right Condenser.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) RIGHT CONDENSER CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

4. Connect harness connectors (Figure 4, Item 2) to right side condenser wiring harness connectors (Figure 4, Item 1) at engine compartment.

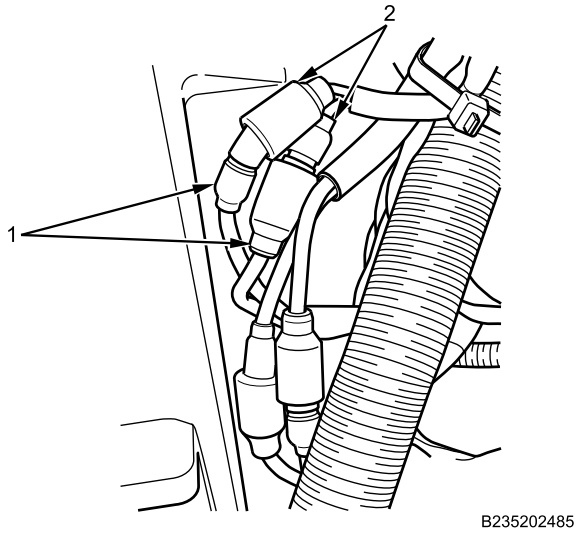


Figure 4. Right Condenser Harness Connectors.

5. Install new cable lock straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
4. Turn off HVAC/LSS (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Install Air Conditioning A/C condenser panel (WP 0672).
8. Close engine hood (TM 9-2355-106-10).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

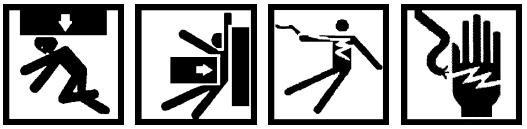
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
O-ring (WP 0796, Item 34)
Cable lock strap - (4) (WP 0796, Item 134)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Right door open and secured (WP 0608)

WARNING



Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Disconnect interior harness connector (Figure 1, Item 2) from HVAC/LSS engine wiring harness (Figure 1, Item 3) at penetration dust plate (Figure 1, Item 1).

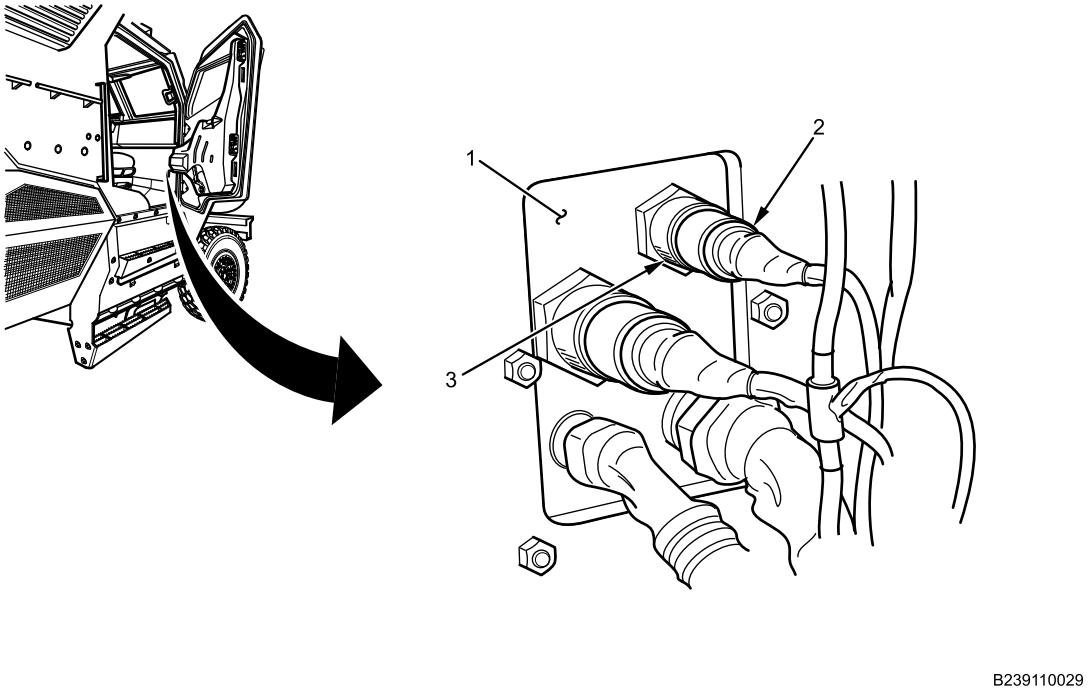


Figure 1. Interior Penetration Plate.

2. Remove nut (Figure 2, Item 1) from HVAC/LSS engine wiring harness (Figure 2, Item 2) at penetration dust plate (Figure 2, Item 3).

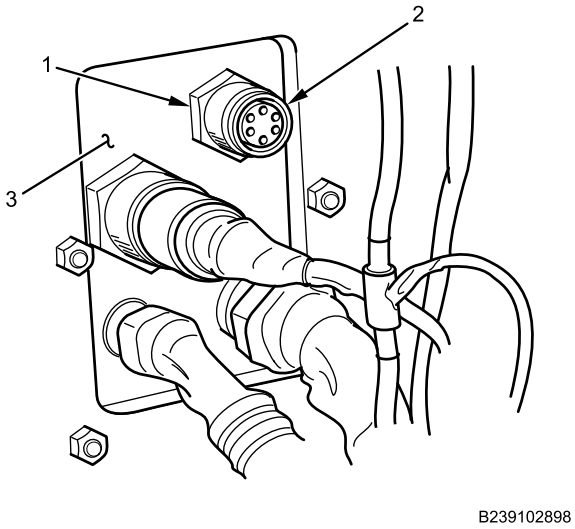


Figure 2. Interior HVAC/LSS Wiring Harness.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

3. Remove HVAC/LSS wiring harness (Figure 3, Item 1) from penetration dust plate (Figure 3, Item 2).

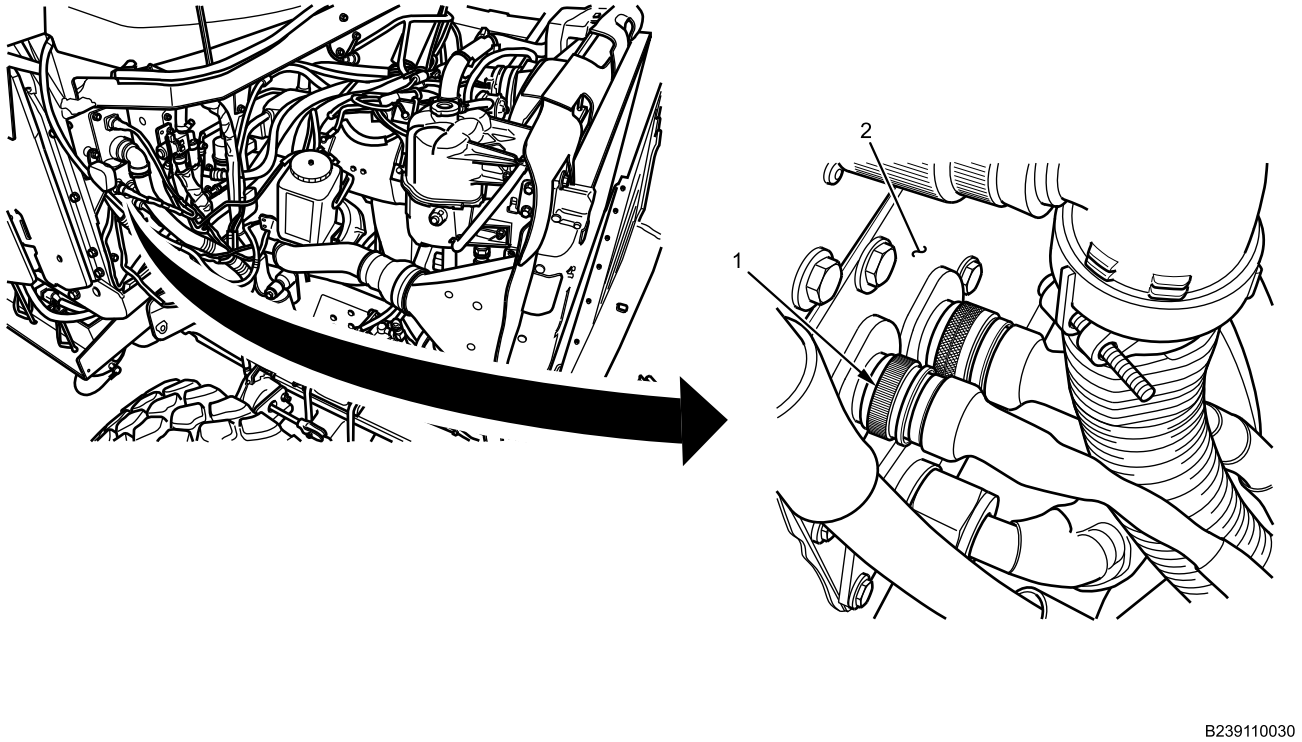


Figure 3. Penetration Plate.

4. Remove O-ring (Figure 4, Item 1) from HVAC/LSS engine wiring harness (Figure 4, Item 2). Discard O-ring.

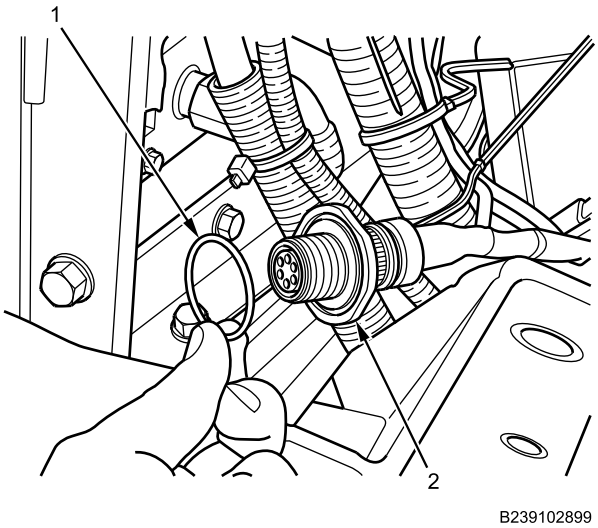


Figure 4. HVAC/LSS Engine Harness O-Ring.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

5. Disconnect harness connectors (Figure 5, Item 1) at 3-way valve.

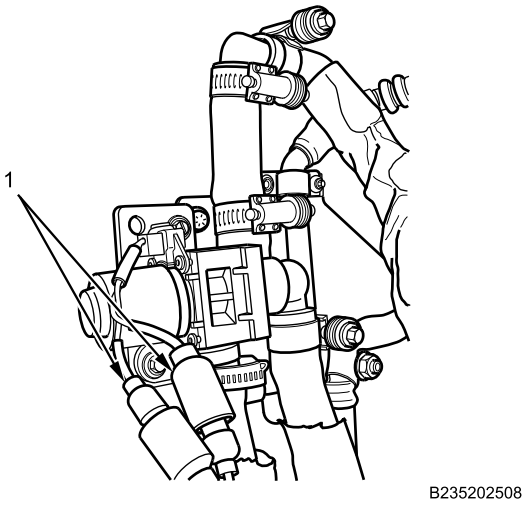


Figure 5. 3-Way Valve.

6. Disconnect high idle request circuit harness connector (Figure 6, Item 1).

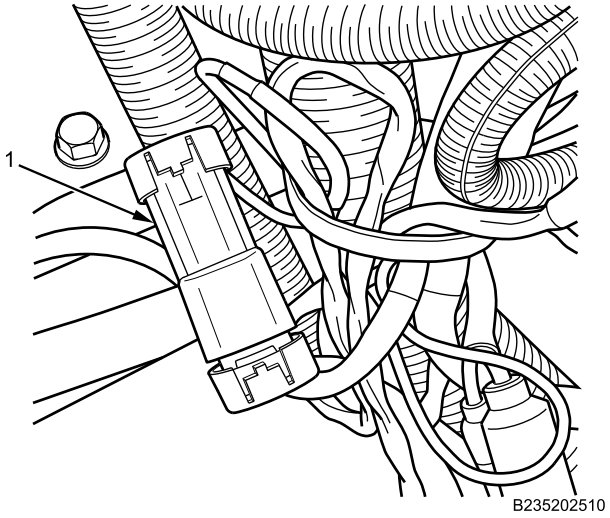


Figure 6. High Idle Request Circuit Connector.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

7. Disconnect harness connectors (Figure 7, Item 1) at low pressure switch.

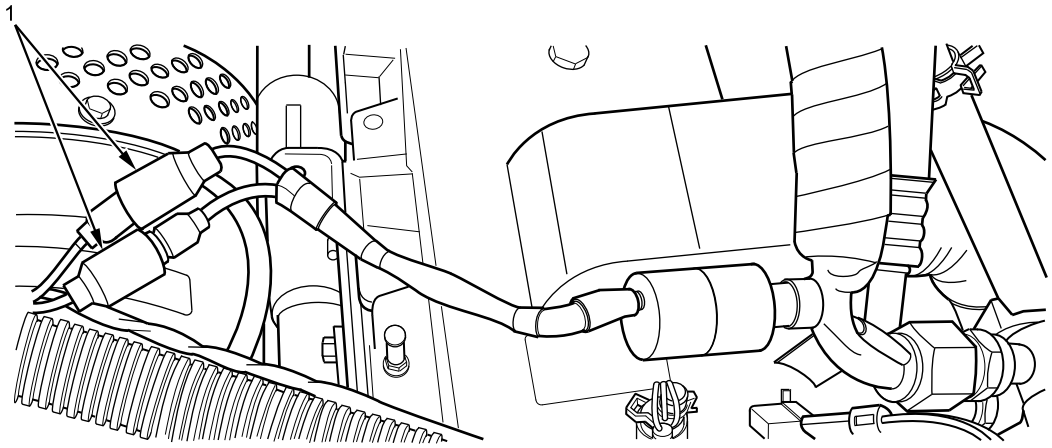


Figure 7. Low Pressure Switch Connector.

8. Remove LSS engine wiring harness from vehicle.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Install LSS engine wiring harness on vehicle.

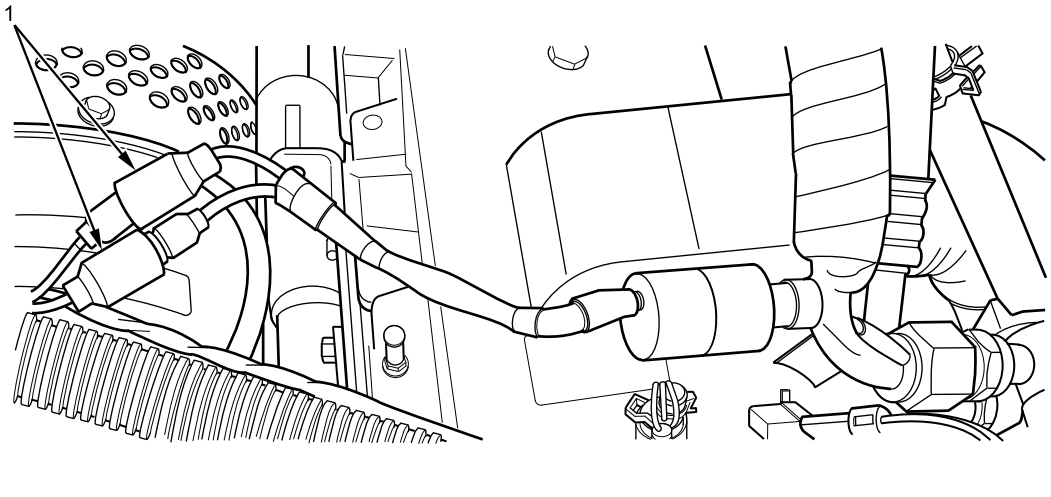


Figure 8. Low Pressure Switch Connector.

2. Connect harness connectors (Figure 8, Item 1) at low pressure switch.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

3. Connect high idle request circuit harness connector (Figure 9, Item 1).

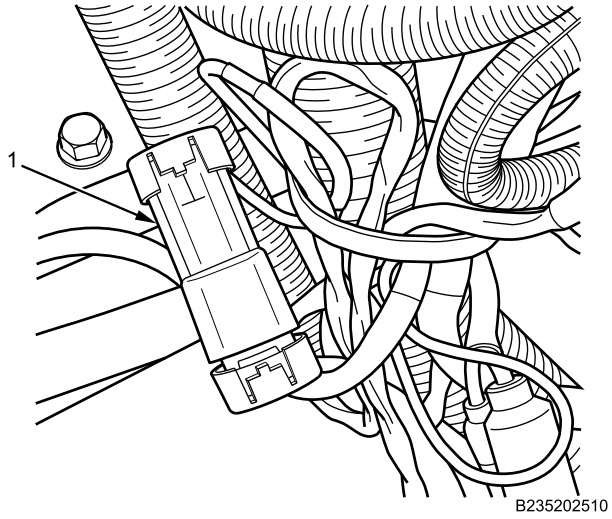


Figure 9. High Idle Request Circuit Connector.

4. Connect harness connectors (Figure 10, Item 1) at 3-way valve.

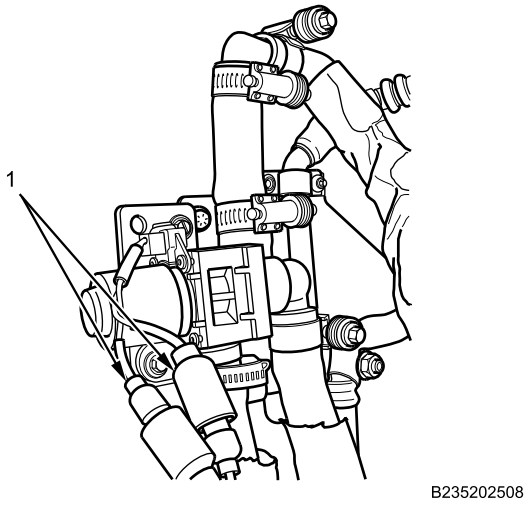


Figure 10. 3-Way Valve.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

5. Install new O-ring (Figure 11, Item 1) on HVAC/LSS engine harness connector (Figure 11, Item 2).

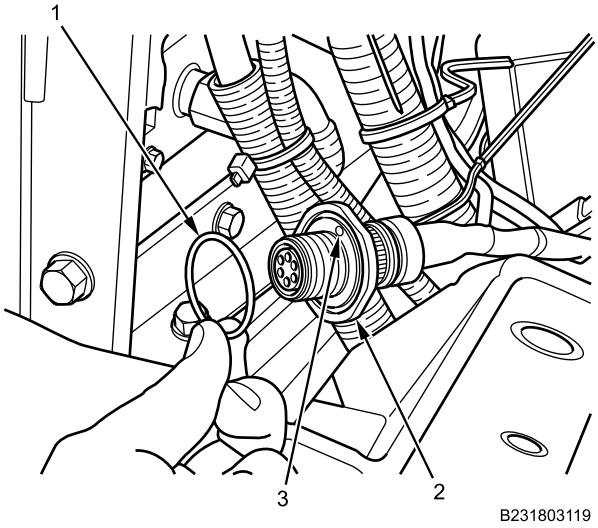


Figure 11. HVAC/LSS Engine Harness O-Ring.

6. Align locator pin (Figure 11, Item 3) on HVAC/LSS engine harness connector (Figure 12, Item 1) with hole in penetration dust plate (Figure 12, Item 2) and connect.

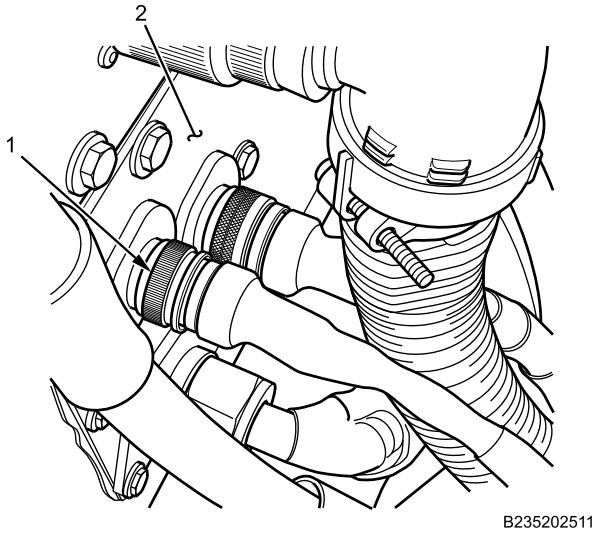


Figure 12. Penetration Plate.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

7. Install nut (Figure 13, Item 1) on HVAC/LSS engine harness connector (Figure 13, Item 2) at penetration dust plate (Figure 13, Item 3). Tighten nut securely.

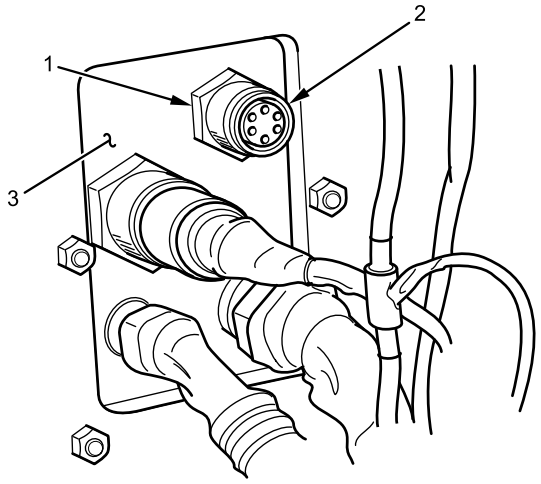


Figure 13. Interior HVAC/LSS Wiring Harness.

8. Install interior harness connector (Figure 14, Item 2) to HVAC/LSS engine wiring harness (Figure 14, Item 3) at penetration dust plate (Figure 14, Item 1).

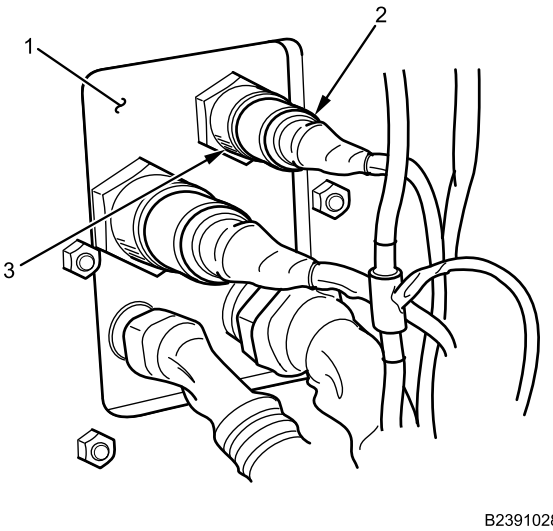


Figure 14. Interior Penetration Plate.

9. Install new cable lock straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) ENGINE WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

3. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
4. Turn off HVAC/LSS (TM 9-2355-106-10).
5. Turn engine off (TM 9-2355-106-10).
6. Turn MAIN POWER switch off (TM 9-2355-106-10).
7. Close and secure right door (WP 0608).
8. Close engine hood (TM 9-2355-106-10).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL INPUT WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

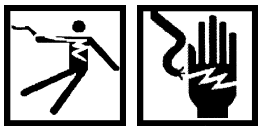
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Cable lock strap - (4) (WP 0796, Item 134)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL INPUT WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

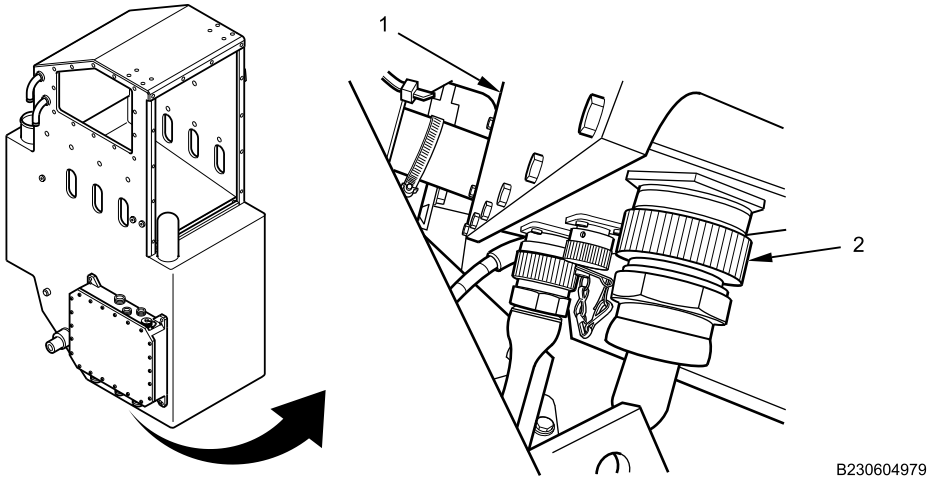


Figure 1. HVAC/LSS Control Input Wiring Harness Connections at Climate Control Unit (CCU) Box.

1. Twisting counterclockwise, disconnect HVAC/LSS control input wiring harness connector (Figure 1, Item 2) from CCU box (Figure 1, Item 1).

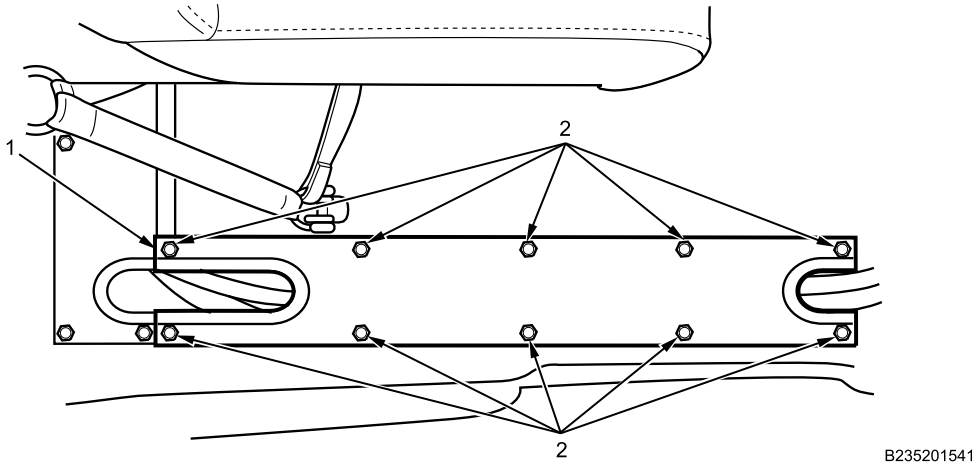


Figure 2. Right HVAC Channel Cover.

2. Remove 10 bolts (Figure 2, Item 2) and right channel cover (Figure 2, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL INPUT WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

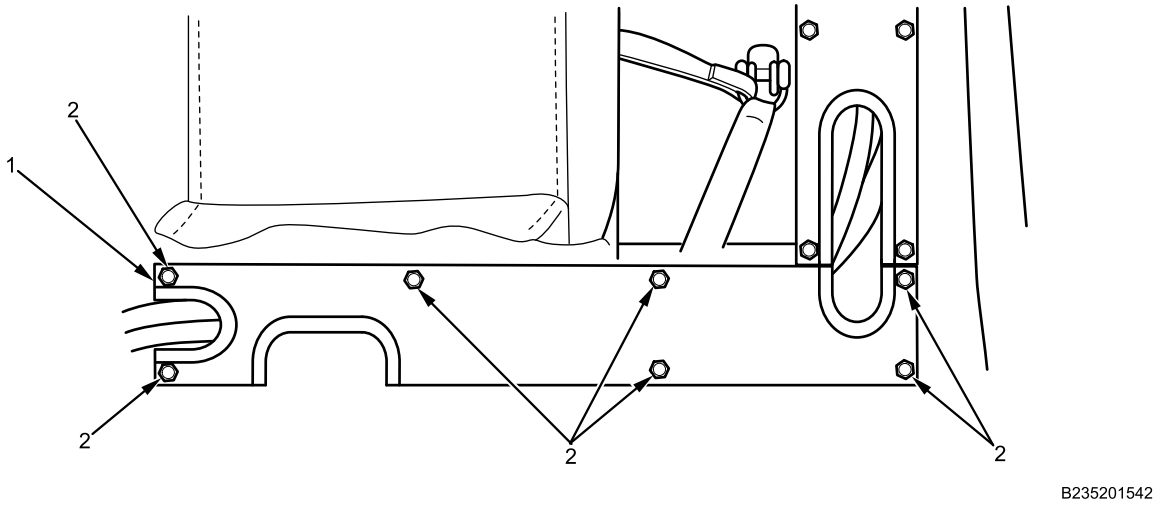


Figure 3. Rear HVAC Channel Cover.

3. Remove seven bolts (Figure 3, Item 2) and rear channel cover (Figure 3, Item 1).

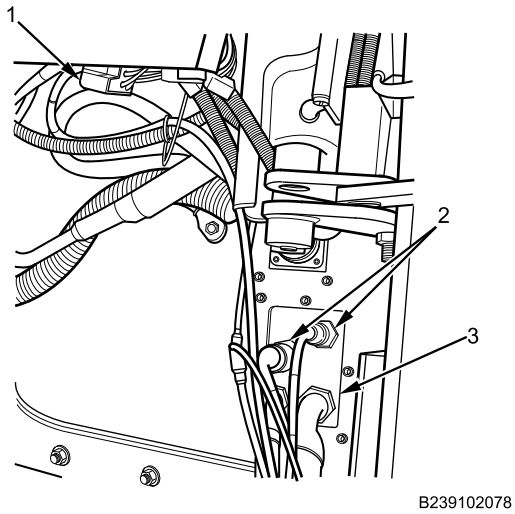


Figure 4. HVAC Condenser Relay Harness Connector.

4. Disconnect HVAC condenser relay harness connector (Figure 4, Item 1). Remove and discard cable lock straps as necessary.
5. Twisting counterclockwise, disconnect two electrical connectors (Figure 4, Item 2) at penetration dust plate (Figure 4, Item 3) and remove HVAC/LSS control input wiring harness.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL INPUT WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

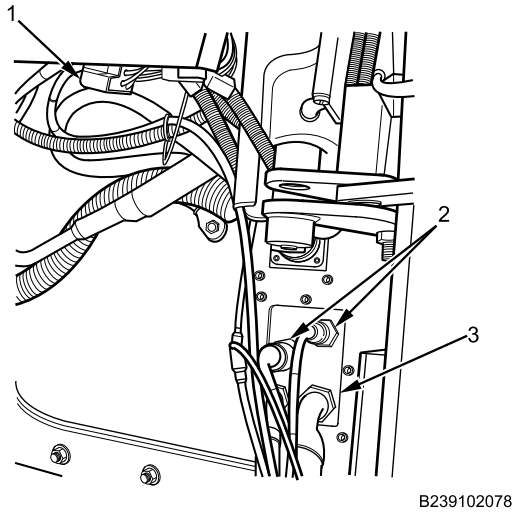


Figure 5. HVAC Condenser Relay Harness Connector.

1. Connect HVAC condenser relay harness connector (Figure 5, Item 1). Install new cable lock straps as necessary.
2. Connect two electrical connectors (Figure 5, Item 2) at penetration dust plate (Figure 5, Item 3) by twisting clockwise until secure.
3. Install the HVAC/LSS control input wiring harness into HVAC channel.

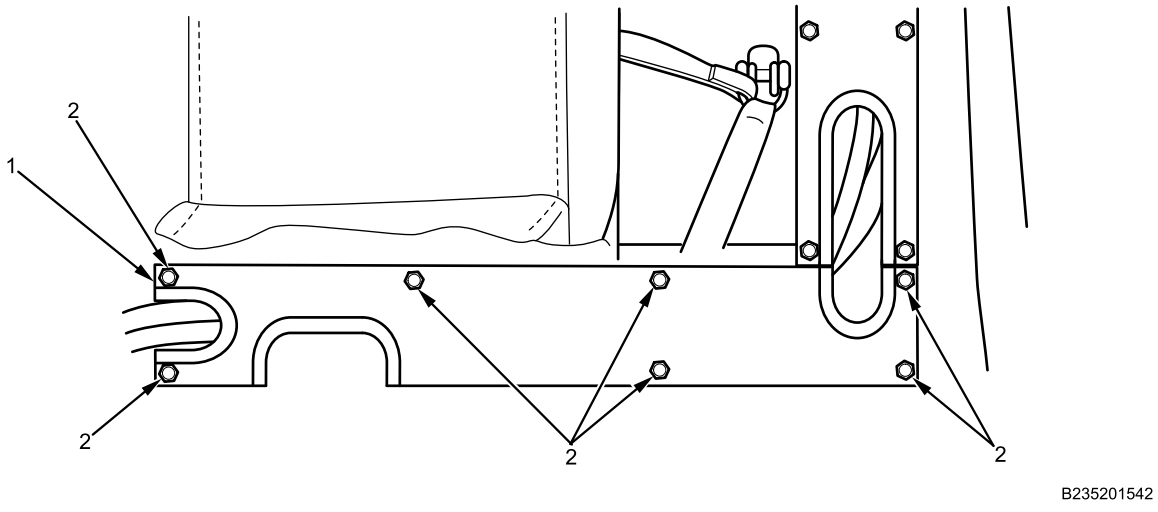


Figure 6. Rear HVAC Channel Cover.

4. Install rear channel cover (Figure 6, Item 1) with seven bolts (Figure 6, Item 2). Tighten bolts securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL INPUT WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

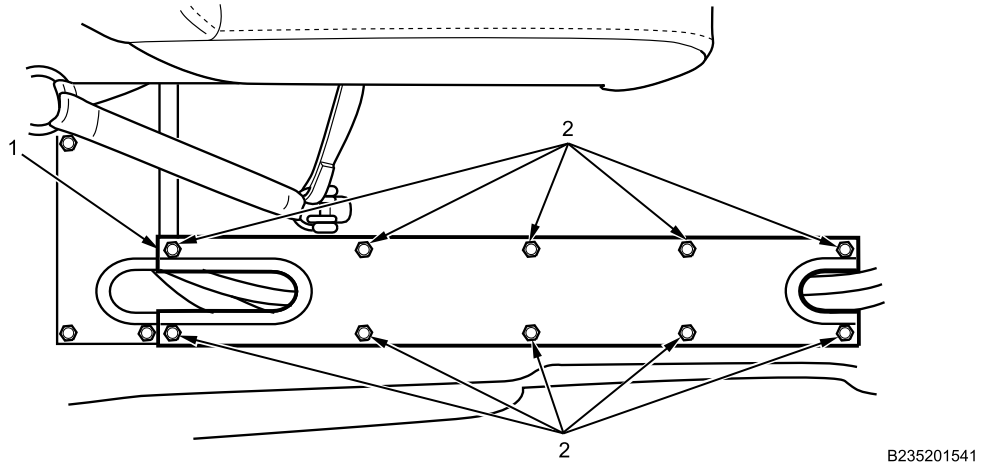


Figure 7. Right HVAC Channel Cover.

5. Install right channel cover (Figure 7, Item 1) with 10 bolts (Figure 7, Item 2). Tighten bolts securely.

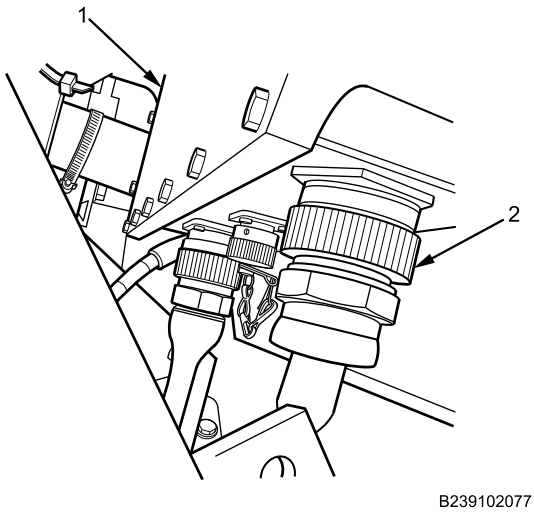


Figure 8. HVAC/LSS Control Input Wiring Harness Connections at Climate Control Unit (CCU) Box.

6. Connect HVAC/LSS control input wiring harness connector (Figure 8, Item 2) on CCU box (Figure 8, Item 1) by twisting clockwise until secure.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL INPUT WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

FOLLOW-ON MAINTENANCE

1. Turn MAIN POWER switch on (TM 9-2355-106-10).
2. Start engine (TM 9-2355-106-10).
3. Close all doors and hatches securely (TM 9-2355-106-10).
4. Turn on HVAC/LSS to verify proper operation (TM 9-2355-106-10).
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Wire tags (WP 0794, Item 33)
Cable lock strap - (8) (WP 0796, Item 134)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Engine hood open and secured (TM 9-2355-106-10)
Right cabin door secured safely open (WP 0608)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Cabin door must be secured in the open position by using heavy duty straps to prevent accidental closure during vehicle maintenance. Pull door hinge pin prior to securing door open. Failure to comply may result in serious injury or death to personnel.

Use the appropriate lifting strap sling or chain hoist for the type of load. Always clean and inspect lifting strap slings and chain hoists prior to use. Inspect for damage such as wear, corrosion, elongation, tears, or punctures. Replace lifting strap slings or chain hoists that are damaged. Failure to comply may result in component damage and death or injury to personnel.

Engine hood is extremely heavy and requires two-person lift. Ensure that there is adequate space in front of the vehicle to open hood completely without pinning or pinching personnel between hood and any other structure. Use extreme care when working under hood and make sure it is properly supported. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

NOTE

Remove cable lock straps as necessary to perform procedure. Note position and size of cable lock straps to aid installation.

Label all wires before removal to facilitate installation.

REMOVAL

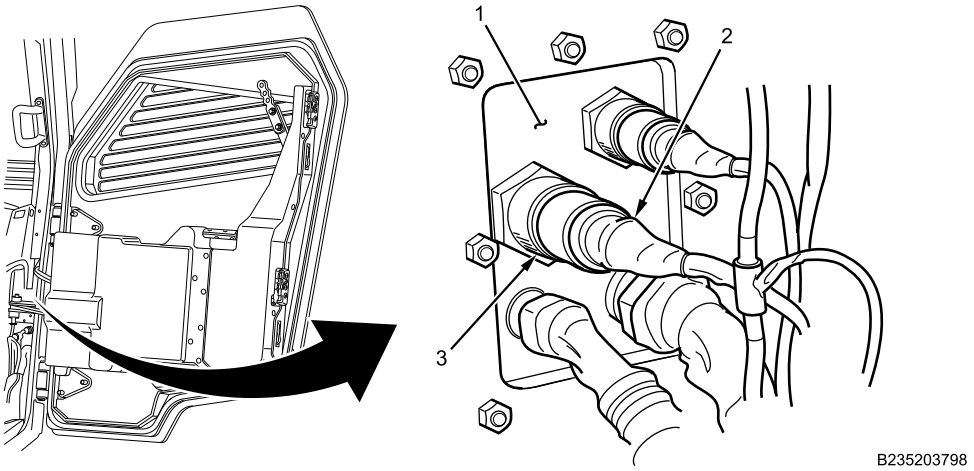


Figure 1. Interior Pass-Through Plate.

1. Disconnect interior wiring harness connector (Figure 1, Item 2) from HVAC control 2 wiring harness connector (Figure 1, Item 3) at interior pass-through plate (Figure 1, Item 1).

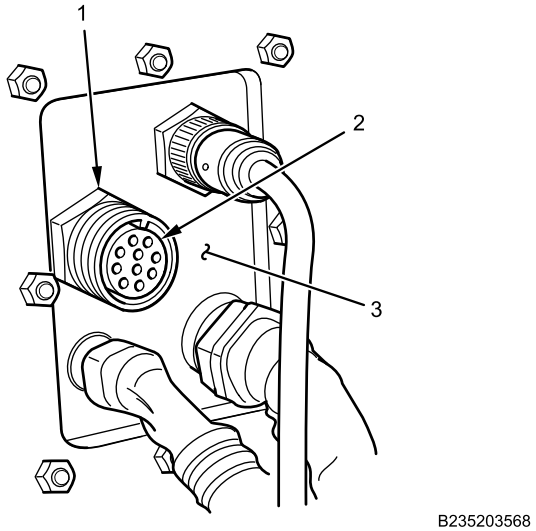


Figure 2. Interior HVAC Control 2 Wiring Harness Connector.

2. Remove nut (Figure 2, Item 1) from HVAC control 2 engine wiring harness connector (Figure 2, Item 2) at interior pass-through plate (Figure 2, Item 3).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

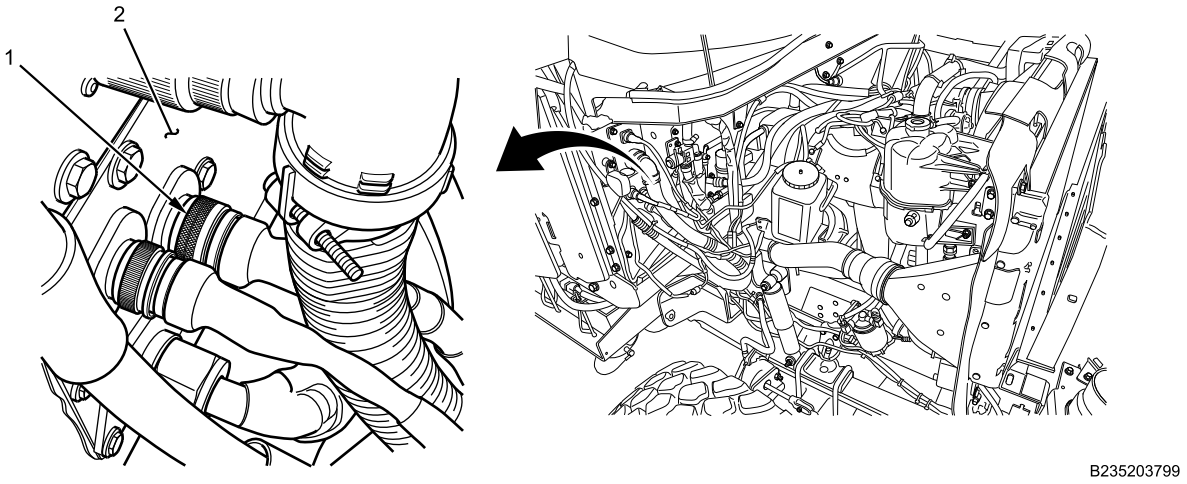


Figure 3. Exterior Pass-Through Plate.

3. Remove HVAC control 2 wiring harness connector (Figure 3, Item 1) from exterior pass-through plate (Figure 3, Item 2).

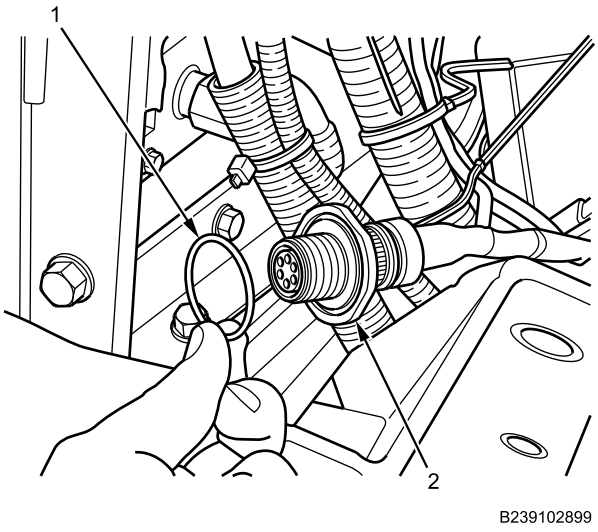


Figure 4. HVAC Control 2 Wiring Harness O-Ring.

4. Remove O-ring (Figure 4, Item 1) from HVAC control 2 wiring harness connector (Figure 4, Item 2) and inspect O-ring for cuts or cracks. If cuts or cracks are found, replace harness.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

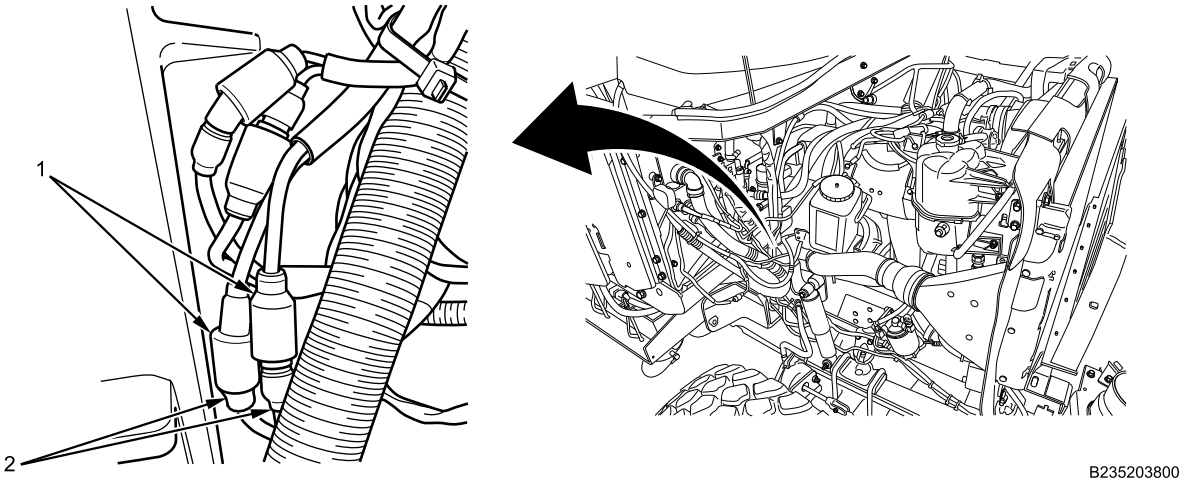


Figure 5. Left Condenser Harness Connectors.

5. Disconnect left condenser harness connectors (Figure 5, Item 1) from HVAC control 2 wiring harness connectors (Figure 5, Item 2).

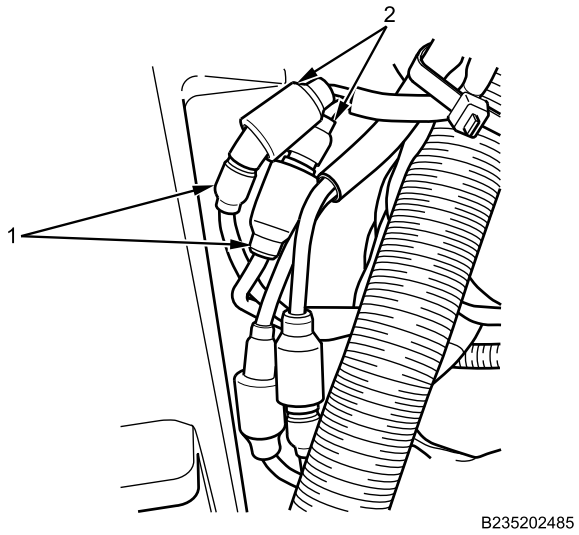


Figure 6. Right Condenser Harness Connectors.

6. Disconnect HVAC control 2 wiring harness connectors (Figure 6, Item 1) from right condenser harness connectors (Figure 6, Item 2).
7. Disconnect HVAC compressor connector (Figure 7, Item 2) from HVAC control 2 wiring harness (Figure 7, Item 1). Remove HVAC control 2 wiring harness.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

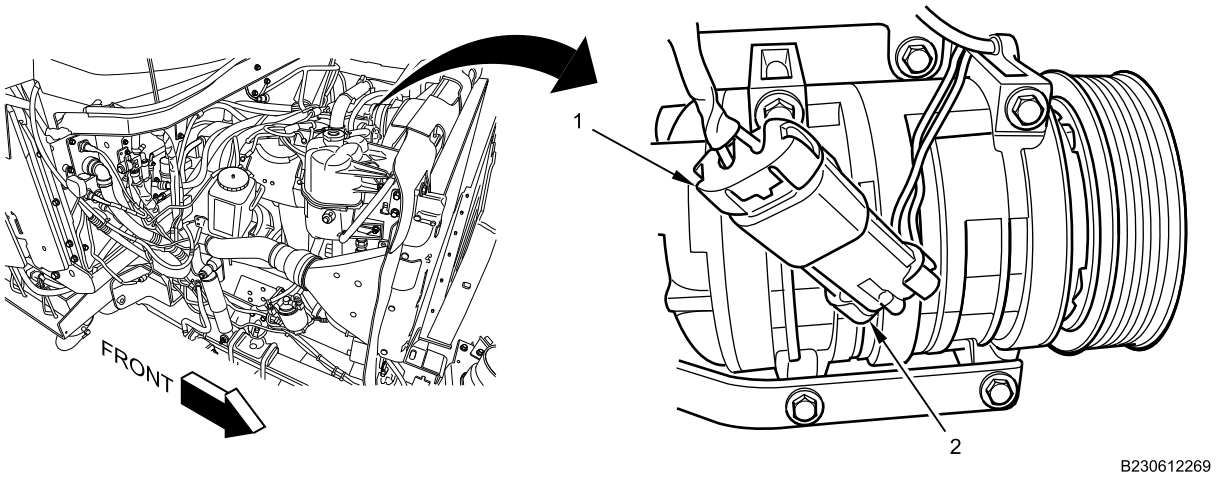


Figure 7. HVAC Compressor Connector.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all HVAC control 2 wiring harness electrical connections before installation.

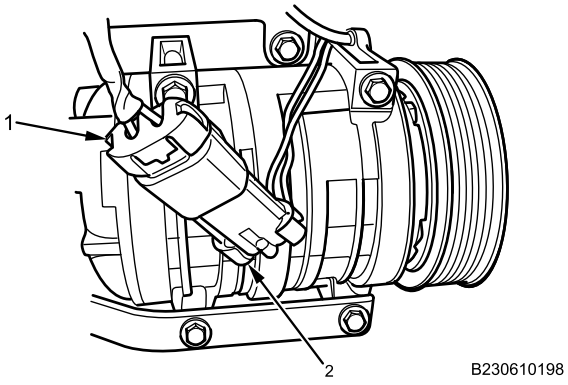


Figure 8. HVAC Compressor Harness Connector.

1. Connect HVAC control 2 wiring harness (Figure 8, Item 1) to HVAC compressor connector (Figure 8, Item 2).

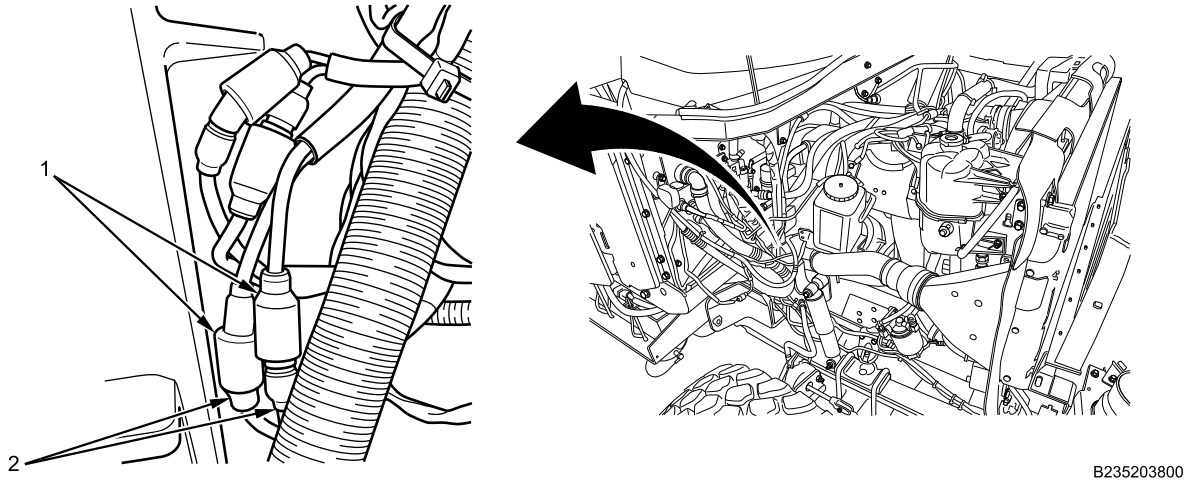


Figure 9. Left Condenser Connectors.

2. Connect HVAC control 2 wiring harness connectors (Figure 9, Item 2) to left condenser harness connectors (Figure 9, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

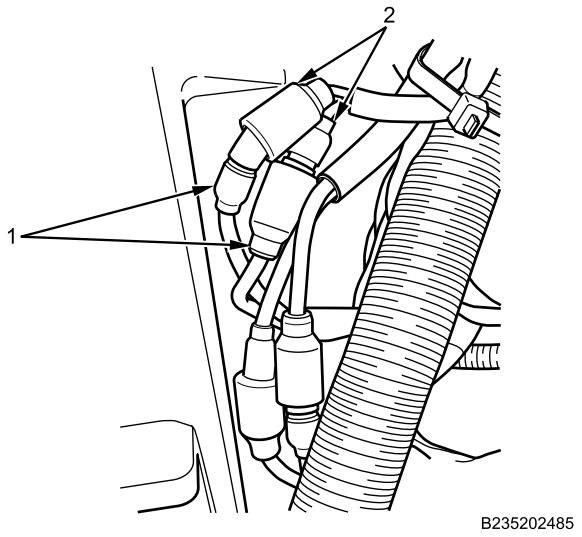


Figure 10. Right Condenser Connectors.

3. Connect HVAC control 2 wiring harness connectors (Figure 10, Item 1) to right condenser harness connectors (Figure 10, Item 2).

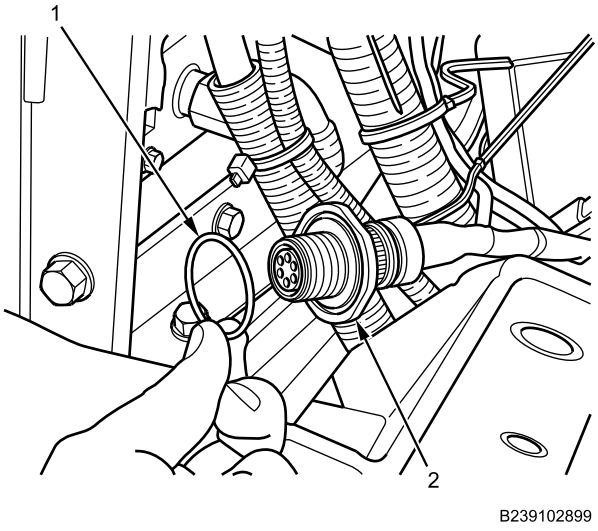


Figure 11. HVAC Control 2 Harness O-Ring.

4. Install O-ring (Figure 11, Item 1) on HVAC control 2 wiring harness connector (Figure 11, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

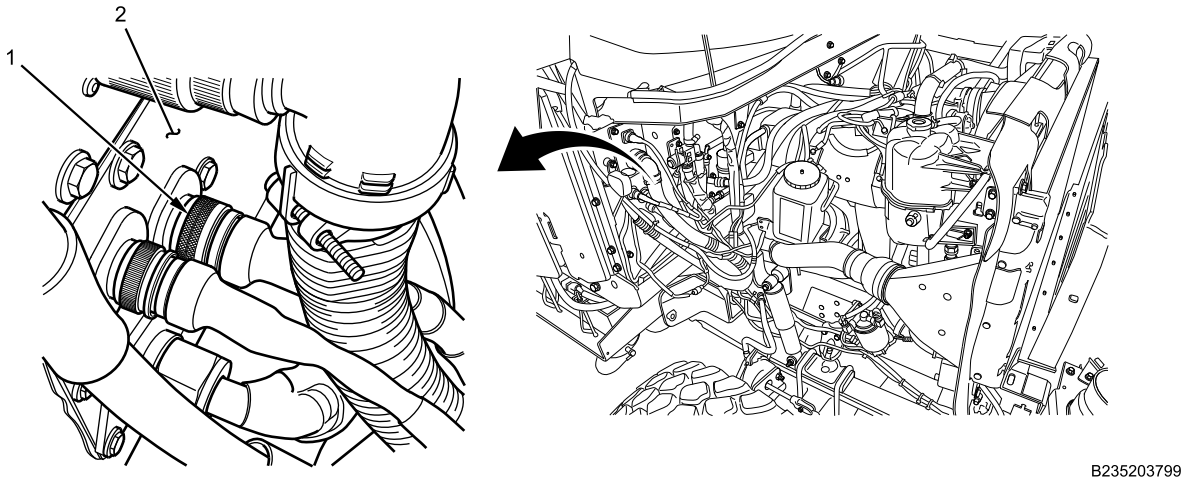


Figure 12. Exterior Pass-Through Plate.

5. Insert HVAC control 2 wiring harness connector (Figure 12, Item 1) through hole on exterior pass-through plate (Figure 12, Item 2).

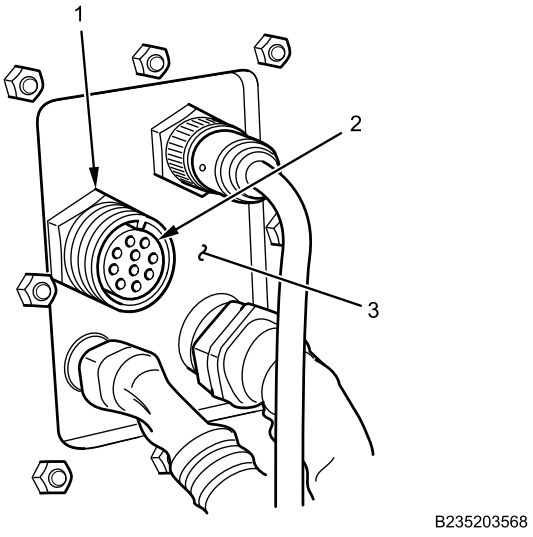


Figure 13. Interior HVAC Wiring Harness Connector.

NOTE

Ensure O-ring remains in position when installing nut.

6. Install nut (Figure 13, Item 1) on HVAC control 2 wiring harness connector (Figure 13, Item 2) at interior pass-through plate (Figure 13, Item 3). Tighten nut securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC) CONTROL 2 WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

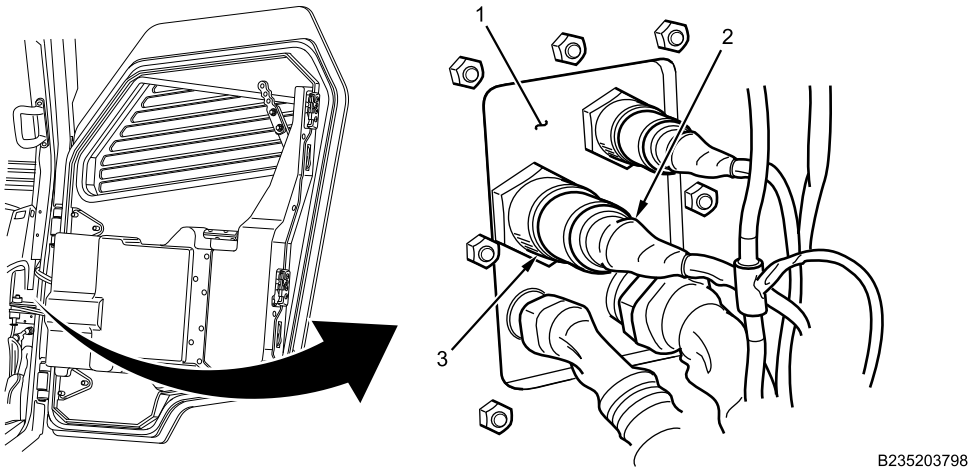


Figure 14. Interior Pass-Through Plate.

7. Install interior wiring harness connector (Figure 14, Item 2) on HVAC control 2 wiring harness connector (Figure 14, Item 3) at interior pass-through plate (Figure 14, Item 1).
8. Install all cable lock straps and tighten securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Close and secure right cabin door (WP 0608).
2. Close engine hood (TM 9-2355-106-10).
3. Turn MAIN POWER switch on (TM 9-2355-106-10).
4. Start engine (TM 9-2355-106-10).
5. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
6. Turn off HVAC/LSS (TM 9-2355-106-10).
7. Turn engine off (TM 9-2355-106-10).
8. Turn MAIN POWER switch off (TM 9-2355-106-10).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

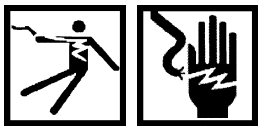
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)
Wire - 6 ft (1.8 m) (WP 0794, Item 57)
Cable lock straps - (6) (WP 0796, Item 134)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Transmission auto shift control module removed (WP 0452)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

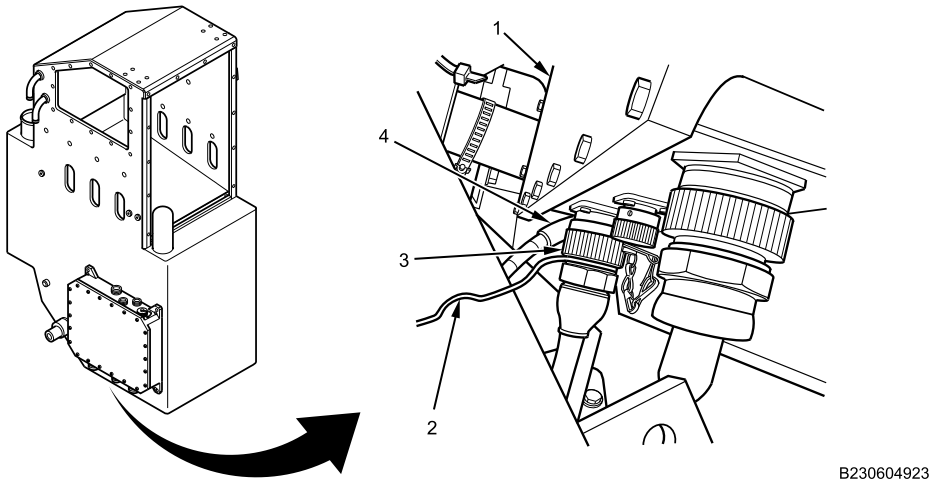


Figure 1. HVAC/LSS Control Power Wiring Harness Connection at Climate Control Unit (CCU) Box.

1. Twisting counterclockwise, disconnect HVAC/LSS control power wiring harness connector (Figure 1, Item 3) from CCU box (Figure 1, Item 1).
2. Remove nut that attaches ground cable (Figure 1, Item 4) to CCU box (Figure 1, Item 1). Nut hidden from view.

NOTE

Mechanic's wire will be used to pull wiring harness under radio tray.

3. Connect one end of mechanic's wire (Figure 1, Item 2) behind control power wiring harness connector (Figure 1, Item 3).

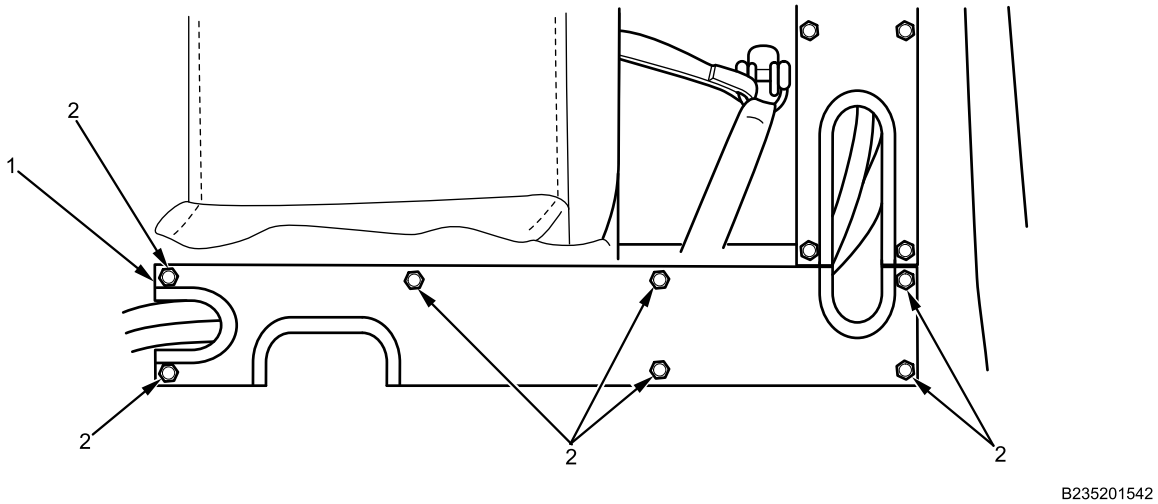


Figure 2. Rear HVAC Channel Cover.

4. Remove seven bolts (Figure 2, Item 2) and rear channel cover (Figure 2, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

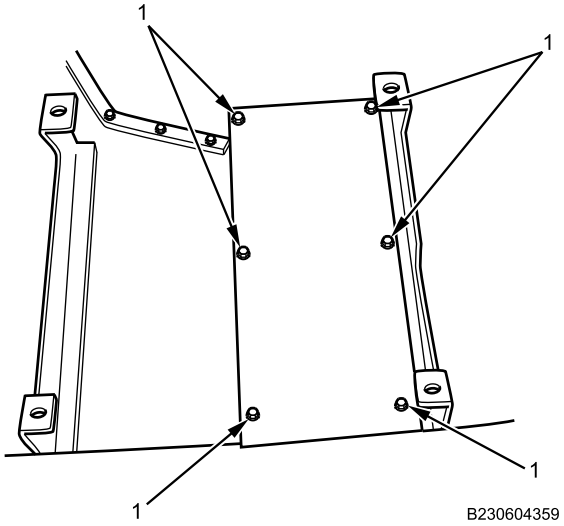


Figure 3. Electrical Harness Storage Duct Cover.

5. Remove six bolts (Figure 3, Item 1) from electrical harness storage duct cover (Figure 3, Item 2) and remove electrical harness storage duct cover.

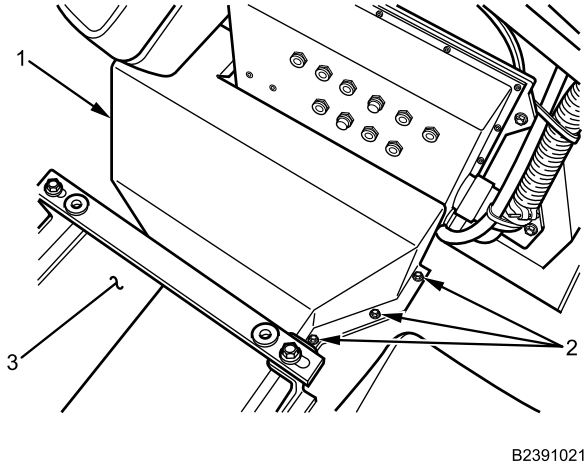


Figure 4. Power Distribution Module (PDM) Harness Electrical Storage Shield.

6. Remove eight bolts (Figure 4, Item 2) from power distribution module (PDM) harness electrical storage shield (Figure 4, Item 1). Three bolts shown. Five bolts hidden from view.
7. Remove PDM harness electrical storage shield (Figure 4, Item 1) from floor (Figure 4, Item 3).

NOTE

Note locations of cable lock straps to aid installation.

8. Cut and discard cable lock straps as necessary to remove harness.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

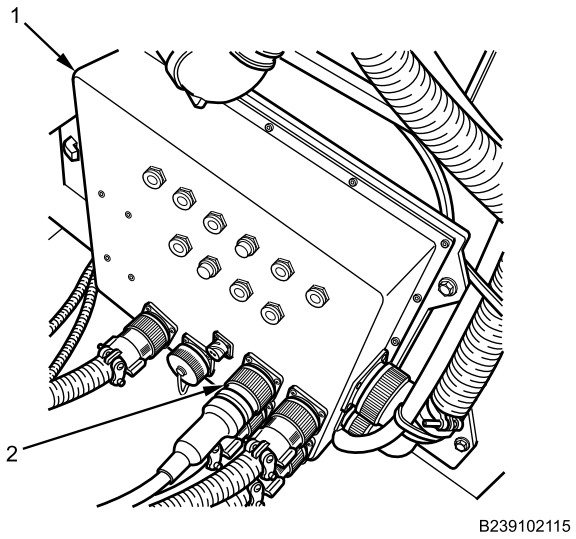


Figure 5. HVAC/LSS Control Power Wiring Harness Connection at PDM.

9. Twisting counterclockwise, remove HVAC/LSS control power wiring harness connector (Figure 5, Item 2) from PDM (Figure 5, Item 1).

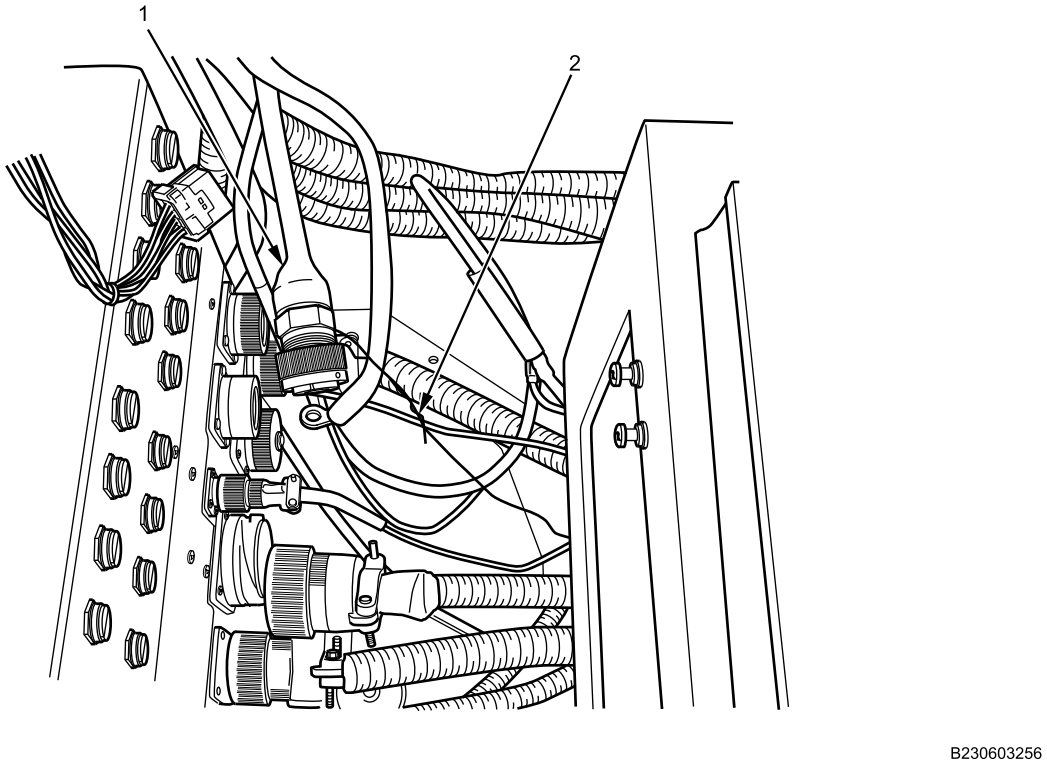


Figure 6. HVAC/LSS Control Power Wiring Harness Routing with Mechanic's Wire.

NOTE

Leave mechanic's wire under government furnished equipment (GFE) tray in order to route harness during installation.

10. Pull HVAC/LSS control power wiring harness (Figure 6, Item 1) under (GFE) tray.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

11. Disconnect mechanic's wire (Figure 6, Item 2) from HVAC/LSS control power wiring harness (Figure 6, Item 1), and remove harness from vehicle.

END OF TASK

INSTALLATION

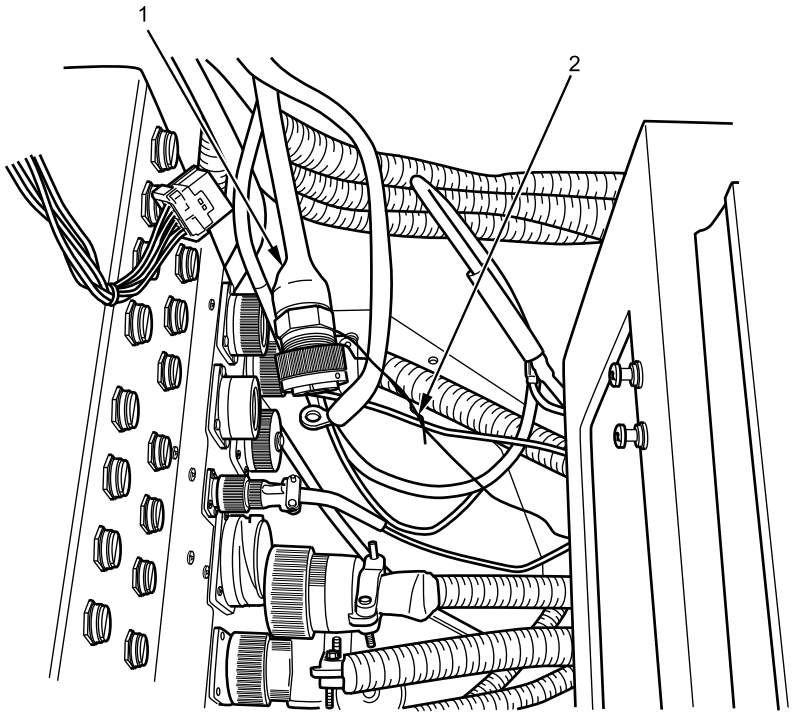
WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.



B230603256

Figure 7. HVAC/LSS Control Power Wiring Harness Routing with Mechanic's Wire.

1. Connect end of mechanic's wire (Figure 7, Item 2) to CCU end of HVAC/LSS control power wiring harness (Figure 7, Item 1), and pull harness under government furnished equipment (GFE) tray.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

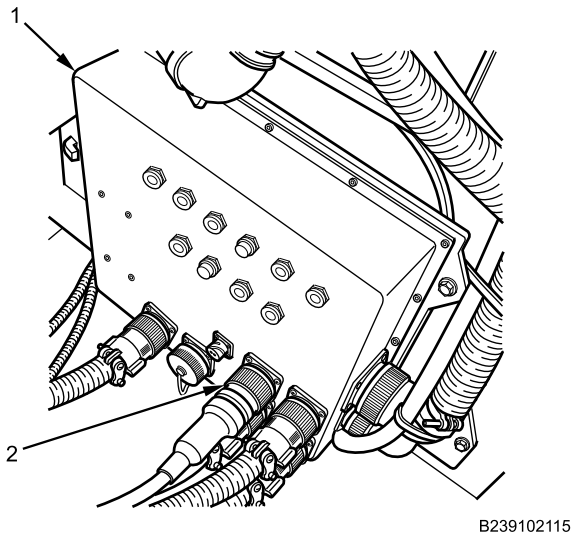


Figure 8. HVAC/LSS Control Power Wiring Harness Connection at Circuit Breaker Panel.

2. Connect HVAC/LSS control power wiring harness connector (Figure 8, Item 2) on circuit breaker panel (Figure 8, Item 1) by twisting clockwise until secure.

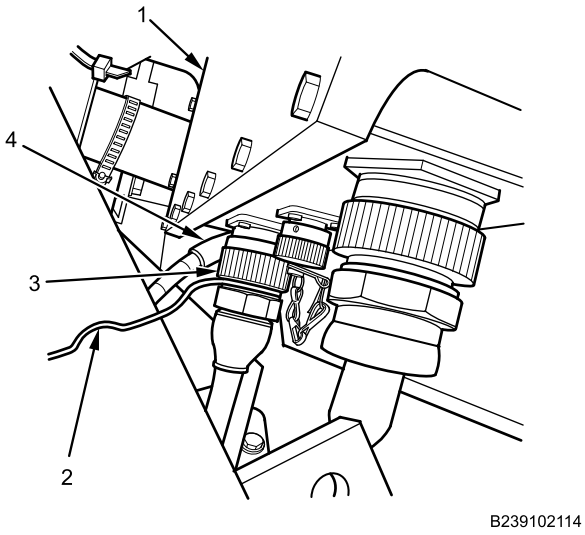


Figure 9. HVAC/LSS Control Power Wiring Harness Connection at CCU Box.

3. Remove mechanic's wire (Figure 9, Item 2) from HVAC/LSS control power wiring harness connector (Figure 9, Item 3).
4. Install ground cable (Figure 9, Item 4) on CCU box (Figure 9, Item 1) with nut and tighten securely. Nut hidden from view.
5. Connect HVAC/LSS control power wiring harness connector (Figure 9, Item 3) on CCU box (Figure 9, Item 1) by twisting clockwise until secure.
6. Install new cable lock straps in locations noted during removal.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

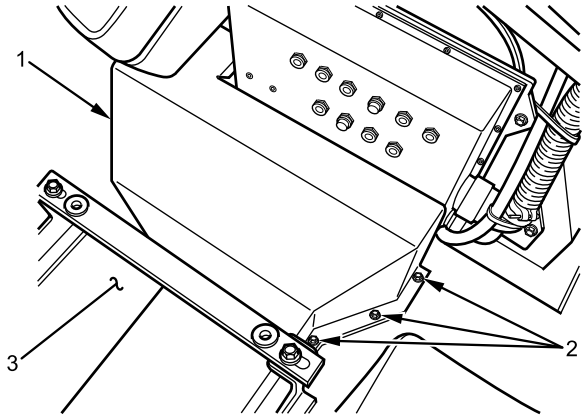


Figure 10. Power Distribution Module (PDM) Harness Electrical Storage Shield.

7. Install PDM harness electrical storage shield (Figure 10, Item 1) on floor (Figure 10, Item 3) with eight bolts (Figure 10, Item 2) and tighten securely. Three bolts shown. Five bolts hidden from view.

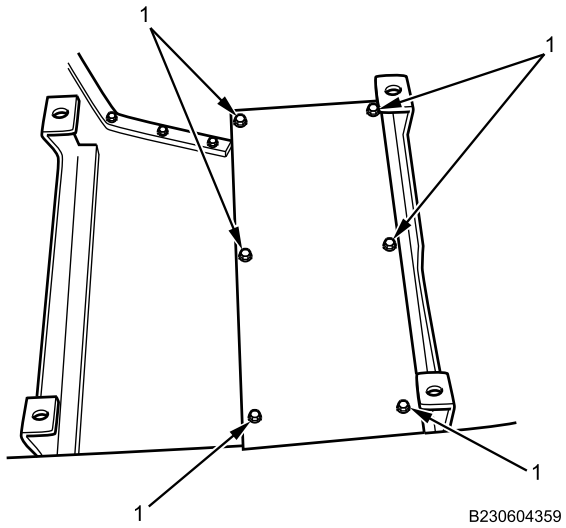


Figure 11. Electrical Harness Storage Duct Cover.

8. Install electrical harness storage duct cover (Figure 11, Item 2) with six bolts (Figure 11, Item 1). Tighten bolts securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL POWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

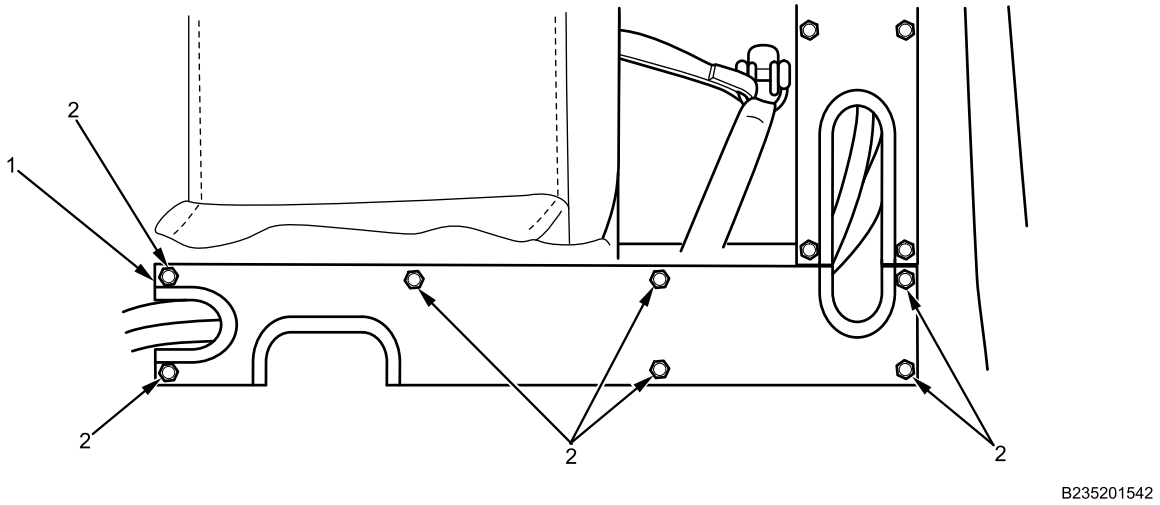


Figure 12. Rear HVAC Channel Cover.

9. Install rear channel cover (Figure 12, Item 1) with seven bolts (Figure 12, Item 2). Tighten bolts securely.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install transmission auto shift control module (WP 0452).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Close all doors and hatches securely (TM 9-2355-106-10).
5. Turn on HVAC/LSS to verify proper operation (TM 9-2355-106-10).
6. Turn off HVAC/LSS (TM 9-2355-106-10).
7. Turn engine off (TM 9-2355-106-10).
8. Turn MAIN POWER switch off (TM 9-2355-106-10).
9. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN BLOWER MOTOR WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

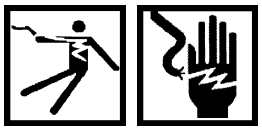
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
Turn LSS control switch off (TM 9-2355-106-10)
Right side exterior body armor front panel removed (WP 0633)
Nuclear, Biological, and Chemical (NBC) filter removed (WP 0762)
NBC filter cover and housing removed (WP 0763)
NBC particle separator filter removed (WP 0764)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN BLOWER MOTOR WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Twisting counterclockwise, remove HVAC/LSS main blower motor wiring harness connector (Figure 1, Item 2) from HVAC/LSS main blower motor (Figure 1, Item 1).

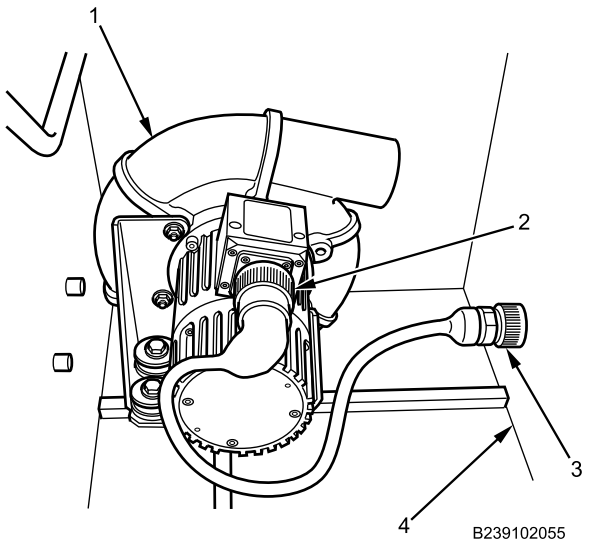


Figure 1. HVAC/LSS Main Blower Motor Wiring Harness.

2. Twisting counterclockwise, remove HVAC/LSS main blower motor wiring harness connector (Figure 1, Item 3) from HVAC/LSS box (Figure 1, Item 4).

END OF TASK

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Install HVAC/LSS main blower motor wiring harness connector (Figure 2, Item 2) on HVAC/LSS main blower motor (Figure 2, Item 1) by twisting clockwise until secure.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) MAIN BLOWER MOTOR WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

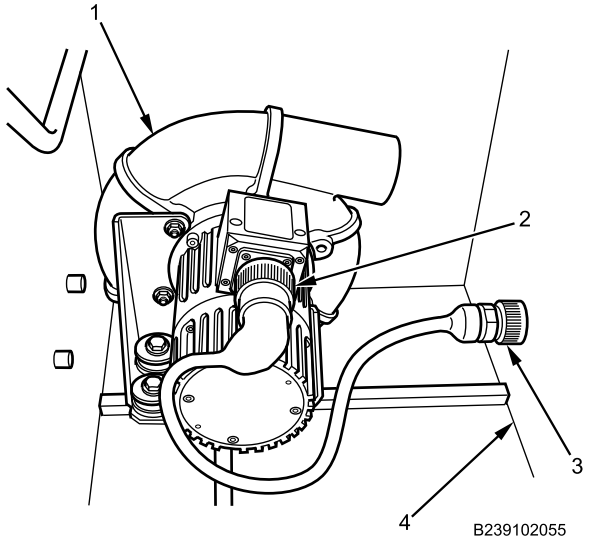


Figure 2. HVAC/LSS Main Blower Motor Wiring Harness.

2. Install HVAC/LSS main blower motor wiring harness connector (Figure 2, Item 3) on HVAC/LSS box (Figure 2, Item 4) by twisting clockwise until secure.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install NBC particle separator filter (WP 0764).
2. Install NBC filter cover and housing (WP 0763).
3. Install NBC filter (WP 0762).
4. Turn MAIN POWER switch on (TM 9-2355-106-10).
5. Start engine (TM 9-2355-106-10).
6. Close all doors and hatches securely (TM 9-2355-106-10).
7. Turn on HVAC/LSS to verify proper cabin pressure (TM 9-2355-106-10).
8. Turn off HVAC/LSS (TM 9-2355-106-10).
9. Turn engine off (TM 9-2355-106-10).
10. Install right side exterior body armor front panel (WP 0633).
11. Turn MAIN POWER switch off (TM 9-2355-106-10).
12. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) UPPER BLOWER WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

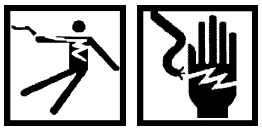
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Grease (WP 0794, Item 22)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
HVAC/LSS upper panel removed (WP 0767)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) UPPER BLOWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

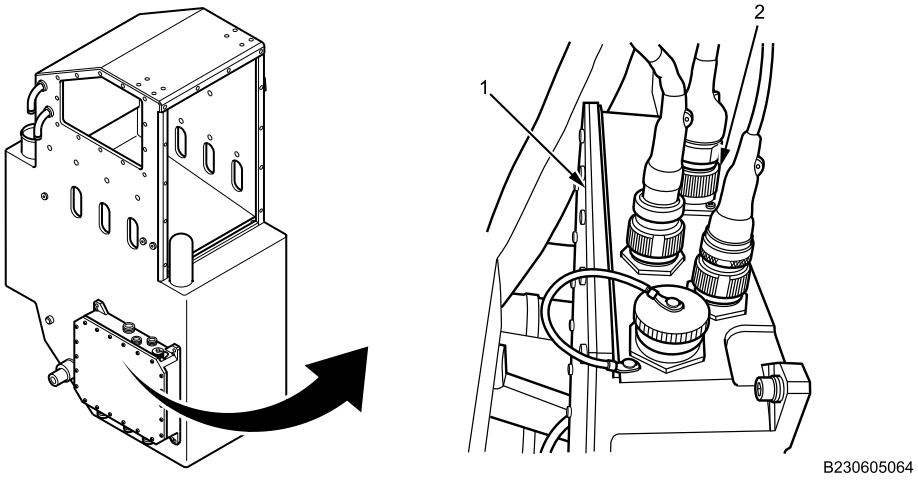


Figure 1. HVAC/LSS Upper Blower Wiring Harness at Climate Control Unit (CCU) Box.

1. Twisting counterclockwise, disconnect HVAC/LSS upper blower wiring harness connector (Figure 1, Item 2) from CCU box (Figure 1, Item 1).

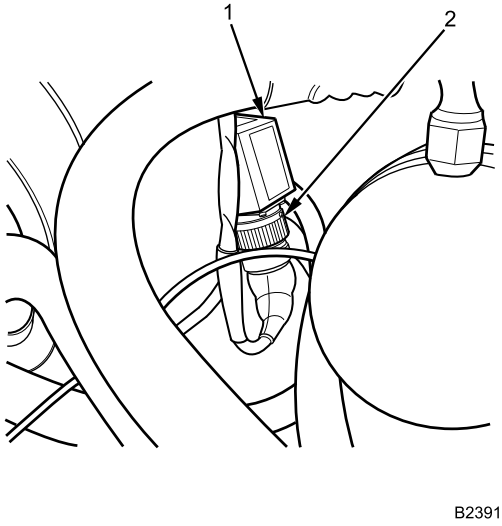


Figure 2. HVAC/LSS Upper Blower Wiring Harness at Upper HVAC/LSS Blower.

2. Twisting counterclockwise, disconnect HVAC/LSS upper blower wiring harness connector (Figure 2, Item 2) from HVAC/LSS upper blower (Figure 2, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) UPPER BLOWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

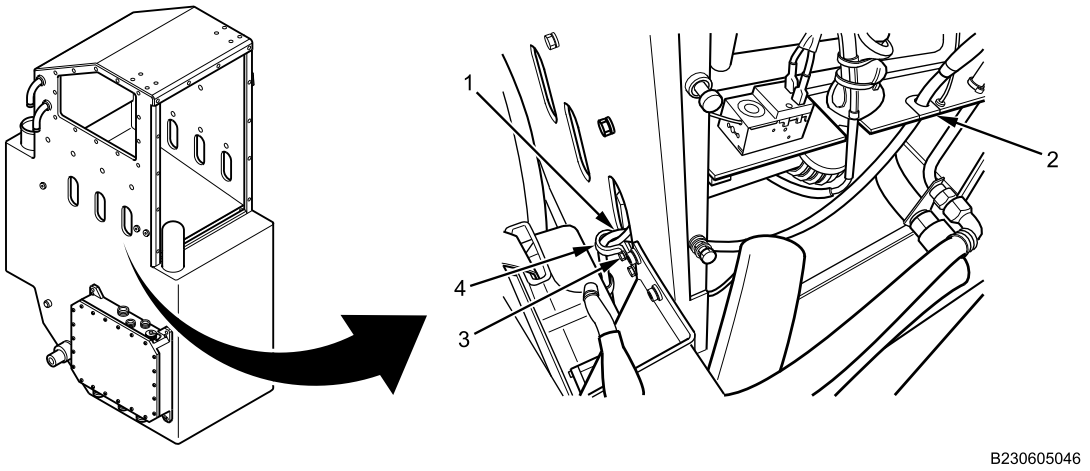


Figure 3. HVAC/LSS Upper Blower Wiring Harness Routing.

3. Remove bolt (Figure 3, Item 3) from insulated wire harness retainer (Figure 3, Item 4).
4. Remove insulated wire harness retainer (Figure 3, Item 4) from HVAC/LSS upper blower wiring harness (Figure 3, Item 1).
5. Remove HVAC/LSS upper blower wiring harness (Figure 3, Item 1) from wiring harness insulator (Figure 3, Item 2).

NOTE

HVAC/LSS upper blower wiring harness has different size connectors at each end. Harness must be removed as instructed in following step and must be aligned precisely to fit through HVAC box opening.

6. Remove wiring harness (Figure 3, Item 1) by pulling CCU box end of harness through opening in HVAC box.

END OF TASK

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) UPPER BLOWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

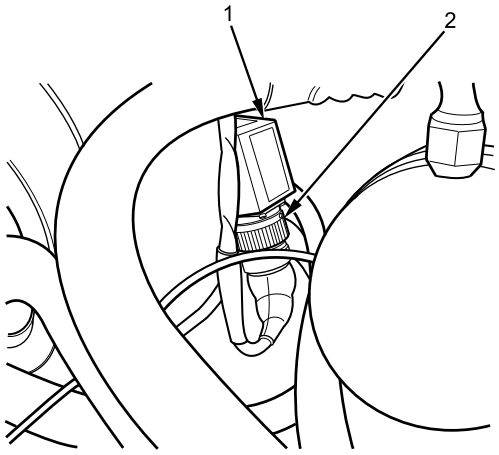


Figure 4. HVAC/LSS Upper Blower Wiring Harness at Upper HVAC/LSS Blower.

1. Connect HVAC/LSS upper blower wiring harness connector (Figure 4, Item 2) on HVAC/LSS upper blower (Figure 4, Item 1) by twisting clockwise until secure.

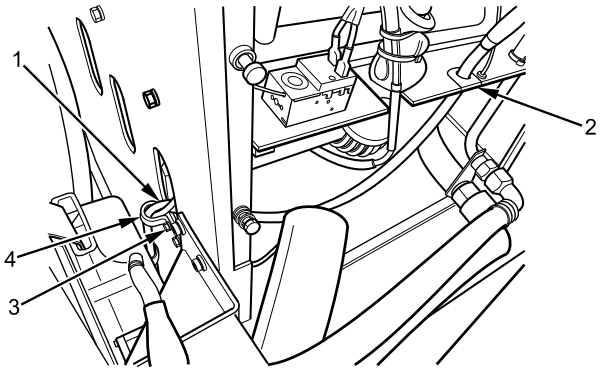


Figure 5. HVAC/LSS Upper Blower Wiring Harness Routing.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) UPPER BLOWER WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

2. Install HVAC/LSS upper blower wiring harness (Figure 5, Item 1) on wiring harness insulator (Figure 5, Item 2).
3. Install insulated wiring harness retainer (Figure 5, Item 4) on HVAC/LSS upper blower wiring harness (Figure 5, Item 1) with bolt (Figure 5, Item 3). Tighten bolt securely.

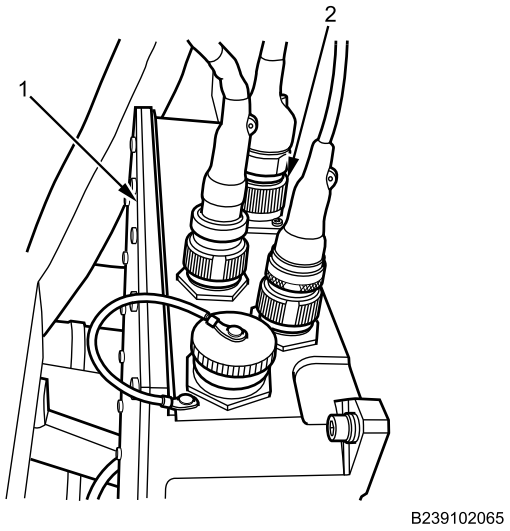


Figure 6. HVAC/LSS Upper Blower Wiring Harness at CCU Box.

4. Connect HVAC/LSS upper blower wiring harness connector (Figure 6, Item 2) on CCU box (Figure 6, Item 1) by twisting clockwise until secure.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC/LSS upper panel (WP 0767).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL WIRING HARNESS REMOVAL AND INSTALLATION

INITIAL SETUP:

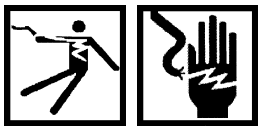
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

Materials/Parts
Cable lock strap - (2) (WP 0796, Item 134)
Grease (WP 0794, Item 22)
Wire tags (WP 0794, Item 33)

References
TM 9-2355-106-10
TM 9-2355-106-23P
WP 0786
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)
HVAC/LSS upper panel removed (WP 0767)

WARNING



Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

Turn off ignition switch and battery disconnect switch before performing electrical system maintenance. Failure to comply may result in serious injury or death to personnel.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

REMOVAL

1. Twisting counterclockwise, disconnect HVAC/LSS control wiring harness connector (Figure 1, Item 2) from CCU box (Figure 1, Item 1).

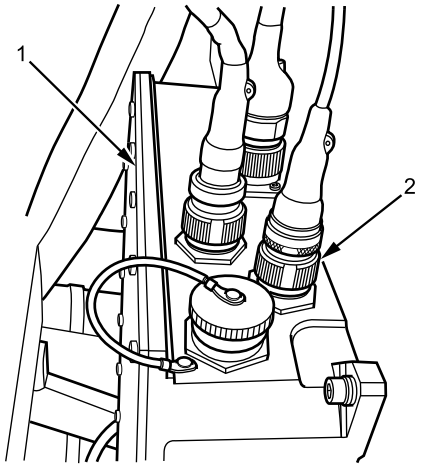


Figure 1. HVAC/LSS Control Wiring Harness at Climate Control Unit (CCU) Box.

2. Remove bolt (Figure 2, Item 3) from insulated wiring harness retainer (Figure 2, Item 4).

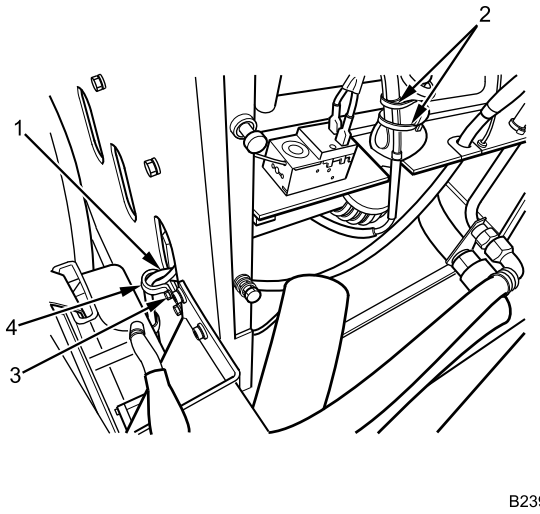


Figure 2. HVAC/LSS Control Wiring Harness Mounting.

3. Remove insulated wiring harness retainer (Figure 2, Item 4) from HVAC/LSS control wiring harness (Figure 2, Item 1).
4. Cut two cable lock straps (Figure 2, Item 2) from HVAC/LSS control wiring harness (Figure 2, Item 1). Discard lock straps (Figure 2, Item 2).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

5. Twisting counterclockwise, disconnect HVAC/LSS control wiring harness connector (Figure 3, Item 1) from HVAC trinary pressure switch jumper harness (Figure 3, Item 2).

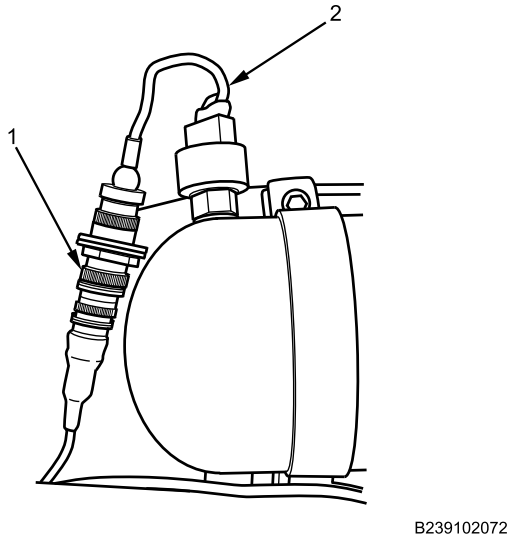


Figure 3. HVAC Trinary Pressure Switch Connection.

6. Twisting counterclockwise, disconnect HVAC/LSS control wiring harness connector (Figure 4, Item 5) from Recirculated Air (RA) temperature sensor (Figure 4, Item 4).

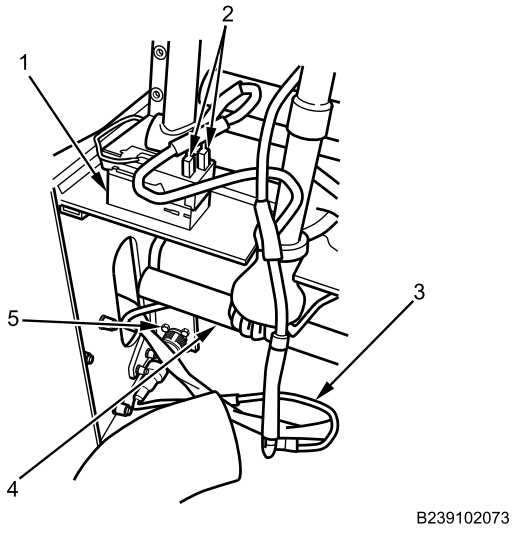


Figure 4. HVAC/LSS Control Wiring Harness Routing.

NOTE

Mark and tag connectors on freeze switch to aid in installation.

7. Disconnect two connectors (Figure 4, Item 2) from freeze switch (Figure 4, Item 1).

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

8. Remove HVAC/LSS control wiring harness (Figure 4, Item 3).

END OF TASK

INSTALLATION

WARNING



Dielectric grease is harmful to skin and eyes. If grease contacts eyes, rinse thoroughly and contact physician if irritation persists. If skin is contacted, wash thoroughly with soap and water. Failure to comply may result in serious injury to personnel.

NOTE

Apply dielectric grease to all electrical connections.

1. Connect HVAC/LSS control wiring harness connector (Figure 5, Item 5) to RA temperature sensor (Figure 5, Item 4) by twisting clockwise until secure.

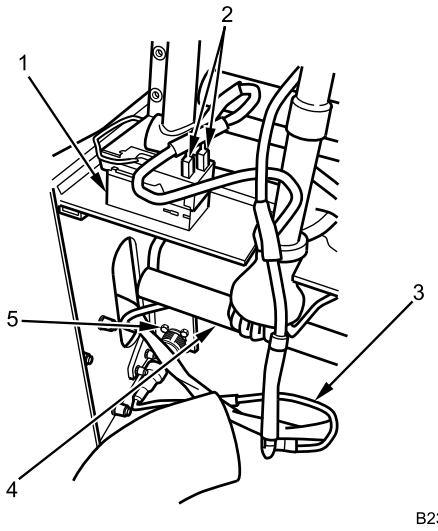


Figure 5. HVAC/LSS Control Wiring Harness Routing.

2. Connect two connectors (Figure 5, Item 2) on freeze switch (Figure 5, Item 1) in locations noted during removal.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

3. Connect HVAC/LSS control wiring harness connector (Figure 6, Item 1) on HVAC trinary pressure switch jumper harness (Figure 6, Item 2) by twisting clockwise until secure.

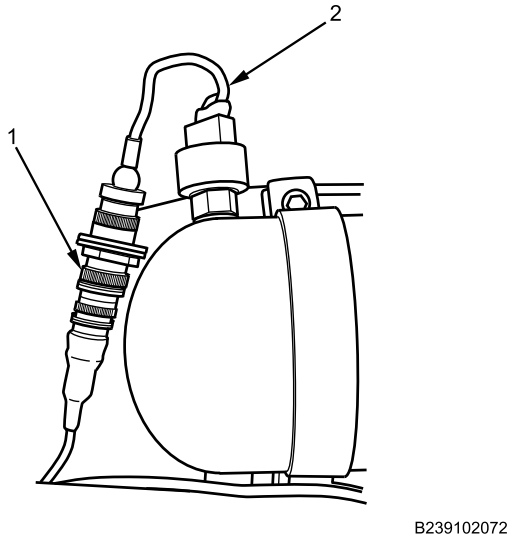


Figure 6. HVAC Trinary Pressure Switch Connection.

4. Install HVAC/LSS control wiring harness (Figure 7, Item 1) on insulated wiring harness retainer (Figure 7, Item 4) with bolt (Figure 7, Item 3) and tighten securely.

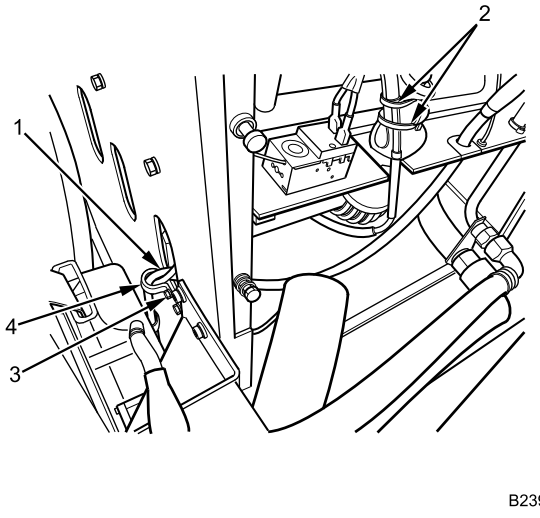


Figure 7. HVAC/LSS Control Wiring Harness Mounting.

5. Install two new cable lock straps (Figure 7, Item 2) on HVAC/LSS control wiring harness (Figure 7, Item 1) and tighten securely.

HEATING VENTILATING AND AIR CONDITIONING (HVAC)/LIFE SUPPORT SYSTEM (LSS) CONTROL WIRING HARNESS REMOVAL AND INSTALLATION - (CONTINUED)

6. Connect HVAC/LSS control wiring harness connector (Figure 8, Item 2) on CCU box (Figure 8, Item 1) by twisting clockwise until secure.

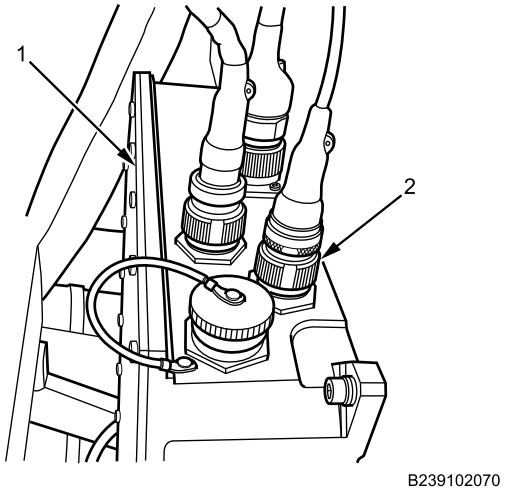


Figure 8. HVAC/LSS Control Wiring Harness at CCU Box.

END OF TASK

FOLLOW-ON MAINTENANCE

1. Install HVAC/LSS upper panel (WP 0767).
2. Turn MAIN POWER switch on (TM 9-2355-106-10).
3. Start engine (TM 9-2355-106-10).
4. Turn on HVAC/LSS to check for proper operation (TM 9-2355-106-10).
5. Turn off HVAC/LSS (TM 9-2355-106-10).
6. Turn engine off (TM 9-2355-106-10).
7. Turn MAIN POWER switch off (TM 9-2355-106-10).
8. Remove wheel chocks (TM 9-2355-106-10).

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

PREPARATION FOR STORAGE OR SHIPMENT

INITIAL SETUP:

NOT APPLICABLE

PREPARATION FOR SHIPMENT

No special preparation, other than maintenance, is required when MRAPs are driven under their own power to their destination.

All doors, except the driver door, should be tied closed. All material that exceeds the width of the vehicle should be removed and secured inside the vehicle. All antennas should be lowered and tied down.

Turn off all Government Furnished Equipment (GFE).

VEHICLE STORAGE

The unit is responsible for adequate storage and protection of new vehicles. Maintain records for vehicles in storage so that proper inspection and maintenance can be performed. Perform the following procedures before storing vehicle:

Storage Duration Two Months or Less

NOTE

To avoid damaging the finish, avoid wiping dirt off of dry surfaces; wash vehicle when surface is cool to the touch.

1. Wash vehicle with warm water and mild soap. Dry wet surfaces with a chamois or soft cloth.
2. Inspect painted surfaces; touch up all exposed primed or raw metal areas to prevent rust.
3. Check radiator coolant reservoir for proper level and adequate freeze protection.
4. Cover open ends of exhaust and air intake for the HVAC system.

NOTE

A low electrolyte level is normally the result of a broken battery case or years of usage. It will not normally be seen on new vehicles.

5. Check batteries state of charge. Charge batteries if open circuit voltage is below 12.6 volts.
6. Fill fuel tank to maximum level. Ventilate system by releasing filler cap. If this can't be accomplished, completely drain the fuel tank.
7. Inspect vehicle prior to storage by performing the next appropriate PMCS, and make any repairs necessary. Ensure that maintenance services and lubrication are up to date.

PREPARATION FOR STORAGE OR SHIPMENT - (CONTINUED)

Storage Duration Over 2 Months

Units in storage for longer than 2 months require the following additional procedures.

1. Inspect for the following:
   a. Leaks
   b. Low or flat tires
   c. Corrosion
   d. Water in compartments
   e. Other problems or shortcomings
2. Perform the next scheduled major maintenance service.
3. Start and run vehicle at fast idle until it reaches operating temperature.
4. To remove surface charge from the battery, operate heater and air conditioner and turn on headlights and other accessories for a few minutes.
5. Drive the vehicle a short distance. Shift the transmission in various ranges; apply and release the service and parking brake systems.
6. Turn off heater and air conditioner and any other accessories; shut off lights. Park vehicle and shut off engine.
7. Disconnect and remove batteries and store in a cool, well-ventilated area. Recharge and clean before use.
8. Drain air brake reservoirs and close drain cocks.
9. Check radiator coolant reservoir for proper level and adequate freeze protection.
10. Lubricate all exposed components.

NOTE

After every 3 months of additional storage, repeat items 1 through 10.

11. For vehicles exposed to ultraviolet rays of the sun, apply a coating of powder cleanser, or similar product, to the inside surfaces of windshield and windows to shade the interior.

STORAGE FACILITIES

1. Whenever possible, store vehicles indoors, protected from sunlight, in a dry, well-ventilated area. If indoor storage is not available, select storage lots to eliminate conditions that cause deterioration.
2. Park away from transformers and/or electrical motors. When the protective wax in tire compound cracks, ozone in the air attacks the exposed areas.
3. Park away from trees, high weeds, and grass to prevent damage from tree or weed sap and to minimize bird and insect stains.
4. Park away from railroad tracks, paint shops, smoky industrial areas, and locations of possible road splash contact.
5. If a vehicle is parked on an incline, block the wheels.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

GENERAL MAINTENANCE

INITIAL SETUP:

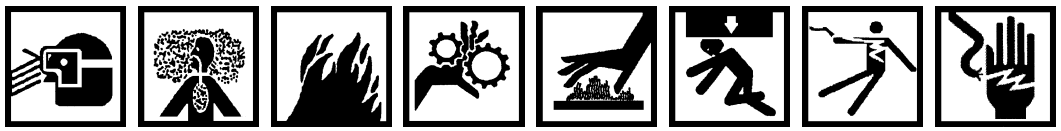
Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)
Jack stand (10-ton) (WP 0795, Item 62)

Materials/Parts
Goggles, industrial (WP 0794, Item 20)
Degreaser (WP 0794, Item 10)
Lubricating oil (WP 0794, Item 22)
Lubricating oil (WP 0794, Item 23)
Rag (WP 0794, Item 39)

References
TM 9-2355-106-10
TM 9-2355-106-23P
TM 9-214
WP 0782

Equipment Condition
Parking brake set (TM 9-2355-106-10)
Transmission set in NEUTRAL (N) (TM 9-2355-106-10)
Engine off (TM 9-2355-106-10)
MAIN POWER switch off (TM 9-2355-106-10)
Wheels chocked (TM 9-2355-106-10)

WARNING



Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Wear goggles and protective clothing. Keep away from open flame and use in well-ventilated area. If adhesive, solvent, or sealing compound get on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury or death to personnel.

Before performing any maintenance procedure, ensure vehicle is parked on level surface, engine is off, parking brake is applied, transmission is in NEUTRAL (N), and wheels are chocked. Wear eye protection and stay clear of rotating parts and hot surfaces. Make sure all electrical tools are grounded. Use extreme caution when working under vehicle. Use hydraulic jack to raise vehicle, and place jackstands under frame rails to support axle. Keep first-aid and fire-control equipment available during all operation and maintenance procedures. Failure to comply may result in damage to equipment and serious injury or death to personnel.

Use extreme caution when testing or working on or around electrical circuits. Always assume that electrical circuits are live. Electrical shock can occur upon contact with voltage high enough to cause current flow through muscles or nerves. On Direct Current (DC) systems, generally 1 milliamp of current can be felt, 5 milliamps can cause severe pain, 15 milliamps can cause loss of muscle control, and 70 milliamps can be fatal. Wear protective clothing; ensure skin, clothing, and surrounding areas are dry; do not wear jewelry; and touch only the insulated, nonmetallic parts of electrical components and testing equipment. To prevent electrical arcing, avoid shorting electrical test probes and jumper wires. Electrical arcing can cause bright flashes of light, capable of causing temporary blindness. If electrical injury occurs, immediately shut off power supply and seek medical assistance. Failure to comply may result in serious injury or death to personnel.

GENERAL MAINTENANCE - (CONTINUED)

CLEANING

CAUTION

Do not allow solvents to come in contact with seals, cables, or flexible hoses. These cleaners cause leather, rubber, and synthetic materials to dry out, rot, and lose pliability, making them unserviceable.

Cleaning procedures are the same for most parts and components of vehicle subassemblies.

1. **GENERAL INSTRUCTIONS**
   a. Perform all cleaning operations carefully and thoroughly. Dirt and foreign material can jeopardize vehicle operation and maintenance.
   b. Frequently wipe hands to remove grease, which can collect dust and grit.
   c. Clean all parts before inspection, after repair, and before assembly.
   d. After cleaning, cover all parts or wrap them in plastic or paper to protect them from dust and dirt.
2. **DISASSEMBLED PARTS CLEANING**
   a. Place all disassembled parts in wire baskets for cleaning.
   b. Dry and cover all cleaned parts.
   c. Place parts on or in racks to hold for inspection or repair.
   d. Lightly oil all parts subject to rusting.
   e. Wrap or cover parts if assembly procedures are not completed immediately.
   f. Keep all related parts and components together. Do not mix parts.
3. **CASTINGS**
   a. Clean inner and outer surfaces of castings with cleaning solvents.
   b. Use a stiff brush to remove sludge and gum deposits.
4. **OIL PASSAGES**
   a. Clean passages with wire probes to break up sludge or gum deposits.
   b. Give particular attention to all oil passages in castings and machined parts. Oil passages must be clean and free of any obstructions.
   c. Wash passages by flushing with solvents.
5. **NONMETALLIC PARTS**

   Clean hoses and other nonmetallic parts with soap and water.
6. **BEARINGS**

   Do not use compressed air to clean or dry bearings. Refer to TM 9-14, Inspection, Care, and Maintenance of Antifriction Bearings.
7. **ELECTRICAL COMPONENTS**

   Clean electrical components with clean cloth dampened with cleaning solvent. Care must be taken not to damage protective insulation.

END OF TASK

GENERAL MAINTENANCE - (CONTINUED)

INSPECTION OF INSTALLED ITEMS

Inspection procedures are the same for most parts and components of the vehicle subassemblies. General procedures are detailed in steps 1 through 10. Dimensional standards for parts have been fixed at extremely close tolerances. Use specified inspection equipment for inspection where cracks and other damage cannot be spotted visually. Exercise extreme care in all phases of inspection. All unserviceable components must be repaired or replaced.

1. **CASTINGS**
   a. Inspect all ferrous and nonferrous castings for cracks. Use penetrant methods for inspection. Particularly check areas around studs, pipe plugs, threaded inserts, and sharp corners. Replace cracked castings.
   b. Inspect machined surfaces for nicks, burrs, and raised metal. Mark damaged areas for repair or replacement.
   c. Inspect all pipe plugs, pipe plug openings, capscrews, and capscrew openings for damage and stripped threads. Replace if damaged or threads are stripped.
   d. Check all gasket mating surfaces, flanges on housings, and supports for warpage, using a straightedge or surface plate and feeler gauge. Inspect mating flanges for discolorations, which may indicate leakage. Replace if warped.
   e. Check all castings for cracks, nicks, burrs, and looseness.
2. **BEARINGS**
   Check all bearings for cracks, nicks, burrs, wear, and looseness. Bearings found to have cracks, dents, discoloration, deformation, corrosion, or indications of spalling shall be replaced.
3. **BUSHINGS AND BUSHING-TYPE BEARINGS**
   a. Check all bushings and bushing-type bearings for secure fit and evidence of heating, wear, burrs, nicks, and out-of-round condition.
   b. Check for dirt in lubrication holes or grooves. Holes and grooves must be clean and free from damage.
4. **MACHINED PARTS**
   a. Check machined parts for cracks, distortion, and damage.
   b. Check all surfaces for nicks, burrs, and raised metal.
5. **STUDS, BOLTS, CAPSCREWS, AND NUTS**
   Replace if bent, loose, or stretched, or if threads are damaged.
6. **GEARS**
   a. Inspect all gears for cracks and missing teeth. Replace if cracked or if teeth are missing.
   b. Inspect gear teeth for wear, sharp fins, burrs, and galled or pitted surfaces.
   c. Inspect splines for wear, burrs, and galled or pitted surfaces.
   d. Check keyway slots for wear and damage.
7. **OIL SEALS**
   Oil seals are mandatory replacement items.
8. **CASTING PLUGS**
   Inspect for leakage. Replace plugs when leakage is present.
9. **SPRINGS**
   Inspect for damaged, distorted, and collapsed coils.

GENERAL MAINTENANCE - (CONTINUED)

10. **SNAPRINGS, RETAINING RINGS, AND WASHERS**

    Many of these parts are mandatory replacement items. Inspect all others for obvious damage and replace as necessary.

END OF TASK

REPAIR OR REPLACEMENT

CAUTION

Repaired items must be thoroughly cleaned to prevent metal chips and abrasives from entering working parts of vehicle components.

Repair of most parts and components is limited to general procedures outlined in applicable maintenance instructions and the following detailed steps.

1. **CASTINGS**
   a. All cracked castings must be replaced.
   b. Only minor repairs are permitted for machined surfaces, flanges, and gasket mating surfaces. Remove minor nicks, burrs, and scratches by:
      (1) Using fine-mill file.
      (2) Using abrasive cloth dipped in cleaning solvent.
      (3) Lapping across a surface plate.
   c. Refinishing of machined surfaces to repair damage, warpage, or uneven surfaces is not permitted. Replace castings that have these defects.
   d. Repair damaged threaded pipe plugs and/or capscrew holes with a thread tap, or repair oversize holes with threaded inserts.
2. **BEARINGS**
   a. Replace damaged or worn bearings.
   b. Coat bearings and contact surfaces with correct type of oil to ensure lubrication of parts during initial operation after repair.
3. **STUDS**
   a. Replace all bent and stretched studs.
   b. Repair minor thread damage with a thread restorer file. Replace studs having stripped or damaged threads as follows:
      (1) Remove using a stud remover. Back studs out slowly to avoid heat buildup and seizure, which can cause stud to break off.
      (2) If studs break off too short to use a stud remover, use extractor to remove.
      (3) Replacement studs have a special coating and must have a small amount of antiseize compound applied on threads before stud is installed. Install replacement stud slowly to prevent heat buildup and snapping off.
4. **GEARS**
   a. Remove gears with pullers, as required.
   b. Use the repair methods described under Castings, step 1b, to remove minor nicks, burrs, or scratches on gear teeth.
   c. If keyways are worn or enlarged, replace gear.

GENERAL MAINTENANCE - (CONTINUED)

5. **BUSHINGS AND BUSHING-TYPE BEARINGS**

   When bushings and bushing-type bearings seize to a shaft and spin in the bore, the associated part must also be inspected and replaced as required.

6. **OIL SEALS**

   a. Oil seals are Mandatory Replacement Parts (MRPs).

   b. Remove oil seals, being careful not to damage casting or adapter bore.

   c. Always install new seal in bore, using proper seal-replacing tool.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE

LUBRICATION INSTRUCTIONS

INITIAL SETUP:

NOT APPLICABLE

GENERAL LUBRICATION INSTRUCTIONS

This work package includes all lubrication services to be performed on the M1224 and M1224A1 MRAP vehicles. Lubrication intervals are based on normal operation. Lubricate more often during constant use and less often during inactive periods. Use the correct grade of lubricant for climate and seasonal temperature expected.

LUBRICATION INSTRUCTIONS - (CONTINUED)

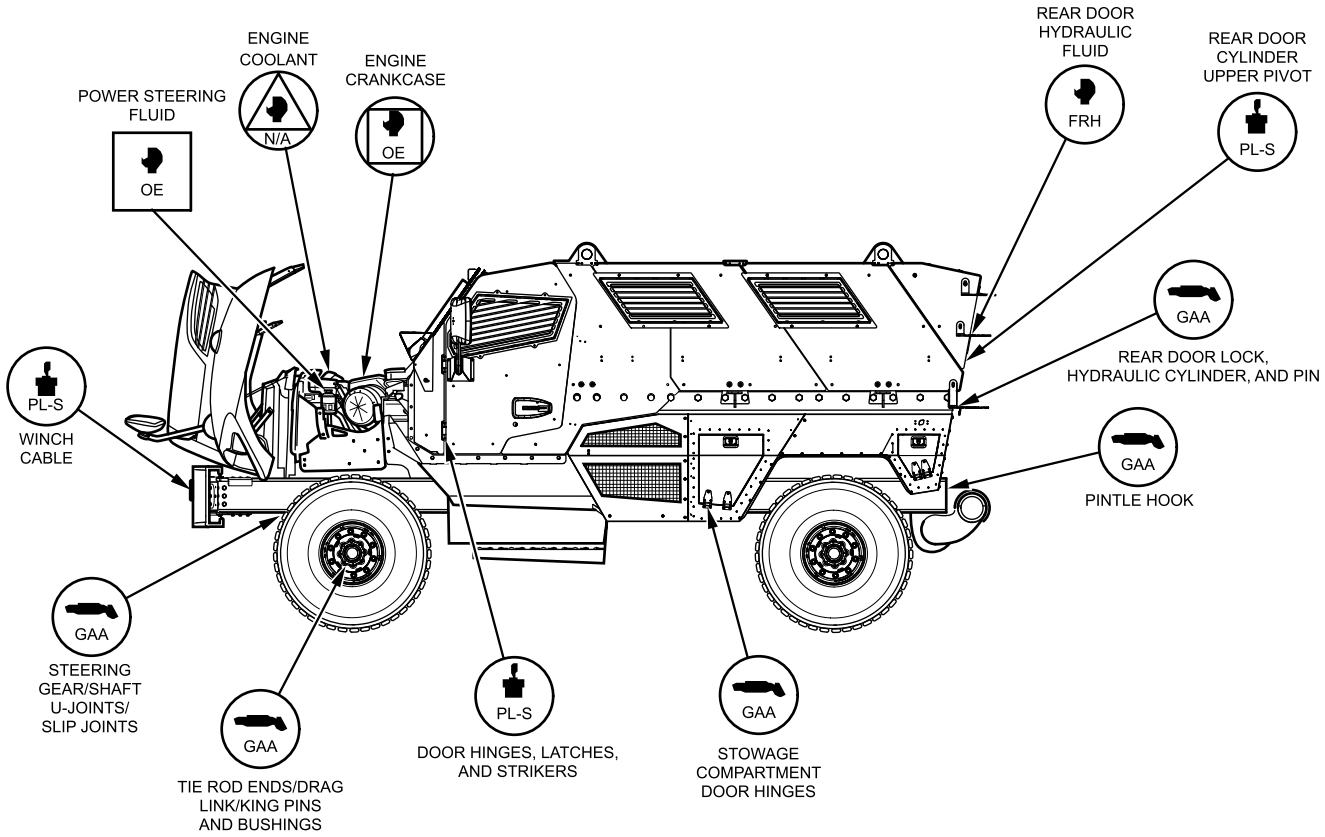


TABLE OF LUBRICANTS		
ID	SPECIFICATION	TYPE OF LUBRICANT
GAA	MIL-PRF-10924	GREASE, ARTILLERY, AND AUTOMOTIVE
PL-S	MIL-PRF-32033	OIL
FRH	MIL-PRF-46170	HYDRAULIC FLUID
OE	MIL-PRF-2104	OIL
N/A	A-A-52624	COOLANT-ANTIFREEZE

SYMBOLS	FREQUENCY	METHOD OF APPLICATION
	1 YEAR OR 6,000 MILES	GREASE GUN
	1 YEAR OR 10,000 MILES	BRUSH
	1 YEAR OR 40,000 MILES	HAND
	2 YEARS OR 72,000 MILES	

B230605484

Figure 1. Body Overview.

LUBRICATION INSTRUCTIONS - (CONTINUED)

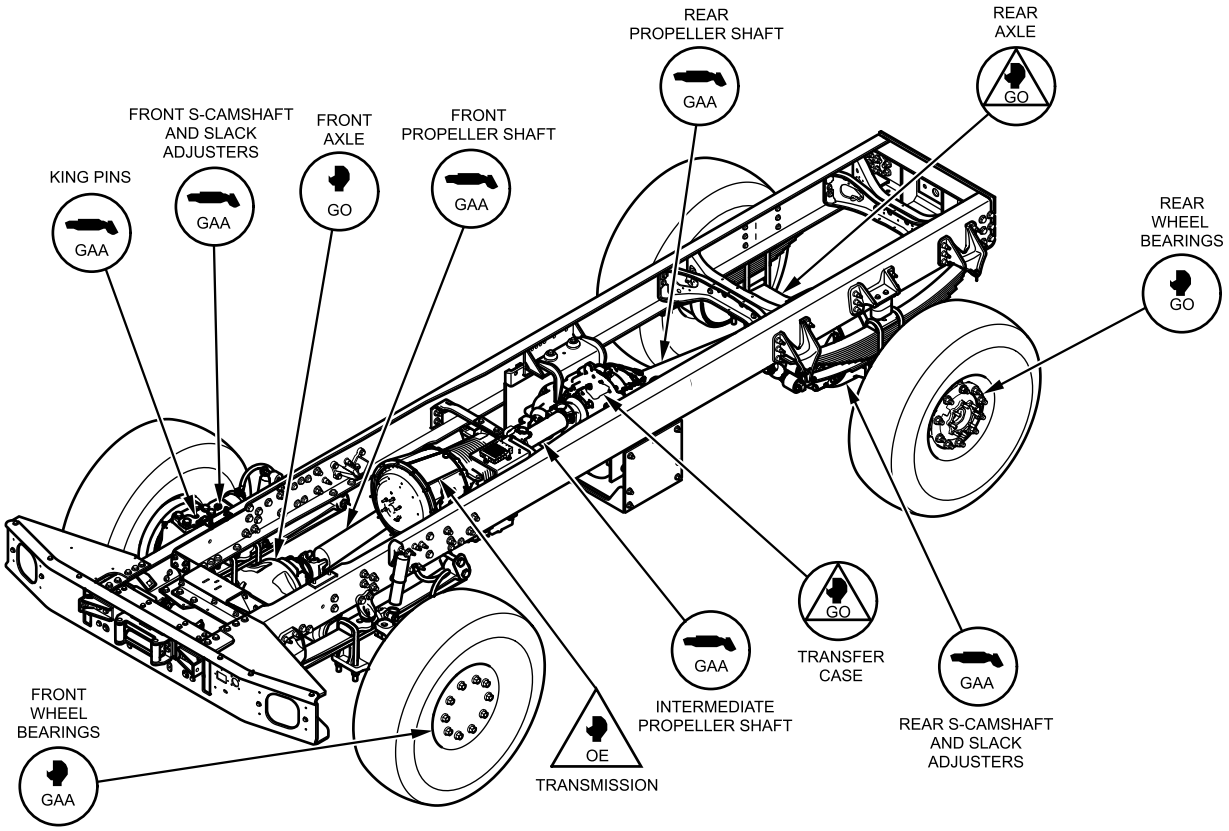


TABLE OF LUBRICANTS		
ID	SPECIFICATION	TYPE OF LUBRICANT
GAA	MIL-PRF-10924	GREASE, ARTILLERY, AND AUTOMOTIVE
OE	MIL-PRF-2104	OIL
GO	SAE J2360	OIL

SYMBOLS	FREQUENCY	METHOD OF APPLICATION
○	1 YEAR OR 10,000 MILES	GREASE GUN
△	2 YEARS OR 12,000 MILES	BRUSH
◎	2 YEARS OR 50,000 MILES	HAND

B230605483

Figure 2. Chassis Overview.

LUBRICATION INSTRUCTIONS - (CONTINUED)

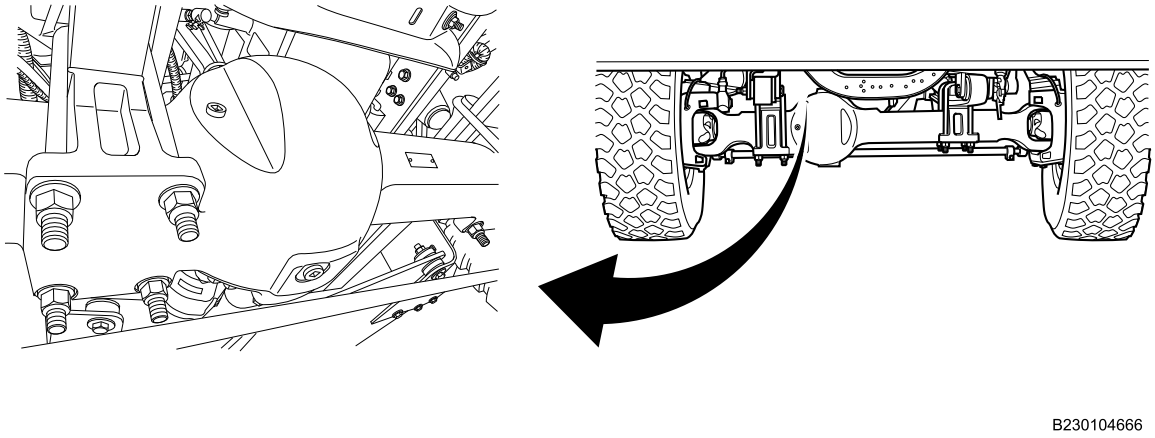


Figure 3. Front Axle.

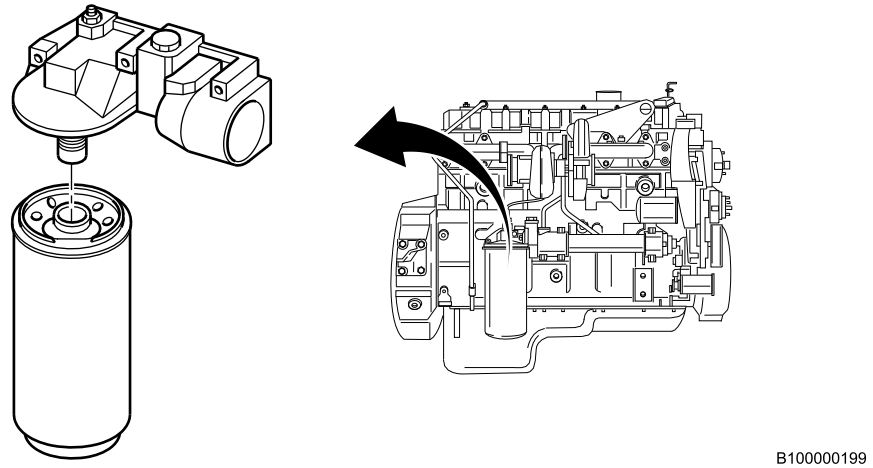


Figure 4. Oil Filter.

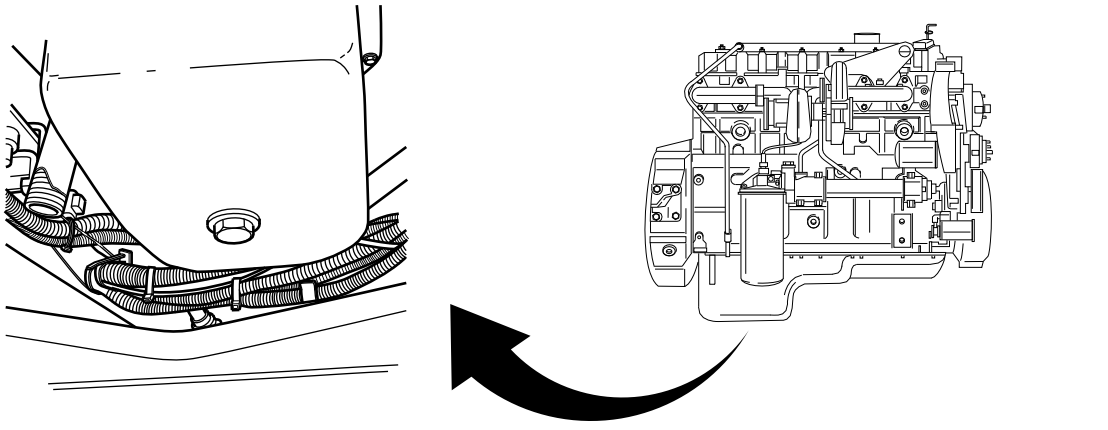
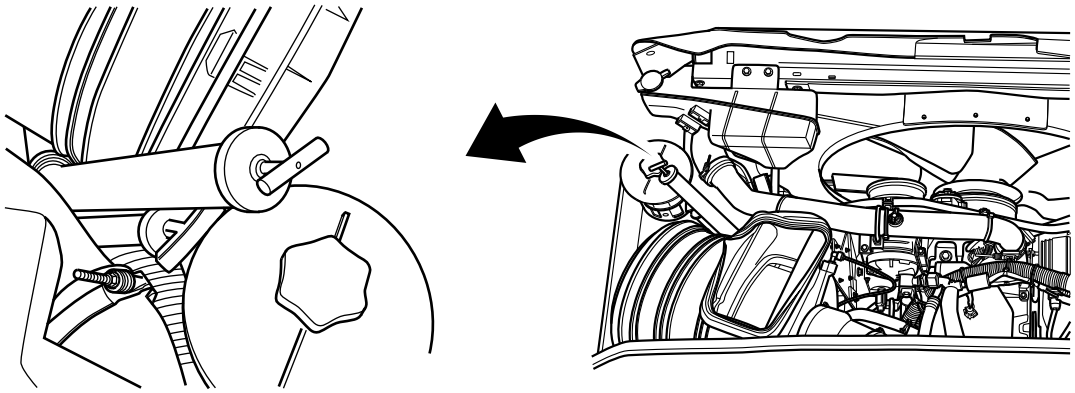


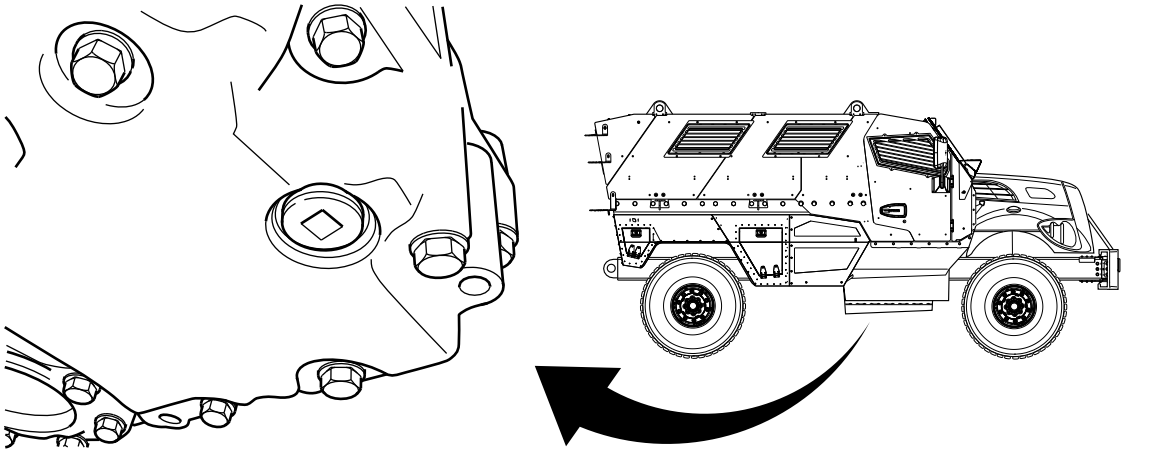
Figure 5. Engine Oil Pan.

LUBRICATION INSTRUCTIONS - (CONTINUED)



B230002972

Figure 6. Engine Oil Dipstick, Transmission Fluid Dipstick, and Power Steering Reservoir.



B230002973

Figure 7. Transmission Drain.

LUBRICATION INSTRUCTIONS - (CONTINUED)

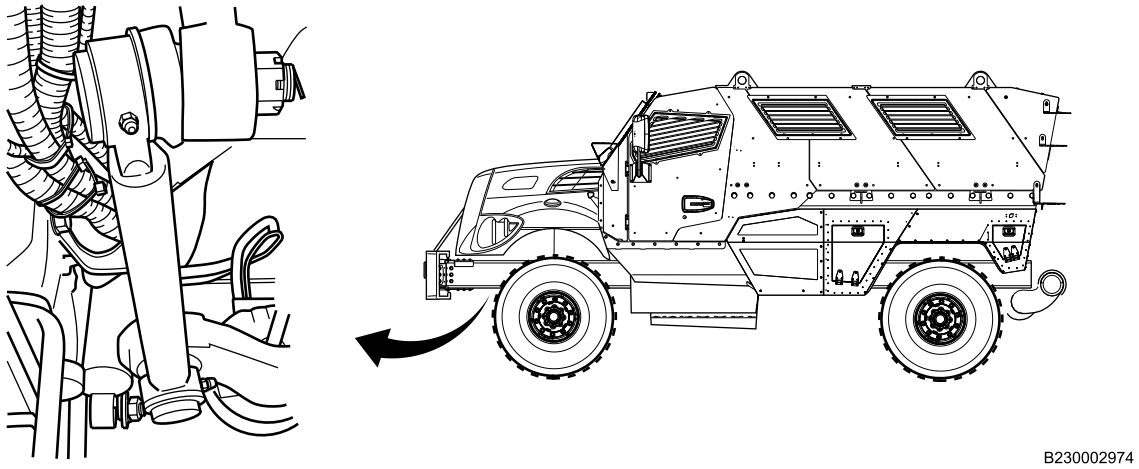


Figure 8. Drag Link.

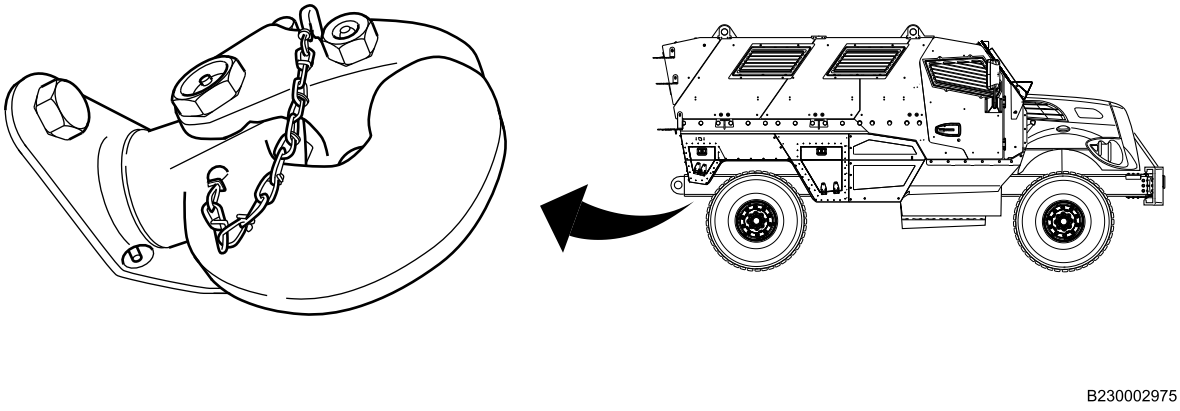


Figure 9. Pintle Hook.

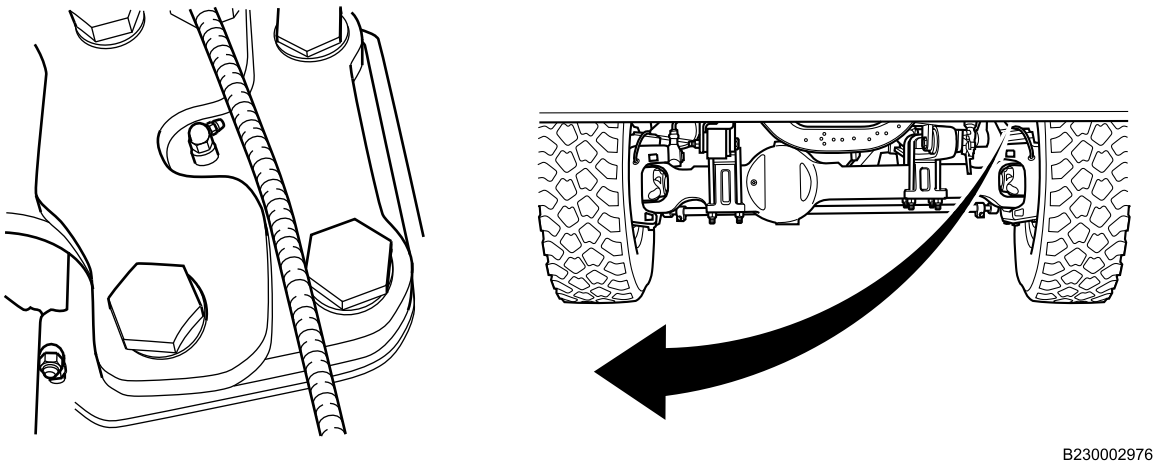


Figure 10. Left Upper King Pin and Inner S-Camshaft (Right Similar).

LUBRICATION INSTRUCTIONS - (CONTINUED)

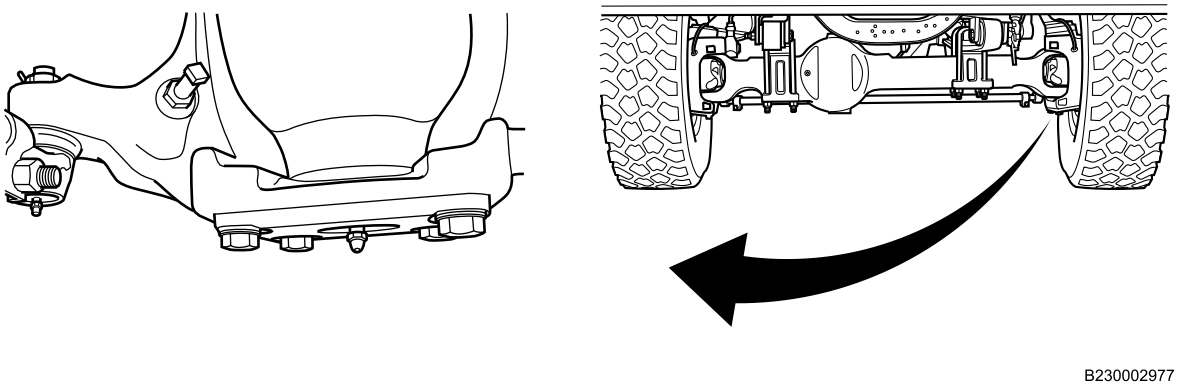


Figure 11. Left Lower King Pin (Right Similar).

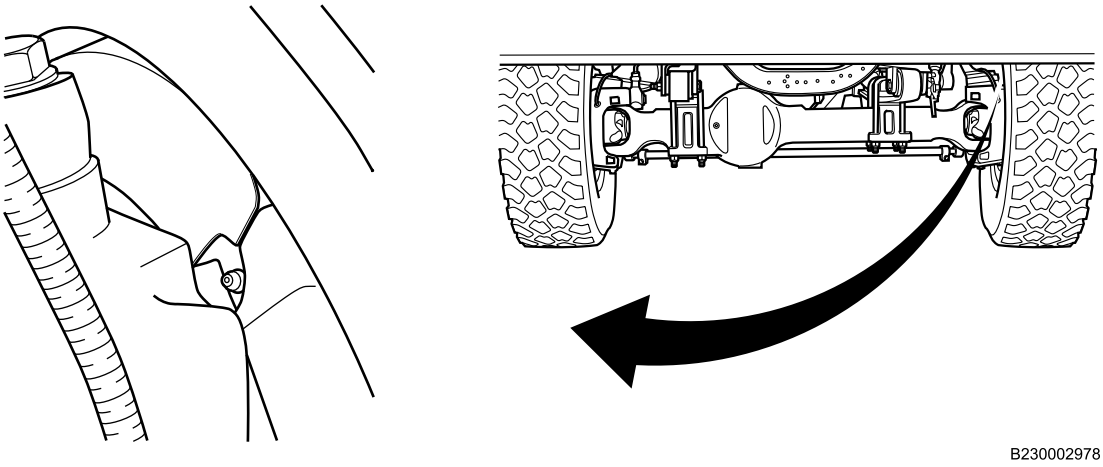


Figure 12. Left Front Outer S-Camshaft (Right Similar).

LUBRICATION INSTRUCTIONS - (CONTINUED)

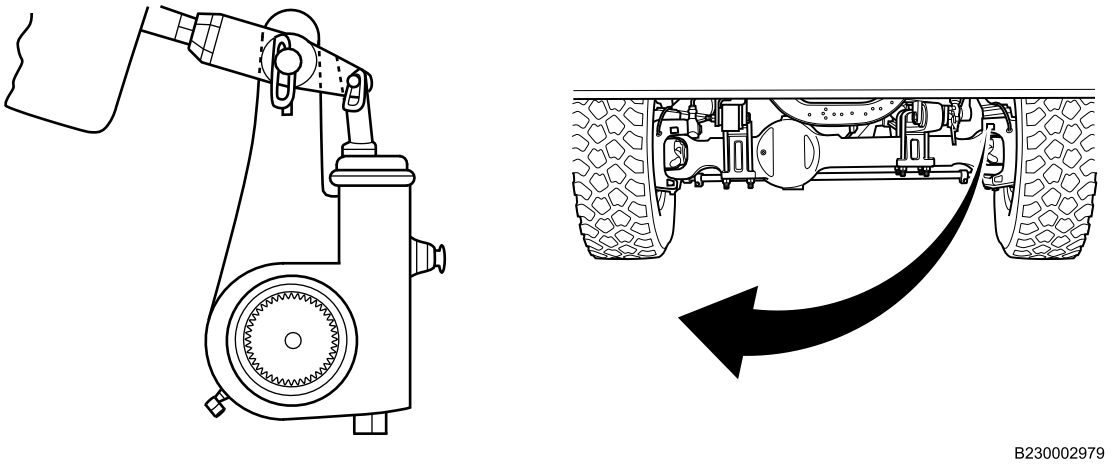


Figure 13. Left Front Slack Adjuster (Right Similar).

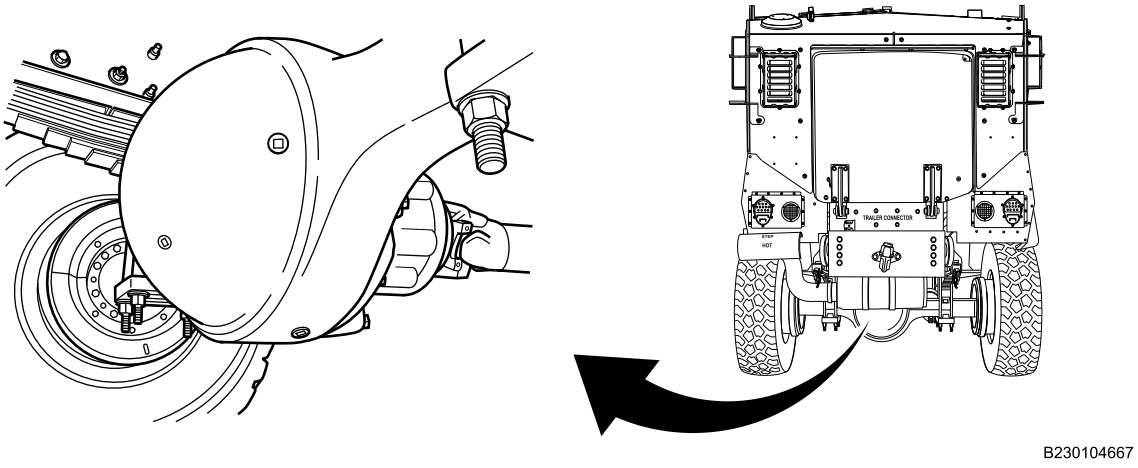


Figure 14. Rear Axle.

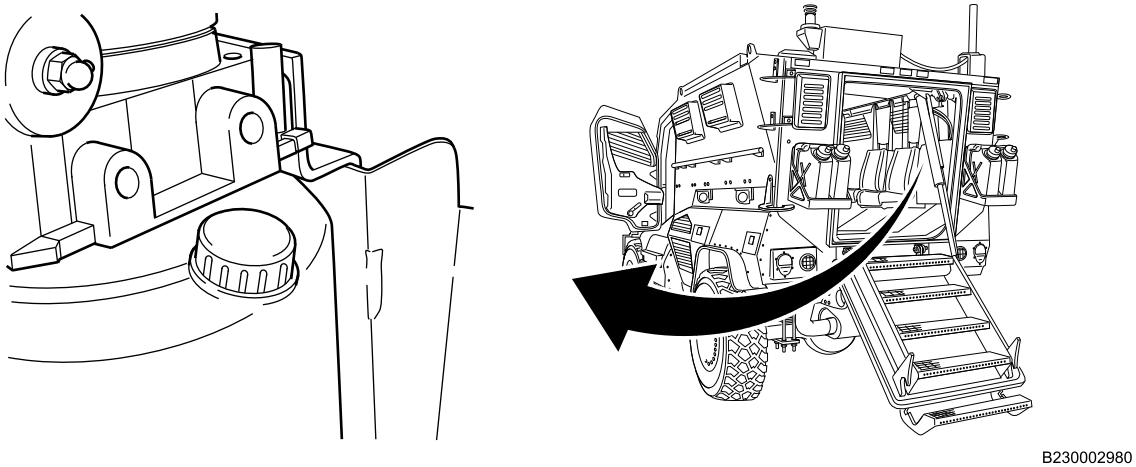
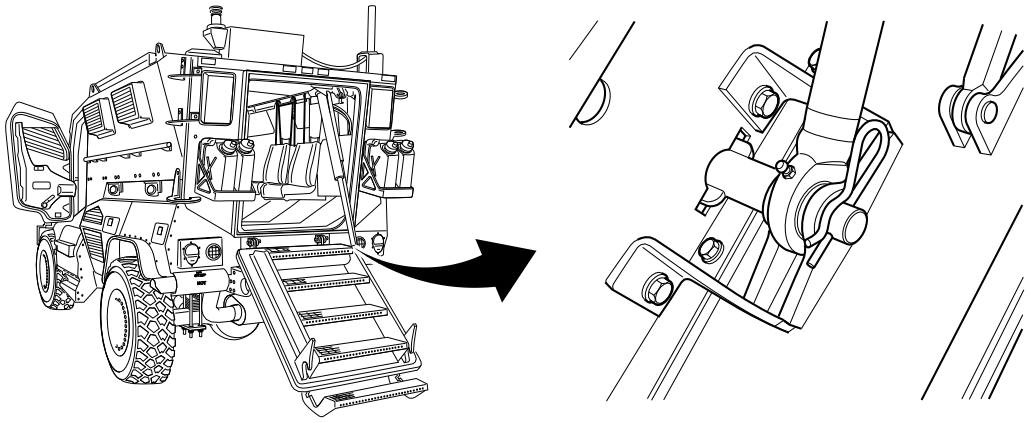


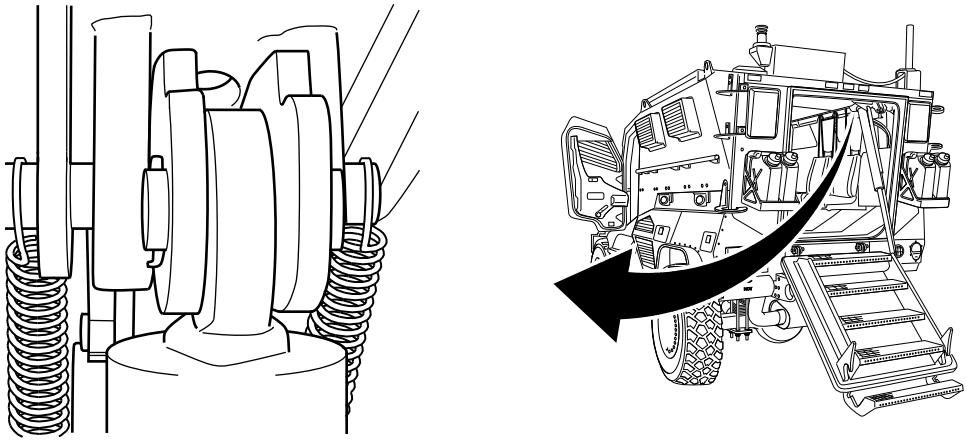
Figure 15. Rear Door Hydraulic Fluid Reservoir.

LUBRICATION INSTRUCTIONS - (CONTINUED)



B230002981

Figure 16. Rear Door Hydraulic Cylinder at Door.



B230002982

Figure 17. Rear Door Hydraulic Cylinder Upper Pivot.

LUBRICATION INSTRUCTIONS - (CONTINUED)

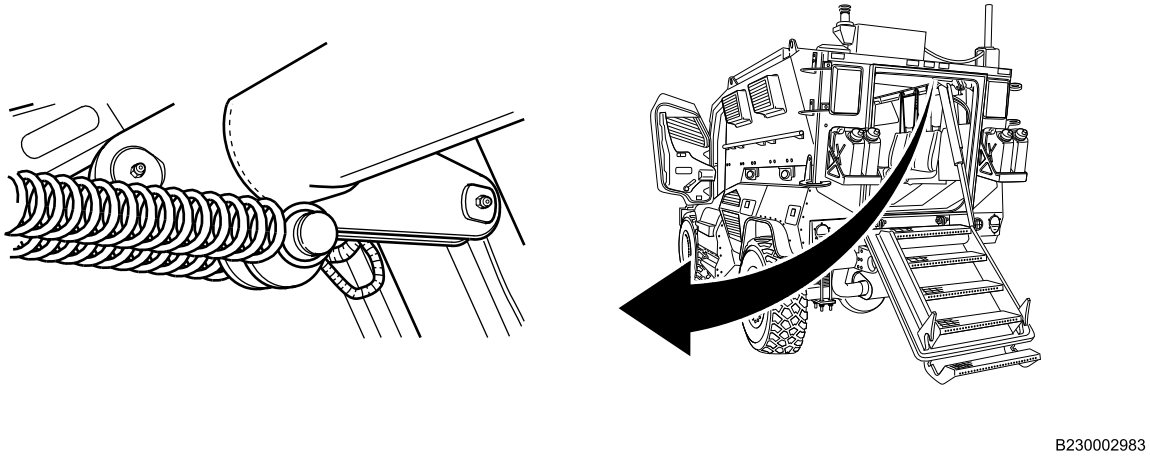


Figure 18. Left Rear Door Lock (Right Similar).

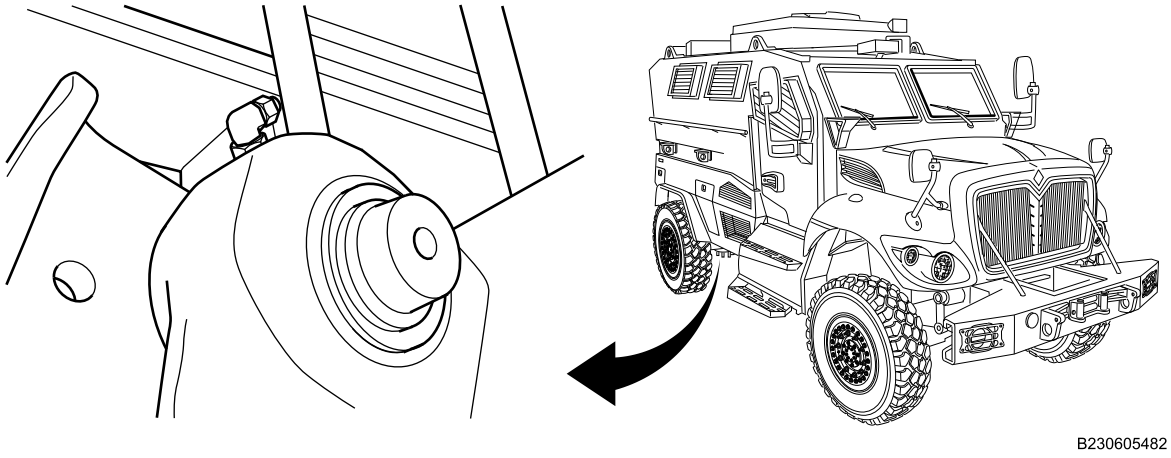


Figure 19. Right Rear Slack Adjuster (Left Similar).

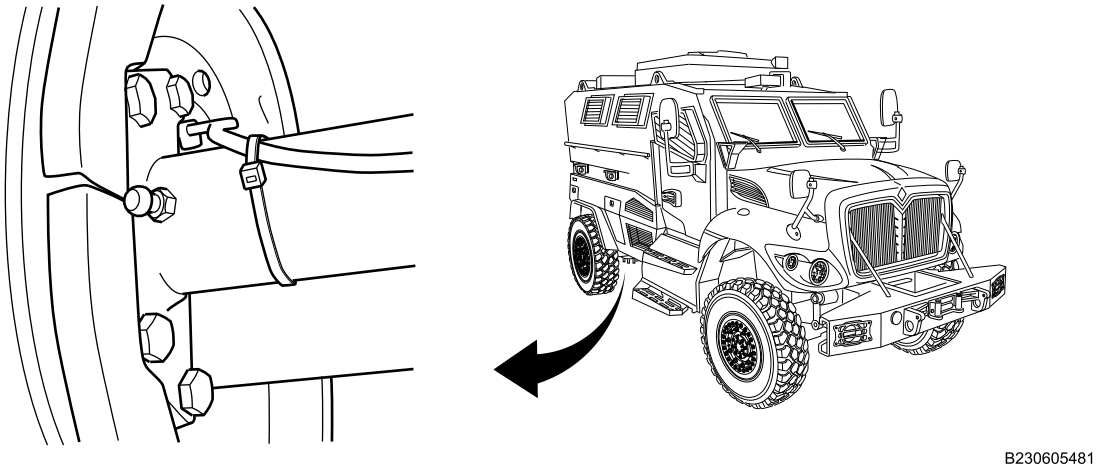
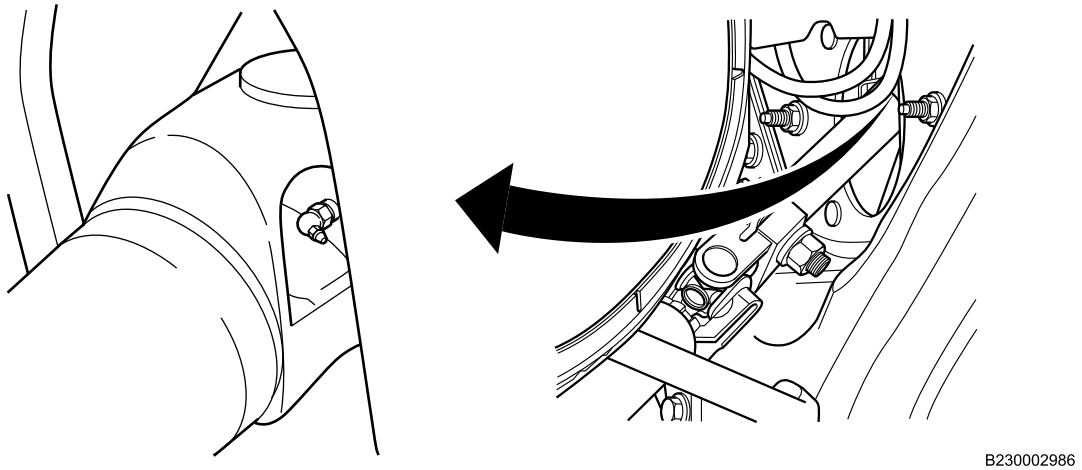


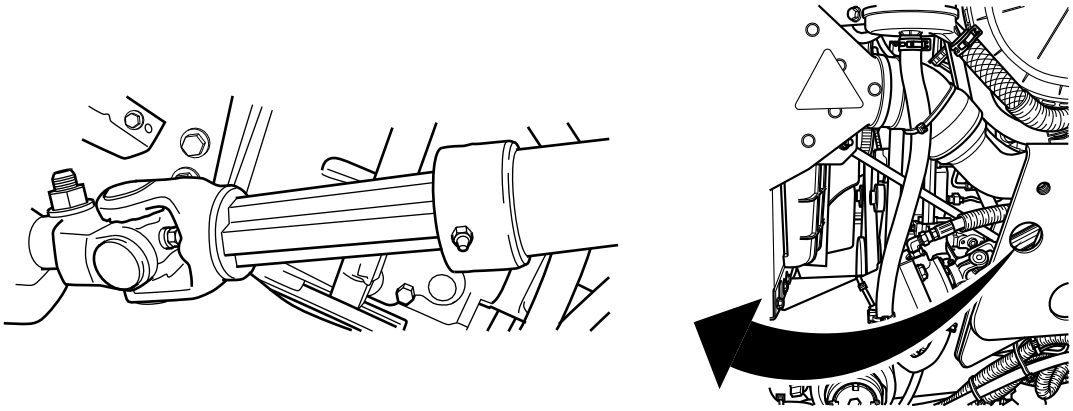
Figure 20. Right Outer S-Camshaft (Left Similar).

LUBRICATION INSTRUCTIONS - (CONTINUED)



B230002986

Figure 21. Intermediate Steering Shaft, Upper.



B230002987

Figure 22. Intermediate Steering Shaft, Lower.

LUBRICATION INSTRUCTIONS - (CONTINUED)

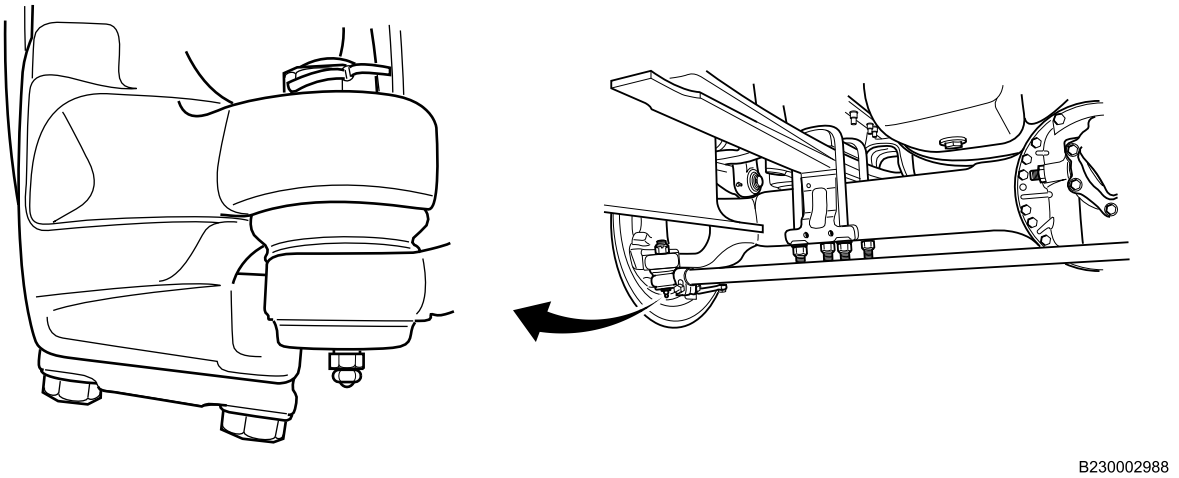


Figure 23. Left Tie Rod End (Right Similar).

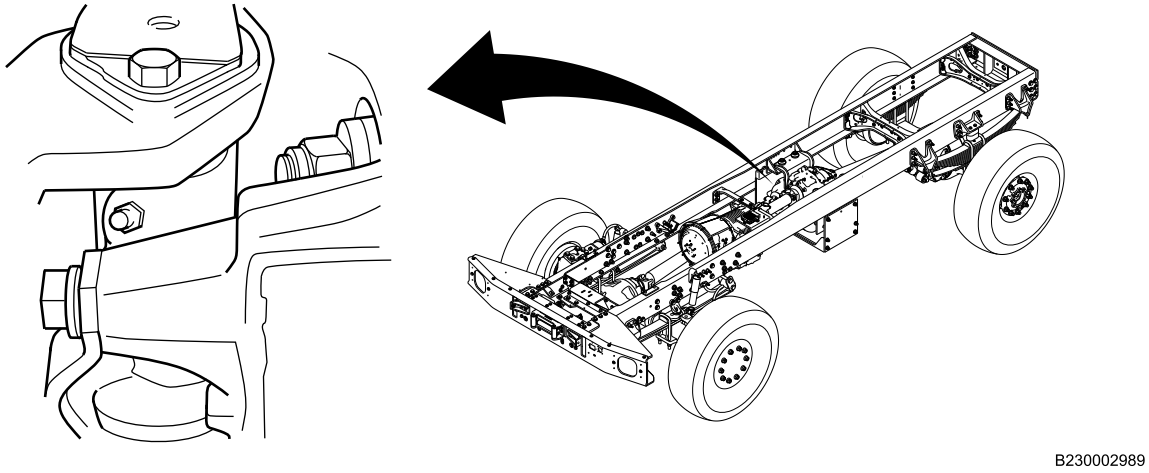


Figure 24. Intermediate Propeller Shaft, Rear.

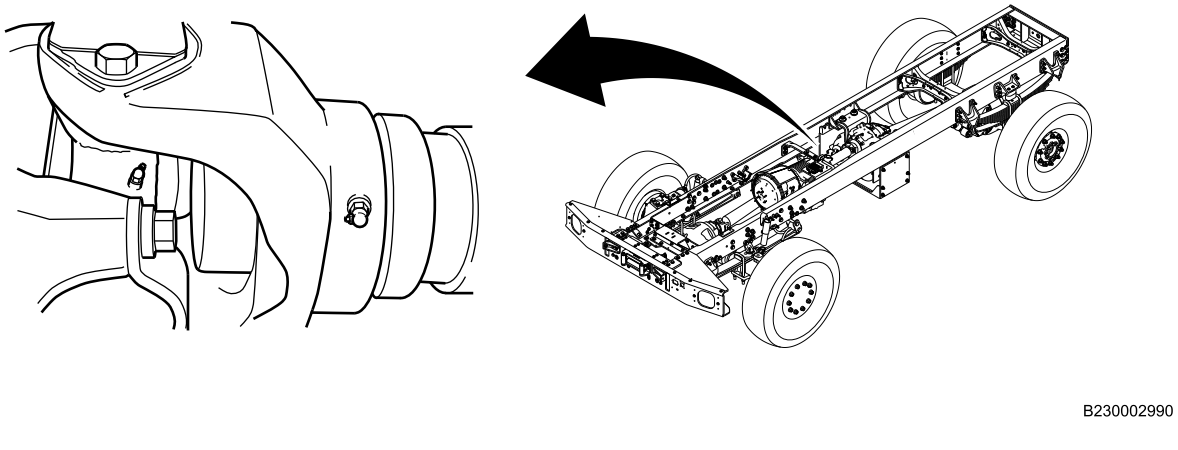
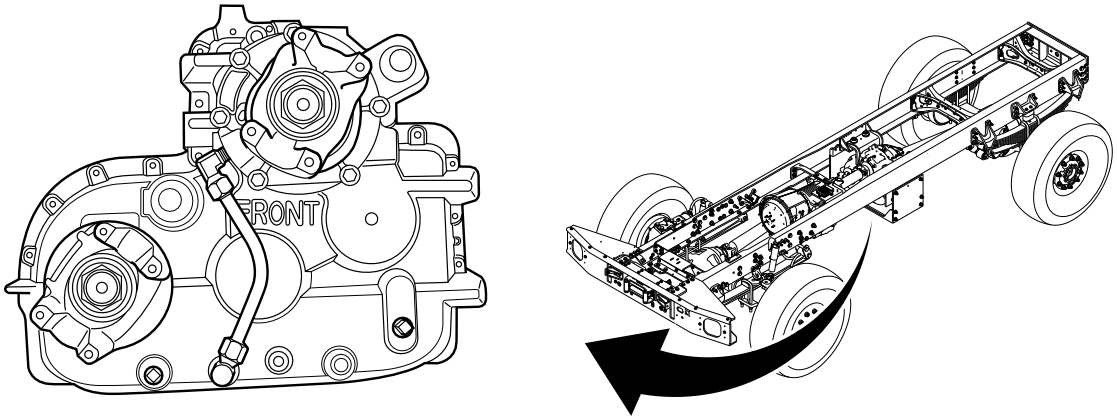


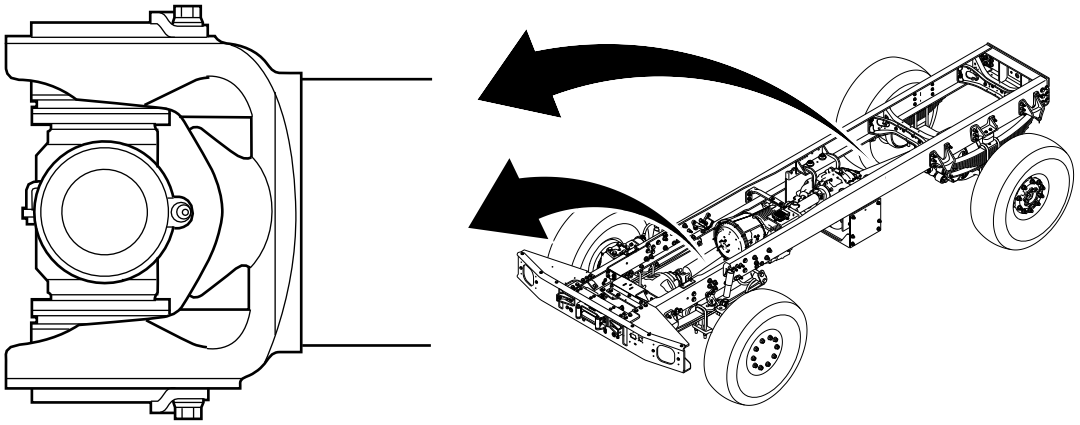
Figure 25. Intermediate Propeller Shaft, Front.

LUBRICATION INSTRUCTIONS - (CONTINUED)



B230002996

Figure 26. Transfer Case.



B230002991

Figure 27. Front and Rear Propeller Shafts — Two Universals Each.

LUBRICATION INSTRUCTIONS - (CONTINUED)

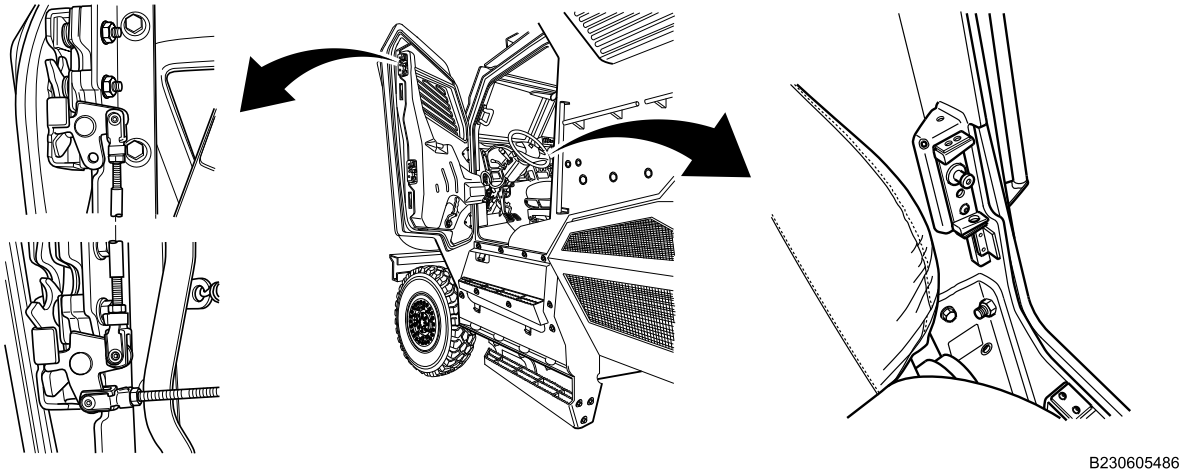


Figure 28. Left Door Latches and Striker, Upper.

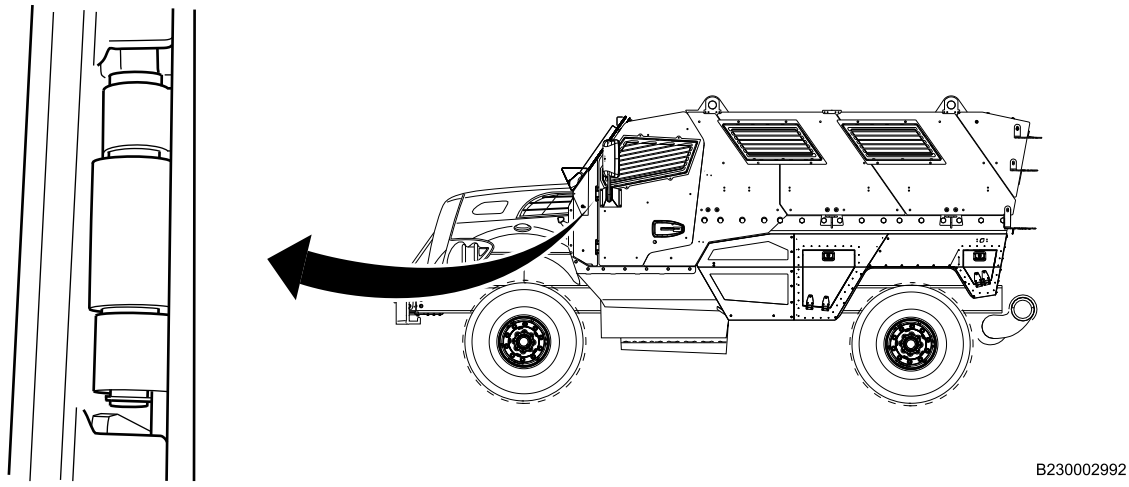


Figure 29. Left Door Hinge, Upper.

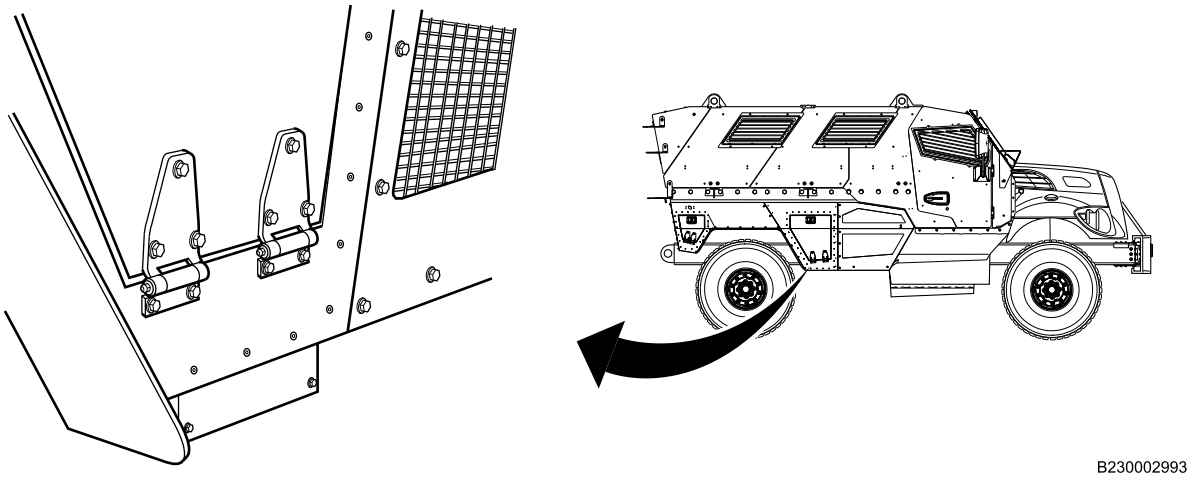
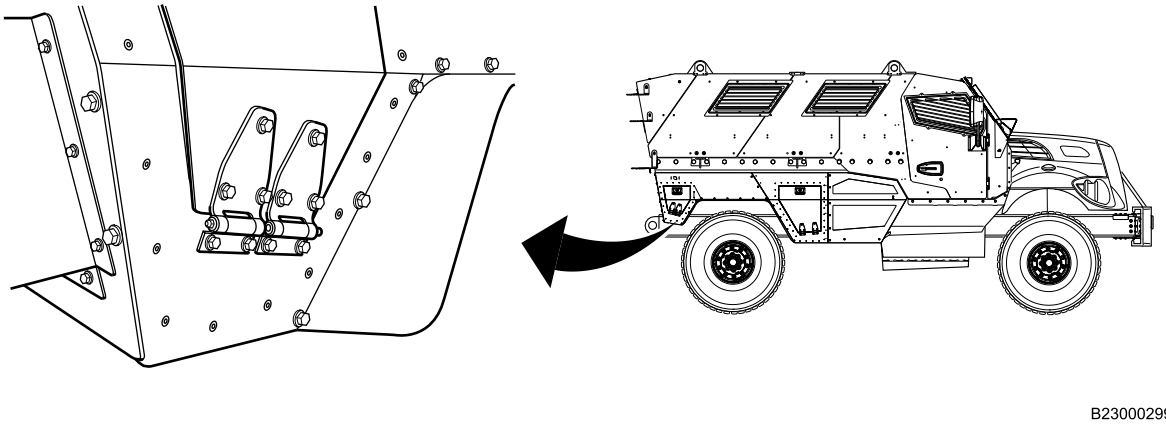


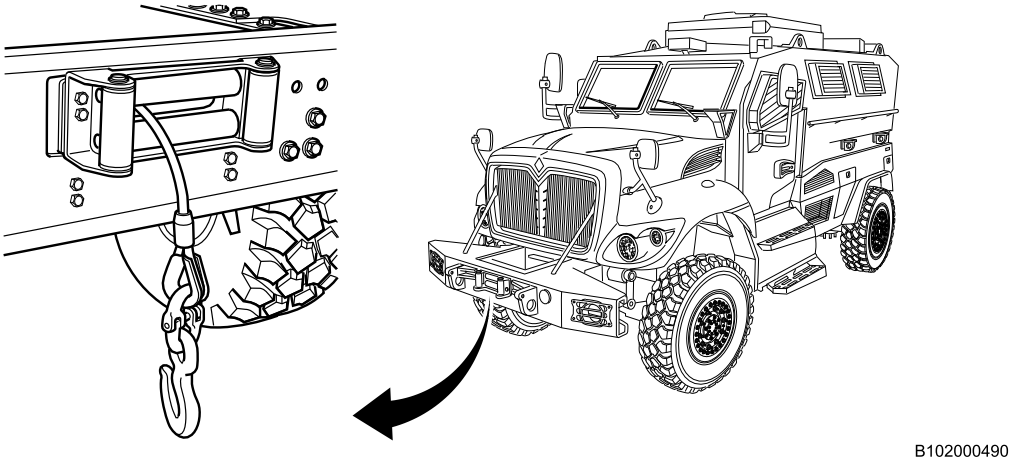
Figure 30. Right Front Stowage Compartment (Left Similar).

LUBRICATION INSTRUCTIONS - (CONTINUED)



B230002994

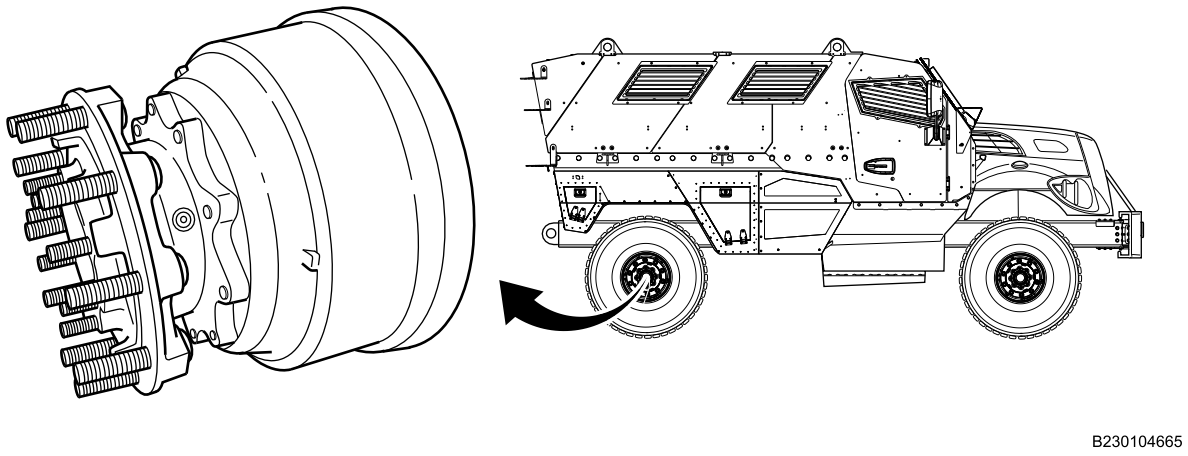
Figure 31. Right Rear Stowage Compartment (Left Similar).



B102000490

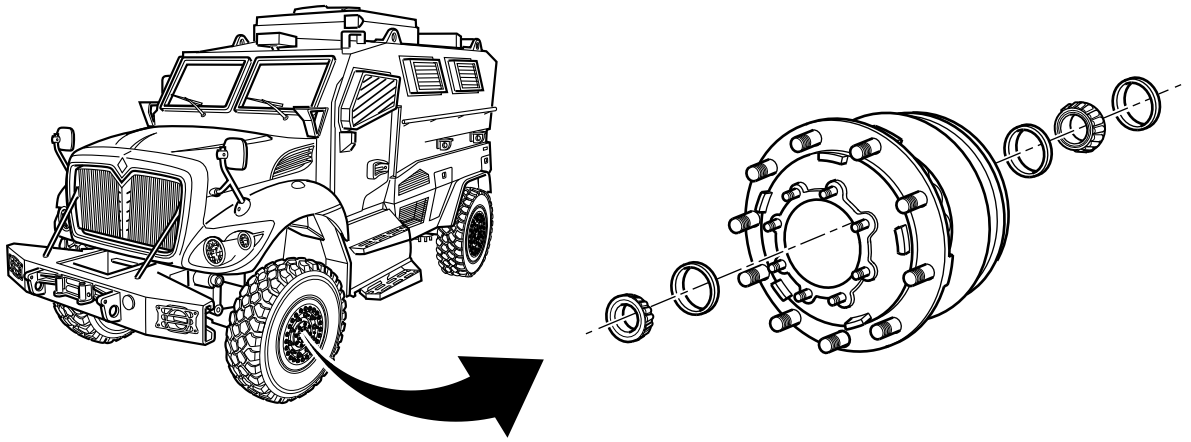
Figure 32. Winch Cable.

LUBRICATION INSTRUCTIONS - (CONTINUED)



B230104665

Figure 33. Rear Wheel Bearings.



B230605485

Figure 34. Front Wheel Bearings.

LUBRICATION INSTRUCTIONS - (CONTINUED)

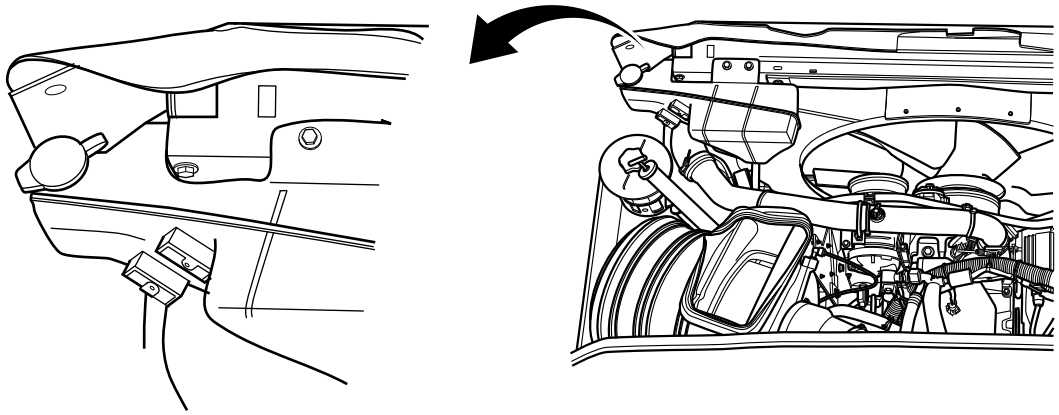


Figure 35. Engine Coolant.

Table 1. Lubrication Schedule.

Refer to Figure 4, Figure 5, and Figure 6 for visual details.					
PART	**CHANGE INTERVAL**	**CAPACITY**	**FLUID/ LUBRICANT**	**TEMPERATURE RANGE**	**NATIONAL STOCK NUMBERS (NSN)**
Engine Crankcase Oil (Refer to figures 1, 4, 5, 6)	1 yr or 6,000 miles	30 qt (28.3L)	MIL-PRF-2104 OE/HDO-15-40 SAE 15W-40 MIL-PRF-46167 OEA-30 (SAE 0W-30)	0ºF to +120ºF (-18ºC to +49ºC) < -50ºF to +90ºF (< -45ºC to +32ºC)	9150-01-178-4725 (1 qt) 9150-01-421-1424 (5 gal) 9150-01-421-1432 (55 gal) 9150-00-402-4478 (1 qt) 9150-00-402-2372 (5 gal) 9150-00-491-7197 (55 gal)
Power Steering Fluid (Refer to Figure 1, 6)	1 yr or 40,000 miles	5.5 qt (5.2L)	MIL-PRF-2104 OE/HDO-15-40 (SAE 15W-40) OE/HDO-10 (SAE 10W) MIL-PRF-46167 OEA-30 (SAE 0W-30)	0ºF to +120ºF (-18ºC to +49ºC) < -15ºF to +120ºF (< -26ºC to +49ºC) < -50ºF to +90ºF (< -45ºC to +32ºC)	9150-01-178-4725 (1 qt bottle) 9150-01-421-1424 (5 gal) 9150-01-421-1432 (55 gal) 9150-01-496-1957 (1 qt bottle) 9150-00-186-6668 (5 gal) 9150-00-191-2772 (55 gal) 9150-00-402-4478 (1 qt) 9150-00-402-2372 (5 gal) 9150-00-491-7197 (55 gal)

LUBRICATION INSTRUCTIONS - (CONTINUED)

Refer to Figure 4, Figure 5, and Figure 6 for visual details.					
Steering Gear/ Shaft U-Joints/ Slip Joint (Refer to figures 1, 21, 22)	1 yr 10,000 miles	As required	MIL-PRF-10924 GAA	All temperatures	9150-01-197-7693 (14 oz) 9150-01-197-7690 (1.75 lb) 9150-01-197-7689 (6.5 lb) 9150-01-197-7692 (35 lb) 9150-01-197-7691 (120 lb) 9150-01-501-7745 (370 lb)
Front Wheel Bearing (Refer to figures 2, 34)	1 yr or 10,000 miles	As required	MIL-PRF-10924 GAA	All temperatures	9150-01-197-7693 (14 oz) 9150-01-197-7690 (1.75 lb) 9150-01-197-7689 (6.5 lb) 9150-01-197-7692 (35 lb) 9150-01-197-7691 (120 lb) 9150-01-501-7745 (370 lb)
Rear Wheel Bearing (Refer to figures 2, 33)	1 yr or 10,000 miles	1 qt (.95L)	SAE J2360 GO-85W/140 SAE 85W-140 SAE J2360 GO-75 (SAE 75)	10ºF to 120ºF (-12ºC to +49ºC) -40ºF to +50ºF (-40ºC to +10ºC)	9150-01-048-4591 (1 qt) 9150-01-035-5395 (5 gal) 9150-01-035-5396 (55 gal) 9150-01- 035-5390 (1 qt) 9150-01-035-5391 (5 gal)
Tie Rod Ends/ Drag Link/King Pins and Bushings (Refer to figures 1, 8, 10, 11, 23)	1 yr or 10,000 miles	As required	MIL-PRF-10924 GAA	All temperatures	9150-01-197-7693 (14 oz) 9150-01-197-7690 (1.75 lb) 9150-01-197-7689 (6.5 lb) 9150-01-197-7692 (35 lb) 9150-01-197-7691 (120 lb) 9150-01-501-7745 (370 lb)
Rear Door Lock, Hydraulic Cylinder, Pin, Stowage Compartment Door Hinges, and Pintle Hook (Refer to figures 1, 9, 16, 18)	1 yr or 10,000 miles	As required	MIL-PRF-10924 GAA	All temperatures	9150-01-197-7693 (14 oz) 9150-01-197-7690 (1.75 lb) 9150-01-197-7689 (6.5 lb) 9150-01-197-7692 (35 lb) 9150-01-197-7691 (120 lb) 9150-01-501-7745 (370 lb)

LUBRICATION INSTRUCTIONS - (CONTINUED)

Refer to Figure 4, Figure 5, and Figure 6 for visual details.					
Front Axle (Refer to figures 2, 3)	1 yr or 10,000 miles	13 qt (12.3L)	SAE J2360 GO-85W/140 (SAE 85W-140) SAE J2360 GO-75 (SAE 75W)	10ºF to 120ºF (-12ºC to +49ºC) -40ºF to +50ºF (-40ºC to +10ºC)	9150-01-048-4591 (1 qt) 9150-01-035-5395 (5 gal) 9150-01-035-5396 (55 gal) 9150-01- 035-5390 (1 qt) 9150-01-035-5391 (5 gal)
Rear Axle (Refer to figures 2, 14)	2 yrs or 50,000 miles	19.75 qt (18.7L)	SAE J2360 GO-85W/140 (SAE 85W-140) SAE J2360 GO-75 (SAE 75W)	10ºF to 120ºF (-12ºC to +49ºC) -40ºF to +50ºF (-40ºC to +10ºC)	9150-01-048-4591 (1 qt) 9150-01-035-5395 (5 gal) 9150-01-035-5396 (55 gal) 9150-01- 035-5390 (1 qt) 9150-01-035-5391 (5 gal)
Transfer Case (Refer to figure 2. 26)	2 yrs or 50,000 miles	8 qt (7.57L)	SAE J2360 GO-80/90 (SAE 80W-90) SAE J2360 GO-75 (SAE 75W)	-10ºF to 120ºF (-23ºC to +49ºC) -40ºF to +50ºF (-40ºC to +10ºC)	9150-01-422-9329 (1 qt) 9150-01-422-9335 (5 gal) 9150-01-422-9340 (55 gal) 9150-01- 035-5390 (1 qt) 9150-01-035-5391 (5 gal)
Propeller Shafts, U-Joints and Slip Joint (Refer to figures 2, 24, 25, 27)	1 yr or 10,000 miles	As required	MIL-PRF-10924 GAA	All temperatures	9150-01-197-7693 (14 oz) 9150-01-197-7690 (1.75 lb) 9150-01-197-7689 (6.5 lb) 9150-01-197-7692 (35 lb) 9150-01-197-7691 (120 lb) 9150-01-501-7745 (370 lb)
Trans-mission Fluid (Refer to figures 2, 6, 7)	2 yrs or 12,000 miles	29 qts (27.4 L) dry w/filter 19 qt (18 L) w/filter, drain and refill	MIL-PRF-2104 OE/HDO-15-40 (SAE 15W-40) MIL-PRF-46167 OEA-30 (SAE 0W-30)	-10ºF to +120ºF (-23ºC to +49ºC) < -50ºF to +90ºF (< -45ºC to +32ºC)	9150-01-178-4725 (1 qt bottle) 9150-01-421-1424 (5 gal) 9150-01-421-1432 (55 gal) 9150-00-402-4478 (1 qt) 9150-00-402-2372 (5 gal) 9150-00-491-7197 (55 gal)
Air Brakes – S-Camshafts and Slack Adjusters (Refer to figures 2, 10, 12, 13, 19, 20)	1 yr or 10,000 miles	As required	MIL-PRF-10924 GAA	All temperatures	9150-01-197-7693 (14 oz) 9150-01-197-7690 (1.75 lb) 9150-01-197-7689 (6.5 lb) 9150-01-197-7692 (35 lb) 9150-01-197-7691 (120 lb) 9150-01-501-7745 (370 lb)

LUBRICATION INSTRUCTIONS - (CONTINUED)

Refer to Figure 4, Figure 5, and Figure 6 for visual details.					
Door Hinges, Latches, Strikers, Seat Adjuster Slides, BII Storage Int/Ext, Rear Door Cylinder Upper Pivot, and Winch Cable (Refer to figures 1, 17, 18, 28, 29, 30, 31, 32)	1 yr or 10,000 miles	As required	MIL-PRF-32033 PL-S	-40ºF to +120ºF (-40ºC to +49ºC)	9150-00-836-8641 (1/2 oz) 9150-00-261-8146 (1 oz) 9150-00-273-2389 (4 oz) 9150-00-458-0075 (16 oz aerosol) 9150-01-374-2021 (16 oz sprayer) 9150-00-231-6689 (1 qt) 9150-00-231-9045 (1 gal) 9150-00-231-9062 (5 gal) 9150-00-281-2060 (55 gal)
Rear Door Hydraulic Fluid (Refer to figures 1, 15)	1 yr or 10,000 miles	6.5 qt (6.2 L)	MIL-PRF-46170 Type I	-40ºF to +120ºF (-40ºC to +49ºC)	9150-00-111-6256 (1 qt) 9150-00-111-6254 (1 gal) 9150-01-158-0462 (55 gal)
Coolant – Antifreeze (Refer to figures 1, 35)	2 yrs or 72,000 miles	29 qt (27.6 L)	A-A-52624 Type 1B (60% Ethylene Glycol Concentration) A-A-52624 Type 1C (50% Ethylene Glycol Concentration)	< -50ºF to +120ºF (< -45ºC to +49ºC) < -30ºF to +120ºF (< -34ºC to +49ºC)	6850-01-464-9266 (1 gal) 6850-01-464-9263 (5 gal) 6850-01-464-9096 (55 gal) 6850-01-471-6530 (1 gal) 6850-01-471-6534 (5 gal) 6850-01-471-6521 (55 gal)

END OF WORK PACKAGE

FIELD MAINTENANCE

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION

Scope

This work package includes complete instructions for making items authorized to be manufactured or fabricated at the field maintenance level.

How To Use The Index Of Manufactured Items

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the information which covers fabrication criteria.

Explanation Of The Illustrations Of Manufactured Items

All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. For additional information, refer to TM 9-2355-106-23P. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Table 2. Index of Manufactured Items.

PART NO./DRAWING NO.	NOMENCLATURE	FIGURE NO.
15210029168X375MM	Insulator, Hose, Rear Brake Hoses, Length 14.8 in. (375 mm)	Figure 8
15210029168X500MM	Insulator, Hose, Rear Brake Hoses, Length 19.7 in. (500 mm)	Figure 8
15210029168X541MM	Insulator, Hose, Fuel Fired Heater Fuel Pump and Supply Hoses, Length 21.3 in. (541 mm)	Figure 8
15210029168X1520MM	Insulator, Hose, Life Support System Interior Hoses, Length 59.8 in. (1520 mm)	Figure 4
1822646C1X7.75IN	Conduit, High Pressure Injection Pump Hose, Length 7.75 in. (196.9 mm)	Figure 29
2000310C1X1120MM	Conduit, Three-Way Valve and Exterior Coolant Hoses, Length 44.1 in. (1120 mm)	Figure 2
2000310C1X1130MM	Conduit, Three-Way Valve and Exterior Coolant Hoses, Length 44.5 in. (1130 mm)	Figure 2
2000310C1X1470MM	Conduit, Three-Way Valve and Exterior Coolant Hoses, Length 57.9 in. (1470 mm)	Figure 2
2000310C1X1757MM	Conduit, Three-Way Valve and Exterior Coolant Hoses, Length 69.2 in. (1757 mm)	Figure 2
2000310C1X2618MM	Conduit, Three-Way Valve and Exterior Coolant Hoses, Length 103.1 in. (2618 mm)	Figure 2
2605751C1X2388MM	Hose, Fuel Fired Heater Feed, Length 94 in. (2388mm)	Figure 9
2643669R1X300MM	Loom, Center Harness, Length 11.8 in. (300mm)	Figure 29
2644081R1X825MM	Conduit, DCM Brake Valves, 1.5 in. (38.1 mm) ID, Length 32.5 in. (825 mm)	Figure 21
2644094R1X	Conduit, Fan Drive, Length 11.5 in. (292 mm)	Figure 12
2644094R1X	Conduit, Fuel Fired Heater, Length 93.7 in. (2380 mm)	Figure 25
2644094R1X955MM	Conduit, Air Cleaner Assembly, Length 37.6 in. (955 mm)	Figure 7
2645001R1X620MM	Insulator, Hose, Transmission Oil Cooler, Length 24.4 in. (620 mm)	Figure 13
2645520R1X	Molding, Trim, Carrier Assembly, Driver Control, Length 9.1 in. (230 mm)	Figure 27
2645520R1X	Molding, Trim, Carrier Assembly, Driver Control, Length 6.7 in. (170 mm)	Figure 27
3113168C1LX22IN	Hose, Washer Supply, Windshield Wiper System, Length 22 in. (558.8 mm)	Figure 14
3113169C1LX90IN	Hose, Washer Supply, Windshield Wiper System, Length 90 in. (2286 mm)	Figure 14
3113865C1X16.5IN	Sleeve, Hose, Hydraulic Hoses, Length 16.5 in. (419.1 mm)	Figure 30

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION - (CONTINUED)

PART NO./DRAWING NO.	NOMENCLATURE	FIGURE NO.
3577746C1X600MM	Insulator, Tubing, Gladhands, Length 23.6 in. (600 mm)	Figure 8
3577746C1X1400MM	Insulator, Tubing, Gladhands, Length 55.1 in. (1400 mm)	Figure 8
3692802C1X51MM	Insert, Wire Reinforced PVC, Front Frame Crossmember, Length 2 in. (51 mm)	Figure 27
3692802C1X152MM	Insert, Wire Reinforced PVC, Front Frame Crossmember, Length 6 in. (152 mm)	Figure 27
3692802C1X203MM	Insert, Wire Reinforced PVC, Flat Back Cowl Side Panel, Length 8 in. (203 mm)	Figure 27
3692802C1X457MM	Insert, Wire Reinforced PVC, Flat Back Cowl Side Panel, Length 18 in. (457 mm)	Figure 27
3693128C1X	Tape, Trim, Foam, Right and Left Inner Cabin Doors	Figure 23
3693128C1X2591MM	Tape, Trim, Foam, Underbody, Length 102 in. (2591 mm)	Figure 23
3693128C1X11430MM	Tape, Trim, Foam, Window Armor Glass, 37.5 ft (11.43 m)	Figure 23
375048C1X970MM	Loom, Conduit, Transfer Case Oil Cooler, Length 38.2 in. (970 mm)	Figure 28
375048C1X1770MM	Loom, Conduit, Transfer Case Oil Cooler, Length 69.7 in. (1770 mm)	Figure 28
375054C2X1070MM	Hose, Nonmetallic, Transfer Case Oil Cooler, Length 42.1 in. (1070 mm)	Figure 28
375054C2X1870MM	Hose, Nonmetallic, Transfer Case Oil Cooler, Length 73.6 in. (1870 mm)	Figure 28
375055C2X89.44IN	Tubing, Nonmetallic Air Dryer, Length 89.44 in. (2271.8 mm)	Figure 15
3820521C92	Hose Assembly, Transfer Case Oil Cooler Inlet	Figure 28
3821623C91	Hose Assembly, Transfer Case Oil Cooler Outlet	Figure 28
3823241C1X2050MM	Seal, Rubber, Flat Back Cowl, Length 80.7 in. (2050 mm)	Figure 22
3835432C1X	Seal, Rubber, Storage Boxes	Figure 26
3861924C1X114.2MM	Molding, Nonmetallic, Windshield Wiper System, Length 4.5 in. (114.2 mm)	Figure 27
417195C3X750MM	Tube, Black Nylon, Engine Cold Start Hosing, 1/8 in. (3.2 mm) OD, Length 29.5 in. (750 mm)	Figure 18
417196C3X12IN	Tube, Black Nylon, Fan and Fan Drive, 1/4 in. (6.4 mm) OD, Length 12 in. (304.8 mm)	Figure 11
417196C3X120IN	Tube, Black Nylon, Right and Left Door Actuator Assemblies, 1/4 in. (6.4 mm) OD, Length 120 in. (3048 mm)	Figure 18
417196C3X520MM	Tube, Black Nylon, Engine Exhaust Brake, 1/4 in. (6.4 mm) OD, Length 20.5 in. (520 mm)	Figure 18
417196C3X990MM	Tube, Black Nylon, Air Cleaner, 1/4 in. (6.4 mm) OD, Length 39 in. (990 mm)	Figure 6
417196C3X1050MM	Tube, Black Nylon, Rear Brakes Air Chamber, 1/4 in. (6.4 mm) OD, Length 41.3 in. (1050 mm)	Figure 18
417196C3X1200MM	Tube, Black Nylon, Transfer Case Air Lines, 1/4 in. (6.4 mm) OD, Length 47.2 in. (1200 mm)	Figure 18
417196C3X1250MM	Tube, Black Nylon, Transfer Case Air Lines, 1/4 in. (6.4 mm) OD, Length 49.2 in. (1250 mm)	Figure 18
417196C3X1380MM	Tube, Black Nylon, Air Cleaner, 1/4 in. (6.4 mm) OD, Length 54.3 in. (1380 mm)	Figure 6
417196C3X1500MM	Tube, Black Nylon, Transfer Case Air Lines, 1/4 in. (6.4 mm) OD, Length 59 in. (1500 mm)	Figure 18
417196C3X1800MM	Tube, Black Nylon, Transfer Case Air Lines, 1/4 in. (6.4 mm) OD, Length 70.9 in. (1800 mm)	Figure 18
417199C3X	Tube, Black Nylon, Hand Brake Control Valves and Lines, 3/8 in. (9.5 mm) OD	Figure 18
417199C3X	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD	Figure 18

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION - (CONTINUED)

PART NO./DRAWING NO.	NOMENCLATURE	FIGURE NO.
417199C3X340MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 13.4 in. (340 mm)	Figure 18
417199C3X350MM	Tube, Black Nylon, Rear Brake Valves, 3/8 in. (9.5 mm) OD, Length 13.8 in. (350 mm)	Figure 18
417199C3X450MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 17.7 in. (450 mm)	Figure 18
417199C3X500MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 19.7 in. (500 mm)	Figure 18
417199C3X750MM	Tube, Black Nylon, Rear Brake Valves, 3/8 in. (9.5 mm) OD, Length 29.5 in. (750 mm)	Figure 18
417199C3X850MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 33.5 in. (850 mm)	Figure 18
417199C3X1100MM	Tube, Black Nylon, Rear Brake Valves, 3/8 in. (9.5 mm) OD, Length 43.3 in. (1100 mm)	Figure 18
417199C3X1450MM	Tube, Black Nylon, Gladhands, 3/8 in. (9.5 mm) OD, Length 57.1 in. (1450 mm)	Figure 18
417199C3X1830MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 72 in. (1830 mm)	Figure 18
417199C3X1960MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 77.2 in. (1960 mm)	Figure 18
417199C3X2000MM	Tube, Black Nylon, Air Dryer, 3/8 in. (9.5 mm) OD, Length 78.7 in. (2000 mm)	Figure 18
417199C3X2450MM	Tube, Black Nylon, Gladhands, 3/8 in. (9.5 mm) OD, Length 96.5 in. (2450 mm)	Figure 18
417199C3X3000MM	Tube, Black Nylon, Air Dryer, 3/8 in. (9.5 mm) OD, Length 118.1 in. (3000 mm)	Figure 18
417199C3X3100MM	Tube, Black Nylon, Gladhands, 3/8 in. (9.5 mm) OD, Length 122 in. (3100 mm)	Figure 18
417200C3X	Tube, Black Nylon, Hand Brake Control Valves and Lines, 1/2 in. (12.7 mm) OD	Figure 18
417200C3X300MM	Tube, Black Nylon, Front Brake Valves and Hoses, 1/2 in. (12.7 mm) OD, Length 11.8 in. (300 mm)	Figure 18
417200C3X400MM	Tube, Black Nylon, Front Brake Valves and Hoses, 1/2 in. (12.7 mm) OD, Length 15.7 in. (400 mm)	Figure 18
417200C3X800MM	Tube, Black Nylon, Front Brake Valves and Hoses, 1/2 in. (12.7 mm) OD, Length 31.5 in. (800 mm)	Figure 18
417200C3X1000MM	Tube, Black Nylon, Center Harness and Clips, 3/8 in. (9.5 mm) OD, Length 39.4 in. (1000 mm)	Figure 18
417200C3X1600MM	Tube, Black Nylon, Gladhands, 1/2 in. (12.7 mm) OD, Length 63 in. (1600 mm)	Figure 18
417200C3X2750MM	Tube, Black Nylon, Front Brake Valves and Hoses, 1/2 in. (12.7 mm) OD, Length 108.3 in. (2750 mm)	Figure 18
417201C3X	Tube, Black Nylon, Hand Brake Control Valves and Lines, 5/8 in. (15.9 mm) OD	Figure 18
417201C3X800MM	Tube, Black Nylon, Rear Brake Valves, 5/8 in. (15.9 mm) OD, Length 31.5 in. (800 mm)	Figure 18
417201C3X2300MM	Tube, Black Nylon, Air Dryer, 5/8 in. (15.9 mm) OD, Length 90.6 in. (2300 mm)	Figure 18
417202C3X1020MM	Tube, Black Nylon, Gladhands, 3/4 in. (19.1 mm) OD, Length 40.2 in. (1020 mm)	Figure 18
442498C1X1580MM	Conduit, Nylon, Left and Right Side Mirror Control Harnesses, Length 62.2 in. (1580 mm)	Figure 24

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION - (CONTINUED)

PART NO./DRAWING NO.	NOMENCLATURE	FIGURE NO.
449632C1X1450MM	Conduit, Convoluted, Gladhands, 1/2 in. (12.7 mm) ID, Length 57.1 in. (1450 mm)	Figure 29
449632C1X2450MM	Conduit, Convoluted, Gladhands, 1/2 in. (12.7 mm) ID, Length 96.5 in. (2450 mm)	Figure 29
450017C1X711MM	Loom, Convoluted, Power Steering Hoses, 1 in. (25.4 mm) ID, Length 28 in. (711 mm)	Figure 19
584067C1X774MM	Loom, Convoluted, Power Steering Hoses, 1.25 in. (31.8 mm) ID, Length 30.5 in. (774 mm)	Figure 19
995509R2X914MM	Tube, Copper, Air Compressor Governor, 5/8 in. (15.9 mm) OD, Length 36 in. (914 mm)	Figure 16
L2643486X	Hose, Heater, Life Support System Interior Hoses, 3/4 in. (19 mm) ID	Figure 3
L2643486X95MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 3.7 in. (95 mm)	Figure 1
L2643486X335MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 13.2 in. (335 mm)	Figure 1
L2643486X660MM	Hose, Heater, Air Compressor Governor, 3/4 in. (19 mm) ID, Length 26 in. (660 mm)	Figure 5
L2643486X1180MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 46.5 in. (1180 mm)	Figure 1
L2643486X1300MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 51.2 in. (1300 mm)	Figure 1
L2643486X1580MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 62.2 in. (1580 mm)	Figure 1
L2643486X1600MM	Hose, Heater, Life Support System Interior Hoses, 3/4 in. (19 mm) ID, Length 63 in. (1600 mm)	Figure 3
L2643486X1837MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 72.3 in. (1837 mm)	Figure 1
L2643486X2678MM	Hose, Heater, Three-Way Valve and Exterior Coolant Hoses, 3/4 in. (19 mm) ID, Length 105.4 in. (2678 mm)	Figure 1
L2643493X343MM	Hose, Heater, Cooling Hose and Pipe, 1 in. (25.4 mm) ID, Length 13.5 in. (343 mm)	Figure 10
L2643504X300MM	Hose, Heater, Cooling Hose and Pipe, 3/8 in. (9.53 mm) ID, Length 11.8 in. (300 mm)	Figure 10
L2643504X675MM	Hose, Heater, Cooling Hose and Pipe, 3/8 in. (9.53 mm) ID, Length 26.6 in. (675 mm)	Figure 10
L2643504X1435MM	Hose, Heater, Cooling Hose and Pipe, 3/8 in. (9.53 mm) ID, Length 56.5 in. (1435 mm)	Figure 10
L2643505X9.5IN	Hose, Coolant, Air Compressor, 1/2 in. (12.7 mm) ID, Length 9.5 in. (241.3 mm)	Figure 5
L2643505X13IN	Hose, Coolant, Air Compressor, 1/2 in. (12.7 mm) ID, Length 13 in. (330.2 mm)	Figure 5
L2643544X450MM	Hose, Nonmetallic, Fuel Tank Breather, 5/16 in. (7.9 mm) ID, Length 17.7 in. (450 mm)	Figure 17
L2643545X900MM	Hose, Heavy Duty, Front Axle, 3/8 in. (9.5 mm) ID, Length 35.4 in. (900 mm)	Figure 17
L2643546X	Hose, Nonmetallic, Rear Axle, 1/2 in. (12.7 mm) ID	Figure 17
L2643546X975MM	Hose, Nonmetallic, Transfer Case, 1/2 in. (12.7 mm) ID, Length 38.5 in. (975 mm)	Figure 17
L2643623X915MM	Hose, Fuel and Oil, Power Steering Hose, 1 in. (25.4 mm) ID, Length 36 in. (915 mm)	Figure 20

END OF WORK PACKAGE

FIELD MAINTENANCE

ILLUSTRATED LIST OF MANUFACTURED ITEMS

INITIAL SETUP:

Tools and Special Tools
General Mechanic's Tool Kit (GMTK) (WP 0795, Item 37)

References
TM 9-2355-106-23P

HEATING, VENTILATING AND AIR CONDITIONING (HVAC) HEATER HOSES AND CONDUIT

NOTE

Most HVAC heater hoses are constructed of heater hose covered with reflective conduit. The following two HVAC heater hoses are not covered with reflective conduit:

Tee-to-cabin floor pass-through, part number L2643486X335MM

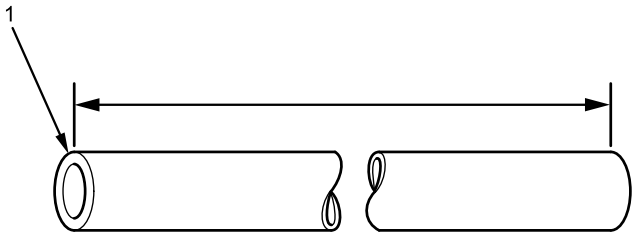
3-way valve inlet-to-elbow, part number L2643486X95MM

Table 1 lists bulk materials from which items are manufactured.

Table 2 lists hose and conduit lengths required to make the HVAC hose assemblies.

Table 3 lists conduit and hose part numbers used together to assemble the HVAC hose assemblies.

1. Cut lengths of bulk hose (Figure 1, Item 1) to dimensions specified in Table 2.

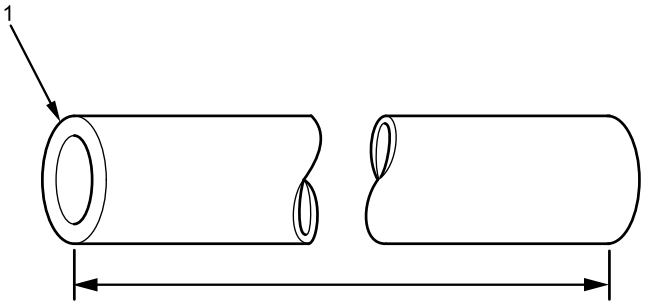


B230002908

Figure 1. Hose.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

2. Cut lengths of bulk conduit (Figure 2, Item 1) to dimensions specified in Table 2.



B230002907

Figure 2. Conduit.

Table 1. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Heater, 3/4 in. (19 mm) ID x 50 ft (15.24 m)	L2643486	338X5	4720-01-269-4725	As required
Conduit, Hose, 1-1/8 in. (28.6 mm) ID	2000310C1	338X5	4730-01-513-4407	As required

Table 2. Hose and Conduit Lengths.

PART NUMBER	DESCRIPTION	CUT LENGTH	MANUFACTURED FROM NSN
2000310C1X1120MM	Conduit, Hose, 1-1/8 in. ID	44.1 in. (1120 mm)	4730-01-513-4407
2000310C1X1130MM	Conduit, Hose, 1-1/8 in. ID	44.5 in. (1130 mm)	4730-01-513-4407
2000310C1X1470MM	Conduit, Hose, 1-1/8 in. ID	57.9 in. (1470 mm)	4730-01-513-4407
2000310C1X1757MM	Conduit, Hose, 1-1/8 in. ID	69.2 in. (1757 mm)	4730-01-513-4407
2000310C1X2618MM	Conduit, Hose, 1-1/8 in. ID	103.1 in. (2618 mm)	4730-01-513-4407
L2643486X95MM	Hose, Heater, 3/4 in. ID	3.7 in. (95 mm)	4720-01-269-4725
L2643486X335MM	Hose, Heater, 3/4 in. ID	13.2 in. (335 mm)	4720-01-269-4725
L2643486X1180MM	Hose, Heater, 3/4 in. ID	46.5 in. (1180 mm)	4720-01-269-4725
L2643486X1300MM	Hose, Heater, 3/4 in. ID	51.2 in. (1300 mm)	4720-01-269-4725
L2643486X1580MM	Hose, Heater, 3/4 in. ID	62.2 in. (1580 mm)	4720-01-269-4725
L2643486X1837MM	Hose, Heater, 3/4 in. ID	72.3 in. (1837 mm)	4720-01-269-4725
L2643486X2678MM	Hose, Heater, 3/4 in. ID	105.4 in. (2678 mm)	4720-01-269-4725

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

Table 3. HVAC Hose Assemblies.

HOSE PART NUMBER	CONDUIT PART NUMBER
L2643486X1180MM	2000310C1X1120MM
L2643486X1300MM	2000310C1X1130MM
L2643486X1580MM	2000310C1X1470MM
L2643486X1837MM	2000310C1X1757MM
L2643486X2678MM	2000310C1X2618MM

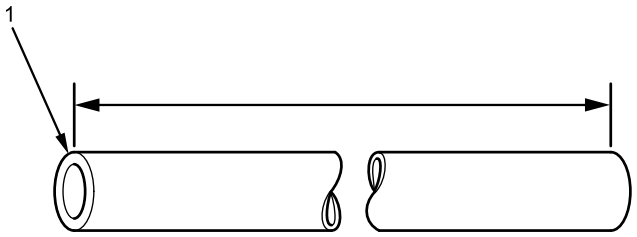
LIFE SUPPORT SYSTEM (LSS) HOSES AND HOSE INSULATORS

NOTE

The two hoses inside the LSS box are not covered with insulation.

Table 4 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose (Figure 3, Item 1), part number L2643486, at 63 in. (1600 mm) to make part number L2643486X1600MM.

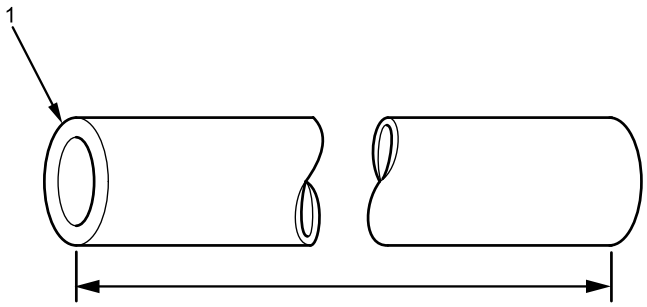


B230002908

Figure 3. Hose.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

2. For the two hoses inside the LSS box (part number L2643486X), cut length of bulk hose (Figure 3, Item 1) equal to length of hoses being replaced.
3. Cut length of bulk insulator (Figure 4, Item 1), part number 15210029168, at 60 in. (1520 mm) to make part number 15210029168X1520MM.



B230002907

Figure 4. Insulator.

Table 4. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Heater, 3/4 in. (19 mm) ID x 50 ft (15.24 m)	L2643486	338X5	4720-01-269-4725	As required
Insulator, Hose, 1-1/8 in. (28.6 mm) ID	15210029168	81851	5999-01-556-4707	60 in. (1520 mm)

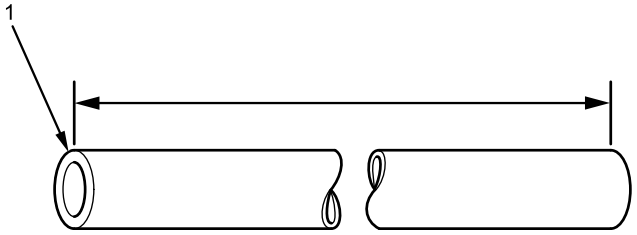
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

AIR COMPRESSOR SUPPLY AIR LINE AND COOLANT HOSES

NOTE

Table 5 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose (Figure 5, Item 1), part number L2643486, at 26 in. (660 mm) to make part number L2643486X660MM.



B230002908

Figure 5. Hose.

2. Cut length of bulk hose (Figure 5, Item 1), part number L2643505, at 9.5 in. (241.3 mm) to make part number L2643505X9.5IN.
3. Cut length of bulk hose (Figure 5, Item 1), part number L2643505, at 13 in. (330.2 mm) to make part number L2643505X13IN.

Table 5. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Heater, 3/4 in. (19 mm) ID x 50 ft (15.24 m)	L2643486	338X5	4720-01-269-4725	26 in. (660 mm)
Hose, Coolant, 1/2 in. (12.7 mm) ID x 50 ft (15.24 m)	L2643505	338X5	4720-01-556-4812	Two pieces: 9.5 in. (241.3 mm) and 13 in. (330.2 mm)

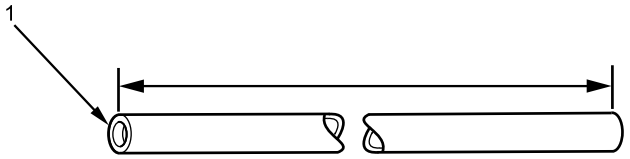
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

AIR CLEANER RESTRICTION GAUGE TUBES AND CONDUIT

NOTE

Table 6 lists bulk materials from which items are manufactured.

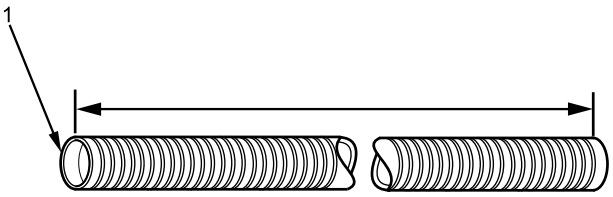
1. Cut length of bulk hose tubing (Figure 6, Item 1), part number 417196C3, at 39 in. (990 mm) to make part number 417196C3X990MM. This tube installs from the air cleaner housing to the coupler.



B230002916

Figure 6. Tube.

2. Cut length of bulk hose tubing (Figure 6, Item 1), part number 417196C3, at 54.3 in. (1380 mm) to make part number 417196C3X1380MM. This tube installs from the coupler to the air cleaner restriction gauge.
3. Cut length of conduit (Figure 7, Item 1), part number 2644094R1, at 37.6 in. (955 mm) to make part number 2644094R1X955MM.



B230002917

Figure 7. Conduit.

Table 6. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Tubing, Nonmetallic, 1/4 in. (6.35 mm) OD	417196C3	89346	4720-00-845-7189	Two pieces: 39 in. (990 mm) and 54.3 in. (1380 mm)
Conduit, 1/4 in. (6.35 mm) ID	2644094R1	338X5	5975-01-460-9996	37.6 in. (955 mm)

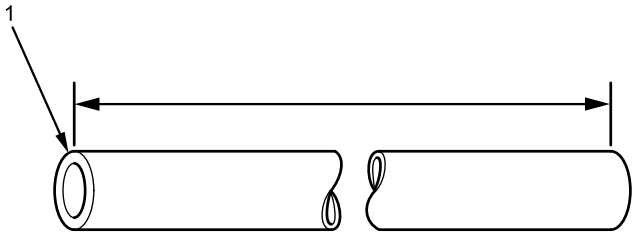
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

GLADHAND TUBES, REAR BRAKE HOSE, AND FUEL FIRED HEATER SUPPLY HOSE INSULATORS

NOTE

Table 7 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose insulator (Figure 8, Item 1), part number 3577746C1, at 23.6 in. (600 mm) to make part number 3577746C1X600MM.



B230002908

Figure 8. Hose Insulator.

2. Cut length of bulk hose insulator (Figure 8, Item 1), part number 3577746C1, at 55.1 in. (1400 mm) to make part number 3577746C1X1400MM.
3. Cut length of bulk hose insulator (Figure 8, Item 1), part number 15210029168, at 14.8 in. (375 mm) to make part number 15210029168X375MM.
4. Cut length of bulk hose insulator (Figure 8, Item 1), part number 15210029168, at 19.7 in. (500 mm) to make part number 15210029168X500MM.
5. Cut length of bulk hose insulator (Figure 8, Item 1), part number 15210029168, at 21.3 in. (541 mm) to make part number 15210029168X541MM.

Table 7. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Insulator, Hose, 3/4 in. (19 mm) ID	3577746C1	338X5	5975-01-556-6189	Two pieces: 23.6 in. (600 mm) and 55.1 in. (1400 mm)
Insulator, Hose, 1-1/8 in. (28.58 mm) ID	15210029168	81851	5999-01-556-4707	Three pieces: 14.8 in. (375 mm), 19.7 in. (500 mm), and 21.3 in. (541 mm)

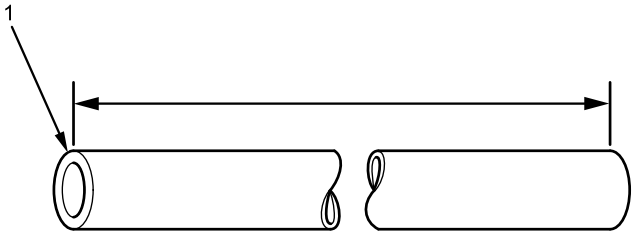
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

FUEL FIRED HEATER FUEL SUPPLY HOSE

NOTE

Table 8 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose (Figure 9, Item 1), part number 2605751C1, at 94 in. (2388 mm) to make part number 2605751C1X2388MM.



B230002908

Figure 9. Hose.

Table 8. Material.

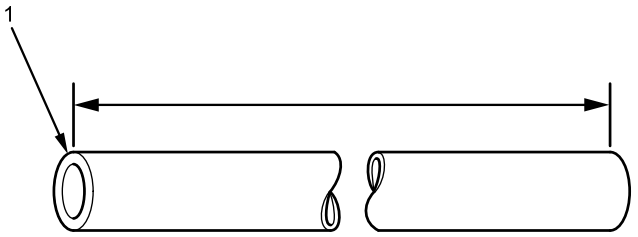
DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Nonmetallic, 1/2 in. (12.7 mm) ID	2605751C1	338X5	4720-01-568-5983	94 in. (2388 mm)

ENGINE COOLING SYSTEM HOSES

NOTE

Table 9 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose (Figure 10, Item 1), part number L2643504, at 11.8 in. (300 mm) to make part number L2643504X300MM.



B230002908

Figure 10. Hose.

2. Cut length of bulk hose (Figure 10, Item 1), part number L2643504, at 26.6 in. (675 mm) to make part number L2643504X675MM.
3. Cut length of bulk hose (Figure 10, Item 1), part number L2643504, at 56.5 in. (1435 mm) to make part number L2643504X1435MM.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

4. Cut length of bulk hose (Figure 10, Item 1), part number L2643493, at 13.5 in. (343 mm) to make part number L2643493X343MM.

Table 9. Material.

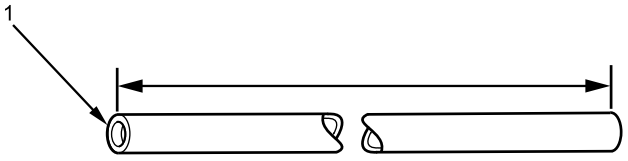
DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Heater, 3/8 in. (9.5 mm) ID	L2643504	89346	4720-01-512-4122	Three pieces: 11.8 in. (300 mm), 26.6 in. (675 mm), and 56.5 in. (1435 mm)
Hose, Heater, 1 in. (25.4 mm) ID	L2643493	89346	4720-01-556-4810	13.5 in. (343 mm)

FAN CLUTCH AIR HOSE TUBING

NOTE

Table 10 lists bulk materials from which items are manufactured.

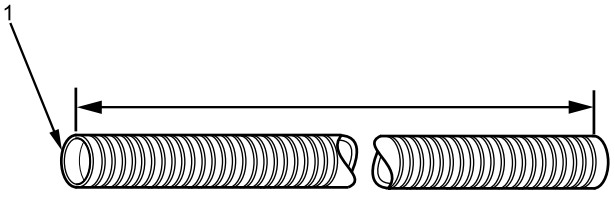
1. Cut length of bulk tubing (Figure 11, Item 1), part number 417196C3, at 12 in. (305 mm) to make part number 417196C3X12IN.



B230002916

Figure 11. Tube.

2. Cut length of conduit (Figure 12, Item 1), part number 2644094R1, at 11.5 in. (292 mm) to make part number 2644094R1X.



B230002917

Figure 12. Conduit.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

Table 10. Material.

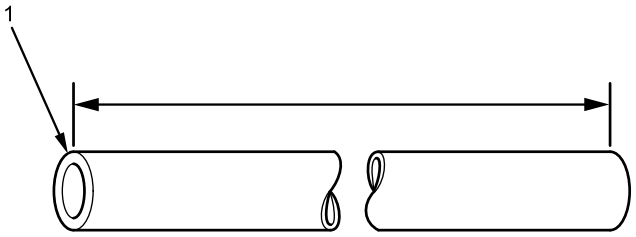
DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Tubing, Nonmetallic, 1/4 in. (6.35 mm) OD	417196C3,	89346	4720-00-845-7189	12 in. (305 mm)
Conduit, 1/4 in. (6.35 mm) ID	2644094R1	338X5	5975-01-460-9996	11.5 in. (292 mm)

TRANSMISSION OIL COOLER HOSE INSULATOR

NOTE

Table 11 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose insulator (Figure 13, Item 1), part number 2645001R1, at 24.4 in. (620 mm) to make part number 2645001R1X620MM.



B230002908

Figure 13. Hose Insulator.

Table 11. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Insulator, Hose, 1-1/2 in. (38.1 mm) ID	2645001R1	338X5	2590-01-568-6386	24.4 in. (620 mm)

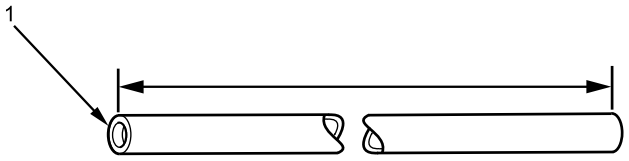
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

WINDSHIELD WASHER SUPPLY HOSES

NOTE

Table 12 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose (Figure 14, Item 1), part number 92713800, at 22 in. (558.8 mm) to make part number 3113168C1LX22IN.



B230002916

Figure 14. Washer Supply Hose.

2. Cut length of bulk hose (Figure 14, Item 1), part number 92713800, at 90 in. (2286 mm) to make part number 3113169C1LX90IN.

Table 12. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Rubber, 5/32 in. (4 mm) ID	92713800	338X5	N/A	Two pieces: 22 in. (558.8 mm) and 90 in. (2286 mm)

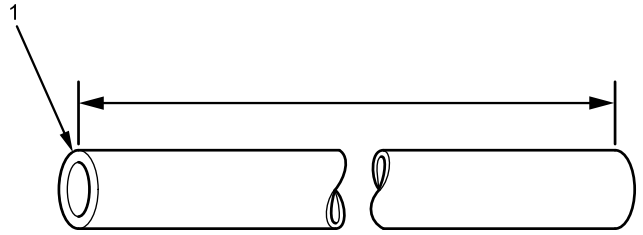
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

AIR COMPRESSOR-TO-AIR DRYER AIR HOSE AND COPPER TUBE

NOTE

Table 13 lists bulk materials from which items are manufactured.

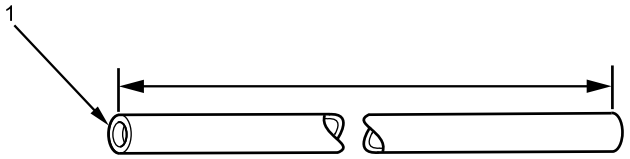
1. Cut length of bulk hose (Figure 15, Item 1), part number 375055C2, at 89.44 in. (2272 mm) to make part number 375055C2X89.44IN.



B230002908

Figure 15. Hose.

2. Cut length of bulk tubing (Figure 16, Item 1), part number 995509R2, at 36 in. (914 mm) to make part number 995509R2X914MM.



B230002916

Figure 16. Copper Tube.

Table 13. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Teflon Air, 5/8 in. (15.9 mm) ID	375055C2	338X5	4720-01-556-4698	89.44 in. (2272 mm)
Tubing, Copper, 5/8 in. (15.9 mm) OD	995509R2	338X5	4710-01-065-6313	36 in. (914 mm)

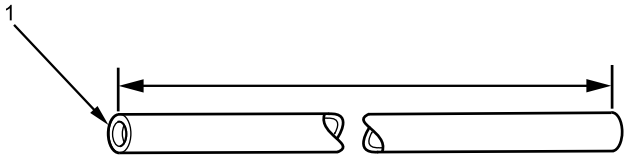
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

FRONT/REAR AXLE, TRANSFER CASE, AND FUEL TANK BREATHER HOSES

NOTE

Table 14 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose (Figure 17, Item 1), part number L2643544, at 17.7 in. (450 mm) to make fuel tank breather hose part number L2643544X450MM.



B230002916

Figure 17. Breather Hose.

2. Cut length of bulk hose (Figure 17, Item 1), part number L2643545, at 35.4 in. (900 mm) to make front axle breather hose part number L2643545X900MM.
3. Cut length of bulk hose (Figure 17, Item 1), part number L2643546, at 38.4 in. (975 mm) to make transfer case breather hose part number L2643546X975MM.
4. For the rear axle, cut bulk hose (Figure 17, Item 1), part number L2643546, equal to the length of hose being replaced.

Table 14. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Hose, Nonmetallic, 5/16 in. (7.9 mm) ID	L2643544	89346	4720-01-038-7344	17.7 in. (450 mm)
Hose, Nonmetallic, 3/8 in. (9.53 mm) ID	L2643545	338X5	4720-01-065-0809	35.4 in. (900 mm)
Hose, Nonmetallic, 1/2 in. (12.7 mm) ID	L2643546	338X5	4720-01-372-1516	As required

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

NONMETALLIC NYLON TUBING

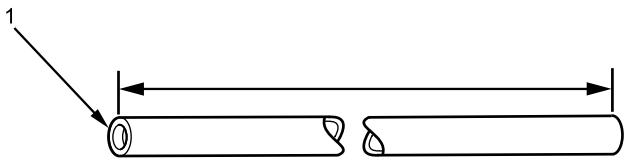
NOTE

The following materials list and instructions apply to all nylon tubing not otherwise addressed in the Illustrated List of Manufactured Items.

Table 15 lists bulk materials from which items are manufactured.

Table 16 lists tube lengths by part number.

1. To make the required part number, cut length of bulk tube (Figure 18, Item 1) to dimension specified in Table 16.



B230002916

Figure 18. Nonmetallic Nylon Tube.

2. For part numbers not listed in Table 16, cut length of bulk tube (Figure 18, Item 1) equal to length of tube being replaced.

Table 15. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Tubing, Nonmetallic, 1/8 in. (3.18 mm) OD	417195C3	89346	4720-01-556-6545	750 mm
Tube, Nylon, 1/4 in. (6.35 mm) OD	417196C3	338X5	4720-00-845-7189	See Table 16.
Tube, Nylon, 3/8 in. (9.53 mm) OD	417199C3	338X5	4720-01-556-7114	See Table 16.
Tube, Nylon, 1/2 in. (12.7 mm) OD	417200C3	338X5	4720-01-513-0088	See Table 16.
Tube, Nylon, 5/8 in (15.88 mm) OD	417201C3	89346	4720-01-556-7118	See Table 16.
Tube, Nylon, 3/4 in (19.1 mm) OD	417202C3	89346	4720-01-347-7388	See Table 16.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

Table 16. Nylon Tube Lengths.

PART NUMBER	NAME	LENGTH
417195C3X750MM	Tube, Nylon, 1/8 in. (3.2 mm) OD	29.5 in. (750 mm)
417196C3X120IN	Tube, Nylon, 1/4 in. (6.35 mm) OD	120 in. (3048 mm)
417196C3X520MM.	Tube, Nylon, 1/4 in. (6.35 mm) OD	20.5 in. (520 mm)
417196C3X1050MM	Tube, Nylon, 1/4 in. (6.35 mm) OD	41.3 in. (1050 mm)
417196C3X1200MM	Tube, Nylon, 1/4 in. (6.35 mm) OD	47.2 in. (1200 mm)
417196C3X1250MM	Tube, Nylon, 1/4 in. (6.35 mm) OD	49.2 in. (1250 mm)
417196C3X1500MM	Tube, Nylon, 1/4 in. (6.35 mm) OD	59.1 in. (1500 mm)
417196C3X1800MM	Tube, Nylon, 1/4 in. (6.35 mm) OD	70.9 in. (1800 mm)
417199C3X340MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	13.4 in. (340 mm)
417199C3X350MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	13.8 in. (350 mm)
417199C3X450MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	17.7 in. (450 mm)
417199C3X500MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	19.7 in. (500 mm)
417199C3X750MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	29.5 in. (750 mm)
417199C3X850MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	33.5 in. (850 mm)
417199C3X1100MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	43.3 in. (1100 mm)
417199C3X1450MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	57.1 in. (1450 mm)
417199C3X1830MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	72 in. (1830 mm)
417199C3X1960MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	77.2 in. (1960 mm)
417199C3X2000MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	78.7 in. (2000 mm)
417199C3X2450MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	96.5 in. (2450 mm)
417199C3X3000MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	118.1 in. (3000 mm)
417199C3X3100MM	Tube, Nylon, 3/8 in. (9.53 mm) OD	122 in. (3100 mm)
417200C3X300MM	Tube, Nylon, 1/2 in. (12.7 mm) OD	11.8 in. (300 mm)
417200C3X400MM	Tube, Nylon, 1/2 in. (12.7 mm) OD	15.7 in. (400 mm)
417200C3X800MM	Tube, Nylon, 1/2 in. (12.7 mm) OD	31.5 in. (800 mm)
417200C3X1000MM	Tube, Nylon, 1/2 in. (12.7 mm) OD	39.4 in. (1000 mm)
417200C3X1600MM	Tube, Nylon, 1/2 in. (12.7 mm) OD	63 in. (1600 mm)
417200C3X2750MM	Tube, Nylon, 1/2 in. (12.7 mm) OD	108.3 in. (2750 mm)
417201C3X800MM	Tube, Nylon, 5/8 in (15.88 mm) OD	31.5 in. (800 mm)
417201C3X2300MM	Tube, Nylon, 5/8 in (15.88 mm) OD	90.6 in. (2300 mm)
417202C3X1020MM	Tube, Nylon, 3/4 in (19.1 mm) OD	40.2 in. (1020 mm)

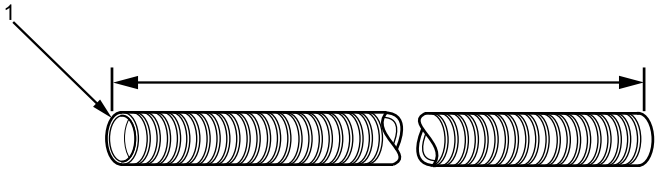
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

POWER STEERING HOSE AND HOSE ARMOR

NOTE

Table 17 lists bulk materials from which items are manufactured.

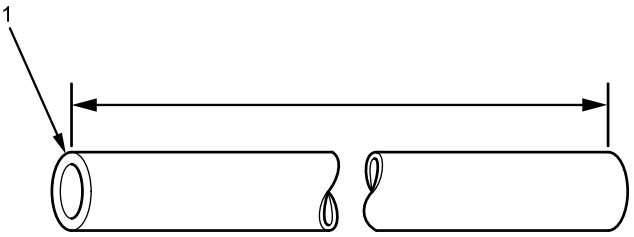
1. Cut length of bulk loom (Figure 19, Item 1), part number 450017C1, at 28 in. (711 mm) to make part number 450017C1X711MM.



B231405923

Figure 19. Power Steering Hose Armor.

2. Cut length of bulk loom (Figure , Item 1), part number 584067C1, at 30.5 in. (774 mm) to make part number 584067C1X774MM.
3. Cut length of bulk hose (Figure 20, Item 1), part number L2643623, at 36 in. (915 mm) to make part number L2643623X915MM.



B230002908

Figure 20. Hose.

Table 17. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Loom, Convoluted, 1 in. (25.4 mm) ID	450017C1	338X5	6150-01-556-6574	28 in. (711 mm)
Loom, Convoluted, 1-1/4 in. (30 mm) ID	584067C1	338X5	5975-01-556-6719	30.5 in. (774 mm)
Hose, Fuel and Oil, 1 in. (24.5 mm) ID	L2643623	338X5	4720-01-556-4816	36 in. (915 mm)

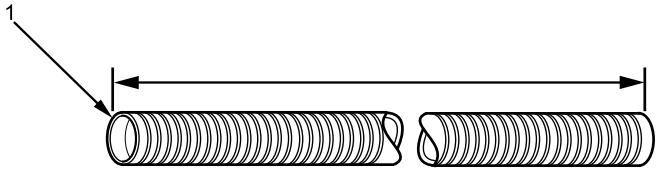
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

STEERING COLUMN AIR BRAKE CONTROL HOSE CONDUIT

NOTE

Table 18 lists bulk materials from which items are manufactured.

1. Cut length of bulk conduit (Figure 21, Item 1), part number 2644081R1, at 32.5 in. (825 mm) to make part number 2644081R1X825MM.



B231405923

Figure 21. Conduit.

Table 18. Material.

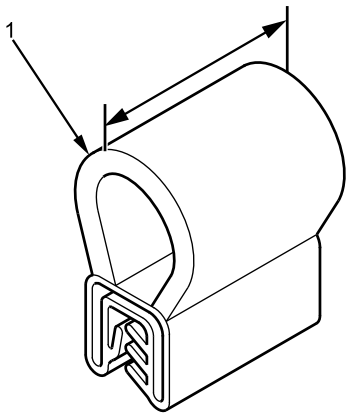
DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Conduit, Nylon, 1-1/2 in. (38 mm) ID	2644081R1	338X5	6145-01-556-5464	32.5 in. (825 mm)

COWL HOOD SEAL

NOTE

Table 19 lists bulk materials from which items are manufactured.

1. Cut length of bulk seal (Figure 22, Item 1), part number 3823241C1, at 80.7 in. (2050 mm) to make part number 3823241C1X2050MM.



B230002926

Figure 22. Hood Seal.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

Table 19. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Seal, Rubber	3823241C1	338X5	5330-01-568-6062	80.7 in. (2050 mm)

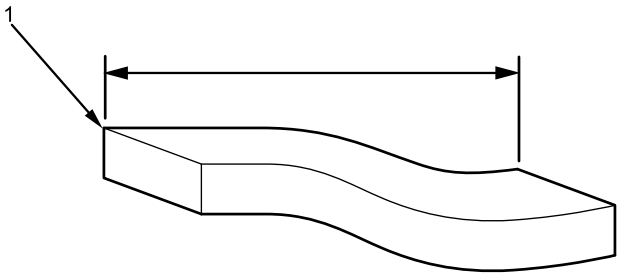
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

WINDOWS, INNER DOORS, AND UNDERBODY SEALS

NOTE

Table 20 lists bulk materials from which items are manufactured.

1. For the windows and inner doors, cut length of bulk trim tape (Figure 23, Item 1), part number 2693128C1, equal to length of seal being replaced.



B230002927

Figure 23. Foam Trim Tape.

2. For the underbody, cut length of bulk trim tape (Figure 23, Item 1), part number 3693128C1, at 102 in. (2591 mm) to make part number 3693128C1X2591MM.

Table 20. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Tape, Foam Trim, 0.2 in. (5 mm) x 0.79 in. (20 mm)	3693128C1	338X5	5330-01-567-0637	As required

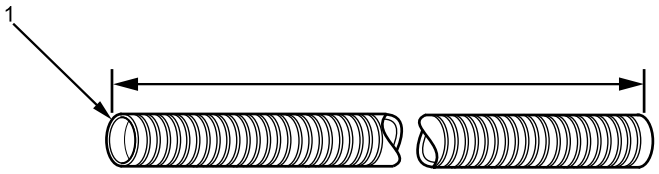
POWER MIRROR HARNESS CONDUIT

NOTE

Table 21 lists bulk materials from which items are manufactured.

1. Cut length of bulk conduit (Figure 24, Item 1), part number 442498C1, at 62.2 in. (1580 mm) to make part number 442498C1X1580MM.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)



B231405923

Figure 24. Power Mirror Harness Conduit.

Table 21. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Conduit, Nylon, 0.375 in. (9.5 mm) ID	442498C1	338X5	6150-01-568-5976	62.2 in. (1580 mm)

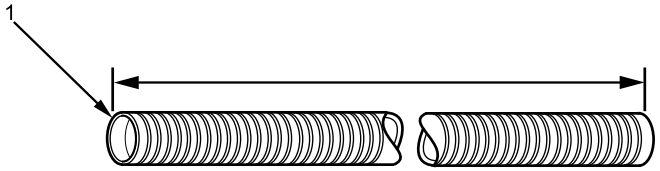
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

FUEL FIRED HEATER FUEL LINE CONDUIT

NOTE

Table 22 lists bulk materials from which items are manufactured.

1. Cut length of bulk conduit (Figure 25, Item 1), part number 2644094R1, at 93.7 in. (2380 mm) to make part number 2644094R1X.



B231405923

Figure 25. Fuel Line Conduit.

Table 22. Material.

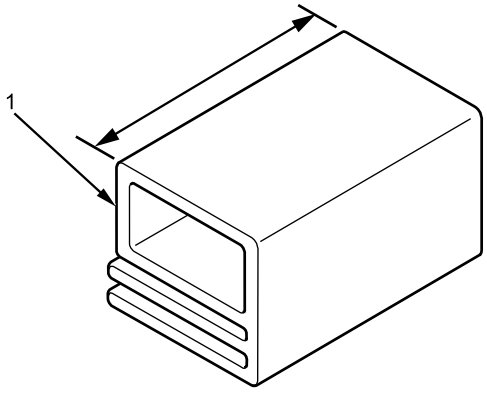
DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Conduit, Nylon, 1/4 in. (6.4 mm) ID	2644094R1	338X5	5975-01-460-9996	93.7 in. (2380 mm)

STORAGE BOX DOOR SEALS

NOTE

Table 23 lists bulk materials from which items are manufactured.

1. Cut length of bulk seal (Figure 26, Item 1), part number 3835432C1, equal to length of seal being replaced.



B231805842

Figure 26. Storage Box Door Seal.

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

Table 23. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Seal, Rubber	3835432C1	338X5	5330-01-568-7351	As required

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

C-CHANNEL TRIM MOLDING

NOTE

Table 24 lists bulk materials from which items are manufactured.

1. Cut length of bulk seal (Figure 27, Item 1), part number 2645520R1, at 6.69 in. (170 mm) and 9.1 in. (230 mm) to make the driver control carrier trim parts.

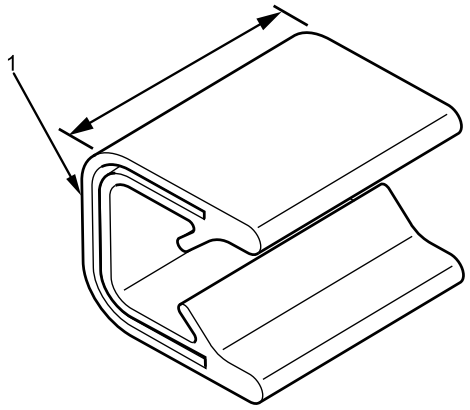


Figure 27. C-Channel Trim Molding.

2. Cut length of bulk seal (Figure 27, Item 1), part number 2645520R1, at 4.5 in. (114.2 mm) to make part number 3861924C1X114.2MM.
3. Cut length of bulk seal (Figure 27, Item 1), part number 3692802C1, at 2 in. (51 mm) to make part number 3692802C1X51MM.
4. Cut length of bulk seal (Figure 27, Item 1), part number 3692802C1, at 6 in. (152 mm) to make part number 3692802C1X152MM.
5. Cut length of bulk seal (Figure 27, Item 1), part number 3692802C1, at 8 in. (203 mm) to make part number 3692802C1X203MM.
6. Cut length of bulk seal (Figure 27, Item 1), part number 3692802C1, at 18 in. (457 mm) to make part number 3692802C1X457MM.

Table 24. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Molding, Trim, 0.23 in. (5.8 mm) wide channel	2645520R1	338X5	9390–01–587–3258	Three pieces: 4.5 in. (114.2 mm), 6.69 in. (170 mm), and 9.1 in. (230 mm)
Molding, Trim, 0.46 in. (11.7 mm) wide channel	3692802C1	338X5	9390–01–587–4624	Four pieces: 2 in. (51 mm), 6 in. (152 mm), 8 in. (203 mm) and 18 in. (457 mm)

ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

TRANSFER CASE OIL COOLER HOSE ASSEMBLIES

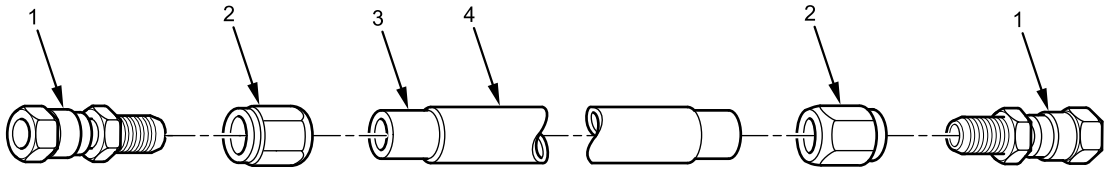
NOTE

Table 25 lists bulk materials from which items are manufactured.

The transfer case oil cooler hose assemblies are made from bulk hose, bulk conduit, and reusable hose fittings. The following two assembly part numbers are to be constructed using this procedure:

1. 3820521C92
2. 3821623C91

1. Cut length of bulk hose (Figure 28, Item 3), part number 375054C2, at 42.13 in. (1070 mm) to make part number 375054C2X1070MM.



B230805836

Figure 28. Fittings, Conduit, and Hose.

2. Cut length of bulk hose (Figure 28, Item 3), part number 375054C2, at 73.6 in. (1870 mm) to make part number 375054C2X1870MM.
3. Cut length of bulk conduit (Figure 28, Item 4), part number 375048C1, at 38.2 in. (970 mm) to make part number 375048C1X970MM.
4. Cut length of bulk conduit (Figure 28, Item 4), part number 375048C1, at 69.7 in. (1770 mm) to make part number 375048C1X1770MM.
5. Assemble conduit (Figure 28, Item 4) onto hoses (Figure 28, Item 3). The hose should protrude approximately 2 in. (50 mm) at each end of conduit.
6. Install fitting socket (Figure 28, Item 2) on each end of both hoses.
7. Thread fitting nipples (Figure 28, Item 1) into sockets (Figure 28, Item 2) until they hit bottom, then back off one-half turn counterclockwise.

Table 25. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Fitting, reusable	20620-6-8	87373	4730-01-419-4747	4
Hose, Nonmetallic, 1/2 in. (12.7 mm) ID	375054C2	338X5	4720-01-556-4697	Two pieces: 42.13 in. (1070 mm) and 73.6 in. (1870 mm)
Loom, Conduit, 0.875 in. (22.2 mm) ID	375048C1	338X5	5995-01-556-6338	Two pieces: 38.2 in. (970 mm) and 69.7 in. (1770 mm)

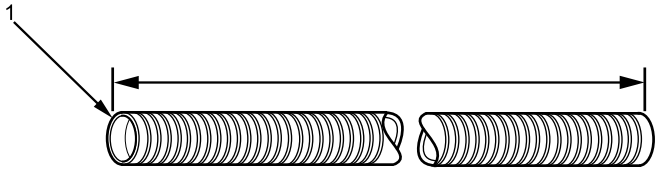
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

HIGH PRESSURE INJECTION PUMP HOSE, CENTER HARNESS, AND GLADHANDS CONDUIT

NOTE

Table 26 lists bulk materials from which items are manufactured.

1. Cut length of bulk conduit (Figure 29, Item 1), part number 449632C1, at 7.75 in. (2380 mm) to make part number 1822646C1X7.75IN.



B231405923

Figure 29. Conduit.

2. Cut length of bulk conduit (Figure 29, Item 1), part number 2643669R1, at 11.8 in. (300 mm) to make part number 2643669R1X300MM.
3. Cut length of bulk conduit (Figure 29, Item 1), part number 449632C1, at 57.1 in. (1450 mm) to make part number 449632C1X1450MM.
4. Cut length of bulk conduit (Figure 29, Item 1), part number 449632C1, at 96.5 in. (2450 mm) to make part number 449632C1X2450MM.

Table 26. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Conduit, Nylon, 2 in. (6 mm) ID	2643669R1	338X5	5340-01-556-5462	11.8 in. (300 mm)
Conduit, Nylon, 1/2 in. (12.7 mm) ID	449632C1	338X5	5975-01-556-6572	Three pieces: 7.75 in. (2380 mm), 57.1 in. (1450 mm), and 96.5 in. (2450 mm)

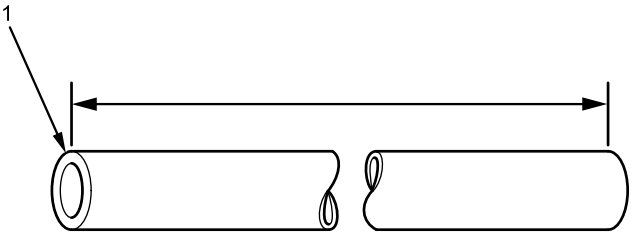
ILLUSTRATED LIST OF MANUFACTURED ITEMS - (CONTINUED)

REAR DOOR HYDRAULIC HOSE SLEEVE

NOTE

Table 27 lists bulk materials from which items are manufactured.

1. Cut length of bulk hose sleeve (Figure 30, Item 1), part number 3113865C1, at 16.5 in. (419.1 mm) to make part number 3113865C1X16.5IN.



B230002908

Figure 30. Hose Sleeve.

Table 27. Material.

DESCRIPTION	PART NUMBER	CAGEC	NSN	QUANTITY
Sleeve, Hose	3113865C1	338X5	4720-01-567-7476	16.5 in. (419.1 mm)

END OF WORK PACKAGE

FIELD MAINTENANCE

TORQUE LIMITS

INTRODUCTION

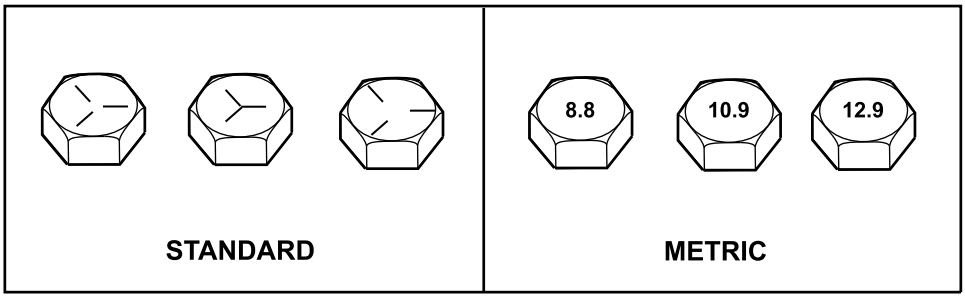
This section provides general torque limits for fasteners. Special torque limits are indicated in the maintenance procedures for applicable components. The general torque limits given in this section shall be used when specific torque limits are not indicated in the maintenance procedure.

These general torque limits cannot be applied to fasteners that retain rubber components. The rubber components will be damaged before the correct torque limit is reached. If a special torque limit is not given in the maintenance instructions for fasteners retaining rubber components, tighten until it touches the metal bracket, then tighten it one more turn.

TORQUE LIMITS

Table 1 lists dry torque limits. Dry torque limits are used on fasteners that do not have lubricants applied to the threads. Table 2 lists wet torque limits. Wet torque limits are used on fasteners that have high pressure lubricants applied to the threads. For metric fasteners, refer to Table 3 for torque limit requirements.

HOW TO USE TORQUE TABLES

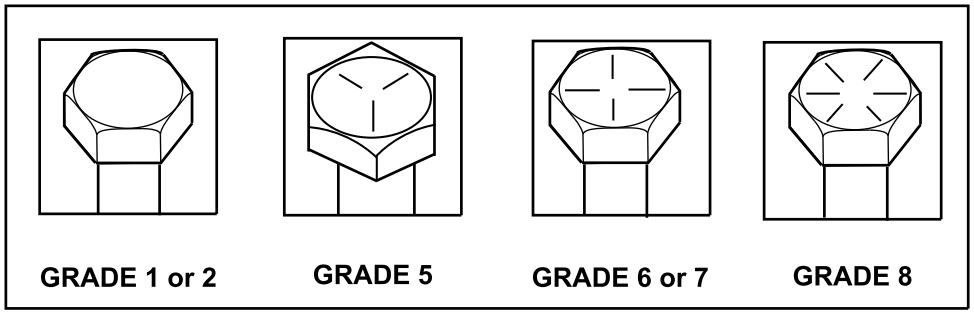


B230002661

Figure 1. Standard and Metric Fastener Markings.

Grades and manufacturer's marks appear on the fastener head. Manufacturer's marks may vary. Figure 1 shows all SAE Grade 5 (3-line) fasteners. Metric fasteners are of three grades: 8.8, 10.9, and 12.9.

Metric hex bolts M5 and larger must have the property class marked on the head of the bold, either in raised or depressed lettering. Fasteners smaller than M5, and those with slotted or recessed heads, whatever their diameter, need not be marked. Radial lines, such as those used to mark SAE grades, are never used on metric bolts.



B230002662

Figure 2. Standard Fastener Grades.

TORQUE LIMITS - (CONTINUED)

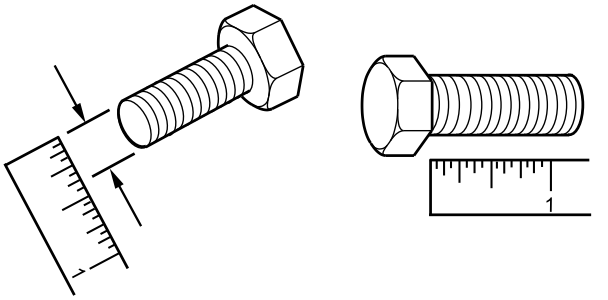


Figure 3. Measuring Fastener.

1. Measure the diameter of the fastener you are installing (figure 3).
2. Count the number of threads per inch (figure 3).
3. Determine the grade of fastener by matching the markings on the head to figure 1 or 2.
4. Under the column heading SIZE in the Torque Limits tables, look down the left hand column and find the diameter of the fastener you are installing (there will usually be two lines beginning with the same size).
5. In the second column under SIZE, find the number of threads per inch that matches the number of threads you counted in step 2 (not required for metric fasteners).
6. Follow across the table to the grade that matches the fastener from step 3 until you find the torque limit (lb-ft or N•m) for the diameter and threads per inch of the screw.

Table 1. Torque Limits for Dry Fasteners.

SIZE			TORQUE							
			SAE GRADE 1 or 2		SAE GRADE 5		SAE GRADE 6 or 7		SAE GRADE 8	
DIA. INCHES	THREADS PER INCH	DIA. MM	LB-FT	N•m	LB-FT	N•m	LB-FT	N•m	LB-FT	N•m
1/4	20	6.35	5	6.78	8	10.85	10	13.56	12	16.27
1/4	28	6.35	6	8.14	10	13.56	-	-	14	18.98
5/16	18	7.94	11	14.92	17	23.05	19	25.76	24	32.54
5/16	24	7.94	13	17.63	19	25.76	-	-	27	36.61
3/8	16	9.53	18	24.41	31	42.04	34	46.10	44	59.66
3/8	24	9.53	20	27.12	35	47.46	-	-	49	66.44
7/16	14	11.11	28	37.97	49	66.44	55	74.58	70	94.92
7/16	20	11.11	30	40.68	55	74.58	-	-	78	105.77
1/2	13	12.70	39	52.88	75	101.7	85	115.26	105	142.38
1/2	20	12.70	41	55.6	85	115.26	-	-	120	162.72
9/16	12	14.29	51	69.16	110	149.16	120	162.72	155	210.18
9/16	18	14.29	55	74.58	120	162.72	-	-	170	230.52
5/8	11	15.88	63	85.43	150	203.4	167	226.45	210	284.76
5/8	18	15.88	95	128.82	170	230.42	-	-	240	325.44
3/4	10	19.05	105	142.38	270	366.12	280	379.68	375	508.5
3/4	16	19.05	115	155.94	295	400.02	-	-	420	569.52
7/8	9	22.23	160	216.96	395	535.62	440	596.64	605	820.38
7/8	14	22.23	175	237.3	435	589.86	-	-	675	915.3
1	8	25.4	235	318.66	590	800.04	660	894.96	910	1234
1	14	25.4	250	339	660	894.96	-	-	990	1342
1-1/8	-	28.58	-	-	840	1140	-	-	1360	1844
1-1/4	-	31.75	-	-	-	-	-	-	1910	2590
1-3/8	-	34.93	-	-	1570	2129	-	-	2550	3457
1-1/2	-	38.1	-	-	2070	2806	-	-	3360	4556

TORQUE LIMITS - (CONTINUED)

Table 2. Torque Limits for Wet Fasteners.

SIZE			TORQUE							
			SAE GRADE 1 or 2		SAE GRADE 5		SAE GRADE 6 or 7		SAE GRADE 8	
DIA. INCHES	THREADS PER INCH	DIA. MM	LB-FT	N•m	LB-FT	N•m	LB-FT	N•m	LB-FT	N•m
1/4	20	6.35	4.5	6.1	7.2	9.76	9	12.20	10.8	14.64
1/4	28	6.35	5.4	7.32	9	12.2	-	-	12.6	17.09
5/16	18	7.94	9.9	13.42	15.3	20.75	17.1	23.19	21.6	29.29
5/16	24	7.94	11.7	15.87	17.1	23.19	-	-	24.3	32.95
3/8	16	9.53	16.2	21.97	27.9	37.83	30.6	41.49	39.6	53.7
3/8	24	9.53	18	24.41	31.5	42.71	-	-	44.1	59.8
7/16	14	11.11	25.2	34.17	44.1	59.8	49.5	67.12	63	85.43
7/16	20	11.11	27	36.61	49.5	67.12	-	-	70.2	95.19
1/2	13	12.70	35.1	47.6	67.5	91.53	76.5	103.73	94.5	128.14
1/2	20	12.70	36.9	50.04	76.5	103.73	-	-	108	146.45
9/16	12	14.29	45.9	62.24	99	134.24	108	146.45	139.5	189.16
9/16	18	14.29	49.5	67.12	108	146.45	-	-	153	207.47
5/8	11	15.88	56.7	76.89	135	183.06	150.3	203.81	189	256.28
5/8	18	15.88	85.5	115.94	153.0	207.47	-	-	216.0	292.90
3/4	10	19.05	94.5	128.14	243.0	329.51	252.0	341.71	337.5	457.65
3/4	16	19.05	103.5	140.35	265.5	360.02	-	-	378.0	512.57
7/8	9	22.23	144.0	195.26	355.5	482.06	396.0	536.98	544.5	738.34
7/8	14	22.23	157.5	213.57	391.5	530.87			607.5	823.77
1	8	25.4	211.5	286.79	531.0	720.04	594	805.46	819	1110
1	14	25.4	225.0	305.10	594.0	805	-	-	891	1208
1-1/8	-	28.58	-	-	756	1025	-	-	1224	1660
1-1/4	-	31.75	-	-	-	-	-	-	1719	2331
1-3/8	-	34.93	-	-	1413	1916	-	-	2295	3112
1-1/2	-	38.1	-	-	1863	2526	-	-	3024	4100

Metric fastener sizes are referred to as M8 - 1.25 X 25, where M8 is the major thread diameter in millimeters, 1.25 is the distance between threads in millimeters, and 25 is the length in millimeters.

Table 3. Torque Limits for Metric Fasteners.

SIZE		TORQUE					
		METRIC GRADE 8.8		METRIC GRADE 10.9		METRIC GRADE 12.9	
DIA. INCHES	DIA. MM	LB-FT	N•m	LB-FT	N•m	LB-FT	N•m
0.237	6	5	9	10	13	9	14
0.276	7	9	14	14	18	18	23
0.315	8	17	23	25	33	29	40
0.394	10	33	45	50	65	50	70
0.473	12	60	80	85	115	95	125
0.552	14	90	125	133	180	145	195
0.630	16	140	195	200	280	210	290
0.709	18	200	280	285	390	290	400
0.788	20	290	400	400	550	-	-

END OF WORK PACKAGE

FIELD MAINTENANCE

SCHEMATIC INTRODUCTION

INITIAL SETUP:

NOT APPLICABLE

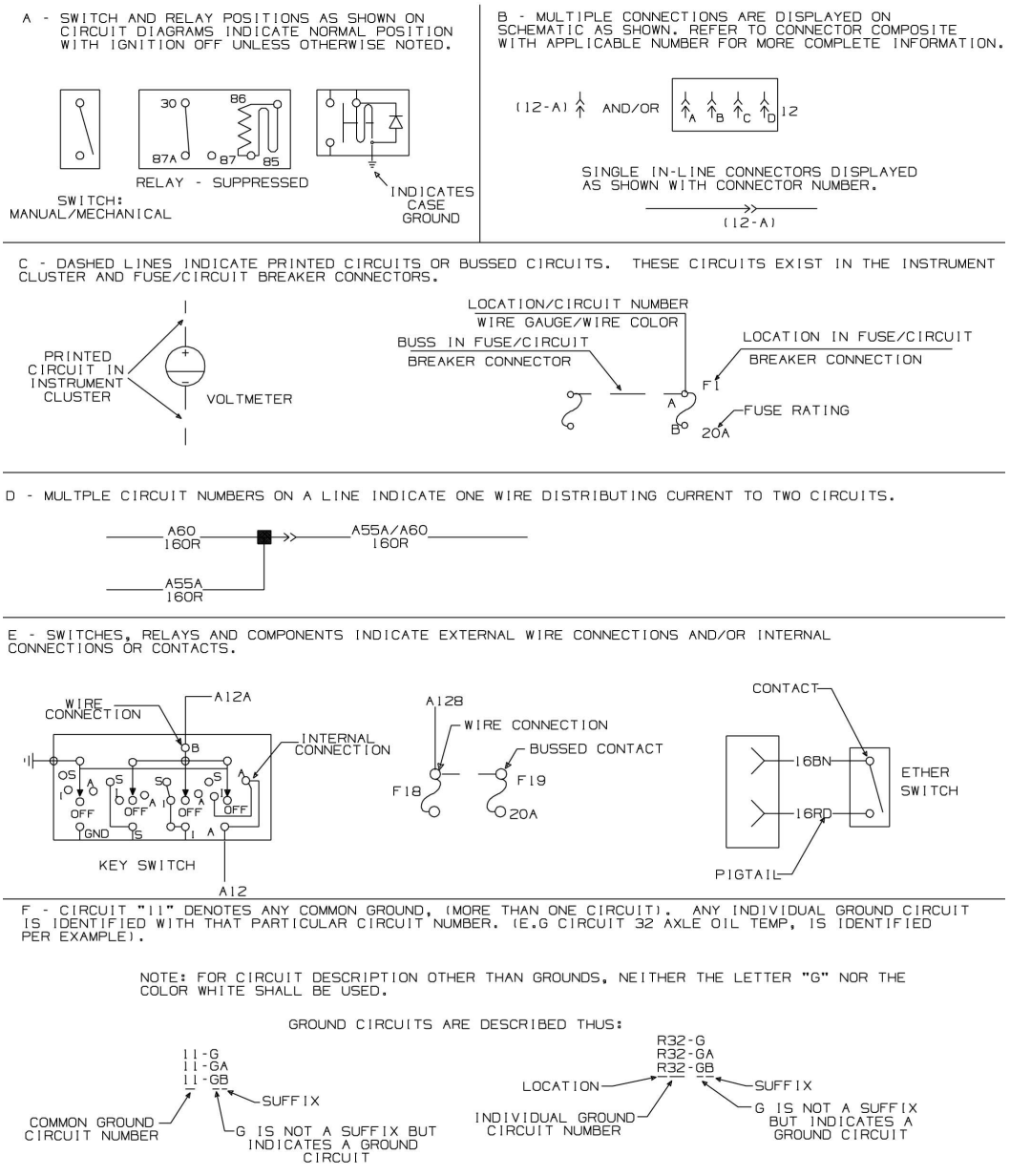


Figure 1. Circuit Diagram Instructions.

SCHEMATIC INTRODUCTION - (CONTINUED)

PREFIX DESIGNATIONS

PREFIX	LOCATION
A	CAB - INSTRUMENT PANEL
B	CAB - DRIVER CONTROL MODULE
C	CAB - HEADER / CLEARANCE LIGHTS
D	CAB - ROOF / REAR PANEL
E	CAB - LEFT DOOR
F	CAB - RIGHT DOOR
H	CAB - SLEEPER
J	CAB - DASH (OUTSIDE)
K	ENGINE / RADIATOR
L	TRANSMISSION
M	CHASSIS / FRONT END (CAB DASH PANEL FORWARD)
N	CHASISS / CENTER SECTION (CAB DASH PANEL TO CAB RR XMBR)
P	CHASSIS / WHEEL BASE SECTION
R	CHASSIS / SUSPENSION / REAR AXLE / AXLES
S	CHASSIS / AF SECTION / STOP / TAIL / TURN LIGHTS

CIRCUIT NUMBER AND IDENTIFICATIONS

CIRCUIT NUMBER	COLOR	DESCRIPTION
1	LT BL	ALTERNATOR - FIELD
2	RD	ALTERNATOR - CHARGE
3	DK BL	SERIAL/DATA COMMUNICATION J1587 / J1708 (+)
3	GY	SERIAL/DATA COMMUNICATION J1587 / J1708 (-)
4		SERIAL/DATA COMMUNICATION J1922
5	YL	SERIAL/DATA COMMUNICATION J1939-11 / J1939-15 (+)
5	GN	SERIAL/DATA COMMUNICATION J1939-11 / J1939-15 (-)
6	GY	LOW VOLTAGE ELECTRONIC FEED (LESS THAN 9 VOLTS)
7	RD	ALTERNATOR - RESISTANCE
8		
9	GY	LOW VOLTAGE ELECTRONIC GROUND
10	WH	CHASSIS/ENGINE GROUND
11	WH	CAB/SLEEPER GROUND
12	LT BL	ACCESSORY FEED
13	PK	IGNITION FEED
13	BK	IGNITION FEED (BODY BUILDER CONNECTOR)
14	RD	BATTERY FEED
15	RD	KEY SWITCH FEED
16	RD	24 VOLT FEED
17	PK	STARTER CONTROL
18	PK	GLOW PLUG/PRE-HEATER
19	GY	ENGINE SHUTDOWN
20	LT GN	REMOTE POWER MODULE

Figure 2. Circuit Identification and Location Chart (1 of 4).

SCHEMATIC INTRODUCTION - (CONTINUED)

CIRCUIT NUMBER AND IDENTIFICATIONS (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
21	TN	COLD START CONTROLS (ETHER)
22	TN	TIRE PRESSURE MONITORING/CONTROL
23	TN	ENGINE FAN/SHUTTERS
24	GY	ENGINE EXHAUST BRAKE
25	TN	PYROMETER
26	TN	AMMETER
27	TN	VOLTMETER
28	TN	INSTRUMENTS AND GAUGES
29	TN	ENGINE WATER TEMPERATURE
30	TN	ENGINE OIL TEMPERATURE
31	TN	TRANSMISSION OIL TEMPERATURE
32	TN	AXLE OIL TEMPERATURE
33	TN	ENGINE OIL LEVEL
34	TN	COOLANT LEVEL
35	TN	ENGINE OIL PRESSURE
36	TN	FUEL LEVEL
37	TN	FUEL PUMP
38	GY	LIFT AXLE
39	GY	AIR DRYER HEATER
40	GY	LOW AIR PRESSURE WARNING
41	TN	AIR TEMPERATURE
42	GY	FRONT AXLE ENGAGED
43	GY	POWER DIVIDER LOCK (PDL) WARNING
44	GY	PARK BRAKE WARNING
45	LTGN	ANTI - THEFT WARNING
46	GY	POWER TAKE - OFF WARNING
47	GY	SPEEDOMETER
48	GY	TACHOMETER
49	GY	DIFFERENTIAL LOCK WARNING
50	YL	LIGHT SWITCH FEED
51	YL	DIMMER SWITCH FEED
52	YL	HEADLIGHT HI-BEAM
53	YL	HEADLIGHT LO-BEAM
54	BN	PARKING/MARKER LIGHTS
55	OR	TURN SIGNAL - FEED
56	OR YL	TURN SIGNAL LIGHTS - LEFT TURN SIGNAL LIGHTS - LEFT (BODY BUILDER CONNECTION)
57	OR LTGN	TURN SIGNAL LIGHTS - RIGHT TURN SIGNAL LIGHTS - RIGHT (BODY BUILDER CONNECTION)

Figure 3. Circuit Identification and Location Chart (2 of 4).

SCHEMATIC INTRODUCTION - (CONTINUED)

CIRCUIT NUMBER AND IDENTIFICATIONS (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
58	BN	CLEARANCE/IDENTIFICATION LIGHTS
59	GY	SOLENOID
60	OR	HAZARD LIGHTS
61	GY	AIR SUSPENSION
62	DKBL	PANEL LIGHTS
63	DKBL	COURTESY/DOME LIGHTS
64	YL	FOG/DRIVING LIGHTS
65	OR	CAB REAR FLOOD LIGHT
66	YL	DAYTIME RUNNING LIGHTS
67	GY	OBSTACLE AVOIDANCE/REMOTE SENSE
68	BN	TAIL LIGHTS
69	BN	LICENSE PLATE LIGHT
70	OR RD	STOP LIGHTS STOP LIGHTS (BODY BUILDER CONNECTION)
71	OR LTBL	BACK - UP LIGHTS BACK - UP LIGHTS (BODY BUILDER CONNECTION)
72	OR	TRAILER AUXILIARY FEED - BATTERY
73	LTGN	PWM
74	LTGN	HEATER RECIRC MOTOR
75	LTGN	HEATER BLOWER MOTOR
76	LTGN	AUXILIARY FAN
77	LTGN	AIR CONDITIONER
78	LTGN	MIRRORS - HEATED; MOTORIZED
79	GY	SEAT BELTS
80	BK	SLEEPER BOX RELAY - FEED
81	LTGN	POWER DOOR LOCKS
82	GY	WINDSHIELD WIPER
83	LTGN	POWER WINDOWS
84	LTGN	CIGAR LIGHTER
85	GY	HORN
86	LTGN	RADIO - ENTERTAINMENT
87	GY	WINDSHIELD WASHER
88	LTGN	CLOCK / HOURMETER
89	VT	AIR BAG
90	GY	HYDRAULIC BRAKE PUMP
91	VT	INTERCOMMUNICATIONS
92	TN	TRANSMISSION CONTROLS - ELECTRONIC
93	TN	AXLE SHIFT CONTROL
94	GY	ANTILOCK BRAKE SYSTEM
95	TN	EXHAUST EMISSION

Figure 4. Circuit Identification and Location Chart (3 of 4).

SCHEMATIC INTRODUCTION - (CONTINUED)

CIRCUIT NUMBER AND IDENTIFICATIONS (CONT.)

CIRCUIT NUMBER	COLOR	DESCRIPTION
96	YL	SNOW PLOW LIGHTS/CRUISE CONTROL
97	VT	ENGINE CONTROLS - ELECTRONIC
98	BK	DATALINK AND DIAGNOSTICS
99	VT	ACCELERATOR POSITION SENSOR (APS)
100	GY	AIR HORN (ELECTRIC SOLENOID ACTUATED)
101	TN	BRAKE APPLICATION AIR
102	YL	FLASH TO PASS
103	LTGN	BODY BUILDER AUX FEED
104	DKBL	REMOTE START/STOP
105	LTGN	HEATED SEATS
106	OR	HIGH VOLTAGE ALTERNATOR AC CHARGE
107	GY	INSTRUMENT CLUSTER ELECTRONIC FEED (5V)
108	GY	BRAKE PAD WEAR SENSORS
109	GY	SLACK ADJUSTER
110	GY	INSTRUMENT CLUSTER ELECTRONIC GROUND
111	TN	FUEL FILTER RESTRICTION TRANSDUCERS
112	GY	LIFT GATE
113	YL	BLACKOUT LIGHTS
114	YL	INFRARED LIGHTS

Figure 5. Circuit Identification and Location Chart (4 of 4).

SCHEMATIC INTRODUCTION - (CONTINUED)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	MALE/FEMALE IN-LINE CONNECTION		HORN
	FEMALE TERMINAL		MAGNETIC SWITCH
	MALE TERMINAL		
	GROUND		LIGHT - DOUBLE FILAMENT
	FUSE		
	LIGHT EMITTING DIODE		SENDER - OIL, WATER, FUEL, TEMPERATURE
	RESISTOR		
	SWITCH CONTACT, NORMALLY OPEN		MOTOR - ELECTRIC
	SWITCH CONTACT, NORMALLY CLOSED		
	JUNCTION POINT		SOLENOID - GENERAL USAGE
	SPLICE		
	SWITCH-PRESSURE		LIGHT - SINGLE FILMENT
	SWITCH-MANUAL/ MECHANICAL		SPEAKER - SOUND SYSTEM
30 86 87A 87 85	RELAY-SUPPRESSED		CIGAR LIGHTER

B235001795

Figure 6. Symbols.

SCHEMATIC INTRODUCTION - (CONTINUED)

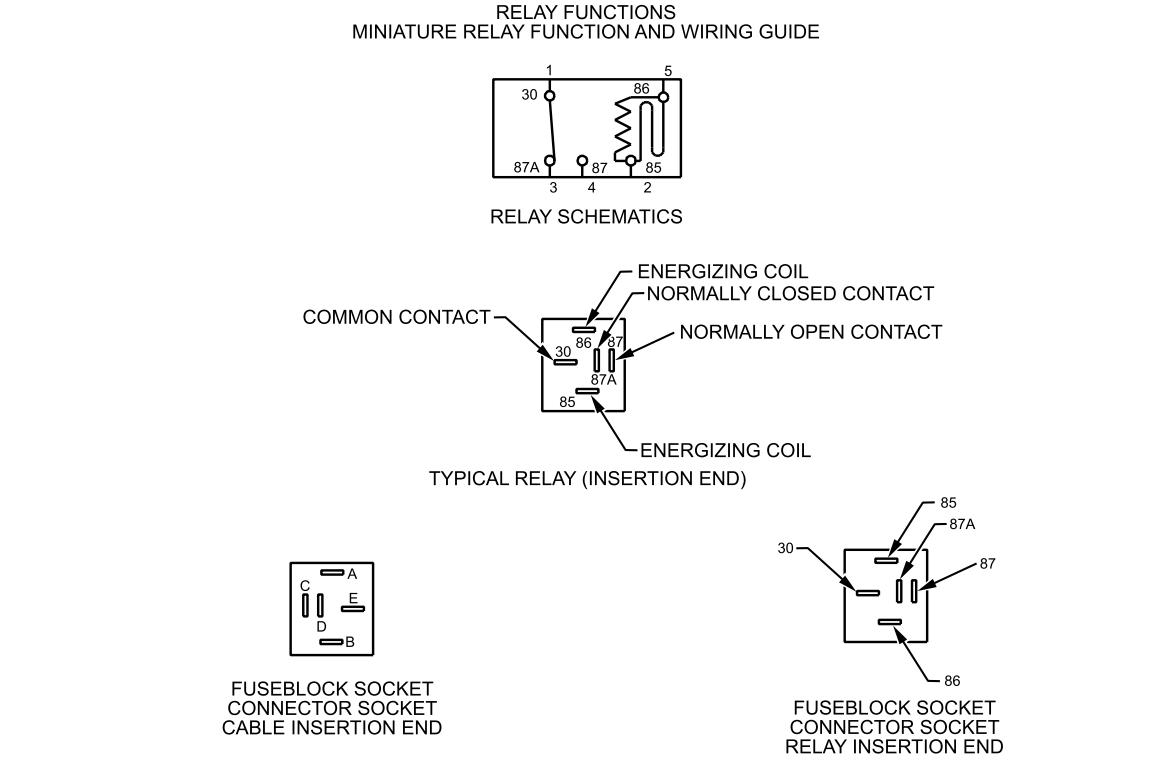


Figure 7. Relay Functions.

SCHEMATIC INTRODUCTION - (CONTINUED)

G - ABBREVIATIONS: COLOR, NOUN AND ENGINE

COLOR ABBREVIATION

AQ - AQUA	LTGN - LIGHT GREEN
BK - BLACK	OR - ORANGE
BL - BLUE	PK - PINK
BN - BROWN	PL - PURPLE
DKGN - DARK GREEN	RD - RED
GD - GOLD	SIL - SILVER
GY - GRAY	TN - TAN
GN - GREEN	VT - VIOLET
LTBL - LIGHT BLUE	WH - WHITE
	YL - YELLOW

NOUN ABBREVIATION

A, ACC - ACCESSORY	G, GND - GROUND
AC - AIR CONDITIONER	I, IGN - IGNITION
AUX - AUXILIARY	IND - INDICATOR
AWG - AMERICAN WIRE GAUGE	L - LEFT
B, BTRY - BATTERY	LT - LIGHT
CONN - CONNECTION OR CONNECTOR	N/ - NOT WITH
DRL - DAYTIME RUNNING LIGHTS	W/O - WITHOUT
FWD - FORWARD	OPT - OPTIONAL
ENG - ENGINE	R - RIGHT
GA - GAUGE	S - START OR SENDER
	THERMO - THERMOSTAT
	W/ - WITH

ENGINE ABBREVIATION

I6-HEUI - MFG (INTERNATIONAL) NGD I6 7.6 OR 8.7 LITER ELECTRONIC ENGINE CONTROL

B235001765

Figure 8. Abbreviations.

END OF WORK PACKAGE

FIELD MAINTENANCE

CONNECTOR LOCATIONS

INITIAL SETUP:

NOT APPLICABLE

Introduction

Connector locations are provided for all electrical circuits, electrical systems, and electronic systems covered in this technical manual.

Table 1. Connector Locations

Connector Number	Description	Location
254M	Power mirror switch	Center of Instrument Panel (IP)
1002	Panel light adapter splice pack	Center of IP
1003	Ground adapter	Center of IP
1010	Ether start switch	Left side of steering column on IP
1011	Fuse block 1	Right side IP
1012	Fuse block 2	Right side IP
1013	Fuse block 3	Right side IP
1014	Fuse block 4	Right side IP
1018	Left blower motor relay	Right side IP
1019	Right blower motor relay	Right side IP
1050	Blackout mode splice pack	Center of IP
1051	24V input	Right side IP
1052	Master Vehicle Light Switch (MVLS) ground	Center of IP
1053	Ground splice pack	Behind IP
1054	Negative stud	Left side IP
1055	Ground terminal	Left side IP
1100M	Key switch	Right side steering column on IP
1101M	Switch pack connector	Center of IP
1111	Dome light switch	Center of IP
1112	Heater interrupt switch	Center of IP
1150	Disconnect master power switch	Right side steering column on IP
1250	Heating, Ventilation, Air Conditioning (HVAC) interconnect switch	Below right side IP
1500	Cluster connector	Behind cluster
1520	Instrument Panel Cluster (IPC) blackout	IP near IP cluster
1521	24-volt meter	Center of IP
1155M	Optional warning light connector	Left IP
1600	Electronic System Controller (ESC) GRAY	Left of steering column on dash
1601	ESC BROWN	Left of steering column on dash
1650	Diagnostic connector	Left side IP under steering column
1658	J1939 telematics	Center of IP
1701	IP pass-through	Left side of IP, inside at dash
1701	Dash pass-through	Left side under hood at dash
1703F	Stop/turn light	Under left IP
1703M	Stop/turn light	Under left IP
1800	Cabin/Driver Control Module (DCM)	Right side of steering column
1804	Accelerator pedal	Firewall
1805	DCM/cabin	Right side of steering column
1808	Barometric Pressure (BAP) sensor	Left side of IP
1809	Clockspring	Steering column

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
1810	Turn signal switch	Steering column
1811	Primary air transducer	Left IP
1812	Secondary air transducer	Left IP
1813	Park brake transducer	Left IP
1822	Air application transducer	Left IP
1823	Stop light 1	Left IP
1824	Stop light 2	Left IP
1850	Battery feed megafuse to cab	Under hood, left side, above Power Distribution Center (PDC), output from 12V 100A megafuse
1851	Negative stud	Left side IP
1852	Transmission shifter 16-way	Shift bracket
1858B	Negative stud	Left side IP
1862	Negative stud	Left side IP
1876	Left turn relay	Center of IP
1877	Right turn relay	Center of IP
1878	Flash-to-pass relay	Center of IP
1936	Power socket ground	Left side IP
1937	Left side power socket	Center of IP
1938	Right side power socket	Center of IP
1939	Left heated windshield	Base of windshield
1940	Right heated windshield	Base of windshield
1951	Fuel-fired heater	Center of IP
1952	Infrared lamp switch	Center of IP
1953	Spotlight	Center of IP
1954	MVLS	Center of IP
1955	Ramp control switch	Center of IP
1956	Ramp control interconnect	Right side IP
2050	Roof marker	Right side IP
2101	Power stud	Under hood, left side, above PDC, input to 12V 100A megafuse
2118	Dome lamp connector	Right side IP
2400	Positive winch cable	Outboard right side frame rail, behind battery box, on 300A megafuse inboard stud
2401	Negative winch cable	Right inner wheel deflector bracket
2500	Positive winch cable	Behind front bumper, on front frame crossmember, upper junction block stud
2501	Negative winch cable	Behind front bumper, on front frame crossmember, lower junction block stud
3000M	Driver door connector	Left side IP near door
3003M	Passenger door connector	Right side IP near door
4001	Mini-fuse blocks	Power distribution center
4002	Micro-relay center	Power distribution center
4003	Isolation and power relays	Power distribution center
4004	ESC GRAY	Left of steering column on dash
4005	Ground 1	Under left side dash
4006	Ground 2	Under left side dash
4006A	Ground 3	Under left side dash
4007	ESC BROWN	Left of steering column on dash
4008	ESC BLUE	Left of steering column on dash
4015	Wiper motor inline connector	Under hood, left side of dash
4019	Air Conditioning (A/C) system	Underhood, right side near firewall
4021	Washer pump	Washer fluid reservoir
4025	Power stud	Brake valve armor
4028A	24V feed stud	Brake valve armor

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
4028C	24V feed stud	Brake valve armor
4034	Fuel-fired heater	Near left front shock
4035	Fuel-fired heater power and ground	Near left front shock
4036	Master power	Near left front shock
4042	Fuel heater	Water and fuel seperator
4043	Water probe	Water and fuel seperator
4100F	Dash connector	Under engine air cleaner
4101M	Dash connector starter/Engine Control Module (ECM) power	Under engine air cleaner
4103	Engine connector	Under engine air cleaner
4105	ECM power/starter solenoid	Under engine air cleaner
4111M	Fan solenoid	Under hood, left side of engine near dash
4300	Dash harness connector	Near left front shock
4301	Forward chassis connector	Near left front shock
4305M	Forward chassis connector	Near left front shock
4305F	Auxiliary dash connector	Near left front shock
4705F1	Dash/Transmission connector	Under engine air cleaner
4705F2	Dash/Transmission connector	Under engine air cleaner
4811	Electronic splice	Under engine air cleaner
4830	Electronic ground splice	Under engine air cleaner
4840	Ignition splice pack	Power distribution center under hood, on brake valve armor
4900	Transfer case connection	Near left front shock
4910	Transfer case connection	Near left front shock
4953	Anti-Lock Brake System (ABS) connector X1	Under right IP
4954	ABS connector X2	Under right IP
6007	ECM engine control	Left side of engine above starter at ECM
6102	Alternator power	Under hood, on alternator
6103	Alternator power	Under hood, on alternator
6104	Alternator ground	Under hood, on alternator
6105	Alternator ground	Under hood, on alternator
6106	Alternator ignition	Under hood, on alternator regulator
6108	12V disconnect switch	Outboard right side frame rail, behind battery box, on 12V solenoid inboard stud
6109	12V disconnect switch	Outboard right side frame rail, behind battery box, on 12V solenoid inboard stud
6302	Engine block ground	Left side of engine near starter
6306	Starter “S” terminal	On starter solenoid “S” terminal
6307	Engine block ground	Left side of engine near starter
6308	Starter power	On starter solenoid “B” terminal
6309	Starter power	On starter solenoid “B” terminal
6316	Engine block ground	Left side of engine near starter
6321	Engine block ground	Under hood, left side firewall
6322	Starter power	On starter solenoid “B” terminal
6323F	Engine ECM clean power	Front of starter
6323M	Engine ECM clean power	Front of starter
6401F	In-line 6 (I6) Hydraulic Electronic Unit Injector (HEUI) engine harness connection	Top of engine front
6401M	Low coolant sensor	Under hood, at coolant reservoir

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
6502	Exhaust brake solenoid	Engine, left side of rocker cover
6503	Exhaust brake solenoid ground	Engine, left side of rocker cover
6550M	Ether start thermostat	Under hood, rear of engine block near ECM
6703	Air temperature sensor	Under hood, air cleaner
6704	Ground splice connection	Under hood, on engine, above ECM
7104F	Transmission Control Module (TCM) clean power	Front of starter
7104M	TCM clean power	Front of starter
7150F	Transmission control module	Top of frame rail between transmission and fuel tank
7205F	Vehicle Interface Wiring (VIW)	Under engine air cleaner
7206M	VIW	Under engine air cleaner
7208M	J1939 transmission	Top of transmission right side
7210	ABS - 6 blink code switch	Left side of IP, left of steering column
7250F	Transmission connector	Right side of transmission
7603M	Engine speed sensor	Front of transmission
7605M	Transmission output speed sensor	Rear of transmission
7611	Transfer case	Left side rear transmission bellhousing
8000	Right headlight turn signal harness	Right side of front bumper
8001	Left headlight turn signal harness	Left side of front bumper
8153F	Left turn signal marker light in-line	Under left front fender
8153FR	Right turn signal marker light in-line	Under right front fender
8154	Left turn signal marker light	Under left front fender
8154R	Right turn signal marker light	Under right front fender
8311	Electric horn 1	Left side behind front bumper
8312	Electric horn 2	Right side behind front bumper
8400B	Ether start	Left front wheel well
8500	Left front ABS modulator valve	Left front wheel well
8501	Right front ABS modulator valve	Right front wheel well
8502A	Left front wheel speed sensor	Left front wheel well
8503A	Right front wheel speed sensor	Right front wheel well
8600	Radiator ground	Near radiator
8800	Ground adapter 1	Left front wheel well
8801	Ground adapter 2	Right front wheel well
8802	ISO ground and splice pack	Left side inside frame rail near transmission
8803	Chassis ground splice pack	Left side inside frame rail near transmission
9100	Left fuel sender	Fuel tank
9250	Battery positive	Battery positive post
9254	Engine ECM feed fuse connector	Battery tray
9255	TCM feed fuse connector	Battery tray
9256	Battery negative	Battery negative post
9260	Battery ECM negative connector	Battery tray
9261	Battery ECM positive connector	Battery tray
9303A	Stop and turn blackout	Rear of vehicle
9501	Left wheel speed sensor	Left rear brake actuator
9502	Left modulator	Left frame rail above rear axle
9503	Right speed sensor	Right rear brake actuator
9504	Right modulator	Right frame rail above axle
9700	Dash/center chassis interconnect	Near left front shock
9714	Dash/center chassis interconnect	Near left front shock
9715	Trailer socket 1 center chassis	Inside left frame rail behind transfer case
9715F	Trailer socket 1 rear chassis	Inside left frame rail behind transfer case
9715M	Trailer socket 1 center chassis	Near left front shock
9715P	Trailer socket 1 dash harness	Near left front shock

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
9716	Trailer socket 2 center chassis	Inside left frame rail behind transfer case
9716F	Trailer socket 2 rear chassis	Near left front shock
9716M	Trailer socket 2 rear chassis	Inside left frame rail behind transfer case
9716P	Trailer socket 2 center chassis	Near left front shock
9717	Trailer ground	Left frame rail behind transfer case
9717F	Trailer ground	Left frame rail behind transfer case
9717M	Trailer socket ground	Under hood, left side on firewall
9720	Blackout lighting	Above muffler near bumper
9722	Trailer auxiliary	Near left front shock
9723	Front trailer socket 1	Near left front shock
9724	Front trailer socket 2	Near left front shock
9733	Trailer auxiliary socket	Near left front shock
9733	Trailer auxiliary socket	Near left front shock
9736	Air solenoid 4-pack	Inside left frame rail near transmission
9750	Transfer case	Top of transfer case
9754	Transfer case switch pigtail	Right rear of transfer case
9755	Transfer case speed	Top of transfer case
9778F	Trailer socket ground	Left rear frame rail near muffler
9779F	Trailer socket 2	Left rear frame rail near muffler
9780M	Trailer socket 1	Left rear frame rail near muffler
9783	Trailer auxiliary power	Left rear frame rail near muffler
9800	Connection to center harness	Inside left frame rail behind transfer case
9900C	Air dryer	Frame at rear of transfer case
9916	Blackout lighting	Left side front bumper
9917	Blackout marker	Right side front bumper
C1	Fire Suppression System (FSS) control panel	Center IP
C2	Engine fire suppression cylinder	Under right side on frame rail behind stowage bin
C3	Internal fire cylinder	Inside vehicle at internal FSS cylinder
C4	Fuel tank fire cylinder	Left side center of vehicle on frame rail
C6	Tire fire suppression cylinder	Above left side rear stowage box, behind panel
C7	Engine fire heat detector	Underside hood
C8	Cabin fire heat detector	Right side below IP on door hinge post
C9	Cabin bulkhead pass-through	Under right side IP at penetration dust panel
C10	Fire suppression harness at Power Distribution Module (PDM)	Lower center IP
C11	Engine bulkhead pass-through	Right side firewall
J2	PDM feed firewall	Inside cabin, under engine cover, on lower front of PDM
J5	24V IP feed harness	Inside cabin, under engine cover, on lower front of PDM
J10	Recycled Air (RA) temperature sensor interface	Inside HVAC box, upper compartment
J19	HVAC control 2	Under right side IP at penetration dust panel
J22	HVAC operator panel	Front side HVAC box
J33	Low-pressure switch signal circuit (harness side)	Right side firewall
J33	3-way valve interface	Right side firewall
J33	HVAC engine harness 3-way valve	Right side firewall
J34	Left HVAC control 2	Right side firewall
J34	Right HVAC control 2	Right side firewall

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
J34	Left condenser control	Right side firewall
J34	Right condenser control	Right side firewall
J36	Air conditioning compressor	Left side upper engine near A/C compressor
P1	HVAC control power	Lower center IP at PDM
P3	Left condenser control	Right side A/C condenser
P4	Right condenser control	Left side A/C condenser
P4	PDM feed harness	Inside cabin, right side of PDM
P5	RA motor harness at Climate Control Unit (CCU)	Lower front of HVAC box
P6	HVAC control in harness at CCU	Lower front of HVAC box
P8	RA motor	Inside HVAC box, upper compartment
P10	RA temp sensor	Inside HVAC box, upper compartment
P12	Trinary switch	Inside HVAC box, upper compartment
P14	Fresh Air (FA) motor harness at CCU	Lower front of HVAC box
P17	FA motor	Inside HVAC box, Nuclear, Biological, Chemical (NBC) filter area
P19	HVAC	Under right side IP at penetration dust panel
P20	HVAC control power at CCU	Lower front of HVAC box
P21	HVAC operator panel harness at CCU	Lower front of HVAC box
P22	HVAC operator panel	Front of HVAC box
P23	HVAC control harness at CCU	Lower front of HVAC box
P29	HVAC control in harness	Under right side IP at penetration dust panel
P31	Freeze switch	Inside HVAC box, upper compartment
P33	Low-pressure switch ground circuit (harness side)	Right side engine near A/C compressor
P33	3-way valve interface	Right side firewall area
P33	HVAC engine harness 3-way valve	Right side firewall area
P34	Left HVAC control 2	Right side firewall area
P34	Right HVAC control 2	Right side firewall area
P34	Left condenser control	Right side firewall area
P34	Right condenser control	Right side firewall area
P35	HVAC interconnect (clear)	Right side IP
P36	A/C compressor	Left side upper engine
4019	A/C system high idle	Right side firewall area
J37	A/C system high idle	Right side firewall area
J14	FA motor harness at CCU	Inside HVAC box, NBC filter area. (Connected to backside of CCU)
LAM1001	Internal spotlight connector	On forward roof, at center pass-through
LAM1002	Spotlight connector/switch IP	Behind IP center trim panel, on spotlight switch
LAM1003	Spotlight connector IP harness	Inside cabin, under right side of IP, below electrical center
LAM1004	External spotlight connector	On forward roof, at center pass-through
LAM1005	Spotlight connection	On forward roof, under spotlight
LAM1006	Spotlight	On forward roof, under spotlight
LAM1007	Left mirror jumper harness to door	Inside cabin, under left side of IP, behind left IP mounting bracket
LAM1008	Left power mirror	Outside left door, outboard of left mirror mounting plate
LAM1009	Left mirror jumper harness through mirror	Outside left door, outboard of left mirror mounting plate, on mirror assembly support bracket
LAM1010	Left mirror jumper harness in mirror	Outside left door, inside mirror housing
LAM1011	Camshaft position (CMP) sensor	Under hood, right side of engine front cover
LAM1012	Spotlight motor static drain wire connector IP	Behind IP center trim panel, behind 24V gauge

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
LAM1013	Engine oil pressure sensor	Under hood, right side of engine block, forward of fuel filter
LAM1014	Manifold absolute pressure sensor	Under hood, forward top of valve cover
LAM1015	Engine oil temperature	Under hood, left side of engine, near high-pressure oil pump
LAM1016	Injector pressure regulator	Under hood, left side of engine, on high pressure oil pump
LAM1018	Injector control pressure sensor	Under hood, right side of engine, above fuel filter adapter mount
LAM1019	ECM	Under hood, on engine left rear lower side
LAM1020	Fuel injector harness	Under hood, left side of valve cover
LAM1021	Dome lamp connector	Inside cabin, under right side of IP, below electrical center
LAM1022	Front crew light	Inside cabin, on roof, between front seats
LAM1023	Right rear crew light	Inside cabin, on right side of roof, rear of turret opening
LAM1024	Right rear crew light	Inside cabin, on right side of roof, rear of turret opening
LAM1025	Left rear crew light	Inside cabin, on left side of roof, near turret opening
LAM1026	Ramp limit	Inside right rear of cabin, under upper cabin molding
LAM1027	Ramp limit	Inside right rear of cabin, under upper cabin molding
LAM1028	Ramp limit switch	Inside right rear of cabin, right upper ramp/door opening
LAM1029	Spotlight motor static drain jumper/wire connector roof	On forward roof, under spotlight
LAM1030	Spotlight motor static drain wire/jumper IP harness	Behind IP center trim panel, behind 24V gauge
LAM1031	Spotlight motor static drain jumper/wire harness	Behind IP center trim panel, on 24V gauge stud
LAM1032	Left side power socket	Inside cabin, under center of IP, above PDM
LAM1033	Right side power socket	Inside cabin, under center of IP, above PDM
LAM1034	Turret power feed	Inside cabin, under engine cover, on lower front of PDM
LAM1035	Ramp feed harness	Inside cabin, under engine cover, on lower front of PDM
LAM1036	24V IP feed harness	Inside cabin, under engine cover, on lower front of PDM
LAM1037	PDM case ground	Inside cabin, forward of engine cover, on right side of PDM
LAM1038	Government Furnished Equipment (GFE) feed harness	Inside cabin, under engine cover, on lower front of PDM
LAM1039	Clearance lights cabin jumper harness	Inside cabin, under right side of IP, below electrical center
LAM1040	Engine coolant temperature sensor	Under hood, left side of engine, near front cover
LAM1041	24V IP feed harness	Inside cabin, under right side of IP, below electrical center
LAM1042	Right mirror jumper harness to door	Inside cabin, under right side of IP, behind right IP mounting bracket

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
LAM1043	PDM firewall ground	Inside cabin, under right side of IP, below electrical center, on firewall
LAM1044	24V body feed harness connector	Under hood, right side firewall
LAM1045	Ground cable firewall	Under hood, right side firewall
LAM1046	Left headlight turn signal harness	Under hood, outboard left frame rail, forward of left front tire
LAM1047	Right headlight turn signal harness	Under hood, outboard right frame rail, forward of right front tire
LAM1048	Left headlight	Under hood, underside of left front fender
LAM1049	Right headlight	Under hood, underside of right front fender
LAM1050	Right power mirror	Outside right door, outboard of right mirror mounting plate
LAM1051	Right mirror jumper harness through mirror	Outside right door, outboard of right mirror mounting plate, on mirror assembly support bracket
LAM1052	Right mirror jumper harness in mirror	Outside right door, inside mirror housing
LAM1053	Ramp control interconnect	Inside cabin, under right side of IP, below electrical center
LAM1054	Engine valve cover pass-through connector	Under hood, left side of valve cover
LAM1055	Fuel injector cylinder #1	Under hood, under valve cover, #1 injector
LAM1056	Fuel injector cylinder #2	Under hood, under valve cover, #2 injector
LAM1057	Fuel injector cylinder #3	Under hood, under valve cover, #3 injector
LAM1058	Fuel injector cylinder #4	Under hood, under valve cover, #4 injector
LAM1059	Fuel injector cylinder #5	Under hood, under valve cover, #5 injector
LAM1060	Fuel injector cylinder #6	Under hood, under valve cover, #6 injector
LAM1061	Left turn signal and marker light	Under hood, underside of left front fender
LAM1062	Right turn signal and marker light	Under hood, underside of right front fender
LAM1063	Ramp control harness	Inside right rear of cabin, under pump cover
LAM1064	Hydraulic station harness	Inside right rear of cabin, under pump cover
LAM1065	Diode 1	Inside right rear of cabin, under pump cover
LAM1066	Diode 2	Inside right rear of cabin, under pump cover
LAM1067	Diode 3	Inside right rear of cabin, under pump cover
LAM1068	Hydraulic solenoid valve	Inside right rear of cabin, under pump cover
LAM1069	Hydraulic solenoid valve	Inside right rear of cabin, under pump cover
LAM1070	Crew ramp switch	Inside right rear of cabin, under pump cover
LAM1071	Ramp feed harness	Inside right rear of cabin, under pump cover
LAM1072	Ramp feed harness	Inside right rear of cabin, under pump cover
LAM1073	Inverter 24V positive feed	Right stowage cabinet, forward of rear wheel
LAM1074	Inverter ground	Right stowage cabinet, forward of rear wheel
LAM1075	Solenoid 24V positive feed	Right stowage cabinet, forward of rear wheel
LAM1076	Solenoid 24V delivery	Right stowage cabinet, forward of rear wheel
LAM1077	Inverter 150A fuse 24V	Right stowage cabinet, forward of rear wheel
LAM1078	Inverter 150A fuse 24V feed	Right stowage cabinet, forward of rear wheel
LAM1079	Solenoid 12V positive control	Right stowage cabinet, forward of rear wheel
LAM1080	Solenoid ground control	Right stowage cabinet, forward of rear wheel
LAM1081	North Atlantic Treaty Organization (NATO) slave-to-150A fuse 24V supply	Right stowage cabinet, forward of rear wheel
LAM1082	Inverter ground supply	Right stowage cabinet, forward of rear wheel
LAM1083	NATO slave 24V positive feed	Right stowage cabinet, forward of rear wheel
LAM1084	NATO slave ground	Right stowage cabinet, forward of rear wheel
LAM1085	Taillamp harness 3-pin	Rear inboard right frame rail, above muffler
LAM1086	Taillamp harness 5-pin	Rear inboard right frame rail, above muffler
LAM1087	Left taillamp assembly	Inside left rear light housing

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
LAM1088	Right taillamp assembly	Inside right rear light housing
LAM1089	Left rear side marker light	Behind left rear side marker light housing, in left rear stowage box
LAM1090	Right rear side marker light	Behind right rear side marker light housing, in right rear stowage box
LAM1091	Left rear side marker light ground	Inside left rear side marker light housing
LAM1092	Right rear side marker light ground	Inside right rear side marker light housing
LAM1093	Left backup light	Inside left rear light housing
LAM1094	Right backup light	Inside right rear light housing
LAM1095	CCU case ground	Inside cabin, behind right side front seat, on CCU unit
LAM1096	24V body feed harness	Outboard right side frame rail, behind battery box, on 24V solenoid inboard stud
LAM1097	24V body feed connector	Outboard right side frame rail, behind battery box, on 24V solenoid inboard stud
LAM1098	Front bumper left harness 3-pin	Behind front bumper, left side
LAM1099	Front bumper left harness blackout driving light	Behind front bumper, left side
LAM1100	Front bumper left harness 5-pin	Outboard left frame rail, forward of right front tire
LAM1101	Front chassis harness 5-pin to left front bumper harness	Outboard right frame rail, forward of right front tire
LAM1102	Front bumper left harness ground eyelet	Behind front bumper, left side
LAM1103	Front bumper left harness light assembly	Behind front bumper, left side
LAM1104	Front bumper right harness light assembly	Behind front bumper, right side
LAM1105	Winch megafuse feed cable	Outboard right frame rail, behind battery box, on 24V solenoid outboard stud
LAM1106	Winch megafuse feed cable	Outboard right frame rail, behind battery box, on 300A megafuse outboard stud
LAM1107	Front chassis harness 5-pin- to-right front bumper harness	Outboard left frame rail, forward of left front tire
LAM1108	Front bumper right harness 5-pin	Outboard right frame rail, forward of right front tire
LAM1109	Front bumper right harness 1-pin	Behind front bumper, right side
LAM1110	Front bumper left harness 2-pin	Behind front bumper, left side
LAM1111	MVLS ground	Behind IP center trim panel, on MVLS
LAM1112	MVLS ground jumper	Behind IP center trim panel, behind MVLS
LAM1113	Ground cable wheel deflector	Right inner wheel deflector bracket
LAM1114	Battery 3 parallel jumper	Battery 3, positive clamp adapter
LAM1115	Battery 4 positive parallel jumper	Battery 4, positive clamp adapter
LAM1116	Battery 4 negative parallel jumper	Battery 3, negative clamp adapter
LAM1117	Battery 3 negative parallel jumper	Battery 4, negative clamp adapter
LAM1118	Battery 3 series jumper	Battery 3, negative clamp adapter
LAM1119	Battery 2 series jumper	Battery 2, positive clamp adapter
LAM1120	Battery 1 negative connector to starter	Battery 1, negative clamp adapter
LAM1121	Starter ground	On starter motor ground stud
LAM1122	Battery 2 negative to NATO slave connector	Battery 2, negative clamp adapter
LAM1123	Battery 3 positive connection to 24V mag switch	Battery 3, positive clamp adapter
LAM1124	24V mag switch feed	On starter solenoid “B” terminal

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
LAM1125	Battery 3 positive to NATO slave connector	Battery 3, positive clamp adapter
LAM1126	Left rear clearance light power	On rear of roof, under rear clearance light bar assembly
LAM1127	Left rear clearance light ground	On rear of roof, under rear clearance light bar assembly
LAM1128	Left center rear clearance light power	On rear of roof, under rear clearance light bar assembly
LAM1129	Left center rear clearance light ground	On rear of roof, under rear clearance light bar assembly
LAM1130	Center rear clearance light power	On rear of roof, under rear clearance light bar assembly
LAM1131	Center rear clearance light ground	On rear of roof, under rear clearance light bar assembly
LAM1132	Right center rear clearance light power	On rear of roof, under rear clearance light bar assembly
LAM1133	Right center rear clearance light ground	On rear of roof, under rear clearance light bar assembly
LAM1134	Right rear clearance light power	On rear of roof, under rear clearance light bar assembly
LAM1135	Right rear clearance light ground	On rear of roof, under rear clearance light bar assembly
LAM1136	Rear clearance lights - lamps side	On rear of roof, under rear clearance light bar assembly, beneath right upper rear armor plate
LAM1137	Rear clearance lights - harness side	On rear of roof, under rear clearance light bar assembly, beneath right upper rear armor plate
LAM1138	Front clearance lights - harness side	On front of roof, left of front clearance light bar assembly
LAM1139	Front clearance lights - lamps side	On front of roof, left of front clearance light bar assembly
LAM1140	Left front clearance light power	On front of roof, under front clearance light bar assembly
LAM1141	Left front clearance light ground	On front of roof, under front clearance light bar assembly
LAM1142	Left center front clearance light power	On front of roof, under front clearance light bar assembly
LAM1143	Left center front clearance light ground	On front of roof, under front clearance light bar assembly
LAM1144	Center front clearance light power	On front of roof, under front clearance light bar assembly
LAM1145	Center front clearance light ground	On front of roof, under front clearance light bar assembly
LAM1146	Right center front clearance light power	On front of roof, under front clearance light bar assembly
LAM1147	Right center front clearance light ground	On front of roof, under front clearance light bar assembly
LAM1148	Right front clearance light power	On front of roof, under front clearance light bar assembly
LAM1149	Right front clearance light ground	On front of roof, under front clearance light bar assembly
LAM1150	12V disconnect switch ground	Outboard right side frame rail, behind battery box, on 12V solenoid inboard switching stud
LAM1151	24V disconnect switch ground	Outboard right side frame rail, behind battery box, on 24V solenoid inboard switching stud

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
LAM1152	12V disconnect switch power	Outboard right side frame rail, behind battery box, on 12V solenoid outboard switching stud
LAM1153	24V disconnect switch power	Outboard right side frame rail, behind battery box, on 24V solenoid outboard switching stud
LAM1154	12V disconnect power feed	Outboard right side frame rail, behind battery box, on 12V solenoid outboard stud
LAM1155	Left side power socket 2	Inside cabin, behind right side front seat, on equipment rack, inside receptacle box
LAM1156	Left side power socket 1	Inside cabin, behind right side front seat, on equipment rack, inside receptacle box
LAM1157	Right side power socket 2	Inside cabin, behind left side front seat, on equipment rack, inside receptacle box
LAM1158	Right side power socket 1	Inside cabin, behind left side front seat, on equipment rack, inside receptacle box
LAM1159	Front equalizer negative terminal at body ground	Right inner wheel deflector bracket
LAM1160	Rear equalizer negative terminal at body ground	Right inner wheel deflector bracket
LAM1161	Rear equalizer negative terminal at body ground	Outboard right side frame rail, behind battery box
LAM1162	Rear equalizer negative terminal	Outboard right side frame rail, behind battery box, on rear equalizer ground terminal
LAM1163	Front equalizer 12V terminal	Outboard right side frame rail, behind battery box, on front equalizer 12V terminal
LAM1164	Front equalizer 24V terminal	Outboard right side frame rail, behind battery box, on front equalizer 24V terminal
LAM1165	Front equalizer cable at 12V solenoid	Outboard right side frame rail, behind battery box, on 12V solenoid inboard stud
LAM1166	Front equalizer cable at 24V solenoid	Outboard right side frame rail, behind battery box, on 24V solenoid inboard stud
LAM1167	Rear equalizer cable at 12V solenoid	Outboard right side frame rail, behind battery box, on 12V solenoid inboard stud
LAM1168	Rear equalizer cable at 24V solenoid	Outboard right side frame rail, behind battery box, on 24V solenoid inboard stud
LAM1169	Rear equalizer 12V terminal	Outboard right side frame rail, behind battery box, on rear equalizer 12V terminal
LAM1170	Rear equalizer 24V terminal	Outboard right side frame rail, behind battery box, on rear equalizer 24V terminal
LAM1171	Front and rear clearance lights roof pass-through, inside harness	On forward roof, at center pass-through
LAM1172	Front and rear clearance lights roof harness	On forward roof, at center pass through
LAM1173	Turret power feed	Inside cabin, behind right side front seat, on equipment rack, inside turret feed box
LAM1174	Turret power feed	Inside cabin, behind right side front seat, on equipment rack, inside turret feed box
LAM1175	Wiper motor at PDC	Right side, under hood, beneath PDC
LAM1176	Wiper motor	Under cowl panel, below windshield, at wiper motor
LAM1177	GFE feed harness	Inside cabin, behind left side front seat, on equipment rack, inside GFE box

CONNECTOR LOCATIONS - (CONTINUED)

Connector Number	Description	Location
LAM1178	GFE feed harness	Inside cabin, behind left side front seat, on equipment rack, inside GFE box
LAM1179	Steering wheel harness	Steering wheel
LAM1180	Cruise control on/off switch	Steering wheel
LAM1181	Cruise control set/resume switch	Steering wheel
LAM1182	Negative battery cable	Battery 1, ground clamp adapter
LAM1183	Negative battery cable	Right inner wheel deflector bracket
LAM1184	Positive battery cable with pigtail	Battery 2, positive clamp adapter
LAM1185	Positive battery cable with pigtail	Battery 2, positive clamp adapter
LAM1186	12V solenoid feed cable	Battery 2, positive clamp adapter
LAM1187	12V solenoid feed cable	Outboard right side frame rail, behind battery box, on 12V solenoid outboard stud
LAM1188	24V solenoid feed cable	Battery 4, positive clamp adapter
LAM1189	24V solenoid feed cable	Outboard right side frame rail, behind battery box, on 24V solenoid outboard stud
LAM1190	14V regulator harness connector	Under hood, on alternator regulator
LAM1191	28V regulator harness connector	Under hood, on alternator regulator
LAM1192	14V regulator harness connector	Under hood, on alternator regulator
LAM1193	28V regulator harness connector	Under hood, on alternator regulator
LAM1194	Fuel-fired heater	Outboard right side frame rail, behind stowage bin, forward of rear tire
LAM1195	Fuel-fired heater fuse holder	Outboard left side frame rail, behind fuel tank
LAM1196	Fuel-fired heater fuel pump	Outboard left side frame rail, behind fuel tank
LAM1197	Fuel-fired heater harness	Outboard left side frame rail, behind fuel tank
LAM1198	Fuel-fired heater power and ground harness	Outboard left side frame rail, behind fuel tank
LAM1199	Front trailer hookup harness trailer socket	Front bumper, left side
LAM1200	Rear trailer hookup harness trailer socket	Rear bumper, left side
LAM1201	Master rear door/ramp switch	Behind IP center trim panel, on master rear door/ramp switch
LAM1202	Ramp control switch	Behind IP center trim panel, behind master rear door/ramp switch
LAM1203	Left front turn signal and parking light	Under hood, underside of left front fender
LAM1204	Right front turn signal and parking light	Under hood, underside of right front fender
LAM1205	Dome lamp switch	Behind IP center trim panel, on dome lamp switch
LAM1206	Dome lamp switch jumper	Behind IP center trim panel, behind dome lamp switch
LAM1207	Hydraulic pump motor feed	Inside right rear of cabin, under pump cover
LAM1208	Rear trailer hookup harness auxiliary power	Rear, inboard left frame rail, forward of muffler
LAM1209	Rear trailer hookup harness ground	Rear, inboard left frame rail, forward of muffler
LAM1210	Rear trailer hookup harness taillights	Rear, inboard left frame rail, forward of muffler
LAM1211	Rear trailer hookup harness tail and turn lights	Rear, inboard left frame rail, forward of muffler
LAM1212	Front trailer hookup harness ground	Under hood, left side firewall, near PDC
LAM1213	Front trailer hookup harness power and ground	Under hood, behind left engine armor plate, near top of left front shock
LAM1214	Front trailer hookup harness tail, turn and brake lights	Under hood, behind left engine armor plate, near top of left front shock

END OF WORK PACKAGE

FIELD MAINTENANCE

ELECTRICAL SYSTEM SCHEMATICS

INITIAL SETUP:

NOT APPLICABLE

Abbreviations

Abbreviations are in accordance with ASME Y14.38.

WIRING DIAGRAMS

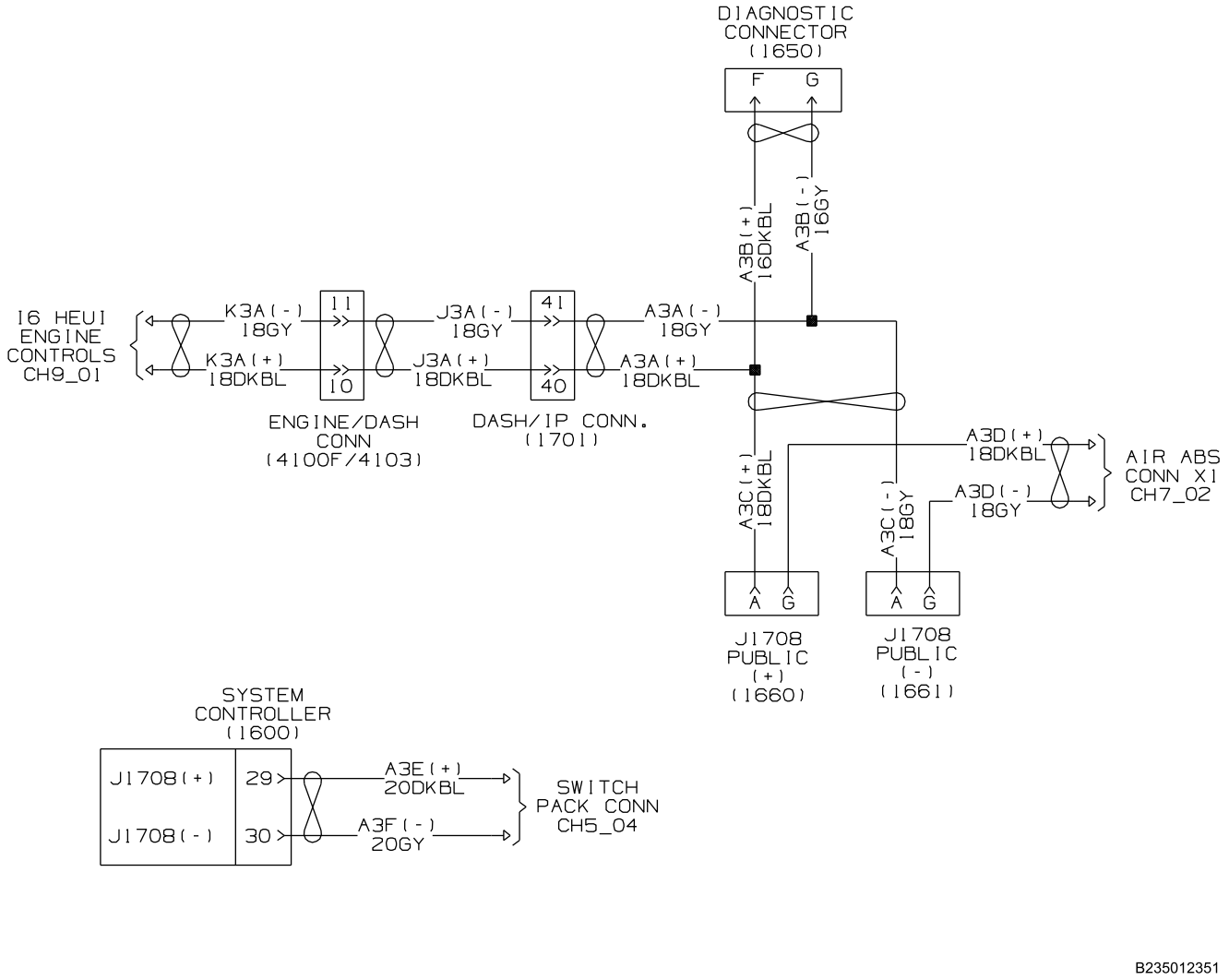
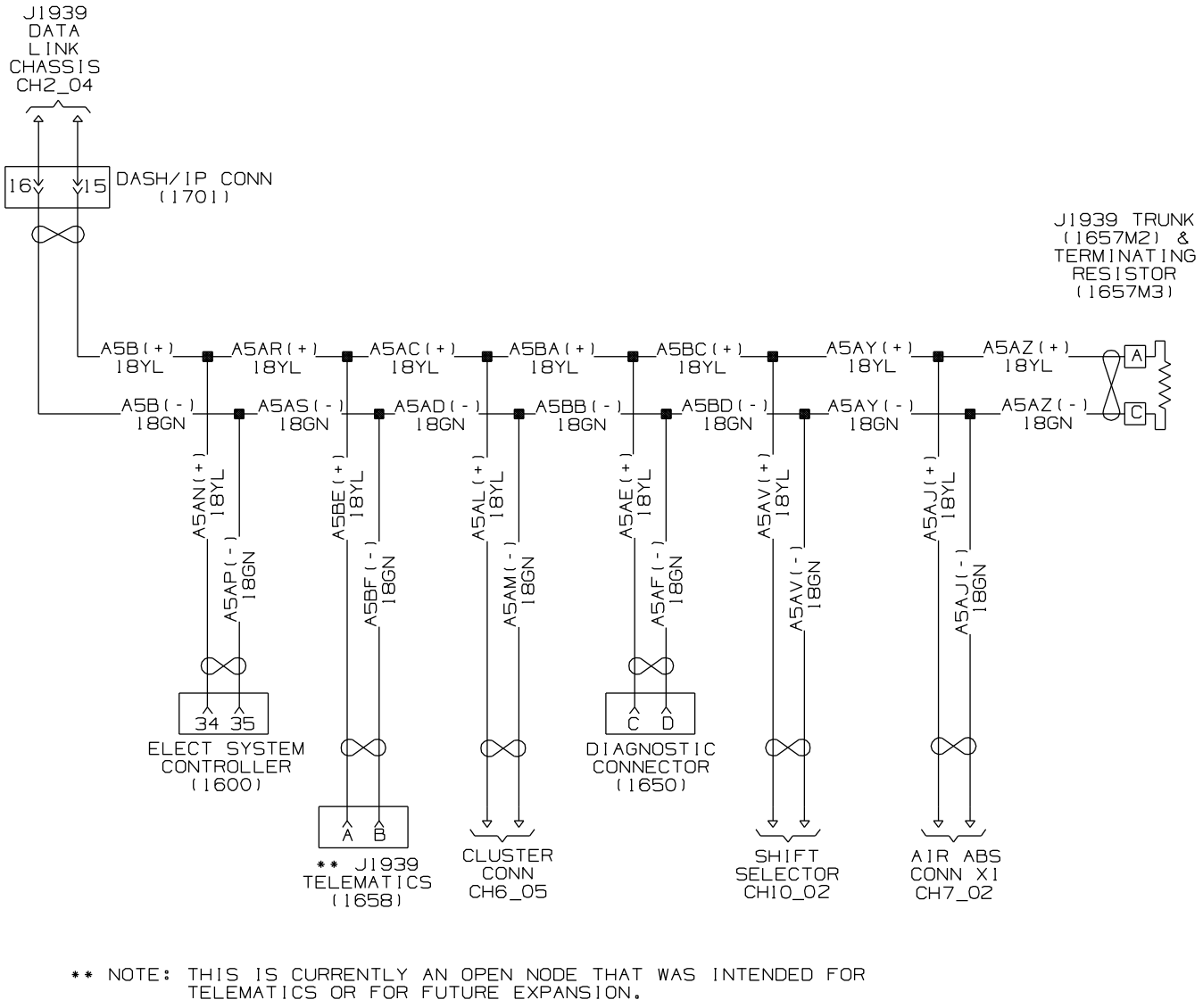


Figure 1. CH2_01, J1708 Data Link.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



** NOTE: THIS IS CURRENTLY AN OPEN NODE THAT WAS INTENDED FOR TELEMATICS OR FOR FUTURE EXPANSION.

B235012352

Figure 2. CH2_02, J1939 Data Link – Cabin.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

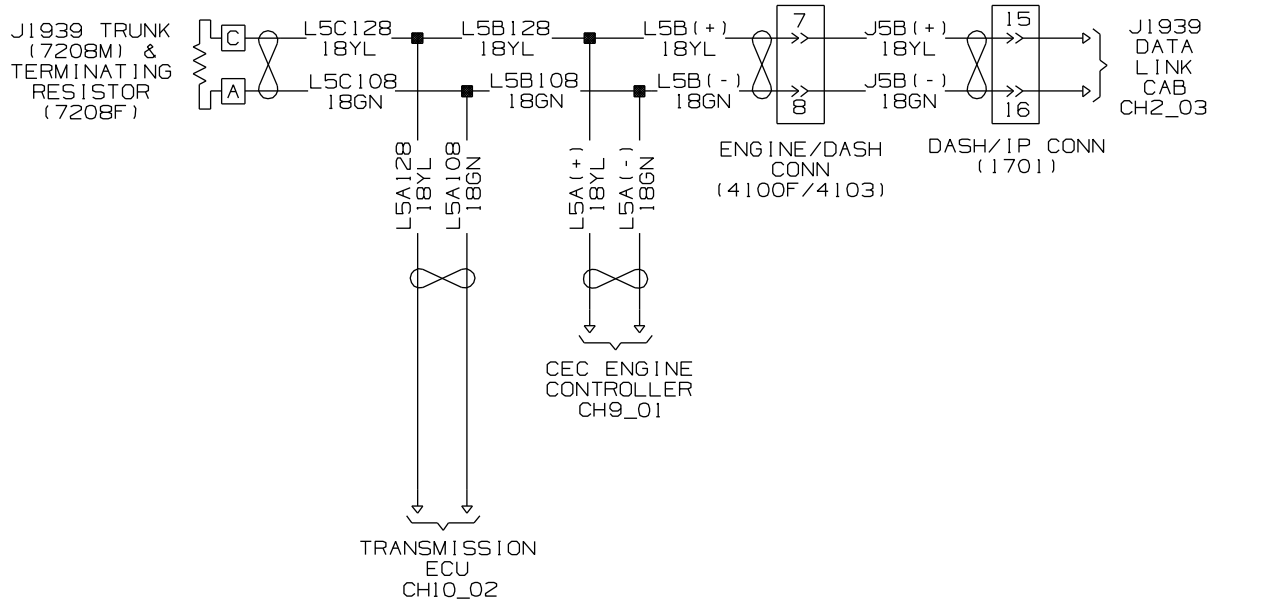


Figure 3. CH2_03, J1939 Data Link – Chassis.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

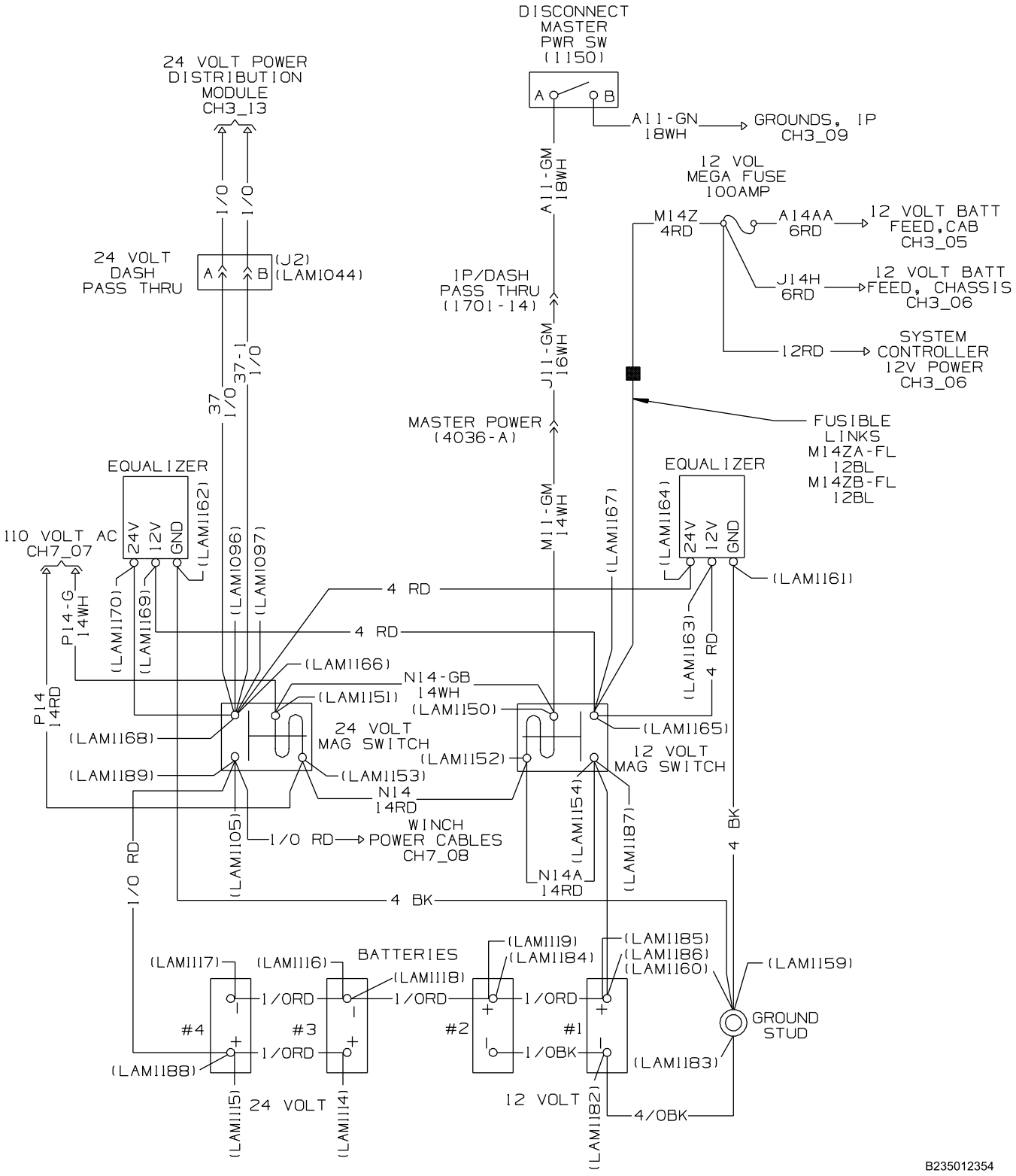


Figure 4. CH3_01, Master Power Disconnect Switch.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

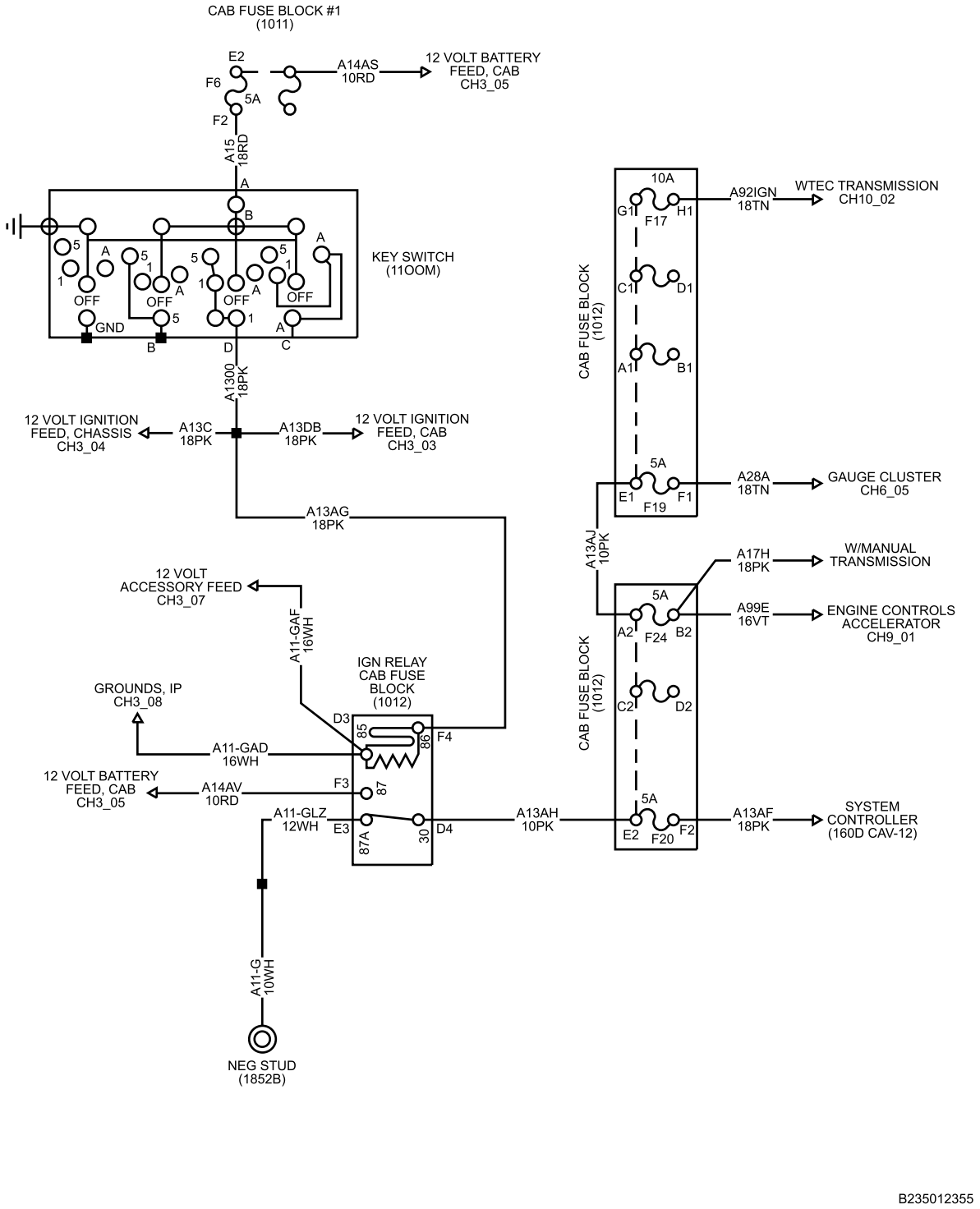


Figure 5. CH3_02, 12V Ignition Feed – Cabin (1 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

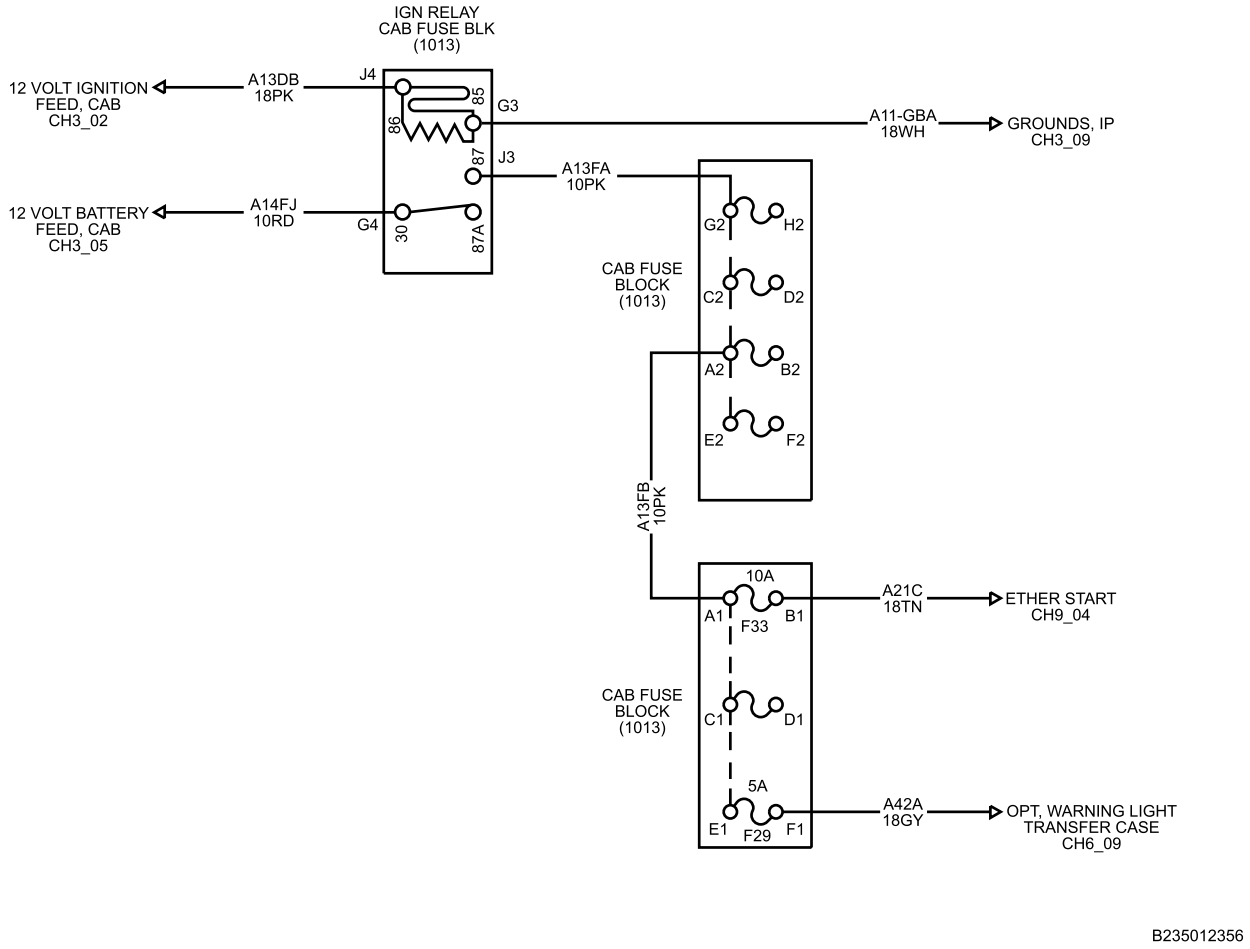


Figure 6. CH3_03, 12V Ignition Feed – Cabin (2 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

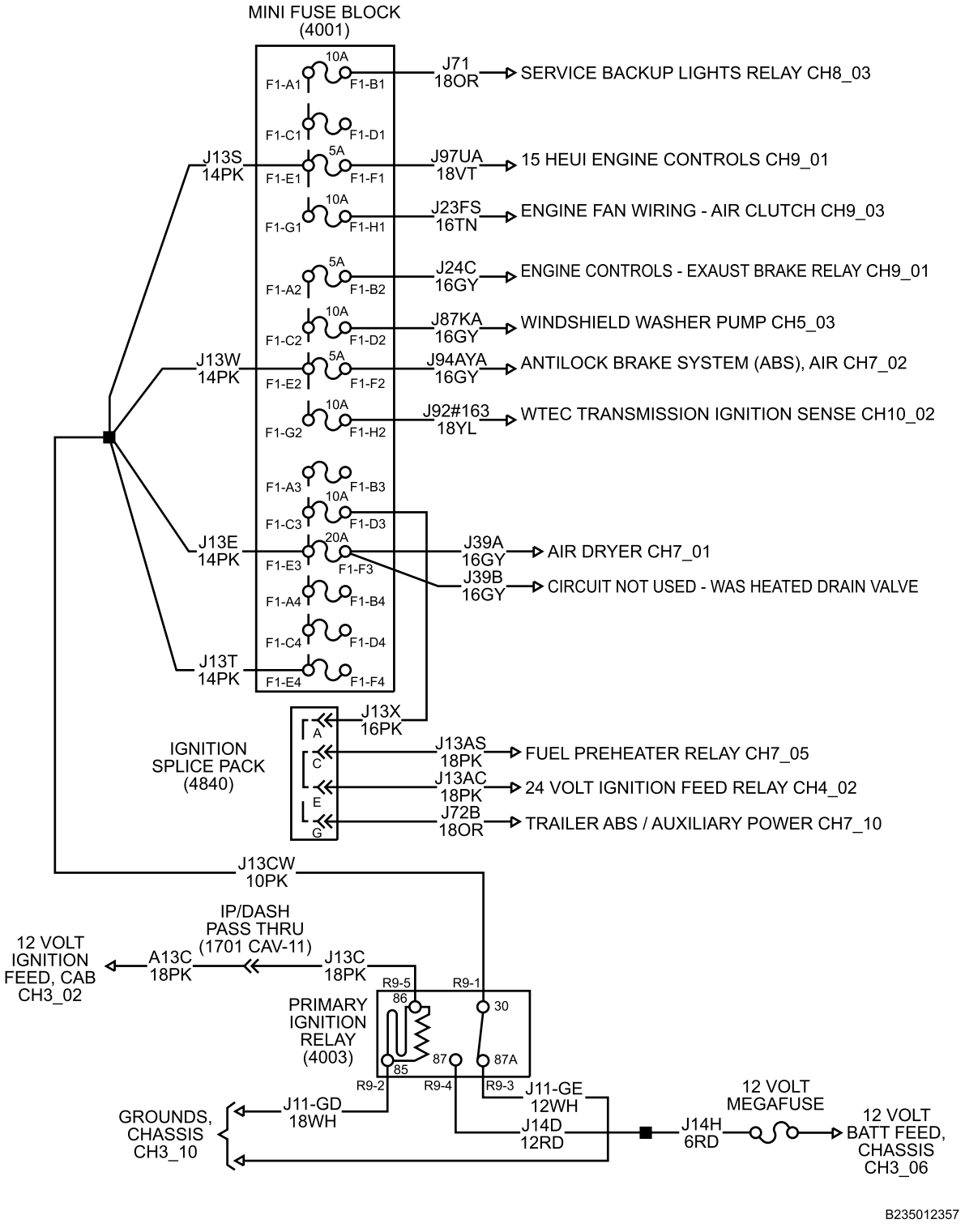


Figure 7. CH3_04, 12V Ignition Feed – Chassis.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

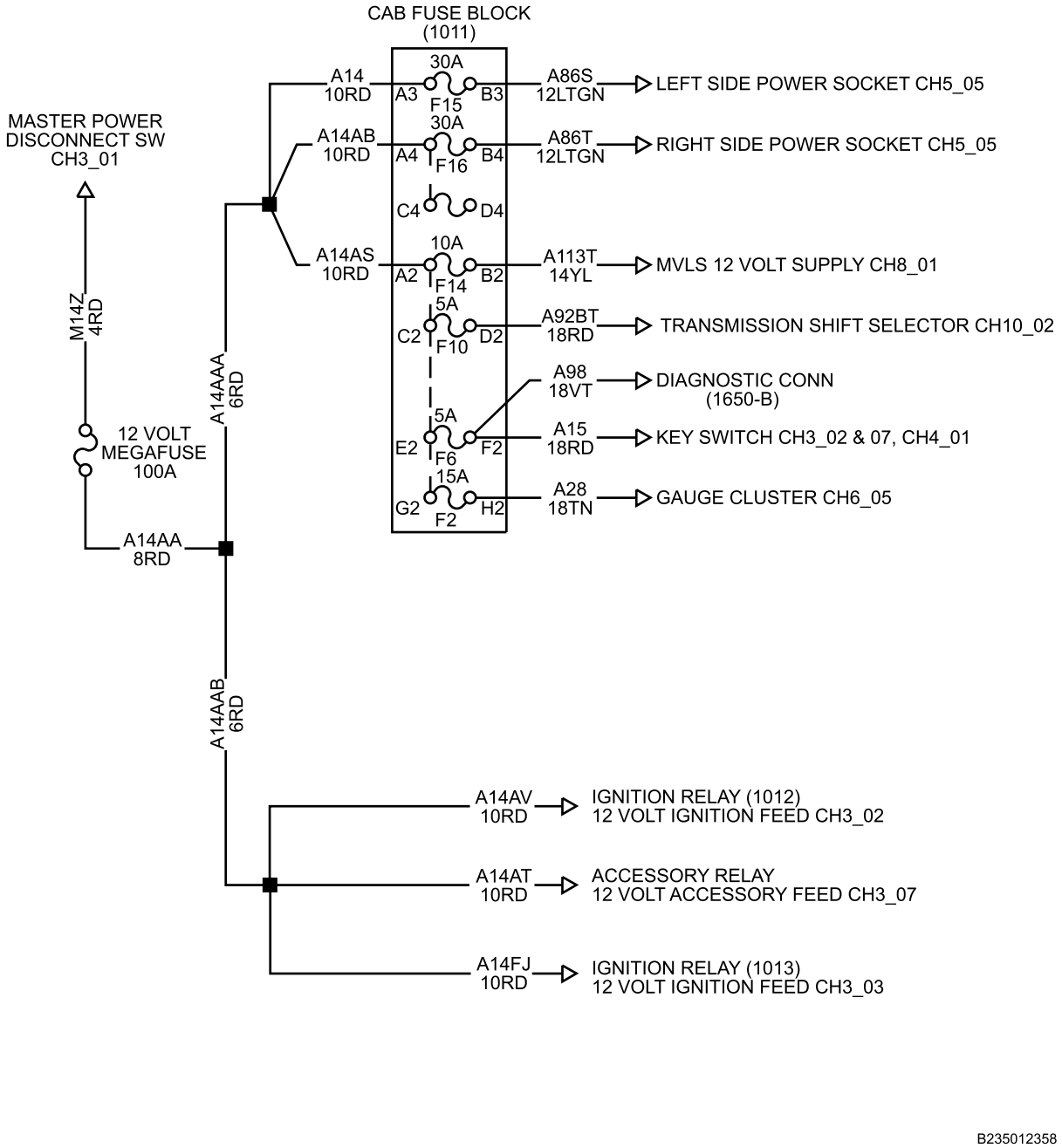


Figure 8. CH3_05, 12V Battery Feed – Cabin.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

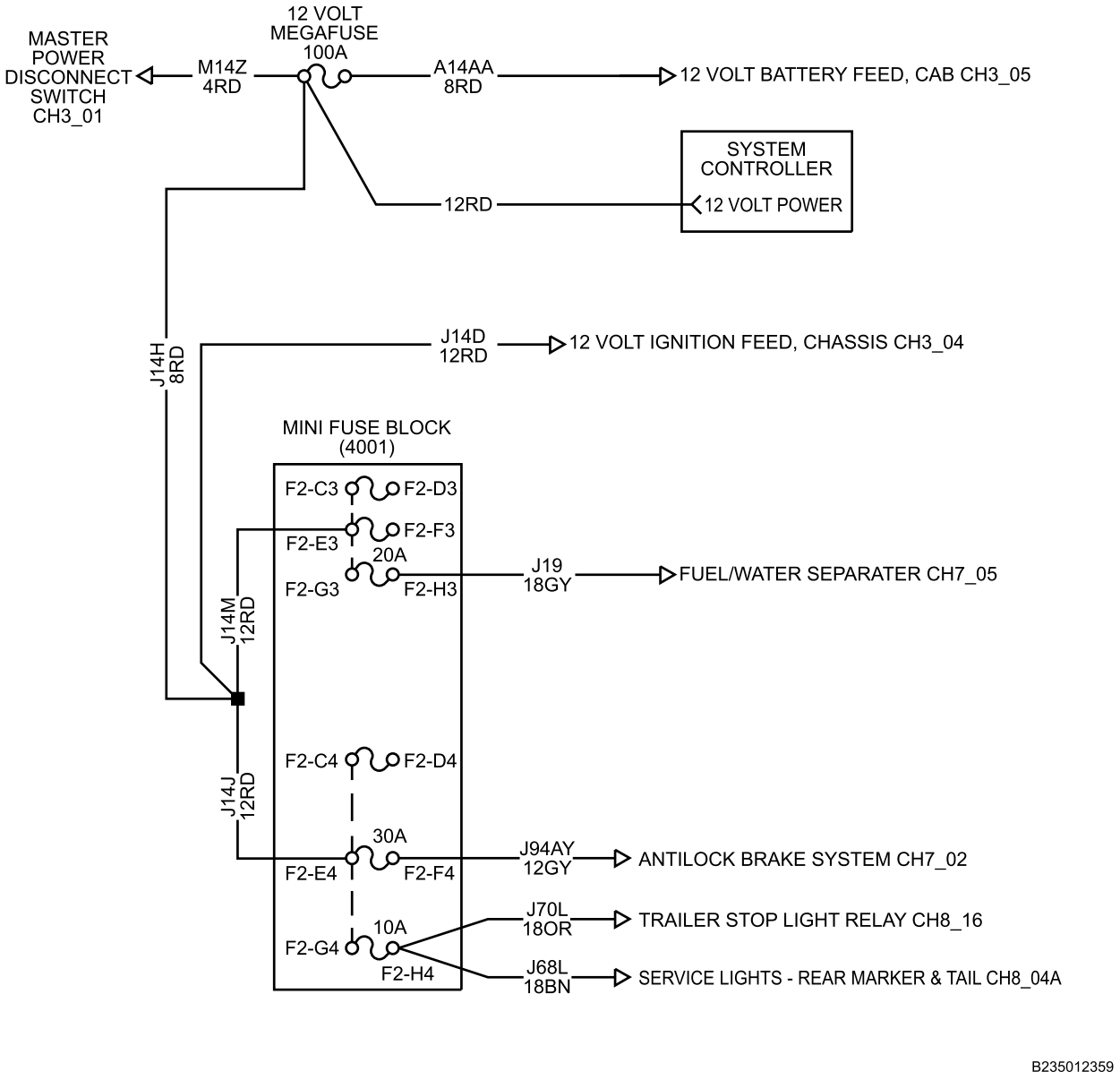


Figure 9. CH3_06, 12V Battery Feed – Chassis.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

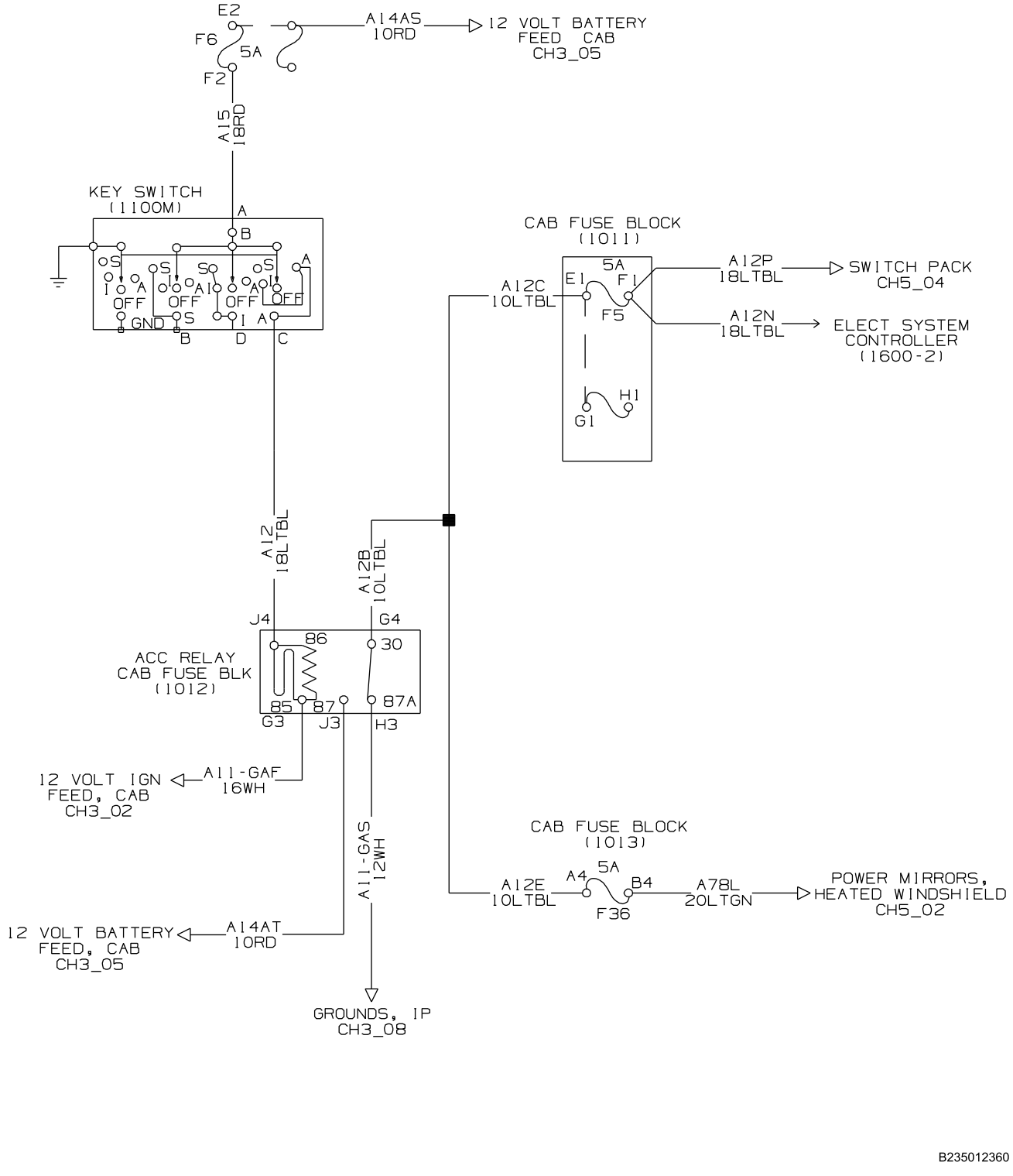


Figure 10. CH3_07, 12V Accessory Feed.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

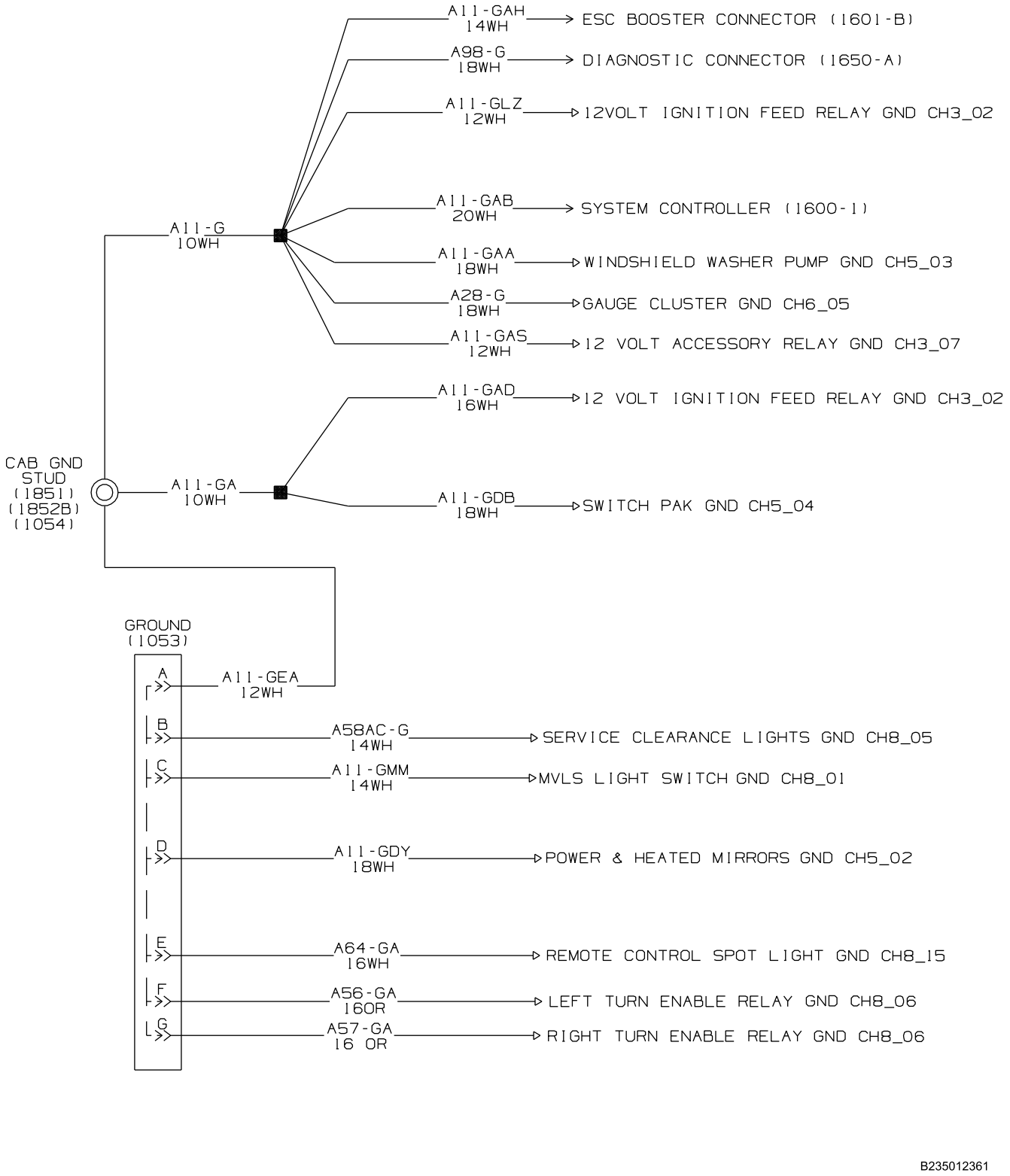


Figure 11. CH3_08, Grounds – Instrument Panel (IP) (1 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

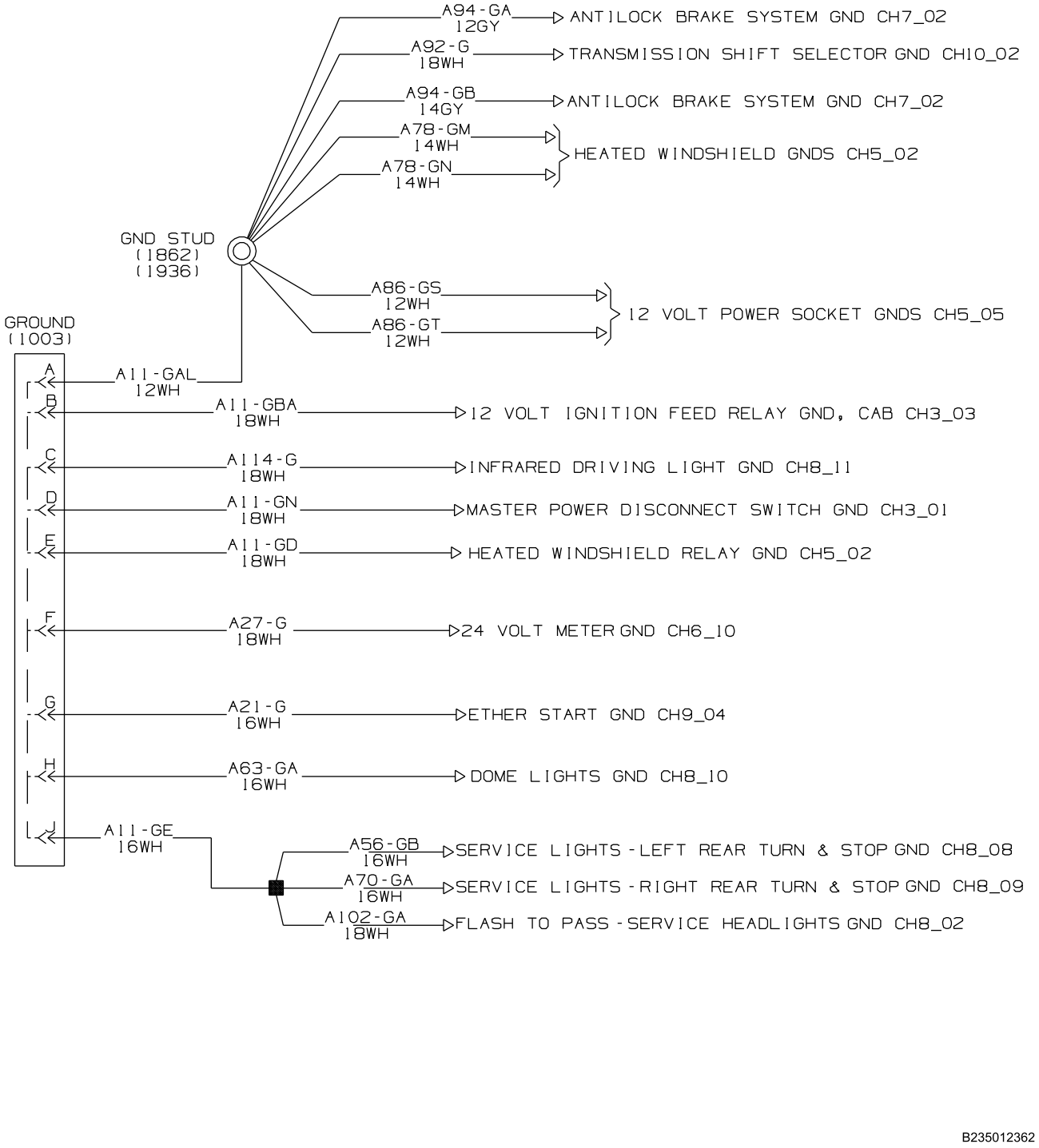


Figure 12. CH3_09, Grounds – IP (2 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

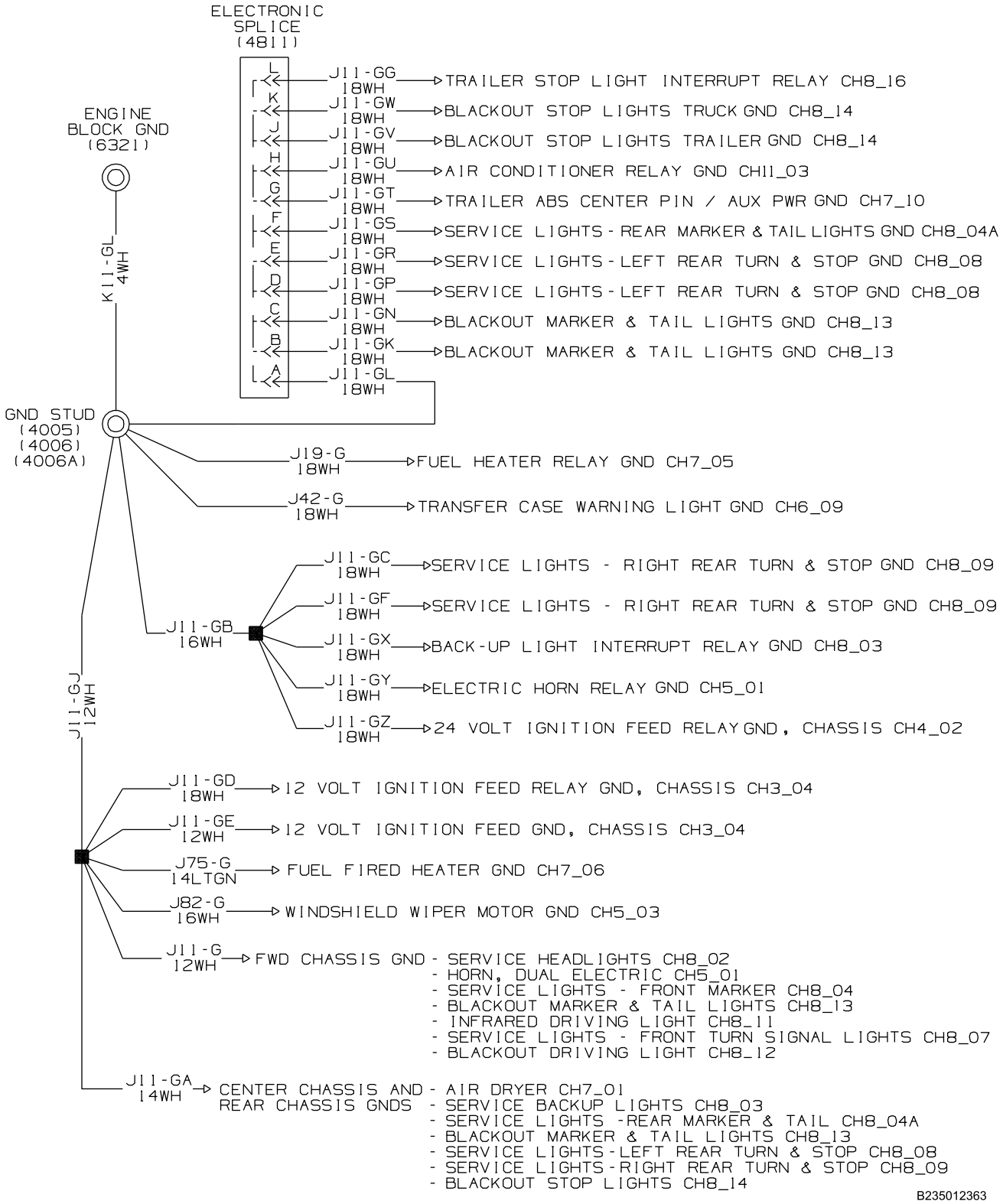
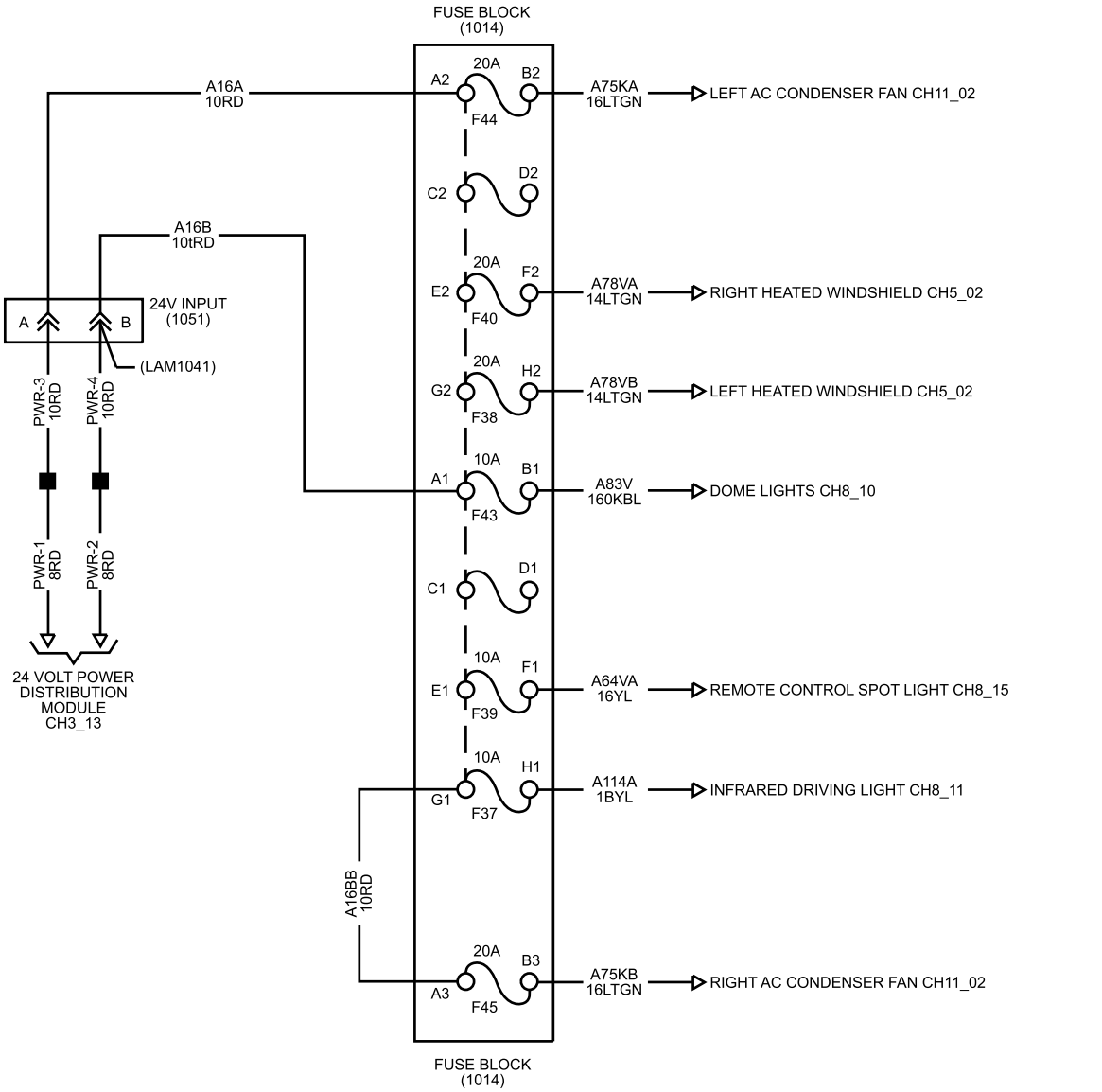


Figure 13. CH3_10, Grounds – Chassis.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235012364

Figure 14. CH3_11, 24V Battery Feed – Cabin.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

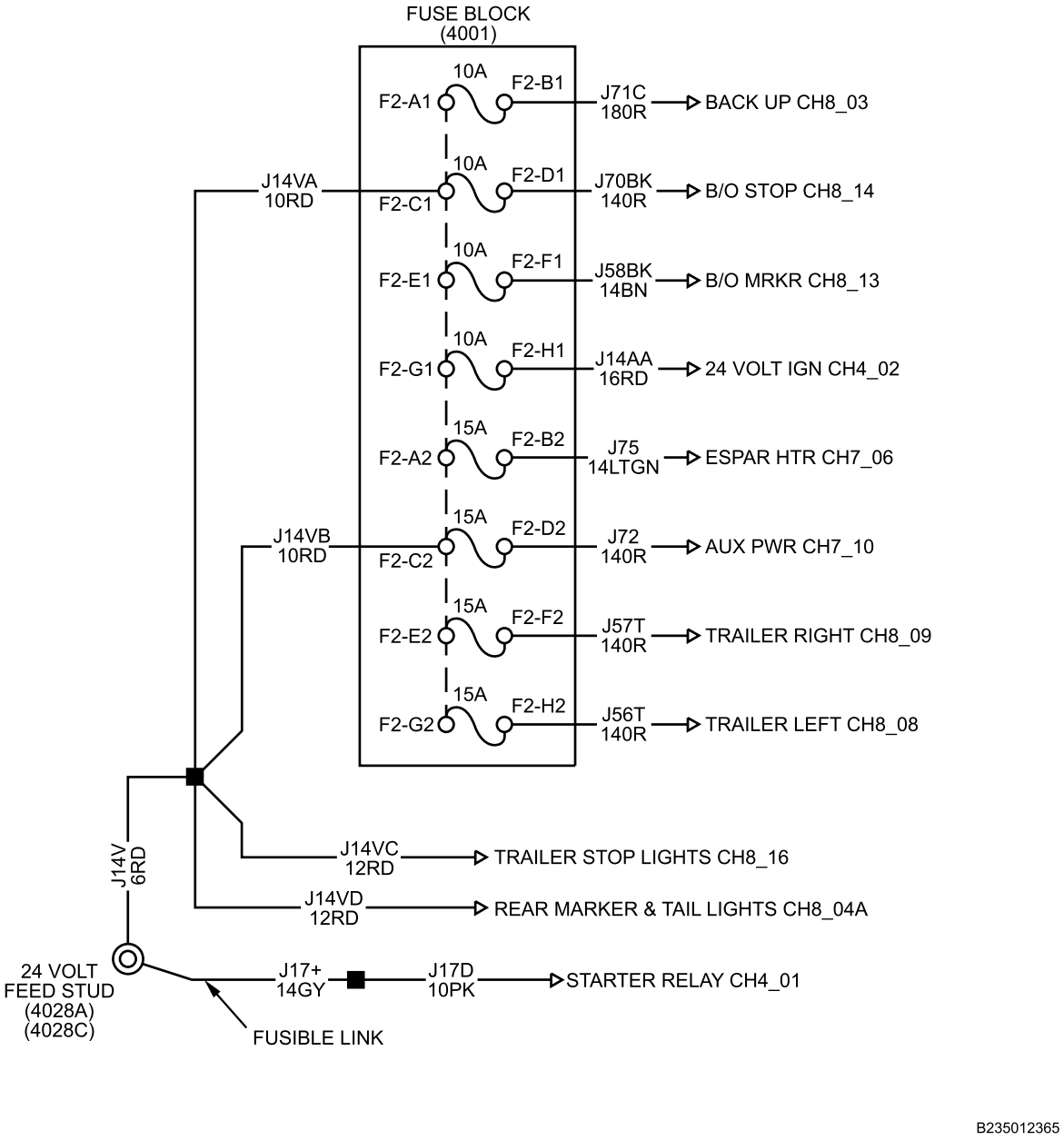


Figure 15. CH3_12, 24V Battery Feed – Chassis.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

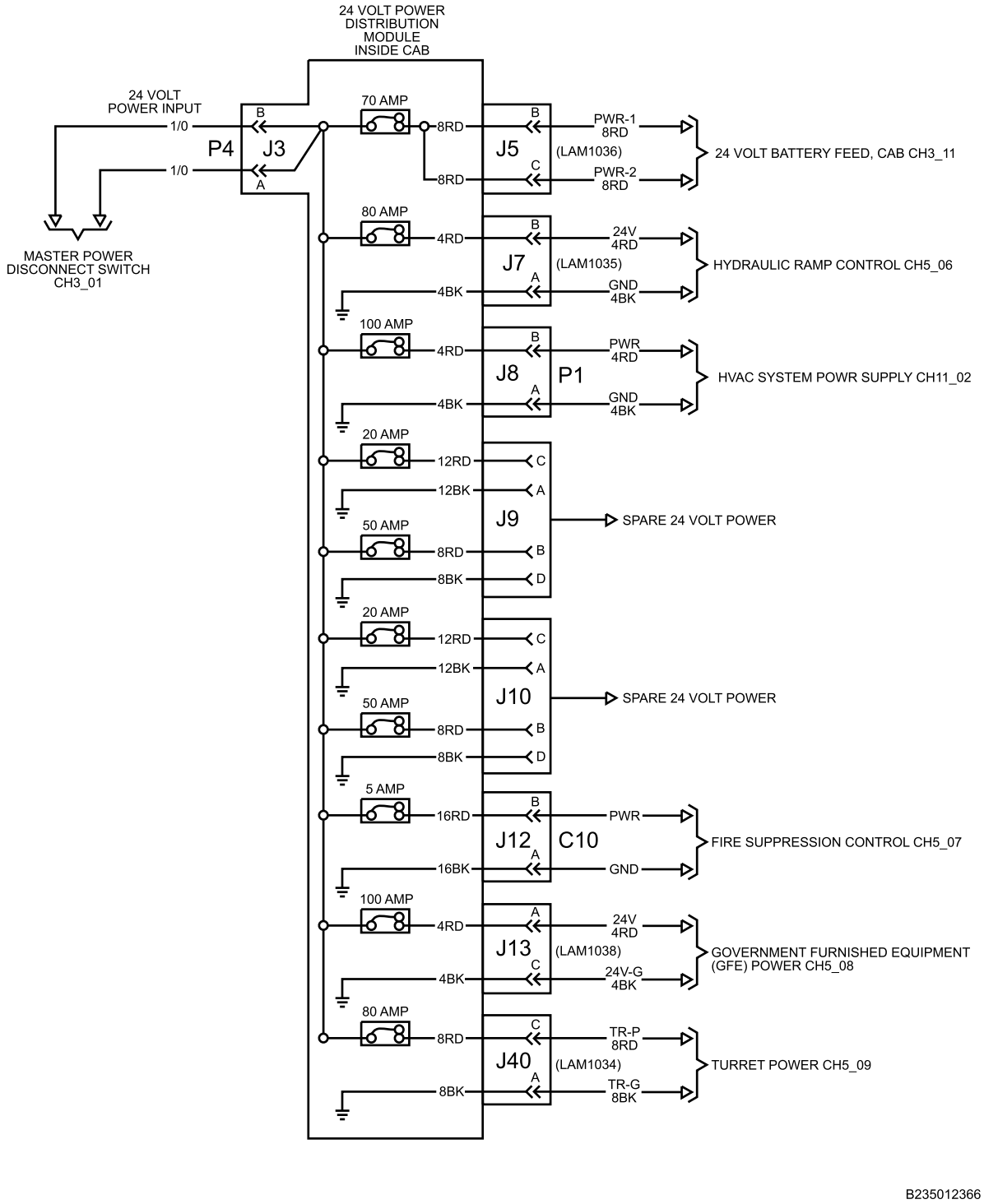


Figure 16. CH3_13, 24V Power Distribution Module (PDM)..

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

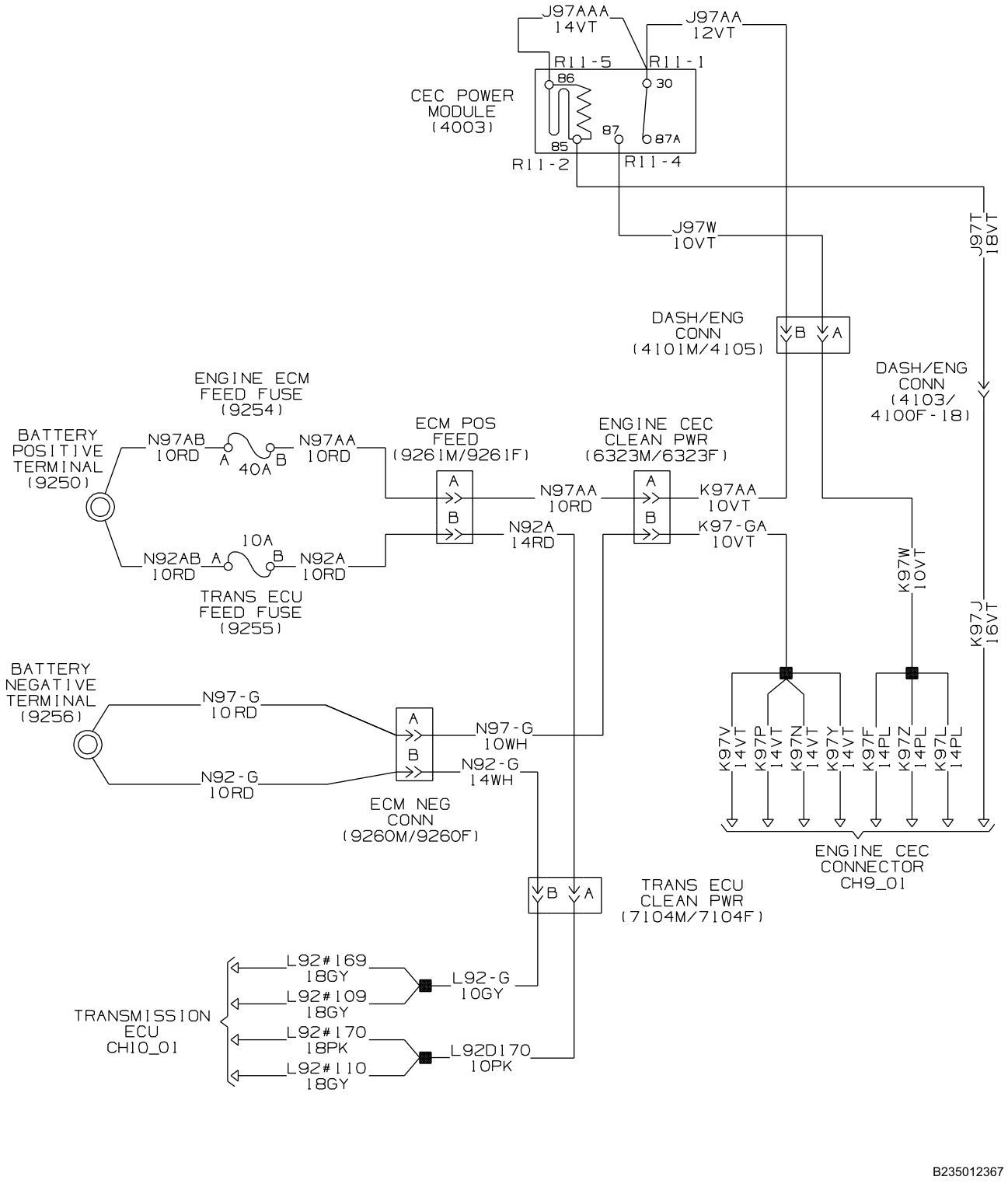


Figure 17. CH3_14, CEC Engine and Transmission Clean Power and Ground.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

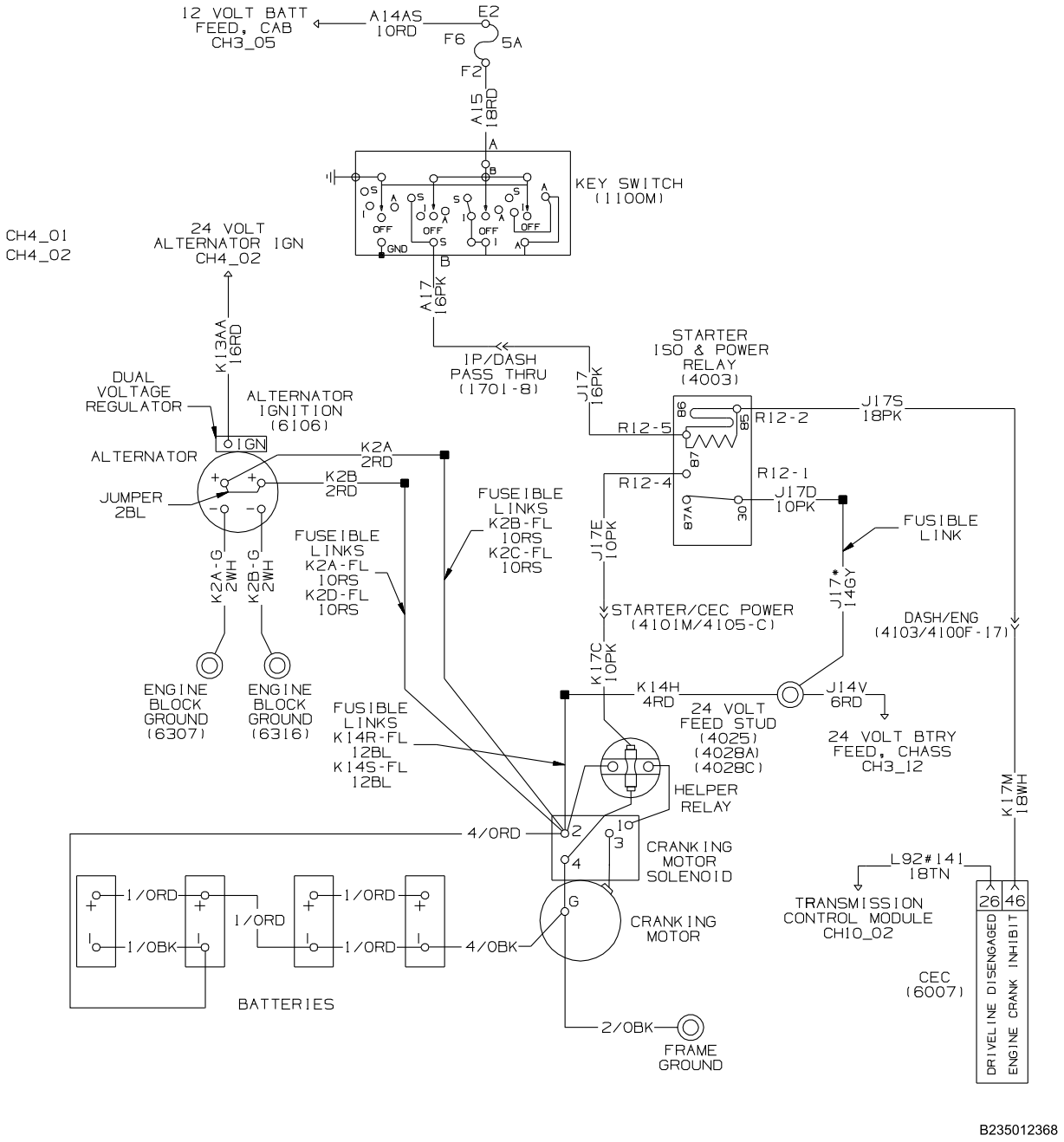


Figure 18. CH4_01, 24V Cranking and Charging Circuits – I6 HEUI Engine.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

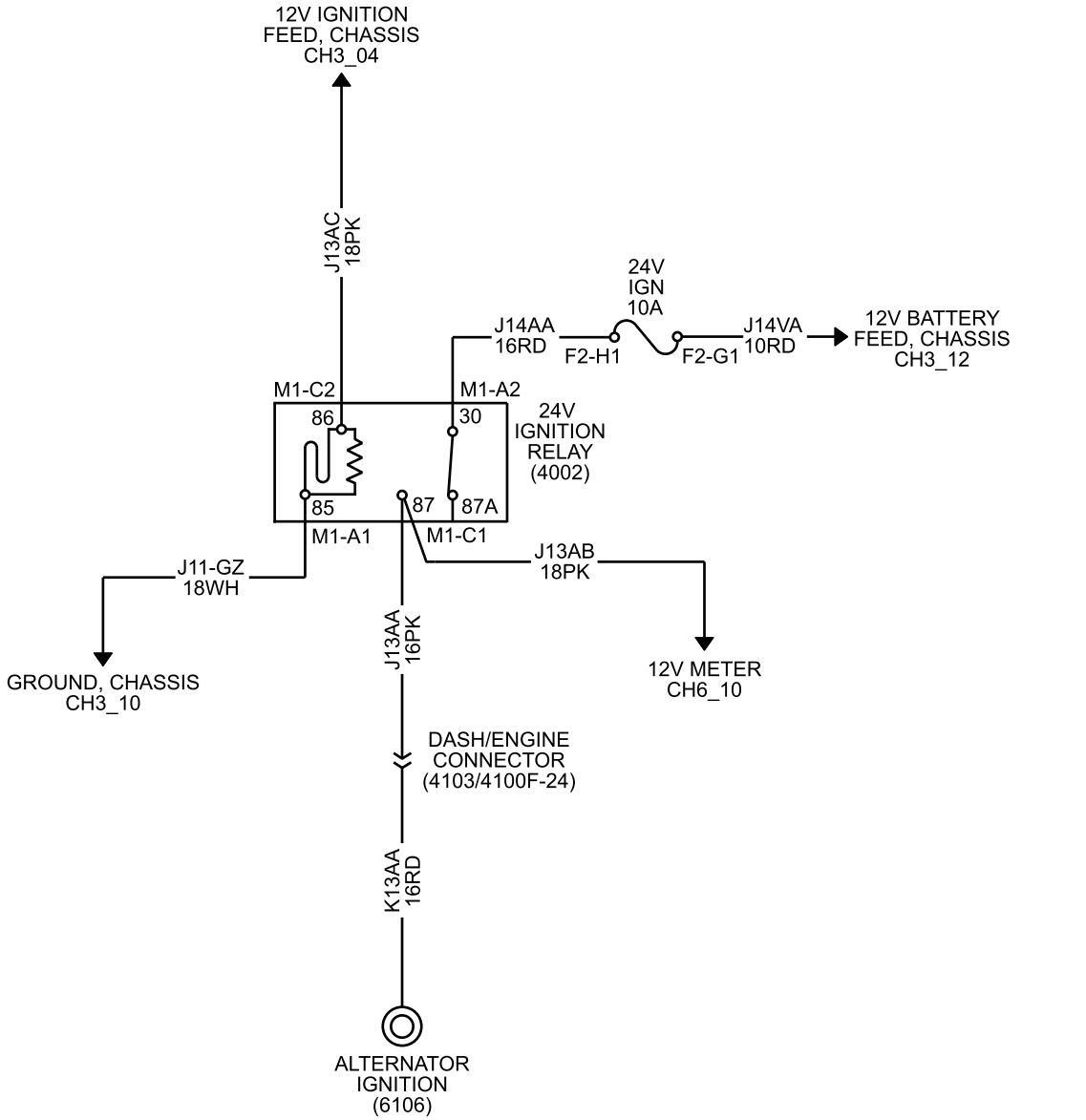


Figure 19. CH4_02, 24V Alternator Ignition.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

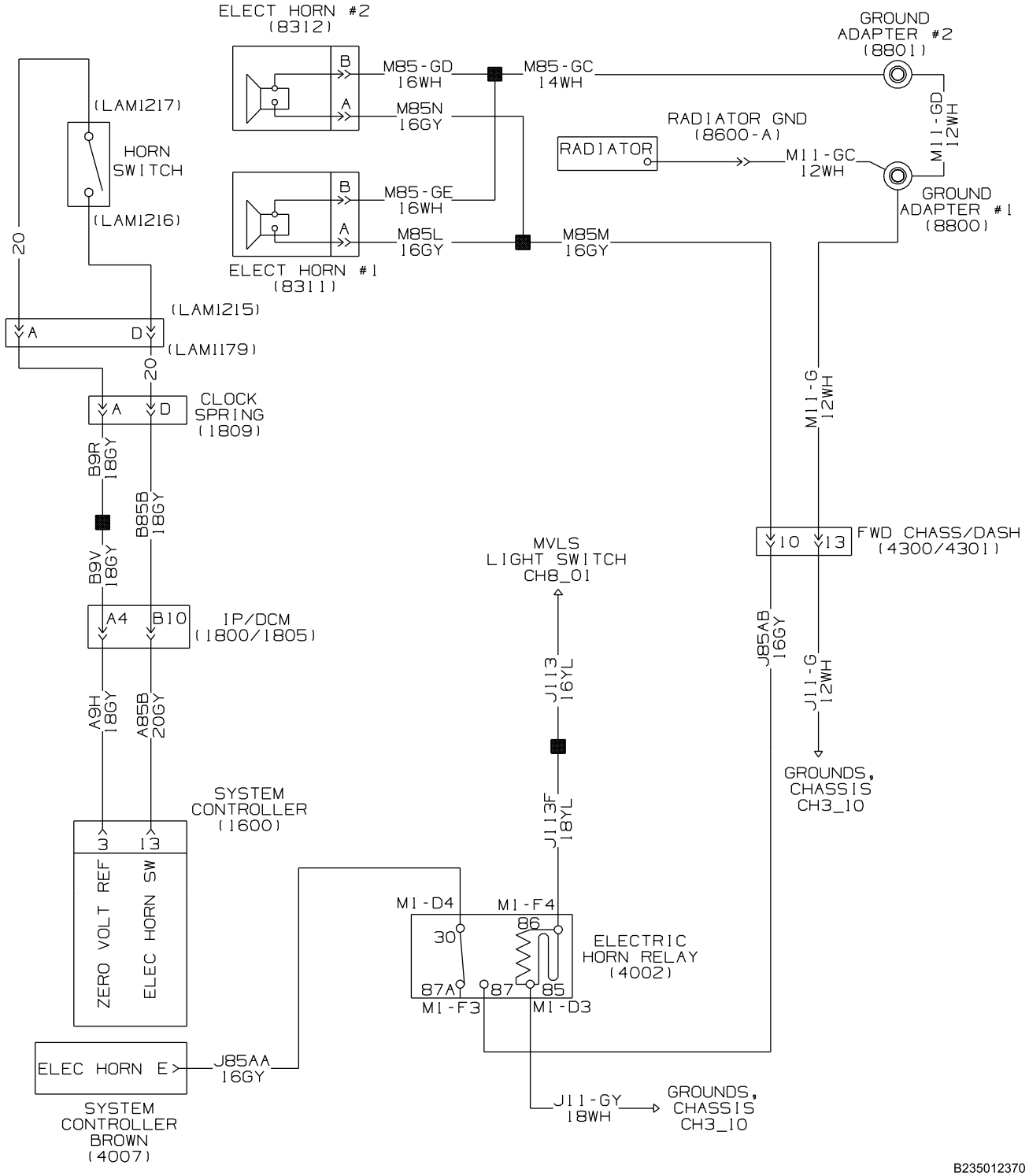


Figure 20. CH5_01, Horn – Dual Electric.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

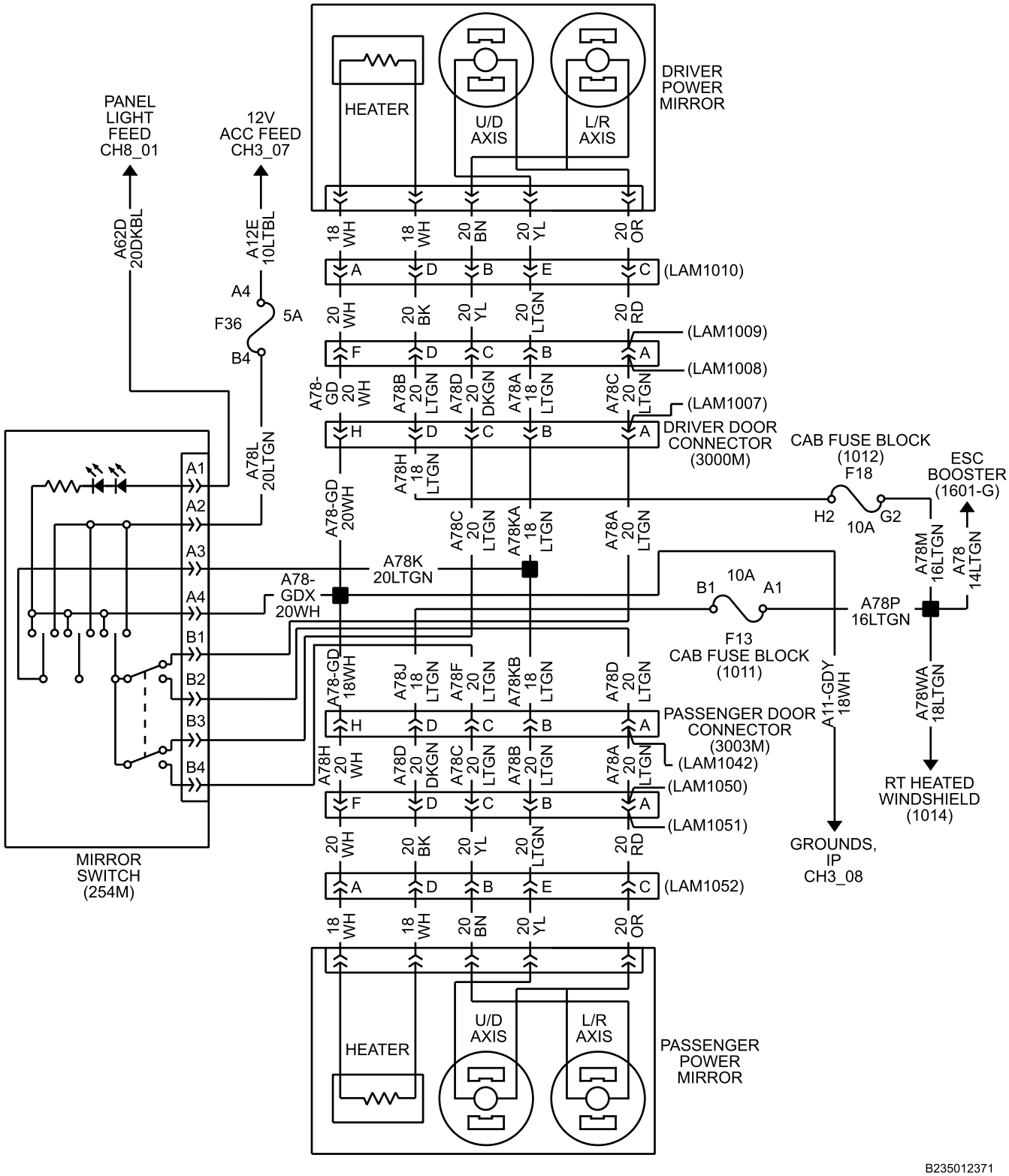


Figure 21. CH5_02, Power and Heated Mirrors.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

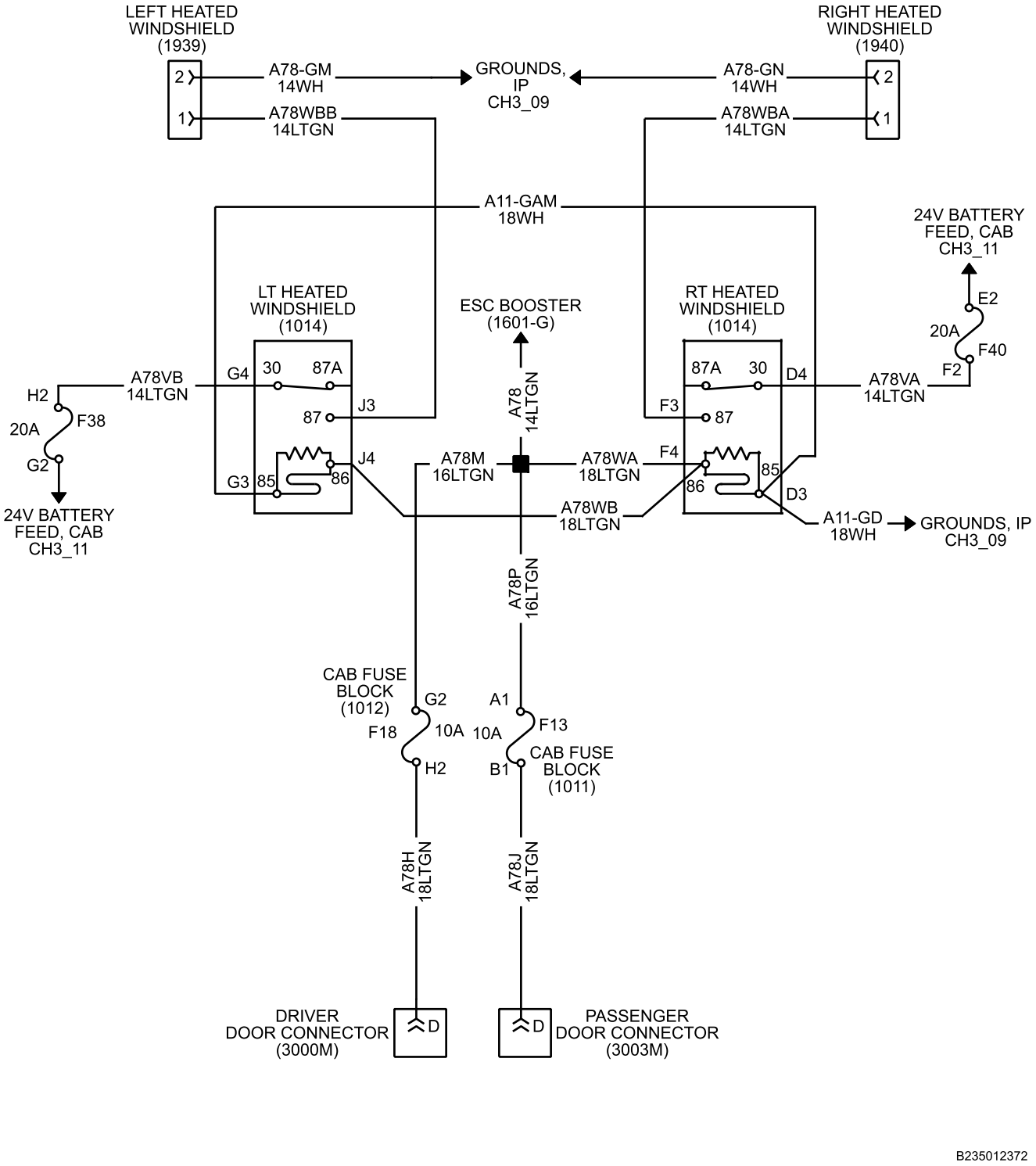


Figure 22. CH5_02A, Heated Windshield.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

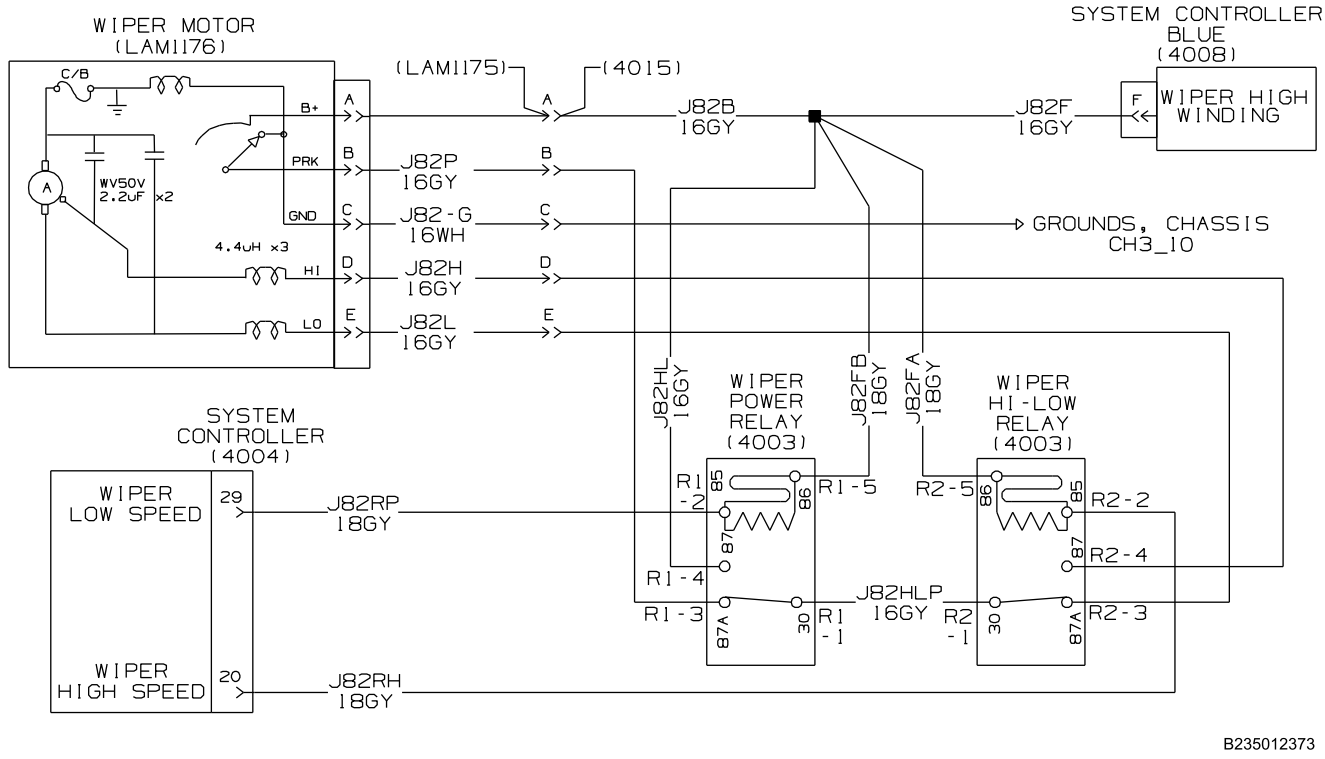


Figure 23. CH5_03, Windshield Wiper Motor.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

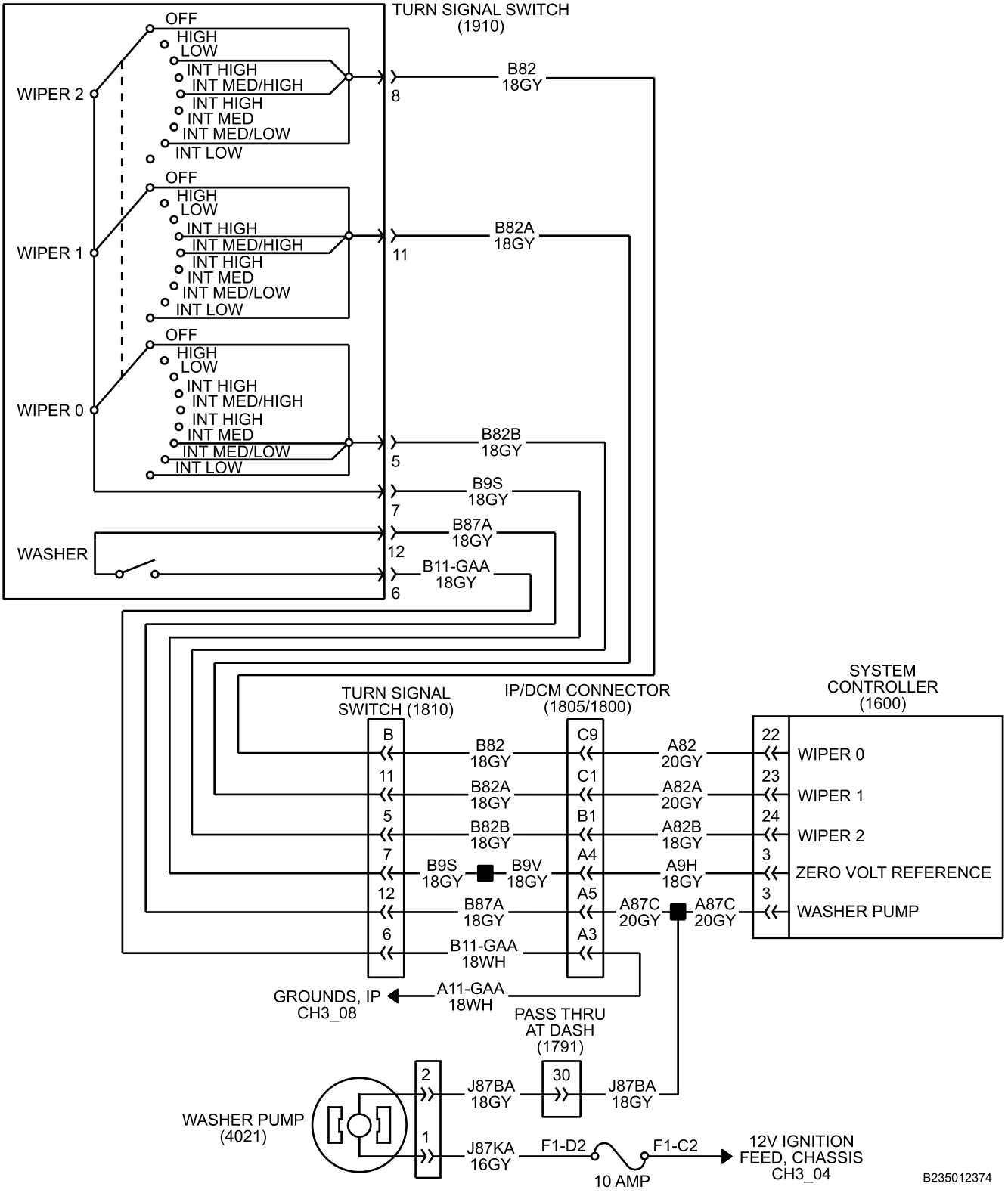
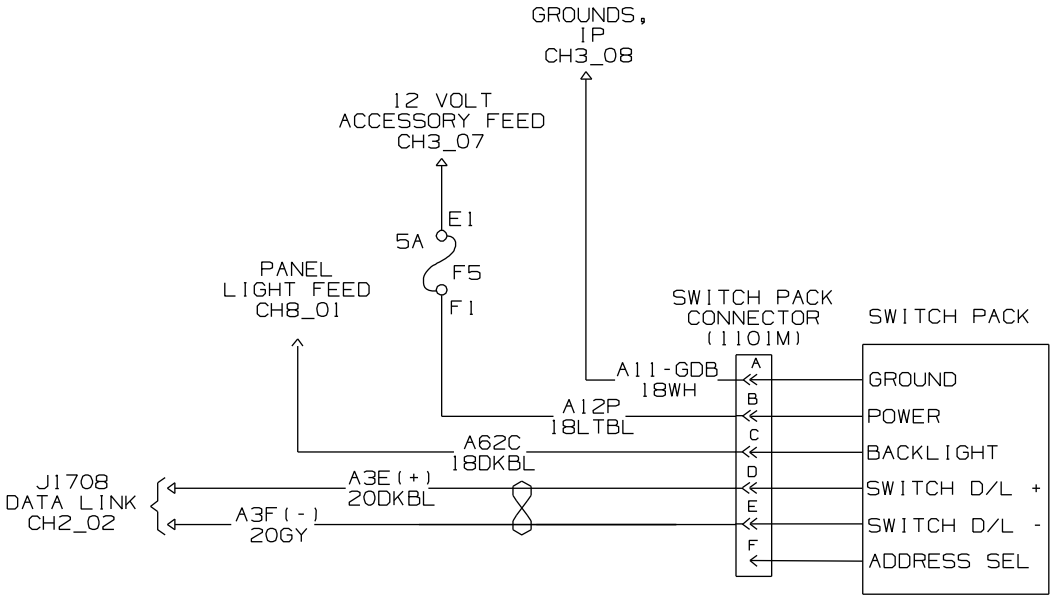


Figure 24. CH5_03A, Windshield Wiper Washer Pump.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235012375

Figure 25. CH5_04, Switch Pack.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

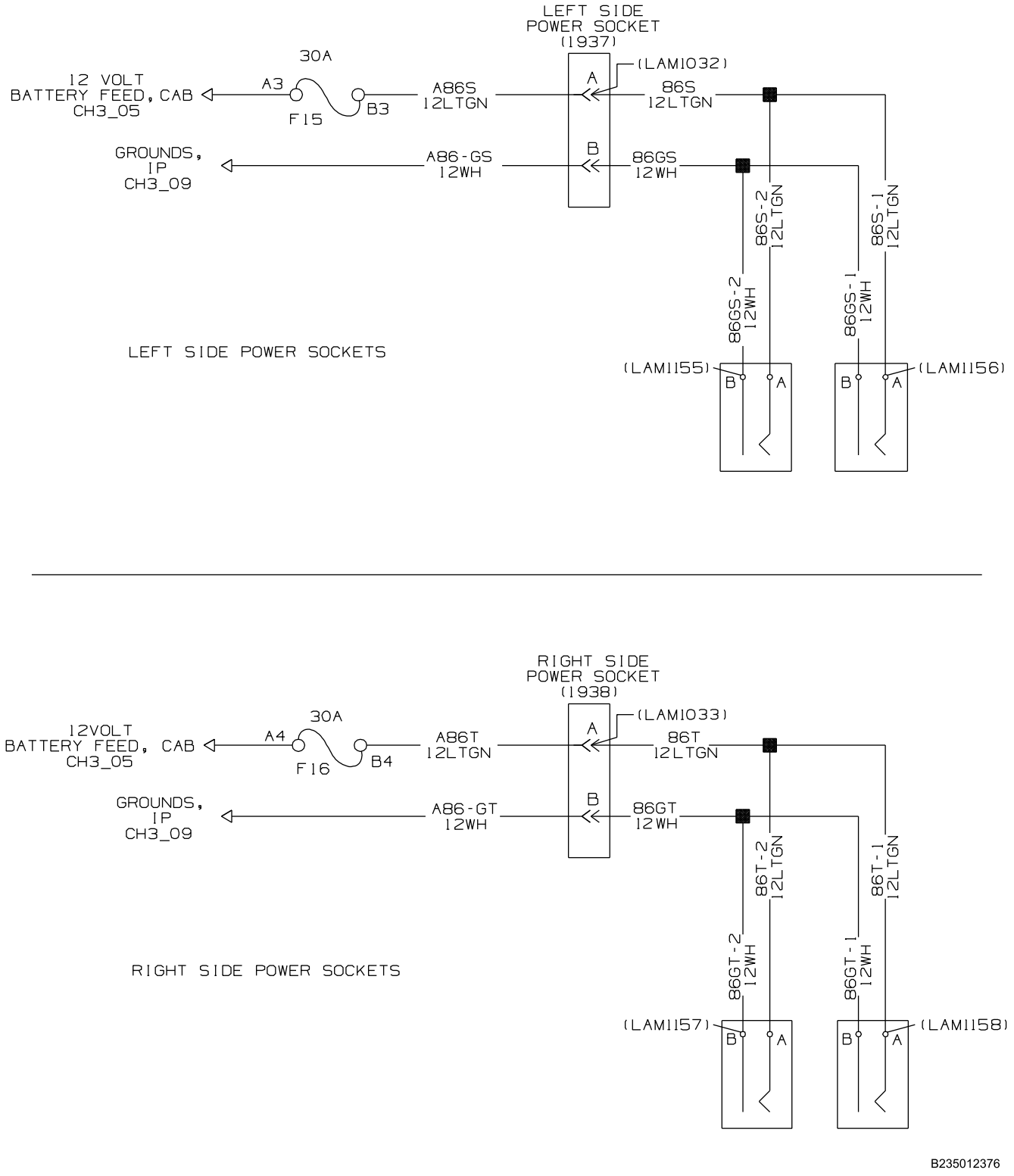


Figure 26. CH5_05, 12V Power Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

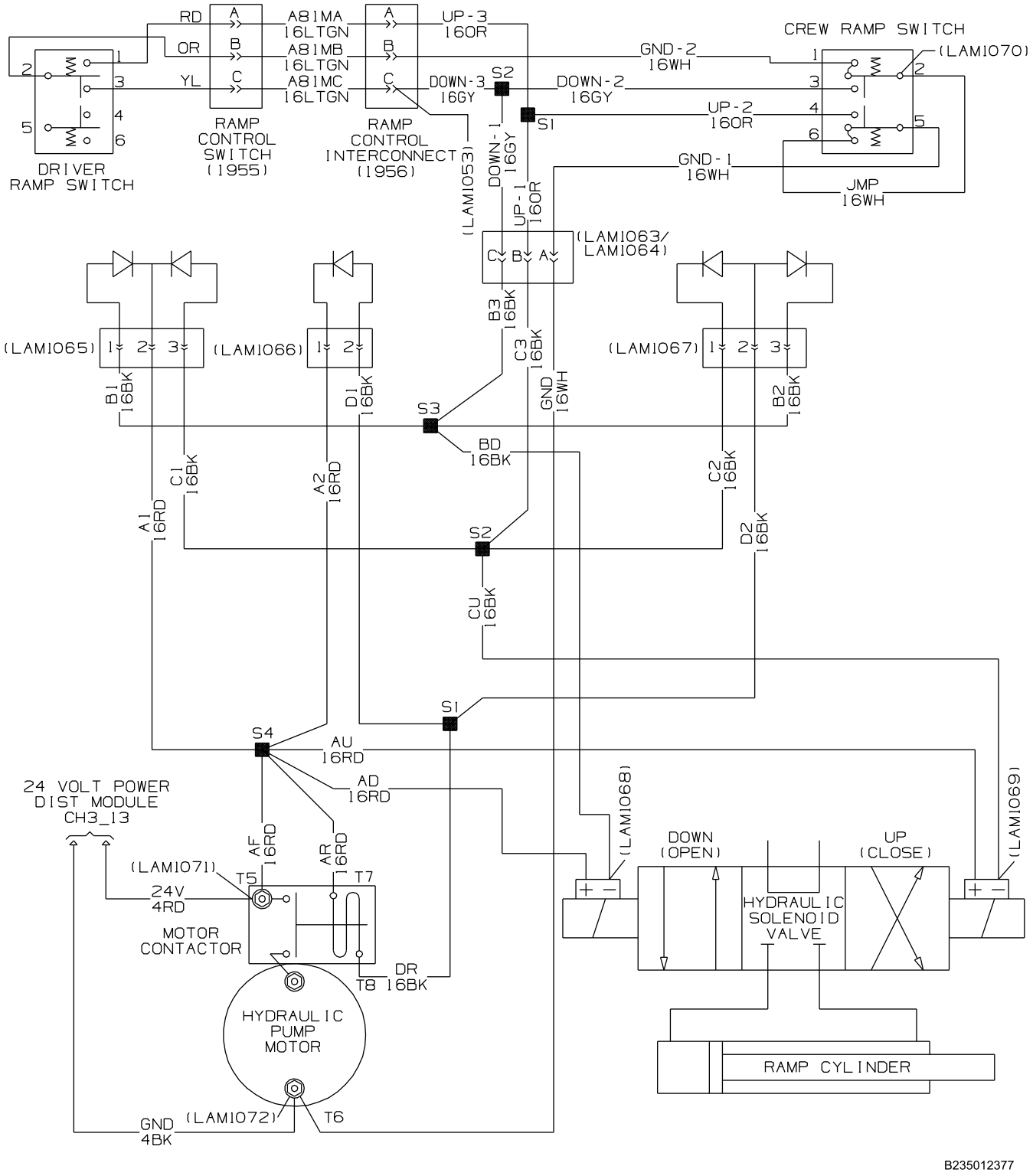


Figure 27. CH5_06, Hydraulic Ramp Control – First Production.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

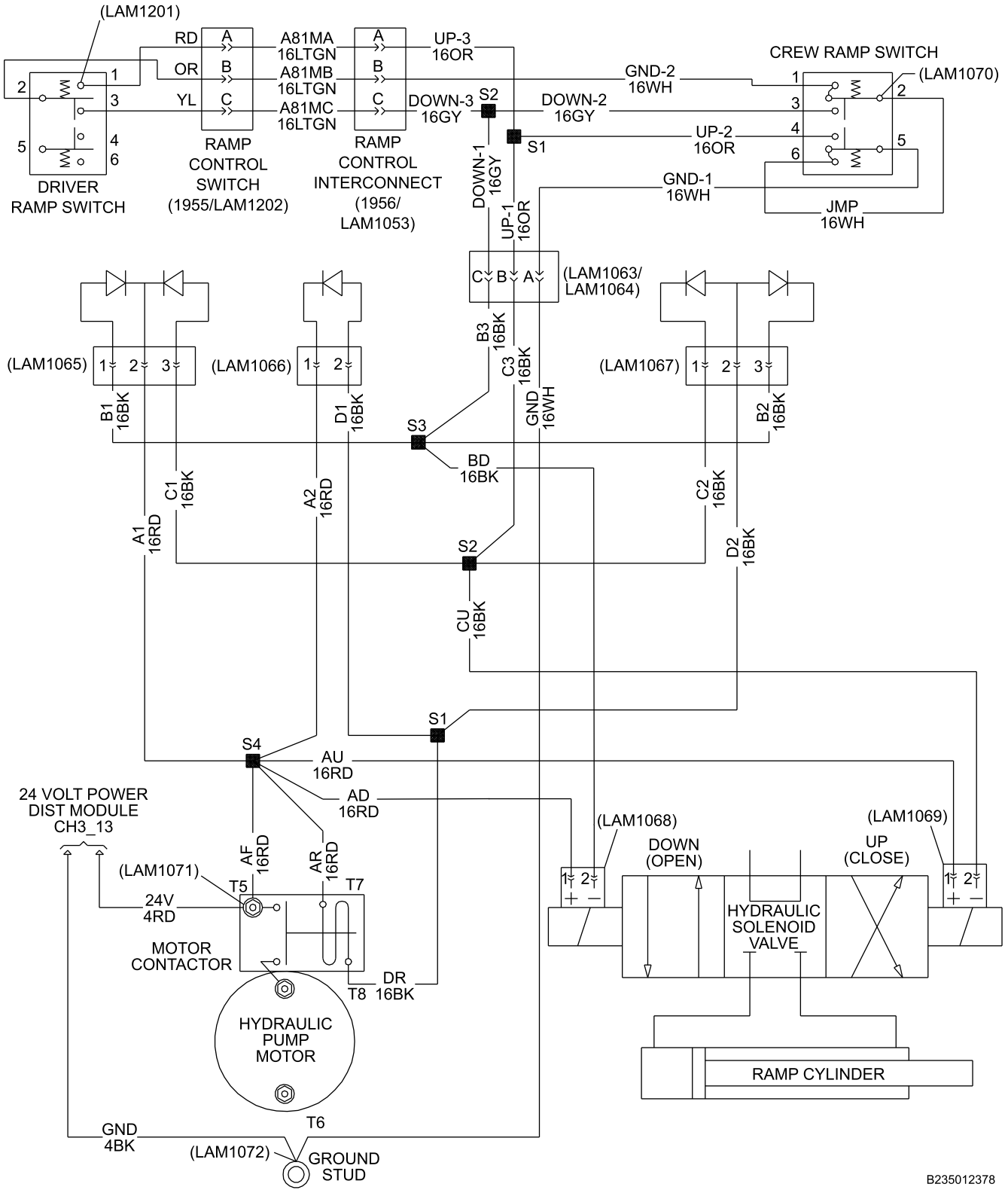
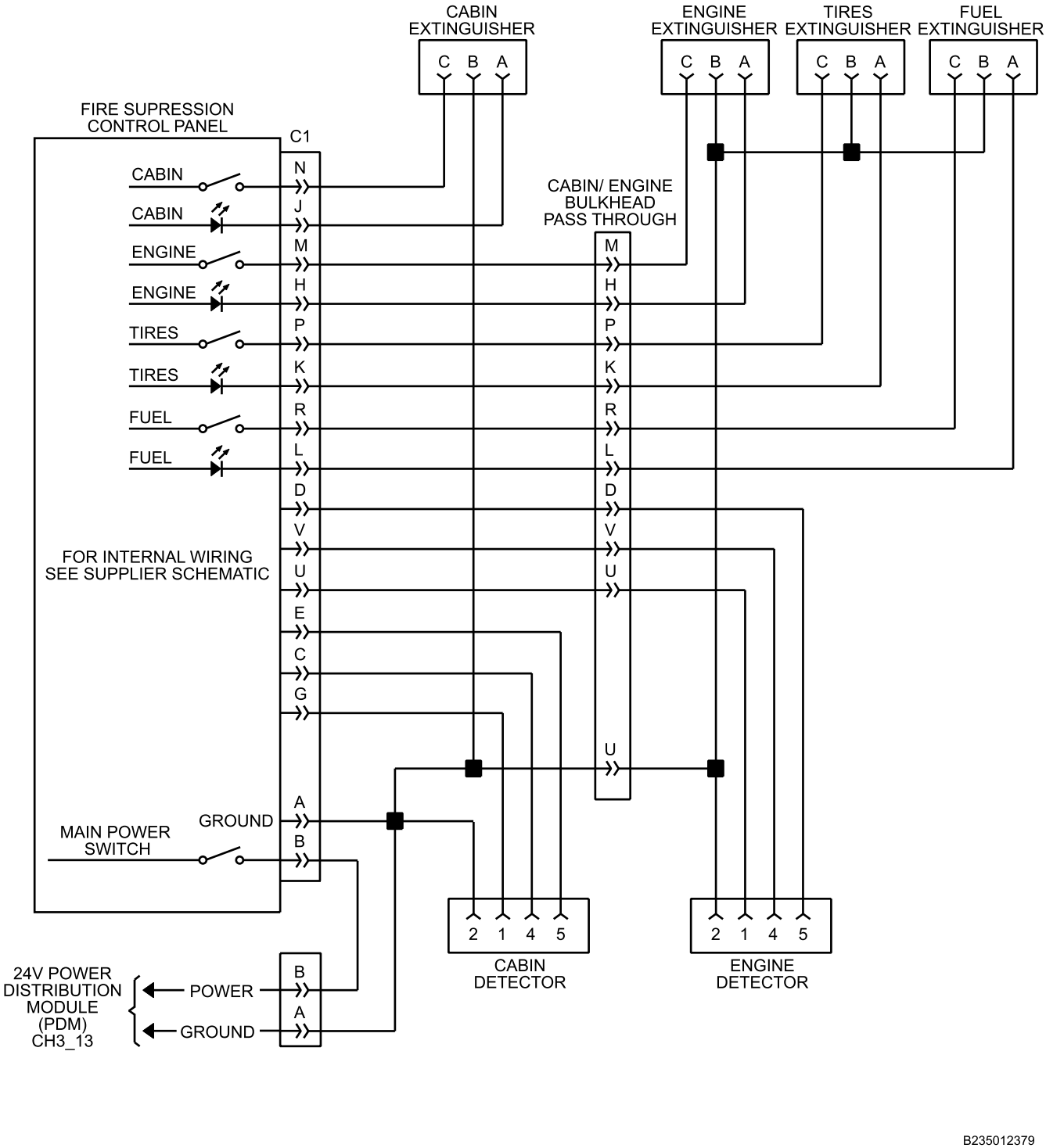


Figure 28. CH5_06A, Hydraulic Ramp Control – Second Production.

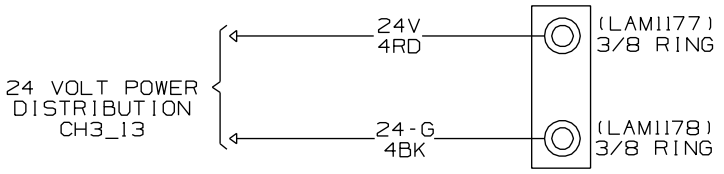
ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235012379

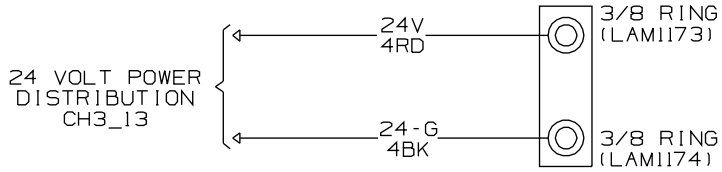
Figure 29. CH5_07, Fire Suppression System (FSS) Control.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235012380

Figure 30. CH5_08, Government Furnished Equipment (GFE) Power.



B235012381

Figure 31. CH5_09, Turret Power.

GAUGE	WARN LIGHT	SIGNAL PATH	SENSOR LOCATION
RPM (TACH)	NO	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	ENGINE
MPH/KPH (SPEEDO)	NO	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	TRANSMISSION
FUEL	YES	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	FUEL TANK
VOLT	YES	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	-
AIR 1 (PRESS)	YES	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	INSIDE CAB-DASH PNL
AIR 2 (PRESS)	YES	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	STEERING COL AREA
WATER (TEMP)	YES	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	ENGINE
OIL (PRES)	YES	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	ENGINE
TRANS (TEMP)	YES	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	TRANSMISSION

NOTE: WARNING LIGHTS ARE PART OF THE GAUGES AND LOCATED IN THE GAUGE

B235001773

Figure 32. CH06_01, Instrument Panel Gauge List.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

IP WARNING LIGHTS		
WARNING LIGHT TITLE	SIGNAL PATH	SENSOR LOCATION
RANGE INHIBITED	XMSN CTRLR/DRIVE TRAIN J1939/CLUSTER	
ENGINE (YELLOW LED)	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	
ENGINE (RED LED)	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	
CHECK XMSN	XMSN CTRLR/DRIVE TRAIN J1939/CLUSTER	
TRAILER ABS	TRLR ABS CTRLR/DRIVE TRAIN J1939/CLUSTER	
(LEFT TURN)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	TURN SIG SW
WATER IN FUEL	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	FUEL FILTER
COOLANT LEVEL	ENGINE CTRLR/DRIVE TRAIN J1939/CLUSTER	SURGE TANK
PARK (P)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	SWITCH
ABS	TRUCK CTRLR/DRIVE TRAIN J1939/CLUSTER	
(RIGHT TURN)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
FASTEN BELTS	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	
(HIGH BEAM IND)	SYSTEM CTRLR/DRIVE TRAIN J1939/CLUSTER	

B235001774

Figure 33. CH06_02, Instrument Panel Warning Light List.

THE FOLLOWING WARNING LIGHTS ARE CONTROLLED BY THE ENGINE, TRANSMISSION, OR ABS CONTROLLER OVER THE DATA BUS AND DO NOT HAVE INDEPENDENT CIRCUITRY THAT CAN BE OR NEEDS TO BE SHOWN:

ENGINE (YELLOW LENS)

ENGINE (RED LENS)

CHECK TRANS

TRAILER ABS

CHECK ELECTR SYS

ABS

RANGE INHIBITED

B235001801

Figure 34. CH06_03, Warning Lights Controlled by Engine, Transmission, and Antilock Brake System (ABS) Controller.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

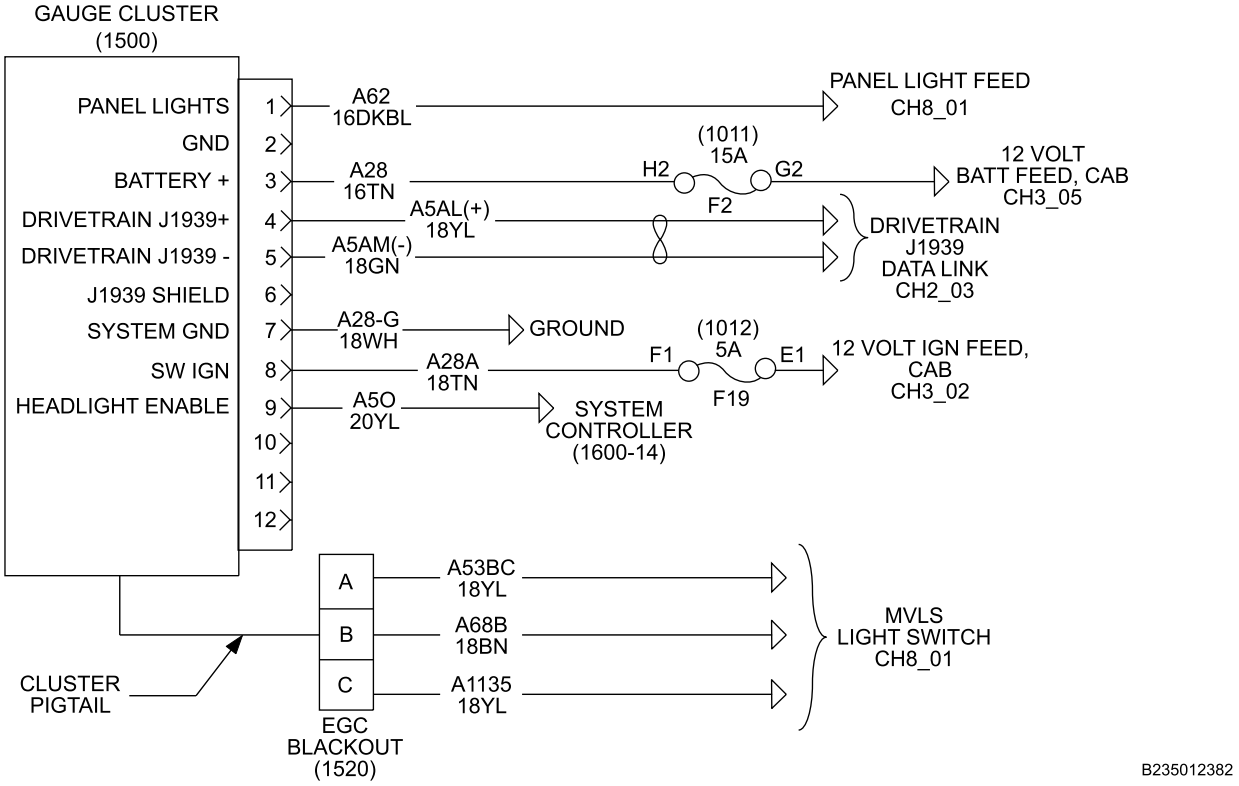


Figure 35. CH6_05, Gauge Cluster.

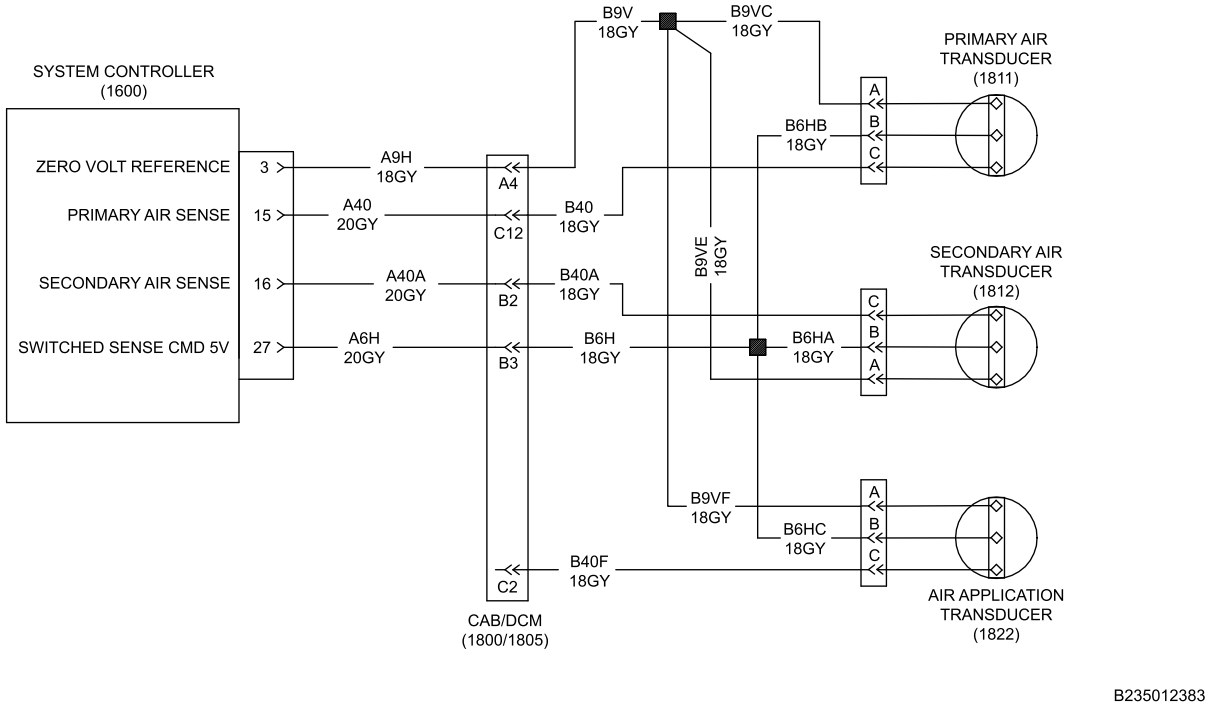


Figure 36. CH6_06, Air Pressure Input Circuits.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

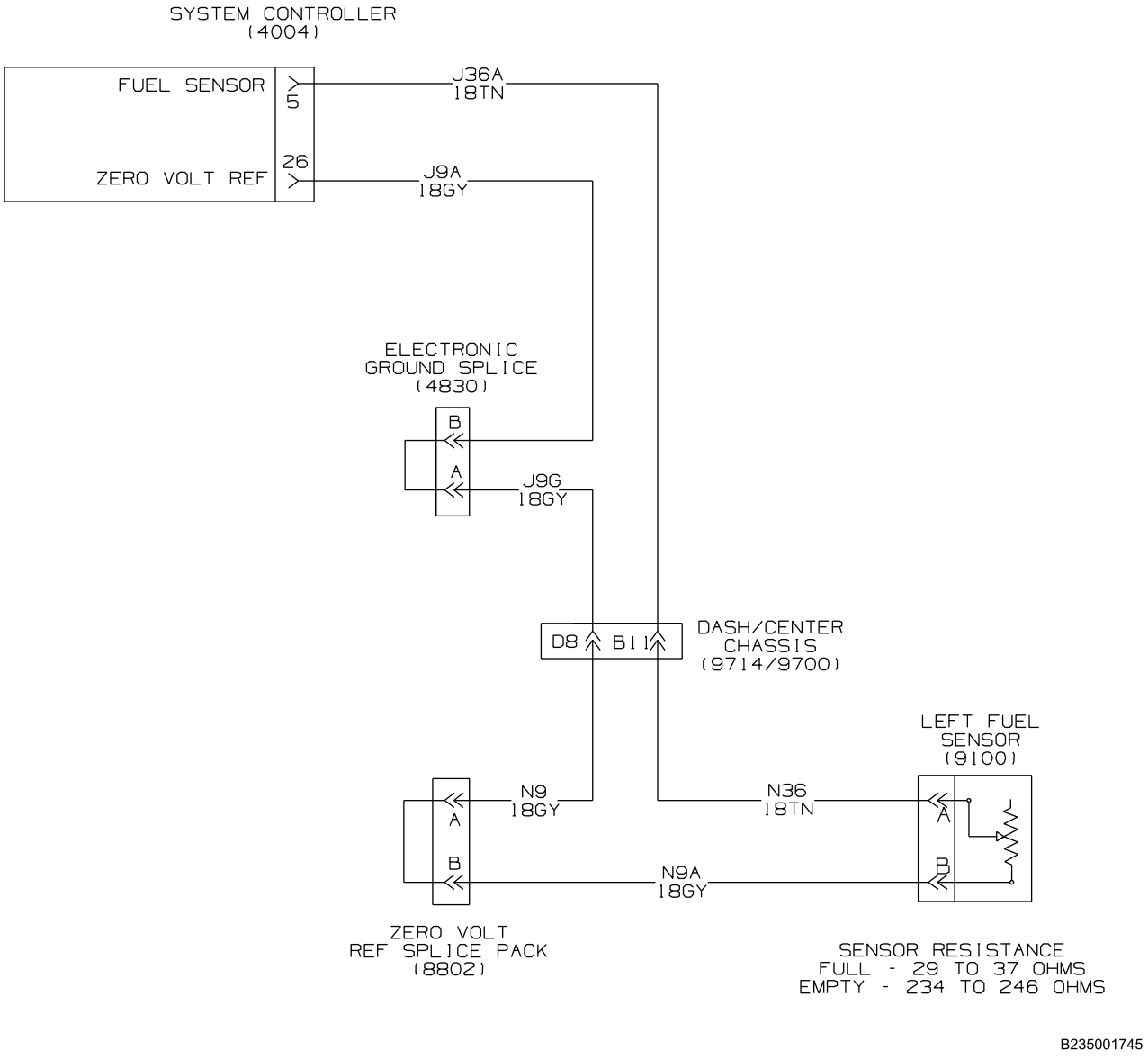


Figure 37. CH6_07, Fuel Gauge Input Circuit.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

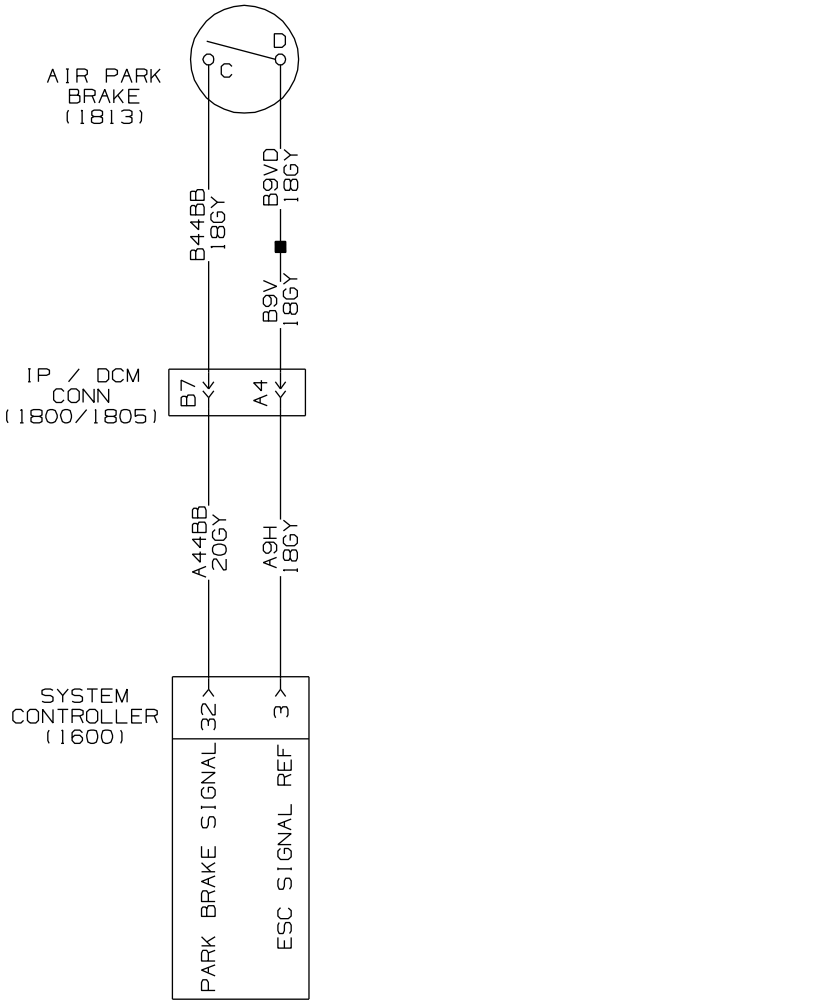


Figure 38. CH6_08, Air Park Brake Warning Light.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

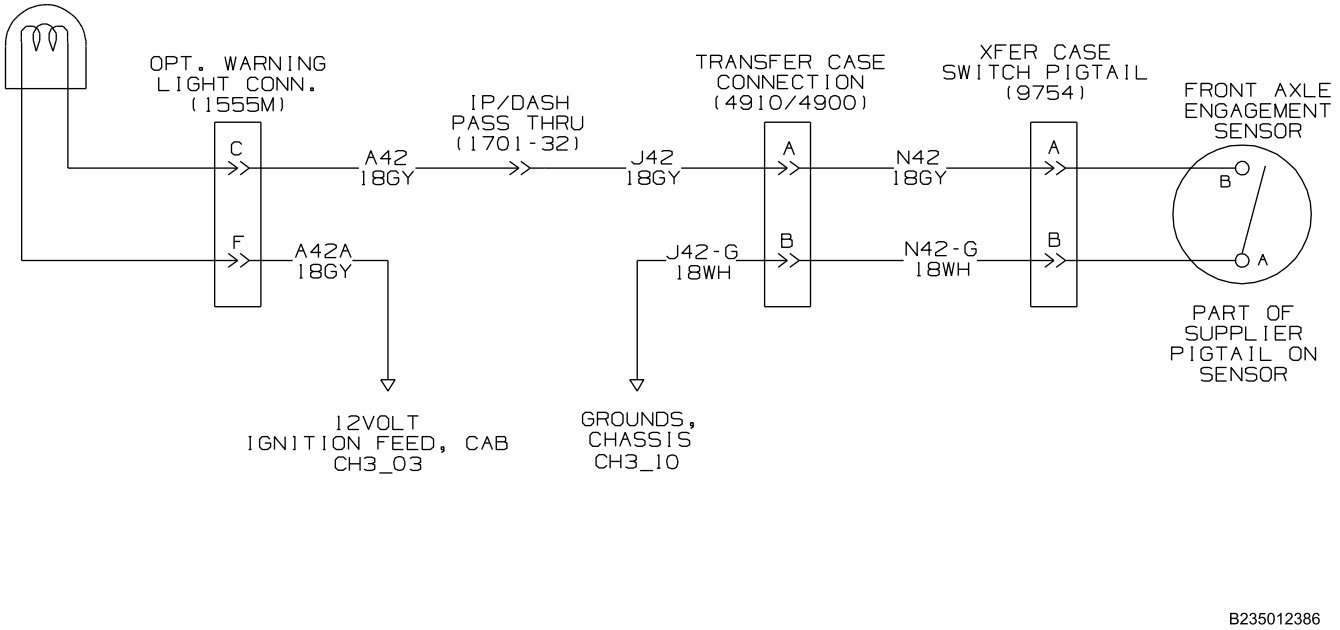


Figure 39. CH6_09, Warning Light – Transfer Case.

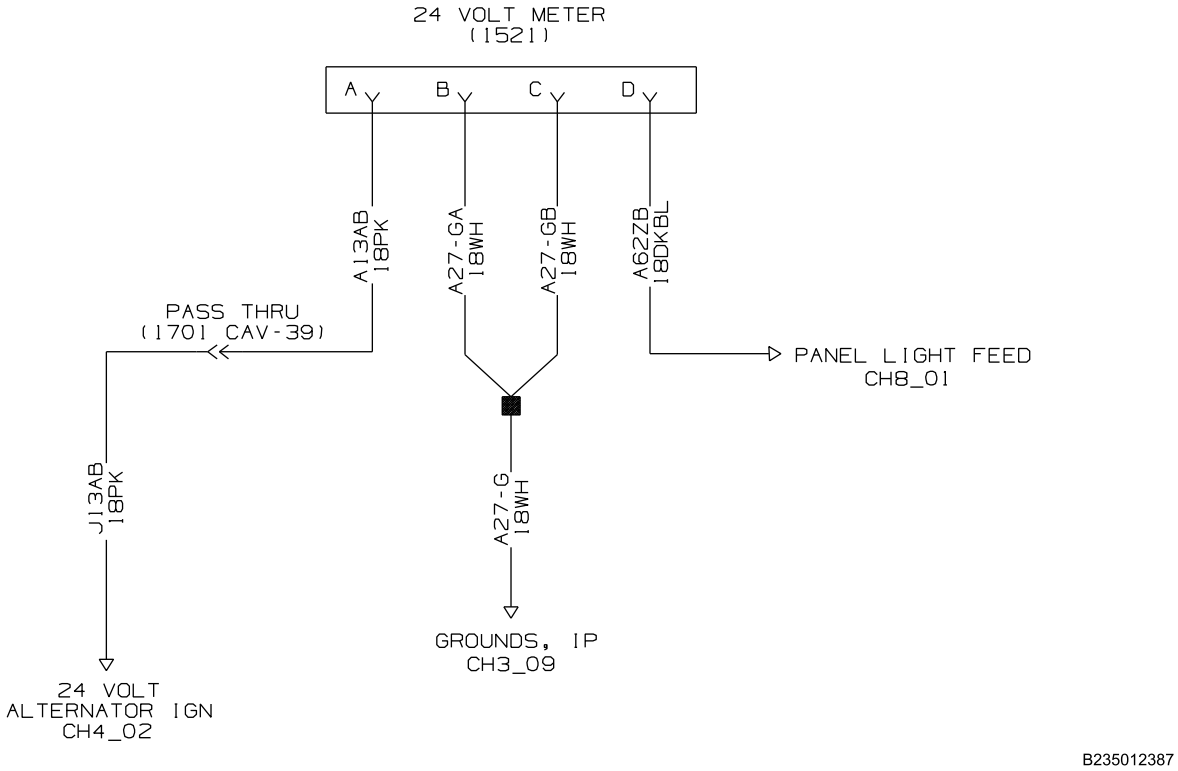


Figure 40. CH6_10, 24V Meter.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

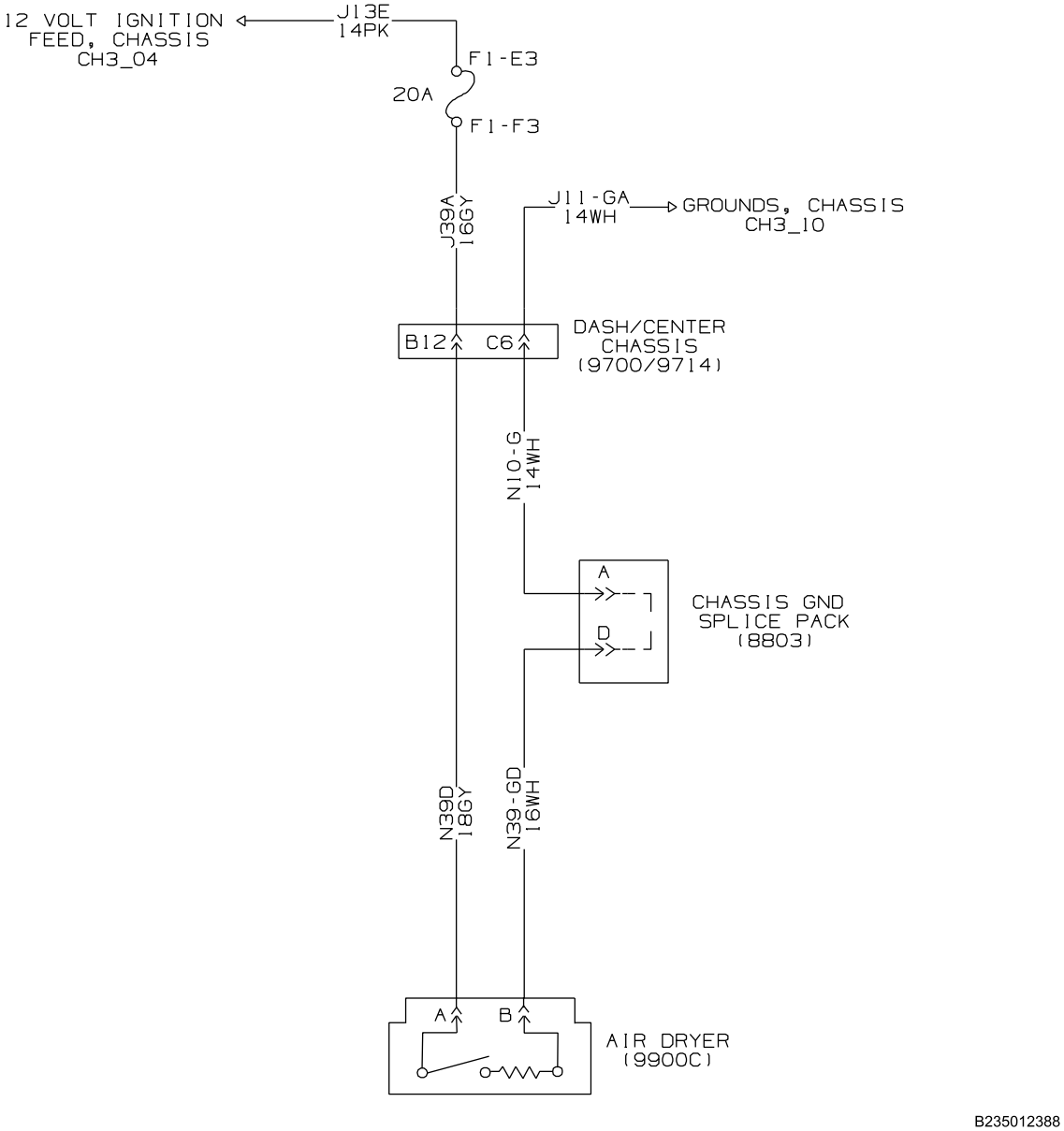
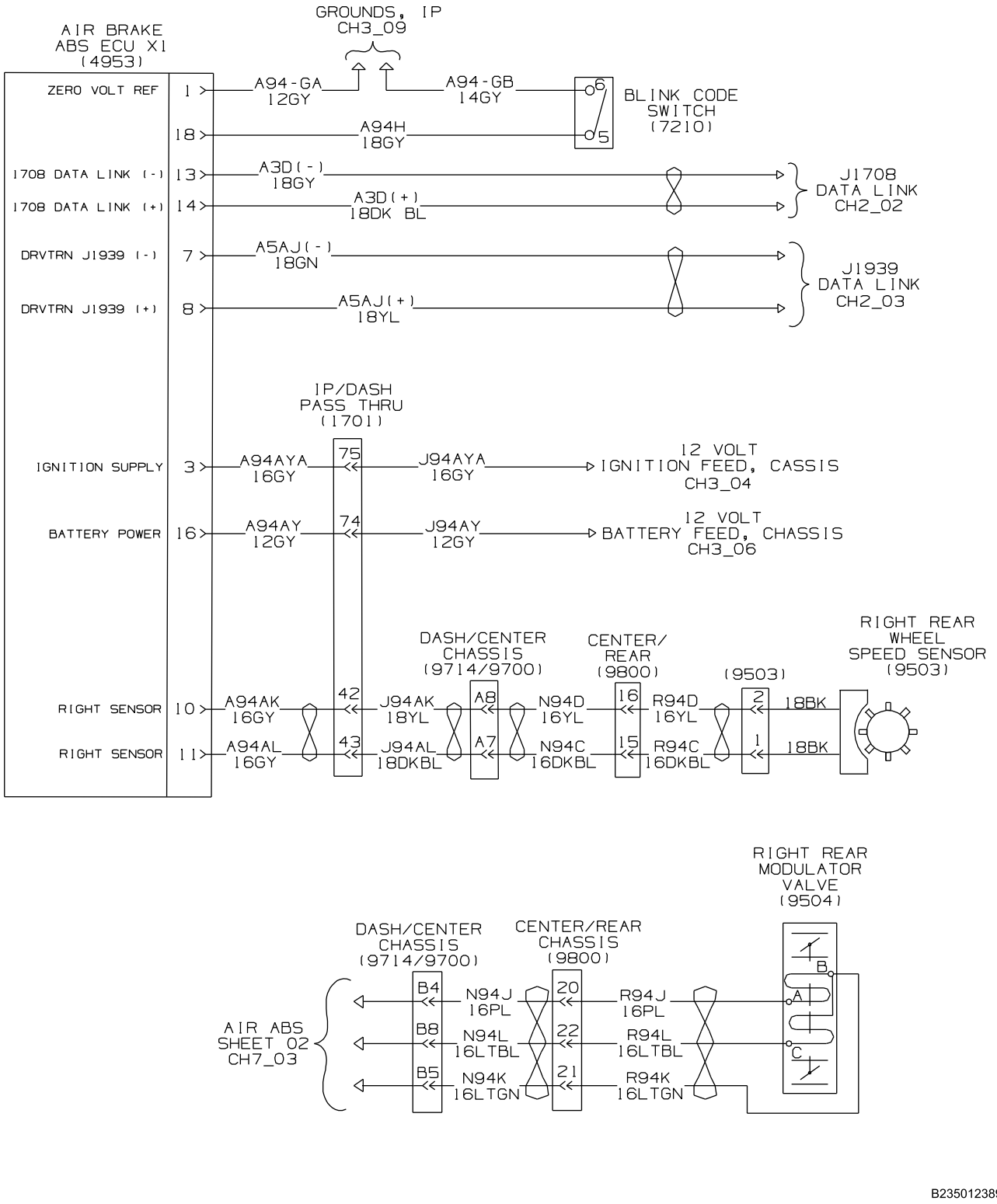


Figure 41. CH7_01, Air Dryer.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235012389

Figure 42. CH7_02, Air – Antilock Brake System (1 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

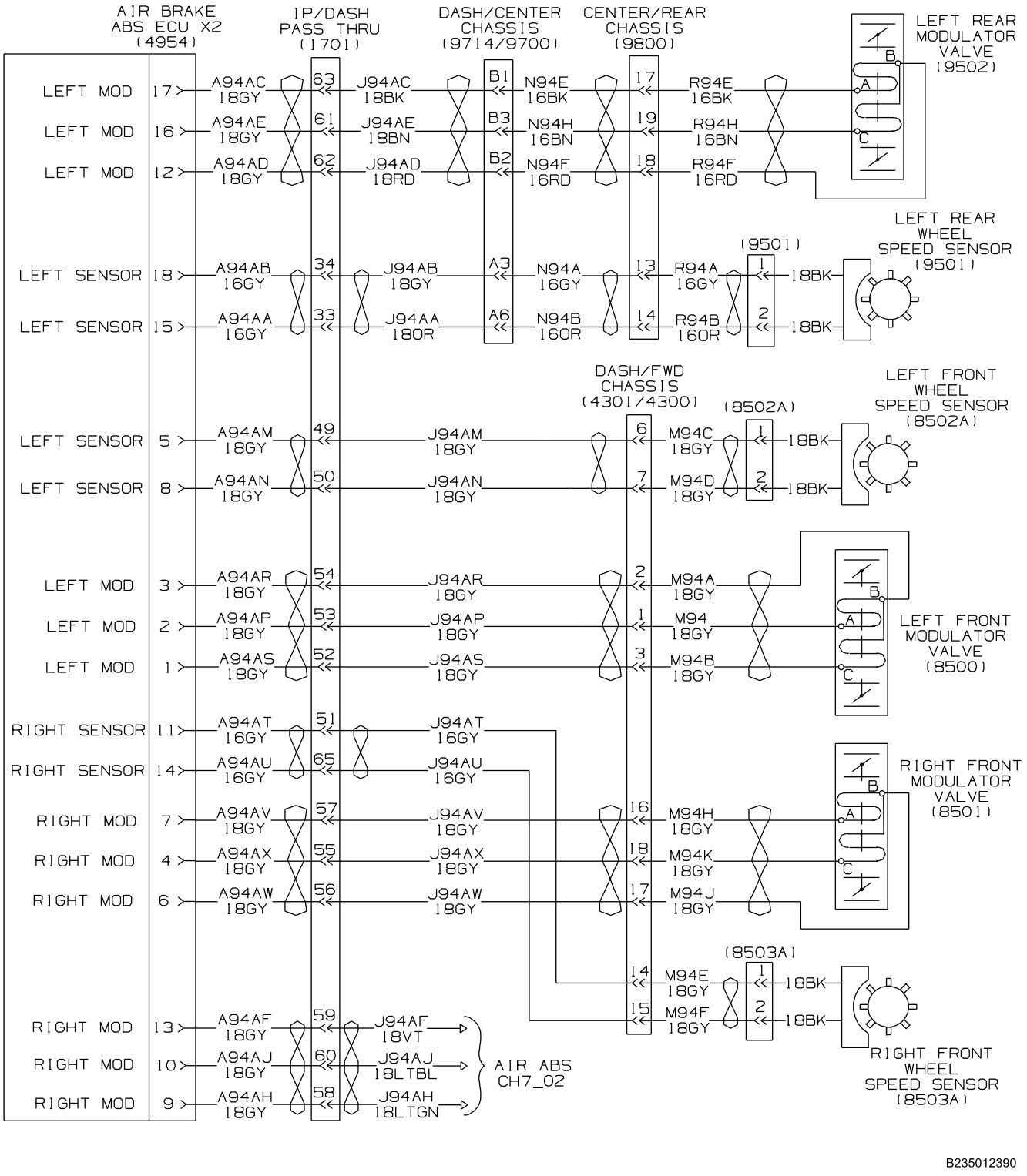


Figure 43. CH7_03, Air – Antilock Brake System (2 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

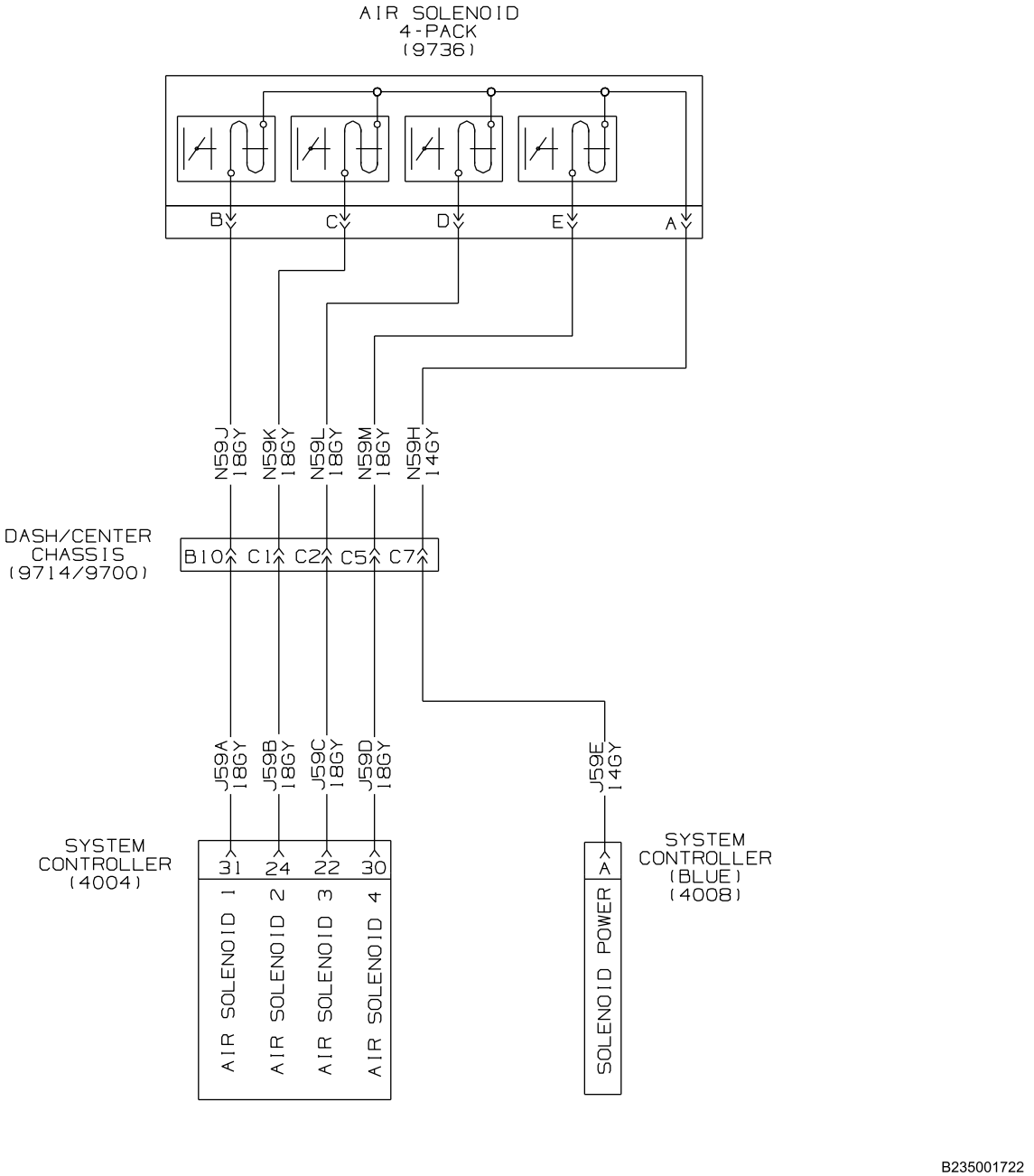


Figure 44. CH7_04, Air Solenoid 4-Way Pack.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

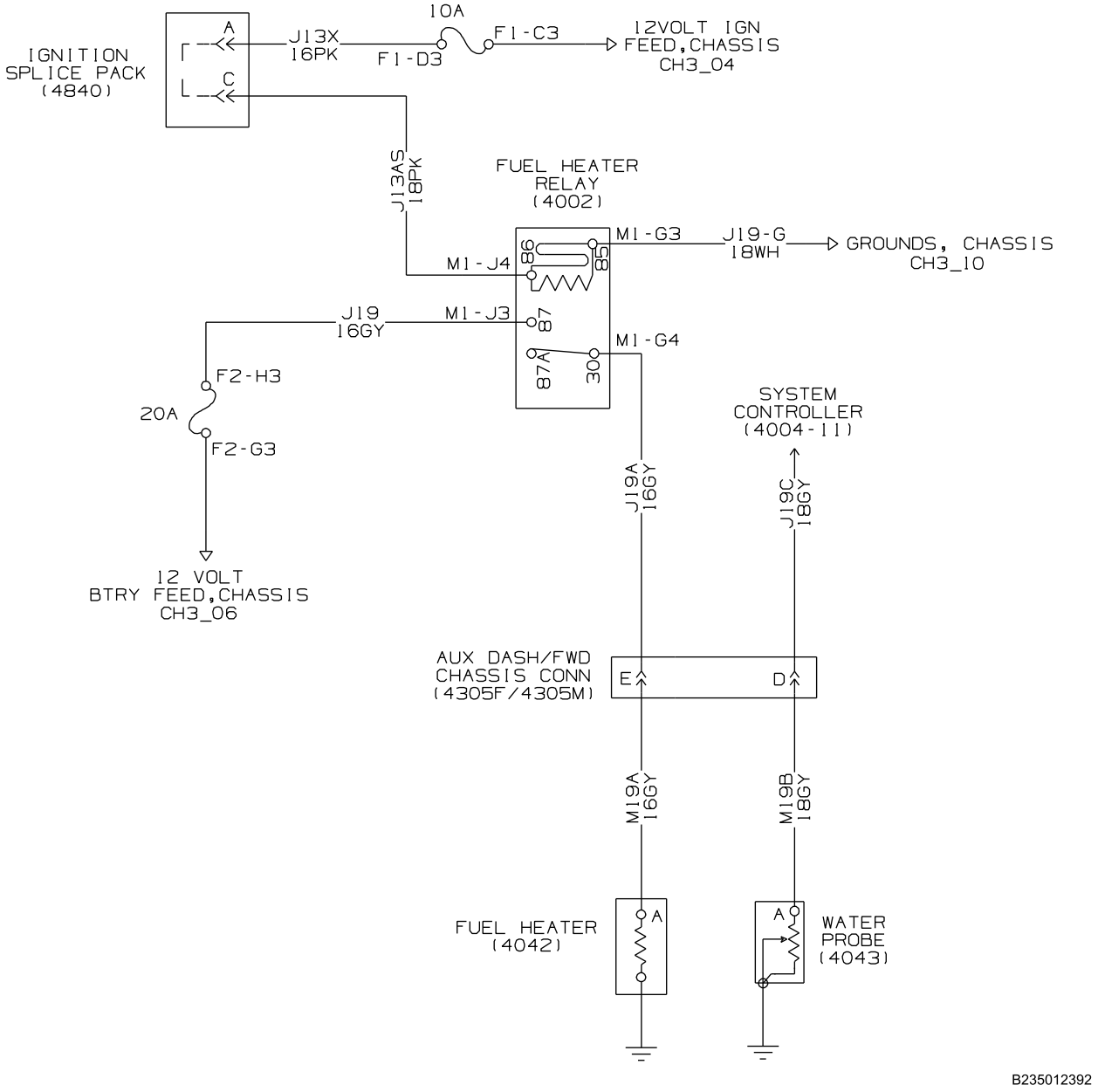


Figure 45. CH7_05, Fuel Water Separator with 12V Fuel Pre-Heater and Water Probe.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

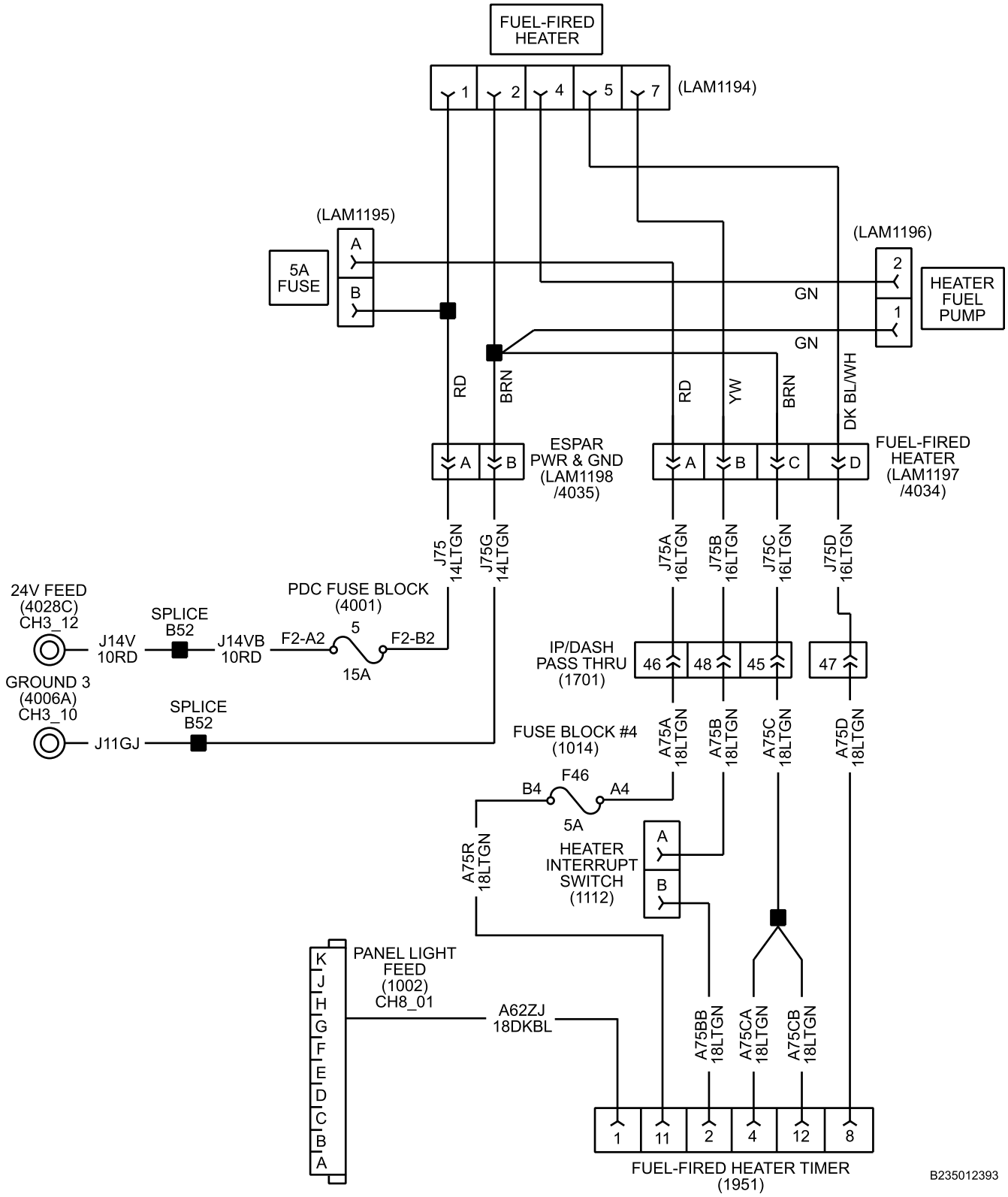


Figure 46. CH7_06, Fuel-Fired Heater.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

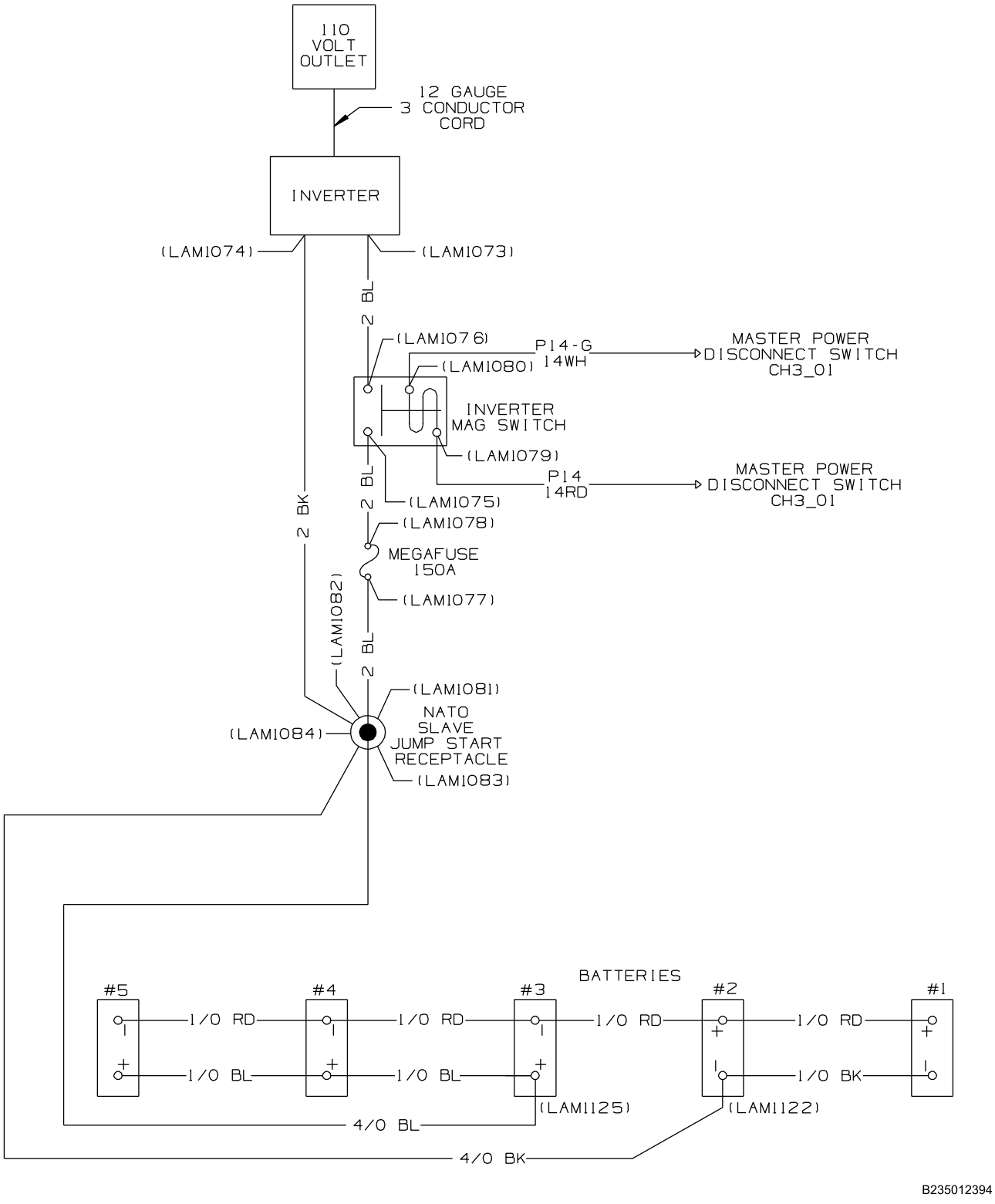


Figure 47. CH7_07, 110V AC Power.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

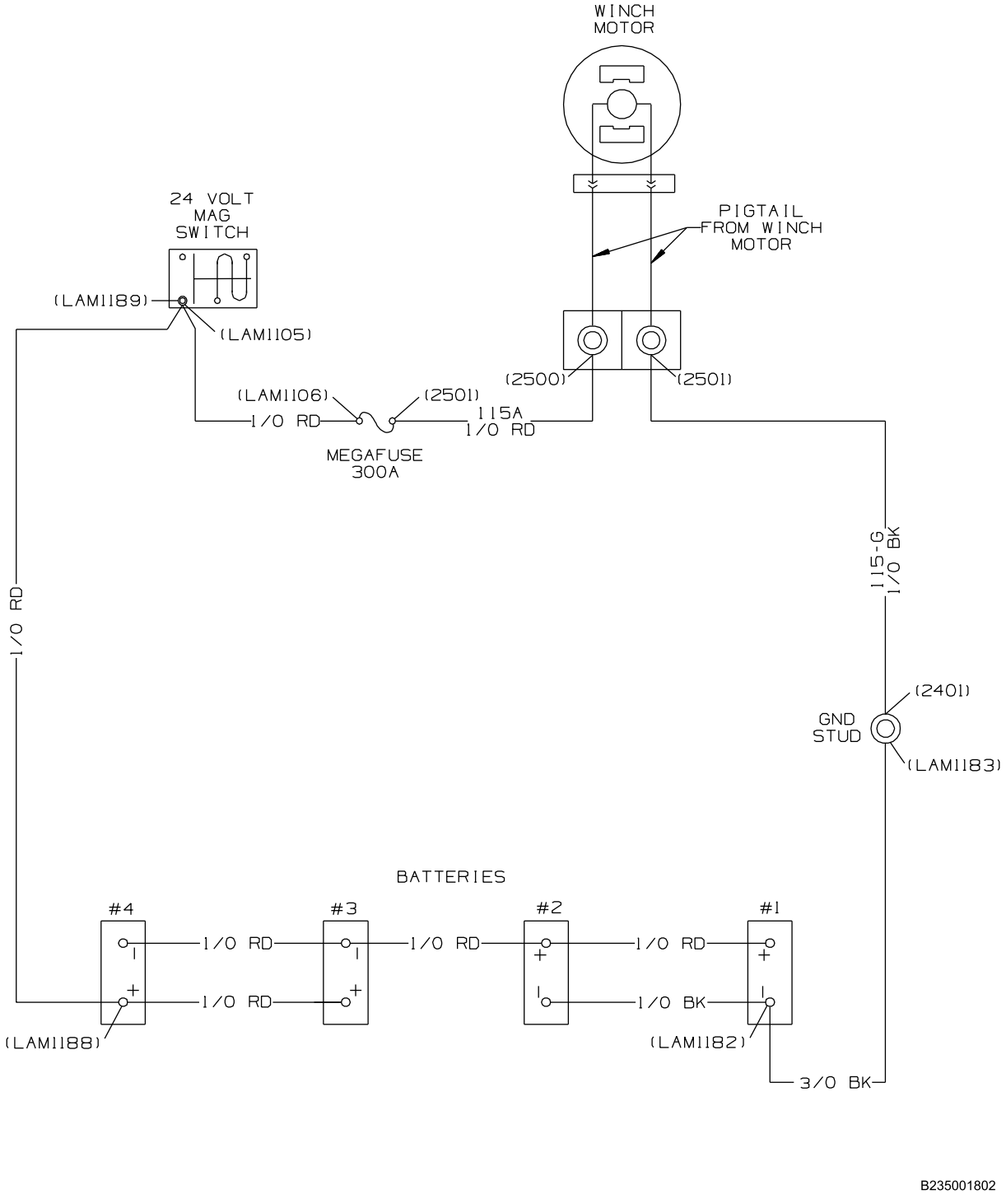


Figure 48. CH7_08, Winch Power Cables.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

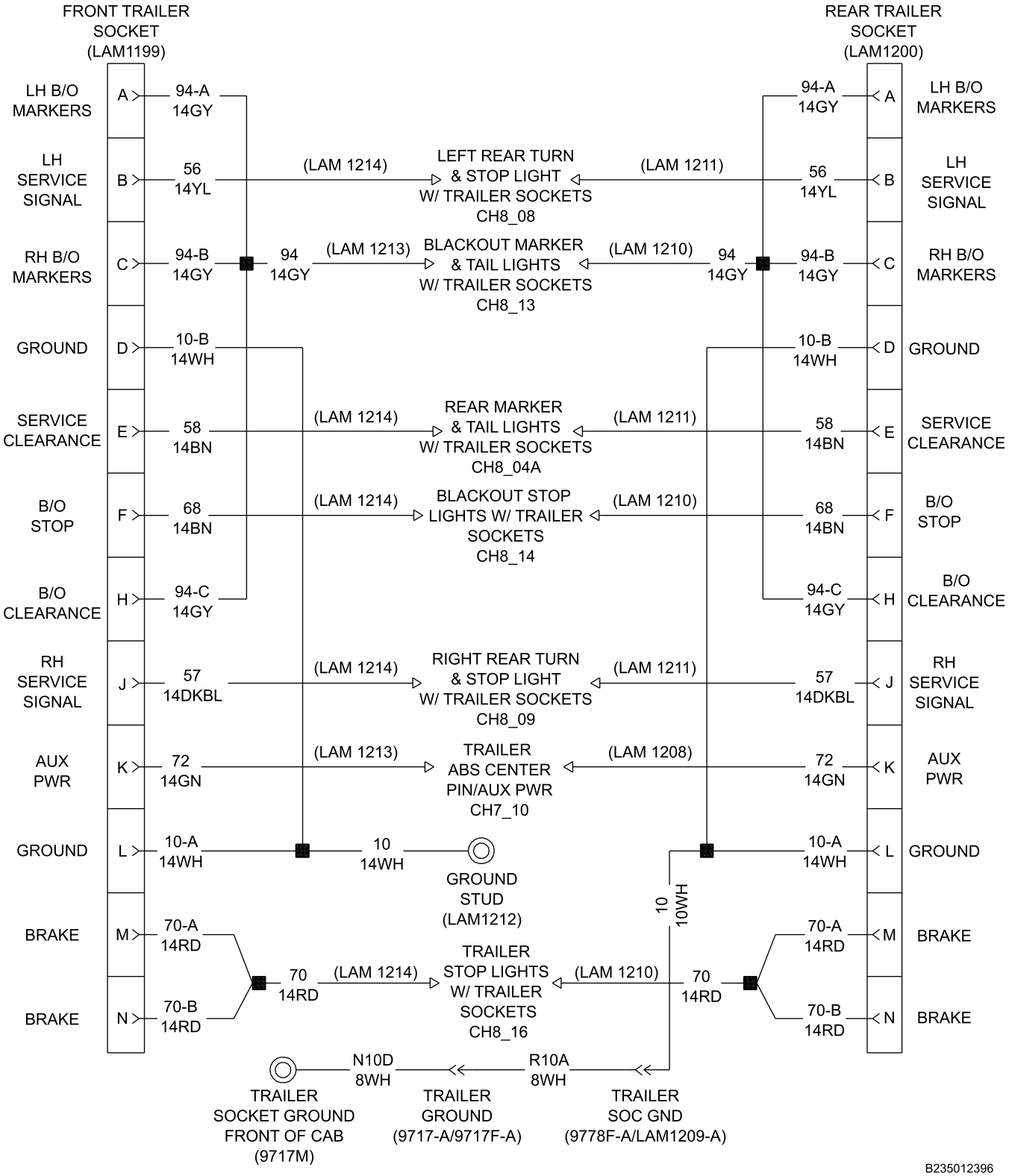


Figure 49. CH7_09, Trailer Sockets – Front and Rear.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

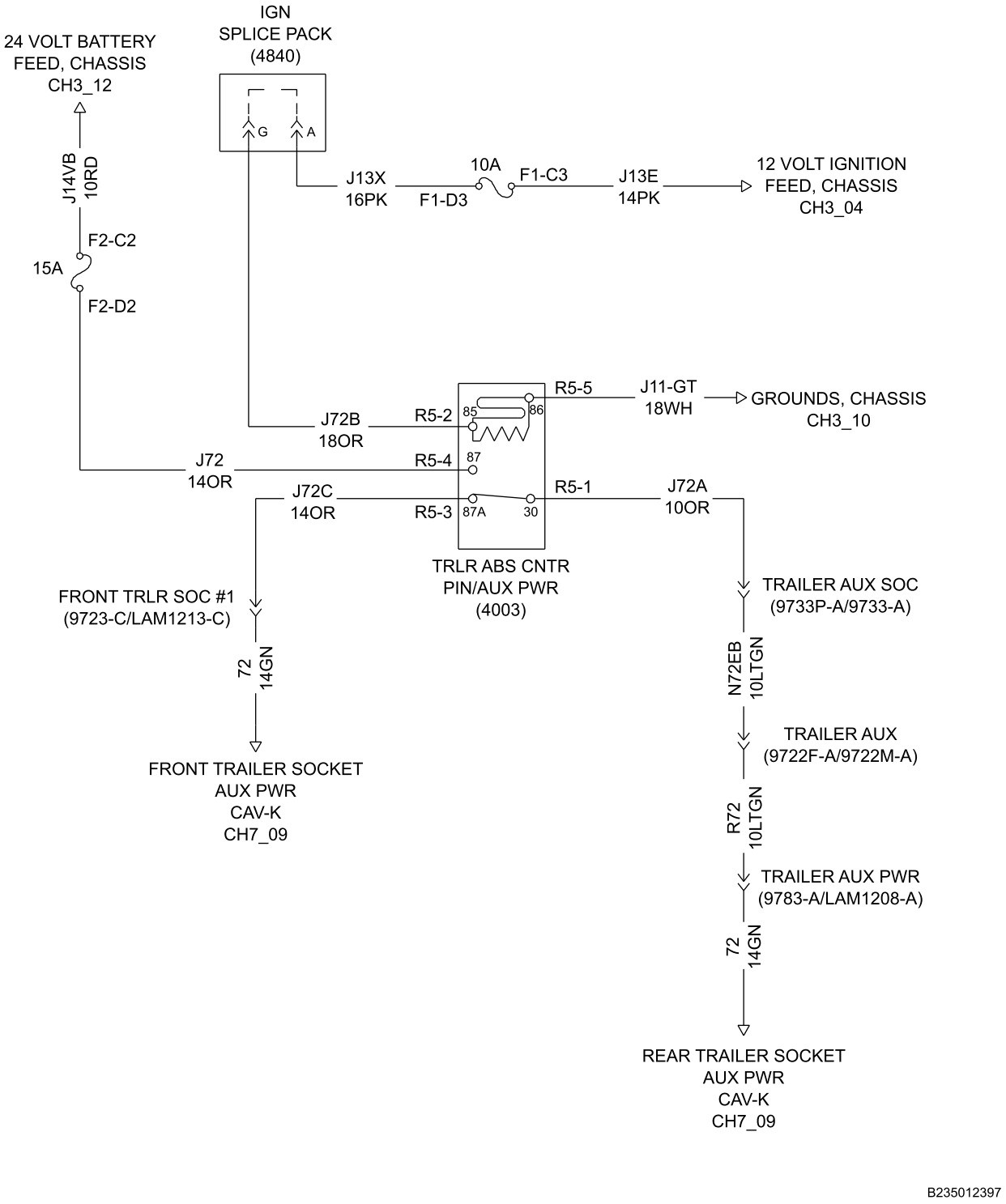


Figure 50. CH7_10, Trailer ABS Center Pin Auxiliary Power.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

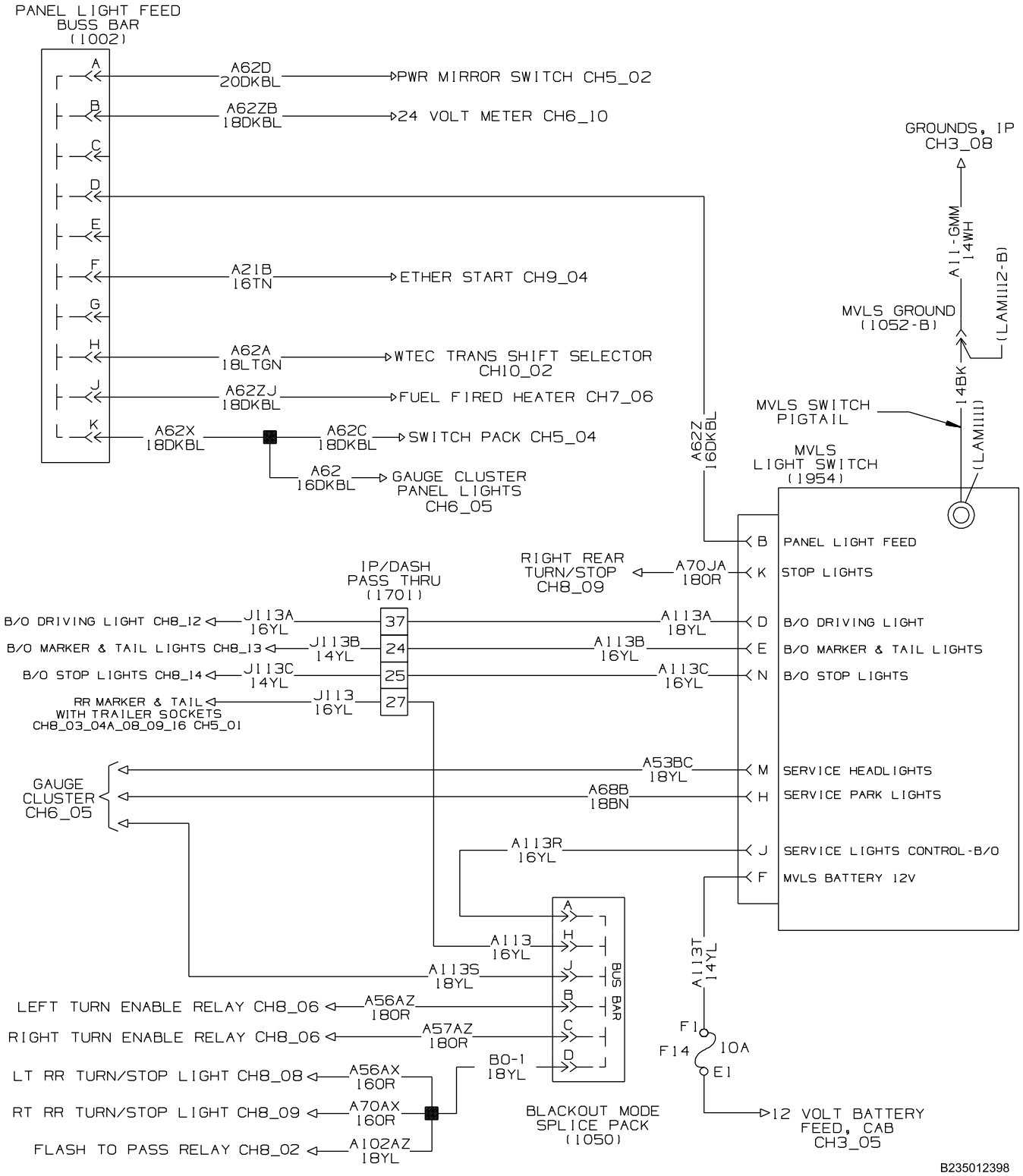


Figure 51. CH8_01, Master Vehicle Light Switch (MVLS) and Panel Light Feed.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

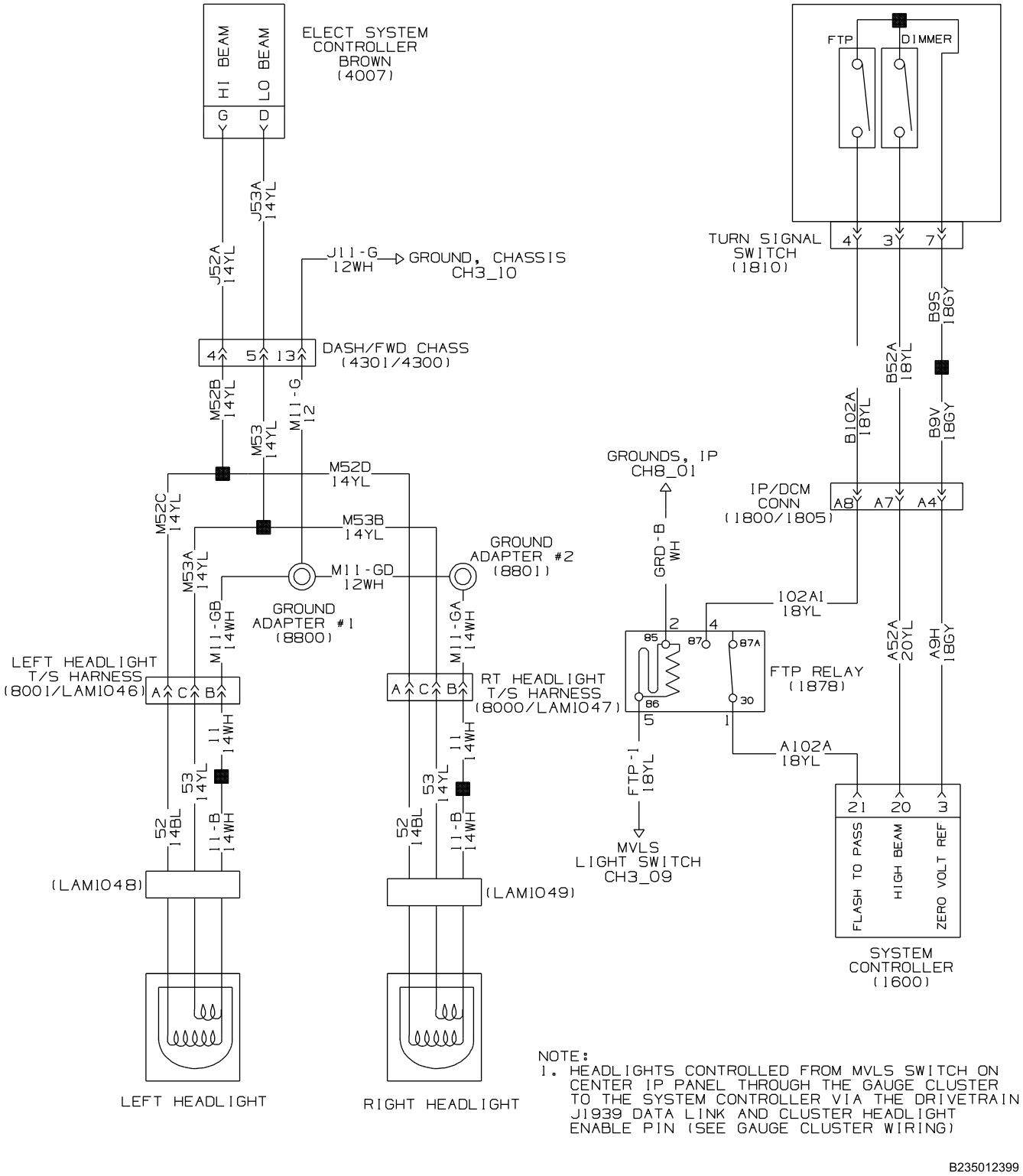


Figure 52. CH8_02, Service Headlights.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

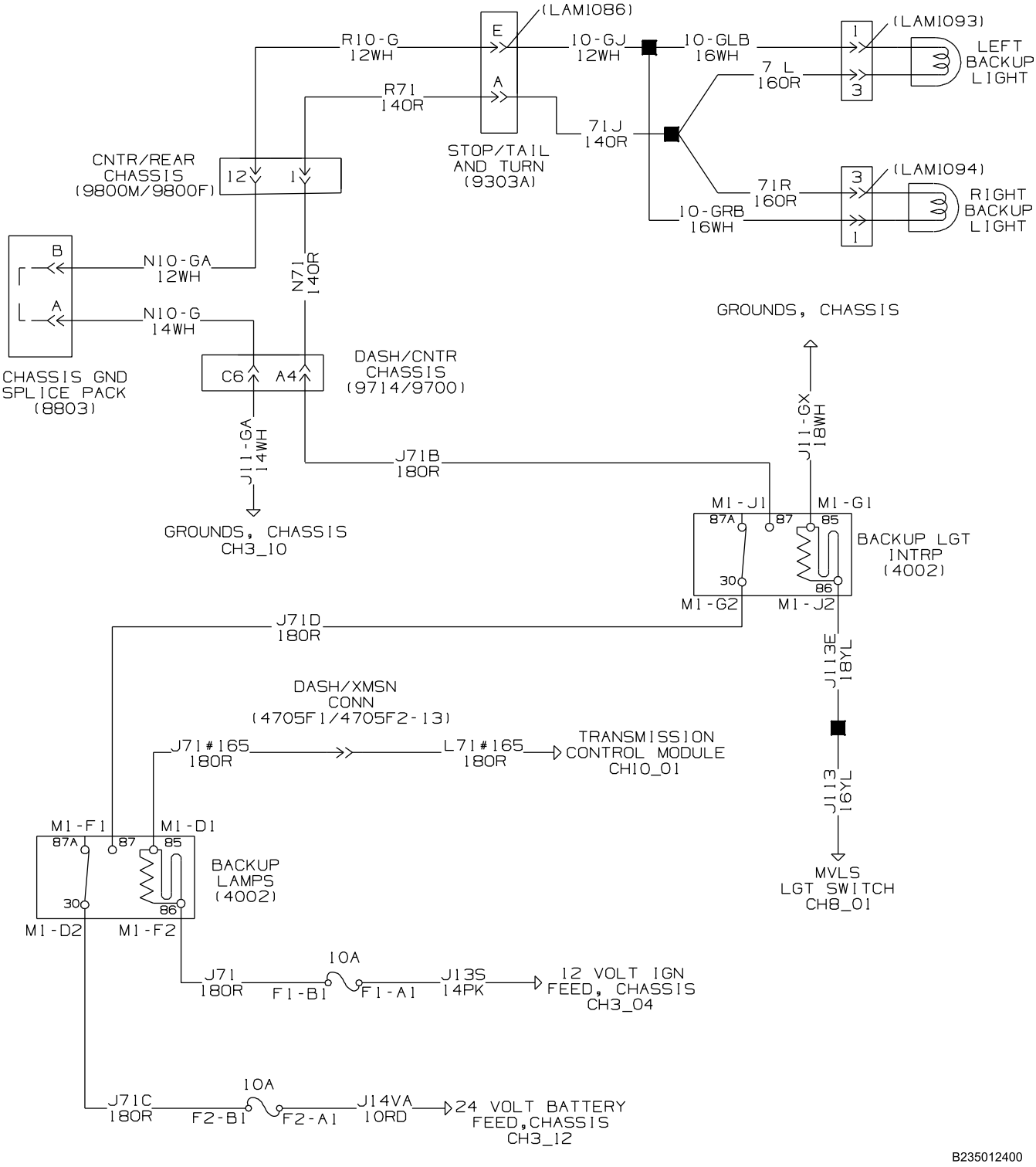


Figure 53. CH8_03, Service Backup Lights.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

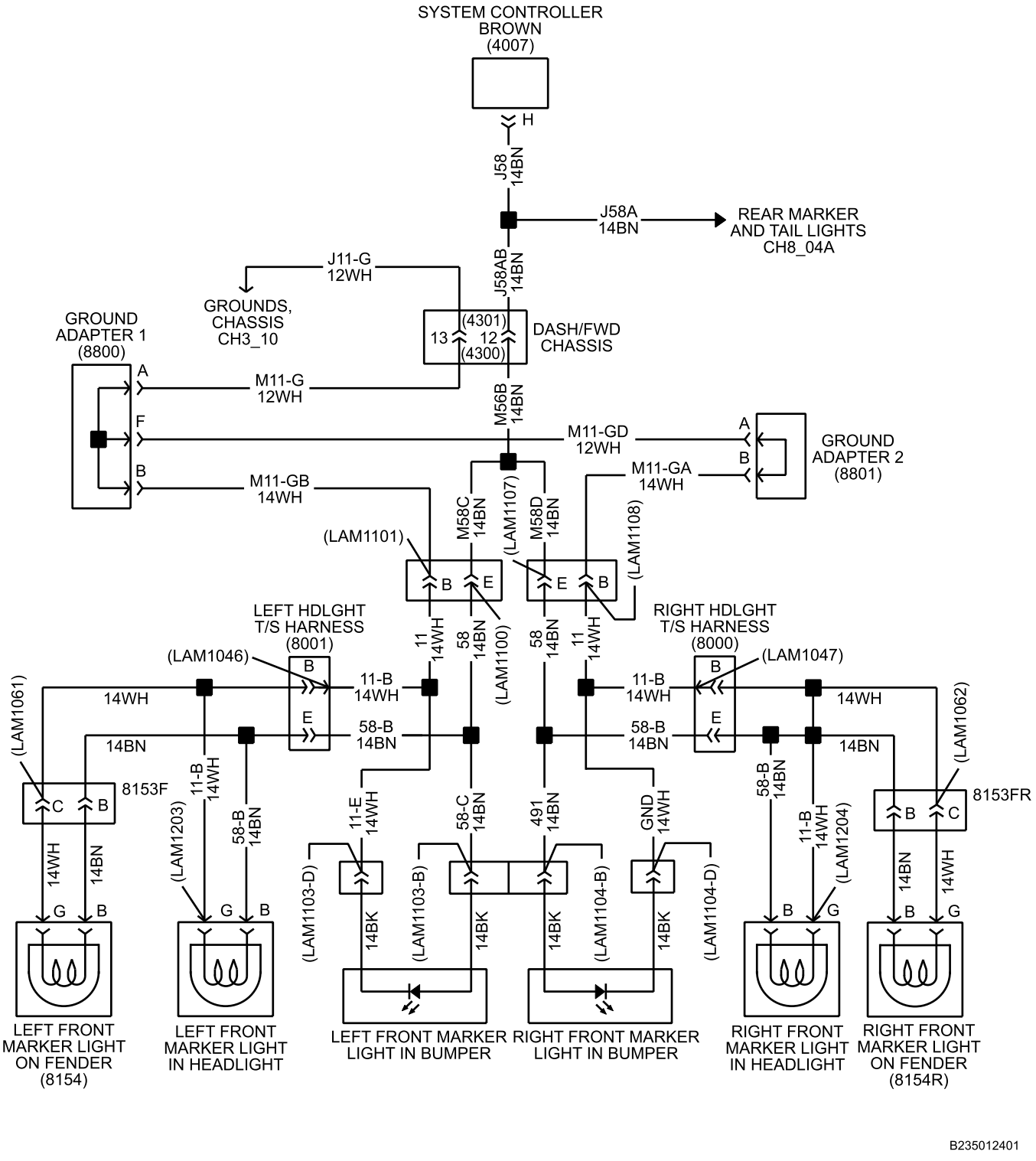


Figure 54. CH8_04, Service Lights – Front Marker Lights.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

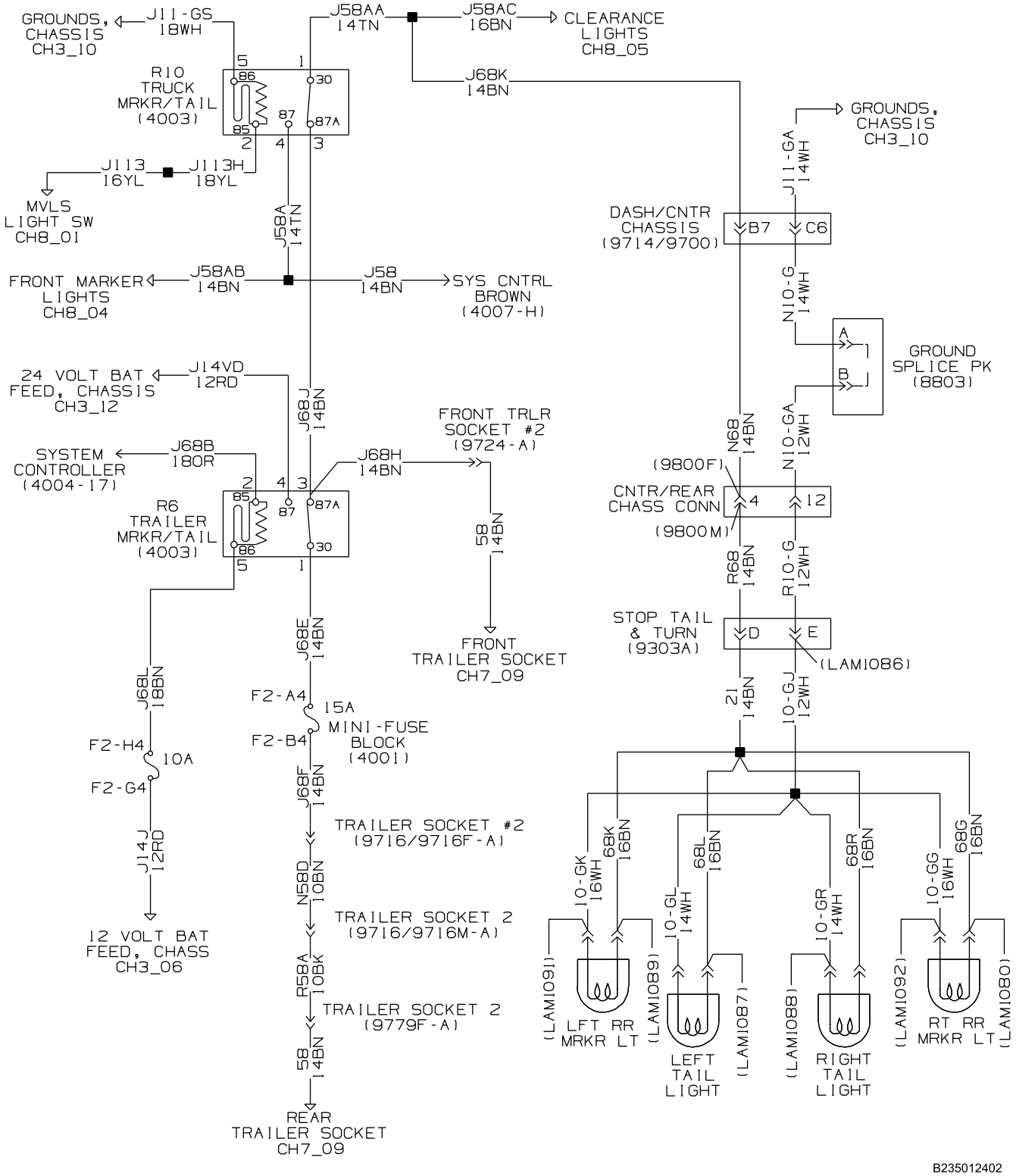


Figure 55. CH8_04A, Service Lights – Rear Marker and Taillights with Trailer Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

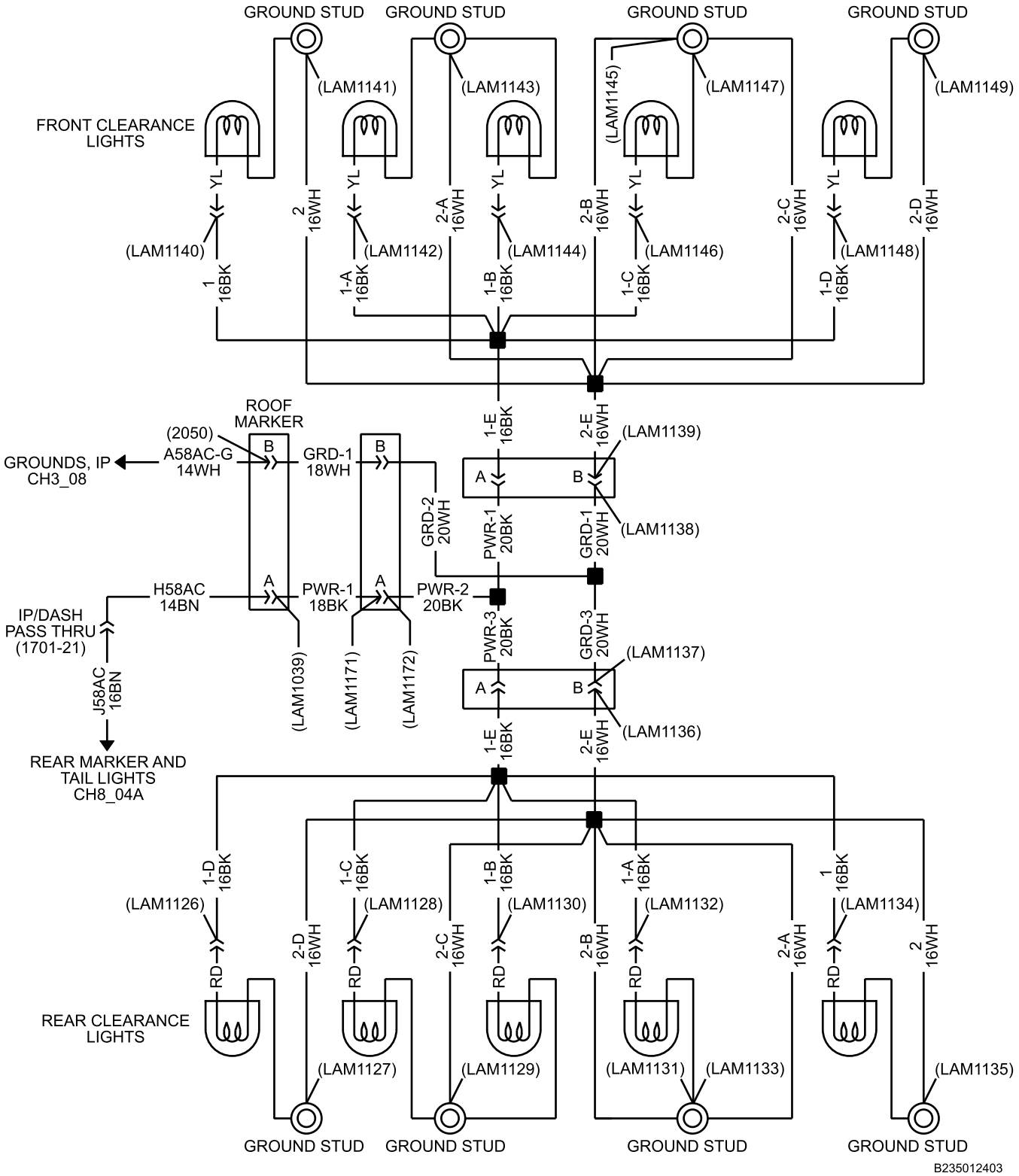


Figure 56. CH8_05, Service Lights – Clearance.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

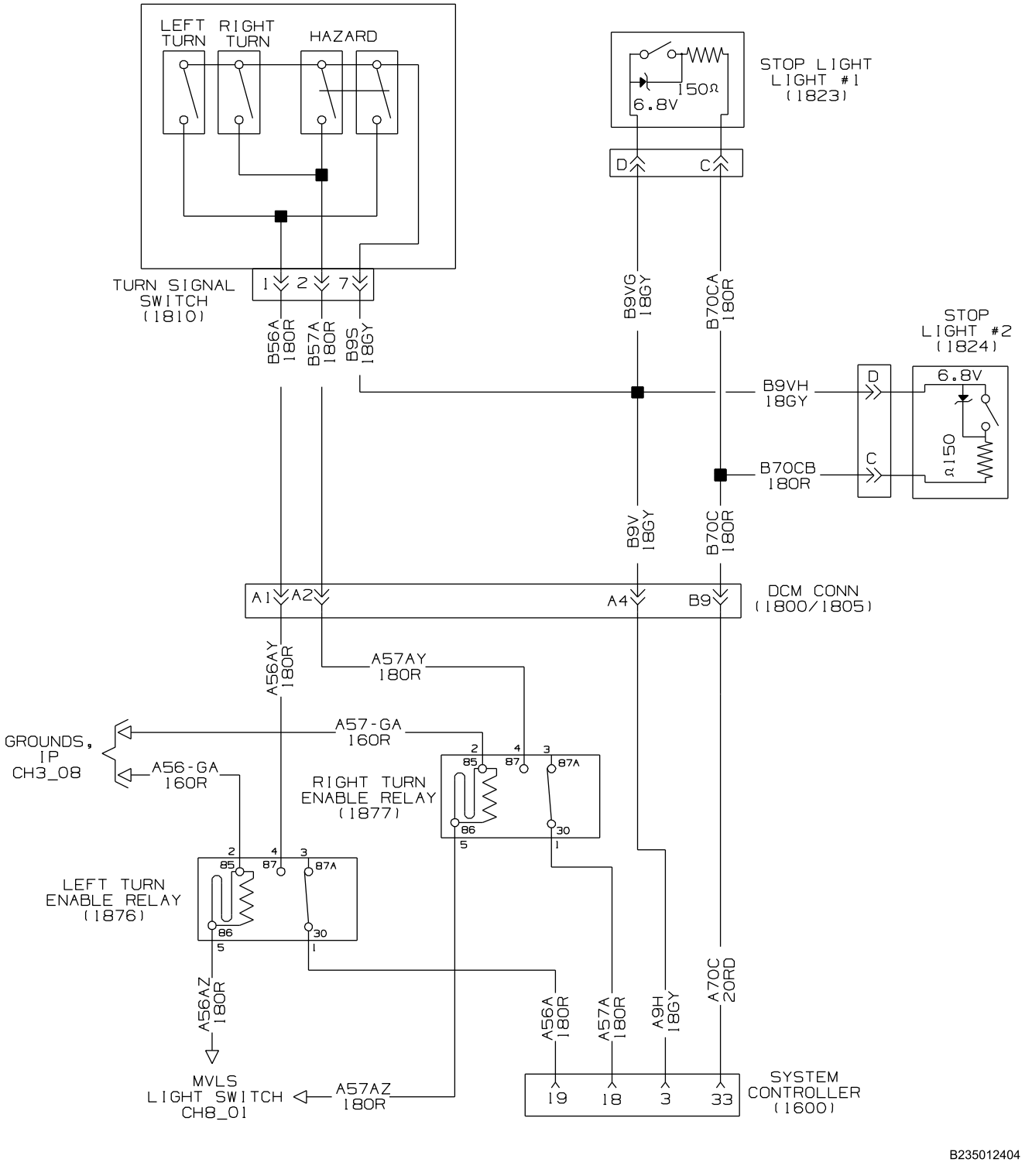
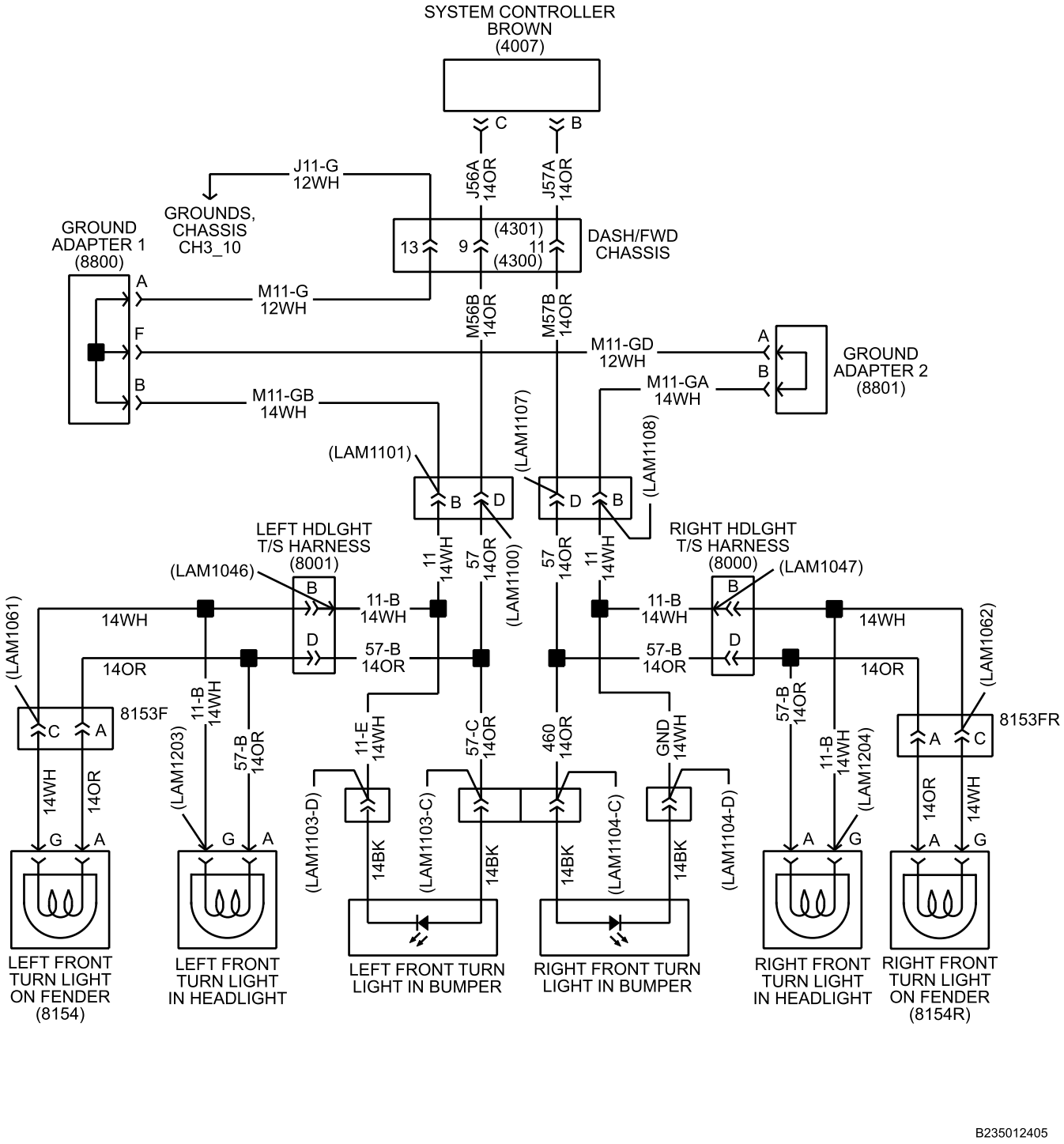


Figure 57. CH8_06, Service Lights – Turn Signal and Stop Light Relays and Switch.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235012405

Figure 58. CH8_07, Service Lights – Front Turn Signal Lights.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

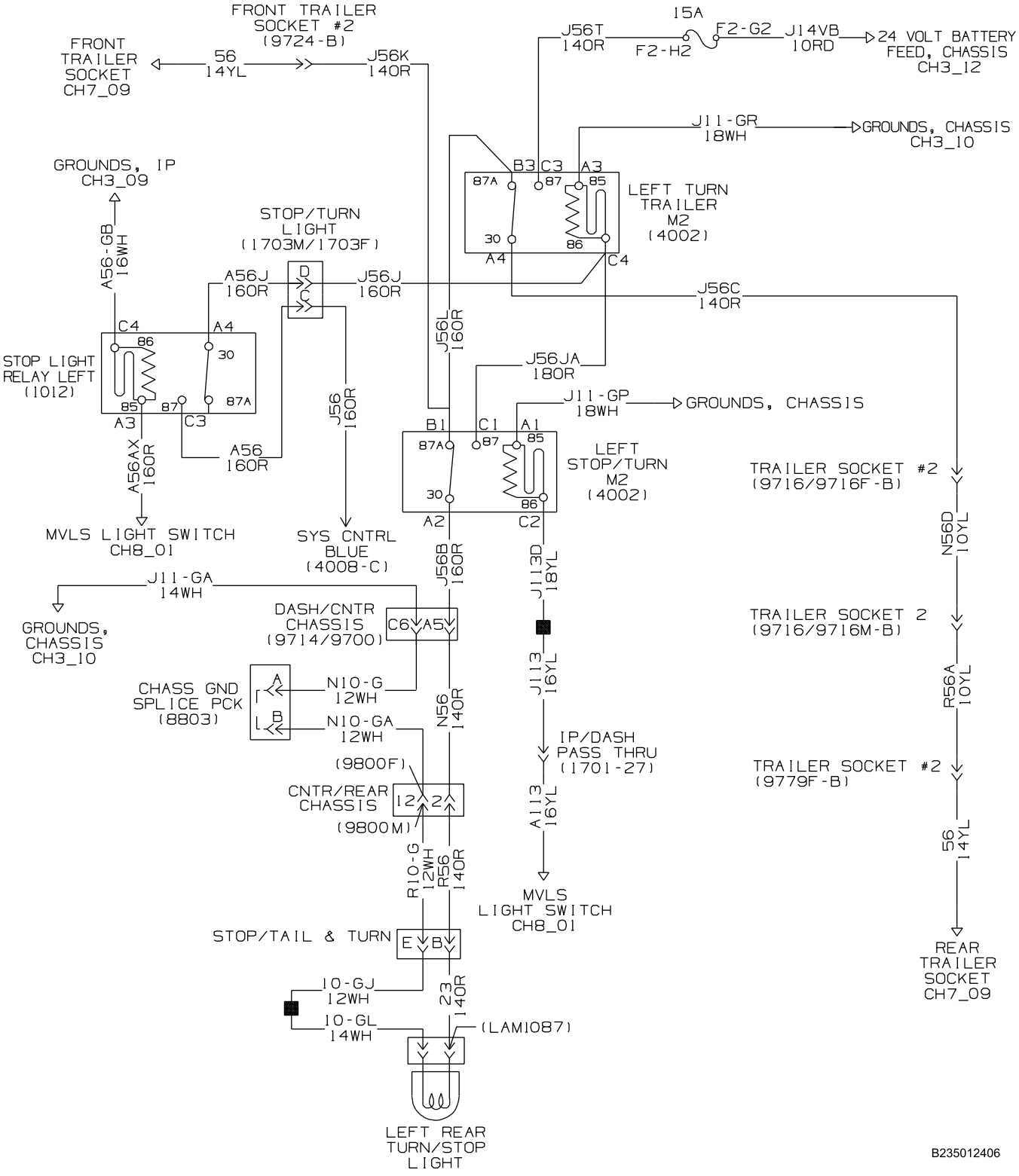


Figure 59. CH8_08, Service Lights – Left Rear Turn and Stop Light with Trailer Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

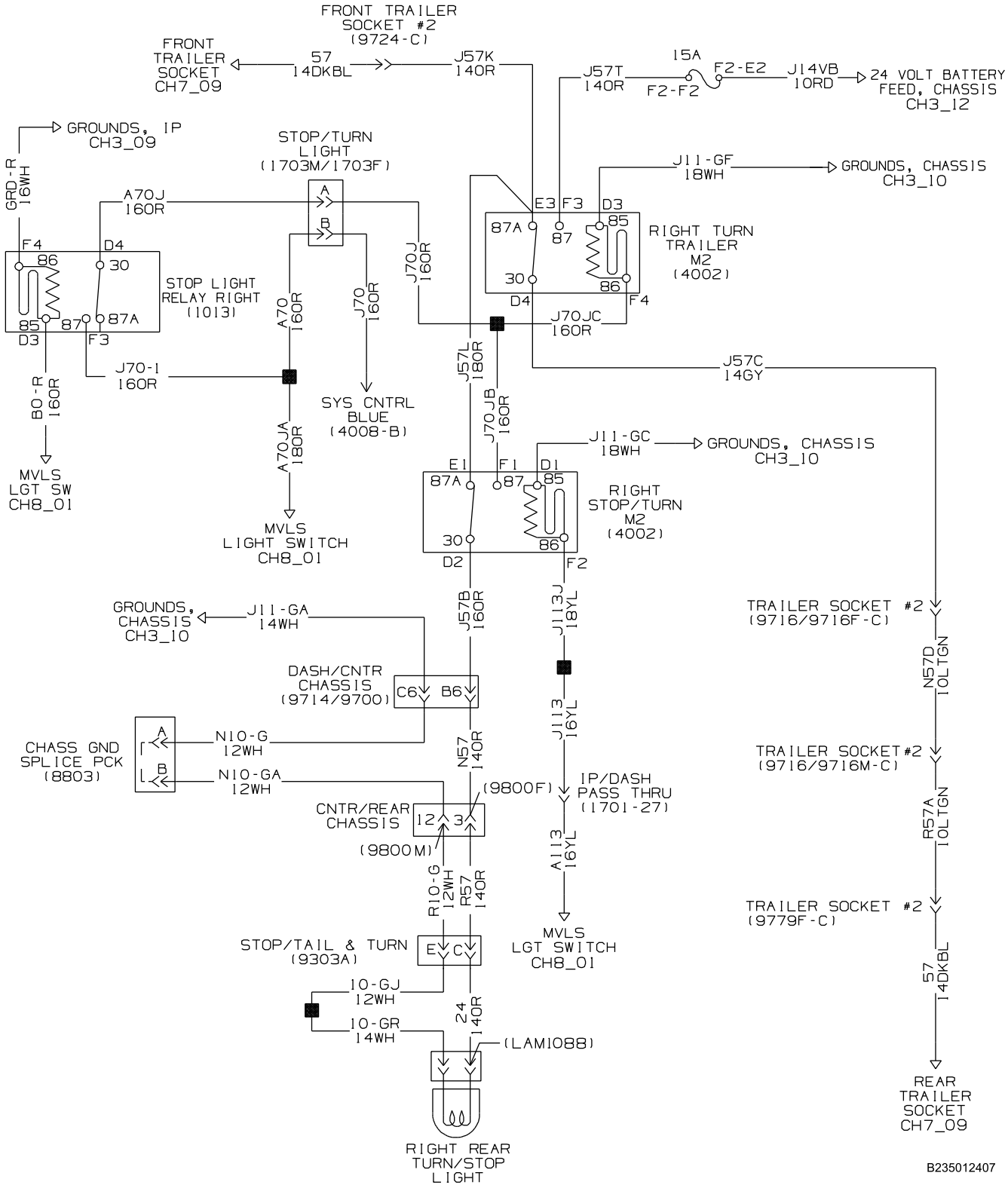


Figure 60. CH8_09, Service Lights – Right Rear Turn and Stop Light with Trailer Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

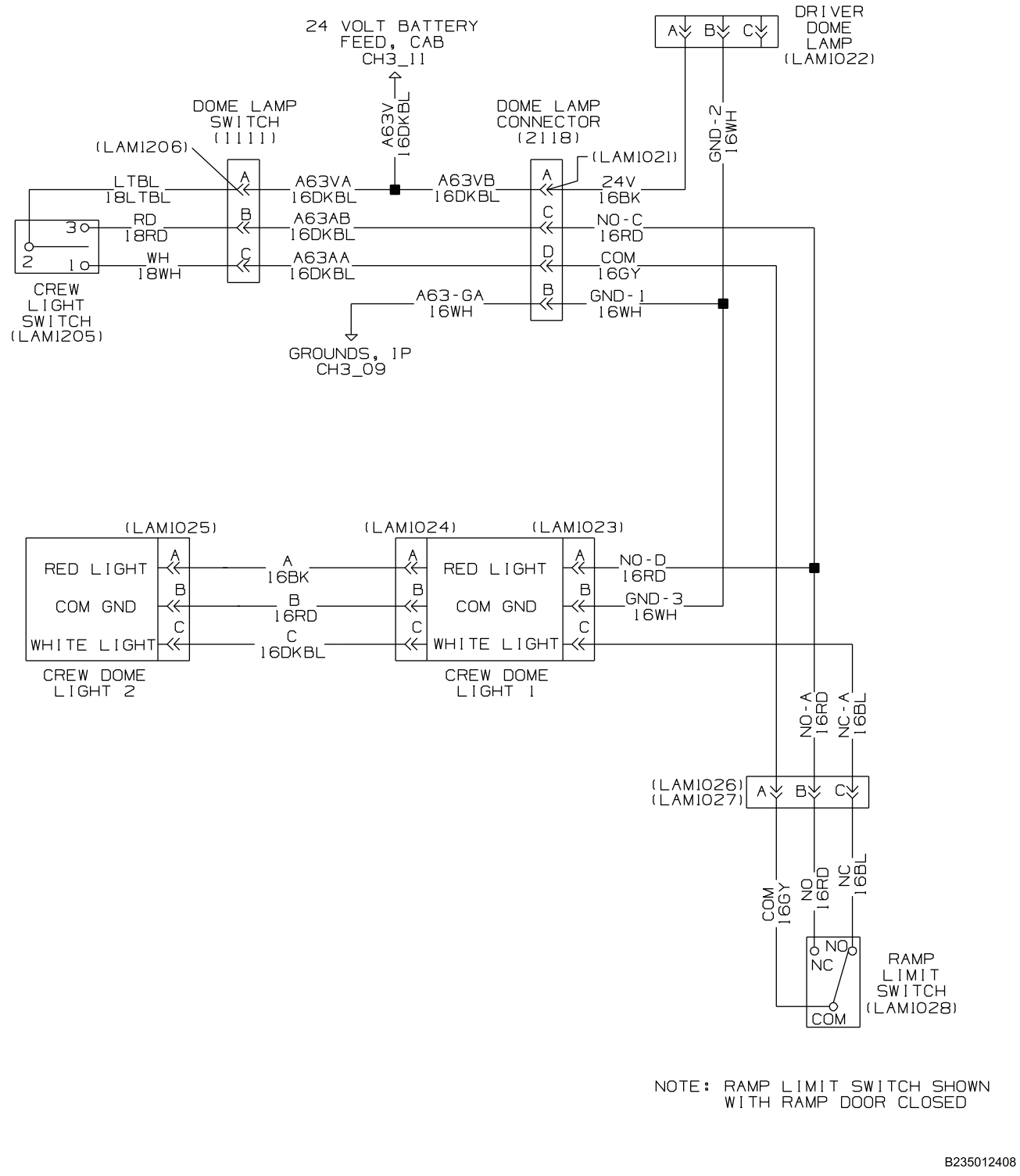


Figure 61. CH8_10, Dome Lights.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

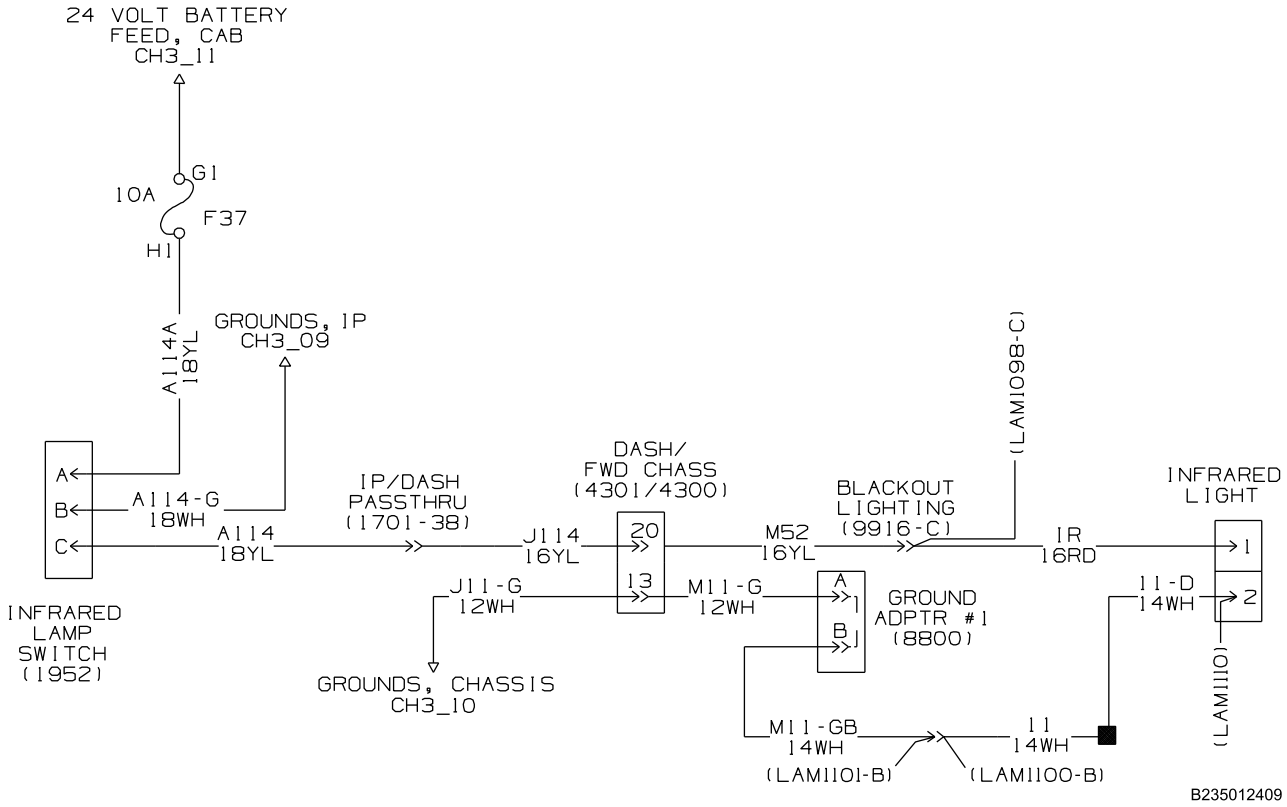


Figure 62. CH8_11, Infrared Driving Light.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

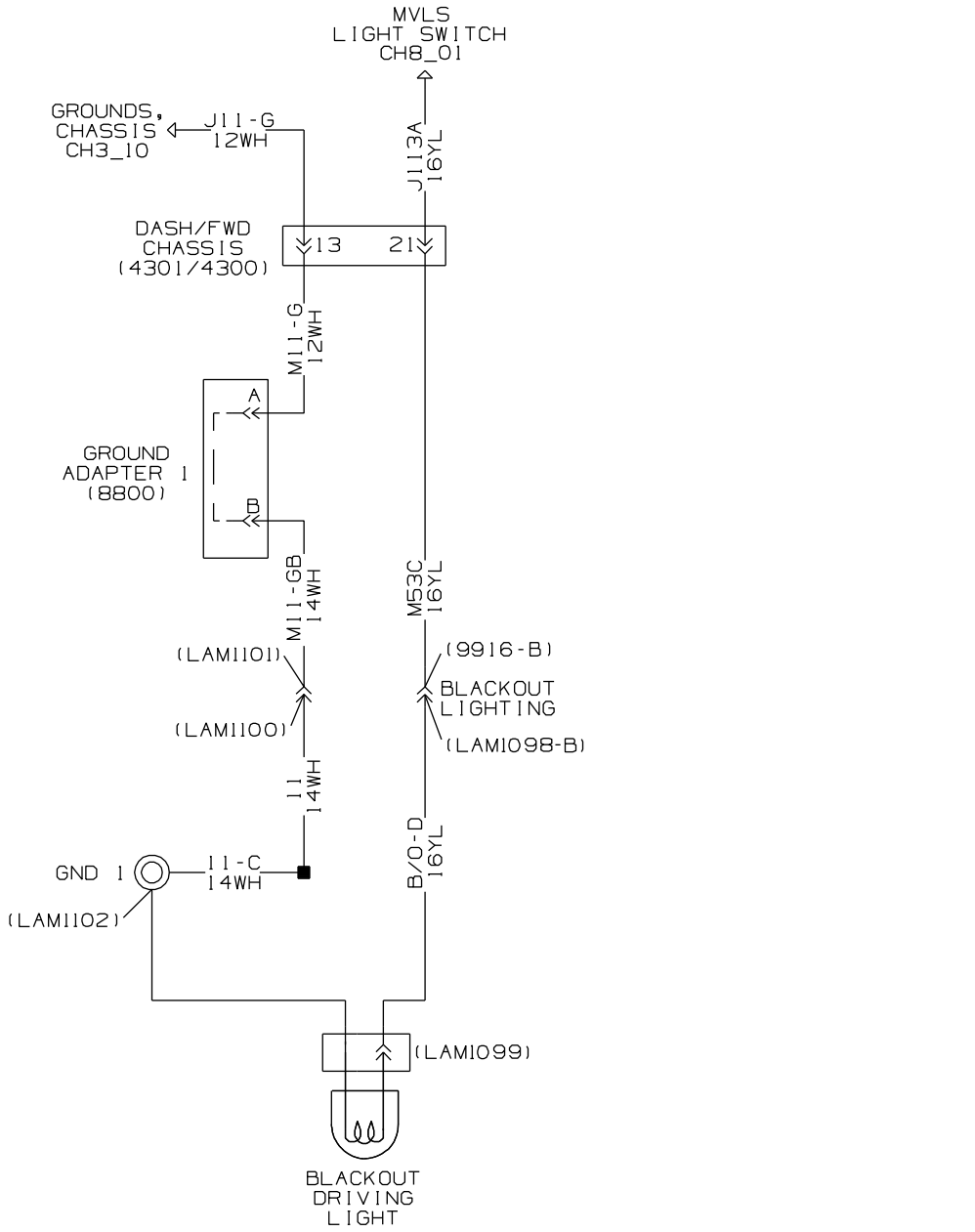


Figure 63. CH8_12, Blackout Driving Light.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

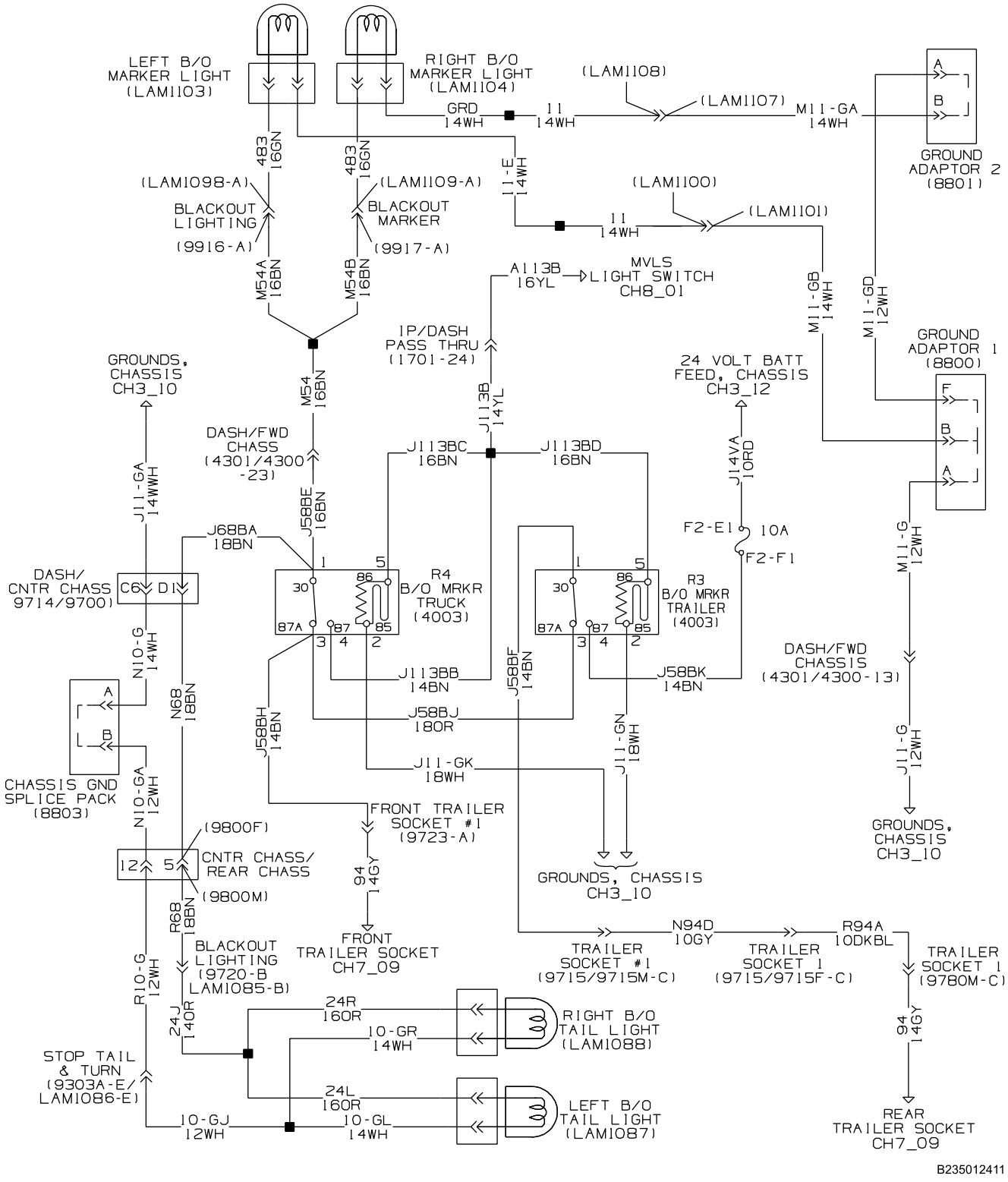


Figure 64. CH8_13, Blackout Marker and Taillights with Trailer Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

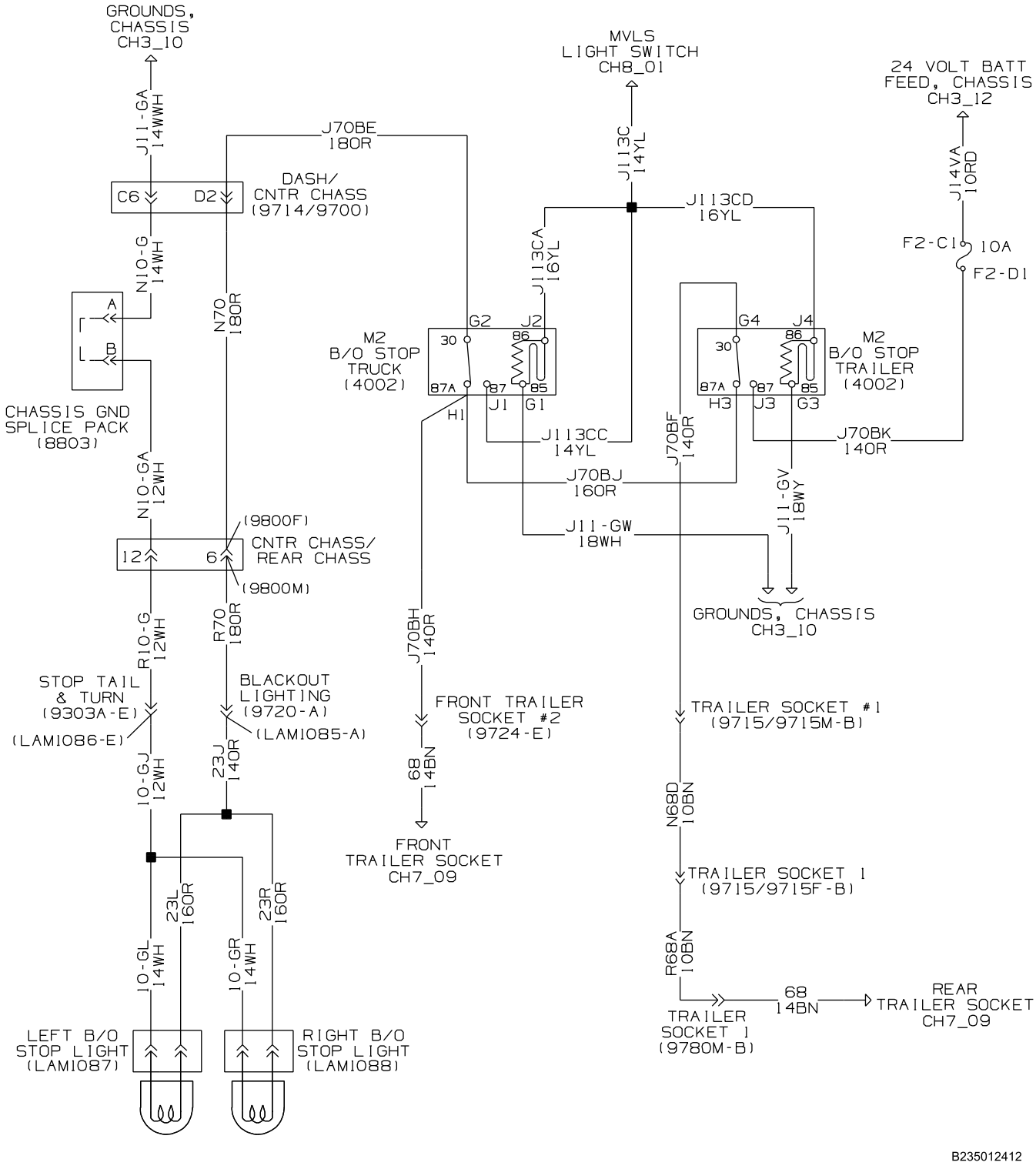


Figure 65. CH8_14, Blackout Stop Lights with Trailer Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

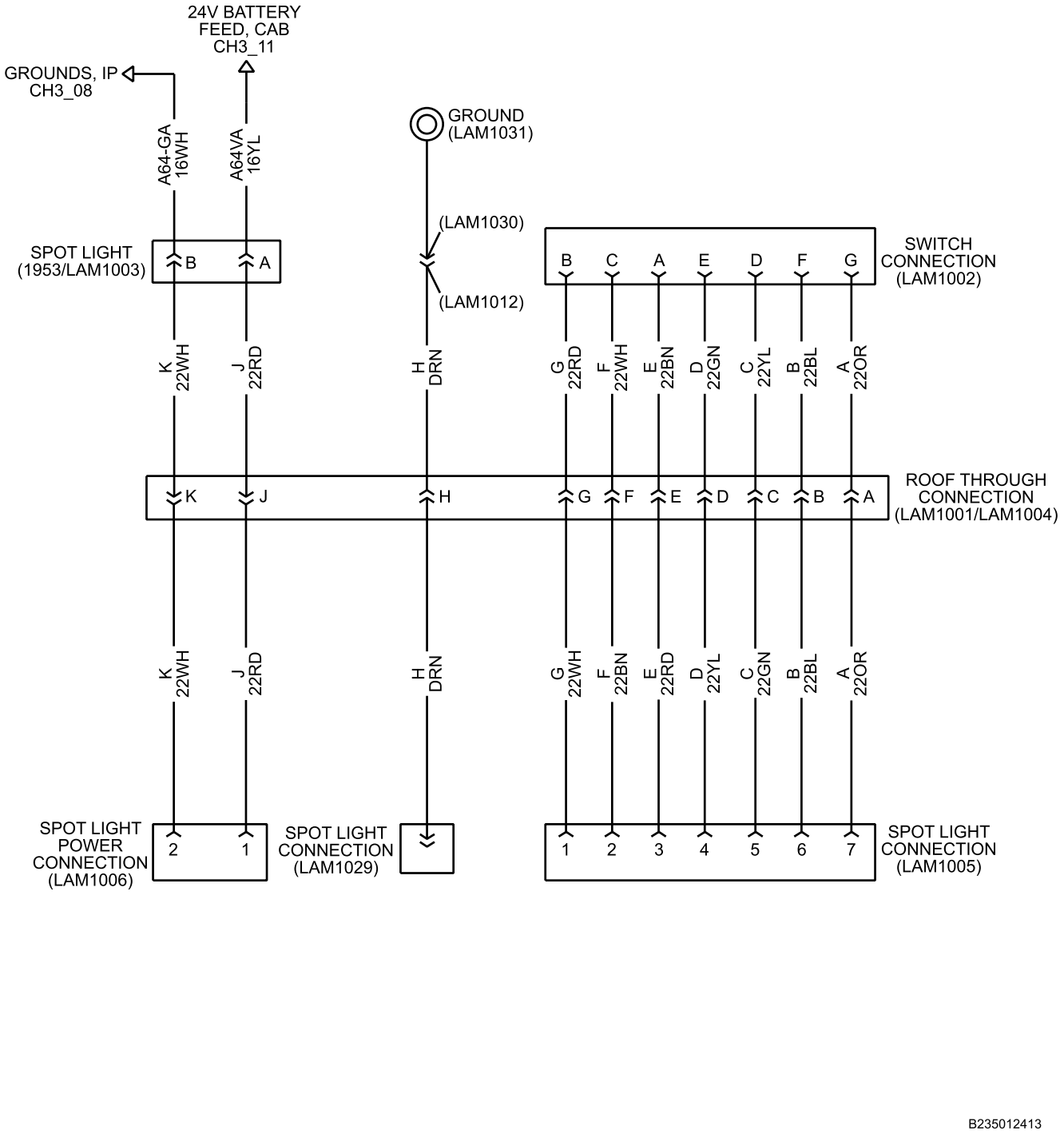


Figure 66. CH8_15, Remote Control Spotlight Power.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

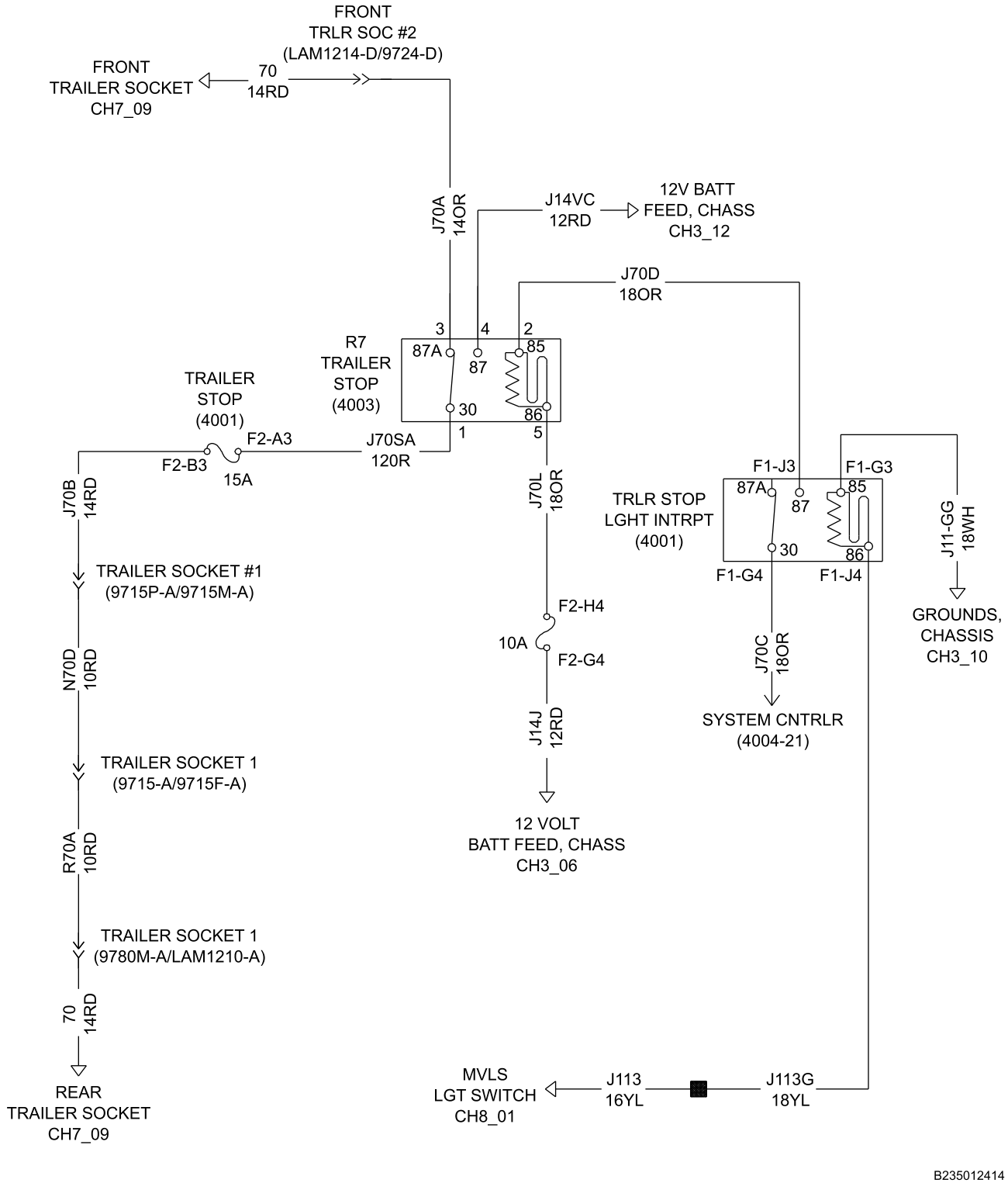


Figure 67. CH8_16, Trailer Stop Lights with Trailer Sockets.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

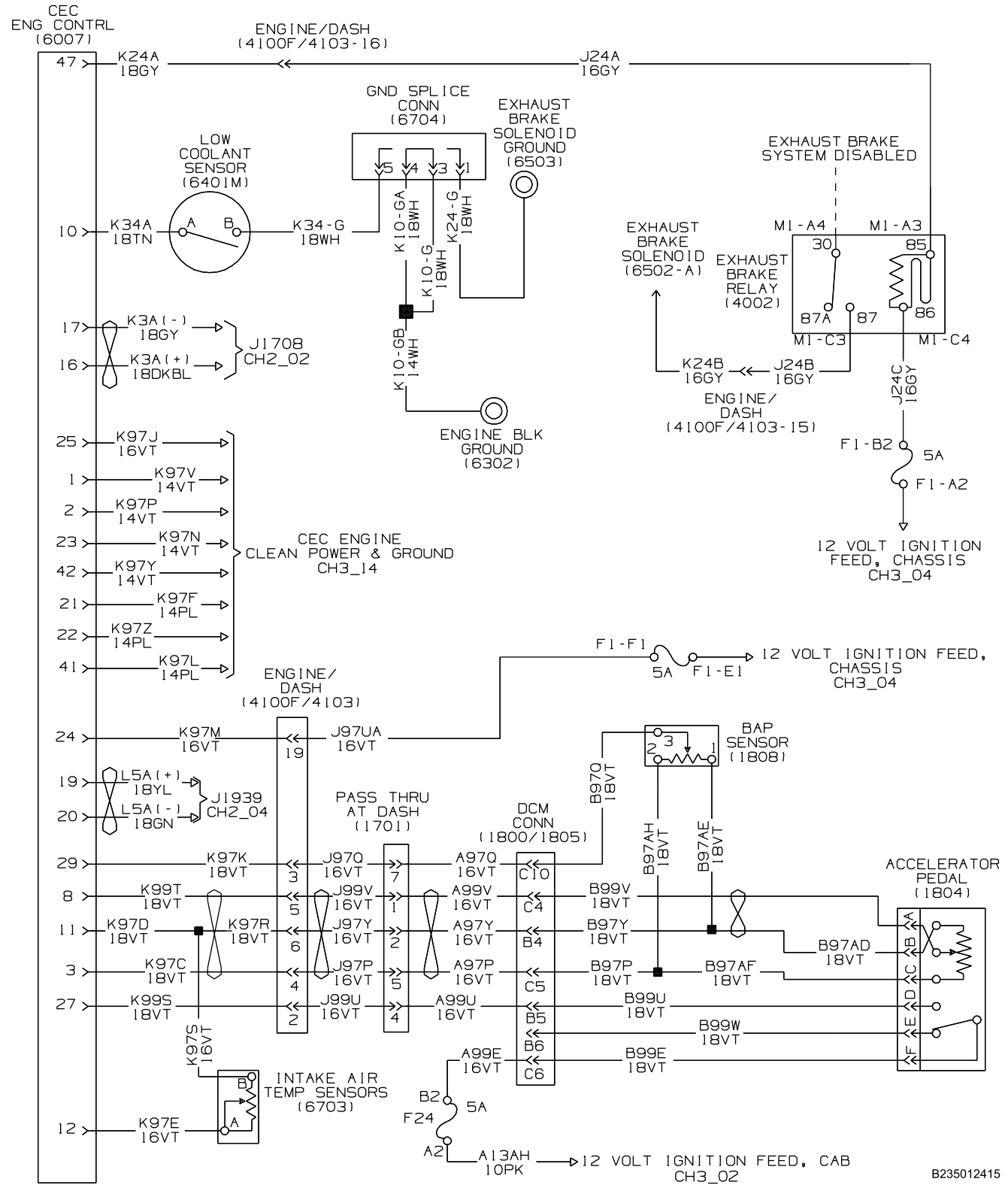


Figure 68. CH9_01, I6 – HEUI Engine Controls.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

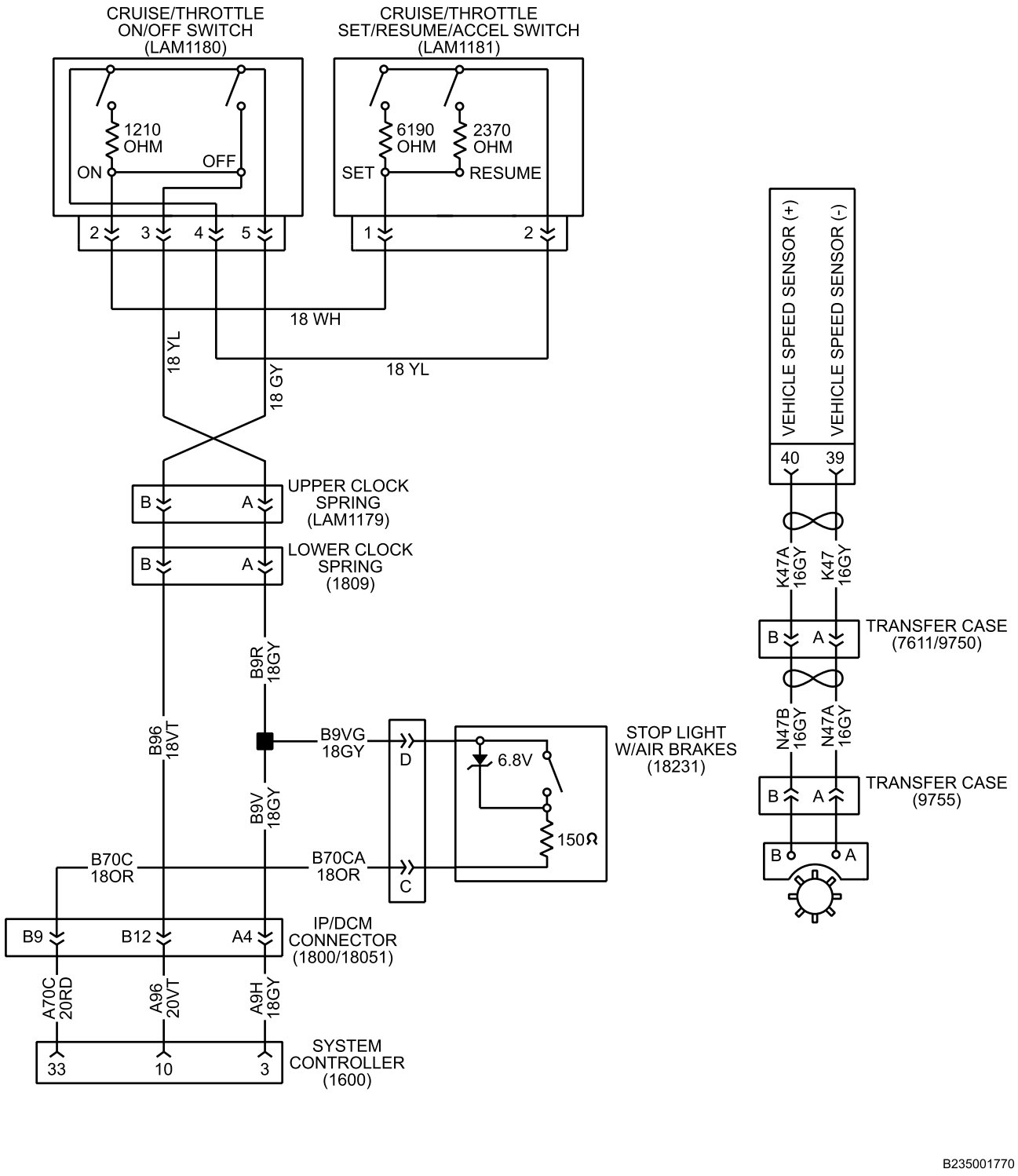


Figure 69. CH9_02, I6 - HEUI Engine Controls – Cruise Control.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

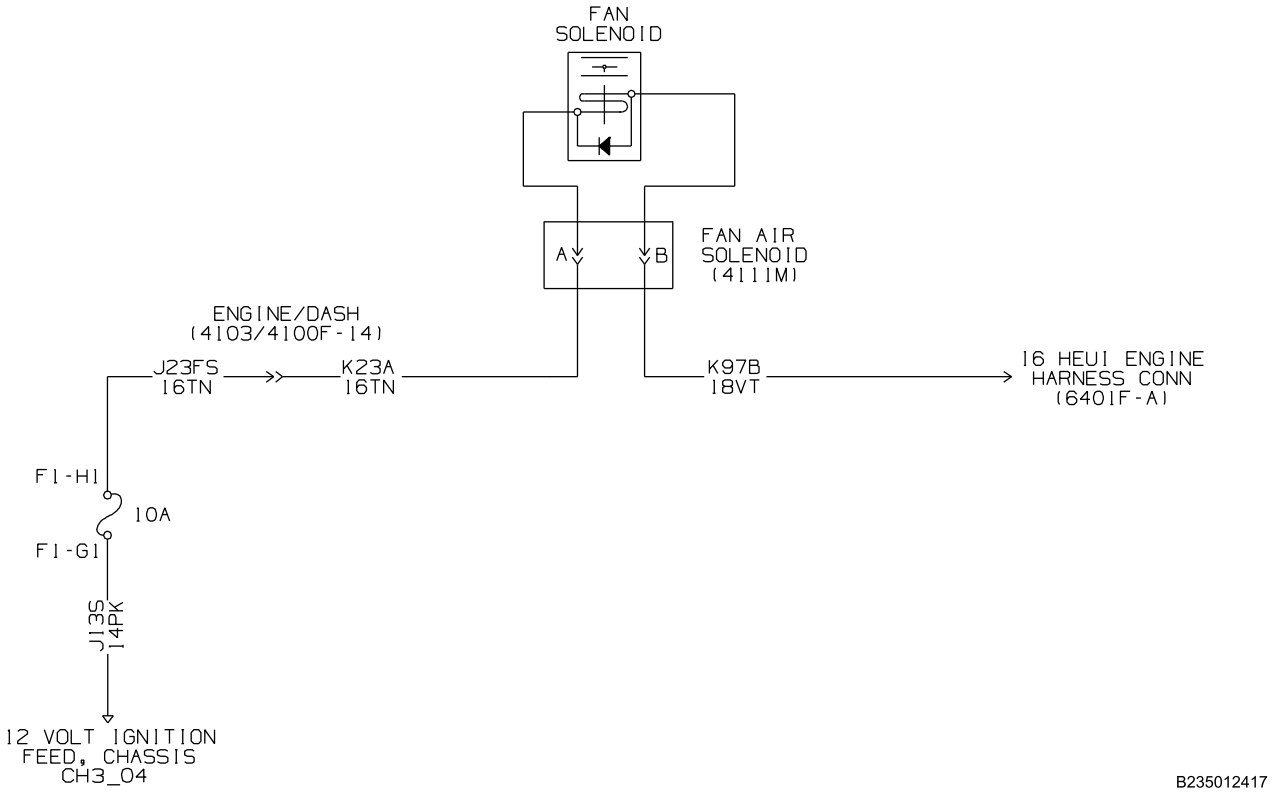


Figure 70. CH9_03, I6 - HEUI Engine Fan and Wiring with Air Clutch.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

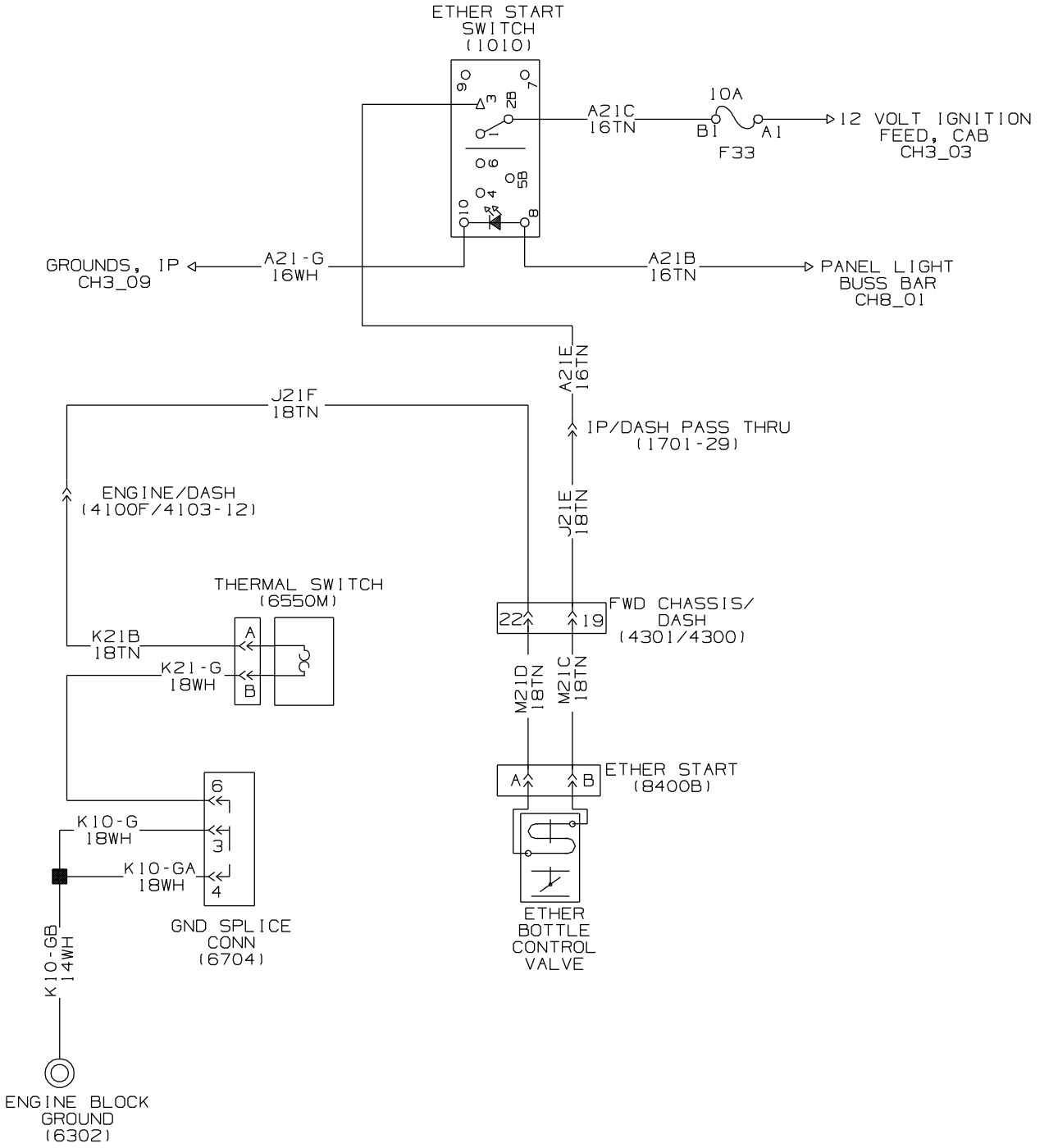


Figure 71. CH9_04, I6 - HEUI Engine – Ether Start.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

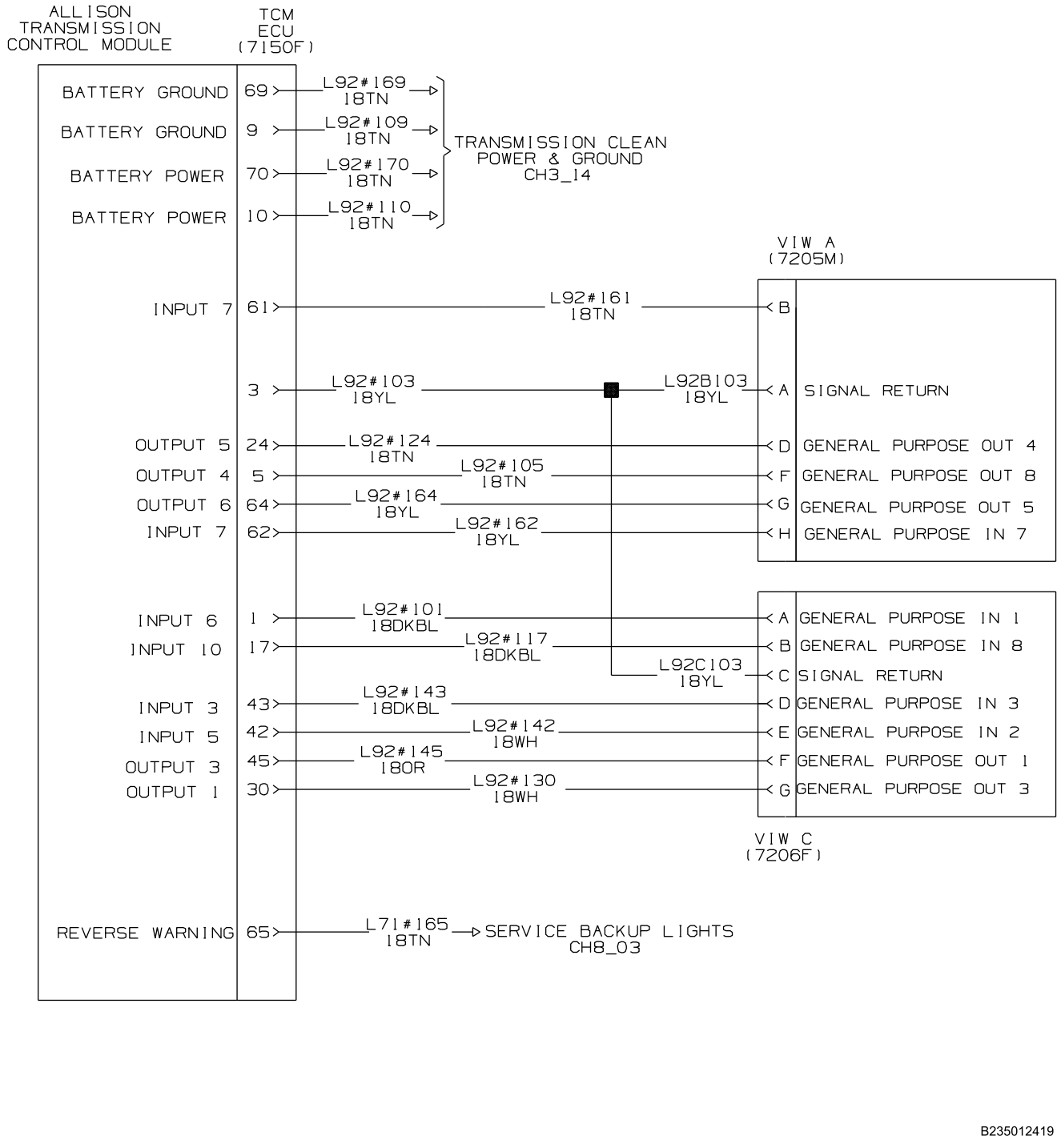


Figure 72. CH10_01, Allison WTEC Transmission (1 of 3).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

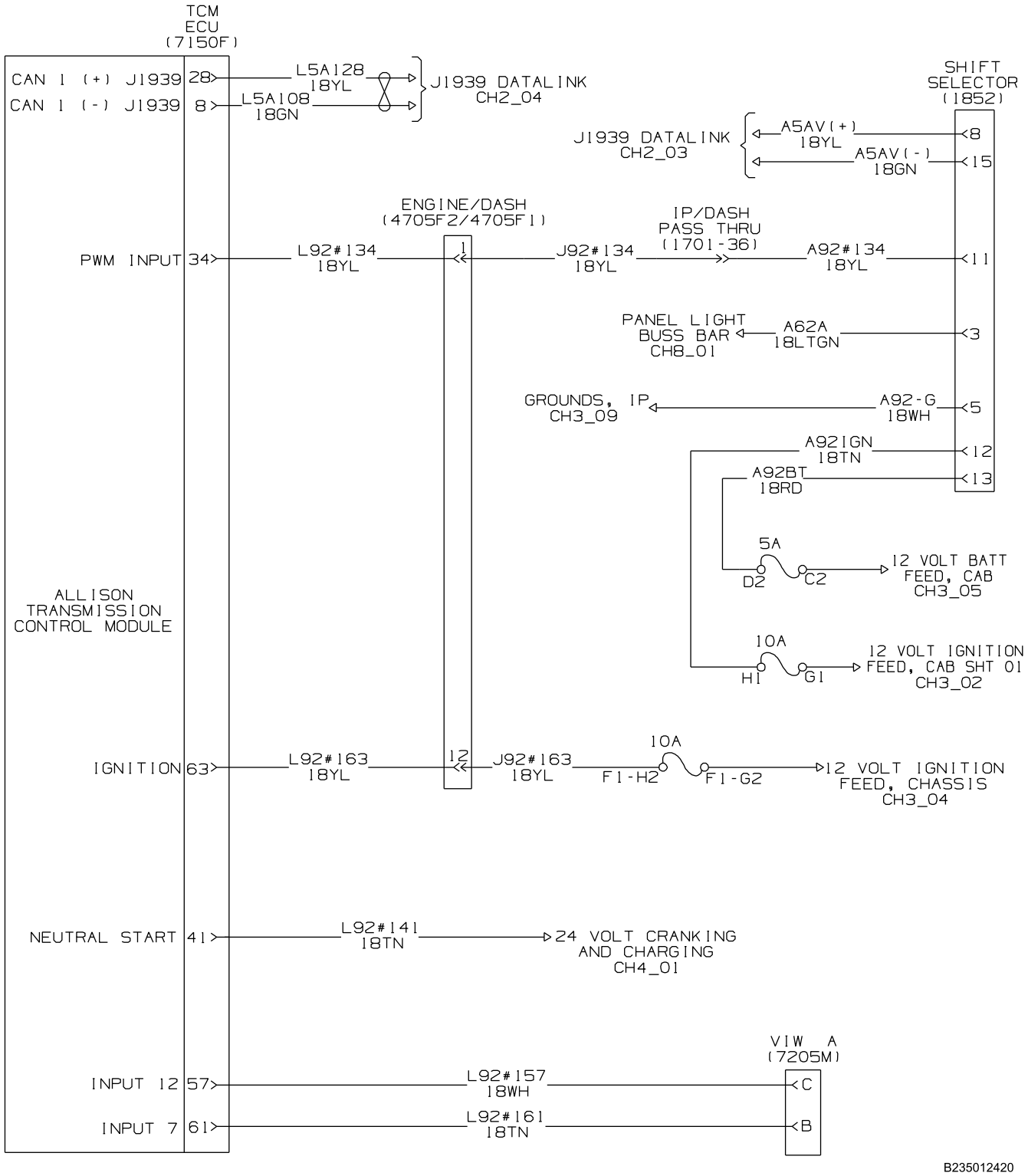
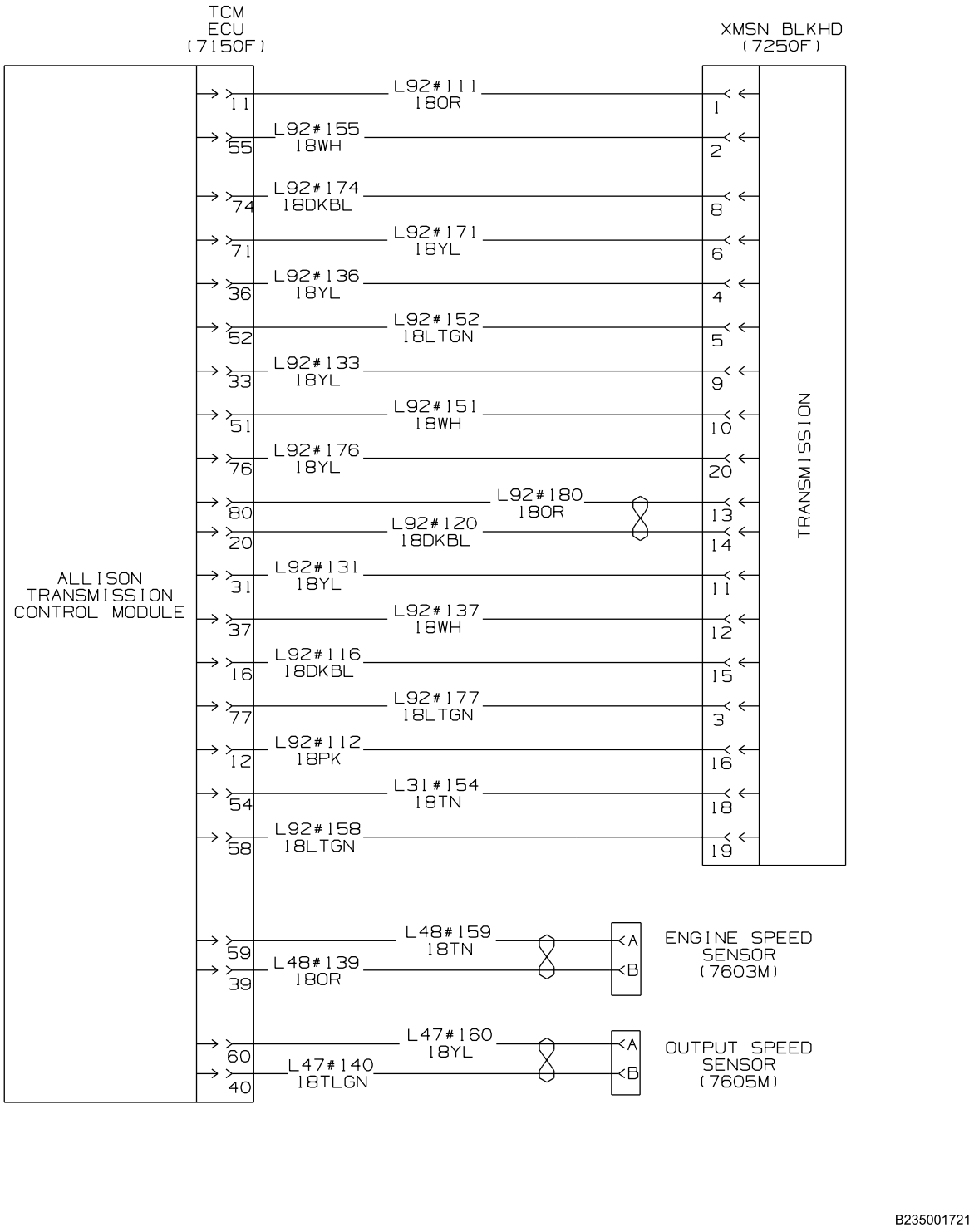


Figure 73. CH10_02, Allison WTEC Transmission (2 of 3).

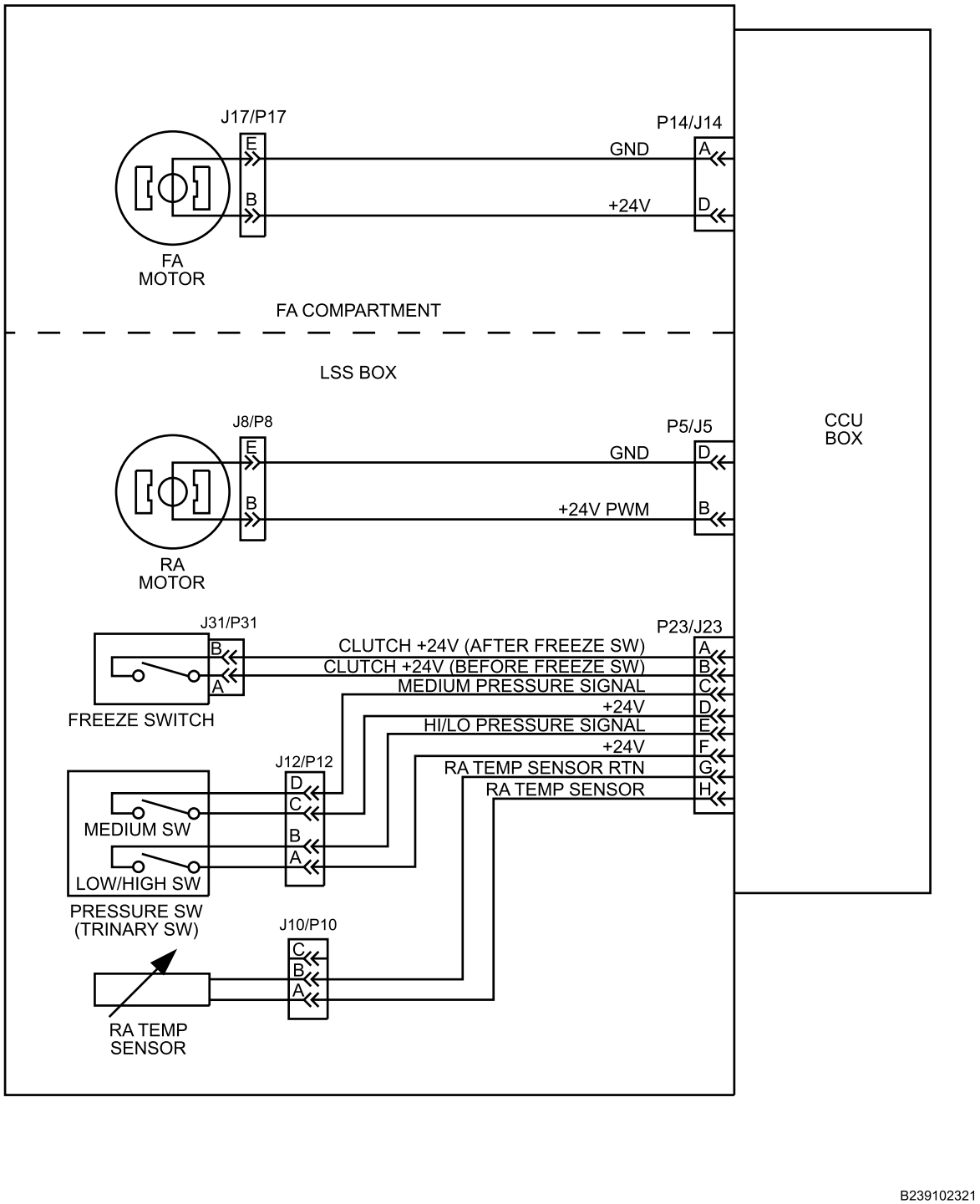
ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B235001721

Figure 74. CH10_03 Allison WTEC Transmission (3 of 3).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)



B239102321

Figure 75. CH11_01, HVAC, Cabin (1 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

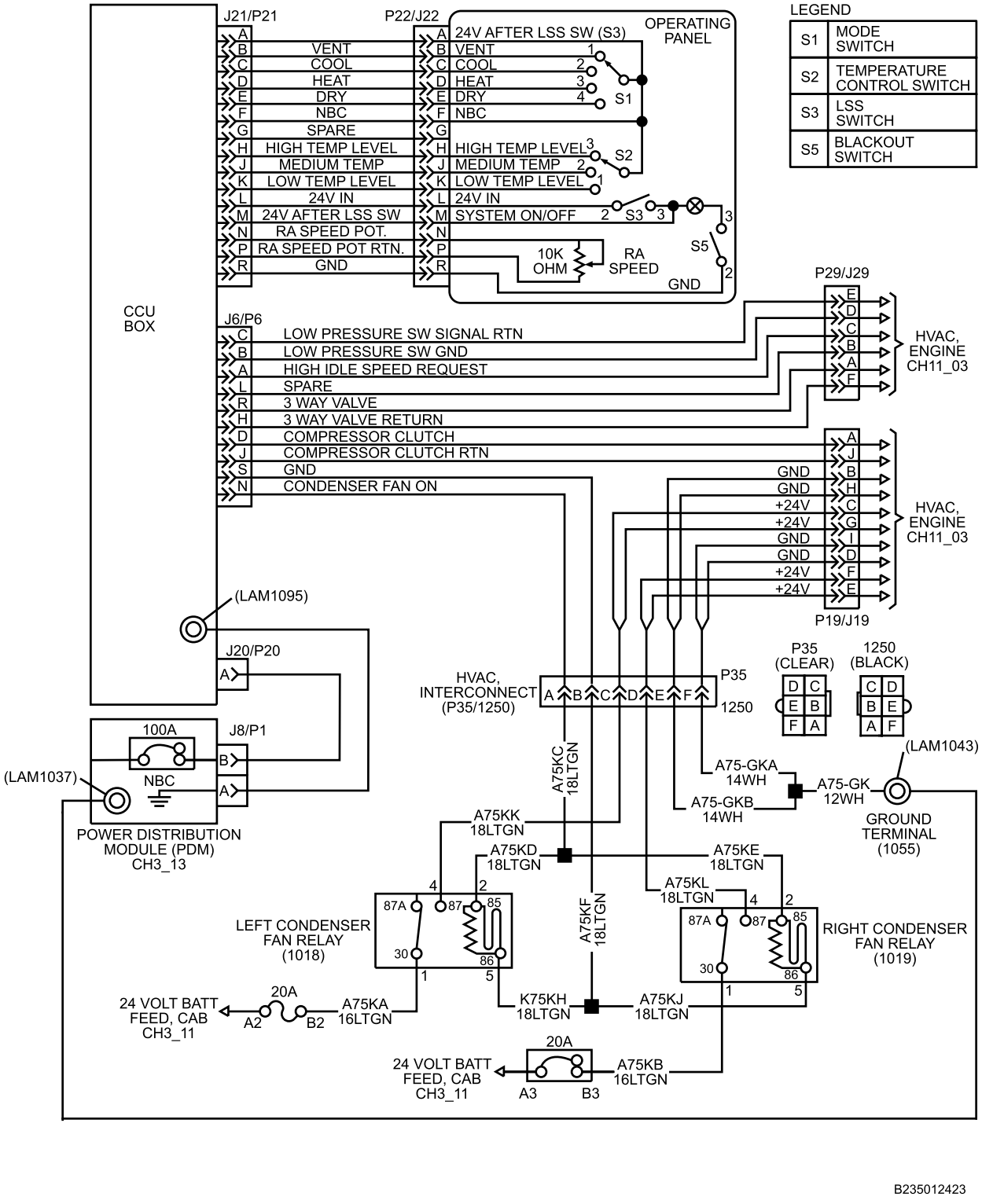


Figure 76. CH11_02, HVAC, Cabin (2 of 2).

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

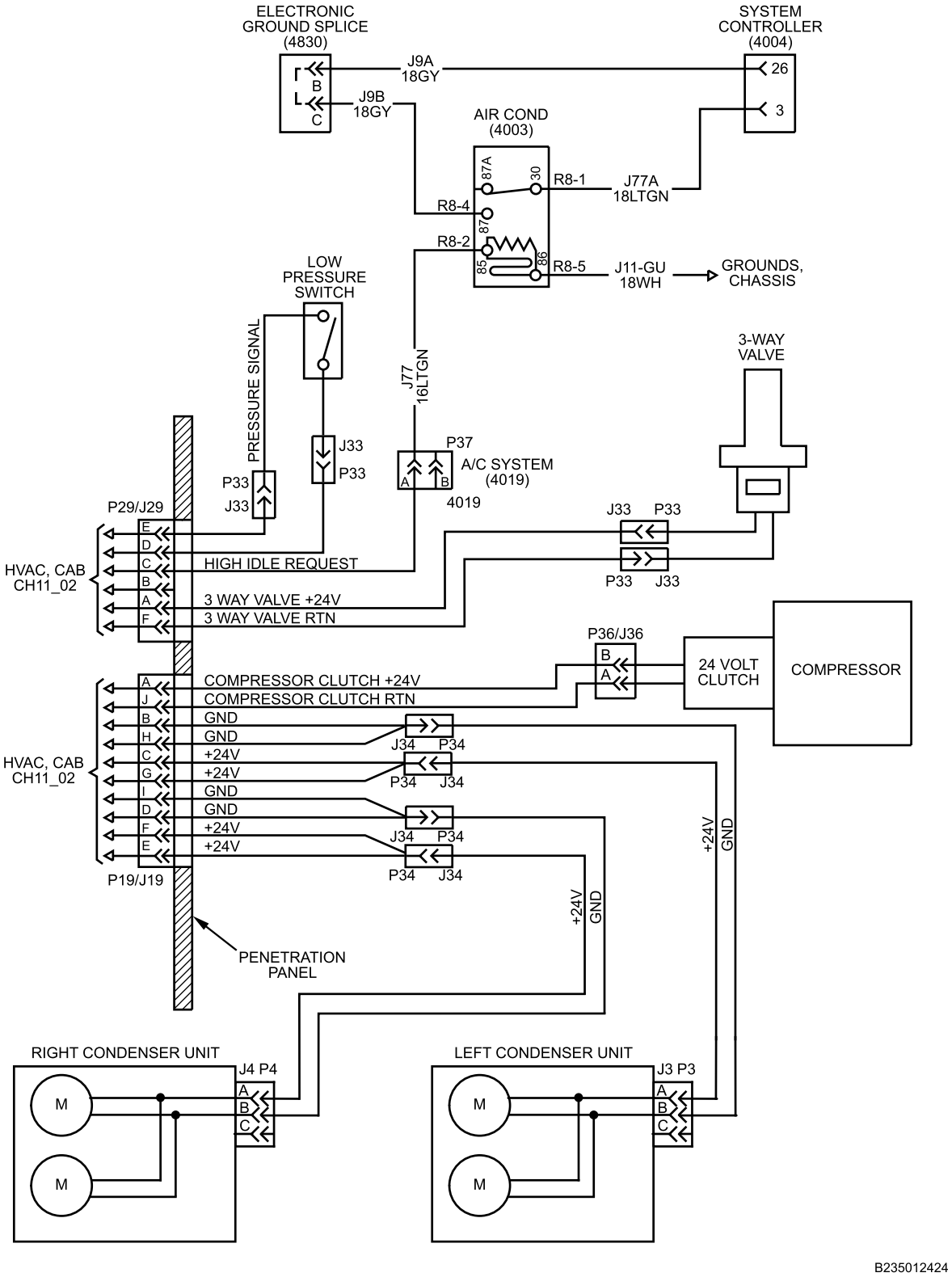


Figure 77. CH11_03, HVAC – Engine Compartment.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

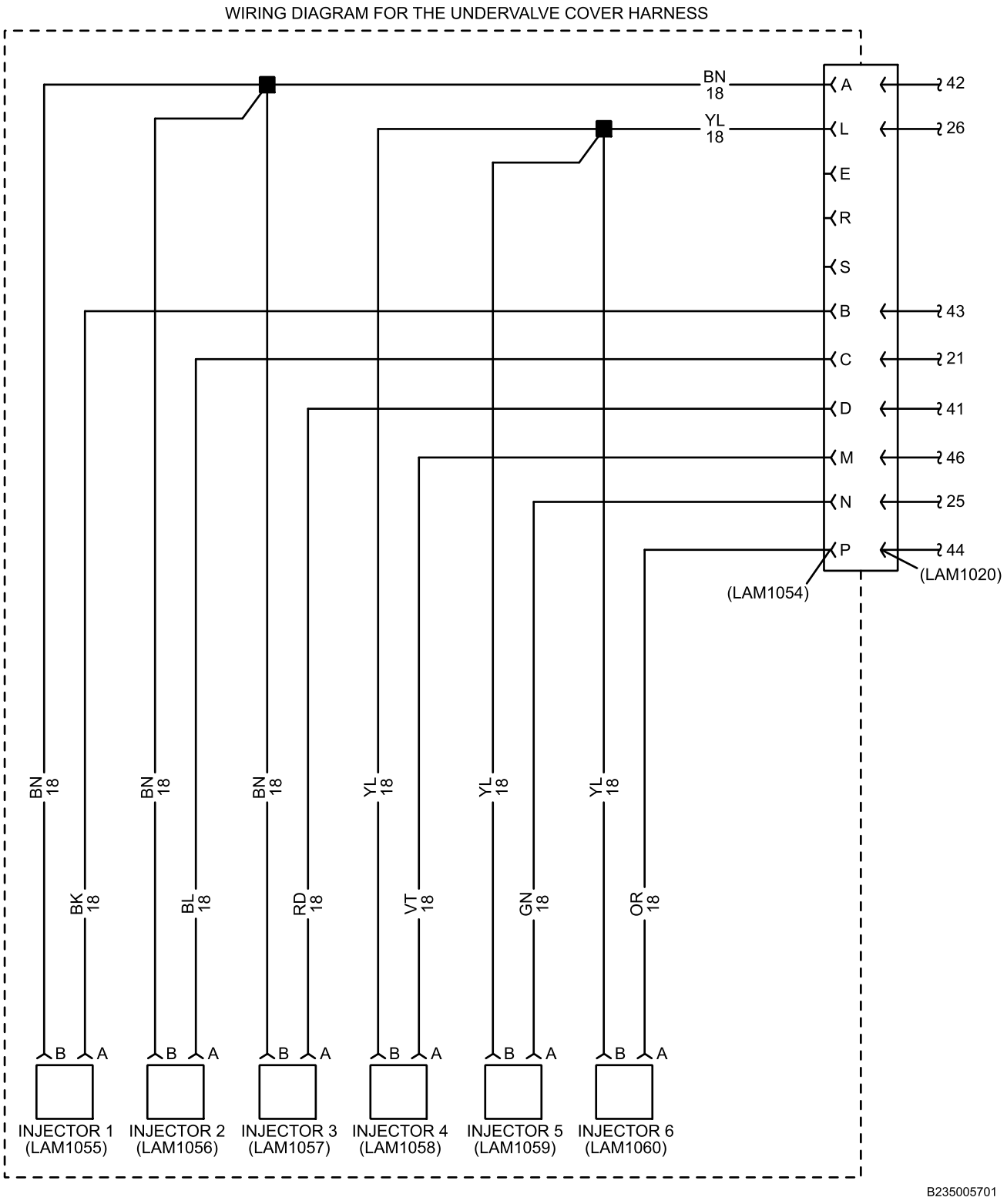


Figure 78. I6 - HEUI Engine Controls - Injector Harness.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

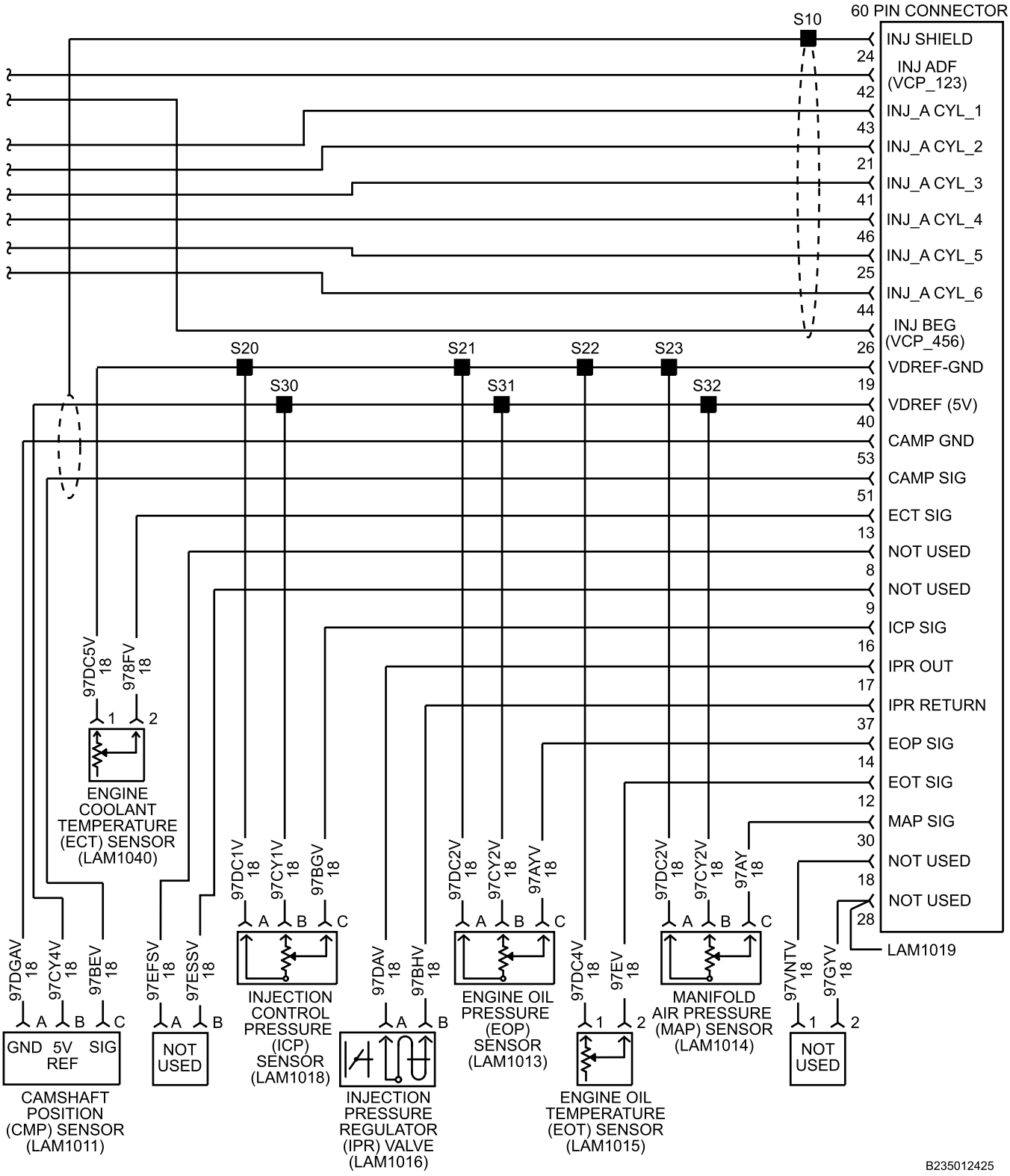


Figure 79. I6 - HEUI Engine Controls - Engine Sensor Harness.

ELECTRICAL SYSTEM SCHEMATICS - (CONTINUED)

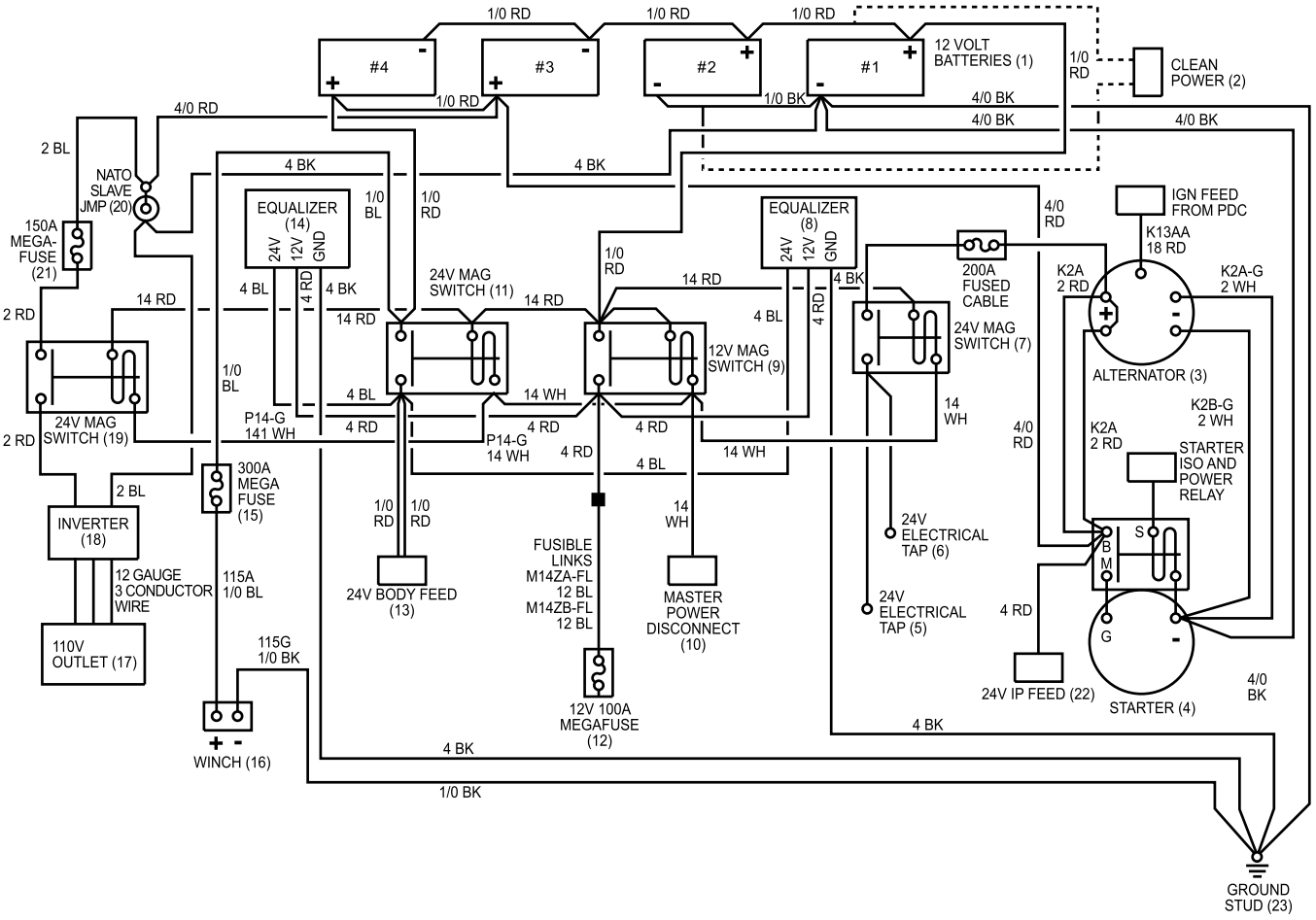


Figure 80. Power Distribution Function Diagram.

END OF WORK PACKAGE

FIELD MAINTENANCE

CONNECTOR COMPOSITES

INITIAL SETUP:

NOT APPLICABLE

INTRODUCTION

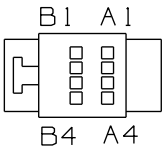
This work package provides connector composites in alphanumeric order for all electrical circuits, electrical systems, and electronic systems covered in this technical manual.

ABBREVIATIONS

Abbreviations are in accordance with ASME Y14.38.

WIRING DIAGRAMS

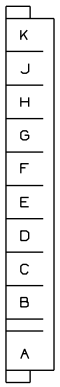
POWER MIRROR SWITCH
(254M)



CONNECTOR - 3510243C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A1	A62D	20	DKBL	3535805C1
A2	A78L	20	LTGN	3535805C1
A3	A78K	20	LTGN	3535805C1
A4	A78-GDX	20	WH	3535805C1
B1	A78A	20	LTGN	3535805C1
B2	A78D	20	LTGN	3535805C1
B3	A78C	20	LTGN	3535805C1
B4	A78F	20	LTGN	3535805C1

PANEL LIGHT ADAPTER SPLICE PACK (1002)
(LOCATED IN CENTER INSTRUMENT PANEL)



CONNECTOR - 2007315C1
BODY LOCK - 2007316C1

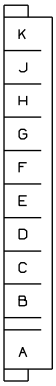
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A62D	20	DKBL	1661208C1
B	A62ZB	18	DKBL	1661208C1
C	-	-	-	-
D	A62Z	16	DKBL	1661209C1
E	-	-	-	-
F	A21B	16	TN	1661209C1
G	-	-	-	-
H	A62A	18	LTGN	1661208C1
J	A62ZJ	18	DKBL	1661208C1
K	A62X	18	DKBL	1661208C1

B235002801

Figure 1. Connector Composites (254M, 1002).

CONNECTOR COMPOSITES - (CONTINUED)

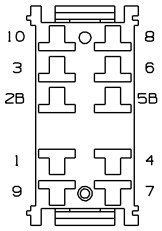
GROUND ADAPTER SPLICE PACK (1003)
(LOCATED IN CENTER INSTRUMENT PANEL)



CAV	CIR	GAUGE	COLOR	TERMINAL
A	A11-GAL	12	WH	1661211C1
B	A11-GBA	18	WH	1661208C1
C	A114-G	18	WH	1661208C1
D	A11-GN	18	WH	1661208C1
E	A11-GD	18	WH	1661208C1
F	A27-G	18	WH	1661208C1
G	A21-G	16	WH	1661209C1
H	A63-GA	16	WH	1661209C1
J	GRD-A	16	WH	1661209C1
K		-	-	-

CONNECTOR - 2007315C1
BODY LOCK - 2007316C1

ETHER START SWITCH (1010)
(LOCATED IN INSTRUMENT PANEL)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	-	-	-	-
2B	A21C	16	TN	1661226C1
3	A21E	16	TN	1661226C1
4	-	-	-	-
5B	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	A21B	16	TN	1661226C1
9	-	-	-	-
10	A21-G	16	WH	1661226C1

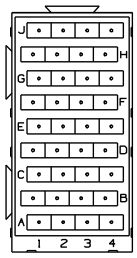
CONNECTOR - 3520850C1

B235002802

Figure 2. Connector Composites (1003, 1010).

CONNECTOR COMPOSITES - (CONTINUED)

FUSE BLOCK #1 (1011)
LOCATED IN RIGHT SIDE INSTRUMENT PANEL



CONNECTOR - 3534572C1
BODY LOCK - 3536085C1

CAV	CIR	GAUGE	COLOR	TERM
A1	A78P	16	LTGN	3573312C1
A2	A14AS	10	RD	3536303C1
A3	H-14	10	RD	3536303C1
A4	A14AB	10	RD	3536303C1
B1	A78J	18	LTGN	3515517C1
B2	A113T	14	YL	3573312C1
B3	A86S	12	LTGN	3573311C1
B4	A86T	12	LTGN	3573311C1
C1	-	-	-	-
C2	(A14AS)	-	-	3536303C1
C3	(A14)	-	-	3536303C1
C4	(A14AB)	-	-	3536303C1
D1	-	-	-	-
D2	A92BT	18	RD	3515517C1
D3	-	-	-	-
D4	-	-	-	-
E1	A12C	10	LTBL	3536298C1
E2	(A14AS)	-	-	3536303C1
E3	(A14)	-	-	3536303C1
E4	(A14AB)	-	-	3536303C1
F1	A12P/A12N	18/18	LTBL/LTBL	3573312C1
F2	A15/A98	18/18	RD/VT	3573312C1
F3	-	-	-	-
F4	-	-	-	-
G1	(A12C)	-	-	3536298C1
G2	(A14AS)	-	-	3536303C1
G3	(A14)	-	-	3536303C1
G4	(A14AB)	-	-	3536303C1
H1	-	-	-	-
H2	A28	16	TN	3573312C1
H3	-	-	-	-
H4	-	-	-	-
J1	-	-	-	-
J2	-	-	-	-
J3	-	-	-	-
J4	-	-	-	-

LOCATION	CAVITY	RATING	PART NUMBER	PART NUMBER	DESCRIPTION
			FUSE	BREAKER	
F13	A1, B1	10 AMPS		3536178C1	RIGHT MIRROR HEAT
F5	E1, F1	5 AMPS	3534208C1	-	SYSTEM CONTROLLER/6 SW PACK
F14	A2, B2	10 AMPS		3536178C1	MVLS 12 VOLT SUPPLY
F10	C2, D2	5 AMPS	3534208C1	-	ALLISON GEN 4 SHIFTER
F6	E2, F2	5 AMPS	3534208C1	-	KEY SWITCH/DIAGNOSTIC CONN
F2	G2, H2	15 AMPS		3536179C1	INSTRUMENT CLUSTER
F15	A3, B3	30 AMPS		3536182C1	LEFT SIDE POWER SOURCE
F16	A4, B4	30 AMPS		3536182C1	RIGHT SIDE POWER SOURCE

NOTE:

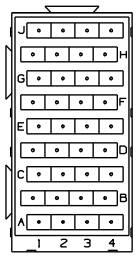
CIRCUIT NUMBERS WITH PARENTHESES REPRESENT BUSS BARS

B235002803

Figure 3. Connector Composites (1011).

CONNECTOR COMPOSITES - (CONTINUED)

FUSE BLOCK #2 (1012)
LOCATED IN RIGHT SIDE INSTRUMENT PANEL



CONNECTOR - 3534572C1
BODY LOCK - 3536085C1

CAV	CIR	GAUGE	COLOR	TERM
A1	A13AJ	10	PK	3536303C1
A2	(A13AH)/A13AJ	-/10	-/PK	3515516C1
A3	B0-L	16	YL	3573312C1
A4	J56L	16	OR	3573312C1
B1	-	-	-	-
B2	A99E/A17H	16	VL/PK	3573311C1
B3	-	-	-	-
B4	-	-	-	-
C1	(A13AJ)	-	-	3536303C1
C2	(A13AH)	-	-	3515516C1
C3	J56B0	16	OR	3573312C1
C4	GRD-L	16	WH	3573312C1
D1	-	-	-	-
D2	-	-	-	-
D3	A11-GAF/A11-GAD	16/16	WH/WH	3573311C1
D4	A13AH	10	PK	3573311C1
E1	(A13AJ)	-	-	3536303C1
E2	A13AH	10	PK	3515516C1
E3	A11-GLZ	12	WH	3573311C1
E4	-	-	-	-
F1	A28A	18	TN	3515517C1
F2	A13AF	18	PK	3515517C1
F3	A14AV	10	RD	3573311C1
F4	A13AG	16	PK	3573312C1
G1	(A13AJ)	-	-	3536303C1
G2	A78M	16	LT GN	3573312C1
G3	A11-GAF	16	WH	3573312C1
G4	A12B	10	LTBL	3573311C1
H1	A92IGN	18	TN	3515517C1
H2	A78H	18	LT GN	3515517C1
H3	A11-GAS	12	WH	3573311C1
H4	-	-	-	-
J1	-	-	-	-
J2	-	-	-	-
J3	A14AT	10	RD	3573311C1
J4	A12	18	LT BL	3515517C1

LOCATION	CAVITY	RATING	PART NUMBER FUSE	PART NUMBER BREAKER	DESCRIPTION
F19	E1, F1	5 AMPS	3534208C1	-	INST CLUSTER/HTR
F17	G1, H1	10 AMPS		3536178C1	ALLISON LCT/EATON AUTOSHIFT-AUTOCLUTCH
F24	A2, B2	5 AMPS	3534208C1	-	ACCELERATOR/CLUTCH SW
F20	E2, F2	5 AMPS	3534208C1	-	SYSTEM CONTROLLER/HTR - A/C BLOWER
F18	G2, H2	10 AMPS		3536178C1	LEFT MIRROR HEAT

RELAY PIN #		
85, 86, 30, 87, 87a		
CAVITY	PART NUMBER	RELAY DESCRIPTION
D3, F4, D4, F3, E3	3519350C1	IGNITION
G3, J4, G4, J3, H3	3519350C1	ACCESSORY
A3, C4, A4, C3, B3	3519350C1	STOP LIGHT LEFT

NOTE:

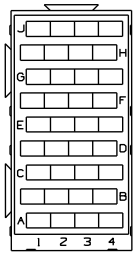
CIRCUIT NUMBERS WITH PARENTHESES REPRESENT BUSS BARS

B265002804

Figure 4. Connector Composites (1012).

CONNECTOR COMPOSITES - (CONTINUED)

FUSE BLOCK #3 (1013)
LOCATED IN RIGHT SIDE INSTRUMENT PANEL



CONNECTOR - 3534572C1
BODY LOCK - 3536085C1

CAV	CIR	GAUGE	COLOR	TERM
A1	A13FB	10	PK	3515516C1
A2	(A13FA)/A13FB	-/10	-/PK	3536303C1
A3	-	-	-	-
A4	A12E	10	LT BL	3573311C1
B1	A21C	16	TN	3573312C1
B2	-	-	-	-
B3	-	-	-	-
B4	A78L	20	LT GN	3535484C1
C1	(A13FB)	-	-	3515516C1
C2	(A13FA)	-	-	3536303C1
C3	-	-	-	-
C4	-	-	-	-
D1	-	-	-	-
D2	-	-	-	-
D3	B0-R	16	YL	3573312C1
D4	J70R	16	OR	3573312C1
E1	(A13FB)	-	-	3515516C1
E2	(A13FA)	-	-	3536303C1
E3	-	-	-	-
E4	-	-	-	-
F1	A42A	18	GY	3515517C1
F2	-	-	-	-
F3	J70-1	16	OR	3573312C1
F4	GRD-R	16	WH	3573312C1
G1	-	-	-	-
G2	A13FA	10	PK	3536303C1
G3	A11-GBA	18	WH	3515517C1
G4	A14FJ	10	RD	3573311C1
H1	-	-	-	-
H2	-	-	-	-
H3	-	-	-	-
H4	-	-	-	-
J1	-	-	-	-
J2	-	-	-	-
J3	A13FA	10	PK	3573311C1
J4	A13DB	18	PK	3515517C1

LOCATION	CAVITY	RATING	PART NUMBER FUSE	PART NUMBER BREAKER	DESCRIPTION
F33	A1, B1	10 AMPS		3536178C1	ETHER START
F29	E1, F1	5 AMPS	3534208C1	-	OPT WARNING LTS
F36	A4, B4	5 AMPS	3534208C1	-	POWER MIRROR

RELAY PIN #	-	-
85, 86, 30, 87, 87a	-	-
CAVITY	PART NUMBER	RELAY DESCRIPTION
D3, F4, D4, F3, E3	3519350C1	STOP LIGHT RIGHT
G3, J4, G4, J3, H3	3519350C1	IGNITION

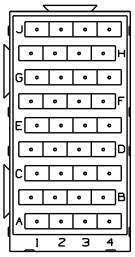
NOTE:
CIRCUIT NUMBERS WITH PARENTHESES REPRESENT BUSS BARS

B235002805

Figure 5. Connector Composites (1013).

CONNECTOR COMPOSITES - (CONTINUED)

FUSE BLOCK #4 (1014)
LOCATED IN RIGHT SIDE INSTRUMENT PANEL



CONNECTOR - 3534572C1
BODY LOCK - 3536085C1

CAV	CIR	GAUGE	COLOR	TERM
A1	A16B	10	RD	3536303C1
A2	A16A	10	RD	3536303C1
A3	A16BB	10	RD	3536303C1
A4	A75A	18	LTGN	3515517C1
B1	A63V	16	DKBL	3573312C1
B2	A75KA	16	LTGN	3573312C1
B3	A75KB	16	LTGN	3573312C1
B4	A75R	18	LTGN	3515517C1
C1	(A16B)	-	-	3536303C1
C2	(A16A)	-	-	3536303C1
C3	-	-	-	-
C4	-	-	-	-
D1	-	-	-	-
D2	-	-	-	-
D3	A11-GD/A11-GAM	18/18	WH/WH	3573312C1
D4	A78VA	14	LTGN	3573312C1
E1	(A16B)	-	-	3536303C1
E2	(A16A)	-	-	3536303C1
E3	-	-	-	-
E4	-	-	-	-
F1	A64VA	16	YL	3673312C1
F2	A78VA	14	LTGN	3573312C1
F3	A78WBA	14	LTGN	3573312C1
F4	A78WA/A78WB	18/18	LTGN/LTGN	3573312C1
G1	(A16B)/A16BB	-/10	-/RD	3536303C1
G2	(A16A)	-	-	3536303C1
G3	A11-GAM	18	WH	3515517C1
G4	A78VB	14	LTGN	3573312C1
H1	A114A	18	YL	3515517C1
H2	A78VB	14	LTGN	3573312C1
H3	-	-	-	-
H4	-	-	-	-
J1	-	-	-	-
J2	-	-	-	-
J3	A78WBB	14	LTGN	3573312C1
J4	A78WB	18	LTGN	3515517C1

LOCATION	CAVITY	RATING	PART NUMBER FUSE	PART NUMBER BREAKER	DESCRIPTION
F43	A1, B1	10 AMPS		3536178C1	DOME LIGHT 24 VOLT
F39	E1, F1	10 AMPS		3536178C1	SPOT LIGHT 24 VOLT
F37	G1, H1	10 AMPS		3536178C1	IR LIGHT 24 VOLT
F44	A2,B2	20 AMPS		3536180C1	LEFT AC CONDENSER FAN
F40	E2, F2	20 AMPS		3536180C1	RIGHT HEATED WINDSHIELD 24 VOLT
F38	G2, H2	20 AMPS		3536180C1	LEFT HEATED WINDSHIELD 24 VOLT
F45	A3,B3	20 AMPS		3536180C1	RIGHT AC CONDENSER FAN
F46	A4, B4	5 AMPS	3534208C1	-	FUEL FIRED HEATER 24 VOLT

RELAY PIN #		
85, 86, 30, 87, 87a		
CAVITY	PART NUMBER	RELAY DESCRIPTION
D3, F4, D4, F3, E3	3519350C1	RIGHT HEATED WINDSHIELD
G3, J4, G4, J3, H3	3519350C1	LEFT HEATED WINDSHIELD

NOTE:

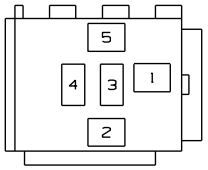
CIRCUIT NUMBERS WITH PARENTHESES REPRESENT BUSS BARS

B235002806

Figure 6. Connector Composites (1014).

CONNECTOR COMPOSITES - (CONTINUED)

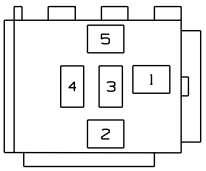
LEFT BLOWER MOTOR RELAY
(1018)



CONNECTOR - 0593385C1
BODY LOCK - 0593387C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A75KA	16	LTGN	1661709C1
2	A75KD	18	LTGN	1659673C1
3	-	-	-	-
4	A75KK	18	LTGN	1659673C1
5	A75KH	18	LTGN	1659673C1

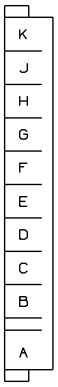
RIGHT BLOWER MOTOR RELAY
(1019)



CONNECTOR - 0593385C1
BODY LOCK - 0593387C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A75KB	16	LTGN	1661709C1
2	A75KE	18	LTGN	1659673C1
3	-	-	-	-
4	A75KL	18	LTGN	1659673C1
5	A75KJ	18	LTGN	1659673C1

BLACKOUT MODE SPLICE PACK
(1050)



CONNECTOR - 2007315C1
BODY LOCK - 2007316C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A113R	16	YL	1661209C1
B	A56AZ	18	OR	1661208C1
C	A57AZ	18	OR	1661208C1
D	BO-1	18	YL	1661208C1
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	A113	16	YL	1661209C1
J	A113S	18	YL	1661208C1
K	-	-	-	-

24 VOLT INPUT
(1051)



CONNECTOR - 1661197C1

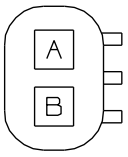
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A16A	10	RD	1661214C2
B	A16B	10	RD	1661214C2

B235002807

Figure 7. Connector Composites (1018, 1019, 1050, 1051).

CONNECTOR COMPOSITES - (CONTINUED)

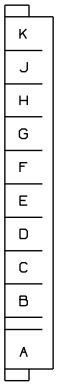
MVLS GROUND
(1052)



CONNECTOR - 1671611C1
BODY LOCK - 1671608C1
PLUG - 0587579C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PLUG	-	-	-	-
B	A11-GMM	14	WH	2033912C1	0589391C1

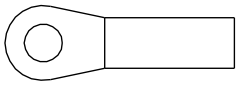
GROUND SPLICE PACK
(1053)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A11-GEA	12	WH	3566715C1
B	A58AC-G	14	WH	3566715C1
C	A11-GMM	18	WH	3566715C1
D	A11-GDY	18	WH	1661208C1
E	A64-GA	16	WH	1661209C1
F	A56-GA	16	OR	1661209C1
G	A57-GA	16	OR	1661209C1
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-

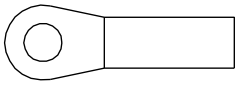
CONNECTOR - 2007315C1
BODY LOCK - 2007316C1

NEG STUD
(1054)



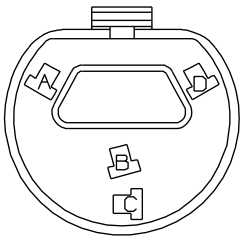
CIRCUIT	GAUGE	COLOR	TERMINAL	SLEAVE
A11-GEA	12	WH	2020632C1	2644002R1

GROUND TERMINAL
(1055)



CIRCUIT	GAUGE	COLOR	TERMINAL	SLEAVE
A75-GK	12	WH	0365684C2	2643648R1

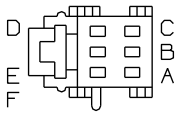
KEY SWITCH
(1100M)



CONNECTOR - 3546518C1
BODY LOCK - 3546519C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A15	18	RD	1661209C1
B	A17	18	PK	1661209C1
C	A12	18	LTBL	1661209C1
D	A13DD	18	PK	1661209C1

SWITCH PACK CONNECTOR
(1101M)



CONNECTOR - 2031871C1
BODY LOCK - 2031873C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A11-GDB	18	WH	1661261C1
B	A12P	18	LTBL	1661261C1
C	A62C	18	DKBL	1661261C1
D	A3E(+)	20	DKBL	3544254C1
E	A3F(-)	20	GY	3544254C1
F	-	-	-	-

B235002808

Figure 8. Connector Composites (1052, 1053, 1054, 1055, 1100M, 1101M).

CONNECTOR COMPOSITES - (CONTINUED)

DOME LAMP SWITCH
(1111)



CONNECTOR - 1661889C1
BODY LOCK - 1661809C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A63VA	16	DKBL	1661261C1
B	A63AB	16	DKBL	1661261C1
C	A63AA	16	DKBL	1661261C1

HEATER INTERRUPT SWITCH
(1112)



CONNECTOR - 1661259C1
BODY LOCK - 1661263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A75B	18	LTGN	1661261C1
B	A75BB	18	LTGN	1661261C1

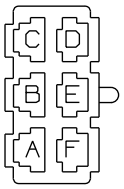
DISCONNECT MASTER POWER SWITCH
(1150)



CONNECTOR - 1661259C1
BODY LOCK - 1661263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A11-GM	18	WH	1661261C1
B	A11-GN	18	WH	1661261C1

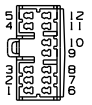
HVAC INTERCONNECT
(BLACK) (1250)



CONNECTOR - 0892136C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A75KC	18	LTGN	0879630C1
B	A75KF	18	LTGN	0879630C1
C	A75KK	18	LTGN	0879630C1
D	A75KL	18	LTGN	0879630C1
E	A75-GKA	14	WH	0188396R1
F	A75-GKB	14	WH	0188396R1

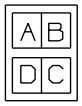
CLUSTER CONN
(1500)



CONNECTOR - 2018590C1

CAV	CIR	GAUGE	COLOR	TERM
1	A62	16	DKBL	2018639C1
2	-	-	-	-
3	A28	16	TN	2018639C1
4	A5AL(+)	18	YL	2018639C1
5	A5AM(-)	18	GN	2018639C1
6	-	-	-	-
7	A28-G	18	WH	2018639C1
8	A28A	18	TN	2018639C1
9	A50	20	YL	2018639C1
10	-	-	-	-
11	-	-	-	-
12	-	-	-	-

EGC BLACKOUT
(1520)



CONNECTOR - 1667529C1
BODY LOCK - 1667530C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A53BC	18	YL	1661262C1
B	A68B	18	BN	1661262C1
C	A113S	18	YL	1661262C1
D	-	-	-	-

B235002809

Figure 9. Connector Composites (1111, 1112, 1150, 1250, 1500, 1520).

CONNECTOR COMPOSITES - (CONTINUED)

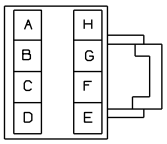
24 VOLT METER
(1521)



CONNECTOR - 1667305C1
BODY LOCK - 1661263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A13AB	18	PK	1661261C1
B	A27-GB	18	WH	1661261C1
C	A27-GA	18	WH	1661261C1
D	A62ZB	18	DKBL	1661261C1

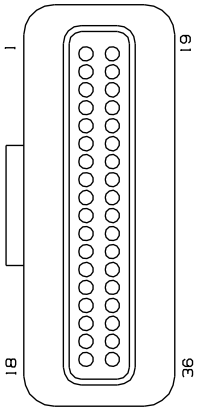
OPT. WARNING LIGHT CONN (BLK)
(1555M)



CONNECTOR: 2005835C1
BODY LOCK: 2006503C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
C	A42	18	GY	1661208C1
F	A42A	18	GY	1661208C1

ELECTRICAL SYSTEM CONTROLLER (ESC) GRAY
(1600)

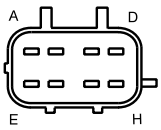


CONNECTOR ASSY: 3533832C1
CONNECTOR: 3533834C1
RETAINER: 3533833C1
SEAL: 3533835C1
CPA: 3533836C1
STRAIN RELIEF: 3533832C1
PLUG: 3518314C1

CAV	CIR	GAUGE	COLOR	TERM
1	A11-GAB	20	WH	3533507C1
2	A12N	18	LTBL	3517243C1
3	A9H	18	GY	3517243C1
5	A85C	20	GY	3533507C1
10	A96	20	VT	3533507C1
12	A13AF	18	PK	3517243C1
13	A85B	20	GY	3533507C1
14	A50	20	YL	3533507C1
15	A40	20	GY	3533507C1
16	A40A	20	GY	3533507C1
17	A96A	20	VT	3533507C1
18	A57A	18	OR	3517243C1
19	A56A	18	OR	3517243C1
20	A52A	20	YL	3533507C1
21	A102	18	YL	3517243C1
22	A82	20	GY	3533507C1
23	A82A	20	GY	3533507C1
24	A82B	20	GY	3533507C1
27	A6H	20	GY	3533507C1
28	A87A	20	GY	3533507C1
29	A3E(+)	20	DKBL	3533507C1
30	A3F(-)	20	GY	3533507C1
32	A44BB	20	GY	3533507C1
33	A70C	20	RD	3533507C1
34	A5AN(+)	18	YL	3517243C1
35	A5AP(-)	18	GN	3517243C1

NOTE:
CAVITIES NOT LISTED HAVE PLUGS

ELECTRICAL SYSTEM CONTROLLER (ESC) BROWN
(1601)



CONNECTOR: 3548934C1
BODY LOCK: 3548943C1
SECOND LOCK: 3573833C1
PLUG: 2025431C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
B	A11-GAH	14	WH	353593IC1	3548945C1
G	A78	14	LTGN	353593IC1	3548945C1

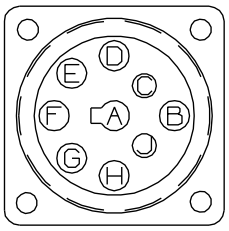
NOTE:
CAVITIES NOT LISTED HAVE PLUGS

B235002810

Figure 10. Connector Composites (1521, 1555M, 1600, 1601).

CONNECTOR COMPOSITES - (CONTINUED)

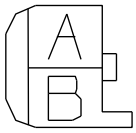
DIAGNOSTIC CONN
(1650)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A98-G	18	WH	1651968C1
B	A98	18	VT	1651968C1
C	A5AE(+)	18	YL	1651968C1
D	A5AF(-)	18	GN	1651968C1
F	A3B(+)	16	DKBL	1651968C1
G	A3B(-)	16	GY	1651968C1

CONNECTOR - 3544066C1

J1939 TELEMATICS
(1658)



CAV	CIR	GAUGE	COLOR	TERM
A	A5BE(+)	18	YL	1661261C1
B	A5BF(-)	18	GN	1661261C1

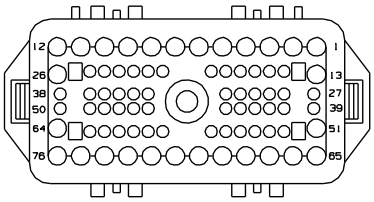
CONNECTOR - 1661259C1
BODY LOCK - 1661263C1

B235002811

Figure 11. Connector Composites (1650, 1658).

CONNECTOR COMPOSITES - (CONTINUED)

(1P) PASS THROUGH
(1701)



CONNECTOR ASSY - 3595625C1

CAV	CIRCUIT	GAUGE	COLOR	TERM
1	A99V	16	VT	3574288C1
2	A97Y	16	VT	3574288C1
3	-	-	-	-
4	A99U	16	VT	3574288C1
5	A97P	16	VT	3574288C1
6	-	-	-	-
7	A97Q	16	VT	3574288C1
8	A17	16	PK	3574288C1
9	-	-	-	-
10	-	-	-	-
11	A13C	18	PK	3574289C1
12	-	-	-	-
13	-	-	-	-
14	A11-GM	18	WH	2003343C1
15	A5B(+)	18	YL	2003343C1
16	A5B(-)	18	GN	2003343C1
17	-	-	-	-
18	-	-	-	-
19	-	-	-	-
20	-	-	-	-
21	A58AC	14	BN	3574285C1
22	-	-	-	-
23	-	-	-	-
24	A113B	16	YL	3574285C1
25	A113C	16	YL	3574285C1
26	-	-	-	-
27	A113	16	YL	3574285C1
28	-	-	-	-
29	A21E	16	TN	3574285C1
30	A87BA	18	GY	2003343C1
31	-	-	-	-
32	A42	18	GY	2003343C1
33	A94AA	16	GY	3574285C1
34	A94AB	16	GY	3574285C1
35	-	-	-	-
36	A92#134	18	YL	2003343C1
37	A113A	18	YL	2003343C1
38	A114	18	YL	2003343C1
39	A13AB	18	PK	2003343C1
40	A3A(+)	18	DKBL	2003343C1

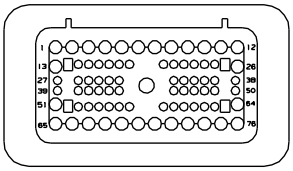
CAV	CIRCUIT	GAUGE	COLOR	TERM
41	A3A(-)	18	GY	2003343C1
42	A94AK	16	GY	3574285C1
43	A94AL	16	GY	3574285C1
44	-			
45	A75C	18	LTGN	2003343C1
46	A75A	18	LTGN	2003343C1
47	A75D	18	LTGN	2003343C1
48	A75B	18	LTGN	2003343C1
49	A94AM	18	GY	2003343C1
50	A94AN	18	GY	2003343C1
51	A94AT	16	GY	3574288C1
52	A94AS	18	GY	2003343C1
53	A94AP	18	GY	2003343C1
54	A94AR	18	GY	2003343C1
55	A94AX	18	GY	2003343C1
56	A94AW	18	GY	2003343C1
57	A94AV	18	GY	2003343C1
58	A94AH	18	GY	2003343C1
59	A94AF	18	GY	2003343C1
60	A94AJ	18	GY	2003343C1
61	A94AE	18	GY	2003343C1
62	A94AD	18	GY	2003343C1
63	A94AC	18	GY	2003343C1
64	-			
65	A94AU	16	GY	3574288C1
66	-			
67	-			
68	-			
69	-			
70	-			
71	-			
72	-			
73	-			
74	A94AY	12	GY	3574287C1
75	A94AYA	16	GY	3574288C1
76	-			
77	-			
78	J58-3	12	BN	

B235002812

Figure 12. Connector Composites (1701).

CONNECTOR COMPOSITES - (CONTINUED)

(DASH) PASS THROUGH
(1701)



CONNECTOR ASSY - 3595624C1
LARGE PLUG - 3598922C1 CAVITIES 1-13, 26, 51 & 64-76
SMALL PLUG - 3598921C1 ALL OTHER CAVITIES

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	J99V	16	VT	3549416C1
2	J99Y	16	VT	3549416C1
3	PLUG	-	-	-
4	J99U	16	VT	3549416C1
5	J97P	16	VT	3549416C1
6	PLUG	-	-	-
7	J97Q	16	VT	3549416C1
8	J17	16	PK	3549416C1
9	PLUG	-	-	-
10	PLUG	-	-	-
11	J13C	16	PK	3549416C1
12	PLUG	-	-	-
13	PLUG	-	-	-
14	J11-GM	16	WH	3549417C1
15	J5B(+)	18	YL	3549418C1
16	J5B(-)	18	GN	3549418C1
17	PLUG	-	-	-
18	PLUG	-	-	-
19	PLUG	-	-	-
20	PLUG	-	-	-
21	J58AC	16	BN	3549417C1
22	PLUG	-	-	-
23	PLUG	-	-	-
24	J113B	14	YL	3549417C1
25	J113C	14	YL	3549417C1
26	PLUG	-	-	-
27	J113	16	YL	3549417C1
28	PLUG	-	-	-
29	J21E	18	TN	3549418C1
30	J87BA	18	GY	3549418C1
31	PLUG	-	-	-
32	J42	18	GY	3549418C1
33	J94AA	18	OR	3549418C1
34	J94AB	18	GY	3549418C1
35	J70JA	18	OR	-
36	J92#134	18	YL	3549418C1
37	J113A	16	YL	3549417C1
38	J114	16	YL	3549417C1
39	J13AB	18	PK	3549418C1
40	J3A(+)	18	DKBL	3549418C1

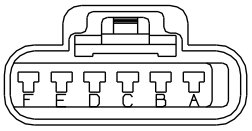
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
41	J3A(-)	18	GY	3549418C1
42	J94AK	18	YL	3549418C1
43	J94AL	18	DKBL	3549418C1
44	PLUG	-	-	-
45	J75C	16	LTGN	3549417C1
46	J75A	16	LTGN	3549417C1
47	J75D	16	LTGN	3549417C1
48	J75B	16	LTGN	3549417C1
49	J94AM	18	GY	3549418C1
50	J94AN	18	GY	3549418C1
51	J94AT	16	GY	3549416C1
52	J94AS	18	GY	3549418C1
53	J94AP	18	GY	3549418C1
54	J94AR	18	GY	3549418C1
55	J94AX	18	GY	3549418C1
56	J94AW	18	GY	3549418C1
57	J94AV	18	GY	3549418C1
58	J94AH	18	LTGN	3549418C1
59	J94AF	18	VT	3549418C1
60	J94AJ	18	LTBL	3549418C1
61	J94AE	18	BN	3549418C1
62	J94AD	18	RD	3549418C1
63	J94AC	18	BK	3549418C1
64	PLUG	-	-	-
65	J94AU	16	GY	3549416C1
66	PLUG	-	-	-
67	PLUG	-	-	-
68	PLUG	-	-	-
69	PLUG	-	-	-
70	PLUG	-	-	-
71	PLUG	-	-	-
72	PLUG	-	-	-
73	PLUG	-	-	-
74	J94AY	12	GY	3549415C1
75	A94AYA	16	GY	3549416C1
76	PLUG	-	-	-
77	-			
78	J58-4	12	BN	

B235002813

Figure 13. Connector Composites (1701).

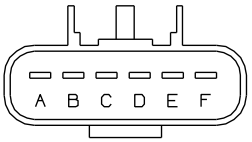
CONNECTOR COMPOSITES - (CONTINUED)

STOP / TURN LIGHT
(1703F)



MATES WITH

STOP / TURN LIGHT
(1703M)



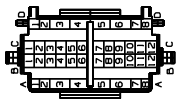
CONNECTOR - 3550639C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A70J	16	OR	3544880C1
B	A70	16	OR	3544880C1
C	A56	16	OR	3544880C1
D	A56J	16	OR	3544880C1
E	-	-	-	-
F	-	-	-	-

CONNECTOR - 3550638C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	J70JR	16	OR	3544876C1
B	J70	16	OR	3544876C1
C	J56	16	OR	3544876C1
D	J56J	16	OR	3544876C1
E	-	-	-	-
F	-	-	-	-

CAB / DCM
(1800)

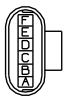


NOTE:
MATES WITH CONNECTOR (1805)

CONNECTOR: 3553649C1
BODY LOCK: 3553650C1
150 SERIES TERMINAL: 3544883C1 (20 AWG)
3544884C1 (18 AWG)
280 SERIES TERMINAL: 3544875C1 (20 AWG)
3544876C1 (18 AWG)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A1	A56AY	18	OR	3517243C1
A2	A57AY	18	OR	3544884C1
A3	A11-GAA	18	WH	3544876C1
A4	A9H	18	GY	3544876C1
A5	A87C	20	GY	3544875C1
A7	A52A	20	YL	3544883C1
A8	A1021	18	YL	3544884C1
B1	A82B	20	GY	3544883C1
B2	A40A	20	GY	3544883C1
B3	A6H	20	GY	3544883C1
B4	A97Y	16	VT	3544884C1
B5	A99U	16	VT	3544884C1
B7	A44BB	20	GY	3544883C1
B9	A70C	20	RD	3544883C1
B10	A85B	20	GY	3544883C1
B11	A85C	20	GY	3544883C1
B12	A96	20	VT	3544883C1
C1	A82A	20	GY	3544883C1
C4	A99V	16	VT	3544884C1
C5	A97P	16	VT	3544884C1
C6	A99E	16	VT	3544884C1
C9	A82	20	GY	3544883C1
C10	A97Q	16	VT	3544884C1
C11	A96A	20	VT	3544883C1
C12	A40	20	GY	3544883C1
D8	A17H	16	PK	3553649C1

ACCELERATOR PEDAL
ACCELERATOR POSITION SENSOR (APS)
AND IDLE VALIDATION SWITCH (IVS)
(1804)



CONNECTOR: 1687790C1
TERMINAL: 1651943C1 (18 AWG)

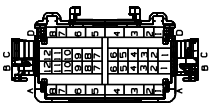
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	B99V	18	VT	1651943C1
B	B97AD	18	VT	1651943C1
C	B97AF	18	VT	1651943C1
D	B99U	18	VT	1651943C1
E	B99W	18	VT	1651943C1
F	B99E	18	VT	1651943C1

B235002814

Figure 14. Connector Composites (1703F, 1703M, 1800, 1804).

CONNECTOR COMPOSITES - (CONTINUED)

DCM / CAB
(1805)



NOTE:
MATES WITH CONNECTOR (1800)

CONNECTOR: 3553651C1
BODY LOCK: 3553652C1
STABILIZER: 3553653C1
LEVER LOCK: 3553654C1
TERMINAL: 3544886C1
(18 AWG)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A1	B56A	18	OR	3544886C1
A2	B57A	18	OR	3544886C1
A3	B11-GAA	18	WH	3544880C1
A4	B9V	18	GY	3544880C1
A5	B87A	18	GY	3544880C1
A7	B52A	18	YL	3544886C1
A8	B102A	18	YL	3544886C1
B1	B82B	18	GY	3544886C1
B2	B40A	18	GY	3544886C1
B3	B6H	18	GY	3544886C1
B4	B97Y	18	VT	3544886C1
B5	B99U	18	VT	3544886C1
B6	B99W	18	VT	3544886C1
B7	B44BB	18	GY	3544886C1
B9	B70C	18	OR	3544886C1
B10	B85B	18	GY	3544886C1
B11	B85C	18	GY	3544886C1
B12	B96	18	VT	3544886C1
C1	B82A	18	GY	3544886C1
C2	B40F	18	GY	3544886C1
C4	B99V	18	VT	3544886C1
C5	B97P	18	VT	3544886C1
C6	B99E	18	VT	3544886C1
C9	B82	18	GY	3544886C1
C10	B97Q	18	VT	3544886C1
C11	B96A	18	VT	3544886C1
C12	B40	18	GY	3544886C1
D7	B17J	18	PK	3544886C1
D8	B17H	18	PK	3544886C1

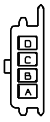
BAP SENSOR
(1808)



CONNECTOR: 2016703C1
BODY LOCK: 2016704C1
TERMINAL: 2003343C1
(18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
1	B97AE	18	VT
2	B97AH	18	VT
3	B97Q	18	VT

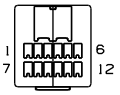
CLOCKSPRING
(1809)



CONNECTOR: 3547870C1
TERMINAL: 1661261C1
(18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
A	B9R	18	GY
B	B96	18	VT
C	B85C	18	GY
D	B85B	18	GY

MULTIFUNCTION SWITCH CONNECTOR
(1810)



CAV	CIRCUIT	GAUGE	COLOR
1	B56A	18	OR
2	B57A	18	OR
3	B52A	18	YL
4	B102A	18	YL
5	B82B	18	GY
6	B11-GAA	18	WH
7	B9S	18	GY
8	B82	18	GY
9	-	-	-
10	-	-	-
11	B82A	18	GY
12	B87A	18	GY

CONNECTOR: 3539212C1
TERMINAL: 3539213C1
(18 AWG)

PRIMARY
AIR TRANSDUCER
(1811)



CONNECTOR: 1678137C1
TERMINAL: 1651934C1
(18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
A	B9VC	18	GY
B	B6HB	18	GY
C	B40	18	GY

SECONDARY
AIR TRANSDUCER
(1812)



CONNECTOR: 1678137C1
TERMINAL: 1651934C1
(18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
A	B9VE	18	GY
B	B6HA	18	GY
C	B40A	18	GY

PARK BRAKE
(1813)



CONNECTOR: 1661777C1
BODY LOCK: 1661873C1
SEAL: 1661872C1
TERMINAL: 1661875C1
(18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
C	B44BB	18	GY
D	B9VD	18	GY

B235002815

Figure 15. Connector Composites (1805, 1808, 1809, 1810, 1811, 1812, 1813).

CONNECTOR COMPOSITES - (CONTINUED)

AIR APPLICATION TRANSDUCER (1822)



CONNECTOR: 1678137C1
TERMINAL: 1651943C1 (18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
A	B9VF	18	GY
B	B6HC	18	GY
C	B40F	18	GY

STOP LIGHT #1 (1823)



CONNECTOR: 1661777C1
SEAL: 1661872C1
TERMINAL: 1661875C1 (18 AWG)

CAV	CIRCUIT	GAUGE	COLOR
C	B70CA	18	OR
D	B9VG	18	GY

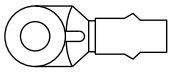
STOP LIGHT #2 (1824)



CONNECTOR: 1661777C1
SEAL: 1661872C1
TERMINAL: 1661875C1 (18 AWG)

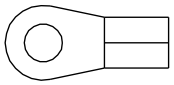
CAV	CIRCUIT	GAUGE	COLOR
C	B70CB	18	OR
D	B9VH	18	GY

BATTERY FEED MEGA-FUSE TO CAB (1850)



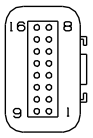
CIRCUIT	GAUGE	COLOR	TERMINAL
A14AA	6	RD	2015884C1

NEG STUD (1851)



CIRCUIT	GAUGE	COLOR	TERMINAL
A11-GA	10	WH	0373756C2

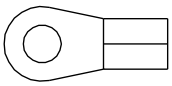
WTEC SHIFTER 16 WAY (1852) (LOCATED IN IP HARNESS)



CONNECTOR: 3605446C91
PLUG: 3518314C1

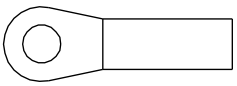
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	PLUG	-	-	-
2	PLUG	-	-	-
3	A62A	18	LT GN	3517243C1
4	PLUG	-	-	-
5	A92-G	18	WH	3517243C1
6	PLUG	-	-	-
7	PLUG	-	-	-
8	A5AV(+)	18	YL	3517243C1
9	PLUG	-	-	-
10	PLUG	-	-	-
11	A92#134	18	YL	3517243C1
12	A92IGN	18	TN	3517243C1
13	A92BT	18	RD	3517243C1
14	PLUG	-	-	-
15	A5AV(-)	18	GN	3517243C1
16	PLUG	-	-	-

NEG STUD (1852B)



CIRCUIT	GAUGE	COLOR	TERMINAL
A11-G	10	WH	0365684C2

NEG STUD (1862)



CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A11-GAL	12	WH	3581768C1	-
A94-GA	12	GY	2020632C1	2644002R1
A94-GB	14	GY		
A92-G	18	WH	3549254C1	-
A78-GM	14	WH	2020632C1	2644005R1
A78-GN	14	WH		

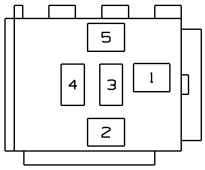
NOTE:
MERGED CELLS INDICATE TWO CIRCUITS IN ONE RING TERMINAL

B235002816

Figure 16. Connector Composites (1822, 1823, 1824, 1850, 1851, 1852, 1852B, 1862).

CONNECTOR COMPOSITES - (CONTINUED)

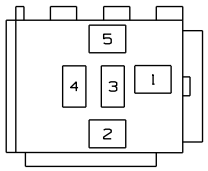
LEFT TURN RELAY
(1876)



CONNECTOR - 0593385C1
BODY LOCK - 0593387C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A56A	16	OR	1659673C1
2	A56-GA	16	OR	2018946C1
3	-		-	-
4	A56AY	18	OR	1659673C1
5	A56AZ	18	OR	1659673C1

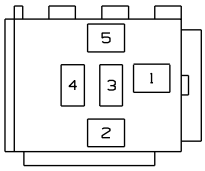
RIGHT TURN RELAY
(1877)



CONNECTOR - 0593385C1
BODY LOCK - 0593387C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A57A	18	OR	3517243C1
2	A57-GA	16	OR	2018946C1
3	-	-	-	-
4	A57AY	18	OR	1659673C1
5	A57AZ	18	OR	1659673C1

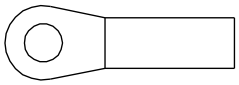
FLASH TO PASS RELAY
(1878)



CONNECTOR - 0593385C1
BODY LOCK - 0593387C1

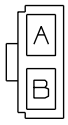
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A102A	18	YL	3544884C1
2	GRD-1	18	WH	3544884C1
3	-	-	-	-
4	102A1	18	YL	3544884C1
5	FTP-1	18	YL	3544884C1

POWER SOCKET GROUND
(1936)



CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A86-GS	12	WH	2020632C1	2644002R1

LEFT SIDE POWER SOCKET
(1937)



CONNECTOR - 1661196C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A86S	12	LT GN	3566715C1
B	A86-GS	12	WH	3566715C1

RIGHT SIDE POWER SOCKET
(1938)



CONNECTOR - 1661197C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A86T	12	LT GN	3534167C1
B	A86-GT	12	WH	3534167C1

B235002817

Figure 17. Connector Composites (1876, 1877, 1878, 1936, 1937, 1938).

CONNECTOR COMPOSITES - (CONTINUED)

LEFT HEATED WINDSHIELD
(1939)



CONNECTOR - 1684261C1
BODY LOCK - 1684263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A78WBB	14	LT GN	2034787C1
2	A78-GM	14	WH	2034787C1

RIGHT HEATED WINDSHIELD
(1940)

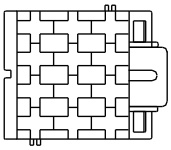


CONNECTOR - 1684261C1
BODY LOCK - 1684263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A78WBA	14	LT GN	2034787C1
2	A78-GN	14	WH	2034787C1

FUEL FIRED HEATER
(1951)

12 11 10

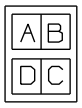


CONNECTOR - 3596927C1

3 2 1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A62ZJ	18	DK BL	3598072C1
2	A75BB	18	LT GN	3598072C1
4	A75CA	18	LT GN	3598072C1
8	A75D	18	LT GN	3598072C1
11	A75R	18	LT GN	3598072C1
12	A75CB	18	LT GN	3598072C1

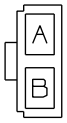
INFRARED LAMP SWITCH
(1952)



CONNECTOR - 1667529C1
BODY LOCK - 1667530C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A114A	18	YL	1661262C1
B	A114-G	18	WH	1661262C1
C	A114	18	YL	1661262C1
D	-	-	-	-

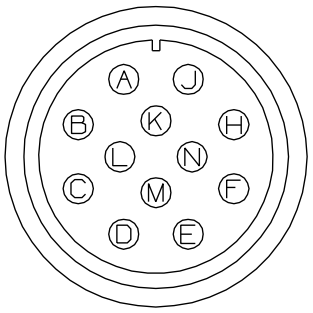
SPOT LIGHT
(1953)



CONNECTOR - 1661196C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	A64VA	16	YL	1661209C1
B	A64-GA	16	WH	1661209C1

MVLS LIGHT SWITCH
(1954)



CONNECTOR - 3820120C1

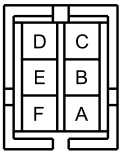
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	-	-	-	-
B	A62Z	16	DK BL	INCLUDED
C	-	-	-	-
D	A113A	18	YL	INCLUDED
E	A113B	16	YL	INCLUDED
F	A113T	14	YL	INCLUDED
G	-	-	-	-
H	A68B	18	BN	INCLUDED
J	A113R	16	YL	INCLUDED
K	A70JA	18	OR	INCLUDED
L	-	-	-	-
M	A53BC	18	YL	INCLUDED
N	A113C	16	YL	INCLUDED

B235002818

Figure 18. Connector Composites (1939, 1940, 1951, 1952, 1953, 1954).

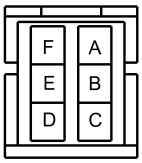
CONNECTOR COMPOSITES - (CONTINUED)

RAMP CONTROL SWITCH
(1955)



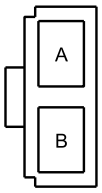
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A81MA	16	LT GN	1661209C1	-
B	A81MB	16	LT GN	1661209C1	-
C	A81MC	16	LT GN	1661209C1	-
D	A81MD	16	LT GN	1661209C1	-
E	A81ME	16	LT GN	1661209C1	-
F	A81MF	16	LT GN	1661209C1	-

RAMP CONTROL INTERCONNECT
(1956)



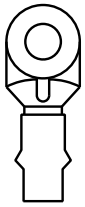
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A81MA	16	LT GN	1661212C1	-
B	A81MB	16	LT GN	1661212C1	-
C	A81MC	16	LT GN	1661212C1	-
D	A81MD	16	LT GN	1661212C1	-
E	A81ME	16	LT GN	1661212C1	-
F	A81MF	16	LT GN	1661212C1	-

ROOF MARKER
(2050)



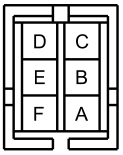
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A58AC	14	BN	3566715C1	-
B	H58AC-G	14	WH	3566715C1	-

POWER STUD
(2101)



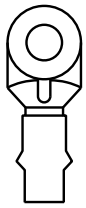
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A	M14Z	-	RD	2015885C1	-

DOME LAMP CONNECTOR
(2118)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A63VB	16	DK BL	1661209C1	-
B	A63-GA	16	WH	1661209C1	-
C	A63AB	16	DK BL	1661209C1	-
D	A63AA	16	DK BL	1661209C1	-
E	-	-	-	-	-
F	-	-	-	-	-

POSITIVE WINCH CABLE
(2400)

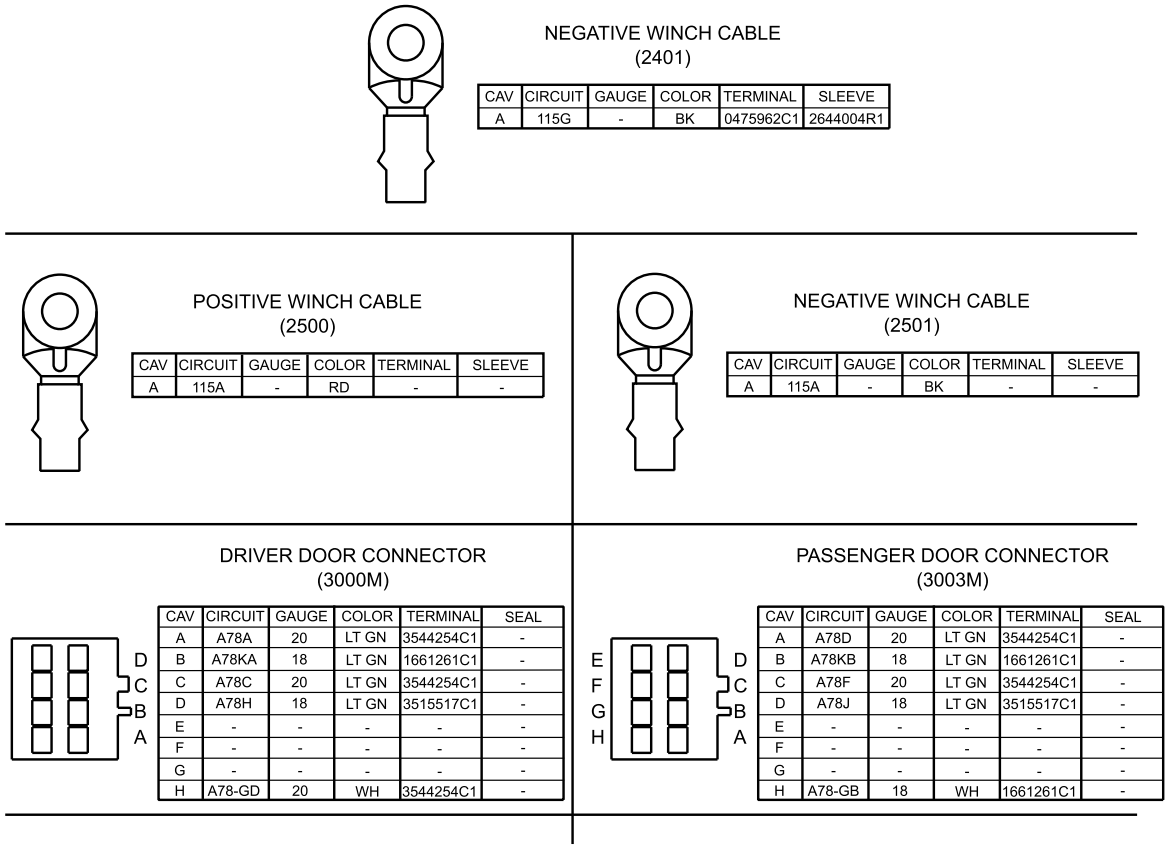


CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A	115A	-	BK	0475962C1	2644004R1

B235005776

Figure 19. Connector Composites (1955, 1956, 2050, 2101, 2118, 2400).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A	115G	-	BK	0475962C1	2644004R1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A	115A	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
A	115A	-	BK	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78A	20	LT GN	3544254C1	-
B	A78KA	18	LT GN	1661261C1	-
C	A78C	20	LT GN	3544254C1	-
D	A78H	18	LT GN	3515517C1	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	A78-GD	20	WH	3544254C1	-

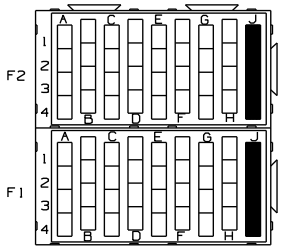
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78D	20	LT GN	3544254C1	-
B	A78KB	18	LT GN	1661261C1	-
C	A78F	20	LT GN	3544254C1	-
D	A78J	18	LT GN	3515517C1	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	A78-GB	18	WH	1661261C1	-

B235005777

Figure 20. Connector Composites (2401, 2500, 2501, 3000M, 3003M).

CONNECTOR COMPOSITES - (CONTINUED)

MINI-FUSE BLOCKS
(4001)
(LOCATED IN POWER DISTRIBUTION CENTER)



CONNECTOR - 3545599C91
BODY LOCK - 3599541C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
F1-A1	(J13S)	-	-	3536304C1
F1-B1	J71	18	OR	3515517C1
F1-C1	(J13S)	-	-	3536304C1
F1-D1	-	-	-	-
F1-E1	J13S	14	PK	3536304C1
F1-F1	J97UA	16	VT	3573312C1
F1-G1	(J13S)	-	-	3536304C1
F1-H1	J23FS	16	TN	3573312C1
F1-A2	(J13W)	-	-	3536304C1
F1-B2	J24C	16	GY	3515517C1
F1-C2	(J13W)	-	-	3536304C1
F1-D2	J87KA	16	GY	3573312C1
F1-E2	J13W	14	PK	3536304C1
F1-F2	J94AYA	16	GY	3573312C1
F1-G2	(J13W)	-	-	3536304C1
F1-H2	J92 #163	18	YL	3515517C1
F1-A3	(J13E)	-	-	3536301C1
F1-B3	-	-	-	-
F1-C3	(J13E)	-	-	3536301C1
F1-D3	J13X	16	PK	3573312C1
F1-E3	J13E	14	PK	3536301C1
F1-F3	J39A	16	GY	3573311C1
F1-F3	J39B	16	GY	3573311C1
F1-G3	J11-GG	18	WH	3515517C1
F1-H3	-	-	-	-
F1-J3	J70D	18	OR	-
F1-A4	(J13T)	-	-	3536301C1
F1-B4	-	-	-	-
F1-C4	(J13T)	-	-	3536301C1
F1-D4	-	-	-	-
F1-E4	J13T	14	PK	3536301C1
F1-F4	-	-	-	-
F1-G4	J70C	18	OR	3515517C1
F1-H4	-	-	-	-
F1-J4	J113G	18	YL	3515517C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
F2-A1	(J14VA)	-	-	3536303C1
F2-B1	J71C	18	OR	3515517C1
F2-C1	J14VA	10	RD	3536303C1
F2-D1	J70BK	14	OR	3573312C1
F2-E1	(J14VA)	-	-	3536303C1
F2-F1	J58BK	14	BN	3573312C1
F2-G1	(J14VA)	-	-	3536303C1
F2-H1	J14AA	16	RD	3515517C1
F2-A2	(J14VB)	-	-	3536303C1
F2-B2	J75	14	LTGN	3573312C1
F2-C2	J14VB	10	RD	3536303C1
F2-D2	J72	14	OR	3573312C1
F2-E2	(J14VB)	-	-	3536303C1
F2-F2	J57T	14	OR	3573312C1
F2-G2	(J14VB)	-	-	3536303C1
F2-H2	J56T	14	OR	3573312C1
F2-A3	J70SA	12	OR	3573311C1
F2-B3	J70B	14	RD	3573312C1
F2-C3	(J14M)	-	-	3536301C1
F2-D3	-	-	-	-
F2-E3	J14M	12	RD	3536301C1
F2-F3	-	-	-	-
F2-G3	(J14M)	-	-	3536301C1
F2-H3	J19	16	GY	3573312C1
F2-A4	J68E	14	BN	3573312C1
F2-B4	J68F	14	BN	3573312C1
F2-C4	(J14J)	-	-	3536301C1
F2-D4	-	-	-	-
F2-E4	J14J	12	RD	3536301C1
F2-F4	J94AY	12	GY	3573311C1
F2-G4	(J14J)	-	-	3536301C1
F2-H4	J70L	18	OR	3573312C1
F2-H4	J68L	18	BN	3573312C1

MINI-FUSE BLOCK (4001)

LOCATION	FUSE	PART NUMBER	DESCRIPTION
F1-A1&B1	10 AMP	3534209C1	BACK UP LAMPS
F1-C1&D1	-	-	-
F1-E1&F1	5 AMP	3534208C1	ENGINE IGN
F1-G1&H1	10 AMP	3534209C1	ENGINE FAN WIRING
F1-A2&B2	5 AMP	3534208C1	EXHAUST BRAKE
F1-C2&D2	10 AMP	3534209C1	WASHER PUMP
F1-E2&F2	5 AMP	3534208C1	AIR ABS
F1-G2&H2	10 AMP	3534209C1	XMSN ECU
F1-A3&B3	-	-	-
F1-C3&D3	10 AMP	3534209C1	IGNITION BUS
F1-E3&F3	20 AMP	3534211C1	AIR DRYER
F1-G3&H3	-	-	-
F1-A4&B4	-	-	-
F1-C4&D4	-	-	-
F1-E4&F4	-	-	-
F1-G4&H4	-	-	-

LOCATION	FUSE	PART NUMBER	DESCRIPTION
F2-A1&B1	10 AMP	3534209C1	BACK UP LIGHTS
F2-C1&D1	10 AMP	3534209C1	B/O STOP LIGHT TRAILER
F2-E1&F1	10 AMP	3534209C1	B/O MARKER TRAILER
F2-G1&H1	10 AMP	3534209C1	24 VOLT ALT IGNITION
F2-A2&B2	15 AMP	3534210C1	FUEL FIRED HEATER
F2-C2&D2	15 AMP	3534210C1	TRAILER ABS/AUX PWR
F2-E2&F2	15 AMP	3534210C1	TRAILER RIGHT TURN
F2-G2&H2	15 AMP	3534210C1	TRAILER LEFT TURN
F2-A3&B3	15 AMP	3534210C1	TRAILER STOP LIGHTS
F2-C3&D3	-	-	-
F2-E3&F3	5 AMP	-	REMOTE PWR MDL
F2-G3&H3	20 AMP	3534211C1	FUEL/WATER SEPARATER
F2-A4&B4	15 AMP	3534210C1	REAR MARKER & TAIL
F2-C4&D4	-	-	-
F2-E4&F4	30 AMP	3534213C1	AIR ABS
F2-G4&H4	10 AMP	3534209C1	MRKR & TAIL/TRLR STOP

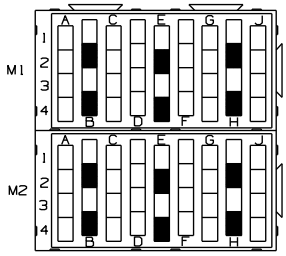
1 MICRO RELAY FOR TRAILER STOP LT INTRPT AT
F1 - G3 H3 J3
G4 J4

B235002819

Figure 21. Connector Composites (4001).

CONNECTOR COMPOSITES - (CONTINUED)

MICRO RELAY BLOCKS
(4002)
(LOCATED IN POWER DISTRIBUTION CENTER)



CONNECTOR ASSY - 3545598C91
BODY LOCK - 3536085C1 (2 REQD)
BODY LOCK - 3599541C1 (8 REQD)
MICRO RELAY - 3519350C1
PLUG - 3555642C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
M1-A1	J11-GZ	18	WH	3515517C1
M1-B1	-	-	-	-
M1-C1	J13AA	16	PK	3573312C1
M1-C1	J13AB	18	PK	
M1-A2	J14AA	16	RD	3573312C1
M1-C2	J13AC	18	PK	3515517C1
M1-D1	J71#165	18	OR	3515517C1
M1-E1	-	-	-	-
M1-F1	J71D	18	OR	3515517C1
M1-D2	J71C	18	OR	3515517C1
M1-F2	J71	18	OR	3515517C1
M1-G1	J11-GX	18	WH	3515517C1
M1-H1	-	-	-	-
M1-J1	J71B	18	OR	3515517C1
M1-G2	J71D	18	OR	3515517C1
M1-J2	J113E	18	YL	3515517C1
M1-A3	J24A	16	GY	3573312C1
M1-B3	-	-	-	-
M1-C3	J24B	16	GY	3573312C1
M1-A4	-	-	-	-
M1-C4	J24C	16	GY	3573312C1
M1-D3	J11-GY	18	WH	3515517C1
M1-E3	-	-	-	-
M1-F3	J85AB	16	GY	3573312C1
M1-D4	J85AA	16	GY	3573312C1
M1-F4	J113F	18	YL	3515517C1
M1-G3	J19-G	18	WH	3515517C1
M1-H3	-	-	-	-
M1-J3	J19	16	GY	3573312C1
M1-G4	J19A	16	GY	3573312C1
M1-J4	J13AS	18	PK	3515517C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
M2-A1	J11-GP	18	WH	3515517C1
M2-B1	J56L	16	OR	3573312C1
M2-B3	J56K	14	OR	3573311C1
M2-C1	J56JA	18	OR	3515517C1
M2-A2	J56B	16	OR	3573312C1
M2-C2	J113D	18	YL	3515517C1
M2-D1	J11-GC	18	WH	3515517C1
M2-E1	J57L	18	OR	3515517C1
M2-F1	J70JB	16	OR	3573312C1
M2-D2	J57B	16	OR	3573312C1
M2-F2	J113J	18	YL	3515517C1
M2-G1	J11-GW	18	WH	3515517C1
M2-H1	J70BH	14	OR	3573311C1
M2-H1	J70BJ	16	OR	
M2-J1	J113CC	14	YL	3573312C1
M2-G2	J70BE	18	OR	3515517C1
M2-J2	J113CA	16	YL	3573312C1
M2-A3	J11-GR	18	WH	3515517C1
M2-B3	J56L	16	OR	3573311C1
M2-C3	J56T	14	OR	3573312C1
M2-A4	J56C	14	OR	3573312C1
M2-C4	J56J	16	OR	3573312C1
M2-C4	J56JA	18	OR	
M2-D3	J11-GF	18	WH	3515517C1
M2-E3	J57K	14	OR	3573311C1
M2-E3	J57L	18	OR	
M2-F3	J57T	14	OR	3573312C1
M2-D4	J57C	14	GY	3573312C1
M2-F4	J70JC	16	OR	3573312C1
M2-G3	J11-GV	18	WH	3515517C1
M2-H3	J70BJ	16	OR	3573312C1
M2-J3	J70BK	14	OR	3573312C1
M2-G4	J70BF	14	OR	3573312C1
M2-J4	J113CD	16	YL	3573312C1

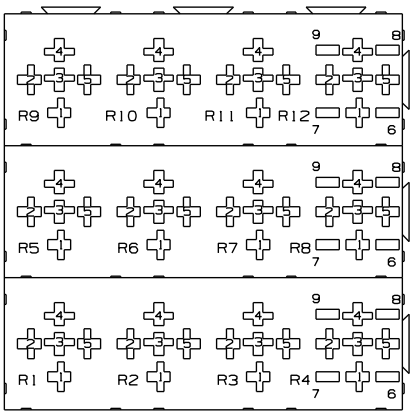
LOCATION	DESCRIPTION
M1-A1 TO M1-C2	24 VOLT IGN
M1-D1 TO M1-F2	BACKUP LAMPS
M1-G1 TO M1-J2	BACKUP LIGHT INTRPT
M1-A3 TO M1-C4	EXHAUST BRAKE
M1-D3 TO M1-F4	ELECTRIC HORN
M1-G3 TO M1-J4	FUEL HEATER
M2-A1 TO M2-C2	LEFT STOP/TURN
M2-D1 TO M2-F2	RIGHT STOP/TURN
M2-G1 TO M2-J2	B/O STOP TRUCK
M2-A3 TO M2-C4	LEFT TURN TRAILER
M2-D3 TO M2-F4	RIGHT TURN TRAILER
M2-G3 TO M2-J4	B/O STOP LT TRAILER

B235002820

Figure 22. Connector Composites (4002).

CONNECTOR COMPOSITES - (CONTINUED)

ISO & POWER RELAYS (4003)
(LOCATED IN POWER DISTRIBUTION CENTER)



LOCATION	DESCRIPTION
R1	WIPER POWER
R2	WIPER HIGH/LOW
R3	B/O MARKER TRAILER
R4	B/O MARKER TRUCK
R5	TRAILER ABS CENTER PIN
R6	TRAILER MARKER TAIL LIGHT
R7	TRAILER STOP
R8	AIR COND
R9	IGN
R10	TRUCK MARKER TAIL
R11	CEC POWER MODULE
R12	STARTER

CONNECTOR ASSY - 3545600C91
BODY LOCK - 3536093C1
ISO RELAY - 2012557C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
R1-1	J82HLP	16	GY	1661226C1
R1-2	J82RP	18	GY	1661224C1
R1-3	J82P	16	GY	1661226C1
R1-4	J82HL	16	GY	1661226C1
R1-5	J82FB	18	GY	1661224C1
R2-1	J82HLP	16	GY	1661226C1
R2-2	J82RH	18	GY	1661224C1
R2-3	J82L	16	GY	1661226C1
R2-4	J82H	16	GY	1661226C1
R2-5	J82FA	18	GY	1661224C1
R3-1	J58BF	14	BN	1661226C1
R3-2	J11-GN	18	WH	1661224C1
R3-3	J58BJ	18	OR	1661224C1
R3-4	J58BK	14	TN	1661226C1
R3-5	J113BD	16	BN	1661226C1
R4-1	J58BE	16	BN	1661226C1
R4-1	J68BA	18	BN	
R4-2	J11-GK	18	WH	1661224C1
R4-3	J58BH	14	BN	1661227C1
R4-3	J58BJ	18	OR	
R4-4	J113BB	14	TN	1661226C1
R4-5	J113BC	16	TN	1661226C1
R5-1	J72A	10	OR	1661227C1
R5-2	J72B	18	OR	1661224C1
R5-3	J72C	14	OR	1661226C1
R5-4	J72	14	OR	1661226C1
R5-5	J11-GT	18	WH	1661224C1
R6-1	J68E	14	BN	1661226C1
R6-2	J68B	18	OR	1661224C1
R6-3	J68H	14	BN	1661226C1
R6-3	J68J	14	TN	
R6-4	J14VD	12	RD	1661227C1
R6-5	J68L	18	BN	1661224C1

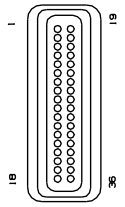
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
R7-1	J70SA	12	OR	1661227C1
R7-2	J70D	18	OR	1661224C1
R7-3	J70A	14	OR	1661226C1
R7-4	J14VC	12	RD	1661227C1
R7-5	J70L	18	OR	1661224C1
R8-1	J77A	18	LT GN	1661224C1
R8-2	J77	16	LT GN	1661226C1
R8-3	-	-	-	-
R8-4	J9B	18	GY	1661224C1
R8-5	J11-GU	18	WH	1661224C1
R9-1	J13CW	10	PK	1661227C1
R9-2	J11-GD	18	WH	1661224C1
R9-3	J11-GE	12	WH	1661227C1
R9-4	J14D	12	RD	1661227C1
R9-5	J13C	16	PK	1661226C1
R10-1	J58AA	14	TN	1661226C1
R10-2	J113H	18	YL	1661224C1
R10-3	J68J	14	TN	1661226C1
R10-4	J58A	14	TN	1661226C1
R10-5	J11-GS	18	WH	1661224C1
R11-1	J97AA	12	VT	1661228C1
R11-1	J97AAA	14	VT	
R11-2	J97T	18	VT	1661224C1
R11-3	-	-	-	-
R11-4	J97W	10	VT	1661227C1
R11-5	J97AAA	14	VT	1661226C1
R12-1	J17D	10	PK	1661227C1
R12-2	J17S	18	PK	1661224C1
R12-3	-	-	-	-
R12-4	J17E	10	PK	1661227C1
R12-5	J17	16	PK	1661226C1

B235002821

Figure 23. Connector Composites (4003).

CONNECTOR COMPOSITES - (CONTINUED)

ELECTRICAL SYSTEM CONTROLLER (ESC 4004)



CONNECTOR - 3533832C1
RETAINER - 3533833C1
STRAIN REL - 3533834C1
SEAL - 3533835C1
CPA - 3533836C1
PLUG - 3518314C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
3	J77A	18	LTGN	3517243C1
5	J36A	18	TN	3517243C1
11	J19C	18	GY	3517243C1
12	J87CA	18	GY	3517243C1
17	J68B	18	OR	3517243C1
20	J82RH	18	GY	3517243C1
21	J70C	18	OR	3517243C1
22	J59C	18	GY	3517243C1
24	J59B	18	GY	3517243C1
26	J9A	18	GY	3517243C1
29	J82RP	18	GY	3517243C1
30	J59D	18	GY	3517243C1
31	J59A	18	GY	3517243C1

NOTE:
CAVITIES NOT LISTED HAVE PLUGS

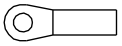
FIREWALL GROUND STUD (4005)



TERMINAL - 0581156C1

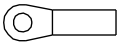
CIRCUIT	GAUGE	COLOR
K11-GL	4	WH

GND 2 (4006)



CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
J11-GL	18	WH	3549254C1	2644005R1
J11-GB	16	WH	3549254C1	2644005R1
J42-G	18	WH	3549254C1	2644005R1

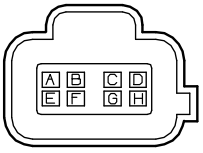
GND 3 (4006A)



TERMINAL - 3581768C1
SLEEVE - 2644005R1

CIRCUIT	GAUGE	COLOR
J11-GJ	12	WH

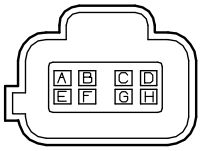
ELECTRICAL SYSTEM CONTROLLER BROWN (4007)



CONNECTOR - 3548934C1
BODY LOCK - 3548943C1
PLUG - 3535938C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PLUG	-	-	-	-
B	J57A	16	OR	3535930C1	3535936C1
C	J56A	16	OR	3535930C1	3535936C1
D	J53A	14	YL	3535931C1	3548945C1
E	J85AA	16	GY	3535930C1	3535937C1
F	PLUG	-	-	-	-
G	J52A	14	YL	3535931C1	3548945C1
H	J58	14	BN	3535931C1	3548945C1

ELECTRICAL SYSTEM CONTROLLER BLUE (4008)



CONNECTOR - 3548933C1
BODY LOCK - 3548943C1
PLUG - 3535938C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J59E	14	GY	3535931C1	3548945C1
B	J70	16	OR	3535930C1	3535937C1
C	J56	16	OR	3535930C1	3535937C1
D	PLUG	-	-	-	-
E	PLUG	-	-	-	-
F	J82F	16	GY	3535930C1	3535937C1
G	PLUG	-	-	-	-
H	PLUG	-	-	-	-

B235002822

Figure 24. Connector Composites (4004, 4005, 4006, 4006A, 4007, 4008).

CONNECTOR COMPOSITES - (CONTINUED)

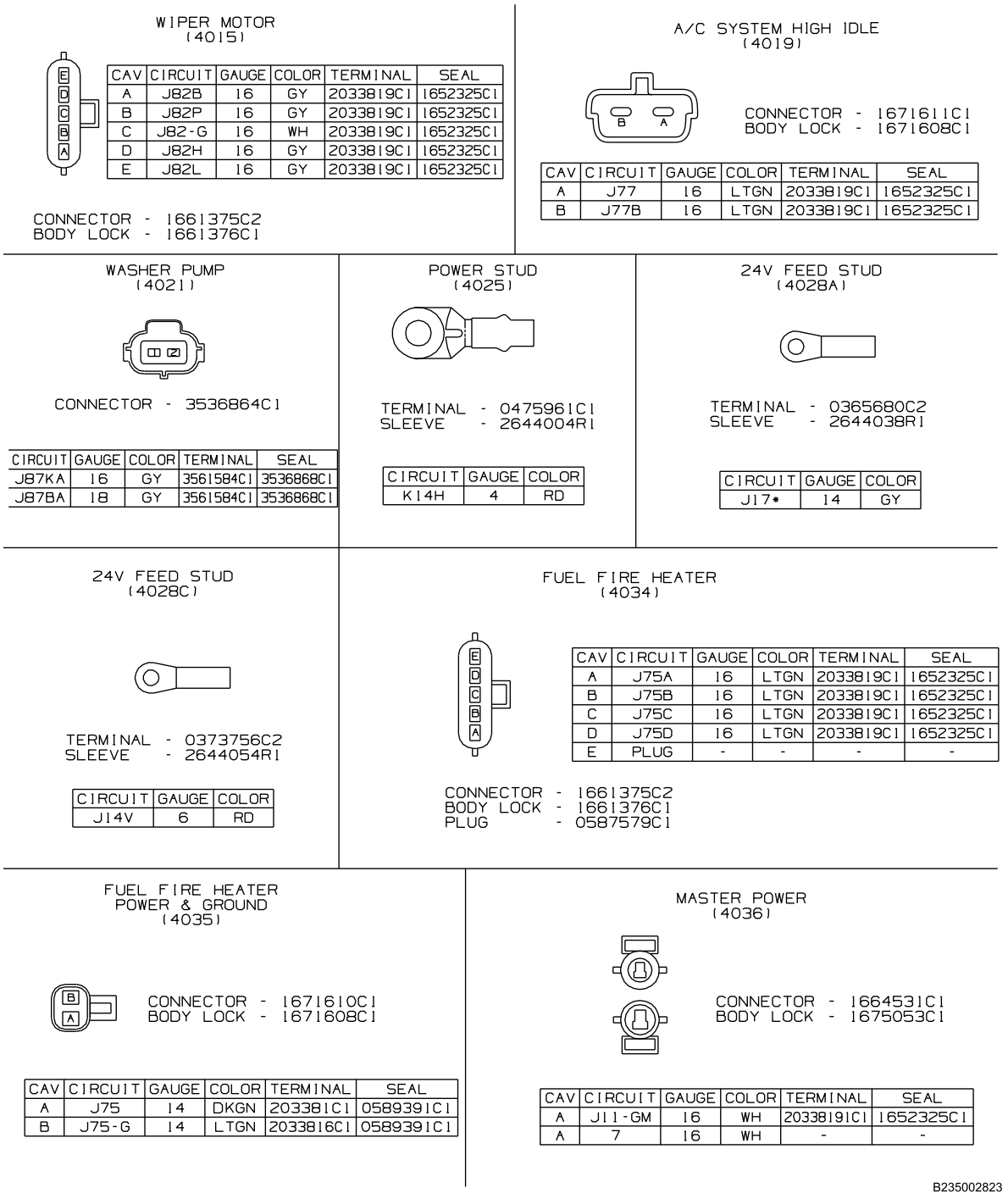
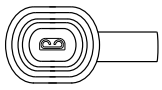


Figure 25. Connector Composites (4015, 4019, 4021, 4025, 4028A, 4028C, 4034, 4035, 4036).

CONNECTOR COMPOSITES - (CONTINUED)

FUEL HEATER
(4042)



CONNECTOR - 1664024C91

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	M19A	16	GY	ASSY

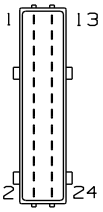
WATER PROBE
(4043)



CONNECTOR - 089000-CA

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M19B	16	GY	0385565C1	089000-CA

DASH CONNECTOR
(4100F)

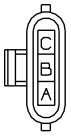


CONNECTOR - 3558022C1
LOCK - 3558056C1
SEAL - 3559047C1
PLUG - 3532129C1

NOTE:
MATES WITH CONNECTOR (4103)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	PLUG	-	-	-	-
2	K99S	18	VT	3559036C1	3509903C1
3	K97K	18	VT	3559036C1	3509903C1
4	K97C	18	VT	3559036C1	3509903C1
5	K99T	18	VT	3559036C1	3509903C1
6	K97R	18	VT	3559036C1	3509903C1
7	L5B(+)	18	YL	3559036C1	3532128C1
8	L5B(-)	18	GN	3559036C1	3532128C1
9	PLUG	-	-	-	-
10	K3A(+)	18	DKBL	3559036C1	3509903C1
11	K3A(-)	18	GY	3559036C1	3509903C1
12	K21B	18	TN	3559036C1	3509903C1
13	PLUG	-	-	-	-
14	K23A	16	TN	3559037C1	3509903C1
15	K24B	16	GY	3559037C1	3509903C1
16	K24A	18	GY	3559036C1	3509903C1
17	K17M	18	WH	3559036C1	3509903C1
18	K97J	16	VT	3559037C1	3509903C1
19	K97M	16	VT	3559037C1	3509903C1
20	K77A	16	LTGN	3559037C1	3509903C1
21	PLUG	-	-	-	-
22	PLUG	-	-	-	-
23	PLUG	-	-	-	-
24	K13AA	16	RD	3559037C1	3509903C1

DASH CONNECTOR
STARTER/CEC POWER
(4101M)



CONNECTOR - 1667733C1
BODY LOCK - 1667734C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	K97W	10	VT	1667737C1	1667735C1
B	K97AA	10	VT	1667737C1	1667735C1
C	K17C	10	PK	1667737C1	1667735C1

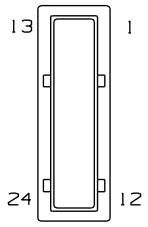
NOTE:
MATES WITH CONNECTOR (4105)

B235002824

Figure 26. Connector Composites (4042, 4043, 4100F, 4101M).

CONNECTOR COMPOSITES - (CONTINUED)

ENGINE CONNECTOR
(4103)

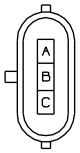


CONNECTOR - 3558026C1
LOCK - 3558056C1
PLUG - 3532129C1

NOTE:
MATES WITH CONNECTOR (4100F)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	PLUG	-	-	-	-
2	J99U	18	VT	3509874C1	3509903C1
3	J97Q	18	VT	3509874C1	3509903C1
4	J97P	18	VT	3509874C1	3509903C1
5	J99V	18	VT	3509874C1	3509903C1
6	J99Y	18	VT	3509874C1	3509903C1
7	J5B(+)	18	YL	3509874C1	3509903C1
8	J5B(-)	18	GN	3509874C1	3509903C1
9	PLUG	-	-	-	-
10	J3A(+)	18	DK BL	3509874C1	3509903C1
11	J3A(-)	18	GY	3509874C1	3509903C1
12	J21F	18	TN	3509874C1	3509903C1
13	PLUG	-	-	-	-
14	J23FS	18	TN	3509874C1	3509903C1
15	J24B	18	GY	3509874C1	3509903C1
16	J24A	18	GY	3509874C1	3509903C1
17	J17S	18	PK	3509874C1	3509903C1
18	J97T	18	VT	3509874C1	3509903C1
19	J97UA	18	VT	3509874C1	3509903C1
20	J77B	16	LT GN	3559035C1	3509903C1
21	PLUG	-	-	-	-
22	PLUG	-	-	-	-
23	PLUG	-	-	-	-
24	J13AA	16	PK	3509874C1	3509903C1

CEC POWER/
STARTER SOLENOID
(4105)



CONNECTOR - 1667732C1
BODY LOCK - 1667734C1

NOTE:
MATES WITH CONNECTOR (4101M)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J97W	10	VT	2025425C1	1667735C1
B	J97AA	12	VT	2025424C1	1671603C1
C	J17E	10	PK	2025425C1	1667735C1

FAN SOLENOID
(4111M)



CONNECTOR - 1671610C1
BODY LOCK - 1671608C1

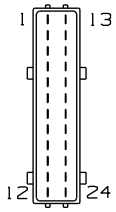
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	K23A	16	TN	2033819C1	1652325C1
B	K97B	18	VT	2033819C1	1652325C1

B235002825

Figure 27. Connector Composites (4103, 4105, 4111M).

CONNECTOR COMPOSITES - (CONTINUED)

DASH HARNESS CONNECTOR
(4300)

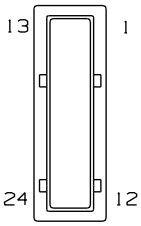


CONNECTOR - 3558022C1
LOCK - 3558056C1
PLUG - 3532129C1

NOTE:
MATES WITH CONNECTOR (4301)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	M94	18	GY	3559036C1	3509903C1
2	M94A	18	GY	3559036C1	3509903C1
3	M94B	18	GY	3559036C1	3509903C1
4	M52B	14	YL	3559037C1	3575783C1
5	M53	14	YL	3559037C1	3575783C1
6	M94C	18	GY	3559036C1	3509903C1
7	M94D	18	GY	3559036C1	3509903C1
8	PLUG	-	-	-	-
9	M56B	16	OR	3559037C1	3509903C1
10	M85M	16	GY	3559037C1	3509903C1
11	M57B	16	OR	3559037C1	3509903C1
12	M56B	16	BN	3559037C1	3509903C1
13	M11-G	12	WH	3559037C1	3575834C1
14	M94E	18	GY	3559036C1	3509903C1
15	M94F	18	GY	3559036C1	3509903C1
16	M94H	18	GY	3559036C1	3509903C1
17	M94J	18	GY	3559036C1	3509903C1
18	M94K	18	GY	3559036C1	3509903C1
19	M21C	18	TN	3559036C1	3509903C1
20	M52	16	YL	3559037C1	3509903C1
21	M53C	16	YL	3559037C1	3509903C1
22	M21D	18	TN	3559036C1	3509903C1
23	M54	16	BN	3559037C1	3509903C1
24	PLUG	-	-	-	-

FWD CHASSIS CONNECTOR
(4301)



CONNECTOR - 3558026C1
BODY LOCK - 3558056C1
SEAL - 3559047C1
PLUG - 3532129C1

NOTE:
MATES WITH CONNECTOR (4300)

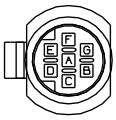
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	J94AP	18	GY	3509874C1	3509903C1
2	J94AR	18	GY	3509874C1	3509903C1
3	J94AS	18	GY	3509874C1	3509903C1
4	J52A	14	YL	3559035C1	3575783C1
5	J52A	14	YL	3559035C1	3575783C1
6	J94AM	18	GY	3509874C1	3509903C1
7	J94AN	18	GY	3509874C1	3509903C1
8	PLUG	-	-	-	-
9	J56A	16	OR	3559035C1	3509903C1
10	J85AB	16	GY	3559035C1	3509903C1
11	J57A	16	OR	3559035C1	3509903C1
12	J58AB	14	BN	3559035C1	3575783C1
13	J11-G	12	WH	3559035C1	3575783C1
14	J94AT	16	GY	3559035C1	3509903C1
15	J94AU	16	GY	3559035C1	3509903C1
16	J94AV	18	GY	3509874C1	3509903C1
17	J94AW	18	GY	3509874C1	3509903C1
18	J94AX	18	GY	3509874C1	3509903C1
19	J21E	18	TN	3509874C1	3509903C1
20	J114	16	YL	3559035C1	3509903C1
21	J113A	16	YL	3559035C1	3509903C1
22	J21F	18	TN	3509874C1	3509903C1
23	J58BE	16	BN	3559035C1	3509903C1
24	PLUG	-	-	-	-

B235002826

Figure 28. Connector Composites (4300, 4301).

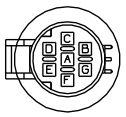
CONNECTOR COMPOSITES - (CONTINUED)

FWD CHASSIS CONN
(4305M)



MATES WITH

AUX DASH CONN
(4305F)



CONNECTOR - 3571887C1
BODY LOCK - 2039342C1
PLUG - 0587579C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS.

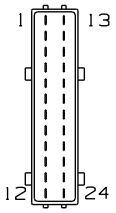
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
D	J19C	18	GY	2039343C1	3517771C1
E	J19A	16	GY	2039343C1	1652325C1

CONNECTOR - 3571886C1
BODY LOCK - 2039342C1
PLUG - 0587579C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS

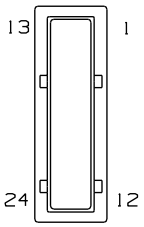
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
D	M19B	16	GY	2033911C1	1652325C1
E	M19A	16	GY	2033911C1	1652325C1

DASH/XMSN CONN
(4705F1)



MATES WITH

DASH/XMSN CONN
(4705F2)



CONNECTOR - 3558022C1
LOCK - 3558056C1
SEAL - 3559047C1
PLUG - 3532129C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS.

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	J92#134	18	YL	3559036C1	3532128C1
12	J92#163	18	YL	3559036C1	3532128C1
13	J71#165	18	OR	3559036C1	3532128C1

CONNECTOR - 3558026C1
BODY LOCK - 3558056C1
PLUG - 3532129C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS

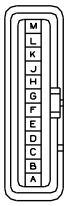
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	L92#134	18	YL	3509874C1	3532128C1
12	L92#163	18	YL	3509874C1	3532128C1
13	L71#165	18	TN	3509874C1	3532128C1

B235002827

Figure 29. Connector Composites (4305M, 4305F, 4705F1, 4705F2,).

CONNECTOR COMPOSITES - (CONTINUED)

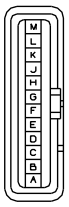
ELECTRONIC SPLICE
(4811)



CONNECTOR - 3543730C1
BODY LOCK - 3543732C1
PLUG - 3535425C1
BUS BAR - 3543735C1

CAV	CIR	GAUGE	COLOR	TERMINAL	SEAL
A	J11-GL	18	WH	3535303C1	3535424C1
B	J11-Gk	18	WH	3535303C1	3535424C1
C	J11-GN	18	WH	3535303C1	3535424C1
D	J11-GP	18	WH	3535303C1	3535424C1
E	J11-GR	18	WH	3535303C1	3535424C1
F	J11-GS	18	WH	3535303C1	3535424C1
G	J11-GT	18	WH	3535303C1	3535424C1
H	J11-GU	18	WH	3535303C1	3535424C1
J	J11-GV	18	WH	3535303C1	3535424C1
K	J11-GW	18	WH	3535303C1	3535424C1
L	J11-GG	18	WH	3535303C1	3535424C1
M	PLUG	-	-	-	-

ELECTRONIC GROUND SPLICE
(4830)



CONNECTOR - 3543730C1
BODY LOCK - 3543732C1
PLUG - 3535425C1
BUS BAR - 3543735C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J9G	18	GY	3535303C1	3535424C1
B	J9A	18	GY	3535303C1	3535424C1
C	J9B	18	GY	3535303C1	3535424C1

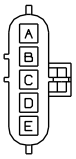
IGNITION SPLICE
(4840)



CONNECTOR - 2006789C1
BODY LOCK - 2006792C1
BUS BAR - 2006791C1
COVER - 2006790C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	J13X	16	PK	1661209C1
B	-	-	-	-
C	J13AS	18	PK	1661208C1
D	-	-	-	-
E	J13AC	18	PK	1661208C1
F	-	-	-	-
G	J72B	18	OR	1661208C1

TRANSFER CASE
CONNECTION
(4900)



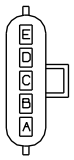
CONNECTOR - 1677851C1
BODY LOCK - 1677914C1
PLUG - 0587579C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N42	18	GY	2033911C1	1652325C1
B	N42-G	18	WH	2033911C1	1652325C1

MATES
WITH

TRANSFER CASE
CONNECTION
(4910)



CONNECTOR - 1661375C2
BODY LOCK - 1661376C1
PLUG - 0587579C1

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS.

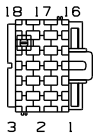
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J42	18	GY	2033819C1	1652325C1
B	J42-G	18	WH	2033819C1	1652325C1

B235002828

Figure 30. Connector Composites (4811, 4830, 4840, 4900, 4910).

CONNECTOR COMPOSITES - (CONTINUED)

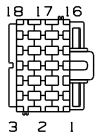
ABS CONN X1
(4953)



CONNECTOR - 3596926C1
BODY LOCK - 3562309C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A94-GA	12	GY	3597157C1
2	-	-		
3	A94AYA	16	GY	3598073C1
4	-	-	-	-
5	-	-	-	-
6	-	-	-	-
7	A5AJ(-)	18	GN	3598072C1
8	A5AJ(+)	18	YL	3598072C1
9	-	-	-	-
10	A94AK	16	GY	3598073C1
11	A94AL	16	GY	3598073C1
12	-	-	-	-
13	A3D(-)	18	GY	3598072C1
14	A3D(+)	18	DK BL	3598072C1
15	-	-	-	-
16	A94AY	12	GY	3597157C1
17	-	-	-	-
18	A94H	18	GY	3548969C1

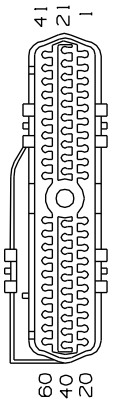
ABS CONN X2
(4954)



CONNECTOR - 3596929C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	A94AS	18	GY	3598072C1
2	A94AP	18	GY	3598072C1
3	A94AR	18	GY	3598072C1
4	A94AX	18	GY	3598072C1
5	A94AM	18	GY	3598072C1
6	A94AW	18	GY	3598072C1
7	A94AV	18	GY	3598072C1
8	A94AN	18	GY	3598072C1
9	A94AH	18	GY	3598072C1
10	A94AJ	18	GY	3598072C1
11	A94AT	16	GY	3598073C1
12	A94AD	18	GY	3598072C1
13	A94AF	18	GY	3598072C1
14	A94AU	16	GY	3598073C1
15	A94AA	16	GY	3598073C1
16	A94AE	18	GY	3598072C1
17	A94AC	18	GY	3598072C1
18	A94AB	16	GY	3598073C1

CEC
ENG CNTRL
(6007)



CONNECTOR - 3541979C1
BODY LOCK - 2041418C1
PLUG - 2041421C2
COVER - 3541958C91

NOTE:
CAVITIES NOT SHOWN HAVE PLUGS

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	K97V	14	VT	2041420C1
2	K97P	14	VT	2041420C1
3	K97C	18	VT	2041419C1
8	K99T	18	VT	2041419C1
10	K34A	18	TN	2041419C1
11	K97D	18	VT	2041419C1
12	K97E	12	VT	2041420C1
16	K3A(+)	18	DK BL	2041419C1
17	K3A(-)	18	GY	2041419C1
19	L5A(+)	18	YL	2041419C1
20	L5A(-)	18	GN	2041419C1
21	K97F	14	VT	2041420C1
22	K97Z	14	VT	2041420C1
23	K97N	14	VT	2041420C1
24	K97M	16	VT	2041420C1
25	K97J	16	VT	2041420C1
26	L92#141	18	TN	2041419C1
27	K99S	18	VT	2041419C1
29	K97K	18	VT	2041419C1
39	K47	18	GY	2041419C1
40	K47A	18	GY	2041420C1
41	K97L	14	VT	2041420C1
42	K97Y	14	VT	2041420C1
46	K17M	18	WH	2041419C1
47	K24A	18	GY	2041419C1

B235002851

Figure 31. Connector Composites (4953, 4954, 6007).

CONNECTOR COMPOSITES - (CONTINUED)

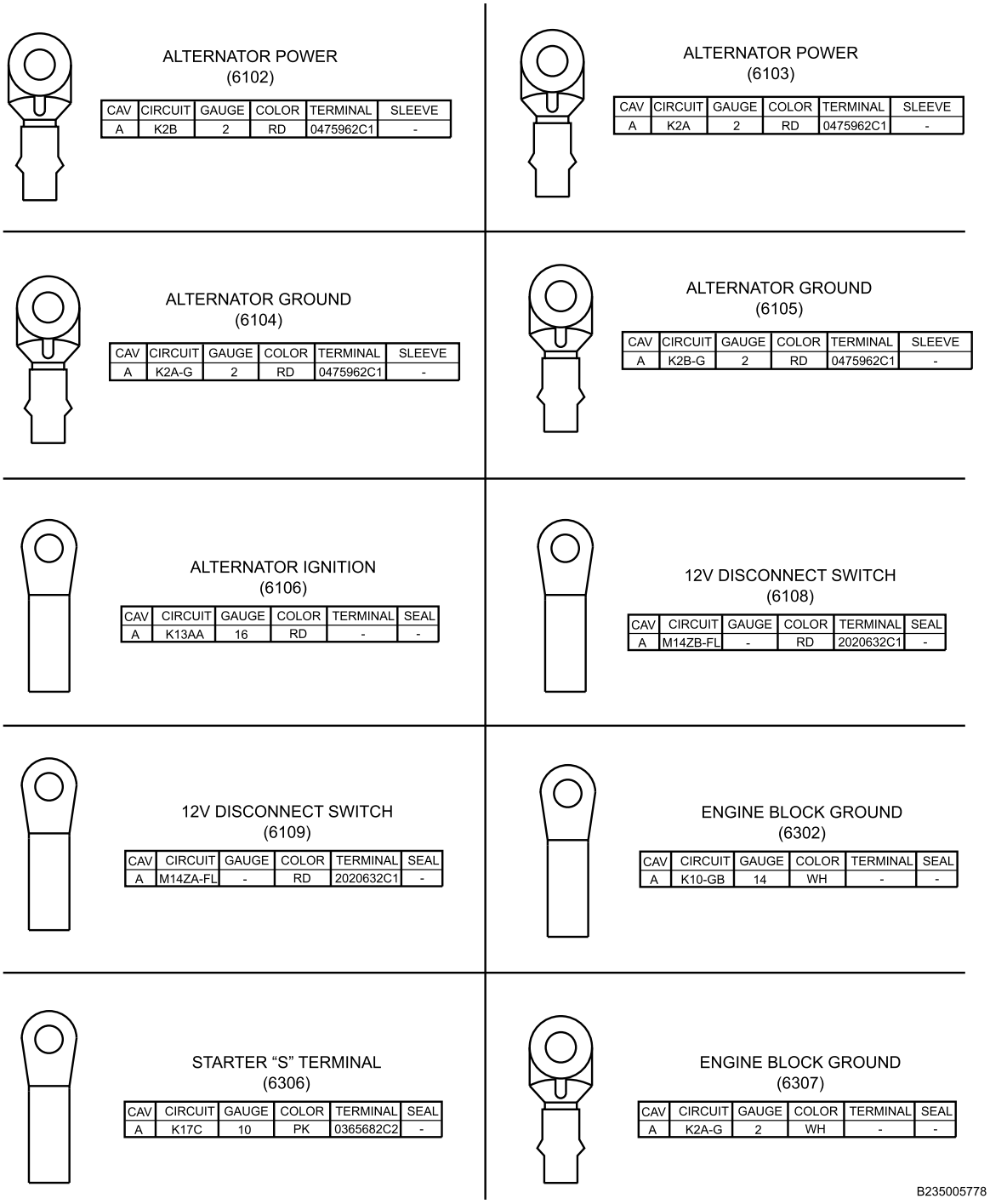


Figure 32. Connector Composites (6102, 6103, 6104, 6105, 6106, 6108, 6109, 6302, 6306, 6307).

CONNECTOR COMPOSITES - (CONTINUED)

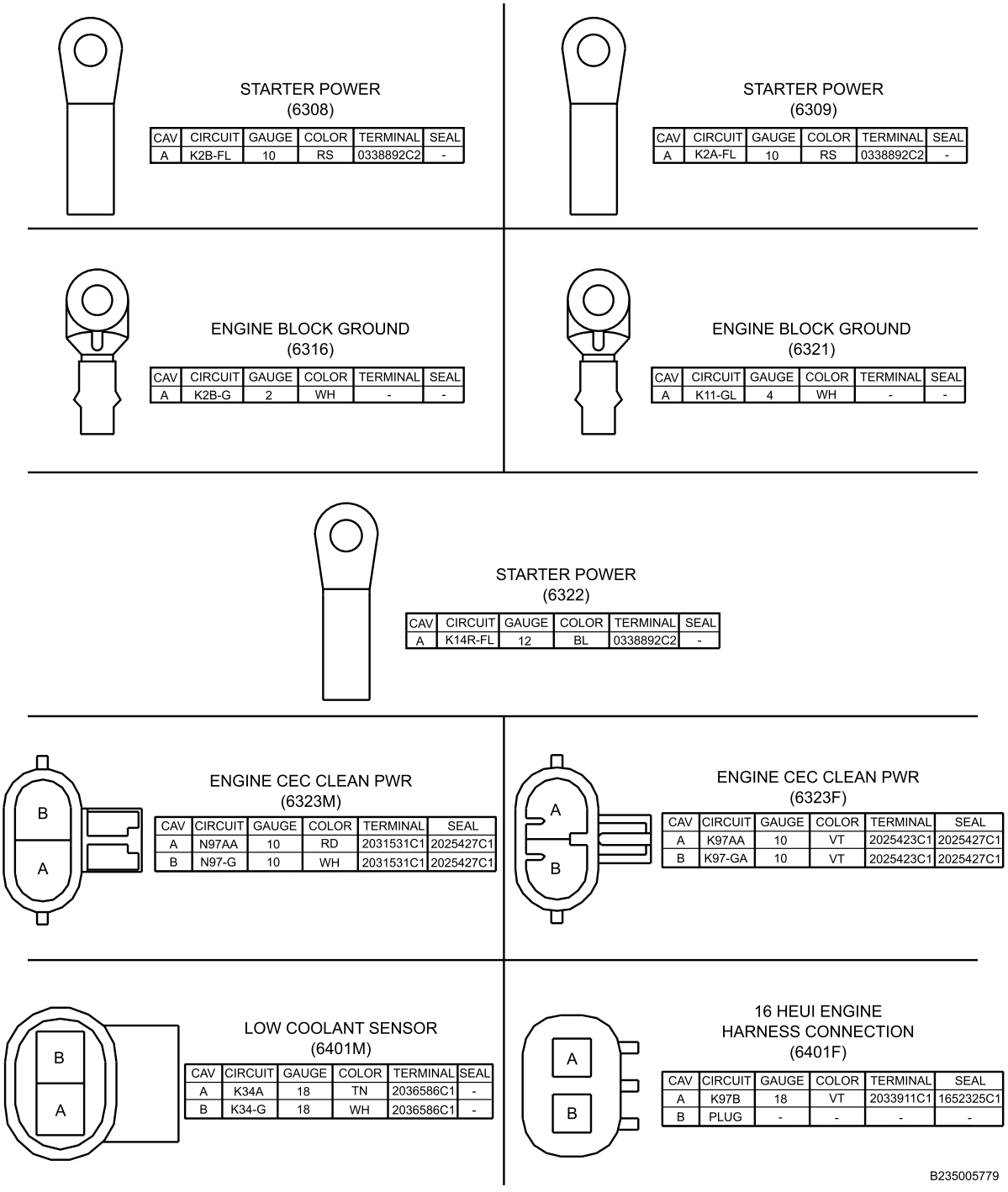


Figure 33. Connector Composites (6308, 6309, 6316, 6321, 6322, 6323M, 6323F, 6401M, 6401F).

CONNECTOR COMPOSITES - (CONTINUED)

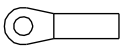
EXHAUST BRAKE SOLENOID
(6502)



CONNECTOR - 0188395R1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	K24B	16	GY	0188396C1

EXHAUST BRAKE
SOLENOID GROUND
(6503)



TERMINAL - 0365679C2
SLEEVE - 2644038R1

CIRCUIT	GAUGE	COLOR
K24-G	18	WH

ETHER START THERMOSTAT
(6550M)



CONNECTOR - 1671610C1
BODY LOCK - 1671608C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	K21B	18	TN	2033819C1	1652325C1
B	K21-G	18	WH	2033819C1	1652325C1

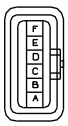
INTAKE AIR TEMPERATURE
(IAT) SENSOR
(6703)



CONNECTOR - 1689462C1
BODY LOCK - 1689463C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	K97E	16	VT	1689464C1
B	K97S	16	VT	1689464C1

GROUND SPLICE
(6704)



CONNECTOR - 3543729C1
BODY LOCK - 3543731C1
BUS BAR - 3543734C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	K24-G	18	WH	353530C1	353542C1
2	K77-G	18	WH	353530C1	353542C1
3	K10-G	18	WH	353530C1	353542C1
4	K10-GA	18	WH	353530C1	353542C1
5	K34-G	18	WH	353530C1	353542C1
6	K21-G	18	WH	353530C1	353542C1

TRANSMISSION CONTROL
MODULE CLEAN POWER
(7104F)



CONNECTOR - 1671611C1
BODY LOCK - 1671608C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N92A	10	PK	167847C1	0589390C1
B	N92-G	10	GY	167847C1	0589390C1

MATES WITH

TRANSMISSION CONTROL
MODULE CLEAN POWER
(7104M)



CONNECTOR - 1671610C1
BODY LOCK - 1671608C1

NOTE:
THESE CIRCUITS ARE IN A SEPERATE CABLE ASSY, NOT THE CENTER CHASSIS HARNESS.

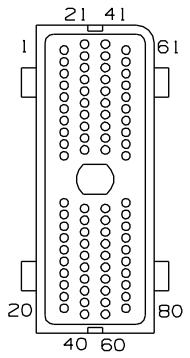
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N92A	14	RD	2033816C1	0589391C1
B	N92-G	14	WH	2033816C1	0589391C1

B235002853

Figure 34. Connector Composites (6502, 6503, 6550M, 6703, 6704, 7104F, 7104M).

CONNECTOR COMPOSITES - (CONTINUED)

TRANSMISSION
CONTROL MODULE
(7150F)

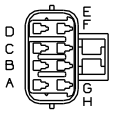


CONNECTOR - 3605713C1
BODY LOCK - 3606525C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	L92#101	18	DKBL	3606047C1
2	-	-	-	-
3	L92#103	18	YL	3606047C1
4	-	-	-	-
5	L92#105	18	TN	3606047C1
6	-	-	-	-
7	-	-	-	-
8	L5A108	18	GN	3606047C1
9	L92#109	18	GY	3606047C1
10	L92#110	18	GY	3606047C1
11	L92#111	18	OR	3606047C1
12	L92#112	18	PK	3606047C1
13	-	-	-	-
14	-	-	-	-
15	-	-	-	-
16	L92#116	18	DKBL	3606047C1
17	L92#117	18	DKBL	3606047C1
18	-	-	-	-
19	-	-	-	-
20	L92#120	18	DKBL	3606047C1
21	-	-	-	-
22	-	-	-	-
23	-	-	-	-
24	L92#124	18	TN	3606047C1
25	-	-	-	-
26	-	-	-	-
27	-	-	-	-
28	L5A128	18	YL	3606047C1
29	-	-	-	-
30	L92#130	18	WH	3606047C1
31	L92#131	18	YL	3606047C1
32	-	-	-	-
33	L92#133	18	YL	3606047C1
34	L92#134	18	YL	3606047C1
35	-	-	-	-
36	L92#136	18	OR	3606047C1
37	L92#137	18	WH	3606047C1
38	-	-	-	-
39	L48#139	18	OR	3606047C1
40	L47#140	18	LTGN	3606047C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
41	L92#141	18	TN	3606047C1
42	L92#142	18	WH	3606047C1
43	L92#143	18	DKBL	3606047C1
44	-	-	-	-
45	L92#145	18	OR	3606047C1
46	-	-	-	-
47	-	-	-	-
48	-	-	-	-
49	-	-	-	-
50	-	-	-	-
51	L92#151	18	WH	3606047C1
52	L92#152	18	LTGN	3606047C1
53	-	-	-	-
54	L31#154	18	TN	3606047C1
55	L92#155	18	WH	3606047C1
56	-	-	-	-
57	L92#157	18	WH	3606047C1
58	L92#158	18	LTGN	3606047C1
59	L48#159	18	TN	3606047C1
60	L47#160	18	YL	3606047C1
61	L92#161	18	TN	3606047C1
62	L92#162	18	YL	3606047C1
63	L92#163	18	YL	3606047C1
64	L92#164	18	DKBL	3606047C1
65	L71#165	18	TN	3606047C1
66	-	-	-	-
67	-	-	-	-
68	-	-	-	-
69	L92#169	18	GY	3606047C1
70	L92#170	18	PK	3606047C1
71	L92#171	18	YL	3606047C1
72	-	-	-	-
73	-	-	-	-
74	L92#174	18	DKBL	3606047C1
75	-	-	-	-
76	L92#176	18	YL	3606047C1
77	L92#177	18	LTGN	3606047C1
78	-	-	-	-
79	-	-	-	-
80	L92#180	18	OR	3606047C1

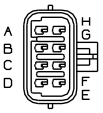
VIW A
(VEHICLE INTERFACE WIRING)
(7205F)



CONNECTOR - 3525872C1
BODY LOCK - 3525873C1
PLUG - 2025431C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	L92B103	18	YL	1661875C1	3568570C1
B	L92#161	18	TN	1661875C1	3568570C1
C	L92#157	18	WH	1661875C1	3568570C1
D	L92#124	18	TN	1661875C1	3568570C1
E	PLUG	-	-	-	-
F	L92#105	18	TN	1661875C1	3568570C1
G	L92#164	18	DKBL	1661875C1	3568570C1
H	L92#162	18	YL	1661875C1	3568570C1

VIW C
(VEHICLE INTERFACE WIRING)
(7206M)



CONNECTOR - 3525874C1
BODY LOCK - 3525875C1
PLUG - 2025431C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	L92#101	18	DKBL	1667742C1	3568570C1
B	L92#117	18	DKBL	1667742C1	3568570C1
C	L92C103	18	YL	1667742C1	3568570C1
D	L92#143	18	DKBL	1667742C1	3568570C1
E	L92#142	18	WH	1667742C1	3568570C1
F	L92#145	18	OR	1667742C1	3568570C1
G	L92#130	18	WH	1667742C1	3568570C1
H	PLUG	-	-	-	-

B235002829

Figure 35. Connector Composites (7150F, 7205F, 7206M).

CONNECTOR COMPOSITES - (CONTINUED)

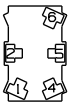
J1939 TRANS
(7208M)



CONNECTOR - 1667741C1
BODY LOCK - 1667771C1
PLUG - 2025431C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	L5C108	18	GN	1661875C1	3568570C1
B	PLUG	-	-	-	-
C	L5C128	18	YL	1661875C1	3568570C1

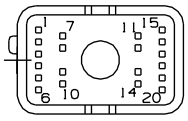
ABS-6 BLINK
CODE SWITCH
SIDE (7210)



CONNECTOR - 1661256C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	-	-	-	-
2	-	-	-	-
4	-	-	-	-
5	A94H	18	GY	1661224C1
6	A94-GB	14	GY	1661226C1

TRANSMISSION CONN
(7250F)



CONNECTOR - 3605715C1
BODY LOCK - 3606532C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	L92#111	18	OR	3606047C1
2	L92#155	18	WH	3606047C1
3	L92#177	18	LTGN	3606047C1
4	L92#136	18	OR	3606047C1
5	L92#152	18	LTGN	3606047C1
6	L92#171	18	YL	3606047C1
7	-	-	-	-
8	L92#174	18	DKBL	3606047C1
9	L92#133	18	YL	3606047C1
10	L92#151	18	WH	3606047C1
11	L92#131	18	YL	3606047C1
12	L92#137	18	WH	3606047C1
13	L92#180	18	OR	3606047C1
14	L92#120	18	DKBL	3606047C1
15	L92#116	18	DKBL	3606047C1
16	L92#112	18	PK	3606047C1
17	-	-	-	-
18	L31#154	18	TN	3606047C1
19	L92#158	18	LTGN	3606047C1
20	L92#176	18	YL	3606047C1

ENGINE SPEED SENSOR
(7603M)



CONNECTOR - 3610533C1
BODY LOCK - 3610532C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	L48#159	18	TN	3554322C1	3554318C1
B	L48#139	18	OR	3554322C1	3554318C1

OUTPUT SPEED SENSOR
(7605M)



CONNECTOR - 3610533C1
BODY LOCK - 3610532C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	L47#160	18	YL	3554322C1	3554318C1
B	L47#140	18	LTGN	3554322C1	3554318C1

TRANSFER CASE
(7611)



CONNECTOR - 1661778C1
BODY LOCK - 1661874C1

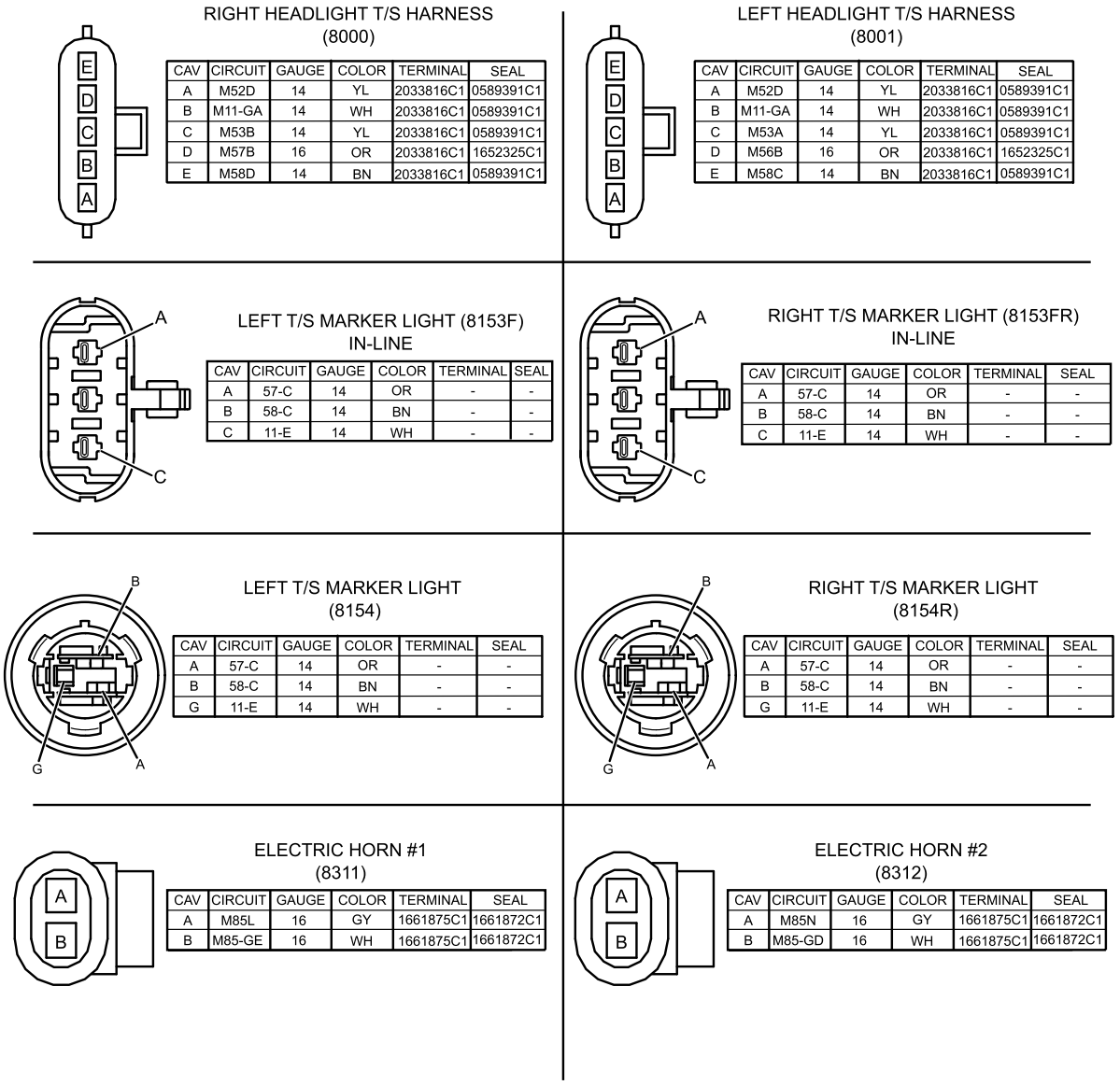
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	K47	16	GY	1661875C1	1661872C1
B	K47A	16	GY	1661875C1	1661872C1

NOTE:
MATES WITH CONNECTOR (9750)

B235002834

Figure 36. Connector Composites (7208M, 7210, 7250F, 7603M, 7605M, 7611).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M52D	14	YL	2033816C1	0589391C1
B	M11-GA	14	WH	2033816C1	0589391C1
C	M53B	14	YL	2033816C1	0589391C1
D	M57B	16	OR	2033816C1	1652325C1
E	M58D	14	BN	2033816C1	0589391C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M52D	14	YL	2033816C1	0589391C1
B	M11-GA	14	WH	2033816C1	0589391C1
C	M53A	14	YL	2033816C1	0589391C1
D	M56B	16	OR	2033816C1	1652325C1
E	M58C	14	BN	2033816C1	0589391C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-C	14	OR	-	-
B	58-C	14	BN	-	-
C	11-E	14	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-C	14	OR	-	-
B	58-C	14	BN	-	-
C	11-E	14	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-C	14	OR	-	-
B	58-C	14	BN	-	-
G	11-E	14	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-C	14	OR	-	-
B	58-C	14	BN	-	-
G	11-E	14	WH	-	-

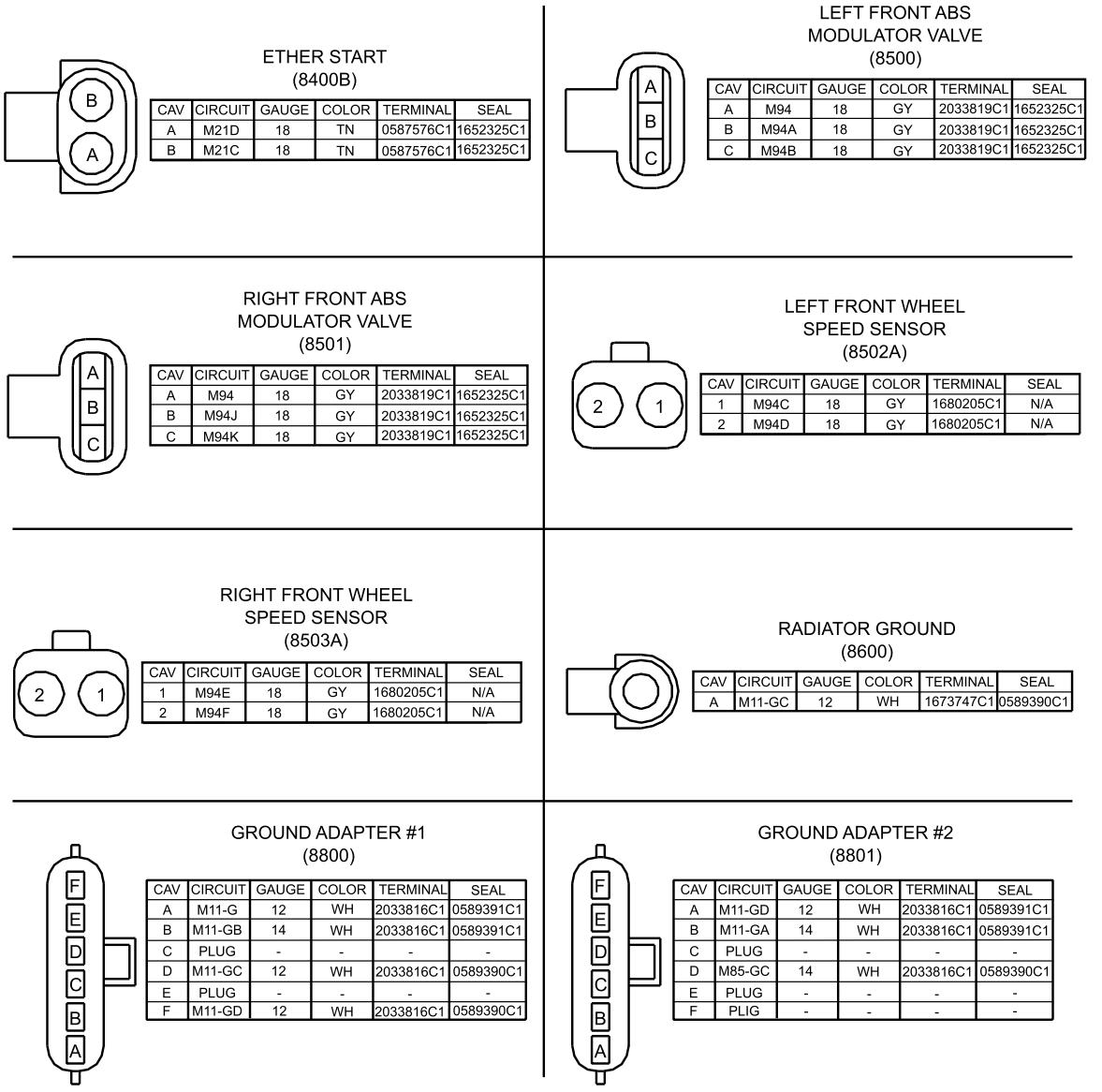
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M85L	16	GY	1661875C1	1661872C1
B	M85-GE	16	WH	1661875C1	1661872C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M85N	16	GY	1661875C1	1661872C1
B	M85-GD	16	WH	1661875C1	1661872C1

B235005780

Figure 37. Connector Composites (8000, 8001, 8153F, 8153FR, 8154, 8154R, 8311, 8312).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M21D	18	TN	0587576C1	1652325C1
B	M21C	18	TN	0587576C1	1652325C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M94	18	GY	2033819C1	1652325C1
B	M94A	18	GY	2033819C1	1652325C1
C	M94B	18	GY	2033819C1	1652325C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M94	18	GY	2033819C1	1652325C1
B	M94J	18	GY	2033819C1	1652325C1
C	M94K	18	GY	2033819C1	1652325C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	M94C	18	GY	1680205C1	N/A
2	M94D	18	GY	1680205C1	N/A

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	M94E	18	GY	1680205C1	N/A
2	M94F	18	GY	1680205C1	N/A

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M11-GC	12	WH	1673747C1	0589390C1

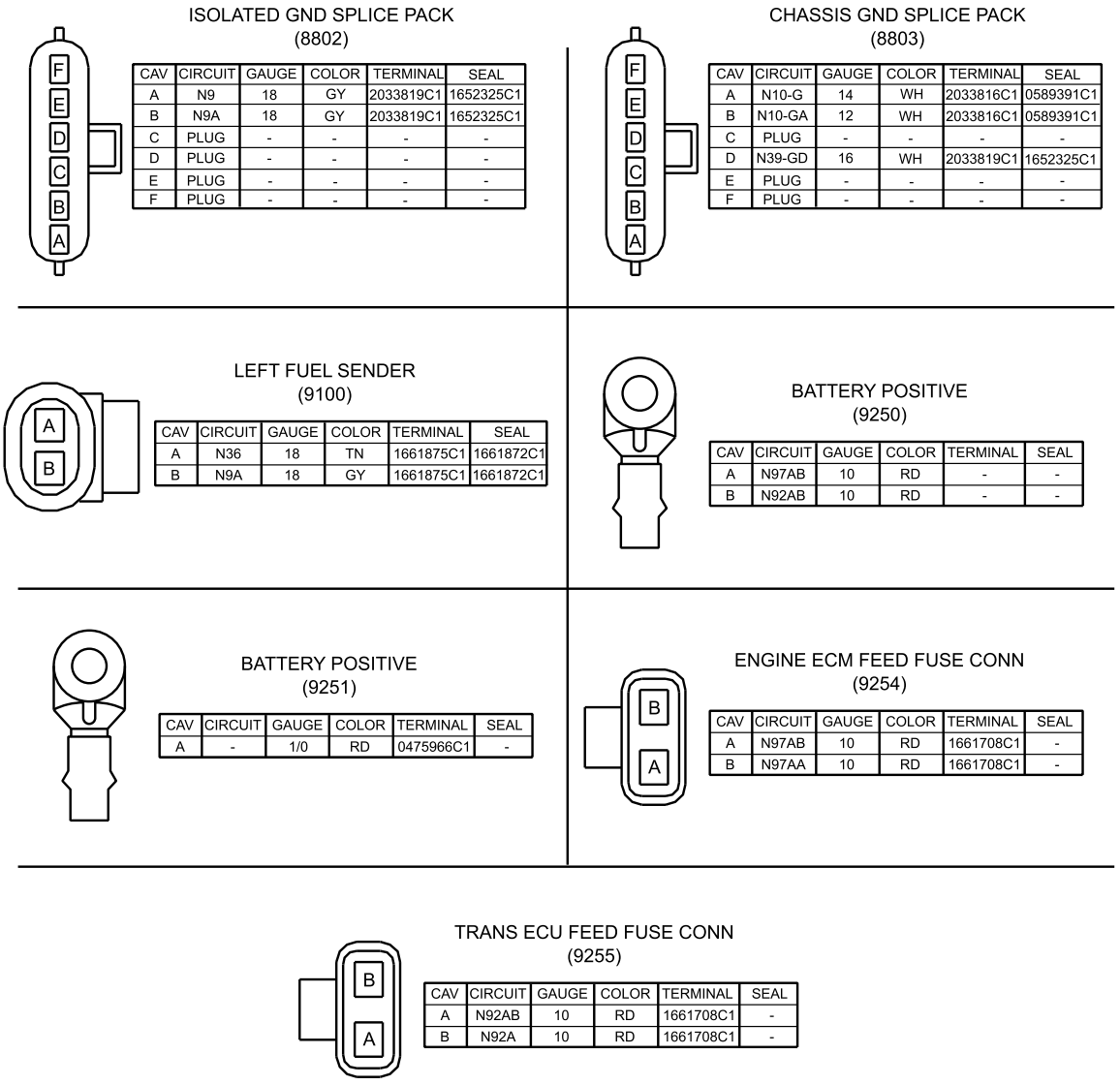
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M11-G	12	WH	2033816C1	0589391C1
B	M11-GB	14	WH	2033816C1	0589391C1
C	PLUG	-	-	-	-
D	M11-GC	12	WH	2033816C1	0589390C1
E	PLUG	-	-	-	-
F	M11-GD	12	WH	2033816C1	0589390C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	M11-GD	12	WH	2033816C1	0589391C1
B	M11-GA	14	WH	2033816C1	0589391C1
C	PLUG	-	-	-	-
D	M85-GC	14	WH	2033816C1	0589390C1
E	PLUG	-	-	-	-
F	PLIG	-	-	-	-

B235005781

Figure 38. Connector Composites (8400B, 8500, 8501, 8502A, 8503A, 8600, 8800, 8801).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N9	18	GY	2033819C1	1652325C1
B	N9A	18	GY	2033819C1	1652325C1
C	PLUG	-	-	-	-
D	PLUG	-	-	-	-
E	PLUG	-	-	-	-
F	PLUG	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N10-G	14	WH	2033816C1	0589391C1
B	N10-GA	12	WH	2033816C1	0589391C1
C	PLUG	-	-	-	-
D	N39-GD	16	WH	2033819C1	1652325C1
E	PLUG	-	-	-	-
F	PLUG	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N36	18	TN	1661875C1	1661872C1
B	N9A	18	GY	1661875C1	1661872C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97AB	10	RD	-	-
B	N92AB	10	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	1/0	RD	0475966C1	-

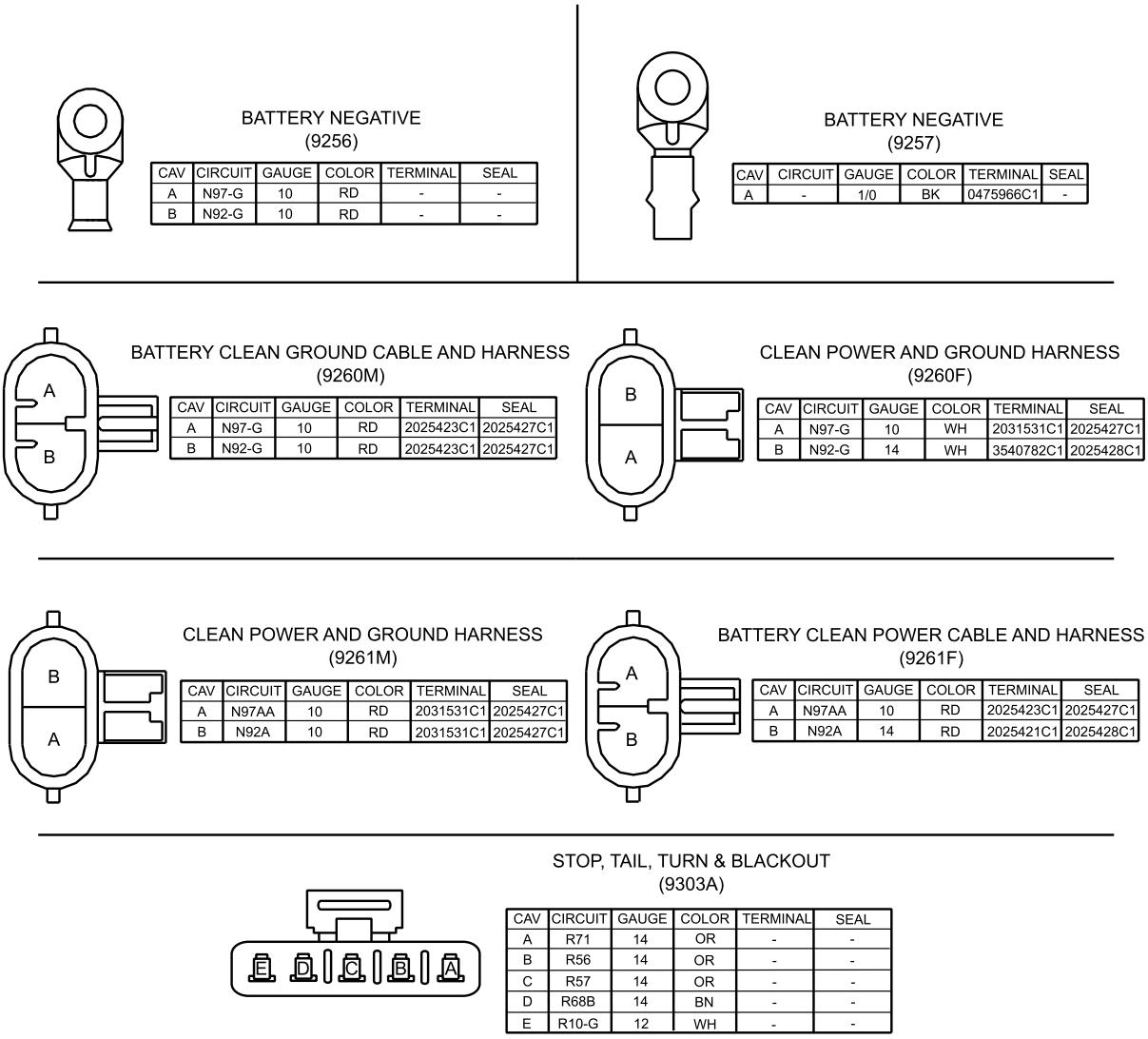
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97AB	10	RD	1661708C1	-
B	N97AA	10	RD	1661708C1	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N92AB	10	RD	1661708C1	-
B	N92A	10	RD	1661708C1	-

B235005782

Figure 39. Connector Composites (8802, 8803, 9100, 9250, 9251, 9254, 9255).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97-G	10	RD	-	-
B	N92-G	10	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	1/0	BK	0475966C1	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97-G	10	RD	2025423C1	2025427C1
B	N92-G	10	RD	2025423C1	2025427C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97-G	10	WH	2031531C1	2025427C1
B	N92-G	14	WH	3540782C1	2025428C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97AA	10	RD	2031531C1	2025427C1
B	N92A	10	RD	2031531C1	2025427C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N97AA	10	RD	2025423C1	2025427C1
B	N92A	14	RD	2025421C1	2025428C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R71	14	OR	-	-
B	R56	14	OR	-	-
C	R57	14	OR	-	-
D	R68B	14	BN	-	-
E	R10-G	12	WH	-	-

B235005783

Figure 40. Connector Composites (9256, 9257, 9260M, 9260F, 9261M, 9261F, 9303A).

CONNECTOR COMPOSITES - (CONTINUED)

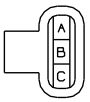
LEFT WHEEL SPEED SENSOR
(9501)



CONNECTOR - 1684261C1
BODY LOCK - 1684263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	R94A	16	GY	1680205C1
2	R94B	16	OR	1680205C1

LEFT MODULATOR
(9502)



CONNECTOR - 1686834C1
BODY LOCK - 1664408C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R94E	16	BK	2033819C1	1652325C1
B	R94F	16	RD	2033819C1	1652325C1
C	R94H	16	BN	2033819C1	1652325C1

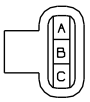
RIGHT WHEEL SPEED SENSOR
(9503)



CONNECTOR - 1684261C1
BODY LOCK - 1684263C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
1	R94C	16	DK BL	1680205C1
2	R94D	16	YL	1680205C1

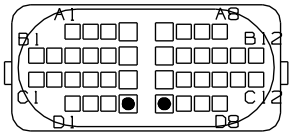
RIGHT MODULATOR
(9504)



CONNECTOR - 1686834C1
BODY LOCK - 1664408C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R94J	16	PL	2033819C1	1652325C1
B	R94K	16	LT GN	2033819C1	1652325C1
C	R94L	16	LT BL	2033819C1	1652325C1

DASH/CENTER CHASSIS INTERCONNECT
(9700)



CONNECTOR - 3535310C1
BODY LOCK - 3535311C1 (X2)
BODY LOCK - 3535312C1 (X1)
PLUG 1 - 3535425C1 (ALL CAVITIES EXCEPT THOSE LISTED FOR PLUG 2)
PLUG 2 - 3535938C1 (CAVITIES A4, A5, B6 B7, C6, & C7 ONLY)

NOTES:
MATES WITH CONNECTOR (9714).
CAVITIES NOT LISTED HAVE PLUGS.

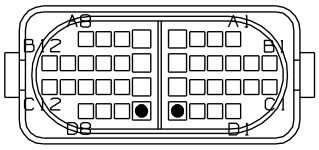
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A3	N94A	16	GY	3535305C1	3535424C1
A4	N71	14	OR	3535934C1	3548945C1
A5	N56	14	OR	3535934C1	3548945C1
A6	N94B	16	OR	3535305C1	3535424C1
A7	N94C	16	DK BL	3535305C1	3535424C1
A8	N94D	16	YL	3535305C1	3535424C1
B1	N94E	16	BK	3535305C1	3535424C1
B2	N94F	16	RD	3535305C1	3535424C1
B3	N94H	16	BN	3535305C1	3535424C1
B4	N94J	16	PL	3535305C1	3535424C1
B5	N94K	16	LT GN	3535305C1	3535424C1
B6	N57	14	OR	3535934C1	3548945C1
B7	N68	14	BN	3535934C1	3548945C1
B8	N94L	16	LT BL	3535305C1	3535424C1
B10	N59J	18	GY	3535305C1	3535424C1
B11	N36	18	TN	3535305C1	3535424C1
B12	N39D	18	GY	3535305C1	3535424C1
C1	N59K	18	GY	3535305C1	3535424C1
C2	N59L	18	GY	3535305C1	3535424C1
C5	N59M	18	GY	3535305C1	3535424C1
C6	N10-G	14	WH	3535934C1	3548945C1
C7	N59H	14	GY	3535934C1	3548945C1
D1	N68	18	BN	3535305C1	3535424C1
D2	N70	18	OR	3535305C1	3535424C1
D8	N9	18	GY	3535305C1	3535424C1

B235002835

Figure 41. Connector Composites (9501, 9502, 9503, 9504, 9700).

CONNECTOR COMPOSITES - (CONTINUED)

DASH/CENTER CHASSIS INTERCONNECT
(9714)

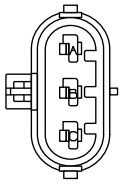


CONNECTOR - 3535306C1
BODY LOCK - 3535307C1 (X2)
BODY LOCK - 3535309C1 (X1)
CONN SEAL - 3535308C1
PLUG 1 - 3535425C1 (ALL CAVITIES EXCEPT THOSE LISTED FOR PLUG 2)
PLUG 2 - 3535938C1 (CAVITIES A4, A5, B6 B7, C6, & C7 ONLY)

NOTES:
MATES WITH CONNECTOR (9700).
CAVITIES NOT LISTED HAVE PLUGS.

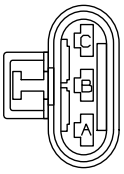
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A3	J94AB	18	GY	3535303C1	3535424C1
A4	J71B	18	OR	3535930C1	3535936C1
A5	J56B	16	OR	3535930C1	3535936C1
A6	J94AA	18	OR	3535030C1	3535424C1
A7	J94AL	18	DK BL	3535303C1	3535424C1
A8	J94AK	18	YL	3535303C1	3535424C1
B1	J94AC	18	BK	3535303C1	3535424C1
B2	J94AD	18	RD	3535303C1	3535424C1
B3	J94AE	18	BN	3535303C1	3535424C1
B4	J94AF	18	VT	3535303C1	3535424C1
B5	J94AH	18	LT GN	3535303C1	3535424C1
B6	J57B	16	OR	3535930C1	3535936C1
B7	J68K	14	BN	3535931C1	3548945C1
B8	J94AJ	18	LT BL	3535303C1	3535424C1
B10	J59A	18	GY	3535303C1	3535424C1
B11	J36A	18	TN	3535303C1	3535424C1
B12	J39A	16	GY	3535303C1	3535424C1
C1	J59B	18	GY	3535303C1	3535424C1
C2	J59C	18	GY	3535303C1	3535424C1
C5	J59D	18	GY	3535303C1	3535424C1
C6	J11-GA	14	WH	3535931C1	3548945C1
C7	J59E	14	GY	3535931C1	3548945C1
C8	J39B	16	GY	3535303C1	3535424C1
D1	J68BA	18	BN	3535303C1	3535424C1
D2	J70BE	18	OR	3535303C1	3535424C1
D6	J87CA	18	GY	3535303C1	3535424C1
D8	J9G	18	GY	3535303C1	3535424C1

TRAILER SOCKET #1
DASH HARNESS
(9715P)



MATES WITH

TRAILER SOCKET #1
CENTER CHASSIS
(9715M)



CONNECTOR - 1667732C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J70B	14	RD	1667736C1	1671603C1
B	J70BF	14	OR	1667736C1	1671603C1
C	J58BF	14	BN	1667736C1	1671603C1

CONNECTOR - 1667733C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

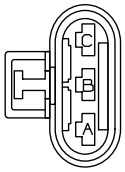
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N70D	10	RD	1667737C1	1667735C1
B	N68D	10	BN	1667737C1	1667735C1
C	N94D	10	GY	1667737C1	1667735C1

B235002833

Figure 42. Connector Composites (9714, 9715, 9715M).

CONNECTOR COMPOSITES - (CONTINUED)

TRAILER SOCKET 1
CENTER CHASSIS
(9715)

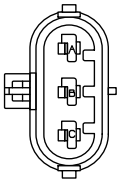


CONNECTOR - 1667733C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N70D	10	RD	1667737C1	1667735C1
B	N68D	10	BN	1667737C1	1667735C1
C	N94D	10	BY	1667737C1	1667735C1

MATES WITH

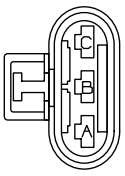
TRAILER SOCKET 1
REAR CHASSIS
(9715F)



CONNECTOR - 1667732C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R70A	10	RD	2025425C1	1667735C1
B	R68A	10	BN	2025425C1	1667735C1
C	R94A	10	DK BL	2025425C1	1667735C1

TRAILER SOCKET #2
DASH HARNESS
(9716P)

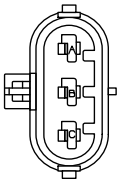


CONNECTOR - 1667733C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J68F	14	BN	1667738C1	1671603C1
B	J56C	14	OR	1667738C1	1671603C1
C	J57C	14	GY	1667738C1	1671603C1

MATES WITH

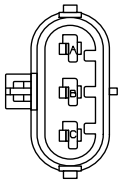
TRAILER SOCKET #2
CENTER CHASSIS
(9716F)



CONNECTOR - 1667732C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N58D	10	BN	2025425C1	1667735C1
B	N56D	10	YL	2025425C1	1667735C1
C	N57D	10	LT GN	2025425C1	1667735C1

TRAILER SOCKET 2
CENTER CHASSIS
(9716)

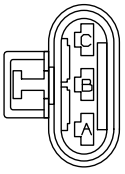


CONNECTOR - 1667732C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N58D	10	BN	2025425C1	1667735C1
B	N56D	10	YL	2025425C1	1667735C1
C	N57D	10	LT GN	2025425C1	1667735C1

MATES WITH

TRAILER SOCKET 2
REAR CHASSIS
(9716M)



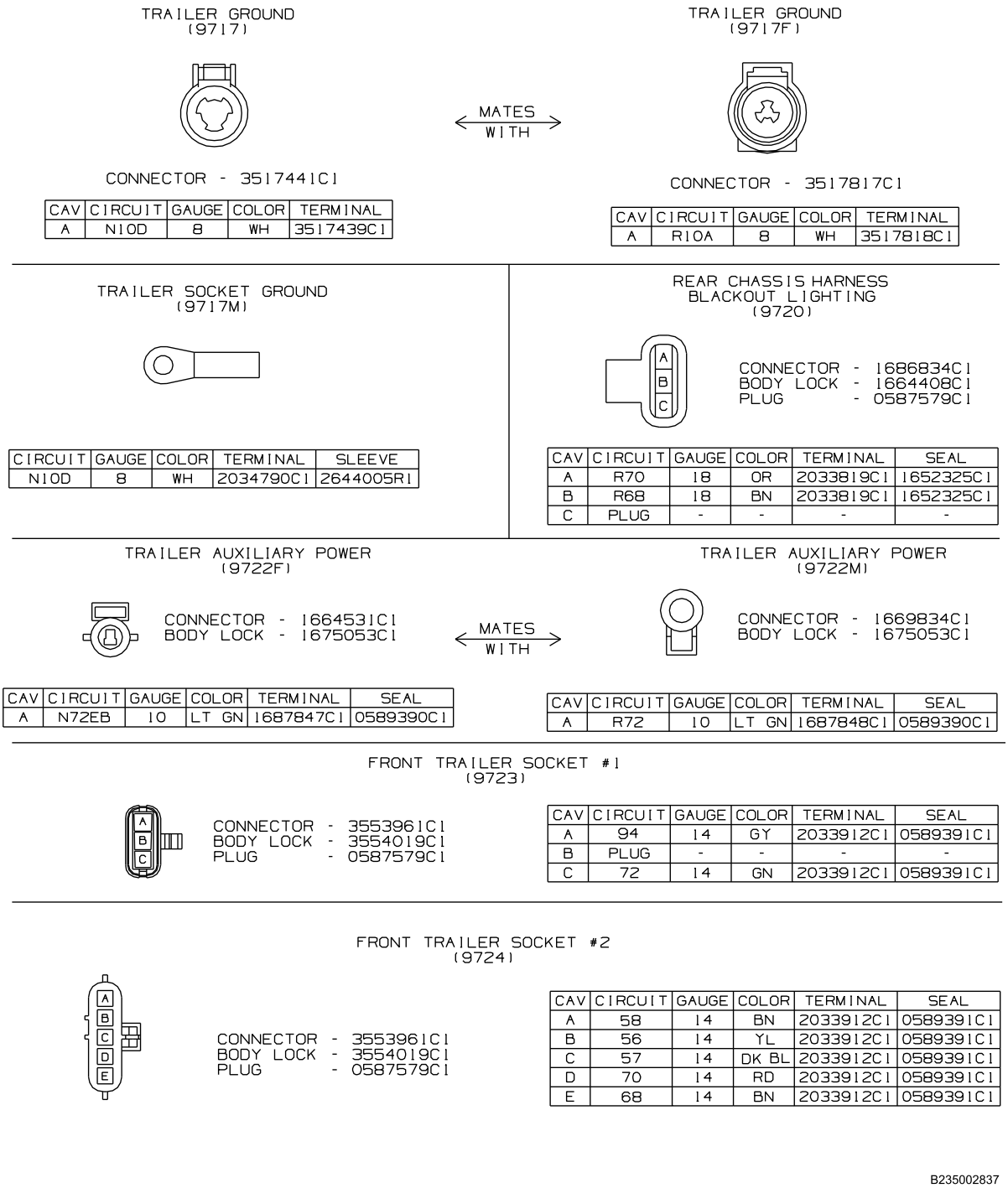
CONNECTOR - 1667733C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R58A	10	BK	1667737C1	1667735C1
B	R56A	10	YL	1667737C1	1667735C1
C	R57A	10	LT GN	1667737C1	1667735C1

B235002836

Figure 43. Connector Composites (9715, 9715F, 9716P, 9716F, 9716, 9716M).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	N10D	8	WH	3517439C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	R10A	8	WH	3517818C1

CIRCUIT	GAUGE	COLOR	TERMINAL	SLEEVE
N10D	8	WH	2034790C1	2644005R1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R70	18	OR	2033819C1	1652325C1
B	R68	18	BN	2033819C1	1652325C1
C	PLUG	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N72EB	10	LT GN	1687847C1	0589390C1

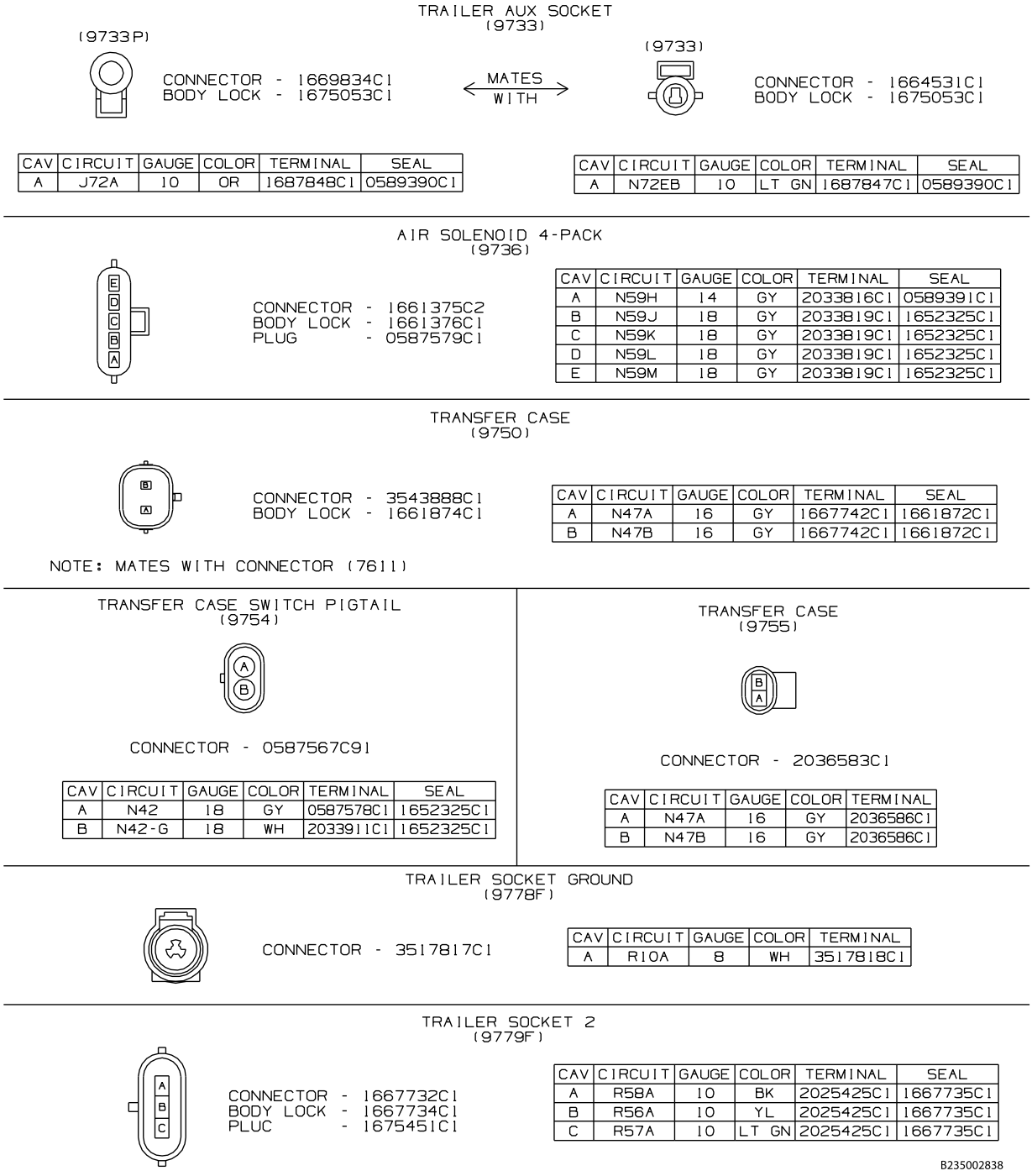
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R72	10	LT GN	1687848C1	0589390C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	94	14	GY	2033912C1	0589391C1
B	PLUG	-	-	-	-
C	72	14	GN	2033912C1	0589391C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	58	14	BN	2033912C1	0589391C1
B	56	14	YL	2033912C1	0589391C1
C	57	14	DK BL	2033912C1	0589391C1
D	70	14	RD	2033912C1	0589391C1
E	68	14	BN	2033912C1	0589391C1

Figure 44. Connector Composites (9717, 9717F, 9717M, 9720, 9722, 9723, 9724).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	J72A	10	OR	1687848C1	0589390C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N72EB	10	LT GN	1687847C1	0589390C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N59H	14	GY	2033816C1	0589391C1
B	N59J	18	GY	2033819C1	1652325C1
C	N59K	18	GY	2033819C1	1652325C1
D	N59L	18	GY	2033819C1	1652325C1
E	N59M	18	GY	2033819C1	1652325C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N47A	16	GY	1667742C1	1661872C1
B	N47B	16	GY	1667742C1	1661872C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N42	18	GY	0587578C1	1652325C1
B	N42-G	18	WH	2033911C1	1652325C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	N47A	16	GY	2036586C1
B	N47B	16	GY	2036586C1

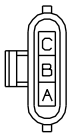
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL
A	R10A	8	WH	3517818C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R58A	10	BK	2025425C1	1667735C1
B	R56A	10	YL	2025425C1	1667735C1
C	R57A	10	LT GN	2025425C1	1667735C1

Figure 45. Connector Composites (9733, 9733P, 9736, 9750, 9754, 9755, 9778F, 9779F).

CONNECTOR COMPOSITES - (CONTINUED)

TRAILER SOCKET 1
(9780M)



CONNECTOR - 1667733C1
BODY LOCK - 1667734C1
PLUG - 1675451C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R70A	10	RD	1667737C1	1667735C1
B	R68A	10	BN	1667737C1	1667735C1
C	R94A	10	DK BL	1667737C1	1667735C1

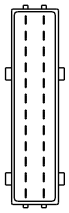
TRAILER AUX POWER
(9783)



CONNECTOR - 1669834C1
BODY LOCK - 1675053C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	R72	10	LT GN	1687848C1	0589390C1

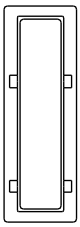
CONNECTION TO CENTER HARNESS
(9800M)



CONNECTOR - 3558022C1
BODY LOCK - 3558056C1
PLUG - 3532129C1

MATES WITH

CONNECTION TO REAR CHASSIS HARNESS
(9800F)



CONNECTOR - 3558026C1
BODY LOCK - 3558056C1
PLUG - 3532129C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	R71	14	OR	3559037C1	3575783C1
2	R56	14	OR	3559037C1	3575783C1
3	R57	14	OR	3559037C1	3575783C1
4	R68	14	BN	3559037C1	3575783C1
5	R68	18	BN	3559036C1	3509903C1
6	R70	18	OR	3559036C1	3509903C1
7	PLUG	-	-	-	-
8	PLUG	-	-	-	-
9	PLUG	-	-	-	-
10	PLUG	-	-	-	-
11	PLUG	-	-	-	-
12	R10-G	12	WH	3559037C1	3575783C1
13	R94A	16	GY	3559037C1	3509903C1
14	R94B	16	OR	3559037C1	3509903C1
15	R94C	16	DK BL	3559037C1	3509903C1
16	R94D	16	YL	3559037C1	3509903C1
17	R94E	16	BK	3559037C1	3509903C1
18	R94F	16	RD	3559037C1	3509903C1
19	R94H	16	BN	3559037C1	3509903C1
20	R94J	16	PL	3559037C1	3509903C1
21	R94K	16	LT GN	3559037C1	3509903C1
22	R94L	16	LT BL	3559037C1	3509903C1
23	PLUG	-	-	-	-
24	PLUG	-	-	-	-

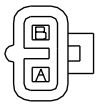
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	N71	14	OR	3559035C1	3575783C1
2	N56	14	OR	3559035C1	3575783C1
3	N57	14	OR	3559035C1	3575783C1
4	N68	14	BN	3559035C1	3575783C1
5	N68	18	BN	3509874C1	3509903C1
6	N70	18	OR	3509874C1	3509903C1
7	PLUG	-	-	-	-
8	PLUG	-	-	-	-
9	PLUG	-	-	-	-
10	PLUG	-	-	-	-
11	PLUG	-	-	-	-
12	N10-GA	12	WH	3559035C1	3575783C1
13	N94A	16	GY	3559035C1	3509903C1
14	N94B	16	OR	3559035C1	3509903C1
15	N94C	16	DK BL	3559035C1	3509903C1
16	N94D	16	YL	3559035C1	3509903C1
17	N94E	16	BK	3559035C1	3509903C1
18	N94F	16	RD	3559035C1	3509903C1
19	N94H	16	BN	3559035C1	3509903C1
20	N94J	16	PL	3559035C1	3509903C1
21	N94K	16	LT GN	3559035C1	3509903C1
22	N94L	16	LT BL	3559035C1	3509903C1
23	PLUG	-	-	-	-
24	PLUG	-	-	-	-

B235002839

Figure 46. Connector Composites (9780M, 9783, 9800F, 9800M).

CONNECTOR COMPOSITES - (CONTINUED)

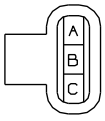
AIR DRYER
(9900C)



CONNECTOR - 1673790C1
BODY LOCK - 1673791C1
PLUG - 0587579C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	N39D	18	GY	2033819C1	1652325C1
B	N39-GD	16	WH	2033819C1	1652325C1

BLACKOUT LIGHTING
(9916)



CONNECTOR - 1686834C1
BODY LOCK - 1664408C1
PLUG - 0587579C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	MU54A	16	BN	2033819C1	1652325C1
B	MU53C	16	YL	2033819C1	1652325C1
C	MU52	16	YL	2033819C1	1652325C1

BLACKOUT MARKER
(9917)



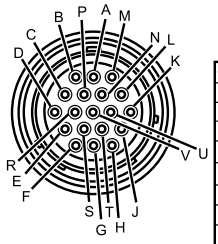
CONNECTOR - 1664531C1
BODY LOCK - 1675053C1

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	MU54B	16	BN	2033819C1	1652325C1

B235002841

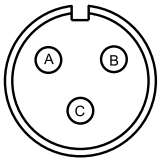
Figure 47. Connector Composites (9900C, 9916, 9917).

CONNECTOR COMPOSITES - (CONTINUED)



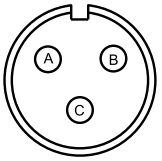
FSS CONTROL PANEL
(C1)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
D	-	-	-	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	-	-	-	-	-
I	-	-	-	-	-
J	-	-	-	-	-
K	-	-	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
P	-	-	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	-	-	-	-	-
U	-	-	-	-	-
V	-	-	-	-	-



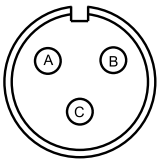
ENGINE FIRE SUPRESSION CYLINDER
(C2)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
-	-	-	-	-	-



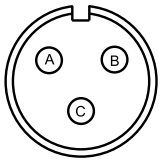
INTERNAL FIRE CYLINDER
(C3)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
-	-	-	-	-	-



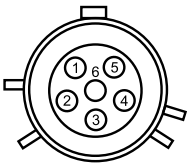
FUEL TANK FIRE CYLINDER
(C4)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
-	-	-	-	-	-



TIRE FIRE SUPRESSION CYLINDER
(C6)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
-	-	-	-	-	-



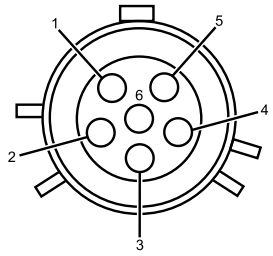
ENGINE FIRE HEAT DETECTOR
(C7)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	21V IGN	-	-	-	-
2	GND	-	-	-	-
3	-	-	-	-	-
4	24V B+	-	-	-	-
5	FSS SWITCHED 24V	-	-	-	-
6	-	-	-	-	-

B235005773

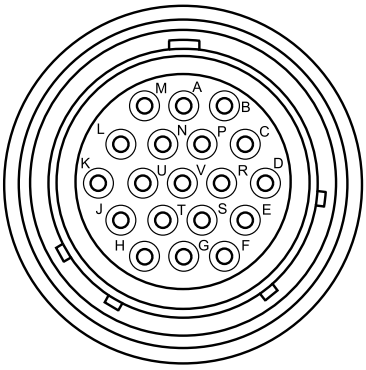
Figure 48. Connector Composites (C1, C2, C3, C4, C6, C7).

CONNECTOR COMPOSITES - (CONTINUED)



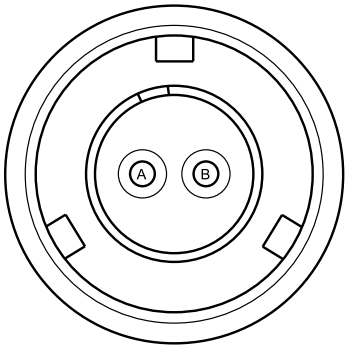
CABIN FIRE HEAT DETECTOR
(C8)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	24V IGN	-	-	-	-
2	GND	-	-	-	-
3	-	-	-	-	-
4	24V B+	-	-	-	-
5	FSS SWITCHED 24V	-	-	-	-
6	-	-	-	-	-



CABIN BULKHEAD PASS THROUGH
(C9)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
D	-	-	-	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	-	-	-	-	-
J	-	-	-	-	-
K	-	-	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
P	-	-	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	-	-	-	-	-
U	-	-	-	-	-
V	-	-	-	-	-



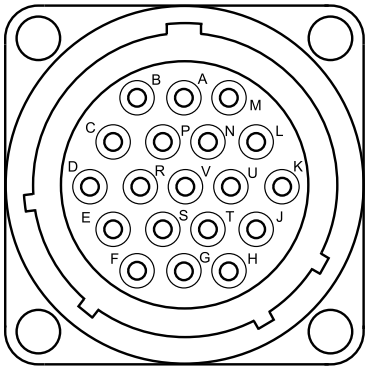
FIRE SUPRESSION HARNESS AT PDM
(C10)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-

B235005774

Figure 49. Connector Composites (C8, C9, C10).

CONNECTOR COMPOSITES - (CONTINUED)



ENGINE BULKHEAD PASS THROUGH
(C11)

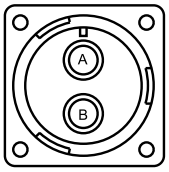
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
D	-	-	-	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	-	-	-	-	-
J	-	-	-	-	-
K	-	-	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
P	-	-	-	-	-
R	-	-	-	-	-
S	-	-	-	-	-
T	-	-	-	-	-
U	-	-	-	-	-
V	-	-	-	-	-

B235005775

Figure 50. Connector Composites (C11).

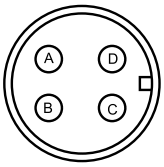
CONNECTOR COMPOSITES - (CONTINUED)

PDM FEED FIREWALL
(J2)



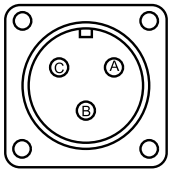
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	24V	1	RD	-	-
B	24V	1	RD	-	-
-	-	-	-	-	-
-	-	-	-	-	-

24V IP FEED HARNESS
(J5)



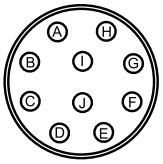
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	+24V	8	RD	-	-
C	+24V	8	RD	-	-
D	-	-	-	-	-

RA TEMP SENSOR INTERFACE
(J10)



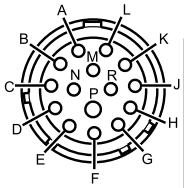
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	RA TEMP SENSOR	-	-	-	-
B	RA TEMP SENSOR RTN	-	-	-	-
C	-	-	-	-	-

HVAC CONTROL 2 (J19)



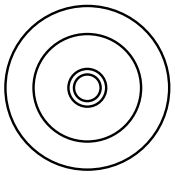
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	COMPRESSOR CLUTCH+24V	-	RD	-	-
B	GND	-	OR	-	-
C	+24V	-	GY	-	-
D	GND	-	GRN	-	-
E	+24V	-	BL	-	-
F	+24V	-	PL	-	-
G	+24V	-	-	-	-
H	GND	-	-	-	-
J	COMPRESSOR CLUTCH RTN	-	-	-	-
I	GND	-	-	-	-

HVAC OPERATOR PANEL
(J22)



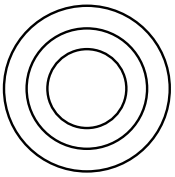
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	24V AFTER LSS SW (S3)	-	-	-	-
B	VENT	-	-	-	-
C	COOL	-	-	-	-
D	HEAT	-	-	-	-
E	DRY	-	-	-	-
F	NBC	-	-	-	-
G	SPARE	-	-	-	-
H	HIGH TEMP LEVEL	-	-	-	-
J	MED TEMP		-	-	-
K	LOW TEMP LEVEL	-	-	-	-
L	24V IN	-	-	-	-
M	24V AFTER LSS SW	-	-	-	-
N	RA SPEED POT	-	-	-	-
P	RA SPEED POT RTN	-	-	-	-
R	GND	-	-	-	-

LOW PRESSURE SWITCH SIGNAL CIRCUIT
(HARNESS SIDE)
(J33)



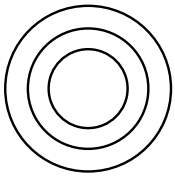
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	A/C LOW PRESSURE SIGNAL	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

3-WAY VALVE INTERFACE
(J33)



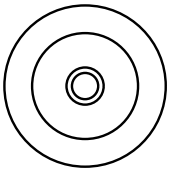
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	3-WAY VALVE RTN	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

HVAC ENGINE HARNESS 3-WAY VALVE
(J33)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	3-WAY VALVE +24V	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

LEFT HVAC CONTROL 2
(J34)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	GND	12	BK	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

B235005741

Figure 51. Connector Composites (J2, J5, J10, J19, J22, J33, J33, J33, J34).

CONNECTOR COMPOSITES - (CONTINUED)

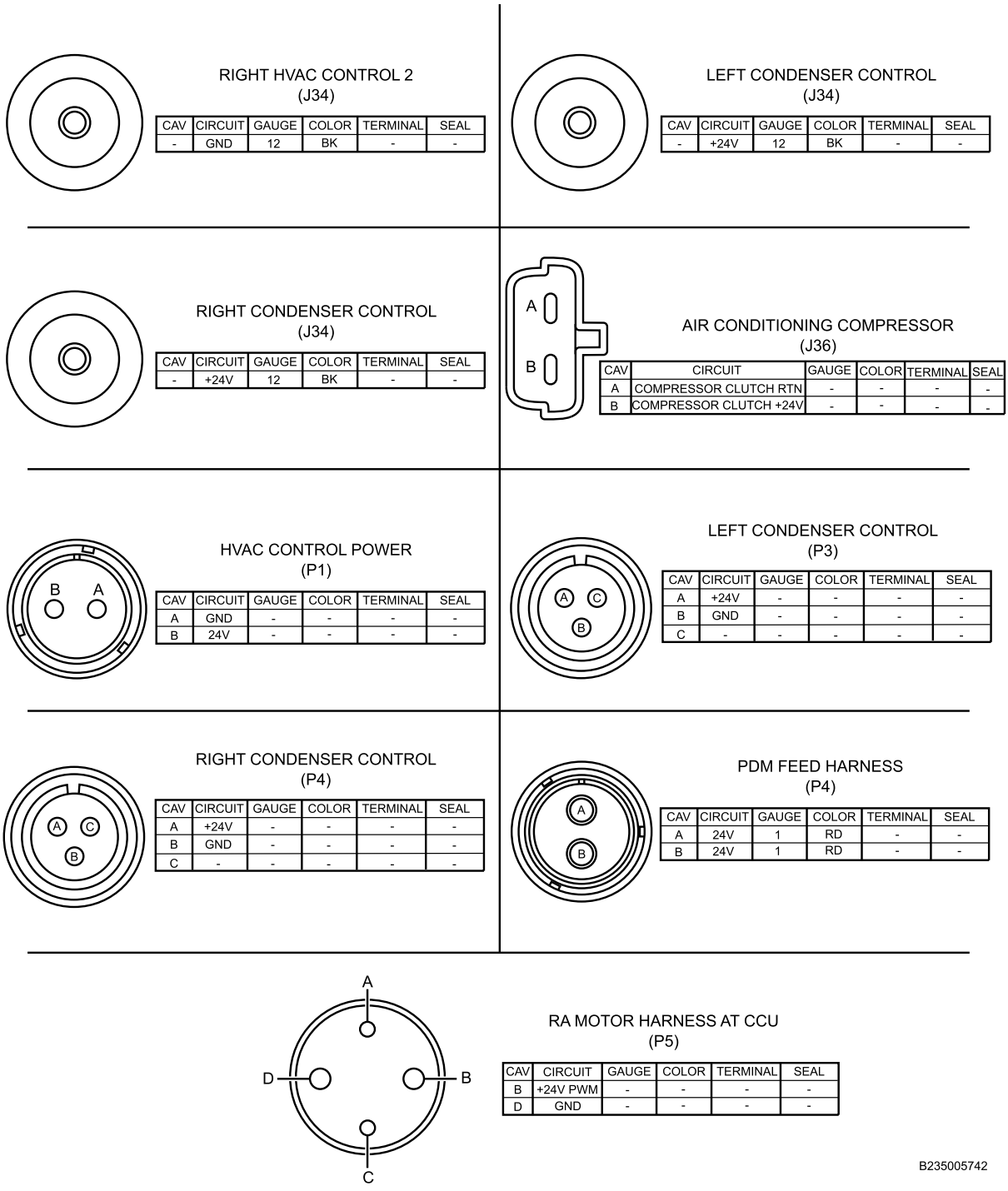
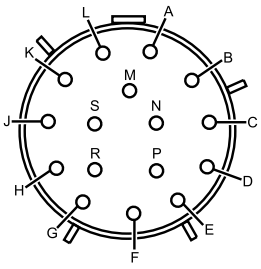


Figure 52. Connector Composites (J34, J34, J34, J36, P1, P3, P4, P4, P5).

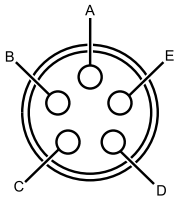
CONNECTOR COMPOSITES - (CONTINUED)

HVAC CONTROL IN HARNESS AT CCU
(P6)



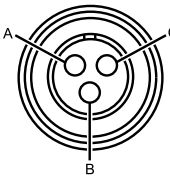
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	HIGH IDLE SPEED REQUEST	-	-	-	-
B	LOW PRESSURE SW GND	-	-	-	-
C	LOW PRESSURE SW SIGNAL RTN	-	-	-	-
D	COMPRESSOR CLUTCH	-	-	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	3 WAY VALVE RETURN	-	-	-	-
J	COMPRESSOR CLUTCH RTN	-	-	-	-
K	-	-	-	-	-
L	SPARE	-	-	-	-
M	-	-	-	-	-
N	CONDENSER FAN ON	-	-	-	-
P	-	-	-	-	-
R	3 WAY VALVE	-	-	-	-
S	GND	-	-	-	-

RA MOTOR
(P8)



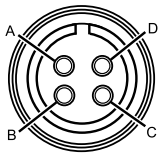
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	+24V PWM	-	-	-	-
C	-	-	-	-	-
D	GND	-	-	-	-
E	GND	-	-	-	-

RA TEMP SENSOR
(P10)



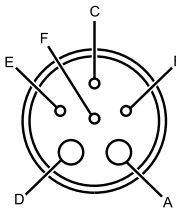
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	RA TEMP SENSOR	-	-	-	-
B	RA TEMP SENSOR RTN	-	-	-	-
C	-	-	-	-	-

TRINARY SWITCH
(P12)



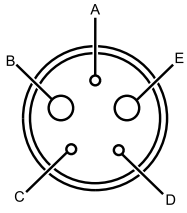
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	MEDIUM PRESSURE SIGNAL	-	-	-	-
B	HI/LO PRESSURE SIGNAL	-	-	-	-
C	+24V	-	-	-	-
D	+24V	-	-	-	-

FA MOTOR HARNESS AT CCU
(P14)



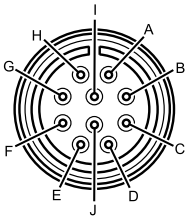
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
D	+24V	-	-	-	-
E	-	-	-	-	-
F	-	-	-	-	-

RA MOTOR
(P17)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	-	-	-	-
B	-	-	-	-	-
C	-	-	-	-	-
D	+24V	-	-	-	-
E	-	-	-	-	-

HVAC
(P19)

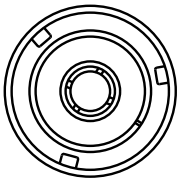


CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	COMPRESSOR CLUTCH	-	-	-	-
B	GND	-	-	-	-
C	+24V	-	-	-	-
D	GND	-	-	-	-
E	+24V	-	-	-	-
F	+24V	-	-	-	-
G	+24V	-	-	-	-
H	GND	-	-	-	-
J	GND	-	-	-	-
I	COMPRESSOR CLUTCH RTN	-	-	-	-

B235005743

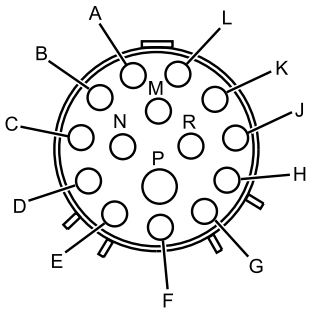
Figure 53. Connector Composites (P6, P8, P10, P12, P14, P17, P19).

CONNECTOR COMPOSITES - (CONTINUED)



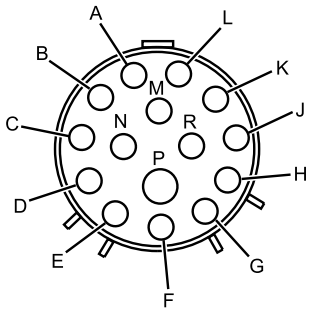
HVAC CONTROL POWER
(P20)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	+24V	-	-	-	-



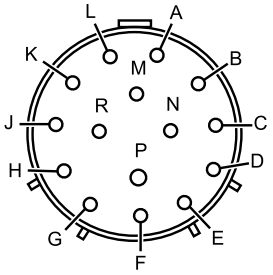
HVAC OPERATOR PANEL
HARNESS AT CCU
(P21)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	VENT	-	-	-	-
C	COOL	-	-	-	-
D	HEAT	-	-	-	-
E	DRY	-	-	-	-
F	NBC	-	-	-	-
G	SPARE	-	-	-	-
H	HIGH TEMP LEVEL	-	-	-	-
J	MED TEMP	-	-	-	-
K	LOW TEMP LEVEL	-	-	-	-
L	24V IN	-	-	-	-
M	24V AFTER LSS SW	-	-	-	-
N	RA SPEED POT.	-	-	-	-
P	RA SPEED POT RTN.	-	-	-	-
R	GND	-	-	-	-



HVAC OPERATOR PANEL
(P22)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	24V AFTER-LSS SW (S3)	-	-	-	-
B	VENT	-	-	-	-
C	COOL	-	-	-	-
D	HEAT	-	-	-	-
E	DRY	-	-	-	-
F	NBC	-	-	-	-
G	SPARE	-	-	-	-
H	HIGH TEMP LEVEL	-	-	-	-
J	MED TEMP	-	-	-	-
K	LOW TEMP LEVEL	-	-	-	-
L	24V IN	-	-	-	-
M	24V AFTER LSS SW	-	-	-	-
N	RA SPEED POT	-	-	-	-
P	RA SPEED POT RTN.	-	-	-	-
R	GND	-	-	-	-



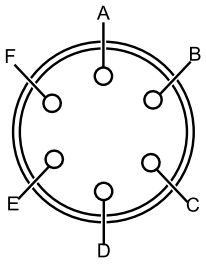
HVAC CONTROL HARNESS AT CCU
(P23)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	CLUTCH +24V (AFTER FREEZE SW)	-	-	-	-
B	CLUTCH +24V (BEFORE FREEZE SW)	-	-	-	-
C	MEDIUM PRESSURE SIGNAL	-	-	-	-
D	+24V	-	-	-	-
E	HI/LO PRESSURE SIGNAL	-	-	-	-
F	+24V	-	-	-	-
G	RA TEMP SENSOR RTN	-	-	-	-
H	RA TEMP SENSOR	-	-	-	-

B235005768

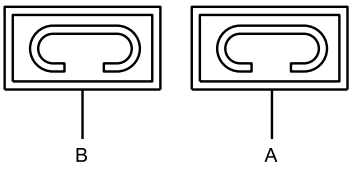
Figure 54. Connector Composites (P20, P21, P22, P23).

CONNECTOR COMPOSITES - (CONTINUED)



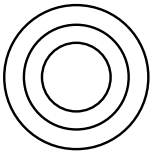
HVAC
(P29)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	3 WAY VALVE	-	-	-	-
B	SPARE	-	-	-	-
C	HIGH IDLE SPEED REQUEST	-	-	-	-
D	LOW PRESSURE SW GND	-	-	-	-
E	LOW PRESSURE SW SIGNAL RTN	-	-	-	-
F	3 WAY VALVE RETURN	-	-	-	-



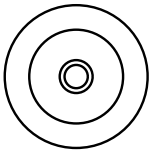
FREEZE SWITCH
(P31)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	CLUTCH +24V (AFTER FREEZE SW)	-	-	-	-
B	CLUTCH +24V (BEFORE FREEZE SW)	-	-	-	-



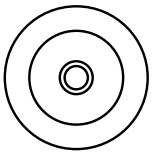
LOW PRESSURE SWITCH GROUND CIRCUIT
(HARNESS SIDE)
(P33)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	-	-	-



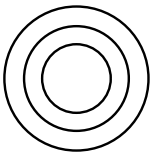
3-WAY VALVE INTERFACE
(P33)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	3 WAY VALVE +24V	-	-	-	-



HVAC ENGINE HARNESS
3-WAY VALVE
(P33)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	3 WAY VALVE RTN	-	-	-	-



LEFT HVAC CONTROL 2
(P34)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	+24V	12	BK	-	-

B235005767

Figure 55. Connector Composites (P29, P31, P33, P33, P33, P34).

CONNECTOR COMPOSITES - (CONTINUED)

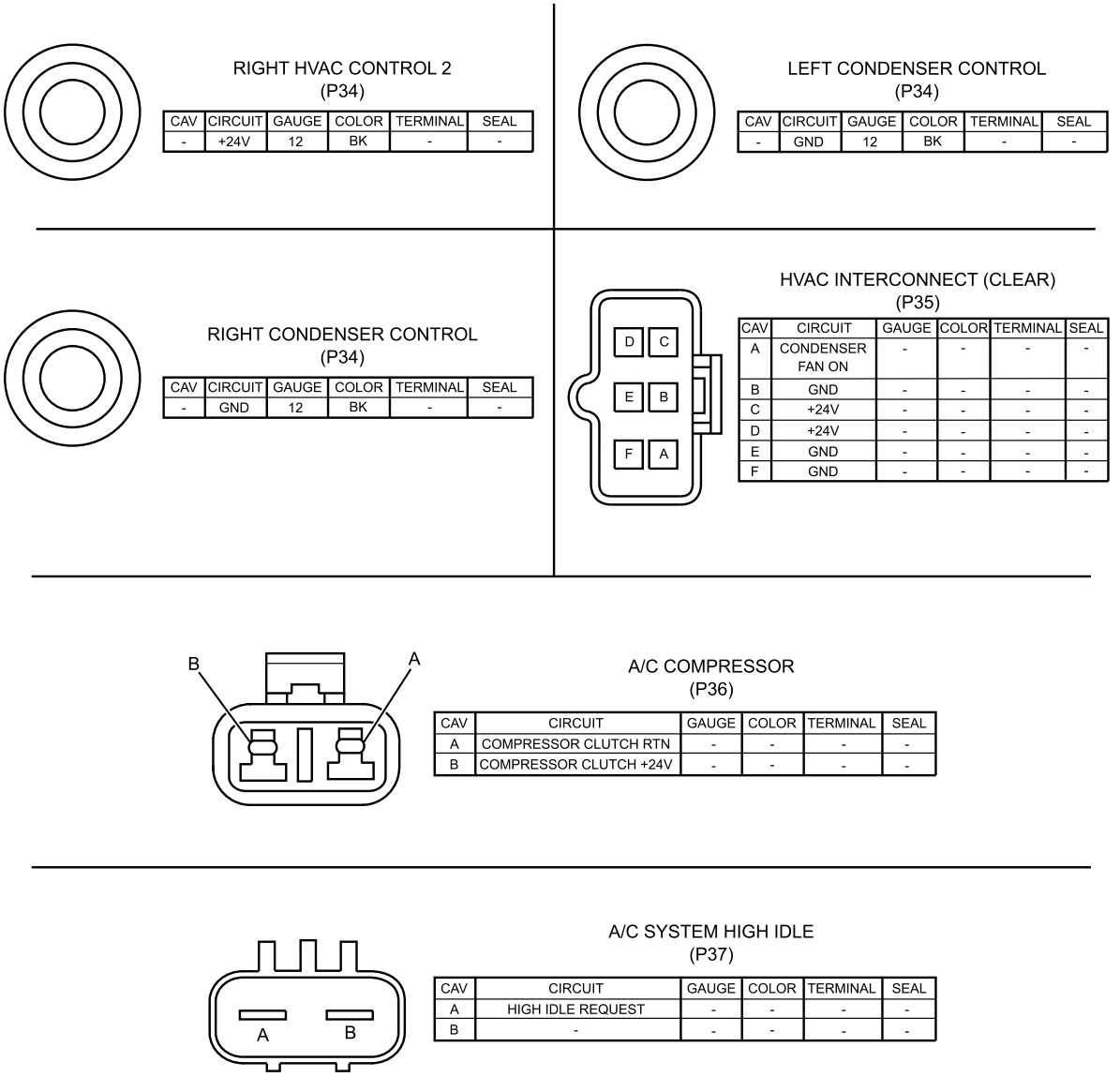
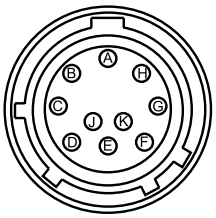


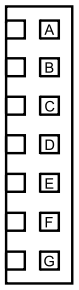
Figure 56. Connector Composites (P34, P34, P34, P35, P36, P37).

CONNECTOR COMPOSITES - (CONTINUED)

INTERNAL SPOT LIGHT CONNECTOR
(LAM1001)

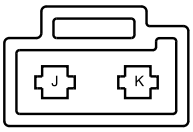


CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	OR	-	-
B	-	-	BL	-	-
C	-	-	GN	-	-
D	-	-	YL	-	-
E	-	-	RD	-	-
F	-	-	BN	-	-
G	-	-	WH	-	-
H	-	-	BARE	-	-
J	-	-	RD	-	-
K	-	-	WH	-	-



SPOT LIGHT CONNECTOR/SWITCH I/P
(LAM1002)

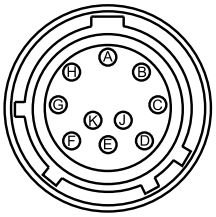
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-
B	-	-	WH	-	-
C	-	-	BN	-	-
D	-	-	GN	-	-
E	-	-	YL	-	-
F	-	-	BL	-	-
G	-	-	OR	-	-



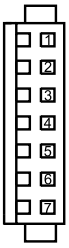
SPOT LIGHT CONNECTOR IP HARNESS
(LAM1003)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
J	-	16	RD	-	-
K	-	16	WH	-	-

EXTERNAL SPOT LIGHT CONNECTOR
(LAM1004)

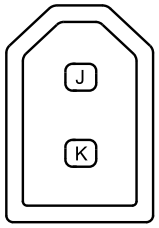


CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	OR	-	-
B	-	-	BL	-	-
C	-	-	GN	-	-
D	-	-	YL	-	-
E	-	-	RD	-	-
F	-	-	BN	-	-
G	-	-	WH	-	-
H	-	-	BARE	-	-
J	-	-	RD	-	-
K	-	-	WH	-	-



SPOT LIGHT CONNECTION
(LAM1005)

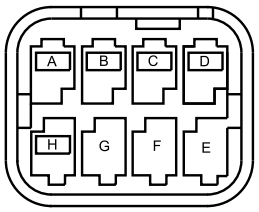
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	-	22	WH	-	-
2	-	22	BN	-	-
3	-	22	RD	-	-
4	-	22	YL	-	-
5	-	22	GN	-	-
6	-	22	BL	-	-
7	-	22	OR	-	-



SPOT LIGHT
(LAM1006)

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
J	-	16	RD	-	-
K	-	16	WH	-	-

LEFT MIRROR JUMPER HARNESS TO DOOR
(LAM1007)



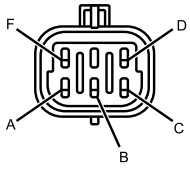
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78A	20	LT GN	-	-
B	A78KA	18	LT GN	-	-
C	A78C	20	GN	-	-
D	A78H	18	LT GN	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	A78-GD	20	WH	-	-

B235005744

Figure 57. Connector Composites (LAM1001, LAM1002, LAM1003, LAM1004, LAM1005, LAM1006, LAM1007).

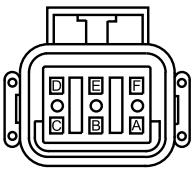
CONNECTOR COMPOSITES - (CONTINUED)

LEFT POWER MIRROR
(LAM1008)



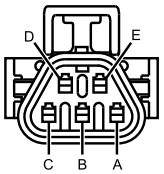
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78A	20	LTGN	12045773	15324973
B	A78B	20	LTGN	12045773	15324973
C	A78C	20	LTGN	12045773	15324973
D	A78D	18	DKGN	12045773	15324973
E	-	-	-	-	-
F	A78-GD	20	WH	12045773	15324973

LEFT MIRROR JUMPER HARNESS
THROUGH MIRROR
(LAM1009)



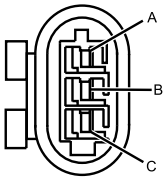
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78A	18	RD	-	-
B	A78KA	20	GN	-	-
C	A78C	20	YL	-	-
D	A78-GD	18	BK	-	-
E	-	-	-	-	-
F	A78H	20	WH	-	-

LEFT MIRROR JUMPER HARNESS IN MIRROR
(LAM1010)



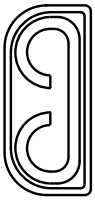
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78-GD	18	WH	-	-
B	A78A	20	YL	-	-
C	A78KA	18	RD	-	-
D	A78H	18	BK	-	-
E	A78C	20	GN	-	-

CAMSHAFT POSITION (CMP) SENSOR
(LAM1011)



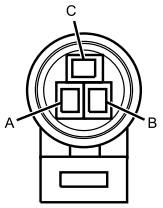
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97GA	18	VT	-	-
B	97CY4	18	VT	-	-
C	97BE	18	VT	-	-

SPOT LIGHT MOTOR STATIC
DRAIN WIRE CONNECTOR IP
(LAM1012)



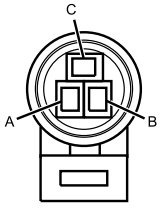
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
H	-	-	BARE	-	-

ENGINE OIL PRESSURE SENSOR
(LAM1013)



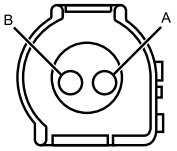
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97DC3	18	VT	-	-
B	97CY3	18	VT	-	-
C	97BK	18	VT	-	-

MANIFOLD ABSOLUTE PRESSURE SENSOR
(LAM1014)



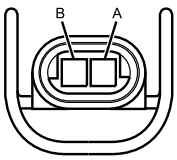
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97DC2	18	VT	-	-
B	97CY2	18	VT	-	-
C	97AY	18	VT	-	-

ENGINE OIL TEMPERATURE
(LAM1015)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97DC4	18	VT	-	-
B	97CE	18	VT	-	-

INJECTOR PRESSURE REGULATOR
(LAM1016)



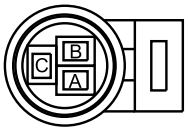
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97DA	18	VT	-	-
B	97BH	18	VT	-	-

B235005745

Figure 58. Connector Composites (LAM1008, LAM1009, LAM1010, LAM1011, LAM1012, LAM1013, LAM1014, LAM1015, LAM1016).

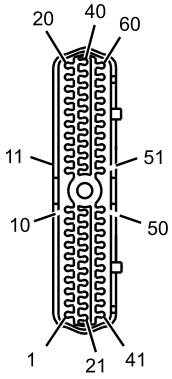
CONNECTOR COMPOSITES - (CONTINUED)

INJECTOR CONTROL PRESSURE SENSOR
(LAM1018)



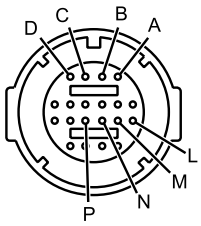
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97DC1	18	VT	-	-
B	97CY1	18	VT	-	-
C	97BG	18	VT	-	-

ENGINE CONTROL MODULE (ECM)
(LAM1019)



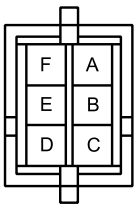
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
12	97CE	18	VT	-	-
13	97BF	18	VT	-	-
14	97BK	18	VT	-	-
16	97BG	18	VT	-	-
17	97DA	18	VT	-	-
19	97DC	18	VT	-	-
21	97BR	18	VT	-	-
24	97DW	18	VT	-	-
25	97BN	18	VT	-	-
26	97MM	18	VT	-	-
30	97AY	18	VT	-	-
37	97BH	18	VT	-	-
40	97CY	18	VT	-	-
41	97BP	18	VT	-	-
42	97MY	18	VT	-	-
43	97AB	18	VT	-	-
44	97AP	18	VT	-	-
46	97AD	18	VT	-	-
51	97BE	18	VT	-	-
53	97GA	18	VT	-	-

FUEL INJECTOR HARNESS
(LAM1020)



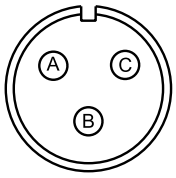
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97MY	18	VT	-	-
B	97AB	18	VT	-	-
C	97BR	18	VT	-	-
D	97BP	18	VT	-	-
L	97MM	18	VT	-	-
M	97AD	18	VT	-	-
N	97BN	18	VT	-	-
P	97AP	18	VT	-	-

DOME LAMP CONNECTOR
(LAM1021)



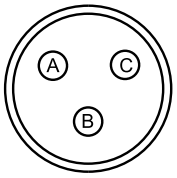
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A63VB	16	BK	12034047	-
B	A63-GA	16	WH	12034047	-
C	A63AB	16	RD	12034047	-
D	A63AA	16	GY	12034047	-
E	-	-	-	-	-
F	-	-	-	-	-

FRONT CREW LIGHT
(LAM1022)



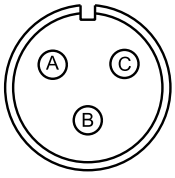
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	+24V	16	BK	-	-
B	GND	16	WH	-	-
C	-	-	-	-	-

RIGHT REAR CREW LIGHT
(LAM1023)



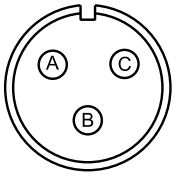
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	+24V	16	RD	-	-
B	GND	16	WH	-	-
C	+24V	16	BL	-	-

RIGHT REAR CREW LIGHT
(LAM1024)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	+24V	16	BK	-	-
B	GND	16	RD	-	-
C	+24V	16	BL	-	-

LEFT REAR CREW LIGHT
(LAM1025)



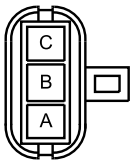
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	+24V	16	BK	-	-
B	GND	16	RD	-	-
C	+24V	16	BL	-	-

B235005746

Figure 59. Connector Composites (LAM1018, LAM1019, LAM1020, LAM1021, LAM1022, LAM1023, LAM1024, LAM1025).

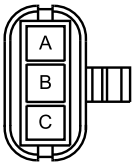
CONNECTOR COMPOSITES - (CONTINUED)

RAMP LIMIT
(LAM1026)



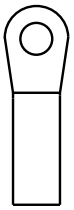
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	COM	16	GY	12034047	-
B	NO-A	16	RD	12077411	-
C	NC-A	16	BL	12077411	-

RAMP LIMIT
(LAM1027)



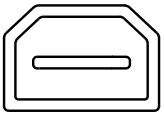
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	COM	16	GY	12048159	15324982
B	NC	16	RD	12048159	15324982
C	NO	16	BL	12048159	15324982

RAMP LIMIT SWITCH
(LAM1028)



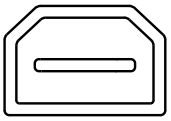
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	COM	16	GY	-	-
B	NC	16	RD	-	-
C	NO	16	BL	-	-

SPOT LIGHT MOTOR STATIC
DRAIN JUMPER/WIRE CONNECTOR ROOF
(LAM1029)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	BARE	-	-

SPOT LIGHT MOTOR STATIC
DRAIN WIRE/JUMPER I/P HARNESS
(LAM1030)



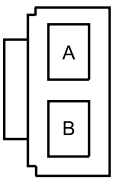
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
H	-	-	BARE	-	-

SPOT LIGHT MOTOR STATIC
DRAIN JUMPER/WIRE HARNESS
(LAM1031)



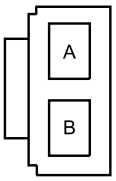
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
H	-	-	BARE	-	-

LEFT SIDE POWER SOCKET
(LAM 1032)



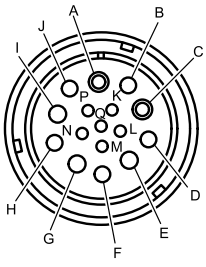
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	86S	12	LTGN	-	-
B	86GS	12	WH	-	-

RIGHT SIDE POWER SOCKET
(LAM 1033)



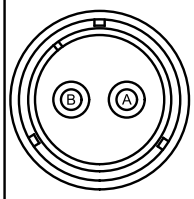
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	86T	12	LTGN	-	-
B	86GT	12	WH	-	-

TURRET POWER FEED
(LAM1034)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	4	BK	-	-
B	-	-	-	-	-
C	24V	4	RD	-	-
D	-	-	-	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	-	-	-	-	-
I	-	-	-	-	-
J	-	-	-	-	-
K	-	-	-	-	-
L	-	-	-	-	-
M	-	-	-	-	-
N	-	-	-	-	-
O	-	-	-	-	-
P	-	-	-	-	-

RAMP FEED HARNESS
(LAM1035)

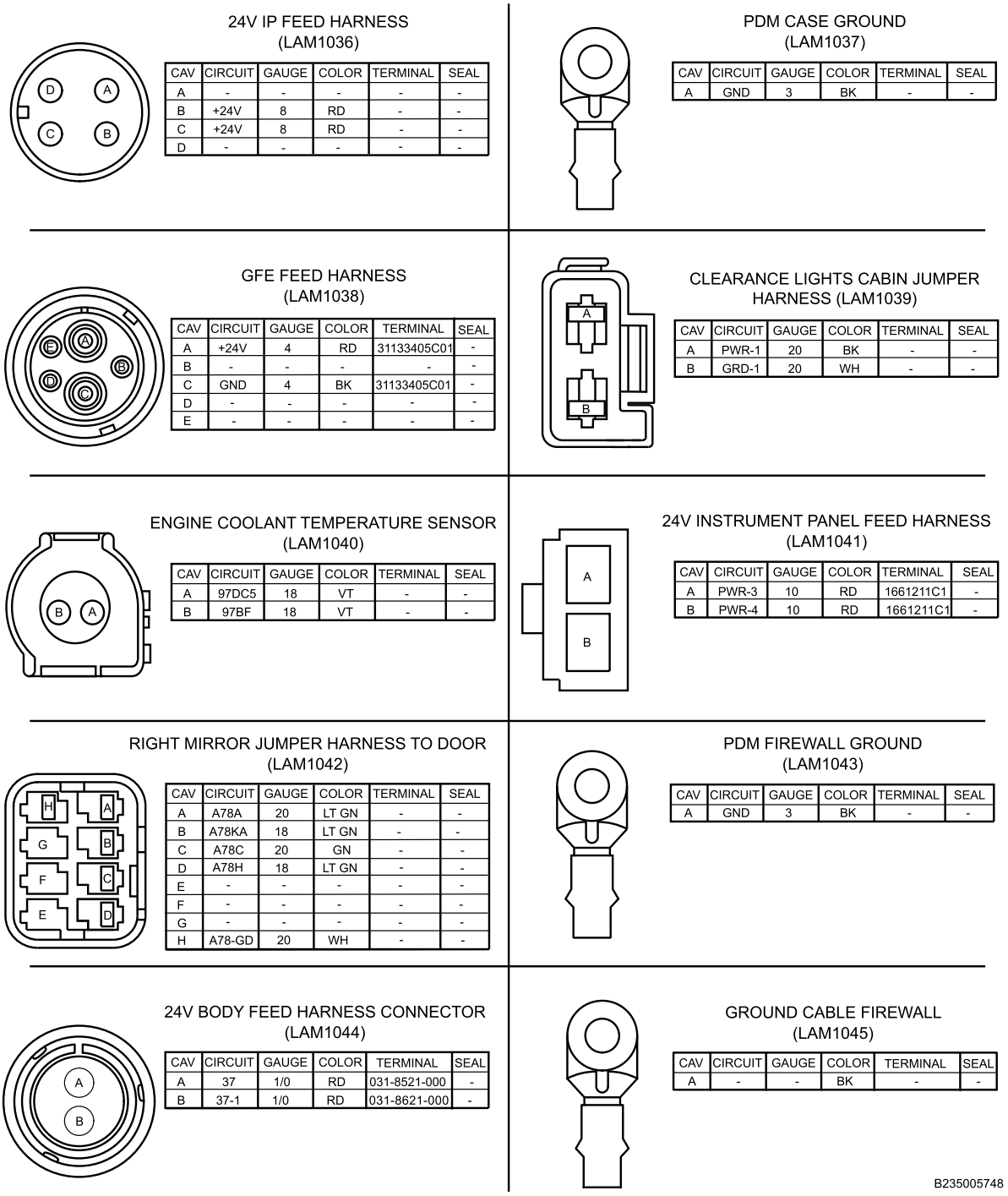


CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	4	BK	-	-
B	24V	4	RD	-	-

B235005747

Figure 60. Connector Composites (LAM1026, LAM1027, LAM1028, LAM1029, LAM1030, LAM1031, LAM1032, LAM1033, LAM1034, LAM1035).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	-	-	-
B	+24V	8	RD	-	-
C	+24V	8	RD	-	-
D	-	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	3	BK	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	+24V	4	RD	31133405C01	-
B	-	-	-	-	-
C	GND	4	BK	31133405C01	-
D	-	-	-	-	-
E	-	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PWR-1	20	BK	-	-
B	GRD-1	20	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	97DC5	18	VT	-	-
B	97BF	18	VT	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PWR-3	10	RD	1661211C1	-
B	PWR-4	10	RD	1661211C1	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	A78A	20	LT GN	-	-
B	A78KA	18	LT GN	-	-
C	A78C	20	GN	-	-
D	A78H	18	LT GN	-	-
E	-	-	-	-	-
F	-	-	-	-	-
G	-	-	-	-	-
H	A78-GD	20	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	3	BK	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	37	1/0	RD	031-8521-000	-
B	37-1	1/0	RD	031-8621-000	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	BK	-	-

Figure 61. Connector Composites (LAM1036, LAM1037, LAM1038, LAM1039, LAM1040, LAM1041, LAM1042, LAM1043, LAM1044, LAM1045).

CONNECTOR COMPOSITES - (CONTINUED)

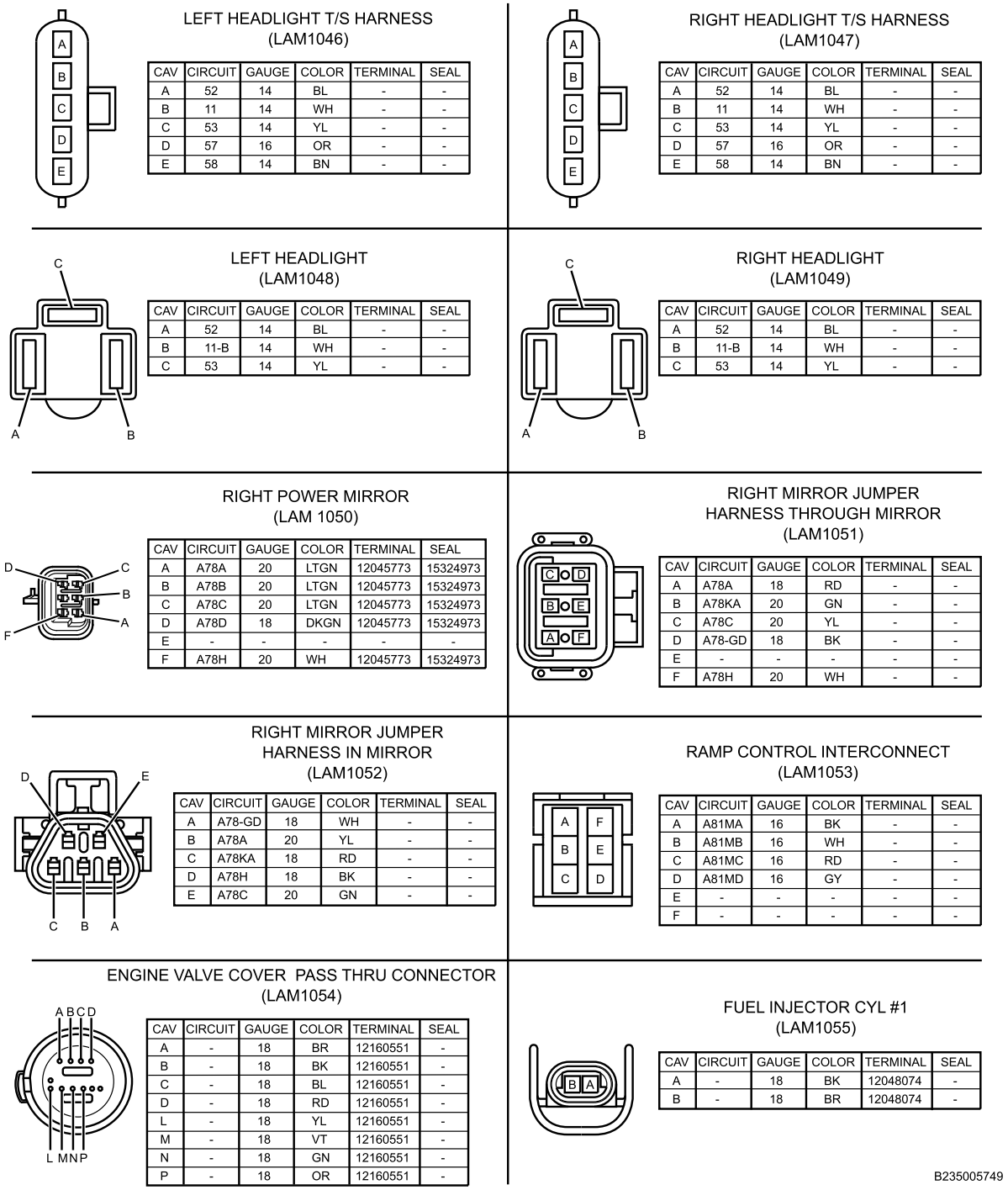
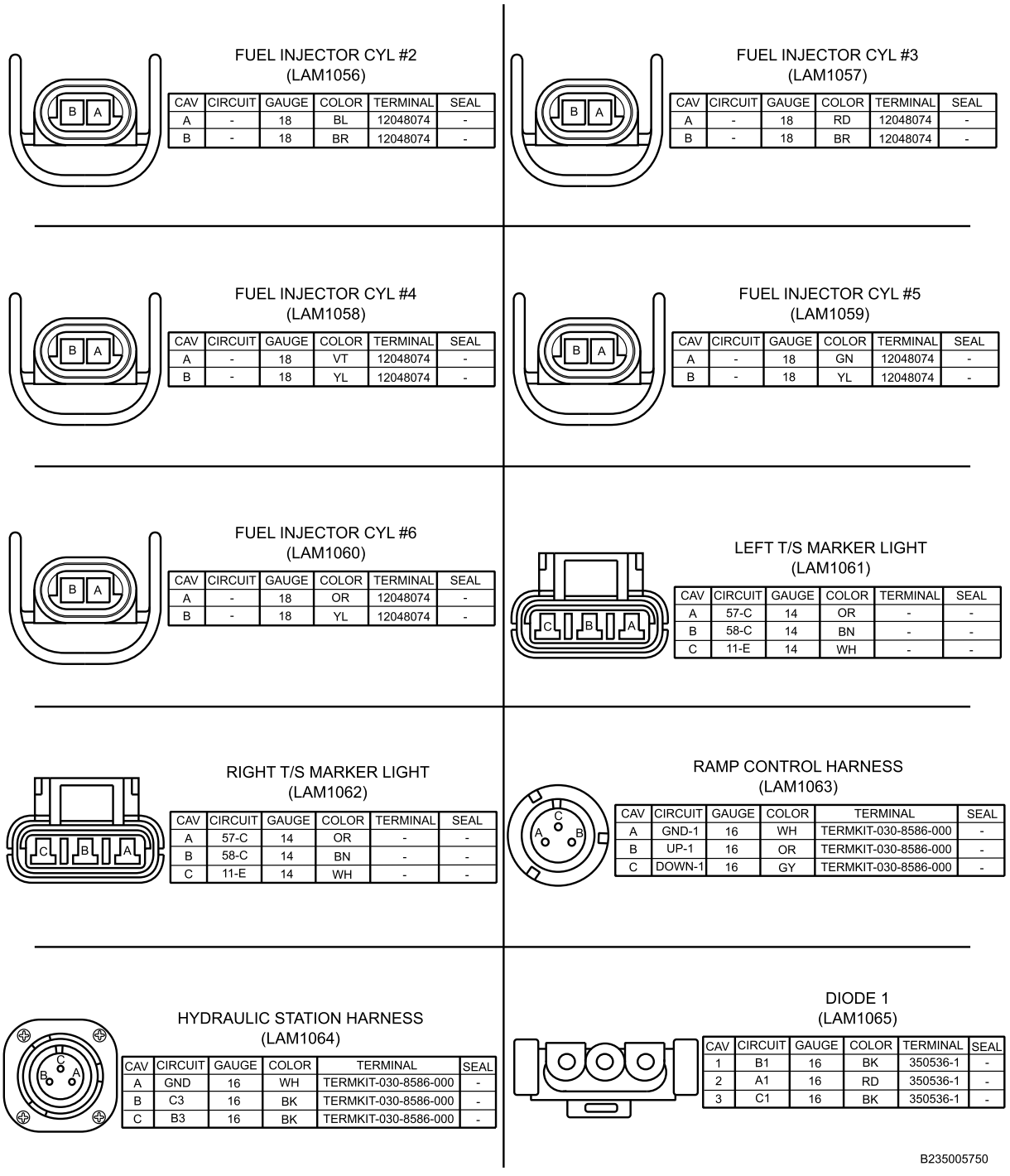


Figure 62. Connector Composites (LAM1046, LAM1047, LAM1048, LAM1049, LAM1050, LAM1051, LAM1052, LAM1053, LAM1054, LAM1055).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	18	BL	12048074	-
B	-	18	BR	12048074	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	18	RD	12048074	-
B	-	18	BR	12048074	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	18	VT	12048074	-
B	-	18	YL	12048074	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	18	GN	12048074	-
B	-	18	YL	12048074	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	18	OR	12048074	-
B	-	18	YL	12048074	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-C	14	OR	-	-
B	58-C	14	BN	-	-
C	11-E	14	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-C	14	OR	-	-
B	58-C	14	BN	-	-
C	11-E	14	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND-1	16	WH	TERMKIT-030-8586-000	-
B	UP-1	16	OR	TERMKIT-030-8586-000	-
C	DOWN-1	16	GY	TERMKIT-030-8586-000	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	GND	16	WH	TERMKIT-030-8586-000	-
B	C3	16	BK	TERMKIT-030-8586-000	-
C	B3	16	BK	TERMKIT-030-8586-000	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	B1	16	BK	350536-1	-
2	A1	16	RD	350536-1	-
3	C1	16	BK	350536-1	-

Figure 63. Connector Composites (LAM1056, LAM1057, LAM1058, LAM1059, LAM1060, LAM1061, LAM1062, LAM1063, LAM1064, LAM1065).

CONNECTOR COMPOSITES - (CONTINUED)

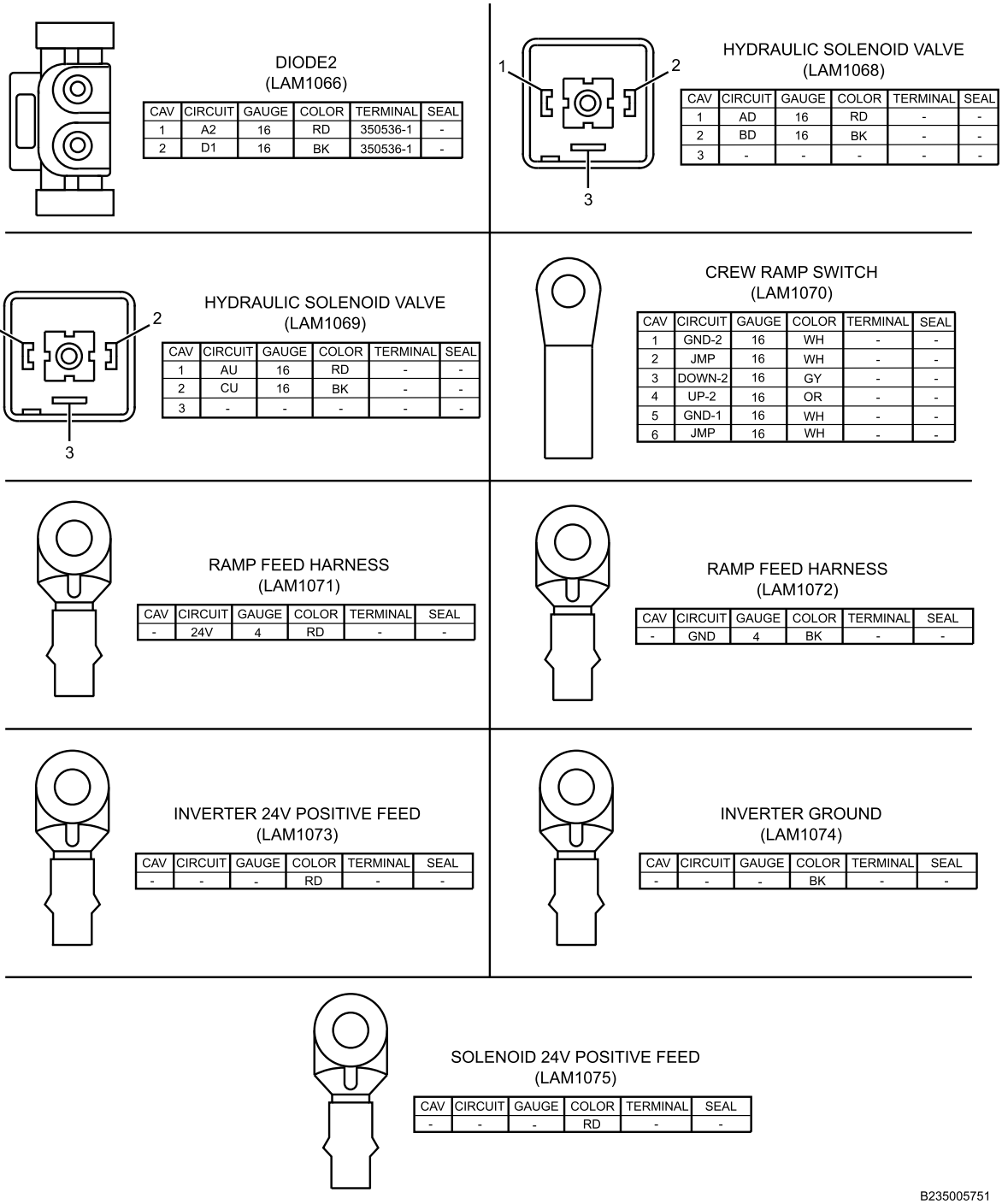


Figure 64. Connector Composites (LAM1066, LAM1068, LAM1069, LAM1070, LAM1071, LAM1072, LAM1073, LAM1074, LAM1075).

CONNECTOR COMPOSITES - (CONTINUED)

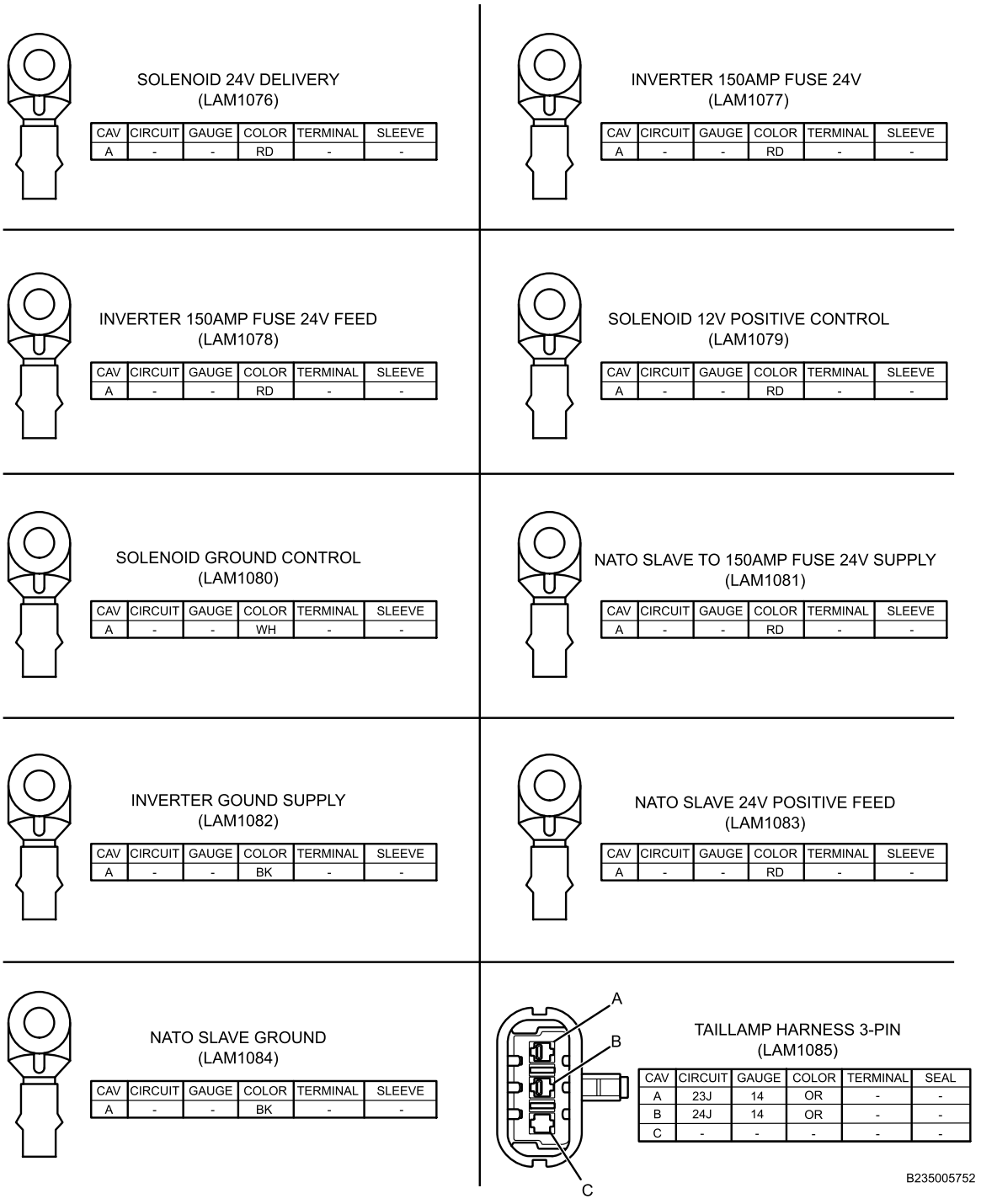


Figure 65. Connector Composites (LAM1076, LAM1077, LAM1078, LAM1079, LAM1080, LAM1081, LAM1082, LAM1083, LAM1084, LAM1085).

CONNECTOR COMPOSITES - (CONTINUED)

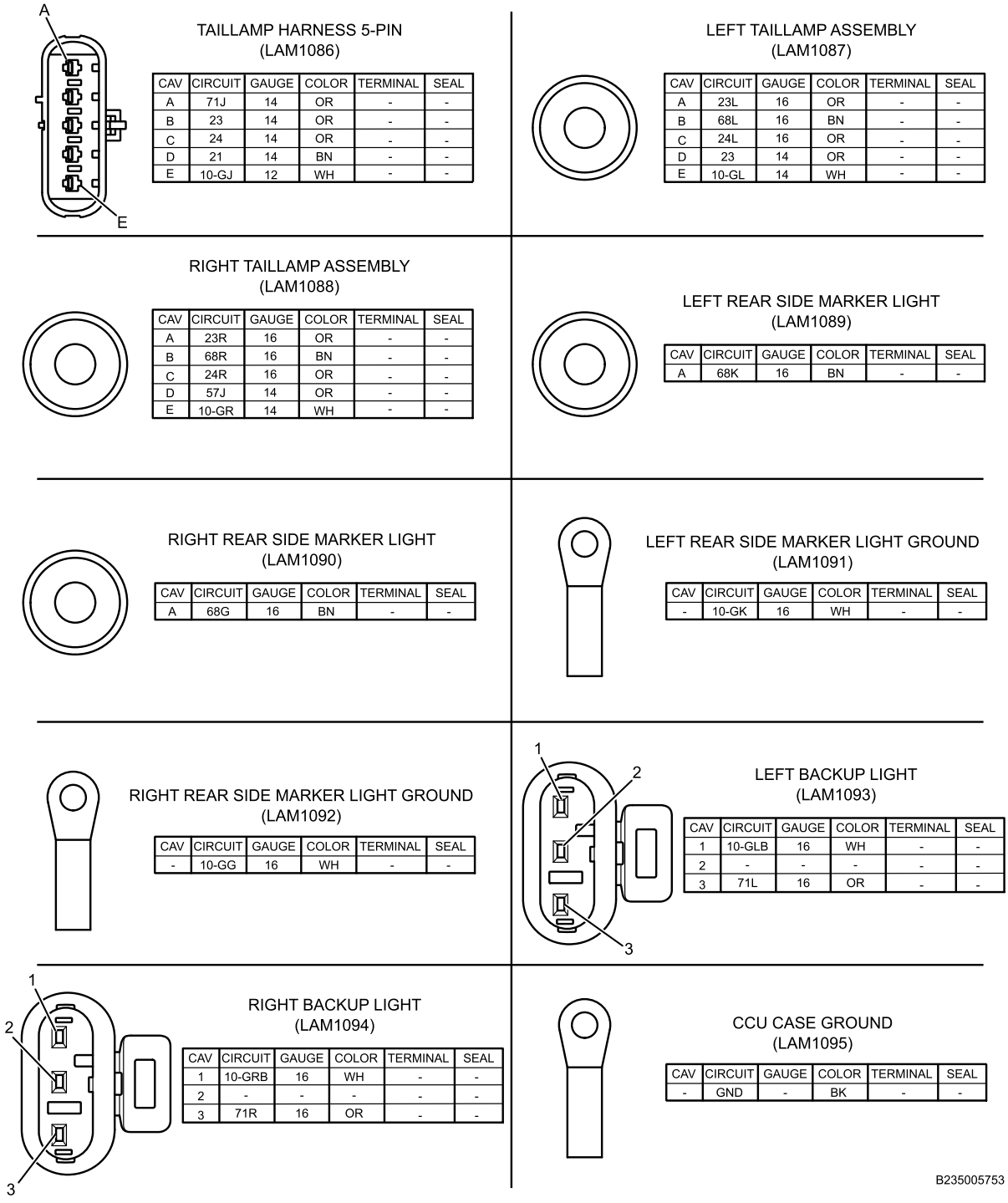
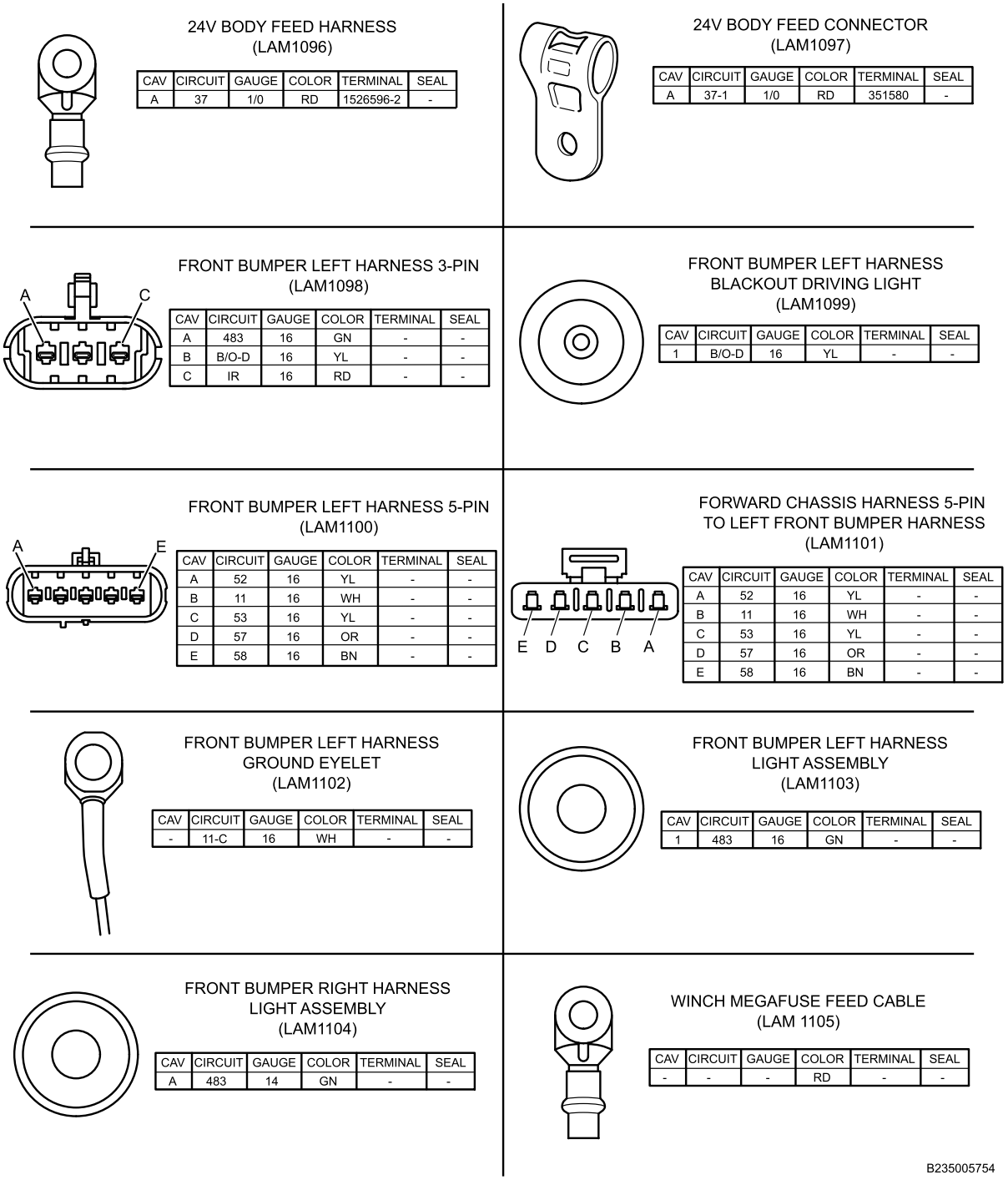


Figure 66. Connector Composites (LAM1086, LAM1087, LAM1088, LAM1089, LAM1090, LAM1091, LAM1092, LAM1093, LAM1094, LAM1095).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	37	1/0	RD	1526596-2	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	37-1	1/0	RD	351580	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	483	16	GN	-	-
B	B/O-D	16	YL	-	-
C	IR	16	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	B/O-D	16	YL	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	52	16	YL	-	-
B	11	16	WH	-	-
C	53	16	YL	-	-
D	57	16	OR	-	-
E	58	16	BN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	52	16	YL	-	-
B	11	16	WH	-	-
C	53	16	YL	-	-
D	57	16	OR	-	-
E	58	16	BN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	11-C	16	WH	-	-

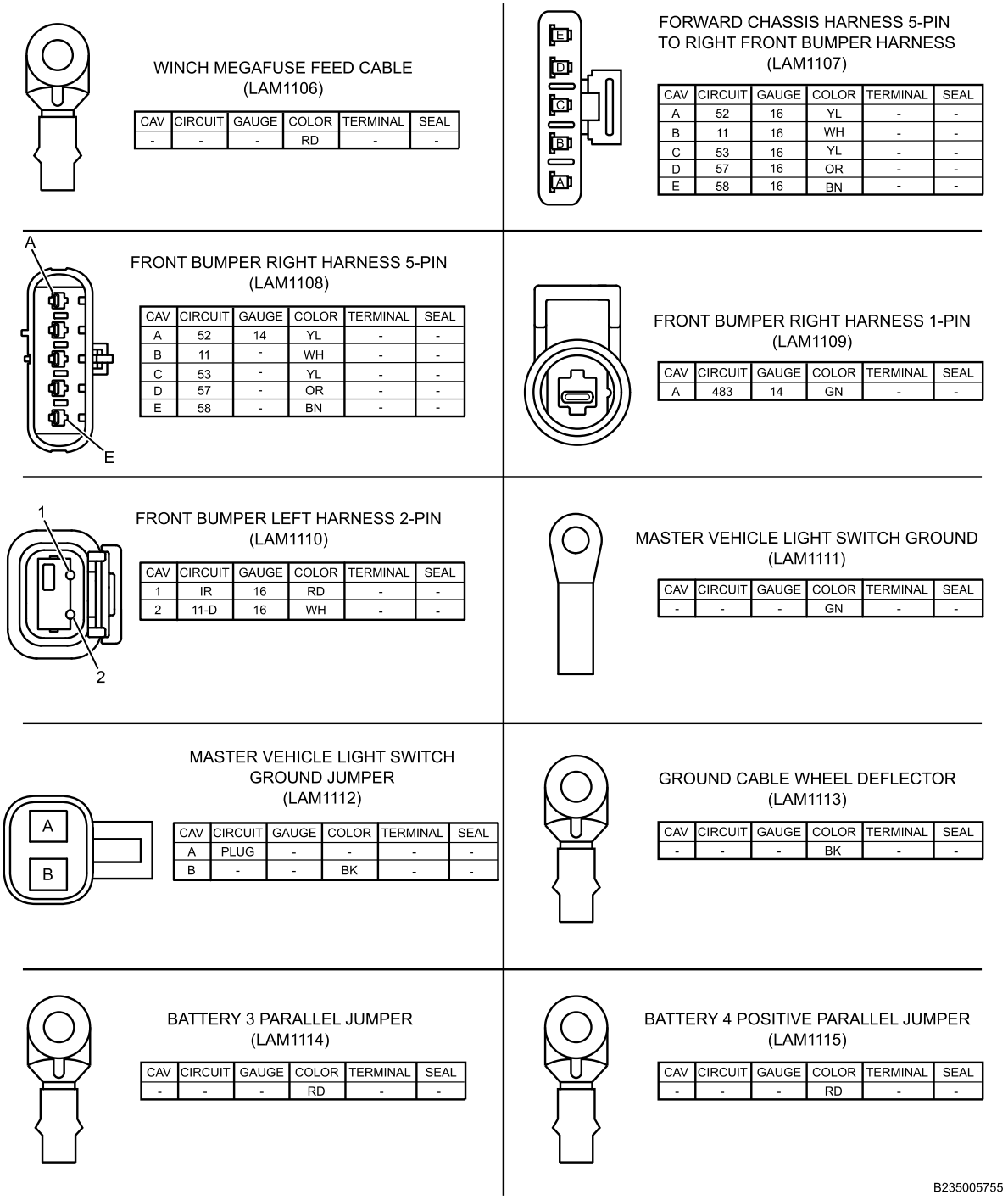
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	483	16	GN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	483	14	GN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	RD	-	-

Figure 67. Connector Composites (LAM1096, LAM1097, LAM1098, LAM1099, LAM1100, LAM1101, LAM1102, LAM1103, LAM1104, LAM1105).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	52	16	YL	-	-
B	11	16	WH	-	-
C	53	16	YL	-	-
D	57	16	OR	-	-
E	58	16	BN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	52	14	YL	-	-
B	11	-	WH	-	-
C	53	-	YL	-	-
D	57	-	OR	-	-
E	58	-	BN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	483	14	GN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	IR	16	RD	-	-
2	11-D	16	WH	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	GN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PLUG	-	-	-	-
B	-	-	BK	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	BK	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	-	-	RD	-	-

Figure 68. Connector Composites (LAM1106, LAM1107, LAM1108, LAM1109, LAM1110, LAM1111, LAM1112, LAM1113, LAM1114, LAM1115).

CONNECTOR COMPOSITES - (CONTINUED)

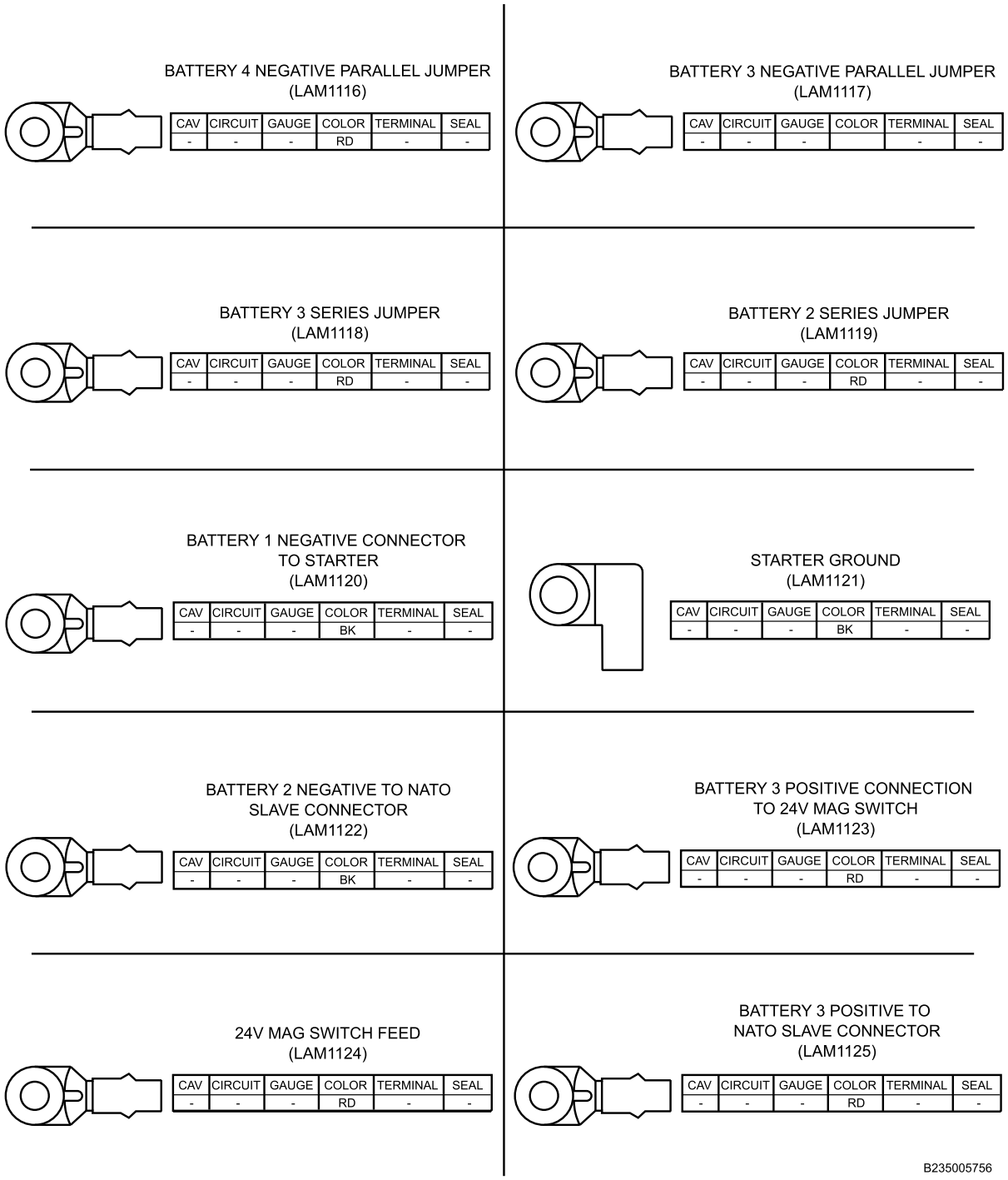


Figure 69. Connector Composites (LAM1116, LAM1117, LAM1118, LAM1119, LAM1120, LAM1121, LAM1122, LAM1123, LAM1124, LAM1125).

CONNECTOR COMPOSITES - (CONTINUED)

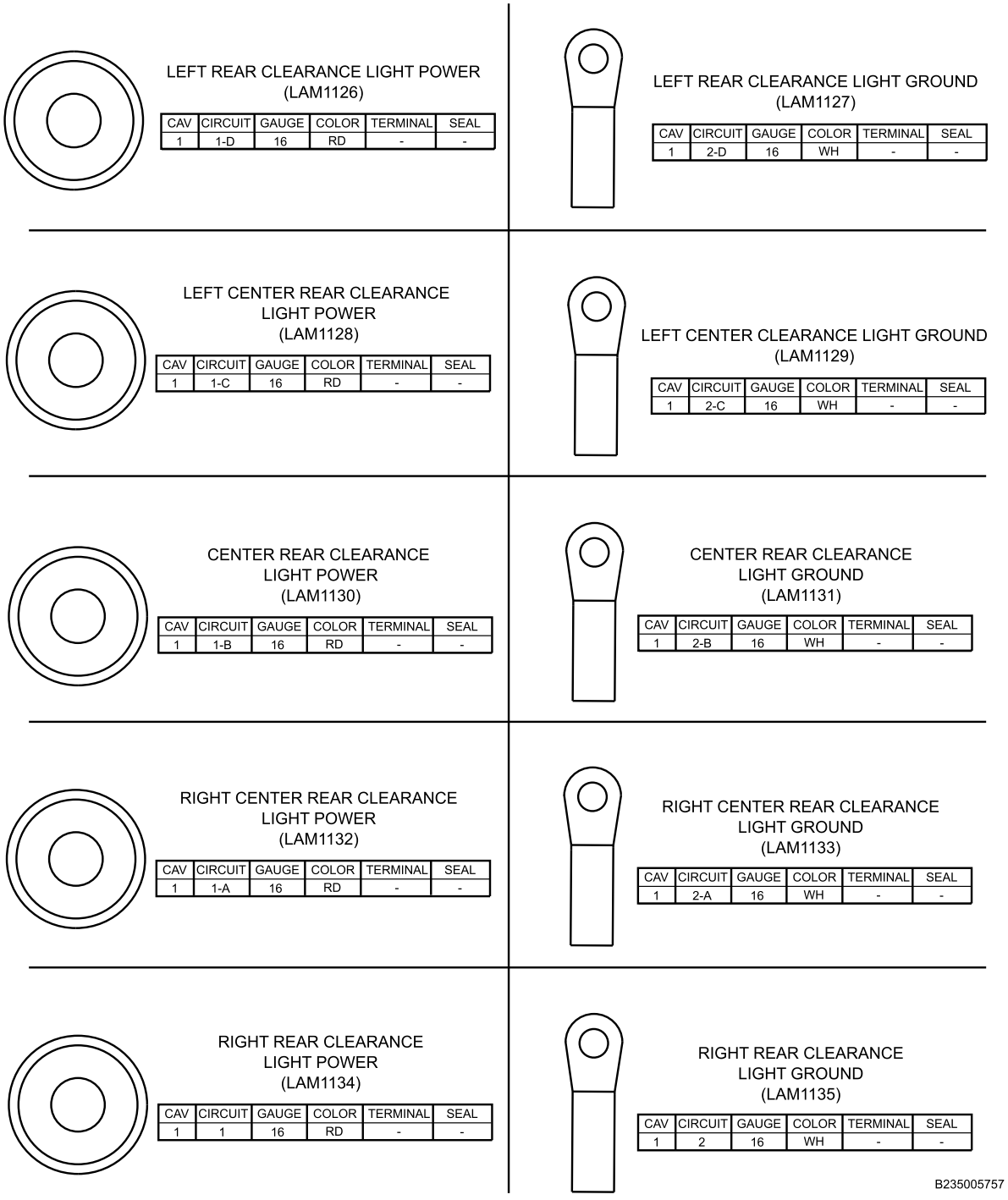


Figure 70. Connector Composites (LAM1126, LAM1127, LAM1128, LAM1129, LAM1130, LAM1131, LAM1132, LAM1133, LAM1134, LAM1135).

CONNECTOR COMPOSITES - (CONTINUED)

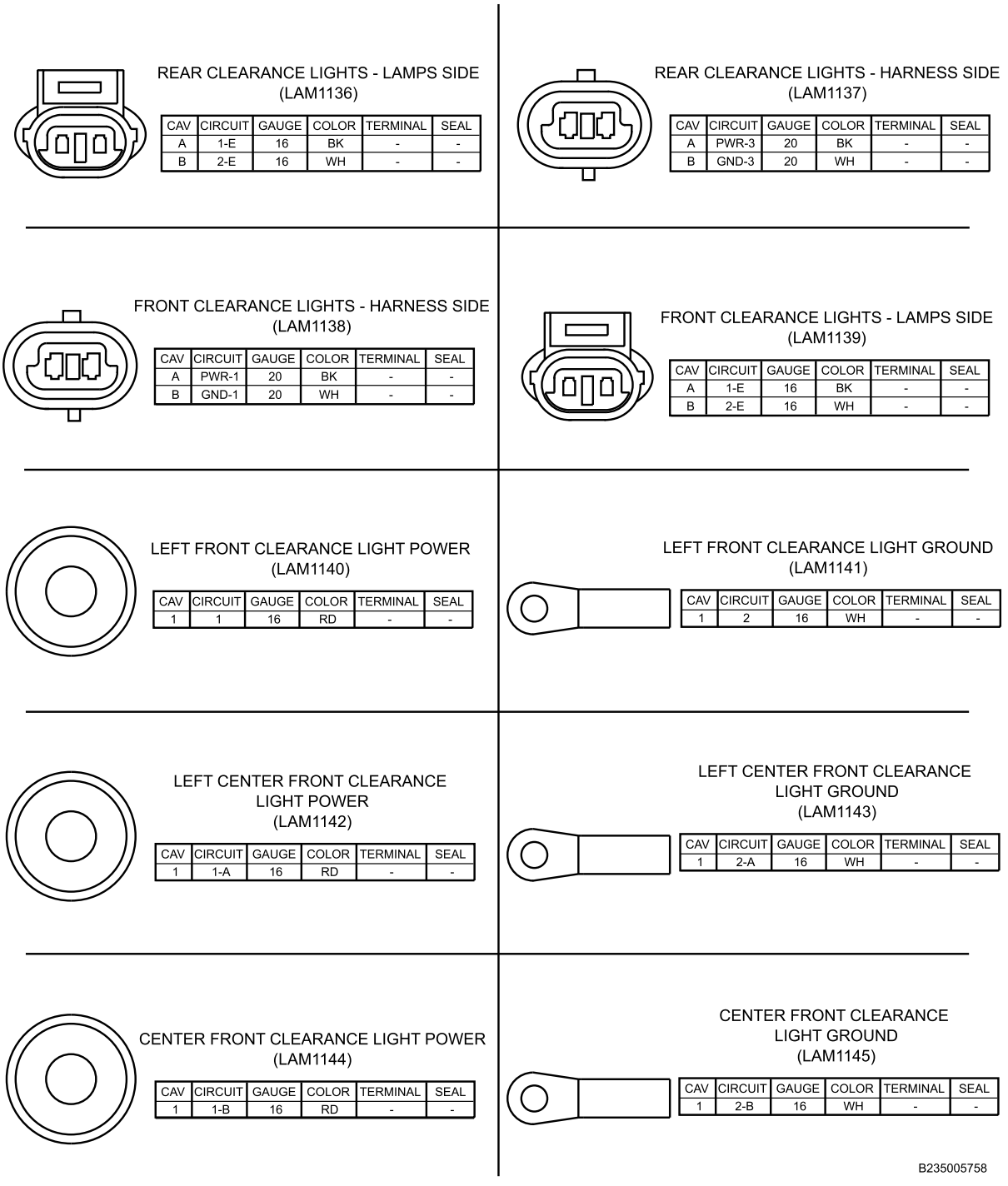


Figure 71. Connector Composites (LAM1136, LAM1137, LAM1138, LAM1139, LAM1140, LAM1141, LAM1142, LAM1143, LAM1144, LAM1145).

CONNECTOR COMPOSITES - (CONTINUED)

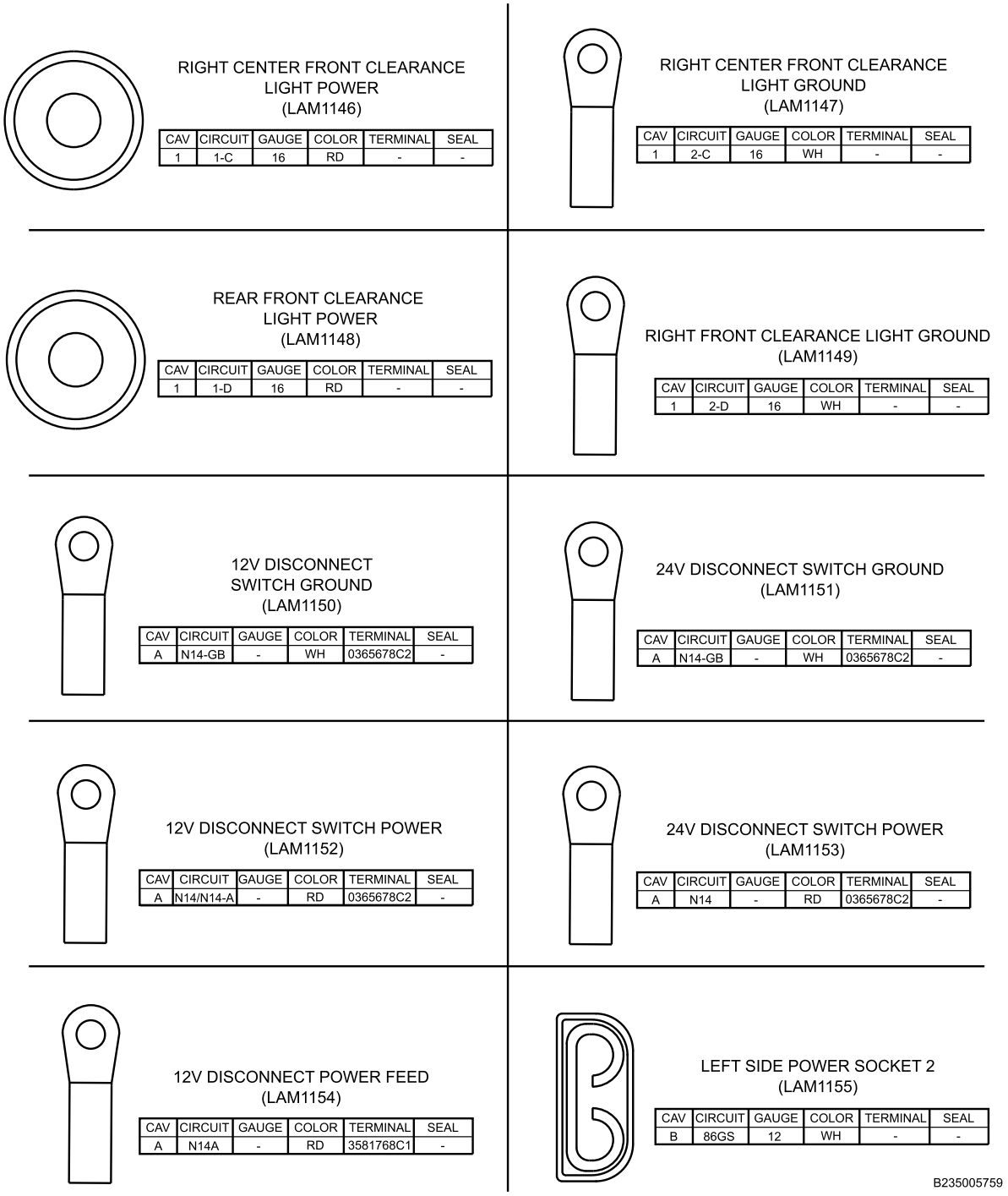


Figure 72. Connector Composites (LAM1146, LAM1147, LAM1148, LAM1149, LAM1150, LAM1151, LAM1152, LAM1153, LAM1154, LAM1155).

CONNECTOR COMPOSITES - (CONTINUED)

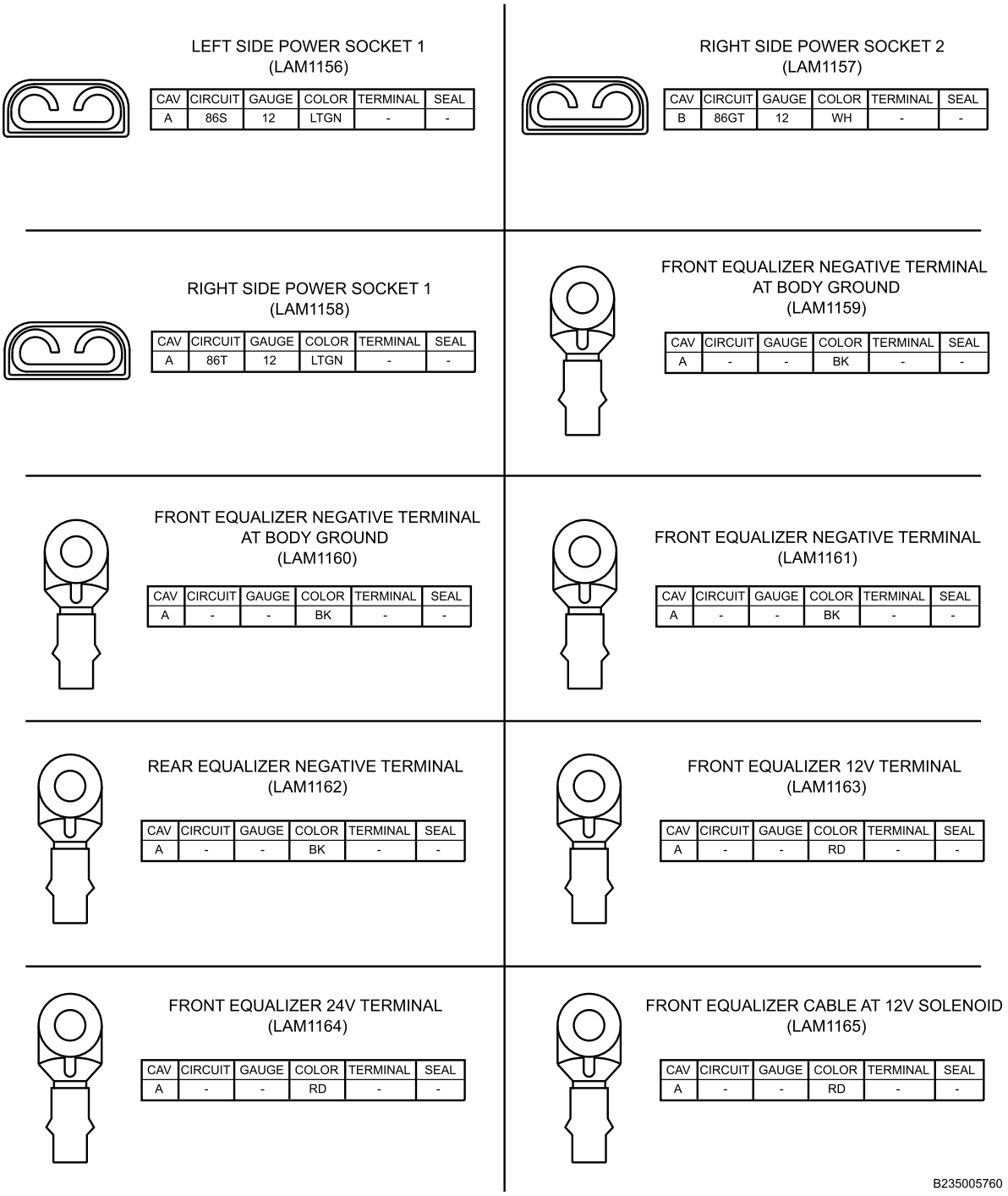
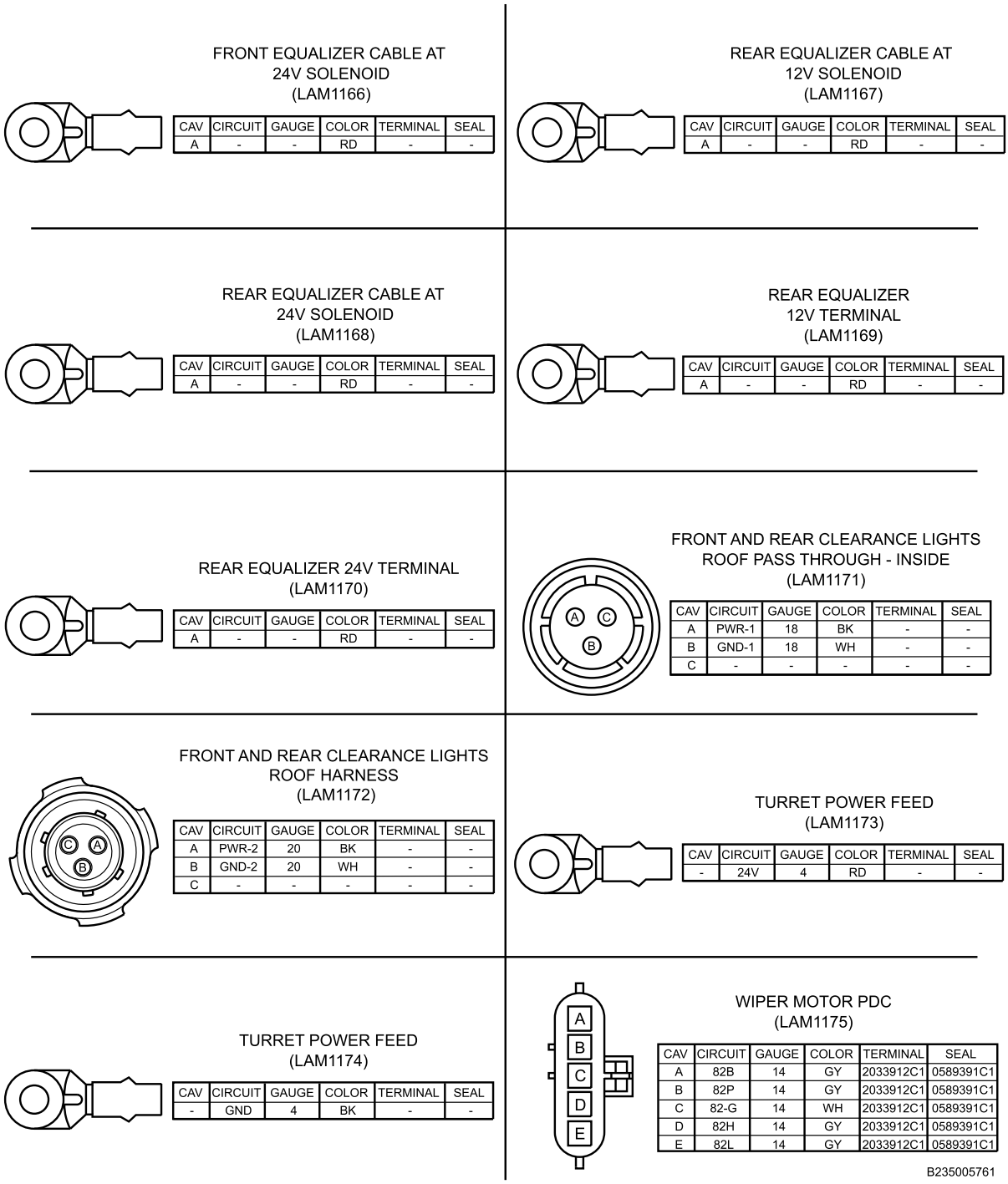


Figure 73. Connector Composites (LAM1156, LAM1157, LAM1158, LAM1159, LAM1160, LAM1161, LAM1162, LAM1163, LAM1164, LAM1165).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PWR-1	18	BK	-	-
B	GND-1	18	WH	-	-
C	-	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PWR-2	20	BK	-	-
B	GND-2	20	WH	-	-
C	-	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	24V	4	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
-	GND	4	BK	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	82B	14	GY	2033912C1	0589391C1
B	82P	14	GY	2033912C1	0589391C1
C	82-G	14	WH	2033912C1	0589391C1
D	82H	14	GY	2033912C1	0589391C1
E	82L	14	GY	2033912C1	0589391C1

Figure 74. Connector Composites (LAM1166, LAM1167, LAM1168, LAM1169, LAM1170, LAM1171, LAM1172, LAM1173, LAM1174, LAM1175).

CONNECTOR COMPOSITES - (CONTINUED)

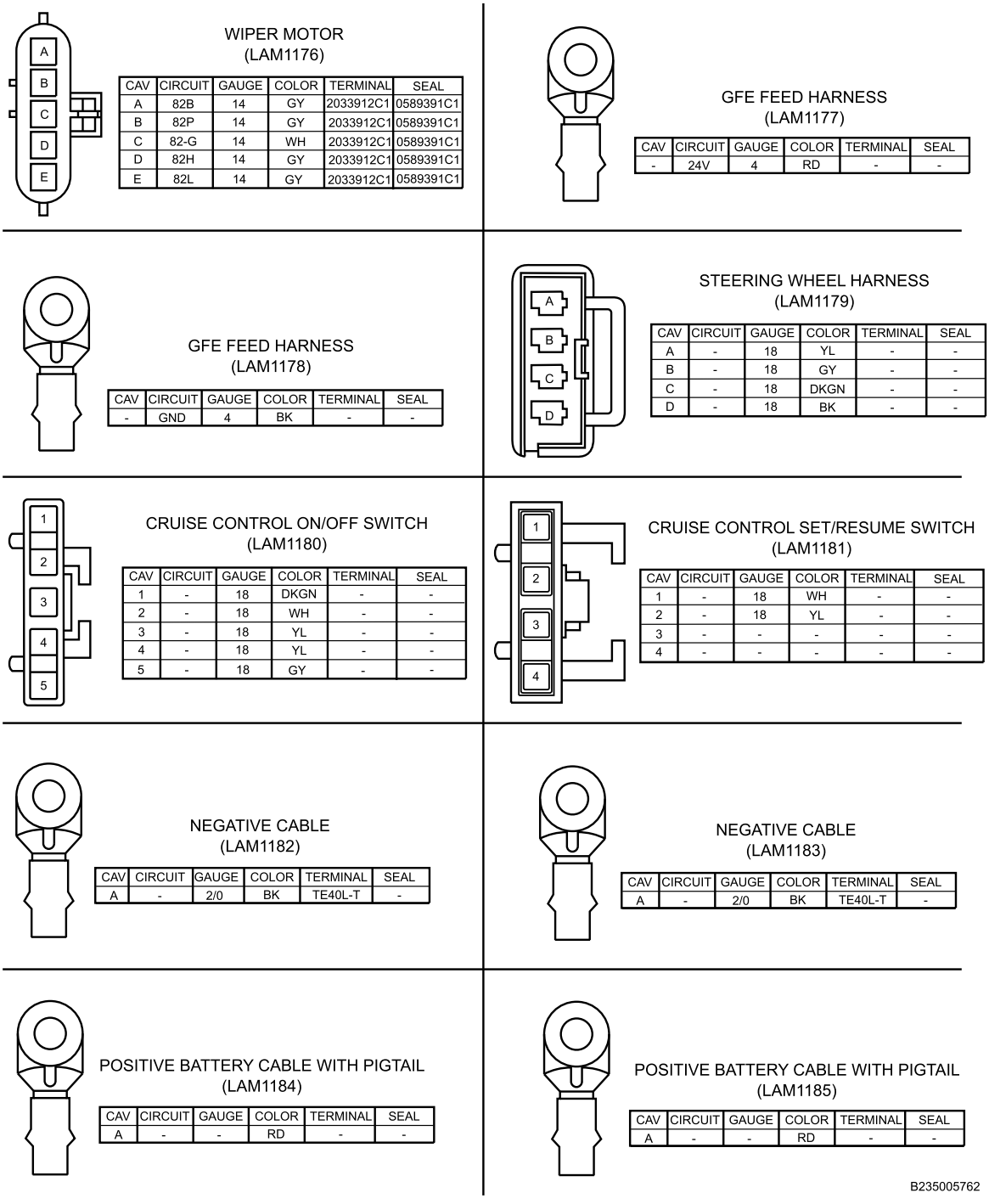
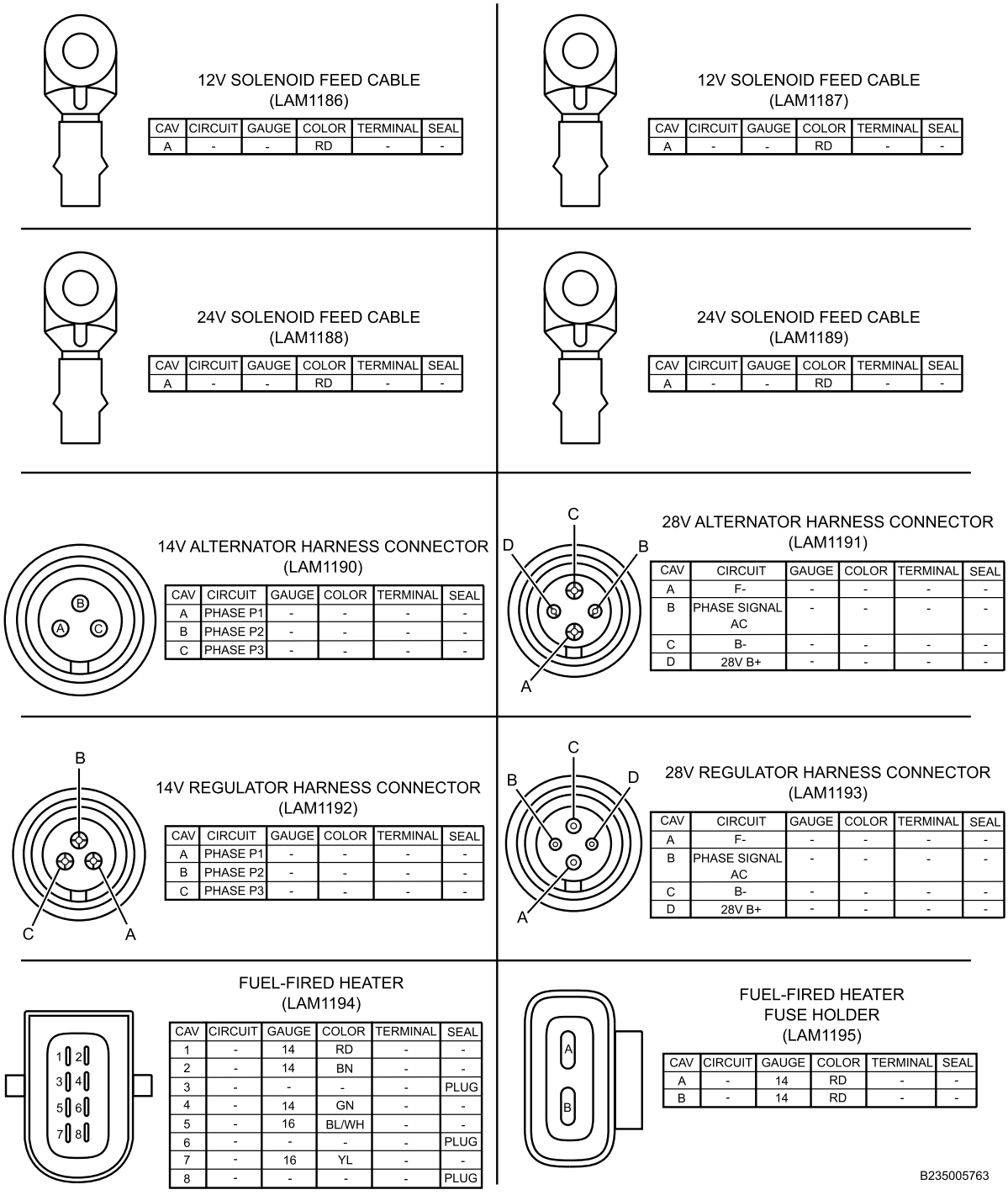


Figure 75. Connector Composites (LAM1176, LAM1177, LAM1178, LAM1179, LAM1180, LAM1181, LAM1182, LAM1183, LAM1184, LAM1185).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PHASE P1	-	-	-	-
B	PHASE P2	-	-	-	-
C	PHASE P3	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	F-	-	-	-	-
B	PHASE SIGNAL AC	-	-	-	-
C	B-	-	-	-	-
D	28V B+	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	PHASE P1	-	-	-	-
B	PHASE P2	-	-	-	-
C	PHASE P3	-	-	-	-

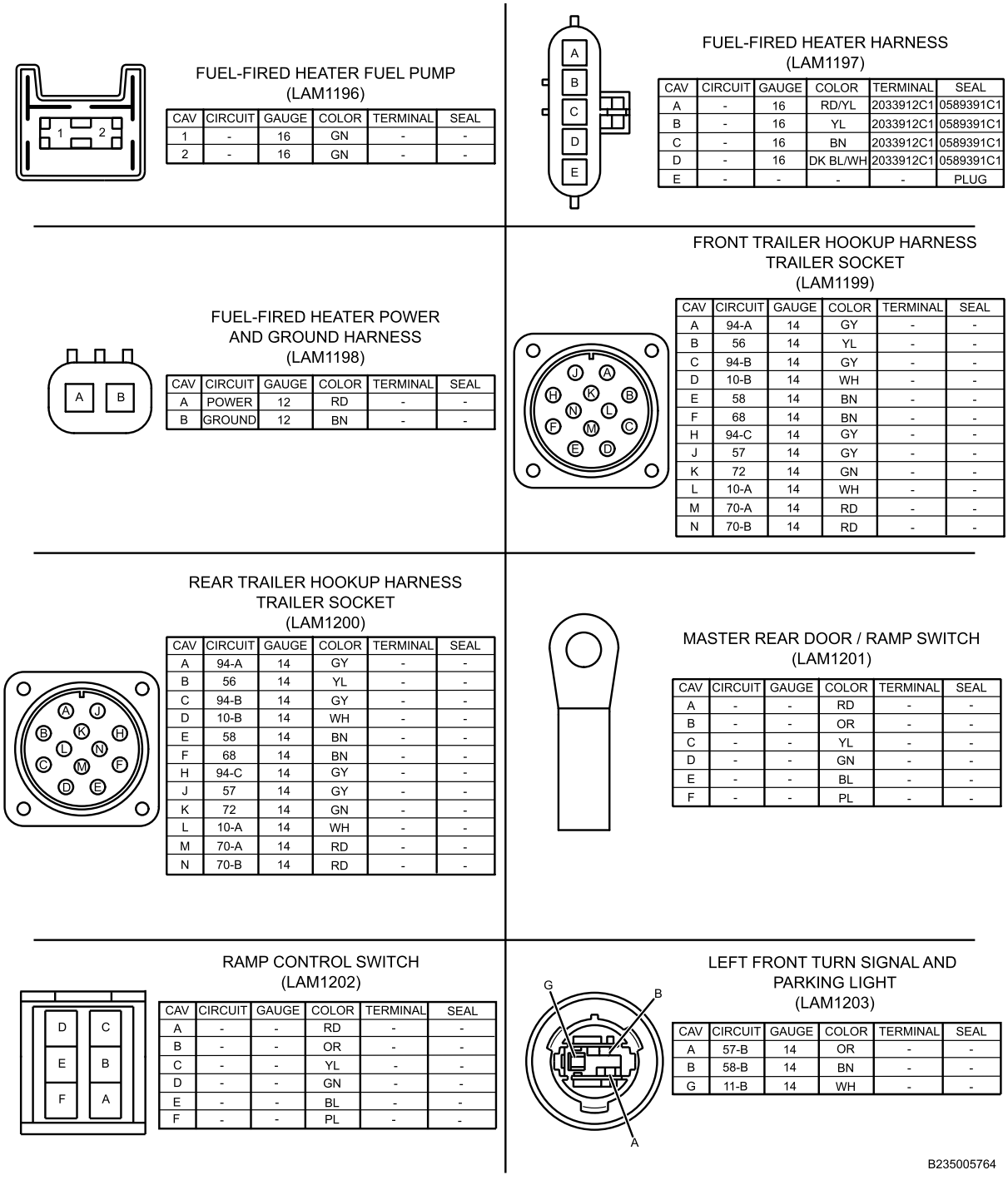
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	F-	-	-	-	-
B	PHASE SIGNAL AC	-	-	-	-
C	B-	-	-	-	-
D	28V B+	-	-	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	-	14	RD	-	-
2	-	14	BN	-	-
3	-	-	-	-	PLUG
4	-	14	GN	-	-
5	-	16	BL/WH	-	-
6	-	-	-	-	PLUG
7	-	16	YL	-	-
8	-	-	-	-	PLUG

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	14	RD	-	-
B	-	14	RD	-	-

Figure 76. Connector Composites (LAM1186, LAM1187, LAM1188, LAM1189, LAM1190, LAM1191, LAM1192, LAM1193, LAM1194, LAM1195).

CONNECTOR COMPOSITES - (CONTINUED)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
1	-	16	GN	-	-
2	-	16	GN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	16	RD/YL	2033912C1	0589391C1
B	-	16	YL	2033912C1	0589391C1
C	-	16	BN	2033912C1	0589391C1
D	-	16	DK BL/WH	2033912C1	0589391C1
E	-	-	-	-	PLUG

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	POWER	12	RD	-	-
B	GROUND	12	BN	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	94-A	14	GY	-	-
B	56	14	YL	-	-
C	94-B	14	GY	-	-
D	10-B	14	WH	-	-
E	58	14	BN	-	-
F	68	14	BN	-	-
H	94-C	14	GY	-	-
J	57	14	GY	-	-
K	72	14	GN	-	-
L	10-A	14	WH	-	-
M	70-A	14	RD	-	-
N	70-B	14	RD	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	94-A	14	GY	-	-
B	56	14	YL	-	-
C	94-B	14	GY	-	-
D	10-B	14	WH	-	-
E	58	14	BN	-	-
F	68	14	BN	-	-
H	94-C	14	GY	-	-
J	57	14	GY	-	-
K	72	14	GN	-	-
L	10-A	14	WH	-	-
M	70-A	14	RD	-	-
N	70-B	14	RD	-	-

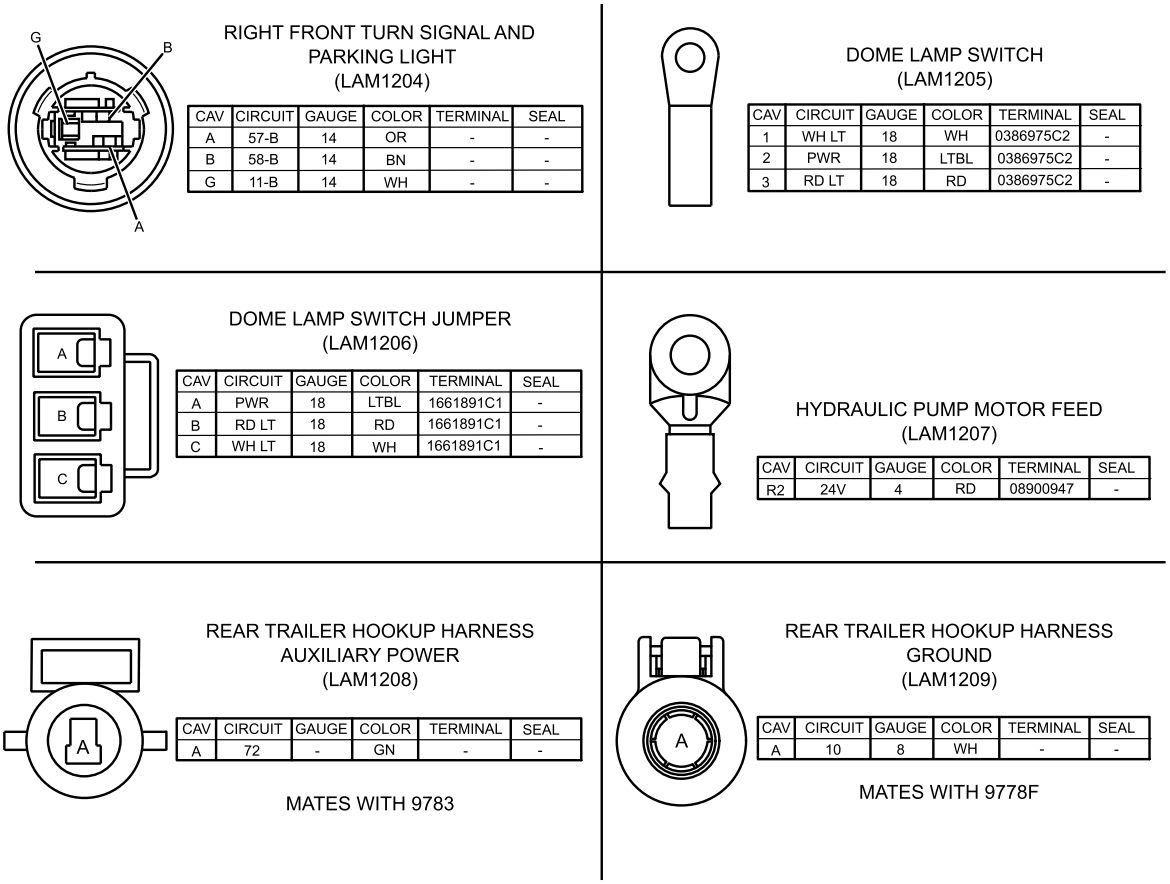
CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-
B	-	-	OR	-	-
C	-	-	YL	-	-
D	-	-	GN	-	-
E	-	-	BL	-	-
F	-	-	PL	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	-	RD	-	-
B	-	-	OR	-	-
C	-	-	YL	-	-
D	-	-	GN	-	-
E	-	-	BL	-	-
F	-	-	PL	-	-

CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	57-B	14	OR	-	-
B	58-B	14	BN	-	-
G	11-B	14	WH	-	-

Figure 77. Connector Composites (LAM1196, LAM1197, LAM1198, LAM1199, LAM1200, LAM1201, LAM1202, LAM1203).

CONNECTOR COMPOSITES - (CONTINUED)

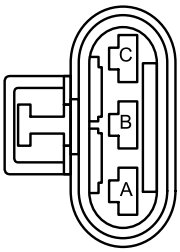


B235005765

Figure 78. Connector Composites (LAM1204, LAM1205, LAM1206, LAM1207, LAM1208, LAM1209).

CONNECTOR COMPOSITES - (CONTINUED)

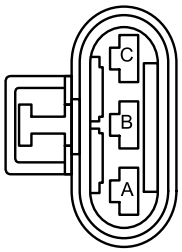
REAR TRAILER HOOKUP HARNESS
TAILLIGHTS
(LAM1210)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	70	18	RD	12084735	-
B	68	18	BN	12064735	-
C	94	18	GY	12064735	-

MATES WITH 9780M

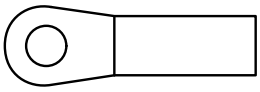
REAR TRAILER HOOKUP HARNESS
TAIL AND TURN LIGHTS
(LAM1211)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	58	18	BN	12052455	-
B	56	18	YL	12052455	-
C	57	18	DKBL	12052455	-

MATES WITH 9779F

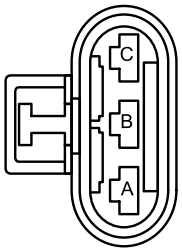
FRONT TRAILER HOOKUP HARNESS
GROUND
(LAM1212)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	10	-	WH	-	-

CONNECTS TO GROUND

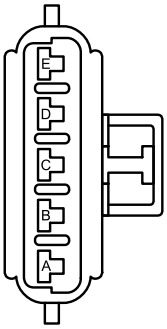
FRONT TRAILER HOOKUP HARNESS
POWER AND GROUND
(LAM1213)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	94	-	GY	-	-
B	-	-	-	-	-
C	72	-	GN	-	-

MATES WITH 9723

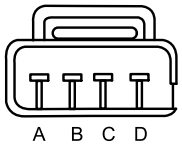
FRONT TRAILER HOOKUP HARNESS
TAIL, TURN AND BRAKE LIGHTS
(LAM1214)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	58	-	BN	-	-
B	56	-	YL	-	-
C	57	-	DKBL	-	-
D	70	-	RD	-	-
E	68	-	BN	-	-

MATES WITH 9724

STEERING WHEEL WIRE
HARNESS CLOCK
SPRING CONNECTOR
(LAM1215)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	22	YL	12059894	-
B	-	22	GY	12059894	-
C	-	22	GR	12059894	-
D	-	22	BK	12059894	-

STEERING WHEEL WIRE
HARNESS HORN BUTTON
CONNECTOR
(LAM1216)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	22	YL	51895	-

STEERING WHEEL WIRE
HARNESS HORN BUTTON
GROUND CONNECTOR
(LAM1217)



CAV	CIRCUIT	GAUGE	COLOR	TERMINAL	SEAL
A	-	22	BK	51895	-

B235005790

Figure 79. Connector Composites (LAM1210, LAM1211, LAM1212, LAM1213, LAM1214, LAM1215, LAM1216, LAM1217).

END OF WORK PACKAGE

CHAPTER 10

SUPPORTING INFORMATION

FOR

MINE RESISTANT AMBUSH PROTECTED (MRAP)

FIELD MAINTENANCE

REFERENCES

SCOPE

This work package lists all field manuals, forms, technical manuals, and miscellaneous publications referenced in this manual.

FIELD MANUALS

FM 3-11.4	Multiservice Tactics, Techniques, and Procedures for Nuclear, Biological, and Chemical (NBC) Protection
FM 3-5	NBC Decontamination
FM 4-25.11	First Aid

FORMS

DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2408-9	Equipment Control Record
DA Form 5988-E	Equipment Inspection and Maintenance Worksheet
SF 361	Transportation Discrepancy Report
SF 364	Report of Discrepancy
SF 368	Product Quality Deficiency Report

DEPARTMENT OF THE ARMY PAMPHLETS

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 750-8	The Army Maintenance Management System User Manual

TECHNICAL BULLETINS

TB 9-1100-803-15	Equipment Improvement Recommendation Report

TECHNICAL MANUALS

TM 43-0139	Painting Instructions for Army Materiel
TM 9-2355-106-10	Operator Manual for Mine Resistant Ambush Protected (MRAP)
TM 9-2355-106-23P	Field Maintenance Manual for Mine Resistant Ambush Protected (MRAP)
TM 9-4940-658-10	Forward Repair System (FRS)
TM 9-4910-783-13	Operator's, Unit, and Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Standard Automotive Tool Set (SATS)

ARMY REGULATIONS

AR 735-11-2	Reporting of Item and Packaging Discrepancies
AR 750-1	Army Material Maintenance Policy

COMMON TABLE OF ALLOWANCES

CTA 8-100	Army Medical Department Expendable/Durable Items
CTA 50-970	Expendable/Durable items (Except Medical, Class V, Repair Parts, and Heraldic Items)

END OF WORK PACKAGE

FIELD MAINTENANCE

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept. This MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field - includes two subcolumns, Crew (C) and Maintainer (F).

Sustainment - includes two subcolumns, Below Depot (H) and Depot (D).

The maintenance to be performed at field and sustainment levels is described as follows:

1. Crew maintenance. The responsibility of a using organization to perform maintenance on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. The replace function for this level of maintenance is indicated by the letter "C" in the third position of the SMR code. A "C" appearing in the fourth position of the SMR code indicates complete repair is possible at the crew level maintenance level.
2. Maintainer maintenance. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "F" appearing in the third position of the SMR code. An "F" appearing in the fourth position of the SMR code indicates complete repair is possible at the field maintenance level. Items are returned to the user after maintenance is performed at this level.
3. Below depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "H" appearing in the third position of the SMR code. An "H" appearing in the fourth position of the SMR code indicates complete repair is possible at the below depot sustainment maintenance level. Items are returned to the supply system after maintenance is performed at this level.
4. Depot sustainment . Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "D" or "K" appearing in the third position of the SMR code. Depot sustainment maintenance can be performed by either depot personnel or contractor personnel. A "D" or "K" appearing in the fourth position of the SMR code indicates complete repair is possible at the depot sustainment maintenance level. Items are returned to the supply systems after maintenance is performed at this level. The tools and test equipment requirements table (immediately following the MAC) lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC. The remarks table (immediately following the tools and test equipment requirements) contains supplemental instructions and explanatory notes for a particular maintenance function.

MAINTENANCE FUNCTIONS

1. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel). This includes scheduled inspection and gaugings and evaluation of cannon tubes.
2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.
3. Service. Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:
   a. Unpack. To remove from packing box for service or when required for the performance of maintenance operations.

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION - (CONTINUED)

b. Repack. To return item to packing box after service and other maintenance operations.

c. Clean. To rid the item of contamination.

d. Touch up. To spot paint scratched or blistered surfaces.

e. Mark. To restore obliterated identification.

4. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
5. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.
6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
7. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.
8. Paint (ammunition only). To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.
9. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. “Replace” is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.
10. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

NOTE

The following definitions are applicable to the “repair” maintenance function: Disassembly/assembly.

Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).

The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
12. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION - (CONTINUED)

Explanation Of Columns In The MAC

Column (1) Group Number. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to “Maintenance Functions” outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Field

C Crew maintenance

F Maintainer maintenance

Sustainment

L Specialized Repair Activity (SRA)

H Below depot maintenance

D Depot maintenance

NOTE

The “L” maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the “H” column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

Explanation Of Columns In The Tools And Test Equipment Requirements

Column (1) - Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) - Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) - Nomenclature. Name or identification of the tool or test equipment.

Column (4) - National Stock Number (NSN). The NSN of the tool or test equipment.

MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION - (CONTINUED)

Column (5) - Tool Number. The manufacturer's part number.

Explanation Of Columns In The Remarks

Column (1) - Remarks Code. The code recorded in column (6) of the MAC.

Column (2) - Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

END OF WORK PACKAGE

FIELD MAINTENANCE

MAINTENANCE ALLOCATION CHART

Table 1. Maintenance Allocation Chart.

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW C	MAINTAINER F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
0100	Engine Assembly	Inspect	0.5					A
		Service	1.0					
		Replace		45.9			7, 8, 32	
		Repair		46.9			1, 7, 8, 23, 32	
		Overhaul				36.0	1, 7, 8, 23, 32	
0100	Front Engine Mounts	Inspect		0.5				
		Replace		10.5			7, 8	
0100	Rear Engine Mounts	Inspect		1.5				
		Replace		10.7			7, 8, 30	B
0101	Cylinder Head and Gasket	Inspect	0.5					
		Replace		42.1			7, 8, 32	
		Repair		43.1			5, 7, 8, 32, 33	
		Overhaul				8.0		
0102	Crankshaft Damper and Front Seal	Inspect	0.1					
		Replace		5.2			7, 8, 16, 17, 32	
0102	Rear Crankshaft Oil Seal	Inspect		0.1				
		Replace		19.2			7, 8, 18, 29, 44	F
0103	Flex Plate	Inspect		0.5				
		Replace		17.7			7, 8, 9	
0103	Starter Ring Gear	Inspect		0.5				
		Replace		17.6			7, 8	
0105	Front Engine Cover	Inspect	0.5					
		Replace		27.1			8, 32	
0105	Valve Cover and Gasket	Inspect		0.5				
		Replace		5.3			8, 32	
0105	Engine Valve Adjustment	Inspect		2.0				
		Service		6.3			8, 9	C
0106	Oil Gauge Tube	Inspect		0.5				
		Replace		8.4			9	
0106	Engine Oil Breather Tube	Inspect		0.1				
		Replace		2.4			8	
0106	Engine Oil Filter	Inspect	0.1					
		Replace		8.8			7, 8, 32	
0106	Engine Oil Drain/Fill Procedure	Service		8.3			8, 32	
0106	Engine Oil Cooler	Inspect		0.5				
		Replace		19			8, 32	D

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0106	Engine Oil Cooler Pressure Regulator	Inspect		3.1				
		Replace		19.1			8	
0106	Engine Oil Pan	Inspect		2.5				
		Replace		10.2			7, 8, 32	
0106	Engine Oil Pickup Tube	Inspect		10.2				
		Replace		15.9			8, 32	
0106	Front Oil Pump	Inspect		0.5				
		Replace		13.9			8	
		Repair		14.9			8	
0108	Exhaust Manifold	Inspect		0.5				
		Replace		18			7, 8	
0109	Serpentine Belt	Inspect	0.1					
		Replace		0.7			8	
0109	Serpentine Belt Idler Pulley	Inspect		0.2				
		Replace		0.9			8, 32	
0109	Serpentine Belt Tensioner	Inspect	0.1					
		Replace		0.8			8	
0109	Serpentine Belt Upper Idler Pulley	Inspect	0.1					
		Replace		0.8			8	
0109	Air Conditioner (A/C) Belt	Inspect	0.1					
		Replace		0.5			7, 8	
0109	Air Conditioner (A/C) Belt Tensioner	Inspect		0.1				
		Replace		0.6			8	
0112	Exhaust Brake	Inspect		0.5				
		Replace		9.5			8	
		Repair		10.5			9	
0112	Exhaust Brake Solenoid	Inspect		0.2				
		Replace		0.9			8	
		Repair		1.9			9	
0112	Exhaust Brake Supply Air Line	Inspect		0.2				
		Replace		4.2			8, 32	
0301	Fuel Injector	Inspect		0.5				
		Replace		5.6			8, 32	
		Repair		6.6			8, 22, 32	
0301	Oil/Fuel Manifold	Inspect		0.3				
		Replace		6.8			8, 32	
		Repair		7.8			8, 32	
0301	Fuel Pressure Regulator	Inspect		1.0				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		3.4			7, 8	
		Repair		4.4			7, 8, 23	
0302	High Pressure Injector Pump	Inspect		0.1				
		Replace		5.1			7, 8, 32	
		Repair		6.1			7, 8, 32	
0302	Fuel Pump	Inspect	1.0					
		Replace		3.1			7, 8, 32	
		Repair		4.1			7, 8, 23, 32	
0302	Fuel Filter Header/Primer Pump	Inspect	0.2					
		Replace		12.0			7, 8, 32	
		Repair		13.0			7, 8, 23, 32	
0302	Fuel Primer Sequence	Service		0.8			8	
0304	Air Intake Tube (To Turbo)	Inspect	0.1					
		Replace		0.2			8	
0304	Air Cleaner Assembly	Inspect	0.1					
		Service	0.2				8	
		Replace	0.5				8	
0304	Air Cleaner Support	Inspect		0.7				
		Replace		2.2			7, 8	
0304	Air Filter Restriction Gauge	Inspect	0.1					
		Replace		1.3			8	
0304	Center Panel Air Filter Restriction Gauge Tubing and Fitting	Inspect	0.1					
		Replace		4.4			8	
0305	Turbocharger Assembly	Inspect		0.5				
		Replace		11.0			8	
		Repair		12.0			8, 23	
		Overhaul				2.5		
0305	Turbocharger Lubricant Lines	Inspect	0.1					
		Replace		0.7			8	
0305	Charge Air Cooler (CAC) Assembly	Inspect	0.1					
		Service	0.5					
		Replace		4.8			7, 8, 32	
0305	Charge Air Cooler (CAC) Hose	Inspect	0.1					
		Replace		1.3			8, 32	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW	MAINTAINER	BELOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
			C	F	H	D		
0306	Fuel Tank	Inspect	0.2					
		Replace		11			8, 32	
0306	Fuel Tank Bracket	Inspect	0.2	0.2				
		Replace		15.4			8	
0306	Fuel Tank Strap	Inspect		0.2				
		Replace		13.2			8	
0306	Fuel Hose	Inspect	0.2					
		Replace		13.3			7, 8, 32	
0309	Fuel Filter and Strainer	Inspect		0.3				
		Replace		1.1			8, 32	
0309	Fuel/Water Separator Filter	Inspect	0.1					
		Service	0.2				8, 32	
		Replace		1.0			8, 32	
0309	Fuel/Water Separator Assembly Purge	Inspect	0.1					
		Service		1.4			8, 32	
0311	Ether (Cold) Start Valve and Atomizer Assembly	Inspect		0.5				
		Replace		0.9			8	
		Repair		1.9			8	
0311	Ether Canister	Inspect	0.1					
		Replace		0.4			8	
0311	Ether Cold Start Thermostatic Switch	Inspect	0.1					
		Replace		3.5			8	
		Repair		4.5			8, 40	
0401	Exhaust Pipe	Inspect	0.3					
		Replace		14.3			8	
0401	Muffler and Shield	Inspect	0.2					
		Replace		3.8			7, 8	
0501	Cooling System Drain and Fill Procedure	Service		1.0			8, 32, 40	
0501	Radiator Assembly Cleaning Procedure	Service	0.2					
0501	Radiator	Inspect	0.2					
		Service	0.2					
		Replace		7.7			7, 8, 30, 32	
0501	Deaeration Tank	Inspect	0.1					
		Replace		1.3			8, 32	
0501	Deaeration Tank Pressure Cap	Inspect	0.1					
		Replace	1.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
			C	F	H	D		
0501	Radiator Surge Overflow Tank	Inspect	0.1					
		Replace		0.3			8, 32	
0502	Radiator Fan and Fan Shroud	Inspect	0.1					
		Replace		2.7			8, 32	
0503	Thermostat	Inspect		0.5				
		Replace		1.5			7, 8	
		Repair		2.5			7, 8	
0503	Water Inlet Elbow	Inspect	0.2					
		Replace		9.3			8, 32	
0503	Radiator Pipes/Hoses	Inspect	0.2					
		Replace		3.4			8, 32	
0504	Engine Water Pump	Inspect		0.2				
		Replace		7.3			8, 32	
0505	Cooling Fan Drive Assembly	Inspect		0.2				
		Replace		3.6			8, 32	
		Repair		4.6			8, 22, 32	
0505	Cooling Fan Actuator Solenoid	Inspect		0.2				
		Replace		0.4			8	
		Repair		1.4			8, 22	
0601	Alternator	Inspect	0.1					
		Replace		3.2			7, 8	
		Repair		4.2			7, 8	
		Overhaul				3.0		
0601	Alternator Bracket	Inspect	0.1					
		Replace		4.8			8, 32	
0601	Alternator Pulley	Inspect		0.1				
		Replace		1.0			7, 8	
0603	Starter Motor	Inspect	0.1					
		Replace		10.6			8	
		Repair		11.6			8	
		Overhaul				2.5		
0607	Transmission Fluid Temperature Gauge and Harness	Inspect	0.1					
		Replace		2.5			8	
		Repair		3.5			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0607	Air 1 Pressure Gauge and Harness	Inspect		0.1				
		Replace		2.5			8	
		Repair		3.5			8, 22	
0607	Air 2 Pressure Gauge and Harness	Inspect		0.1				
		Replace		2.5			8	
		Repair		3.5			8, 22	
0607	Battery Main Power Switch	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8	
0607	Instrument Panel Cluster (IPC)	Inspect	0.1					
		Replace		2.3			8	
		Repair		3.3			8, 22, 40	
0607	Instrument Panel Cluster (IPC) Right Side Warning Panel	Inspect	0.1					
		Replace		2.5			8	
		Repair		3.5			8	
0607	Instrument Panel (IP) Light Bulb	Inspect	0.1					
		Replace		2.7			8	
		Repair		3.7			8	
0607	Rocker Switch	Inspect	0.1					
		Replace		0.2			6, 8	
		Repair		1.2			6, 8, 22	
0607	Keyless Ignition Switch	Inspect	0.1					
		Replace		1.4			8	
		Repair		2.4			8	
0607	Master Vehicle Light Switch (MVLS)	Inspect	0.1					
		Replace		0.6			8	
		Repair		1.6			8, 40	
0607	24V Gauge	Inspect	0.1					
		Replace		1.7			8	
		Repair		2.7			8	
0607	24V Gauge Bulb	Inspect	0.1					
		Replace		0.7			8	
		Repair		1.7			8	
0607	Mirror Remote Control Switch	Inspect	0.1					
		Replace		0.7			8	
		Repair		1.7			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
			C	F	H	D		
0607	Master Vehicle Light Switch (MVLS) Ground Harness	Inspect	0.1					
		Replace		0.7			8, 32	
		Repair		1.7			8, 32, 40	
0607	Infrared (IR) Light Switch	Inspect	0.1					
		Replace		0.8			8	
		Repair		1.8			8	
0607	Master Rear Door/Ramp Switch	Inspect	0.1					
		Replace		0.7			8	
		Repair		1.7			8	
0607	Master Rear Door/Ramp Switch Jumper Harness	Inspect	0.1					
		Replace		0.7			8, 32	
		Repair		1.7			8	
0607	Master Crew Light Switch	Inspect	0.1					
		Replace		0.8			8	
		Repair		1.8			8	
0607	Master Crew Light Switch Jumper Harness	Inspect	0.1					
		Replace		0.8			8, 32	
		Repair		1.8			8, 32, 40	
0607	Spotlight Control	Inspect	0.1					
		Replace		0.7			8	
		Repair		1.7			8, 40	
0607	Mirror Remote Control Switch Wiring Harness	Inspect	0.2					
		Replace		0.8			7, 8, 30, 32	
		Repair		1.8			7, 8, 32	
0608	Antilock Brake System (ABS) Blink Code Switch	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8	
0608	Cruise Control Switch Module	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8	
0608	Instrument Panel (IP) Circuit Breaker, Fuse, and Relay	Inspect		0.1				
		Replace		0.4			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Repair		1.4			8, 40	
0608	Instrument Panel (IP) Center Relay	Inspect		0.1				
		Replace		0.7			8	
		Repair		1.7			8, 40	
0608	Instrument Panel (IP) Harness	Inspect		0.1				
		Replace		11.8			8	
		Repair		12.8			8, 36, 40	
0608	Cabin Electrical Ground Stud Plate	Inspect	0.1					
		Replace		1.3			7, 8	
		Repair		2.3			7, 8	
0608	Air Gauge Transducer	Inspect		0.1				
		Replace		0.4			8	
		Repair		1.4			8	
0608	Multifunction Turn Signal Switch Assembly	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8, 40	
0608	Steering Column Wiring Harness	Inspect		0.5				
		Replace		2.6			8	
		Repair		3.6			8, 40	
0608	Steering Wheel Wire Harness	Inspect		0.5				
		Replace		0.8			8	
		Repair		1.8			8, 40	
0608	Brake Stoplight Switch	Inspect		0.1				
		Replace		0.2			8	
		Repair		1.2			8	
0608	Parking Brake Lamp Transducer	Inspect	0.1					
		Replace		0.4			8	
		Repair		1.4			8, 22, 40	
0608	110V Cover, Outlet, and Box	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8	
0608	Engine Control Module (ECM)	Inspect		1.0				
		Replace		11.1			8	
		Repair		12.1			8, 14, 40	
0608	Engine Sensor Wiring Harness	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		16.1			8	
		Repair		17.1			8, 34, 40	
0608	Fuel Injector Harness	Inspect		0.5				
		Replace		5.1			8	
		Repair		6.1			8, 12, 22	
0608	Air Conditioning (A/C) Condenser Fan Motor Relay	Inspect		0.1				
		Replace		0.4			8	
		Repair		1.4			8, 40	
0608	Instrument Panel (IP) Harness Terminating Resistor	Inspect		0.1				
		Replace		0.5			8	
		Repair		1.5			8	
0608	Power Distribution Center (PDC) Fuse and Relay	Inspect		0.1				
		Replace		1.0			8	
		Repair		2.0			8, 13, 40	
0608	Power Distribution Center (PDC) Junction Box	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8, 40	
0608	Power Distribution Center (PDC) Harness	Inspect	0.1					
		Replace		7.6			8	
		Repair		8.6			8, 13, 40	
0608	Engine Wiring Harness	Inspect	0.1					
		Replace		19.6				
		Repair		20.6			7, 8	
0608	Engine Wiring Harness Terminating Resistor	Inspect		0.1				
		Replace		8.3			8	
		Repair		9.3			8, 40	
0608	Starter Motor-to-Engine Ground Jumper Harness	Inspect	0.1					
		Replace		9.3			8	
		Repair		10.3			8	
0608	Starter Motor-to-Frame Ground Jumper Cable	Inspect	0.1					
		Replace		9.1			8	
		Repair		10.1			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
0608	Alternator Interconnect Positive Cable	Inspect	0.1					
		Replace		1.1			7, 8	
		Repair		2.1			7, 8	
0608	12V and 24V Battery Disconnect Switch Solenoid	Inspect	0.1					
		Replace		1.6			8	
		Repair		2.6			8	
0608	12V Battery Disconnect Switch Solenoid Feed Cable	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8	
0608	24V Battery Disconnect Switch Solenoid Feed Cable	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8	
0608	Winch Megafuse Feed Cable	Inspect	0.1					
		Replace		1.2			8	
		Repair		2.2			8	
0608	Inverter Disconnect Battery Switch Solenoid Harness	Inspect	0.1					
		Replace		2.0			8	
		Repair		3.0			8	
0608	12 to 24V Disconnect Battery Switch Solenoid Feed Harness	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8	
0608	12V to 24V Disconnect Battery Switch Solenoid Ground Harness	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8	
0608	24V Body Feed Harness	Inspect	0.1					
		Replace		3.1			8	
		Repair		4.1			8	
0608	Equalizer Cables	Inspect	0.1					
		Replace		1.1			8	
		Repair		2.1				
0608	Battery Equalizer	Inspect		1.0				
		Replace		13.5			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
		Repair		14.5			7, 8	
0608	Master Disconnect Harness	Inspect		0.1				
		Replace		14.8			8	
		Repair		15.8			8	
0608	110V Inverter	Inspect	0.1					
		Replace		0.4			8	
		Repair		1.4			8, 40	
0608	Electronic System Controller (ESC)	Inspect	0.1					
		Replace		1.2			8	
		Repair		2.2			4, 8, 22, 40	
0608	Electronic System Controller (ESC) Brace	Inspect	0.1					
		Replace		2.0			7, 8	
0608	Antilock Brake System (ABS) Control Module	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8, 22, 40	
0609	Front Crew Light	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8	
0609	Rear Crew Light	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8	
0609	Interior Lights Crew Light Limit Switch and Jumper Harness	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8, 40	
0609	Interior Lights Left Rear Crew Light Harness	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8, 40	
0609	Interior Lights Right Rear and Front Crew Lights Harness	Inspect	0.1					
		Replace		2.0			8	
		Repair		3.0			8, 40	
0609	Front Bumper Turn Signal and Parking Light Assembly	Inspect	0.1					
		Replace		0.4			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Repair		1.4			8, 40	
0609	Spotlight Light Bulb	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8	
0609	Spotlight	Inspect	0.1					
		Replace		0.4			8	
		Repair		1.4			8, 40	
0609	Spotlight Exterior Harness	Inspect	0.1					
		Replace		0.2			8, 40	
		Repair		1.2			8, 40	
0609	Spot Light Interior Harness	Inspect	0.1					
		Replace		4.9			8	
		Repair		5.9			8, 40	
0609	Blackout Drive Light Assembly	Inspect	0.1					
		Replace		0.4			8	
		Repair		1.4			8, 40	
0609	Clearance and Marker Light Harness	Inspect	0.1					
		Replace		0.4			8	
		Repair		1.4			8, 40	
0609	Infrared (IR) Light	Inspect	0.1					
		Replace		0.1			8	
		Repair		1.1			8, 40	
0609	Front Clearance Light Assembly	Inspect	0.1					
		Replace		1.9			8	
		Repair		2.9			8	
0609	Front Clearance Light Bar Harness	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8, 40	
0609	Front Fender Light Assembly	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8	
0609	Front Fender Light Bulb	Inspect	0.1					
		Replace		0.3				
		Repair		1.3				
0609	Front Turn Signal and Parking Light Bulb	Inspect	0.1					
		Replace		0.1			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Repair		1.1			8, 40	
0609	Front Bumper Left Harness	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8, 40	
0609	Front Bumper Right Harness	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8, 40	
0609	Headlamp	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8	
0609	Headlamp Alignment Procedure	Align		0.5			8	
0609	Left Headlamp and Turn Signal Harness	Inspect	0.1					
		Replace		0.9			8	
		Repair		1.9			8, 40	
0609	Right Headlamp and Turn Signal Harness	Inspect	0.1					
		Replace		0.9			8	
		Repair		1.9			8, 40	
0609	Headlamp Assembly	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8, 40	
0609	Headlamp Bezel	Inspect	0.1					
		Replace		1.1			8	
0609	Back-up Light Assembly	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8	
0609	Composite Taillamp Assembly	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8	
0609	Taillamp Harness	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8	
0609	Rear Clearance Light Assembly	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
0609	Rear Clearance Light Bar Harness	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8, 40	
0609	Rear Sidemarker Light	Inspect	0.1					
		Replace		1.7			8	
		Repair		2.7			8	
0610	Engine Coolant Temperature (ECT) Sensor	Inspect	0.1					
		Replace		6.1			7, 8, 32	
		Repair		7.1			7, 8, 32, 34	
0610	Engine Oil Temperature (EOT) Sensor		0.1					
		Replace		0.1				
		Repair		1.1			8	
0610	Manifold Absolute Pressure (MAP) Sensor	Inspect	0.1					
		Replace		0.1			8	
		Repair		1.1			8, 8, 22, 35	
0610	Injection Control Pressure (ICP) Sensor	Inspect	0.1					
		Replace		0.1			8, 32	
		Repair		1.1			8, 22, 32, 35, 38, 40	
0610	Engine Oil Pressure (EOP) Sensor	Inspect	0.1					
		Replace		1.7			7, 8, 32	
		Repair		2.7			7, 8, 23, 32, 35	
0610	Camshaft Position (CMP) Sensor	Inspect		0.2				
		Replace		0.2			8, 32	
		Repair		1.2			8, 32	
0610	Transfer Case Mode Switch	Inspect		0.2				
		Replace		0.4			8	
		Repair		1.4			8	
0610	Transfer Case Vehicle Speed Sensor (VSS)	Inspect		0.2				
		Replace		2.6			8	
0610	Injection Pressure Regulator (IPR) Sensor	Inspect	0.1					
		Replace		5.3			7, 8, 32	
		Repair		6.3			7, 8, 22, 32	
0610	Accelerator Pedal (APS) Sensor	Inspect		0.1				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW C	MAIN-TAI-NER F	BE-LOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
		Replace		0.6			8	
		Repair		1.6			8, 36	
0610	Barometric Pressure Sensor	Inspect		0.1				
		Replace		2.6			8	
		Repair		3.6			8	
0610	Intake Air Temperature (IAT) Sensor	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8, 22, 34, 40	
0610	Fuel Level Sending Unit	Inspect		0.2				
		Replace		19.7			8	
		Repair		20.7			8, 23	
0610	Water Sensor Probe	Inspect	0.1					
		Replace		0.2			8, 32	
		Repair		1.2			8, 32	
0611	Electric Horn	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8	
0611	Horn Button Assembly	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8, 40	
0612	Battery Disconnect Procedure	Service		0.8			7, 8	
0612	Battery Cable and Clean Power Harness	Inspect		0.1				
		Replace		1.0			7, 8	
		Repair		2.0			7, 8, 40	
0612	Engine Control Module (ECM) and Transmission Control Module (TCM) Clean Power and Ground Harness	Inspect		0.1				
		Replace		9.2			8	
		Repair		10.2			8, 22, 40	
0612	Battery Cables	Inspect		0.1				
		Replace		2.1			7, 8	
		Repair		3.1			7, 8	
0612	Body Ground to Firewall Ground Cable	Inspect		0.1				
		Replace		1.4			8	
		Repair		2.4			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW C	MAINTAINER F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
0612	Battery Stud Adapter Terminal Clamp	Inspect		0.1				
		Replace		2.3			7, 8, 32	
0612	Battery Body Ground Cable	Inspect		0.1				
		Replace		1.0			8	
		Repair		2.0			8	
0612	Instrument Panel (IP) Feed Harness	Inspect		0.1				
		Replace		10.1			8	
		Repair		11.1			8	
0612	Engine Control Module (ECM) and Transmission Control Module (TCM) Clean Power Fuse	Inspect		0.1				
		Replace		0.5			8	
0612	Starter Motor-to-Battery Feed Cable	Inspect		0.1				
		Replace		9.3			8	
		Repair		10.3			8, 40	
0612	Starter Motor-to-Battery Ground Cable	Inspect		0.1				
		Replace		9.3			8	
		Repair		10.3			8	
0612	Winch Battery Cable Junction Block and Bracket Support	Inspect		0.1				
		Replace		1.0			8	
0612	Winch Feed Cable	Inspect		0.1				
		Replace		1.1			8	
		Repair		2.1			8	
0612	Winch Ground Cable	Inspect		0.1				
		Replace		1.2			8	
		Repair		2.2			8	
0612	Battery	Inspect		0.5				
		Service	0.5					
		Replace		2.7			8	
		Repair		3.7			8	
0612	Battery Box	Inspect		0.5				
		Replace		16.2			8	
0613	NATO Jump Start Connector	Inspect	0.1					
		Service	0.2					
		Replace		1.4			8	
		Repair		2.4			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0613	12V Underhood Megafuse and Holder	Inspect	0.1					
		Replace		1.4			7, 8	
		Repair		2.4			7, 8	
0613	24 Volt Underhood Junction Block	Inspect	0.1					
		Replace		1.1			7, 8	
0613	Forward Chassis Wiring Harness	Inspect	0.1					
		Replace		2.9			8	
		Repair		3.9			8, 40	
0613	Front Antilock Braking System (ABS) Sensor	Inspect		1.5				
		Replace		0.4			8, 32	
		Repair		1.4			8, 22, 32, 40	
0613	Center Chassis Wiring Harness	Inspect		0.1				
		Replace		10.2			8	
0613	Rear Chassis Harness	Inspect		0.1				
		Replace		1.2			8	
		Repair		2.2			8, 40	
0613	Front Trailer Hookup Cover	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8	
0613	Front Trailer Hookup Harness	Inspect	0.1					
		Replace		1.4			8	
		Repair		2.4			8, 40	
0613	Rear Trailer Hookup Cover	Inspect	0.1					
		Replace		0.5			8	
		Repair		1.5			8	
0613	Rear Trailer Hookup Harness	Inspect	0.1					
		Replace		0.7			8	
		Repair		1.7			8, 40	
0613	Rear Door Ramp Hydraulic System Control Harness	Inspect		0.2				
		Replace		2.4			7, 8	
		Repair		3.4			7, 8, 40	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0613	Rear Door Ramp Hydraulic System Harness (Push-Type Operation)	Inspect		0.2				
		Replace		0.6			8	
		Repair		1.6			8, 40	
0613	Rear Door Ramp Hydraulic System Harness (Pull-Type Operation)	Inspect		0.2				
		Replace		0.7			8	
		Repair		1.7			8, 40	
0613	110V Outlet Harness	Inspect	0.1					
		Replace		2.0			8	
		Repair		3.0			8, 40	
0613	24V Instrument Panel (IP) Feed Harness	Inspect		0.1				
		Replace		0.4			8	
		Repair		1.4			8, 40	
0613	24V Power Distribution Module (PDM) Feed Harness	Inspect		0.1				
		Replace		0.7			8	
		Repair		1.7			8, 40	
0613	24V Power Distribution Module (PDM) Ground Cable	Inspect		0.1				
		Replace		0.4			8	
		Repair		1.4			8	
0613	Left 12V Socket and Feed Harness	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8, 40	
0613	Right 12V Socket and Feed Harness	Inspect	0.1					
		Replace		2.0			8	
		Repair		3.0			8, 40	
0613	Front and Rear Clearance Lights Roof Harness	Inspect	0.1					
		Replace		4.8			8	
		Repair		5.8			8, 40	
0613	Clearance Lights Cabin Jumper Harness	Inspect	0.1					
		Replace		2.1			8	
		Repair		3.1			8, 40	
0613	Electrical Wire Repair	Inspect		0.3				
		Repair		0.3			7, 8, 32	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0613	24 Volt Power Distribution Module (PDM)	Inspect	0.1					
		Replace		3.2			8	
		Repair		4.2			8, 32	
0613	Rear Door Ramp Feed Harness	Inspect	0.1					
		Replace		11.4			8	
		Repair		12.4			8, 40	
0613	24V Government Furnished Equipment (GFE) Harness	Inspect	0.1					
		Replace		1.2			8	
		Repair		2.2			8	
0613	Turret Power Feed Harness	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8	
0618	110V Inverter Main Power Switch	Inspect	0.1					
		Replace		0.8			8	
		Repair		1.8			8	
0618	Winch Megafuse and Holder	Inspect	0.1					
		Replace		1.0			8	
		Repair		2.0			8	
0618	24V Inverter Megafuse and Holder	Inspect		0.5				
		Replace		1.8			8	
		Repair		2.8			8	
0618	Inverter and Main Power Switch Solenoid Cables	Inspect	0.1					
		Replace		2.2			8	
		Repair		3.2			8	
0705	Transmission Auto Shift Control Module	Inspect	0.2					
		Replace		1.1			8, 32	
		Repair		2.1			8, 32	
0705	Transmission Control Module and Brace	Inspect		1.0				
		Replace		12.6			7, 8, 32	
		Repair		13.6			7, 8, 32	
0708	Torque Converter	Replace				7.0	7, 8, 32	
0710	Transmission Assembly	Inspect	0.2					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Service	1.0					E
		Replace		17.4			7, 8, 32	
		Repair		18.4			7, 8, 22, 32, 40	
		Overhaul				22.0		
0710	Transmission Mounting Crossmember	Inspect		0.5				
		Replace		10.1			8, 32	
0721	Transmission Cooler Hose	Inspect	0.1					
		Replace		10.0			8, 32	
0721	Transmission Fluid and Filter	Inspect	0.2					
		Service		8.6			7, 8, 32	
0721	Transmission Breather	Inspect		2.0				
		Replace		8.2			8	
0721	Transmission Speed Sensors	Inspect		1.0				
		Replace		8.2			8	
		Repair		9.2			8, 22, 40	
0801	Transfer Case Assembly	Inspect	0.1					
		Replace		12.7			7, 8, 32	
		Repair		13.7			7, 8, 32	
		Overhaul				7.0		
0801	Transfer Case Mount and Support	Inspect		0.5				
		Replace		14.0			7, 8	
0801	Transfer Case Armor	Inspect	0.1					
		Replace		1.1			7, 8, 32	
0803	Transfer Case Air Lines	Inspect		0.2				
		Replace		10.0			8	
0803	4-Pack Air Solenoid Module and Support	Inspect		0.2				
		Replace		1.4			8, 32	
		Repair		2.4			4, 8, 22, 32, 40	
0804	Transfer Case Oil Cooler Hose	Inspect	0.1					
		Replace		0.7			7, 8	
0804	Transfer Case Drain/Fill	Service		0.5			7, 8, 32	
0804	Transfer Case Oil Cooler	Inspect		0.1				
		Replace		1.4			8, 32	
0900	Prop Shaft	Inspect	0.1					
		Service	0.2				7, 8	B
		Replace		8.6			7, 8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
			C	F	H	D		
0901	Transmission to Transfer Case Prop Shaft	Inspect		0.5				
		Service	0.2				7, 8	
		Replace		9.2			7, 8	
1000	Front Axle Assembly	Inspect	0.2					
		Service		0.5			7, 8, 32	
		Replace		13.9			7, 8, 32	
		Repair		14.9			7, 8, 32	
		Overhaul				16.0		
1000	Front Wheel Hub and Bearing	Inspect		1.0				
		Replace		2.2			7, 8, 32	
1000	Front Axle Assembly Alignment	Service		1.0			7, 8, 32	
1000	Front Axle Breather	Inspect		0.2				
		Replace		0.1			8	
1000	Front Axle Differential Drain/Fill Procedure	Service		0.8			7, 8, 32	
1000	Upper and Lower King Pin Bushing and Axle Shaft Oil Seal	Inspect		0.5				
		Service		0.2			8, 32	
		Replace		11.7			8, 32	
1004	Steering Arm	Inspect		0.5				
		Service		0.2			7, 8, 32	
		Replace		2.9			7, 8, 32	
1004	Steering Knuckle and King Pin	Inspect		0.5				
		Service		0.2			7, 8, 32	
		Replace		10.2			7, 8, 32	
1100	Rear Axle Assembly	Inspect		0.5				
		Service		1.0			7, 8, 32	
		Replace		17.1			7, 8, 32	
		Repair		18.1			7, 8, 32	
		Overhaul				16.0		
1100	Rear Axle Differential Drain/Fill	Service		0.5			7, 8, 32	
1100	Rear Hub Assembly Bearing and Bearing Cup	Inspect		1.5				
		Replace		4.6			8, , 32	
1100	Rear Axle Outer Hub Drain/Fill	Service		0.8			8, 32	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW C	MAINTAINER F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
1100	Rear Axle Shaft and Gasket	Inspect		1.0				
		Replace		1.4			7, 8, 32	
1202	Front Axle Antilock Braking System (ABS) Tone Ring	Inspect		1.0				
		Replace		2.4			8, 32	
1202	Brake Adjustment Procedure	Adjust		1.3			8	
1202	Front Brake Dust Shield	Inspect		1.0				
		Replace		4.7			8	
1202	Front Brake Shoes	Inspect		1.0				
		Service		1.5				
		Replace		4.2			8	
1202	Front Brake Drum	Inspect		1.0				
		Service		1.5				
		Replace		0.8			8, 32	
1202	Front Brake S-Camshaft	Inspect		1.5				
		Replace		5.2			7, 8	
1202	Front Brake Spider and Spindle Assembly	Inspect		2.0				
		Replace		7.1			7, 8, , 32	
1202	Front Slack Adjuster Assembly	Inspect		0.6				
		Replace		1.8			7, 8	
1202	Rear Antilock Braking System (ABS) Sensor	Inspect		1.5				
		Replace		3.8			8	
		Repair		4.8			8, 22, 40	
1202	Rear Brake Dust Shield	Inspect		0.2				
		Replace		0.1			8	
1202	Rear Brake Shoes	Inspect		1.5				
		Service		1.5				
		Replace		4.0			8	
1202	Rear Brake Drum and Hub Assembly	Inspect		1.5				
		Service		1.5				
		Replace		3.7			7, 8, 32	
1202	Rear Brake S-Camshaft	Inspect		1.5				
		Replace		4.5			7, 8	
1202	Rear Brake Spider Assembly	Inspect		2.0				
		Replace		5.5			7, 8, , 32	
1202	Rear Slack Adjuster Assembly	Inspect		0.6				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		1.8			7, 8	
1202	Brake S-Camshaft Tube Support Bracket	Inspect		0.1				
		Replace		0.5			7, 8	
1208	Air Reservoir Tank	Inspect		1.0				
		Service	0.2					
		Replace		12.7			7, 8, 32	
1208	Cabin Door Assist System Limit Valve	Inspect	0.1					
		Replace		8.5			8	
1208	Brake Pedal	Inspect		0.2				
		Replace		0.2			7, 8	
1208	Foot Brake Valve	Inspect		1.0				
		Replace		5.6			8	
		Repair		6.6			8	
1208	Tractor Protection Valve	Inspect		1.0				
		Replace		4.6			8	
		Repair		5.6			8	
1208	Upper Air Line Grommet	Inspect		0.2				
		Replace		7.0			8	
1208	Driver Control Module (DCM) Left Air Line Grommet	Inspect		0.2				
		Replace		4.8			8	
1208	Hand Brake Control Valve	Inspect		0.5				
		Replace		1.0			8	
1208	Front Antilock Braking System (ABS) Modulator Valve	Inspect		0.2				
		Replace		0.5			8	
		Repair		1.5			8, 22, 40	
1208	Front Brake Air Hoses	Inspect		0.2				
		Replace		0.1			8	
1208	Spring Brake Modulating Valve	Inspect		0.5				
		Replace		8.8			8	
1208	Air Brake Relay Valve	Inspect		0.1				
		Replace		0.4			8	
1208	Rear Antilock Braking System (ABS) Modulator Valve	Inspect		0.2				
		Replace		0.7			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Repair		1.7			8, 22, 40	
1208	Air Hose Quick Connect Fitting	Inspect	0.1					
		Replace		0.1			8	
1208	Air Hose Fitting	Inspect	0.1					
		Replace		0.6			8, 25	
1208	Front Brake Air Chamber	Inspect		0.2				
		Replace		1.7			8, 32	
		Repair		2.7			8, 32	
1208	Rear Brake Air Hoses	Inspect		0.2				
		Replace		0.4			8	
1208	Rear Brake Air Chamber	Inspect		0.2				
		Replace		2.0			8, 32	
		Repair		3.0			8, 32	
1208	Air Dryer	Inspect		0.2				
		Service		0.5				
		Replace		0.4			7, 8, 32	
1208	Air Dryer Bracket	Inspect		0.2				
		Replace		3.2			7, 8	
1208	Air Dryer Desiccant Cartridge	Inspect		0.2				
		Service		0.3				
		Replace		0.2			7, 8	
1208	Pressure Protection Valve	Inspect		0.2				
		Replace		8.3			8	
		Repair		9.3			8	
1208	Air Brake Quick Release Valves	Inspect		0.1				
		Replace		0.2			8	
1208	Air Brake Double Check Valve	Inspect		0.1				
		Replace		11.2			8	
1209	Air Compressor Supply Air Line	Inspect		0.2				
		Replace		0.1			8	
1209	Air Compressor Delivery Air Line	Inspect		1.0				
		Replace		11.7			7, 8	
1209	Air Compressor Governor	Inspect		0.5				
		Replace		0.4			8	
1209	Air Compressor Governor Adjustment Procedure	Adjust		2.0			8	
1209	Air Compressor	Inspect		0.5				
		Replace		14.0			7, 8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
			C	F	H	D		
		Repair		15.0			7, 8	
		Overhaul				5.0		
1211	Gladhands	Inspect	0.1					
		Replace		0.3			8	
1211	Trailer Control Valve	Inspect	0.1					
		Replace		2.0			7, 8	
1311	Wheel and Tire Assembly	Inspect	0.1					
		Service	0.1			0.5		
		Replace		0.7			7, 8, 32	
1401	Tie Rod	Inspect		0.5				
		Replace		0.5			7, 8, 32	
1401	Steering Shaft	Inspect		0.5				
		Replace		4.8			8	
1401	Steering Column	Inspect		0.2				
		Replace		7.1			7, 8	
1401	Steering Wheel and Clock Spring	Inspect		0.5				
		Replace		1.8			7, 8	
1401	Pitman Arm	Inspect		0.5				
		Replace		0.6			7, 8, 24, 31, 32	
1401	Steering Drag Link	Inspect		0.5				
		Replace		0.3			7, 8, 32	
1407	Steering Gear	Inspect		0.5				
		Test		0.5				
		Replace		3.3			8, 24, 32	
		Repair		4.3			8, 24, 32	
		Overhaul				3.0		
1407	Bleeding Single Gear	Service		1.0			7, 8,	
1410	Power Steering Pump	Inspect		0.2				
		Replace		10.7			8, 32	
		Repair		11.7			8, 32	
1411	Power Steering Tubing and Hose	Inspect		0.5				
		Replace		0.9			8, 32	
1413	Power Steering Reservoir	Inspect	0.1					
		Service	0.1					
		Replace		0.1			8, 32	
1413	Power Steering Filter	Inspect		0.1				
		Service		0.2				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		0.2			8, 32	
1413	Power Steering Reservoir Drain/Fill Procedure	Service		1.1			7, 8, 32	
1501	Front Bumper	Inspect	0.1					
		Replace		2.0			8	
1501	Winch Remote Control Connector Support	Inspect	0.1					
		Replace		0.4			8	
1501	Front Frame Crossmember and Radiator Support	Inspect		0.2				
		Replace		10.8			8	
1501	Front Frame Crossmember and Support	Inspect		0.5				
		Replace		6.0			8	
1501	Engine Mount Crossmember Assembly	Inspect		0.5				
		Replace		7.3			7, 8	
1501	Rear Frame Crossmember and Support	Inspect		0.5				
		Replace		5.8			8	
1501	Harness Support Bracket	Inspect		0.5				
		Replace		9.8			8	
1503	Rear Towing Eye	Inspect	0.1					
		Service	0.2					
		Replace		4.7			7, 8	
1503	Towing Pintle Hook	Inspect	0.1					
		Service	0.2					
		Replace		4.6			7, 8, 32	
1503	Front Towing Eye	Inspect	0.1					
		Service	0.2					
		Replace		1.2			7, 8	
1601	Front Axle Bumper Stop	Inspect		0.1				
		Replace		0.3			8	
1601	Front Axle Bumper Stop Bracket	Inspect		0.1				
		Replace		0.8			7, 8	
1601	Auxiliary Spring	Inspect		1.0				
		Replace		0.4			7, 8	
1601	Rear Spring Assembly	Inspect	0.1					
		Replace		2.1			7, 8	
1601	Front Spring Shackle	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Service		0.5				
		Replace		9.0			7, 8	
1601	Front Spring Assembly	Inspect	0.1					
		Replace		9.9			7, 8, 32	
1604	Front Shock Absorber	Inspect	0.1					
		Replace		0.6			7, 8	
1604	Front Shock Absorber Lower Mounting Bracket	Inspect		0.1				
		Replace		1.6			7, 8, 32	
1604	Front Shock Absorber Upper Mounting Bracket	Inspect		0.1				
		Replace		1.0			7, 8	
1801	Cabin	Inspect	0.2					
		Replace				16.0		
1801	Instrument Panel (IP) Storage Bin	Inspect	0.1					
		Replace		1.1			8	
1801	Cross-Vehicle Equipment Bracket	Inspect	0.1					
		Replace		4.9			7, 8	
1801	Steering Column Covers	Inspect	0.1					
		Replace		1.1			8, 32	
1801	Driver Control Mounting (DCM) Bracket	Inspect		0.2				
		Replace		11.7			8	
1801	Armor Grille	Inspect	0.1					
		Replace		2.4			7, 8, 30, 32	
1801	Armor Grille Support and Armor Grille Support Bracket	Inspect		0.5				
		Replace		5.2			8	
1801	Hood/Fender Latch	Inspect	0.1					
		Replace		0.1			8	
1801	Hood Hinge Assembly	Inspect	0.1					
		Replace		0.8			7, 8	
1801	Hood Grille Air Intake	Inspect	0.1					
		Replace		0.1			8	
1801	Hood Grille Surround Assembly	Inspect	0.1					
		Replace		0.8			8	
1801	Hood Safety Cable Assembly	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		0.2			8	
1801	Hood Torsion Assist Bar	Inspect	0.1					
		Replace		0.1			8	
1801	Hood Assembly	Inspect	0.1					
		Replace		2.1			7, 8, 32	
1801	Hood Mirror	Inspect	0.1					
		Replace		0.6			8, 32	
1801	Instrument Panel (IP)	Inspect	0.1					
		Replace		4.3			7, 8	
1801	Instrument Panel (IP) Cluster Closeout	Inspect	0.1					
		Replace		2.0			8	
1801	Instrument Panel (IP) Center Closeout	Inspect	0.1					
		Replace		0.7			8	
1801	Instrument Panel (IP) Right Side Closeout	Inspect	0.1					
		Replace		0.2			8	
1801	Instrument Panel (IP) Center Trim Panel	Inspect	0.1					
		Replace		0.5			8, 32	
1801	Nuclear, Biological, and Chemical (NBC) Gauge	Inspect		0.1				
		Replace		1.9			8	
		Repair		2.9			8	
1801	Cabin Roof Molding	Inspect	0.1					
		Replace		1.0			8	
1801	Roof Armor Front Panel	Inspect	0.1					
		Replace		0.2			7, 8	
1801	Roof Armor Front Spoiler	Inspect	0.1					
		Replace		3.4			7, 8	
1801	Roof Armor Middle Front Panel	Inspect	0.1					
		Replace		3.0			7, 8	
1801	Roof Armor Middle Rear Panel	Inspect	0.1					
		Replace		3.0			7, 8	
1801	Roof Armor Rear Spoiler	Inspect	0.1					
		Replace		0.2			7, 8, 30	
1801	Roof Armor Rear Panel	Inspect	0.1					
		Replace		0.2			7, 8	
1801	Weapon (Sliding) Hatch (Gunner Hatch)	Inspect	0.1					
		Service		0.1				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		3.5			7, 8, 30, 32	
1801	Weapon (Sliding) Hatch (Gunner Hatch) Inner Lock	Inspect	0.1					
		Replace		0.3			8	
1801	Weapon (Sliding) Hatch (Gunner Hatch) Seal	Inspect	0.1					
		Replace		0.2			7, 8	
1801	Cabin Emergency Hatch and Hinge	Inspect	0.1					
		Replace		0.8			7, 8, 30, 32	
1801	Cabin Emergency Hatch Handle/Lock	Inspect	0.1					
		Replace		0.3			8	
1801	Cabin Emergency Hatch Seal	Inspect	0.1					
		Replace		0.5			3, 7, 8	
1801	Hulls with Gun Port	Inspect	0.1					
		Replace		0.5			8, 32	
1801	Left Engine Armor Plate	Inspect	0.1					
		Replace		0.3			7, 8, 32	
1801	Left Engine Armor Plate Bracket	Inspect	0.1					
		Replace		1.0			8	
1801	Right Engine Armor Plate	Inspect	0.1					
		Replace		1.2			7, 8, 32	
1801	Right Engine Armor Plate Bracket	Inspect	0.1					
		Replace		2.0			7, 8, 32	
1801	Inner Wheel Deflector Armor Plate	Inspect	0.1					
		Replace		0.8			8, 32	
1801	Left Inner Wheel Deflector Bracket	Inspect	0.1					
		Replace		13.1			8, 32	
1801	Right Inner Wheel Deflector Bracket	Inspect	0.1					
		Replace		14.5			8	
1801	Exterior Battery Box Armor Door	Inspect	0.1					
		Replace		0.3			8	
1801	Exterior Fuel Tank Armor Door	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		0.6			8	
1801	Belly Armor	Inspect	0.1					
		Replace		8.0			3, 7, 8, 32	
1801	Cabin Door	Inspect	0.1					
		Replace		5.1			7, 8, 30, 32	
1801	Securing Cabin Door for Service	Service		0.2			3, 8, 30, 32	
1801	Door Armor Panel	Inspect	0.1					
		Replace		1.8			7, 8, 30, 32	
1801	Door Window Riot Guard	Inspect	0.1					
		Replace		2.0			8	
1801	Upper Cabin Door Lock, Spacer, and Bracket	Inspect	0.1					
		Replace		0.9			8	
1801	Lower Cabin Door Lock, Spacer, and Bracket	Inspect	0.1					
		Replace		0.9			8	
1801	Cabin Door Striker and Cabin Door Check Stop Assemblies	Inspect	0.1					
		Replace		0.4			8, 32	
1801	Cabin Door Seal	Inspect	0.1					
		Replace		0.5			7, 8	
1801	Cabin Door Linkage Inspection and Adjustment Procedure (Lower Combat Door Lock-Type)	Inspect		0.4				
		Adjust		1.0			8, 32	
1801	Cabin Door Linkage Inspection and Adjustment Procedure (Upper Combat Door Lock-Type)	Inspect		0.4				
		Adjust		1.2			8, 32	
1801	Dual-Pneumatic Door Actuator	Inspect		1.0				
		Replace		3.3			8	
		Repair		4.3			8	
1801	Cabin Door Assist System Actuator Air Line Tubing	Inspect	0.1					
		Replace		1.2			8	
1801	Left Door Air Supply Line	Inspect	0.1					
		Replace		1.2			8	
1801	Right Cabin Door Assist System Supply Air Line Tubing	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		1.2			8	
1801	Cabin Door Assist System Supply Pass-Through Air Line Tubing	Inspect	0.1					
		Replace		4.9			8	
1801	Cabin Door Assist System Supply Air Line Tubing	Inspect	0.1					
		Replace		9.5			8	
1801	Cabin Door Exterior Handle Assembly (Single and Dual Cylinder)	Inspect	0.1					
		Replace		4.1			8, 32	
1801	Cabin Door Interior Handle Assembly (Single-Piston, Lower Combat Door Lock-Type)	Inspect	0.1					
		Replace		2.5			7, 8, 32	
1801	Cabin Door Interior Handle Assembly (Dual-Piston, Upper Combat Door Lock-Type)	Inspect	0.1					
		Replace		2.2			7, 8, 32	
1801	Cabin Door Trim Panel (One-Piece, Lower Combat Door Lock-Type)	Inspect	0.1					
		Replace		0.5			8	
1801	Cabin Door Trim Panel (Two-Piece, Upper Combat Door Lock-Type)	Inspect	0.1					
		Replace		0.7			8	
1801	Cabin Door Combat Lock Assembly	Inspect	0.1					
		Replace		1.7			8	
1801	Exterior Body Armor Right Front Panel	Inspect	0.1					
		Replace		0.7			8	
1801	Exterior Body Armor Middle Rear Panel	Inspect	0.1					
		Replace		0.4			7, 8	
1801	Exterior Body Armor Rear Panel	Inspect	0.1					
		Replace		0.2			7, 8	
1801	Exterior Body Armor Riot Guard	Inspect	0.1					
		Replace		0.2			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW C	MAINTAINER F	BELOW DEPOT H	DEPOT D	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
1801	Exterior Body Armor Left Front Panel	Inspect	0.1					
		Replace		0.4			7, 8, 30, 32	
1801	Exterior Body Armor Left Middle Front Panel	Inspect	0.1					
		Replace		0.4			7, 8	
1801	Exterior Body Armor Right Middle Front Panel	Inspect	0.1					
		Replace		0.6			7, 8	
1801	Rear Door/Ramp Seal	Inspect	0.1					
		Replace		0.3			7, 8	
1801	Body Armor Rear Wall Riot Guard and Bracket	Inspect	0.1					
		Replace		0.7			8	
1801	Rear Wall Overlap	Inspect	0.1					
		Replace		0.7			8	
1801	Rear Door/Ramp	Inspect	0.2					
		Replace		1.9			7, 8, 30, 32	
1801	Bottom Ramp Step	Inspect	0.1					
		Replace		0.1			8	
1801	Rear Door/Ramp Lock Assembly	Inspect	0.2					
		Replace		1.0			8, 32	
1801	A-Pillar Cover Trim	Inspect	0.1					
		Replace		0.4			8	
1801	A-Pillar Assist Handle	Inspect	0.1					
		Replace		0.2			8	
1801	Side Cowl Body Armor Panel	Inspect	0.1					
		Replace		0.8			7, 8	
1801	Windshield Armor	Inspect	0.1					
		Replace		4.2			8	
1801	Driver Control Mounting (DCM) Bracket Assembly Exterior Armor (With Front Access Panel)	Inspect	0.1					
		Replace		4.2			7, 8, 32	
1801	Driver Control Mounting (DCM) Bracket Assembly Exterior Armor (Without Front Access Panel)	Inspect	0.1					
		Replace		4.2			7, 8, 32	
1801	Driver Control Mounting (DCM) Bracket Assembly Interior Armor	Inspect	0.1					
		Replace		4.4			7, 8, 32	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
1801	Engine Cover	Inspect	0.1					
		Replace		3.3			8	
1801	Cowl Panel Drain Tube	Inspect	0.1					
		Replace		0.1			8	
1801	Motor Baffle	Inspect	0.1					
		Replace		5.8			8	
1802	Rear Window Armor Glass	Inspect	0.1					
		Replace		1.7			8	
1802	Door Window Armor Glass	Inspect	0.1					
		Replace		2.9			7, 8, 30, 32	
1802	Cabin Window Armor Glass	Inspect	0.1					
		Replace		2.3			7, 8, 30, 32	
1802	Windshield Armor Glass	Inspect	0.1					
		Replace		9.2			7, 8, 30, 32	
1802	Step and Brackets	Inspect	0.1					
		Replace		0.7			8	
1802	Fender and Reinforcement	Inspect	0.1					
		Replace		0.6			7, 8	
1805	Floor Panel (Front)	Inspect	0.1					
		Replace		15.2			8	
1805	Floor Panel (Front Center)	Inspect	0.1					
		Replace		2.9			8	
1805	Center Floor Panel	Inspect	0.1					
		Replace		2.3			8	
1805	Rear Center Floor Panel	Inspect	0.1					
		Replace		1.9			7, 8, 30, 32	
1805	Rear Floor Panel	Inspect	0.1					
		Replace		7.0			8	
1806	Driver Seat	Inspect	0.1					
		Replace		1.0			8	
1806	Seat Belt	Inspect	0.1					
		Replace		0.4			7, 8	
1806	Right Floor Seat Bracket	Inspect	0.1					
		Replace		1.7			8	
1806	Crew and Front Passenger Seat	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		0.3			8	
1808	Communications Rack		0.1					
		Replace		1.8			8, 32	
1808	Gunner Platform/Stand	Inspect	0.1					
		Replace		0.9			8	
1808	Gunner Restraint Assembly	Inspect	0.1					
		Replace		0.4			8	
1808	Rear Communication Rack	Inspect	0.1					
		Replace		0.7			3, 8	
1808	Right Side Forward Stowage Box	Inspect	0.1					
		Replace		4.3			8	
1808	Air Conditioning (A/C) Condenser Panel	Inspect	0.1					
		Replace		0.4			8	
1808	Right Side Rear Stowage Box	Inspect	0.1					
		Replace		0.6			8	
1808	Left Side Forward Stowage Box	Inspect	0.1					
		Replace		2.1			8	
1808	Right Rear Stowage Box Latch	Inspect	0.1					
		Replace		0.2			7, 8	
1808	Left Rear Stowage Box	Inspect	0.1					
		Replace		0.9			8	
2001	Winch Cable	Inspect	0.1					
		Replace		1.0			7, 8	
2001	Winch Assembly	Inspect	0.2					
		Replace		2.8			7, 8, 30, 32	
		Overhaul				3.0		
2202	Litter Arm Storage Bracket	Inspect	0.1					
		Replace		0.2			8	
2202	Front Litter Arm Mount Plate and Arm Support	Inspect	0.1					
		Replace		0.5			8	
2202	Rear Litter Arm Mount Plate and Arm Support	Inspect	0.1					
		Replace		0.2			8	
2202	Door Mounted Mirror	Inspect	0.1					
		Replace		0.1			8, 32	
2202	Wiper Cowl Panel	Inspect	0.1					

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		1.7			7, 8, 32	
2202	Windshield Wiper Motor, Transmission, Bracket, and Linkage Assembly	Inspect	0.1					
		Replace		2.5			7, 8	
		Repair		3.5			7, 8, 40	
2202	Windshield Wiper Arm and Blade Assembly	Inspect	0.1					
		Replace		0.2			7, 8	
2202	Windshield Washer Reservoir and Pump Motor Assembly	Inspect	0.1					
		Replace		0.4			8, 32	
		Repair		1.4			8, 13, 32, 40	
2202	Windshield Washer Hose Assembly	Inspect	0.1					
		Replace		1.8			8	
2202	Windshield Washer Reservoir Bracket	Inspect	0.1					
		Replace		1.3			8, 32	
2202	Windshield Wiper Motor Harness	Inspect	0.1					
		Replace		1.9			8	
		Repair		2.9			8	
2401	Rear Door/Ramp Hydraulic Pump Cover (Push-Type Operation)	Inspect		0.1				
		Replace		0.2			8	
2401	Rear Door/Ramp Hydraulic Pump Cover (Pull-Type Operation)	Inspect		0.1				
		Replace		0.3			8	
2401	Rear Door/Ramp Hydraulic Pump (Push-Type Operation)	Inspect		0.1				
		Service		0.5				
		Replace		1.4			8, 32	
		Repair		2.4			8, 32, 40	
2401	Rear Door/Ramp Hydraulic Pump (Pull-Type Operation)	Inspect		0.1				
		Service		0.5				
		Replace		3.4			8	
		Repair		4.4			8, 40	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
2401	Rear Door/Ramp Hydraulic Hand Pump (Push-Type Operation)	Inspect		0.1				
		Service		0.5				
		Replace		0.5			8, 32	
		Repair		1.5			8, 32	
2401	Rear Door/Ramp Hydraulic Power Unit Manifold and Module (Pull-Type Operation)	Inspect		0.1				
		Service		0.5				
		Replace		2.2			8, 32	
2401	Rear Door/Ramp Hydraulic Cylinder (Push-Type Operation)	Inspect		0.1				
		Replace		0.6			7, 8, 32	
		Repair		1.6			7, 8, 32	
2401	Rear Door/Ramp Hydraulic Cylinder (Pull-Type Operation)	Inspect		0.1				
		Replace		0.7			7, 8, 32	
2401	Rear Door/Ramp Gas Spring	Inspect		0.1				
		Replace		1.2			8, 32	
2401	Rear Door/Ramp Hydraulic Reservoir Fluid Fill Procedure (Pull-Type Operation)	Service		0.5			7, 8	
2401	Rear Door/Ramp Hydraulic Hoses (Push-Type Operation)	Inspect		0.1				
		Replace		0.5			7, 8, 32	
2401	Rear Door/Ramp Hydraulic Hoses (Pull-Type Operation)	Inspect		0.1				
		Replace		0.6			7, 8, 32	
3401	Outside Gunner Protection Riser	Inspect	0.1					
		Replace		2.8			7, 8, 30, 32	
3401	Outside Gunner Protection Armor	Inspect	0.1					
		Replace		0.2			8	
3401	Gun Turret Platform	Inspect	0.1					
		Replace		1.9			3, 7, 8, 30, 32	
3401	Turret Mounting Plate	Inspect	0.1					
		Replace		0.9			7, 8, 30, 32	
3402	Rifle Rack	Inspect	0.1					
		Replace		0.3			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
5200	Heating Ventilating and Air Conditioning (HVAC) Service/Recharge	Service		1.0			8, 26, 27	G
5200	Heating Ventilating and Air Conditioning (HVAC) Compressor	Inspect		0.5				
		Replace		2.7			8, 27, 32	
		Repair		3.7			8, 32	
5217	Heating Ventilating and Air Conditioning (HVAC) Evaporator Inlet Hose	Inspect		0.5				
		Replace		1.7			8, 27, 32	
5217	Heating Ventilating and Air Conditioning (HVAC) Evaporator Outlet Hose	Inspect		0.5				
		Replace		4.4			8, 27, 32	
5217	Heating Ventilating and Air Conditioning (HVAC) Filter Outlet Hose	Inspect		0.5				
		Replace		1.2			7, 8	
5217	Heating Ventilating and Air Conditioning (HVAC) Compressor Suction Hose	Inspect		0.5				
		Replace		2.9			7, 8	
5217	Heating Ventilating and Air Conditioning (HVAC) Left-Side Condenser Inlet Hose	Inspect		0.5				
		Replace		5.2			7, 8	
5217	Heating Ventilating and Air Conditioning (HVAC) Right-Side Condenser Inlet Hose	Inspect		1.0				
		Replace		4.8			7, 8	
5217	Heating Ventilating and Air Conditioning (HVAC) Left-Side Condenser Outlet Hose	Inspect		0.5				
		Replace		5.0			7, 8	
5217	Heating Ventilating and Air Conditioning (HVAC) Right-Side Condenser Outlet Hose	Inspect		0.5				
		Replace		3.6			7, 8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
5217	Heating Ventilating and Air Conditioning (HVAC) Compressor Discharge Hose	Inspect		0.5				
		Replace		2.1			7, 8	
5217	Heating Ventilating and Air Conditioning (HVAC) Service Port/Schrader Valve	Inspect		0.5				
		Replace		1.5			7, 27	
5217	Heating Ventilating and Air Conditioning (HVAC) Water Drainage Hose	Inspect		0.1				
		Replace		0.1			8	
5217	Heating Ventilating and Air Conditioning (HVAC) Fresh Air Inlet Tube	Inspect		0.3				
		Replace		0.2			8	
5217	Nuclear, Biological, and Chemical (NBC) Dust Tube	Inspect		0.5				
		Replace		0.8			8	
5221	Heating Ventilating and Air Conditioning (HVAC) Refrigerant Filter	Inspect		0.1				
		Service		0.5				
		Replace		2.8			7, 8	
5243	Heating Ventilating and Air Conditioning (HVAC) Condenser	Inspect		0.2				
		Replace		1.6			8	
5243	Heating Ventilating and Air Conditioning (HVAC) Condenser Fan Assembly	Inspect		1.0				
		Replace		1.4			8	
		Repair		2.4			8, 40	
5247	Engine Water Outlet Pipe and Elbow	Inspect	0.2					
		Replace		6.1			8, 32	
5247	Heating Ventilating and Air Conditioning (HVAC) 3-Way Valve Coolant Outlet Hose	Inspect		9.2				
		Replace		10.2			8, 32	
5247	Heating Ventilating and Air Conditioning (HVAC) 3-Way Valve and Bracket	Inspect		1.0				
		Replace		2.0			8, 32	
		Repair		3.0			8, 32, 40	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1)	(2)	(3)	(4) MAINTENANCE LEVEL				(5)	(6)
			FIELD		SUSTAINMENT			
GROUP NUMBER	COMPONENT/ASSEMBLY	MAINTENANCE FUNCTION	CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT	TOOLS AND EQUIPMENT REF CODE	REMARKS CODE
			C	F	H	D		
5247	Heating Ventilating and Air Conditioning (HVAC) Cabin Heater Hose	Inspect		0.2				
		Replace		1.4			8, 32	
5247	Heating Ventilating and Air Conditioning (HVAC) Fuel-Fired Heater Coolant Outlet Hose	Inspect		1.0				
		Replace		3.8			8, 32	
5247	Heating Ventilating and Air Conditioning (HVAC) 3-Way Valve Coolant Inlet Hose	Inspect		1.0				
		Replace		1.5			8, 32	
5247	Heating Ventilating and Air Conditioning (HVAC) Fuel-Fired Heater Coolant Inlet Hose	Inspect		1.0				
		Replace		3.4			8, 32	
5247	Fuel-Fired Heater	Inspect	0.1					
		Replace		1.3			8, 32	
		Repair		2.3			8, 32, 40	
5247	Fuel-Fired Heater Fuel Pump and Fuel Line	Inspect	0.1					
		Replace		8.4			8, 32	
		Repair		9.4			8, 32, 40	
5247	Fuel-Fired Heater and Fuel-Fired Fuel Pump Harness	Inspect	0.1					
		Replace		8.7			8, 32	
		Repair		9.7			8, 32, 40	
5247	Fuel Fired Heater Timer Control	Inspect	0.1					
		Replace		1.3			8	
		Repair		2.3			8	
7639	Fire Suppression System (FSS) Disable and Enable	Service	0.1				8	
7639	Fire Suppression System (FSS) Control Unit	Inspect	0.1					
		Replace		0.2			8	
		Repair		1.2			8	
7639	Fire Suppression System (FSS) Control Unit Bracket	Inspect	0.1					
		Replace		0.3			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
7639	Fire Suppression System (FSS) Cabin Harness	Inspect	0.1					
		Replace		1.8			8	
		Repair		2.8			8, 40	
7639	Fire Suppression System (FSS) Chassis Harness	Inspect	0.1					
		Replace		11.0			8	
		Repair		12.0			8, 40	
7639	Fire Suppression System (FSS) Engine Compartment Sensor	Inspect	0.1					
		Replace		0.6			8	
		Repair		1.6			8, 40	
7639	Fire Suppression System (FSS) Cabin Sensor	Inspect	0.1					
		Replace		4.1			8	
		Repair		5.1			8, 40	
7639	Fire Suppression System (FSS) Fuel Tank Cylinder	Inspect		0.1				
		Replace		0.3			8	
7639	Fire Suppression System (FSS) Fuel Tank Dispersion Unit and Pipe	Inspect		0.1				
		Replace		8.6			8	
7639	Fire Suppression System (FSS) Cabin Cylinder	Inspect	0.1					
		Replace		0.4			8	
7639	Fire Suppression System (FSS) Cabin/Crew Dispersion Unit and Pipe	Inspect		0.1				
		Replace		0.3			8	
7639	Fire Suppression System (FSS) Tire Cylinder	Inspect		0.1				
		Replace		1.2			8	
7639	Fire Suppression System (FSS) Front Tire Dispersion Unit and Pipe	Inspect		0.1				
		Replace		0.3			8	
7639	Fire Suppression System (FSS) Rear Tire Dispersion Unit and Pipe	Inspect		0.5				
		Replace		0.6			8	
7639	Fire Suppression System (FSS) Engine Cylinder	Inspect		0.1				
		Replace		0.3			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAIN-TAI-NER	BE-LOW DEPOT	DEPOT		
			C	F	H	D		
7639	Fire Suppression System (FSS) Engine Dispersion Unit and Pipe	Inspect		0.1				
		Replace		0.2			8	
9110	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Main Air Duct	Inspect		0.1				
		Replace		4.1			8	
9110	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Air Duct Louver	Inspect		0.1				
		Replace		0.3			8	
9110	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Defogging Air Duct	Inspect		0.1				
		Replace		0.5			8	
9110	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Diffuser Air Duct	Inspect		0.1				
		Replace		0.7			8	
9110	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Fresh Air Inlet Flange	Inspect		0.3				
		Replace		3.8			8	
9110	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Overpressure Relief Valve	Inspect		0.1				
		Replace		0.8			8	
		Repair		1.8			8	
9111	Heating Ventilating and Air Conditioning (HVAC) Receiver/Drier	Inspect		0.2				
		Replace		2.3			7, 8, 27	
9111	Heating Ventilating and Air Conditioning (HVAC) Main Evaporator Assembly	Inspect		1.0				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		16.9			7, 8	
9111	Heating Ventilating and Air Conditioning (HVAC) Heater Radiator	Inspect		1.0				
		Replace		16.6			8, 27	
9111	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Box	Inspect		0.5				
		Replace		8.6			8, 32	
		Repair		9.6				
9111	Nuclear, Biological, and Chemical (NBC) Filter	Inspect	0.1					
		Service		1.0				
		Replace		1.0			8	H
9111	Nuclear, Biological, and Chemical (NBC) Filter Cover and Housing	Inspect		0.5				
		Replace		1.7			8	
9111	Nuclear, Biological, and Chemical (NBC) Particle Separator Filter	Inspect		0.5				
		Service		1.0				
		Replace		2.1			8	H
9111	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Main Blower Motor and Support	Inspect		0.5				
		Replace		2.7			8	
		Repair		3.7			8	
9111	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Upper Blower	Inspect		0.5				
		Replace		2.5			8, 27	
		Repair		3.5			8, 27	
9111	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Upper Panel	Inspect		0.5				
		Replace		0.2			8	
9112	Heating Ventilating and Air Conditioning (HVAC) Recirculated Air (RA) Temperature Sensor	Inspect		0.2				
		Replace		0.5			8	

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Repair		1.5			8, 27	
9112	Climate Control Unit (CCU) Box	Inspect		0.2				
		Replace		0.6			8	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Operator Panel	Inspect	0.1					
		Replace		0.3			8	
		Repair		1.3			8, 27, 40	
9112	Heating Ventilating and Air Conditioning (HVAC) Low Pressure Switch	Inspect		0.5				
		Replace		1.3			7, 8	
		Repair		2.3			7, 8, 40	
9112	Heating Ventilating and Air Conditioning (HVAC) Left Condenser Control Wiring Harness	Inspect		0.2				
		Replace		1.9			8	
		Repair		2.9			8	
9112	Heating Ventilating and Air Conditioning (HVAC) Right Condenser Control Wiring Harness	Inspect		0.1				
		Replace		1.9			8	
		Repair		2.9			8	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Engine Wiring Harness	Inspect		0.1				
		Replace		0.6			8	
		Repair		1.6			8, 13, 40	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Control Input Wiring Harness	Inspect		0.1				
		Replace		0.7			8	
		Repair		1.7			8, 40	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Control 2 Wiring Harness	Inspect		0.1				

MAINTENANCE ALLOCATION CHART - (CONTINUED)

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REF CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
		Replace		0.9			8	
		Repair		1.9			8, 40	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Control Power Wiring Harness	Inspect		0.1				
		Replace		2.5			8	
		Repair		3.5			8, 40	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Main Blower Motor Wiring Harness	Inspect		0.1				
		Replace		2.4			8	
		Repair		3.4			8, 40	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Upper Blower Wiring Harness	Inspect		0.1				
		Replace		0.4			8	
		Repair		1.4			8, 40	
9112	Heating Ventilating and Air Conditioning (HVAC)/Life Support System (LSS) Control Wiring Harness	Inspect		0.1				
		Replace		0.7			8	
		Repair		1.7			8, 40	

Table 2. Tools and Test Equipment.

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	ASB	Adapter, crankcase pressure test	4940-01-573-0113	ZTSE4039
2	ASB	Adapter, ICP	4920-01-568-6355	ZTSE4359
3	ASB	Belly Armor Removal/Installer Kit	4940-01-573-0094	ZTSE4903
4	ASB	Box, breakout, Electronic System Controller (ESC)	4940-01-573-0141	ZTSE4477
5	ASB	Cylinder Head Pressure Test Kit	4910-01-583-5562	ZTSE4289A
6	ASB	DIN Module Removal Kit	4910-01-573-0792	2504954C1
7	ASB	Forward Repair System (FRS)	4940-01-463-7940	SC4940-95-E41

MAINTENANCE ALLOCATION CHART - (CONTINUED)

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
8	ASB	General Mechanic's Tool Kit (GMTK)	5180-01-548-7634	PD484
9	ASB	Guide stud set	4910-01-583-5333	ZTSE4375
10	ASB	Harness, 500-ohm resistor	4940-01-573-0921	ZTSE4497
11	ASB	Harness, banana plug	4940-01-573-0178	ZTSE4498
12	ASB	Harness, fuel injector test	6150-01-568-5804	ZTSE4401
13	ASB	Harness, relay breakout	4940-01-573-0843	ZTSE4596
14	ASB	Harness, relay breakout	6150-01-573-0488	ZTSE4674
15	ASB	Harness, sensor breakout, injection control pressure	6150-01-573-0478	ZTSE4662
16	ASB	Heater, damper	4520-01-568-5859	ZTSE4384
17	ASB	Installer, crankshaft front wear sleeve	4940-01-573-0105	ZTSE3004B
18	ASB	Installer, rear oil seal and wear sleeve	4910-01-583-2100	ZTSE4749
19	ASB	Jack, floor, 20–ton	4910-01-583-5138	DFP-554
20	ASB	Kit, plug, injection control pressure	4910-01-573-0902	ZTSE4655
21	ASB	Manometer, slack tube	6685-00-857-4895	1211–60
22	ASB	Maintenance Support Device (MSD)	6625-01-573-3383	DG-MRAP-CDK
23	ASB	Pressure Test Kit	2590-01-568-6524	ZTSE4409
24	ASB	Puller, pitman arm Quality	5120-01-579-6906	3591842K
25	ASB	Connect Tool Kit Refrigerant	2590-01-568-6384	991843C91
26	ASB	recovery station	4250-01-411-7240	17800B
27	ASB	Refrigeration Ordnance Service Tool Kit	5180-00-596-1474	SC 5180-90-CL-N18
28	ASB	Snapring Pliers Tool Kit	5120-01-429-7455	SRPC112
29	ASB	Set, slide hammer	4910-01-557-0175	1001094
30	ASB	Sling, nylon	2835-01-078-2080	EE2-802D-7FT TYPE 4
31	ASB	Socket, hex, 3/4-inch drive, 3/4 inch	5120-01-437-3788	LAW124E
32	ASB	Standard Automotive Tool Set (SATS)	4910-01-490-6453	SC 4910-95-A81

MAINTENANCE ALLOCATION CHART - (CONTINUED)

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
33	ASB	Straightedge	5210-00-264-6400	MIL-S-15769
34	ASB	Tee, 2-way breakout	4940-01-573-0147	ZTSE4483
35	ASB	Tee, 3-wire pressure sensor breakout	5935-01-568-6297	ZTSE4347
36	ASB	Tee, Accelerator Position Sensor (APS)/Idle Validation Switch (IVS), sensor breakout	4940-01-573-0152	ZTSE4485
37	ASB	Tee, breakout	4940-01-573-0154	ZTSE4486
38	ASB	Tee, Injection Control Pressure (ICP) adapter	4730-01-573-0280	ZTSE4594
39	ASB	Tee, IPR, breakout	4940-01-573-0150	ZTSE4484
40	ASB	Terminal Test Kit	6625-01-581-2453	ZTSE4435C
41	ASB	Tester, Charge Air Cooler (CAC) leak	4940-01-573-0128	ZTSE4341
42	ASB	Terminal Kit		MWH30005
43	ASB	USB cable, 1C4 interface	4940-01-573-0862	ZTSE4632
44	ASB	Wear sleeve remover	4910-01-583-5760	ZTSE4404
45	ASB	Wheel alignment gauge	5210-01-223-3701	69804

Table 3. Remarks.

REMARKS CODE	REMARKS
A	Crew performs PMCS
B	Remove Belly Armor
C	Remove rocker cover
D	Remove engine oil cooler
E	Visual inspection of leaks under vehicle
F	Remove transmission
G	Recovery/Recharging Station required
H	Trained personnel wearing proper NBC equipment required. Contact unit NBC NCO or NBC Officer for assistance.

END OF WORK PACKAGE

FIELD MAINTENANCE

EXPENDABLE AND DURABLE ITEMS LIST

Scope

This work package lists expendable and durable items that you will need to operate and maintain the M1224 and M1224A1. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanations of Columns in the Expendable/Durable Items List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use brake fluid (WP 0098, item 5)).

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item (C = Crew, O = AMC, F = Maintainer or ASB, H = Below Depot or TASMG, D = Depot).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER AND (CAGEC)	(5) U/I
1	F		Adhesion promoter, 3M 70-0064-0673-3 (34360)	GL
2	F	8040-01-406-8116	Adhesive, sealant, caulk gun tube dispenser (0PMN0)	CA
3	F	8040-01-145-1768	Adhesive, RTV silicone sealant, caulk gun tube dispenser RTV106 (01139)	TU
4	F	8040-01-147-6849	Adhesive, 3M weatherstrip and gasket 8008 (34360)	TU
5	F	6850-01-441-3221	Antifreeze AA52624-I-A (58536)	GL
6	F	8030-00-913-8934	Antiseize compound, brush-in-bottle dispenser 51606 (05972)	CN
7	F	5306-01-574-8680	Bolt, machine, M12-1.25 x 50 1850815C2 (338X5)	EA
8	F	7920-00-252-4084	Brush, adhesive 38B1725 (90142)	DZ
9	F	6850-01-167-0678	Cleaner, brake parts 05088 (10136)	CN
10	F	6850-01-381-4401	Cleaning compound, solvent, (0K209)	DR

EXPENDABLE AND DURABLE ITEMS LIST - (CONTINUED)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER AND (CAGEC)	(5) U/I
11	F	5350-00-268-3116	Cloth, abrasive, emery cloth, fine-grit ASTM E11 (81346)	RO
12	F	7920-00-044-9281	Cloth, cleaning, low-lint MIRACLEWIPEL001 (51200)	BX
13	C	8040-01-531-8302	Compound, corrosion preventive CA-LUBRIPLATE/130AA (73219)	CN
14	F	5120-00-679-5655	Dispenser, sealant, caulk gun GGG-C-120 TY3 (80244)	EA
15	C	6810-01-070-1784	Distilled water 6170-18-7 (53390)	BT
16	F	4240-00-017-9767	Faceshield, industrial 11040124-7 (18876)	PR
17	F	5325-01-556-6733	Fastener, trim, ribbed, pine tree 6010241C1 (338X5)	EA
18	F	8415-01-283-3866	Glove, nitrile, large C-4542 (53547)	PR
19	F	8415-00-268-8350	Gloves, leather A-A-50016 (58536)	PR
20	F	4240-00-052-3776	Goggles, industrial ANSI Z87.1 (80204)	PR
21	F	9150-01-197-7693	Grease, automotive and artillery MIL-PRF-10924 (81349)	CA
22	F	9150-01-573-1110	Grease, silicone insulated electric motor 67VR (1PBQ8)	TU
23	F	9150-01-556-7102	Grease, silicone insulated electric motor, high temperature 291126N (6853)	CN
24	F	4720-01-065-0809	Hose, nonmetallic, 3/8 in. ID, 18 in. long L2643545 (338X5)	FT
25	F	9150-00-082-7524	Hydraulic fluid, petroleum base MIL-PRF-5606 (81349)	CN
26	F	6810-01-075-5546	Isopropyl alcohol 7618-19-4 (53390)	BT
27	F	9150-00-402-4478	Lubricating oil, engine, MIL-PRF-2104 C0N0C0DN600FLUIDTYPE1 (15445)	CN
28	F	9150-01-048-4591	Lubricating oil, gear, axle-differential - SAE 85W/140 M2105-1-85W140 (81349)	QT
29	F	9150-01-035-5390	Lubricating oil, gear, transfer case fuid - high-temperature M2105-1-75W 90 (81349)	QT

EXPENDABLE AND DURABLE ITEMS LIST - (CONTINUED)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER AND (CAGEC)	(5) U/I
30	F	9150-01-422-9329	Lubricating oil, gear, transfer case fuid - low-temperature J2360 (81349)	QT
31	F	9150-01-546-5096	Lubricating oil, refrigerant compressor, PAG 46 refrigerant compressor oil RD-5-7166-1P (62534)	QT
32	F	7050-00-961-7663	Lubriplate, lubricant, petroleum ST40334 (90536)	CN
33	F	7690-00-422-9673	Marker, identification, wire PWM-1-45 (85480)	PK
34	F	7240-00-138-7985	Measure, liquid 3126-00 (3T537)	EA
35	F	7510-01-015-3244	Paint stick, marking 1660T26 (39428)	DZ
36	F	5350-0-0598-6105	Paper, abrasive, 60-grit, fine, 9 in. x 10 in. sheets A-A-1202 (58536)	HD
37	F	4730-00-801-8186	Plug, pipe, 1/2-in. NPT S-915-A (15434)	EA
38	F	8040-01-498-3919	Primer, adhesive, 3M adhesive primer 94 70-0160-5478-8 (76381)	QT
39	F	7920-00-205-1711	Rag, wiping, unbleached cotton and synthetic cotton 7920-00-205-1711 (80244)	BE
40	F	8030-01-470-6256	Sealant, fuel tank, 2-part squeeze cartridge dispenser PR-1440 B-1/2 (82574)	CO
41	F	8030-00-551-1059	Sealing compound, squeeze tube dispenser FORM-A-GASKET 2 (62377)	TU
42	F	8030-00-252-3391	Sealing compound, squeeze tube dispenser MIL-S-45180 (81349)	TU
43	F	8030-01-508-9181	Sealing compound, Ultra Grey RTV silicone gasket maker 18718 (05972)	TU
44	F	8030-00-118-0012	Sealing compound, thread, squeeze bottle dispenser ASTM D5363 (81346)	BT
45	F	8030-01-104-5392	Sealing compound, 242 24221 (05972)	BT
46	F	8030-01-220-6400	Sealing compound, 635 retaining compound, squeeze bottle dispenser 63531 (05972)	BT

EXPENDABLE AND DURABLE ITEMS LIST - (CONTINUED)

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER (NSN)	(4) ITEM NAME, DESCRIPTION, PART NUMBER AND (CAGEC)	(5) U/I
47	F	8030-01-579-4656	Sealing compound, (0PMN0)	BX
48	F	3439-01-026-1084	Solder, tin alloy, rosin core SN60WRMAP3 0.063 1LB (81346)	SL
49	F	9905-00-537-8955	Tag, marker, wire, plain tags with twist wires 9905-00-537-8955 (64067)	BD
50	F	8030-00-889-3535	Tape, antiseizing, pipe sealing A-A-58092 (58536)	RO
51	F	5640-00-103-2254	Tape, duct 1791K70 (39428)	RO
52	F	5970-01-195-3964	Tape, electrical SCOTCHX-1245 (75037)	RO
53	F	7510-00-685-4963	Tape, pressure sensitive adhesive, 3/4-inch masking MIL-T-21595 (81349)	RO
54	F	6830-01-412-6362	Refrigerant, R-134 – 30 lbs 8935-3130 (2S827)	CY
55	F	5180-00-329-3318	Tool kit, window glass installation, self-sealing weather strip, two-sided insulation 201-1021 (55899)	RO
56	F	4720-01-143-2007	Tubing, heatshrink, sealed (various sizes) S17552-03 (99932)	FT
57	F	9505-00-293-4208	Wire, nonelectrical, safety wire, 16-gauge, soft annealed black wire MS20995C32 (80205)	EA

END OF WORK PACKAGE

FIELD MAINTENANCE

TOOL IDENTIFICATION LIST

Table 1. Tool Identification List.

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
1	Adapter, crankcase pressure test	4940-01-573-0113	ZTSE4039 (45225)	TM 9-2355-106-23P
2	Adapter, socket wrench, 3/8-inch drive female - 1/2-inch male		KTC S0658 (00NS2)	SATS SC 4910-95-A81
3	Adapter, socket, wrench drive, 1/4-inch male - 3/8-inch female		KTC S0657 (00NS2)	SATS SC 4910-95-A81
4	Adapter, socket, wrench drive, 3/4-inch female - 1/2-inch male	5120-01-355-1894	GLAS1E (55719)	FRS SC 4940-95-E42
5	Adapter, socket, wrench drive, 3/4-inch male - 1/2-inch female		KTC S0660 (00NS2)	SATS SC 4910-95-A81
6	Adaptor, ICP	4920-01-568-6355	ZTSE4359 (338X5)	TM 9-2355-106-23P
7	Analyzer, battery and charging system		KTC S6602 (00NS2)	SATS SC 4910-95-A81
8	Attachment, screwdriver, Torx bit, 1/4-inch drive, T20		KTC S0285 (00NS2)	SATS SC 4910-95-A81
9	Attachment, screwdriver, Torx bit, 1/4-inch drive, T27		KTC S0287 (00NS2)	SATS SC 4910-95-A81
10	Attachment, screwdriver, Torx bit, 1/4-inch drive, T40		KTC S0289 (00NS2)	SATS SC 4910-95-A81
11	Attachment, screwdriver, Torx bit, 3/8-inch drive, T50		KTC S0292 (00NS2)	SATS SC 4910-95-A81
12	Bar, breaker, 1/2-inch drive, 18-inch OAL, chrome		SN18B (55719)	FRS SC 4940-95-E42
13	Bar, breaker, 3/4-inch drive, chrome		L8112A (55719)	FRS SC 4940-95-E42
14	Battery filler, gravity		KTC S0130 (00NS2)	SATS SC 4910-95-A81
15	Battery Service Kit		KTC S0132 (00NS2)	SATS SC 4910-95-A81
16	Belly Armor Removal/Installer Kit	4940-01-573-0094	ZTSE4903 (45225)	TM 9-2355-106-23P
17	Bender set, tube, hand-actuated, 5/8-inch		100-58 (55719)	FRS SC 4940-95-E42
18	Bit, drill, standard, cobalt, jobber length, 3/16-inch		316-CO (55719)	FRS SC 4940-95-E42
19	Blind Rivet Tool Kit		D-100-MIL-1 (55719)	FRS SC 4940-95-E42
20	Block, filler, wood	5510-01-484-6776	RIA149431 (55719)	FRS SC 4940-95-E42
21	Box, breakout, Electronic System Controller (ESC)	4940-01-573-0141	ZTSE4477 (45225)	TM 9-2355-106-23P
22	Brush, wire, scratch		KTC S0148 (00NS2)	SATS SC 4910-95-A81
23	Cap and plug set	5340-00-450-5718	10935405 (55719)	FRS SC 4940-95-E42

TOOL IDENTIFICATION LIST - (CONTINUED)

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
24	C-clamp, deep throat, 0-6 inch capacity	5120-00-180-0909	406 (55719)	FRS SC 4940-95-E42
25	Crimping tool, terminal	5120-01-374-8936	KTC S0159 (00NS2)	SATS SC 4910-95-A81
26	Cylinder Head Pressure Test Kit	4910-01-583-5562	ZTSE4289A (45225)	TM 9-2355-106-23P
27	Dial indicator set		KTC S1019 (00NS2)	SATS SC 4910-95-A81
28	DIN Module Removal Kit	4910-01-573-0792	2504954C1 (338X5)	TM 9-2355-106-23P
29	Drill, hand, VSR, electric, 3/8-inch	5130-01-396-6314	DW223G (55719)	FRS SC 4940-95-E42
30	Electrical Contact Tool Kit	5180-00-876-9336	DMC986 (55719)	FRS SC 4940-95-E42
31	Extension, 3-inch OAL, 3/4-inch drive, chrome		KTC S0376 (00NS2)	SATS SC 4910-95-A81
32	Extension, 8-inch, 3/4-inch drive, chrome		KTC S0377 (00NS2)	SATS SC 4910-95-A81
33	Flaring and Cutting Kit		TF528DE2 (55719)	FRS SC 4940-95-E42
34	Fluid gun, direct delivery		KTC S0219 (00NS2)	SATS SC 4910-95-A81
35	Funnel, flexible spout, 1 qt. capacity		KTC S0207 (00NS2)	SATS SC 4910-95-A81
36	Gage, feeler, standard, 0.003-0.018-inch, 25 pieces		000AA (55719)	FRS SC 4940-95-E42
37	General Mechanic's Tool Kit (GMTK)	5180-01-548-7634	PD484 (19200)	SC 5180-95-B48
38	Gloves, rubber		RI60411 (55719)	FRS SC 4940-95-E42
39	Gloves, welders		820L (55719)	FRS SC 4940-95-E42
40	Grease Gun Adapter Kit		KTC S0124 (00NS2)	SATS SC 4910-95-A81
41	Grease gun, pneumatic		KTC S0217 (55719)	FRS SC 4940-95-E42
42	Guide pin set	4910-01-583-5333	ZTSE4375 (45225)	TM 9-2355-106-23P
43	Gun, air		KTC S0142 (00NS2)	SATS SC 4910-95-A81
44	Hammer, hand, soft face, dead blow, 10 oz		KTC S0222 (00NS2)	SATS SC 4910-95-A81
45	Hammer, hand, soft face, dead blow, 52 oz		KTC S0221 (00NS2)	SATS SC 4910-95-A81
46	Hammer, hand	5120-01-604-4892	BD-8ESG (55719)	FRS SC 4940-95-E42
47	Handle, ratchet, 3/4-inch drive, 17 inches long		KTC S0374 (00NS2)	SATS SC 4910-95-A81
48	Harness, 500-ohm resistor	4940-01-573-0921	ZTSE4497 (45225)	TM 9-2355-106-23P

TOOL IDENTIFICATION LIST - (CONTINUED)

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
49	Harness, Banana Plug	4940-01-573-0178	ZTSE4498 (45225)	TM 9-2355-106-23P
50	Harness, fuel injector test	6150-01-568-5804	ZTSE4401 (45225)	TM 9-2355-106-23P
51	Harness, relay breakout	4940-01-573-0843	ZTSE4596 (45225)	TM 9-2355-106-23P
52	Harness, relay breakout	6150-01-573-0488	ZTSE4674 (45225)	TM 9-2355-106-23P
53	Harness, Sensor Breakout, Injection Control	6150-01-573-0478	ZTSE4662 (45225)	TM 9-2355-106-23P
54	Heat gun	4940-01-391-7046	PH1100 (55719)	FRS SC 4940-95-E42
55	Heater, damper	4520-01-568-5859	ZTSE4384 (45225)	TM 9-2355-106-23P
56	Hex key set, metric		KTC S0239 (00NS2)	SATS SC 4910-95-A81
57	Installer, crankshaft front wear sleeve	4940-01-573-0105	ZTSE3004B (45225)	TM 9-2355-106-23P
58	Installer, rear oil seal and wear sleeve	4910-01-583-2100	ZTSE4749 (45225)	TM 9-2355-106-23P
59	Jack, floor, 20-ton	4910-01-583-5138	DFP-554 (00NS2)	SATS SC 4910-95-A81
60	Jack, hydraulic, bottle, 20-ton capacity		D51126 (55719)	FRS SC 4940-95-E42
61	Lift, Transmission and Differential	4910-00-585-3622	KTC S6604 (00NS2)	SATS SC 4910-95-A81
62	Jackstand, 10-ton, 19-28.5-inches		D41608 (55719)	FRS SC 4940-95-E42
63	Jackstand, 10-ton, 30-52-inches	4910-01-583-5140	KTC S10001 (00NS2)	SATS SC 4910-95-A81
64	Kit, Plug, Injection Control Pressure	4940-01-573-0902	ZTSE4655 (45225)	TM 9-2355-106-23P
65	Knife, utility, retractable		WK5V (55719)	FRS SC 4940-95-E42
66	Lift, wheel, truck	4910-00-554-5983	KTC S6606 (00NS2)	SATS SC 4910-95-A81
67	Lifting device		2-195-1-10005 (19204)	
68	Lifting sling		KTC S1051 (00NS2)	SATS SC 4910-95-A81
69	Manometer, Slack Tube	6685-00-857-4895	1211-60 (85274)	TM 9-2355-106-23P
70	Maintenance Support Device (MSD)	6625-01-573-3383	DG-MRAP-CDK (1J1T6)	TM 9-2355-106-23P
71	Measure, liquid, 2 qt		KTC S0251 (00NS2)	SATS SC 4910-95-A81
72	Meter, clamp-on		275 (55719)	FRS SC 4940-95-E42

TOOL IDENTIFICATION LIST - (CONTINUED)

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
73	Multimeter		DM4010 (11707)	GMTK SC 5180-95-B48
74	Multiplier, torque		KTC S0253 (00NS2)	SATS SC 4910-95-A81
75	Pan, drain, 5-gal. capacity		KTC S0255 (00NS2)	SATS SC 4910-95-A81
76	Pneumatic Abrasive Cutting Tool Kit		KTC S0701 (00NS2)	SATS SC 4910-95-A81
77	Pressure Test Kit	2590-01-568-6524	ZTSE4409 (45225)	TM 9-2355-106-23P
78	Puller set, mechanical		KTC S0269 (00NS2)	SATS SC 4910-95-A81
79	Puller, mechanical, steering wheel, 4 5/8-inch spread		KTC S0270 (00NS2)	SATS SC 4910-95-A81
80	Puller, pitman arm	5120-01-579-6906	3591842K (78222)	TM 9-2355-106-23P
81	Punch, 3/8 inch, 3/16 inch pt		KTC S6391 (00NS2)	SATS SC 4910-95-A81
82	Quality Connect Tool Kit	2590-01-568-6384	991843C91 (338X5)	TM 9-2355-106-23P
83	Radiator Test Kit		SVTS262KIT (55719)	FRS SC 4940-95-E42
84	Refrigerant recovery station	4130-01-550-8557	17800B (45225)	5180-95-N18
85	Refrigeration Ordnance Service Tool Kit	5180-00-596-1474	SC 5180-90-CL-N18 (50980)	5180-95-N18
86	Scale, weighing		IN-050M (55719)	FRS SC 4940-95-E42
87	Scraper, gasket		KTC S0280 (00NS2)	SATS SC 4910-95-A81
88	Screwdriver, round shank, cross-tip, #4 tip, 13.5 inch		KTC S0334 (00NS2)	SATS SC 4910-95-A81
89	Screwdriver, Torx, T27, 4-inch		KTC S0344 (00NS2)	SATS SC 4910-95-A81
90	Set, slide hammer	4910-01-557-0175	1001094 (1EFH8)	TM 9-2355-106-23P
91	Sling, nylon		KTC S1051 (00NS2)	SATS SC 4910-95-A81
92	Snapring Pliers Tool Kit		KTC S0260 (00NS2)	SATS SC 4910-95-A81
93	Soapstone		FL5 (55719)	FRS SC 4940-95-E42
94	Socket driver, 3/8 inch drive, 6 mm Allen head		FAM6E (55719)	FRS SC 4940-95-E42
95	Socket standard, 1/2-inch drive, 6 point, 1-5/16 inch		KTC S0585 (00NS2)	SATS SC 4910-95-A81
96	Socket, bearing locknut, 6 pt, 4-inch		ANS1914A (55719)	FRS SC 4940-95-E42
97	Socket, bearing locknut, 8 pt, 4-7/8-inch		ANS1919A (55719)	FRS SC 4940-95-E42

TOOL IDENTIFICATION LIST - (CONTINUED)

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
98	Socket, deep well, 1/2-inch drive, 6 pt, 15/16 inch		KTC S0579 (00NS2)	SATS SC 4910-95-A81
99	Socket, deep well, 3/4-inch drive, 6 pt, 1-1/4 inch		SFS241 (55719)	FRS SC 4940-95-E42
100	Socket, deep well, 3/8-inch drive, 6 pt, 15 mm		KTC S0553 (00NS2)	SATS SC 4910-95-A81
101	Socket, deep, 3/8-inch drive, 6 pt, 1-inch, chrome		KTC S0511 (00NS2)	SATS SC 4910-95-A81
102	Socket, deep-well, 1/2-inch drive, 12 pt, 1-1/2 inch, chrome		S481 (55719)	FRS SC 4940-95-E42
103	Socket, hex, 3/4-inch drive, 3/4 inch	5120-01-437-3788	LAW124E (55719)	TM 9-2355-106-23P
104	Socket, impact, 3/4-inch drive, 6 pt, 1-1/8-inch		KTC S0972 (00NS2)	SATS SC 4910-95-A81
105	Socket, impact, deep, 1/2 drive, 6 pt, 1-1/8 inch		SIM360 (55719)	FRS SC 4940-95-E42
106	Socket, socket wrench, 1/2-inch drive, 6 pt, deep, 1-1/16-inch		KTC S0623 (00NS2)	SATS SC 4910-95-A81
107	Socket, socket wrench, 3/4-inch drive, 12 pt, 15/16-inch		KTC S0382 (00NS2)	SATS SC 4910-95-A81
108	Socket, socket wrench, 3/8-inch drive, 6 pt, deep, 10 mm		KTC S0548 (00NS2)	SATS SC 4910-95-A81
109	Socket, standard, 3/4-inch drive, 12 pt, 1-5/16 inch		KTC S0974 (00NS2)	SATS SC 4910-95-A81
110	Socket, standard, 3/4-inch drive, 12 pt, 2-1/4 inch, chrome		LDH722 (55719)	FRS SC 4940-95-E42
111	Socket, standard, impact, 3/4-inch drive, 6 pt, 1-1/4 inch		IM402 (55719)	FRS SC 4940-95-E42
112	Socket, standard, impact, 3/4-inch drive, 6 pt, 1-5/16 inch	5130-00-227-6684	IM422 (55719)	FRS SC 4940-95-E42
113	Soldering gun, 3-wire	3439-00-732-7798	R490 (55719)	FRS SC 4940-95-E42
114	Straightedge	5210-00-264-6400	MIL-S-15769 (81349)	TM 9-2355-106-23P
115	Tee, 2-way breakout	4940-01-573-0147	ZTSE4483 (45225)	TM 9-2355-106-23P
116	Tee, 3-wire pressure sensor breakout	5935-01-568-6297	ZTSE4347 (45225)	TM 9-2355-106-23P
117	Tee, Accelerator Position Sensor (APS)/Idle Validation Switch (IVS), sensor breakout	4940-01-573-0152	ZTSE4485 (45225)	TM 9-2355-106-23P
118	Tee, Breakout	4940–01–573–0154	ZTSE4486 (45225)	TM 9-2355-106-23P
119	Tee, Injection Control Pressure (ICP) adapter	4730-01-573-0280	ZTSE4594 (45225)	TM 9-2355-106-23P
120	Tee, IPR, Breakout	4940-01-573-0150	ZTSE4484 (45225)	TM 9-2355-106-23P
121	Terminal Kit		MWH30005 (55719)	FRS SC 4940-95-E42

TOOL IDENTIFICATION LIST - (CONTINUED)

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
122	Terminal Test Kit	6625-01-581-2453	ZTSE4435C (30US2)	TM 9-2355-106-23P
123	Tester, antifreeze solution/battery specific gravity		KTC S0699 (00NS2)	SATS SC 4910-95-A81
124	Tester, Charge Air Cooler (CAC) leak	4940-01-573-0128	ZTSE4341 (45225)	TM 9-2355-106-23P
125	Tire inflator		KTC S0236 (00NS2)	SATS SC 4910-95-A81
126	Transmission jack, 1 ton jack, 48 in. x 72 in.		KTC S0257 (00NS2)	SATS SC 4910-95-A81
127	USB Cable, 1C4 Interface	4940-01-573-0862	ZTSE4632–USB (45225)	TM 9-2355-106-23P
128	Vise, machinist's, 4-inch		KTC S0725 (00NS2)	SATS SC 4910-95-A81
129	Wear sleeve remover	4910-01-583-5760	ZTSE4404 (00NS2)	SATS SC 4910-95-A81
130	Wheel Alignment Gauge	5210-01-223-3701	S6603 (00NS2)	SATS SC 4910-95-A81
131	Wheel, abrasive, type 27		KTC S0701 (00NS2)	SATS SC 4910-95-A81
132	Wrench, combination, 1-1/2 inch		KTC S0793 (00NS2)	SATS SC 4910-95-A81
133	Wrench, combination, 1-1/4 inch		KTC S0756 (00NS2)	SATS SC 4910-95-A81
134	Wrench, combination, 1-3/8 inch		KTC S0791 (00NS2)	SATS SC 4910-95-A81
135	Wrench, combination, standard length, 12 pt, 1-1/2 inch, chrome	5120-01-399-8798	OEX488 (55719)	FRS SC 4940-95-E42
136	Wrench, combination, standard length, 12 pt, 1-1/8 inch chrome		KTC S0788 (00NS2)	SATS SC 4910-95-A81
137	Wrench, combination, standard length, 12 pt, 1-1/8 inch, chrome	5120-01-228-9516	OEX36B (55719)	FRS SC 4940-95-E42
138	Wrench, combination, standard length, 12 pt, chrome 32 mm	5120-01-349-1460	OEXM320B (55719)	FRS SC 4940-95-E42
139	Wrench, filter, strap		KTC S0982 (00NS2)	SATS SC 4910-95-A81
140	Wrench, pipe, adjustable	5120-01-399-8985	PW12C (55719)	FRS SC 4940-95-E42
141	Wrench, torque, 20-100 lb-ft, 3/8-inch drive		1002MFRMHSS (55719)	FRS SC 4940-95-E42
142	Wrench, torque, 40-200 lb-in., 3/8-inch drive	5120-01-400-0233	2002MRMHSS (55719)	FRS SC 4940-95-E42
143	Wrench, torque, 50-250 lb-ft, 1/2-inch drive	5120-01-400-0239	2503MFRMHSS (55719)	FRS SC 4940-95-E42
144	Wrench, torque, 90-600 lb-ft, 3/4-inch drive	5120-01-576-5975	J6020AB (55719)	FRS SC 4940-95-E42
145	Wrench, torque, click, ratcheting, 15-75 lb-ft, 3/8-inch drive		KTC S0989 (00NS2)	SATS SC 4910-95-A81

TOOL IDENTIFICATION LIST - (CONTINUED)

(1) ITEM NO.	(2) ITEM NAME	(3) NATIONAL STOCK NUMBER (NSN)	(4) PART NUMBER/ (CAGEC)	(5) REFERENCE
146	Wrench, torque, dial, 30 lb-in., 1/4-inch drive		KTC S0986 (00NS2)	SATS SC 4910-95-A81
147	Wrench, torque, dial, 300 lb-in., 3/8-inch drive		KTC S0987 (00NS2)	SATS SC 4910-95-A81

END OF WORK PACKAGE

FIELD MAINTENANCE

MANDATORY REPLACEMENT PARTS

MANDATORY REPLACEMENT PARTS LIST

This work package includes a list of all mandatory replacement parts referenced in the task initial setups and procedures. These are items that must be replaced during maintenance whether they have failed or not. This includes items based on usage intervals such as miles, time, etc.

Table 1. Mandatory Replacement Parts

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
1	A-1205-V-2648 78500	5331-01-556-5330	Seal	2
2	BX801534 338X5	5340-01-556-4785	Clip	1
3	C-1423 82484	5310-00-180-0277	Lockwasher	2
4	EC35PLA 338X5	5340-01-342-5552	Coupling, pipe	2
5	MS24465-628 80205	5315-00-846-0126	Pin, cotter	4
6	MS51971-4 96906	5310-00-965-1800	Nut	2
7	MS90728-95 96906	5305-00-071-2061	Bolt	2
8	N0304 2-013 02697	5331-00-006-2382	O-ring	2
9	N9015 76761	5310-01-046-0186	Lockwasher	2
10	N9461 76761	5310-01-348-8392	Lockwasher	2
11	NL-210-1 3D6E9	5310-01-082-8578	Locknut	2
12	XB-769 74410	5310-01-150-8599	Locknut	1
13	4760 78500		Shim Kit	1
14	33628 0Y3H3	5310-01-556-4499	Lockwasher	1
15	36007 0Y3H3	5310-01-556-6526	Locknut	4
16	37010 0Y3H3	5310-01-556-6829	Locknut	2
17	40252 0Y3H3	5310-01-556-5967	Lockwasher	1
18	65016 0Y3H3	5315-1-556-4469	Pin, cotter	3
19	65080 0Y3H3	5315-01-556-4472	Pin, cotter	2
20	65612 6853	4120-01-555-5461	Cartridge, desiccant	2
21	103375 338X5	5315-00-730-6396	Pin, cotter	4

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
22	116121 338X5	5310-00-011-6121	Lockwasher	1
23	120380 338X5	5310-01-552-9670	Lockwasher	32
24	120382 338X5	5310-01-556-4486	Lockwasher	14
25	120383 338X5	5310-00-480-6170	Lockwasher	5
26	138479 78640	5310-00-596-7691	Lockwasher	8
27	138572 338X5	5310-01-553-1230	Lockwasher	1
28	203019 06853	5315-00-234-1657	Pin, cotter	1
29	273896 338X5	5310-01-556-5475	Locknut	2
30	9412230 97271	5310-01-194-8489	Locknut	1
31	29503383 73342	5331-01-360-6017	O-ring	1
32	29545779 73342	4330-01-425-7701	Filter Parts Kit, fluid pressure	1
33	29546229 73342	5330-01-360-7826	Seal	1
34	107578821C 62319	5330-01-563-3232	O-ring	6
35	107578822C 62319	5330-01-563-3242	O-ring	2
36	107578823C 62319	5330-01-563-3245	O-ring	1
37	107578824C 62319	5330-01-563-3250	O-ring	4
38	1225-B-496 78500	5365-00-255-6042	Bushing	2
39	1225-B-834 78500	3120-01-179-7532	Bushing	1
40	1225-L-1442 78500	5365-01-556-5439	Bushing, axle shaft	2
41	1225-U-1191 78500	3120-01-566-7140	Bushing	4
42	1229-M-4823 78500	5310-01-571-7019	Washer, shim	2
43	1250-V-1218 78500	5340-01-556-7106	Plug, expansion	1
44	144425H 338X5	5310-01-512-6121	Locknut	22
45	1514759C1 338X5	4730-01-398-8329	Clamp	2
46	1618386C93 338X5	4930-01-555-4840	Filter	1
47	1657366C1	5305-01-338-8155	Screw, cap	4

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
48	1685073C1 338X5	3110-01-556-4598	Bearing, thrust	1
49	1697853C1 338X5	5330-01-466-1618	Seal	1
50	17233R1 89346	5315-01-513-0967	Pin, cotter	1
51	1811036C1 338X5		O-ring	1
52	1812559C1 338X5	6680-01-556-4868	Seal	1
53	1815874C1 338X5	5331-01-556-4882	O-ring	1
54	1815980C1 338X5	5331-01-556-4885	O-ring	1
55	1816722C2 89346	5330-01-556-4888	Gasket	1
56	1817674C1 338X5	2910-01-411-8424	Strainer, fuel	1
57	1817849C3 338X5	5330-01-556-4902	Gasket	1
58	1817867C92 338X5	5330-01-411-1650	Seal	1
59	1818400C1 338X5	5331-01-556-4926	O-ring	1
60	1818402C2 338X5	5331-01-547-4884	O-ring	2
61	1818518C1 338X5	5331-01-556-4929	O-ring	1
62	1818716C5 338X5	5330-01-556-4933	Gasket	1
63	1818727C1 338X5	5330-01-556-4935	Gasket	1
64	1819099C1 338X5	5331-01-437-1285	Seal	1
65	1820353C1 338X5	5330-01-556-4952	Seal	1
66	1820878C2 338X5	5331-01-547-4611	Seal	2
67	1820907C2 338X5	5331-01-556-4960	O-ring	4
68	1820909C1 338X5	5330-01-507-3718	Gasket	1
69	1820920C3 338X5	5330-01-556-4965	Gasket	1
70	1820936C1 338X5	5330-01-556-4966	Gasket	1
71	1821098C2 338X5	5331-01-556-4970	O-ring	4
72	1822120C1 338X5	5330-01-556-4984	Gasket	1

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
73	1822577C1 338X5	2805-01-512-4252	Gasket	1
74	1822588C1 338X5	2910-01-444-8795	Filter	1
75	1823790C1 338X5	5331-01-556-5008	O-ring	1
76	1824735C1 338X5	5331-01-556-5015	O-ring	2
77	1824736C1 338X5	5331-01-556-5016	O-ring	2
78	1824908C1 338X5	5331-01-556-5020	O-ring	1
79	1824954C3 338X5	5306-01-556-5023	Bolt	6
80	1824955C2 338X5	5306–01-5565024	Bolt	20
81	1824978C1 338X5	5310-01-556-5025	Locknut	1
82	1824979C1 338X5	5331-01-556-5026	O-ring	1
83	1824980C1 338X5	5331-01-556-5028	O-ring	1
84	1824981C1 338X5	5330-01-556-5027	Ring, backup	1
85	1825436C1 338X5	5330-01-347-3726	Gasket	1
86	1825610C1 338X5	5330-01-556-5042	Gasket	1
87	1825685C1 338X5	5330-01-556-5047	Gasket	2
88	1826587C1 338X5	5330-01-437-1284	Gasket	1
89	1830189C2 338X5	5330-01-556-5088	Gasket	1
90	1830362C1 338X5	5330-01-556-5098	Gasket	1
91	1830742C92 338X5	5330-01-508-6977	Gasket kit, injector	1
92	1831483C1 338X5	5340-01-556-5116	O-ring	1
93	1833096C94 338X5	5330-01-556-5123	Oil Seal Kit	1
94	1836075C1 338X5	5331-01-556-5141	O-ring	1
95	1839026C1 338X5	5331-01-556-5148	O-ring	1
96	1841622C1 338X5	5330-01-556-5157	Gasket	1
97	1841992C1 338X5	5330-1-566-5651	Gasket	1
98	1842909C1 338X5	5330-01-556-5164	Gasket	1

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
99	1844447C1 338X5	5331-01-556-5165	O-ring	1
100	2009N-7		O-ring	3
101	2035272C1 338X5	5310-01-564-0408	Locknut	1
102	2037534C1 338X5	5310-01-566-9235	Locknut	4
103	2040956C1 338X5	5320-01-512-9947	Rivet	2
104	2042710C1 338X5	5340-01-591-9993	Cable lock strap	1
105	22068-12 01276	5330-01-211-3121	O-ring	1
106	2257D1174 78500	5315-478-7697	Clip	7
107	2258-H-1230 78500	5360-01-546-2220	Spring	4
108	2258-W-803 78500	5360-01-499-3396	Spring	1
109	2258-Y-1273 3D6E9	5360-01-518-3316	Spring	1
110	2502063C91 338X5	2530-01-556-4691	Retainer	1
111	2503221C1 338X5	4330-01-507-4201	Filter	1
112	2505773C1 338X5	5330-01-556-5274	Gasket	1
113	2506988C1 338X5	4820-01-578-1544	Valve	1
114	2507061C1 338X5	5330-01-556-5317	Gasket	1
115	2507844C1 338X5	5330-01-568-5881	Seal	2
116	253660R2 13446	5330-01-539-4252	Gasket	1
117	25549R1 338X5	5310-01-556-5374	Lockwasher	11
118	2589457C1 338X5	5340-01-556-5398	Clip	1
119	265204R1 338X5	5365-00-846-7660	Sleeve, compression	2
120	289862C1 338X5	5340-00-421-5015	Cable lock strap	30
121	291207C1 338X5	2590-01-513-4557	Cable lock strap	1
122	2XX306158 79788	5330-01-556-6137	Gasket	1
123	30243R1 338X5	5315-01-591-9161	Pin, cotter	1

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
124	306132C1 338X5	5340-01-189-8297	Cable lock strap	70
125	30756R1 338X5	5310-01-512-6137	Locknut	2
126	3113286C1L 338X5	5331-01-563-3270	O-ring	1
127	3113654C1 338X5	5315-01-568-5844	Pin, cotter	2
128	3513117C1 338X5	5306-01-556-5890	Bolt	4
129	3523434C1 338X5	5340-01-556-5900	Clamp	1
130	3523435C1 338X5	4730-01-513-0955	Clamp	1
131	3535854C1 338X5	5306-01-512-2116	Lockbolt	2
132	3535859C1 338X5	5310-01-512-6154	Locknut	4
133	3544557C1 338X5	5340-01-556-5977	Cable lock strap, buttonhead	3
134	3551709C1 338X5	5340-01-556-6045	Cable lock strap	25
135	3553592C1 338X5	5310-01-557-0708	Locknut	4
136	3556343C1 338X5	5340-01-556-6086	Cable lock strap	4
137	3558816C1 89346	5340-01-537-2705	Clip, spring	9
138	3560710C91 338X5	5340-1-556-6111	Cable lock strap	1
139	3562424C1 338X5	4820-01-577-7976	Valve	2
140	3576742C1 338X5	4730-556-6187	Clamp, screw	6
141	3591600C1 338X5	5330-01-556-6208	Gasket	2
142	3601546C1	5310-01-592-8602	Locknut	4
143	3606527C1	5310-01-556-6230	Locknut	1
144	3626607C1 338X5	3940-01-556-6275	Cable lock strap	1
145	3810865C1 338X5	5340-01-556-4708	Cable lock strap	6
146	3819433C1 338X5	5330-01-556-4748	Seal	1
147	3821116C1 338X5	5310-01-555-4987	Locknut	2
148	3821117C2 338X5	5310-01-555-4988	Locknut	9
149	3821118C1 338X5	5310-01-555-4989	Locknut	25

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
150	3822144C1 338X5	2590-01-578-6373	Base, cable lock strap mounting	19
151	386170C1 338X5	5340-01-556-6500	Cable lock strap	3
152	40050R1 338X5	5310-01-556-5260	Locknut	6
153	40066R1 338X5	5310-01-556-6508	Locknut	6
154	40240R1 338X5	5310-01-556-6511	Locknut	4
155	533959R1 338X5	3990-01-589-2739	Cable lock strap	3
156	575359C1 338X5	5320-01-556-6711	Rivet	1
157	591597C2 338X5	5330-01-346-2917	Gasket	1
158	592855C1 338X5	5330-01-556-6727	Seal, oil	1
159	6010241C1 338X5	5325-01-556-6733	Fastener, trim, ribbed	3
160	6-1-5866-17 81337	5310-01-130-9065	Lockwasher	4
161	6410-13B-003 338X5		Filter, engine oil	1
162	691273C1 338X5	5330-30-363-1720	Gasket	1
163	69480R91 338X5	5306-00-481-9792	Bolt	5
164	875522C1 338X5	5331-01-556-6807	O-ring	1
165	876106C1 338X5	5331-01-076-6167	O-ring	1
166	876108C1 338X5	5331-01-556-6809	O-ring	1
167	933965R1 338X5	5310-01-556-6817	Lockwasher	1
168	934948R1 338X5	5310-567-1388	Lockwasher	35
169	9395-C 9K475		Rivet	4
170	9A65337A 3FQN6	5310-01-575-3875	Locknut	1
171			O-ring	1
172			Lockwasher	1
173			Lockwasher	4
174			Lockwasher	4
175	BAC10WL6-16) 81205	5310-01-008-6782	Locknut	2
176			Lockwasher	6

Mandatory Replacement Parts - (CONTINUED)

ITEM NO.	PART NUMBER/ CAGEC	NATIONAL STOCK NUMBER (NSN)	NOMENCLATURE	QTY
177	120382 338X5	5310-01-556-4486	Lockwasher	2
178	MS35338-67 96906	5310-00-011-6121	Lockwasher	3
179			Lockwasher	3
180			Gasket	1
181	22046-16 01276	5330-01-485-1779	O-ring	4
182			Lockwasher	2
183			Lockwasher	2
184			Lockwasher	2
185	40250 0Y3H3	5310-01-556-6816	Lockwasher	2

END OF WORK PACKAGE

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA.	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE *Date you filled out this form.*
TO *(Forward to proponent of publication or form) (Include ZIP Code)* U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	**FROM** *(Activity and location) (Include ZIP Code)* *Your mailing address*	

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM Number	*Date of the TM*	*Title of the TM*

ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)
	0007-3					*Figure 2, Item 9 should show a lockwasher. Currently shows a flat washer.*
	0018-2					*Cleaning and inspection, Step 6, reference to governor support pin (14) is wrong reference. Reference should be change to (12).*

SAMPLE

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your Name	*Your Phone Number*	*Your Signature*

TO *(Forward direct to addressee listed in publication)*	**FROM** *(Activity and location) (Include ZIP Code)*	**DATE**
U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	*Your Address*	*Date you filled out this form*

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM Number	*Date of the TM*	*Title of the TM*

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

SAMPLE

PART III – REMARKS *(Any general remarks, or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your Name	*Your Phone Number*	*Your Signature*

APD V4.00

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	**DATE**
TO *(Forward to proponent of publication or form) (Include ZIP Code)* U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	**FROM** *(Activity and location) (Include ZIP Code)*	

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9-2355-106-23-5	19 November 2012	MAINTENANCE MANUAL FOR MINE RESISTANT AMBUSH PROTECTED VEHICLE

	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO *(Forward direct to addressee listed in publication)*	**FROM** *(Activity and location) (Include ZIP Code)*	**DATE**
U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000		

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9-2355-106-23-5	19 November 2012	MAINTENANCE MANUAL FOR MINE RESISTANT AMBUSH PROTECTED VEHICLE

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remarks, or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

APD V4.00

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	**DATE**
TO *(Forward to proponent of publication or form) (Include ZIP Code)* U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	**FROM** *(Activity and location) (Include ZIP Code)*	

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9-2355-106-23-5	19 November 2012	MAINTENANCE MANUAL FOR MINE RESISTANT AMBUSH PROTECTED VEHICLE

ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO *(Forward direct to addressee listed in publication)*	**FROM** *(Activity and location) (Include ZIP Code)*	**DATE**
U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000		

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 9-2355-106-23-5	19 November 2012	MAINTENANCE MANUAL FOR MINE RESISTANT AMBUSH PROTECTED VEHICLE

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remark, or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army

1229007

By Order of the Secretary of the Air Force:

JANET C. WOLFENBARGER
General, United States Air Force
Commander, AFMC

MARK A. WELSH, III
General, United States Air Force
Chief of Staff

Distribution:

To be distributed in accordance with the initial distribution number (IDN) 381168 requirements for TM 9-2355-106-23-5.

THE METRIC SYSTEM AND EQUIVALENTS

Linear Measure

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

Weights

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Pounds
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

Liquid Measure

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

Square Measure

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.0386 Sq Miles

Cubic Measure

1 Cu Centimeter = 1,000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

Temperature

9/5 C° +32 = F°
5/9 (°F - 32) = °C
212° Fahrenheit is equivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius

APPROXIMATE CONVERSION FACTORS

To Change	To	Multiply By
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Sq Inches	Sq Centimeters	6.451
Sq Feet	Sq Meters	0.093
Sq Yards	Sq Meters	0.836
Sq Miles	Sq Kilometers	2.590
Acres	Sq Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Sq Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

To Change	To	Multiply By
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Sq Centimeters	Sq Inches	0.155
Sq Meters	Sq Feet	10.764
Sq Meters	Sq Yards	1.196
Sq Kilometers	Sq Miles	0.386
Sq Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Sq Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621

PIN: 087255-000