Air Compressor

3.1 Air Compressor Coolant Lines

3.1.1 Description and Operation of the Air Compressor Coolant Return Line

1. Air Compressor Coolant Return Line
2. Air Compressor Coolant Supply Line

3.1.2 Removal of the Air Compressor Coolant Return Line

1. Shut off the engine, apply the parking brake, chock the wheels, and perform any other applicable safety steps.

CAUTION
ELECTRICAL SHOCK

To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.
2. Disconnect batteries.
3. Open hood.
4. If needed, remove the bumper end(s).
5. Drain the cooling system. Refer to section "Cooling System Drain Procedure".
6. Remove the Motor Control Module (MCM). Refer to section "Removal of the Motor Control Module (MCM)".
7. If needed, remove the power steering pump mounting bolts and position aside, leaving the lines attached.
8. Remove the accessory mounting bracket. Refer to section "Removal of the Accessory Mounting Bracket."
9. Remove Air Conditioning Line support brackets as needed to allow movement.
10. Remove the Air Conditioning Compressor mounting bolts, and position compressor aside.

Note: Retaining rings do not come completely off the coolant line end fittings; use care to not bend or damage the clip.
11. Disengage the retaining clip on each end of the air compressor coolant return line (1) and remove.

3.1.3 Inspection of the Air Compressor Coolant Return Line

1. Inspect the Air Compressor Coolant Return Line for any signs or chaffing or cracking. Replace as needed.
2. Inspect both retaining clips found on each end. Clips should not be bent or show signs of stress. Replace as needed.
3. Inspect both line adaptors at the air compressor and Exhaust Gas Recirculation (EGR) Delivery Elbow for cracking or damage. Replace as needed.

3.1.4 Installation of the Air Compressor Coolant Return Line

Note: Retaining rings do not come completely off the coolant line end fittings; use care to not bend or damage the clip.

1. Install the air compressor coolant return line (1) and engage the retaining clip on each end.
2. If removed, install the power steering pump with a new gasket. Torque to 50 N·m (37 lb·ft).
3. Install the accessory mounting bracket. Refer to section “Installation of the Accessory Mounting Bracket.”
4. Install the Motor Control Module (MCM). Refer to section “Installation of the Motor Control Module (MCM).”
5. Reposition the Air Conditioning Compressor and install the mounting bolts. Refer to Original Equipment Manufacturer (OEM) procedures.
6. As needed, install Air Conditioning Line support brackets.
7. Fill the cooling system. Refer to section “Filling the Cooling System”.
8. If needed, install the bumper end(s).

CAUTION
ELECTRICAL SHOCK

To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.
9. Connect the batteries.
10. Close hood.

3.1.5 Description and Operation of the Air Compressor Coolant Supply Line
3.1.6 Removal of the Air Compressor Coolant Supply Line

1. Air Compressor Coolant Return Line
2. Air Compressor Coolant Supply Line

3.1.6 Removal of the Air Compressor Coolant Supply Line
3.1.7 Inspection of the Air Compressor Coolant Supply Line

1. Inspect the Air Compressor Coolant Supply Line for any signs of chaffing or cracking. Replace as needed.
2. Inspect both retaining clips found on each end. Clips should not be bent or show signs of stress. Replace as needed.

To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.

Note: Retaining rings do not come completely off the coolant line end fittings, use care so as not to bend or damage the clip.

CAUTION
ELECTRICAL SHOCK

To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.

1. Shut off the engine, apply the parking brake, chock the wheels, and perform any other applicable safety steps.
2. Disconnect batteries.
3. Open hood.
4. If needed, remove the bumper end(s).
5. Drain the cooling system. Refer to section “Cooling System Drain Procedure”.
6. Remove the Motor Control Module (MCM). Refer to section “Removal of the Motor Control Module (MCM)”.
7. If needed, remove the power steering pump mounting bolts and position aside, leaving the lines attached.
8. Disengage the retaining clip on each end of the air compressor coolant supply line (2) and remove.

Remove as follows:

1. Shut off the engine, apply the parking brake, chock the wheels, and perform any other applicable safety steps.