

SECTION 9E

ENGINE COOLANT HEATER

NOTICE: When fasteners are removed, always reinstall them at the same location from which they were removed. If a fastener needs to be replaced, use the correct part number fastener for that application. If the correct part number fastener is not available, a fastener of equal size and strength (or stronger) may be used. Fasteners that are not reused, and those requiring thread locking compound will be called out. The correct torque value must be used when installing fasteners that require it. If the above conditions are not followed, parts or system damage could result.

CONTENTS

General Description	9E-1	Engine Coolant Heater Cord Assembly	
On-Vehicle Service	9E-1	Replacement	9E-2
Engine Coolant Heater Assembly		Specifications	9E-3
Replacement	9E-1	Fastener Tightening Specifications	9E-3

GENERAL DESCRIPTION

The engine coolant heater assembly is used to heat engine coolant, making it easier to start the engine in cold climates. It is installed into the engine block assembly at a water jacket plug location. An engine coolant heater cord assembly is routed inside the engine compartment. The heater assembly is rated at 600 watts and uses a 110-volt ac power supply. For electrical diagram of engine coolant heater assembly, refer to ELECTRICAL DIAGNOSIS 8A-32.

ON-VEHICLE SERVICE

ENGINE COOLANT HEATER ASSEMBLY REPLACEMENT

Figures 1 and 2

 Remove or Disconnect

CAUTION: Perform this operation when the engine is cool or personal injury may result.

1. Raise and suitably support vehicle. Refer to SECTION 0A.
2. Drain engine coolant from engine block assembly into an approved container. Refer to SECTION 6B.
3. Cord assembly from heater assembly (1).
4. Loosen bolt/screw (2).

NOTICE: When removing the engine coolant heater assembly from the engine block assembly, be careful not to score the machined surface of the plug hole.

5. Heater assembly (1) carefully from plug hole.
 - If removing heater assembly (1) permanently, install water jacket plug into plug hole and replace engine coolant. For engine coolant replacement procedures, refer to SECTION 6B.

 Clean

- Plug hole.
 - Remove burrs, sealer, paint and other rough spots.

 Install or Connect

NOTICE: The element must not touch the engine block assembly inner wall in the installed position or damage to the engine block assembly and heater assembly could result.

NOTICE: See “Notice” on page 9E-1 of this section.

1. Apply coat of engine coolant heater lubricant, GM P/N 9985164 or equivalent, to O-ring and walls of plug holes.
2. Engine coolant heater assembly (1) into plug hole.
 - A. Insert heating element end of heater assembly (1) into plug hole.
 - B. Line up heater assembly (1) with plug hole and push it straight into place.
 - C. Rotate heater assembly (1) so that center electrical contact and bolt/screw (2) are in line horizontally.
 - D. Turn bolt/screw (2) so that yoke presses against engine block assembly inner wall.

 Tighten

- Bolt/screw (2) to 1.9 N•m (17 lb. in.).

CAUTION: Engine coolant heater cord assembly must not touch the engine, hot pipes, manifold or any moving parts or damage to the vehicle and possible personal injury may result.

3. Cord assembly to heater assembly (1).
4. Lower vehicle.

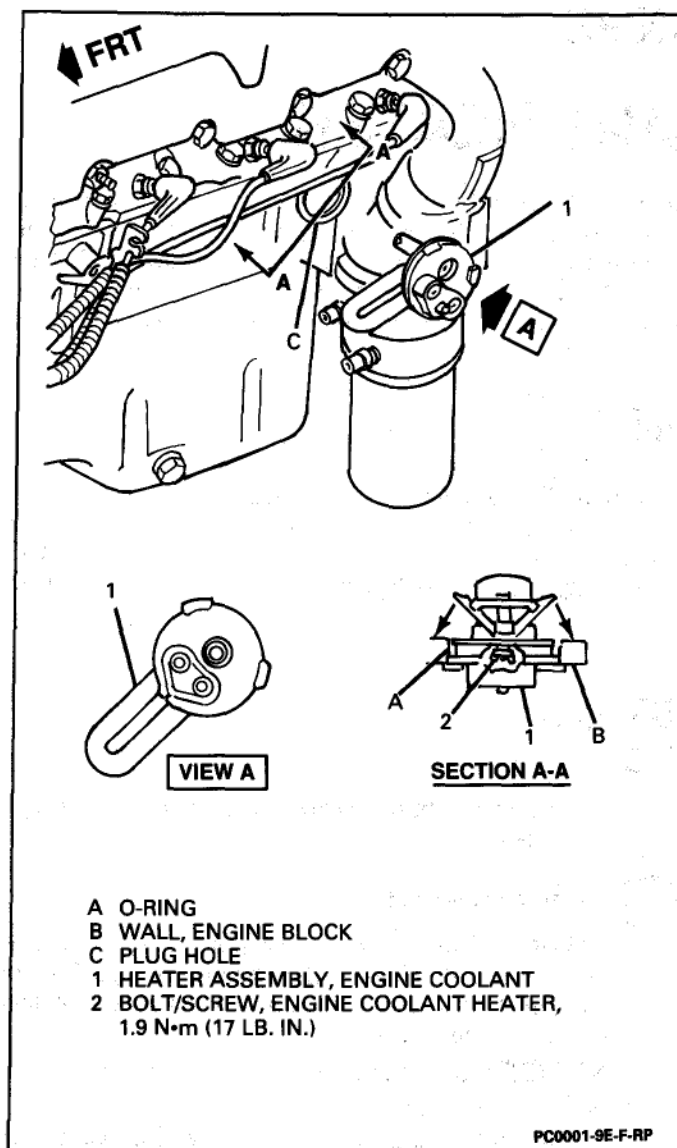


Figure 1 – Engine Coolant Heater Assembly (5.7L LT1 Engine)

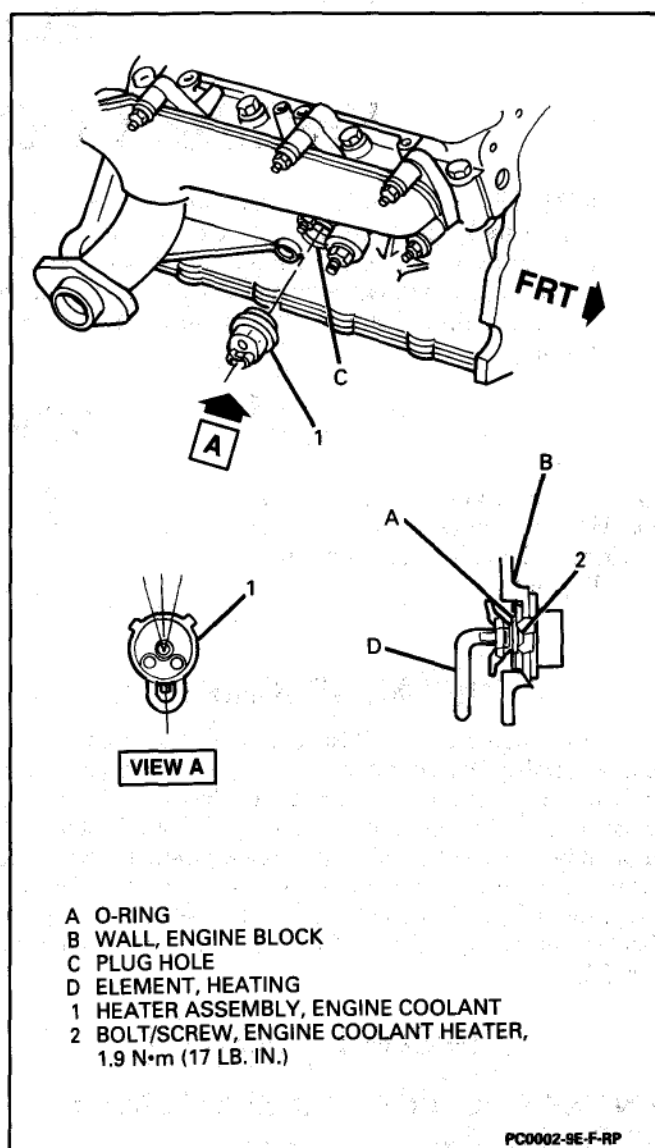


Figure 2 – Engine Coolant Heater Assembly (3.4L L32 Engine)

5. Replace engine coolant. Refer to SECTION 6B.

ENGINE COOLANT HEATER CORD ASSEMBLY REPLACEMENT

Figures 3 and 4

Remove or Disconnect

1. Note position and routing of cord assembly (3) for proper placement during installation.
2. Cord assembly (3) from heater assembly (1).
3. Cord straps (4).
4. Cord assembly (3) from vehicle routing.

Install or Connect

CAUTION: Engine coolant heater cord assembly must not touch the engine, hot pipes, manifold or any moving parts, or damage to the vehicle and possible personal injury may result.

NOTICE: See "Notice" on page 9E-1 of this section.

1. Cord assembly (3) to vehicle routing as noted during removal.
2. Cord straps (4).
3. Cord assembly (3) to heater assembly (1).

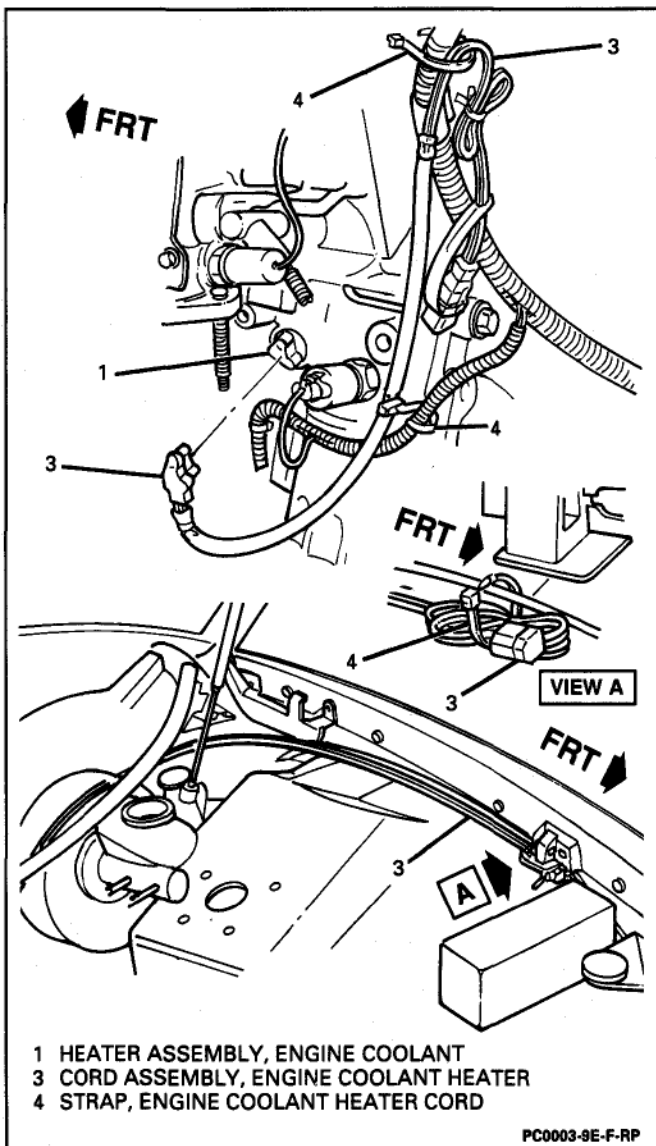


Figure 3 – Engine Coolant Heater Cord Assembly (5.7L LT1 Engine)

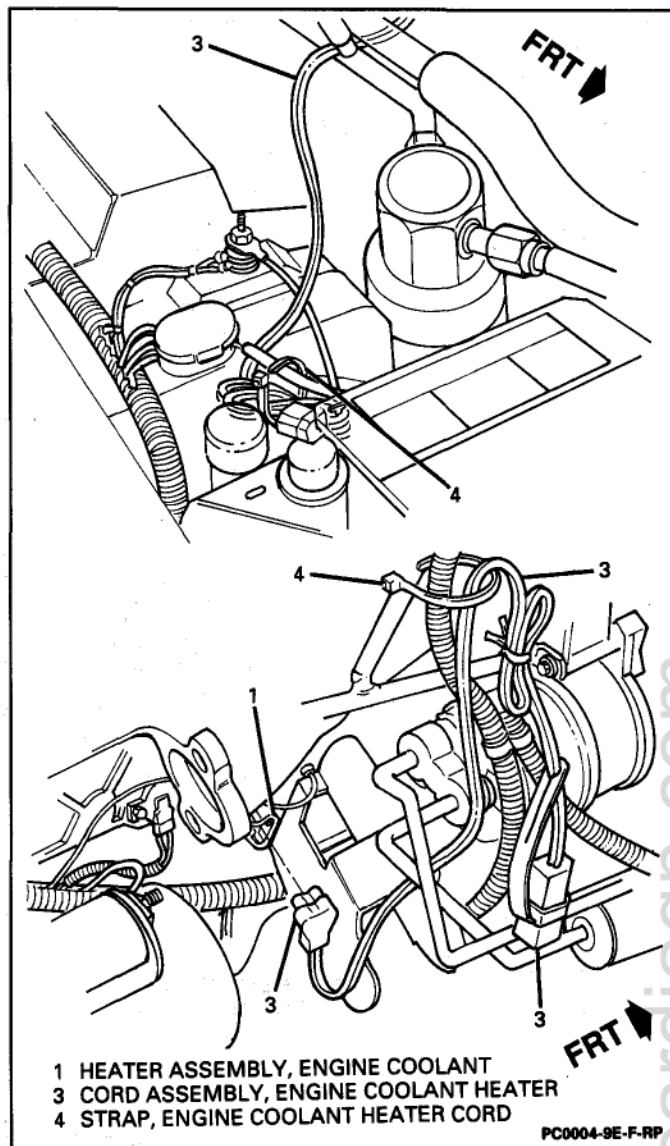


Figure 4 – Engine Coolant Heater Cord Assembly (3.4L L32 Engine)

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

Engine Coolant Heater Bolt/Screw 1.9 N•m (17 lb. in.)

