

RADIATOR REPLACEMENT

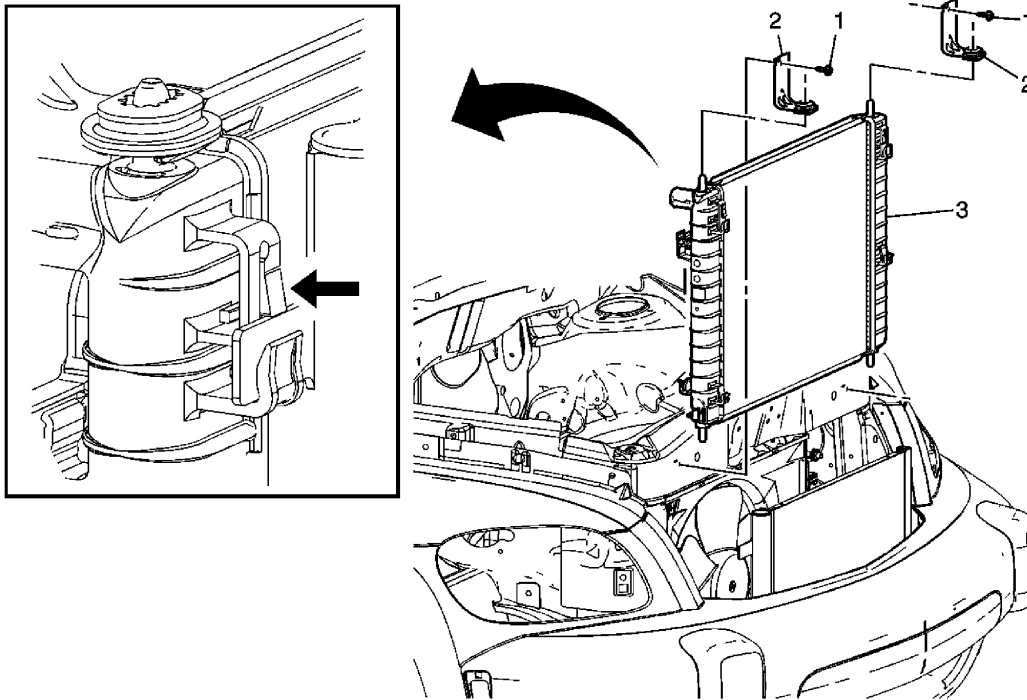


Fig. 92: Radiator

Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
<p>NOTE: Refer to Fastener Notice .</p> <p>Fastener Tightening Specifications: Refer to Fastener Tightening Specifications.</p> <p>Preliminary Procedure</p> <ol style="list-style-type: none"> 1. Drain the cooling system. Refer to Cooling System Draining and Filling (Static Fill-LE5, L61), Cooling System Draining and Filling (GE 47716 Fill) or Cooling System Draining and Filling (Static Fill-LNF). 2. Remove the air cleaner assembly. Refer to Air Cleaner Assembly Replacement for the 2.2L engine or Air Cleaner Assembly Replacement for the 2.4L engine. 3. Remove the hood latch from the tie bar and set aside. Refer to Hood Primary and Secondary 	

Latch Replacement .

4. Remove the transmission lines from the radiator. Refer to **Automatic Transmission Oil Cooler Pipes Replacement** .
5. Remove the radiator inlet hose from the radiator. Refer to **Radiator Inlet Hose Replacement**.
6. Remove the radiator outlet hose from the radiator. Refer to **Radiator Outlet Hose Replacement (LE5, L61)** or **Radiator Outlet Hose Replacement (LNF)**.

1	Bolt, Radiator Bracket Assembly Tighten: 9 N.m (80 lb in)
2	Bracket Assembly, Radiator
3	Radiator Assembly Tip: <ul style="list-style-type: none"> • Lift up on the fan assembly and remove from the radiator and set a side. • Push in on the retaining tabs to release the condenser from the radiator and set aside.

RADIATOR SUPPORT BRACKET REPLACEMENT

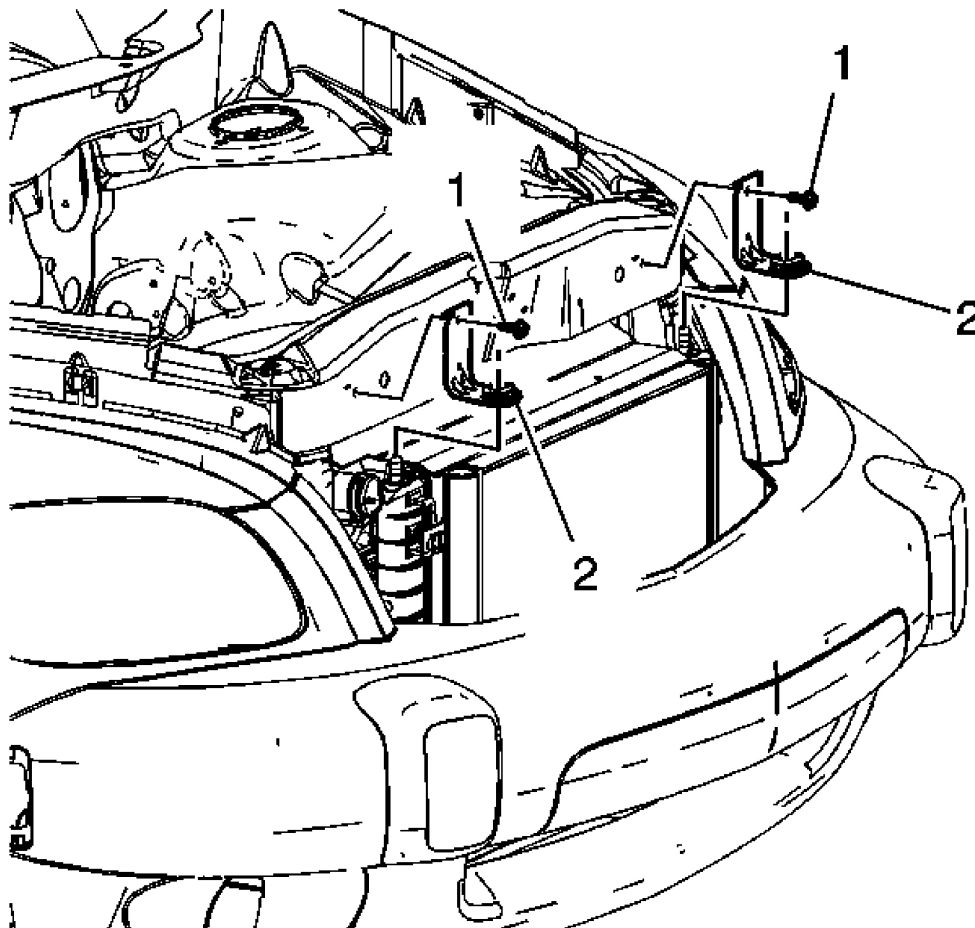


Fig. 93: Radiator Support Bracket
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
1	Radiator Bracket Assembly Bolt - Upper NOTE: Refer to <u>Fastener Notice</u> . Tighten: 9 N.m (80 lb in)
2	Radiator Bracket Asm - Upper

RADIATOR SUPPORT REPLACEMENT (L61, LE5)

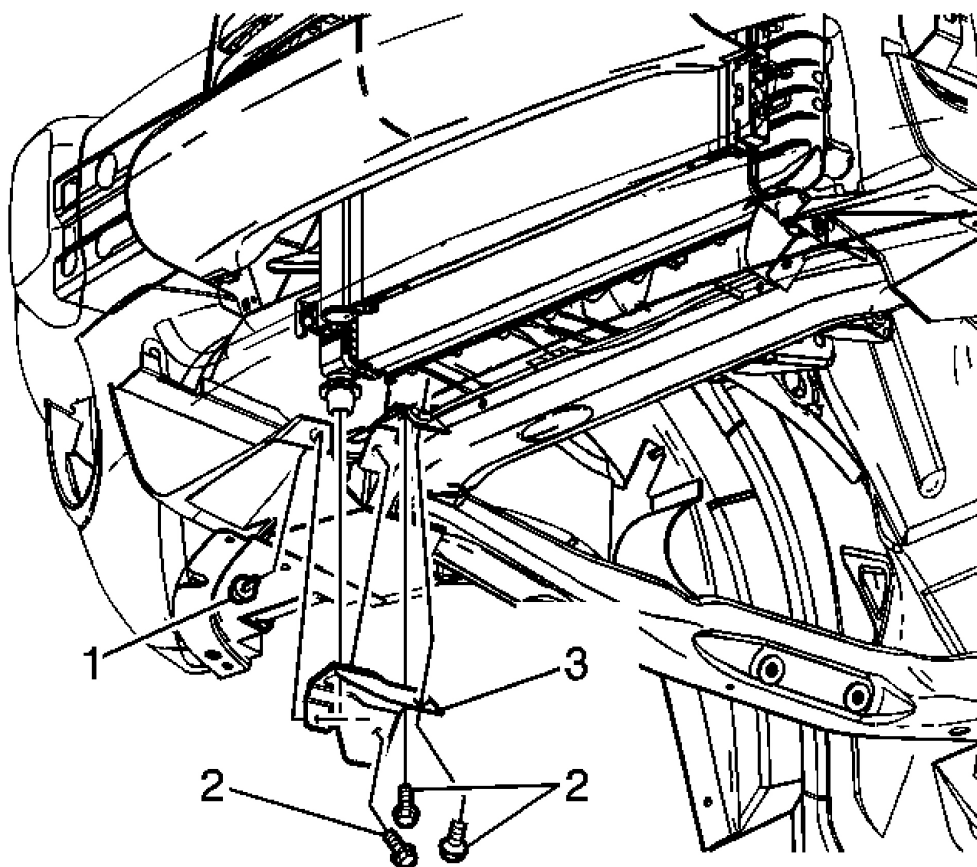


Fig. 94: Radiator Support
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure: Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .	
1	Front Bumper Fascia Lower Deflector Retainer- Push In
2	Radiator Support Bolt - Lower NOTE: Refer to Fastener Notice .

	Tighten: 22 N.m (16 lb ft)
3	Radiator Support - Lower

RADIATOR SUPPORT REPLACEMENT (LNF)

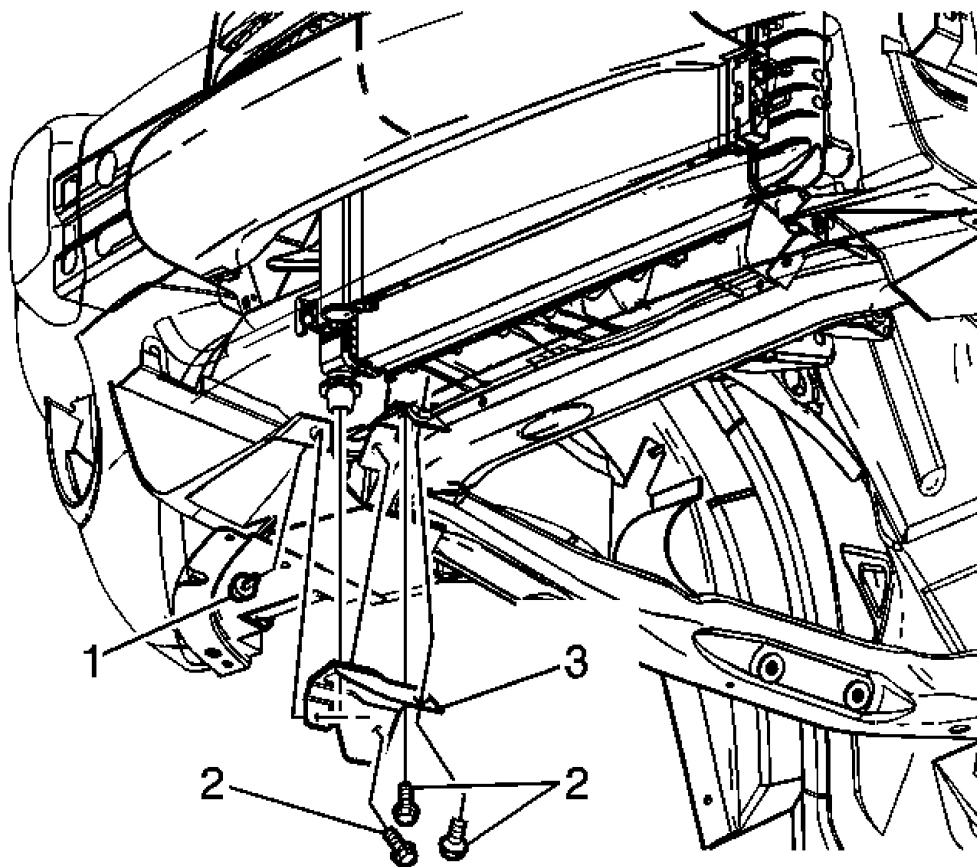


Fig. 95: Radiator Support
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure: Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .	
1	Front Bumper Fascia Lower Deflector Retainer - Push In
	Radiator Support Bolt - Lower

2	<p>NOTE: Refer to <u>Fastener Notice</u> .</p> <p>Tighten: 34 N.m (25 lb ft)</p>
3	Radiator Support - Lower

RADIATOR AIR SIDE BAFFLE AND DEFLECTOR REPLACEMENT

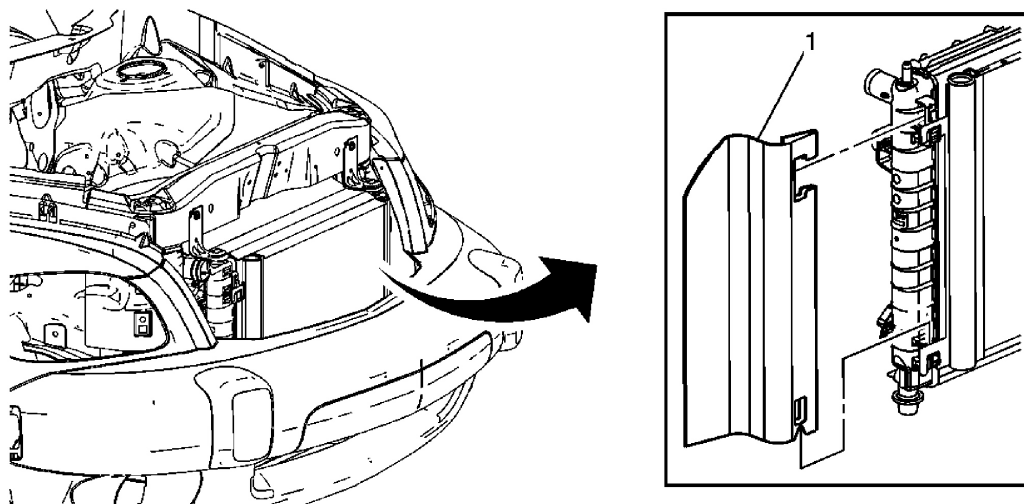


Fig. 96: Radiator Air Baffle And Deflector - Side
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Fastener Tightening Specifications: Refer to Fastener Tightening Specifications .	
1	Radiator Air Baffle and Deflector- Side Tip: <ul style="list-style-type: none"> • Pull up and the out to release the radiator air seal from the radiator. • Right side shown left similar.

RADIATOR AIR UPPER BAFFLE AND DEFLECTOR REPLACEMENT

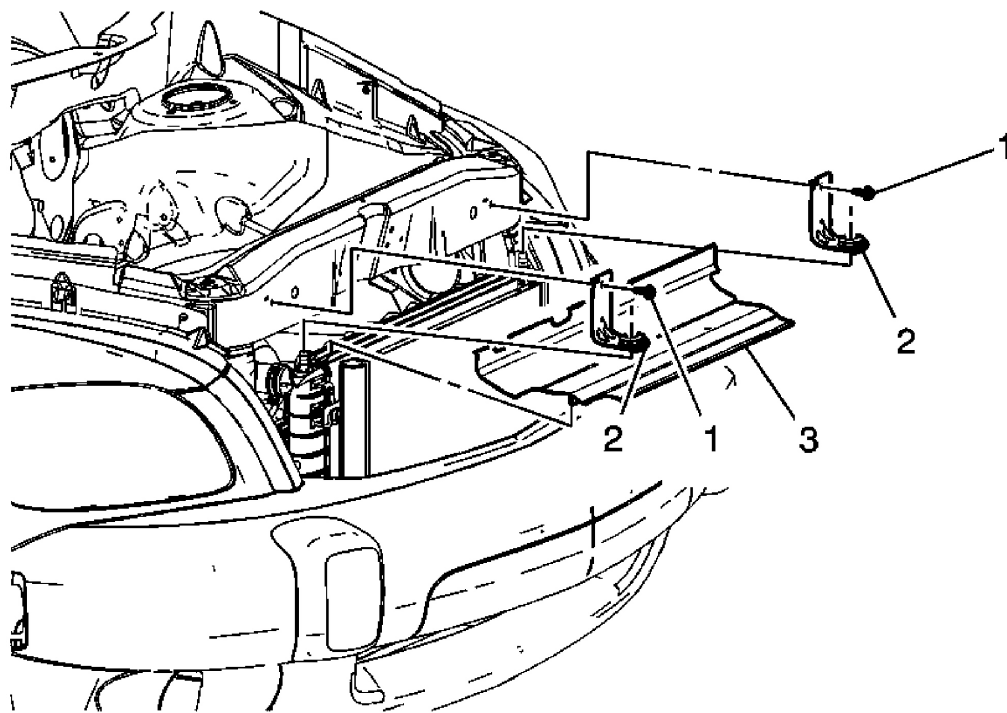


Fig. 97: Radiator Air Baffle And Deflector - Upper
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
NOTE: Refer to <u>Fastener Notice</u> .	
Fastener Tightening Specifications: Refer to <u>Fastener Tightening Specifications</u> .	
1	Radiator Bracket Assembly- Upper Bolt Tighten: 9 N.m (80 lb in)
2	Radiator - Upper Bracket Assembly
3	Radiator Air Baffle and Deflector- Upper

COOLANT HEATER REPLACEMENT (LNF)

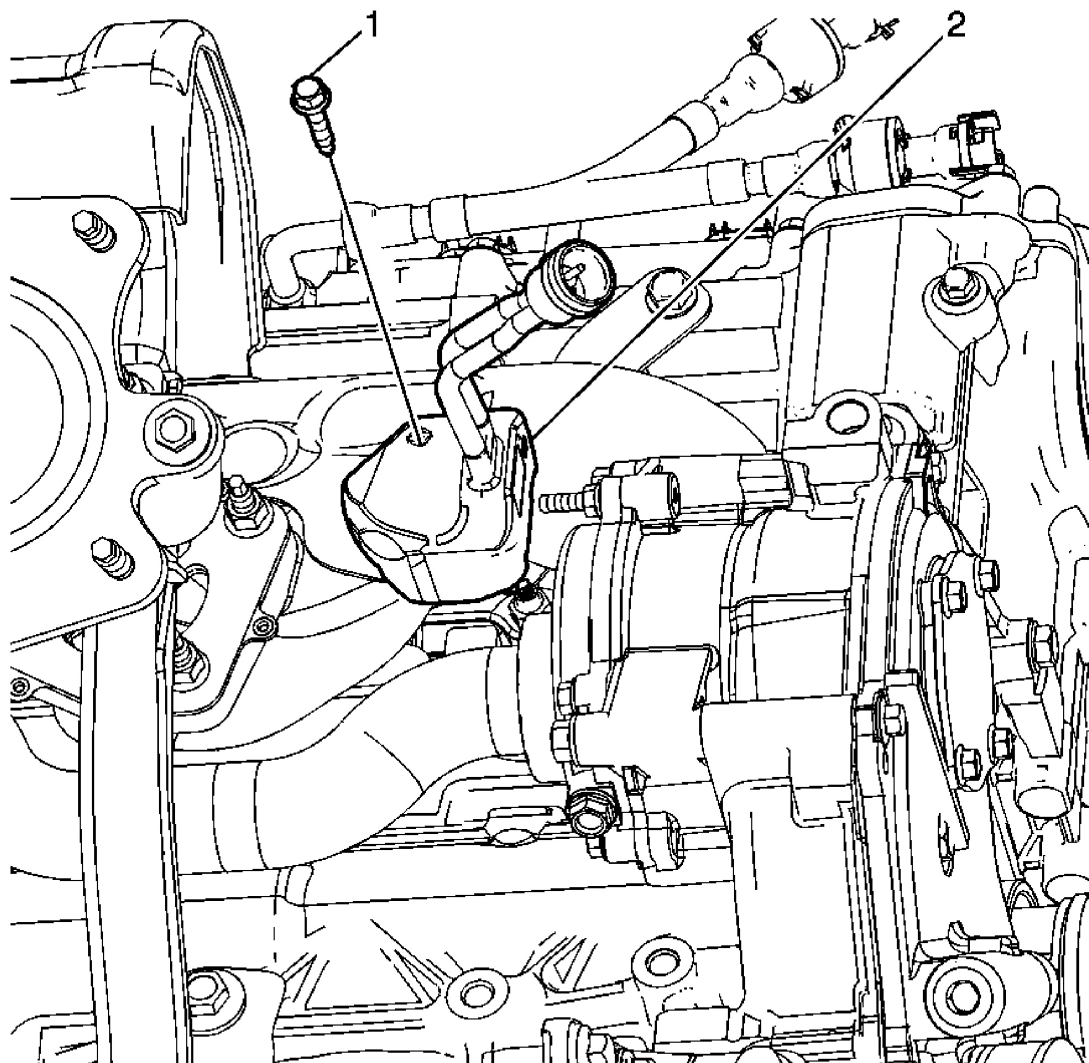


Fig. 98: Coolant Heater
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
Preliminary Procedure: Remove the turbocharger assembly. Refer to Turbocharger Replacement .	
1	Coolant Heater Bolt NOTE: Refer to Fastener Notice . Procedure: Disconnect the electrical connector.

	Tighten: 10 N.m (89 lb in)
2	Coolant Heater

COOLANT HEATER REPLACEMENT (L61, LE5)

Removal Procedure

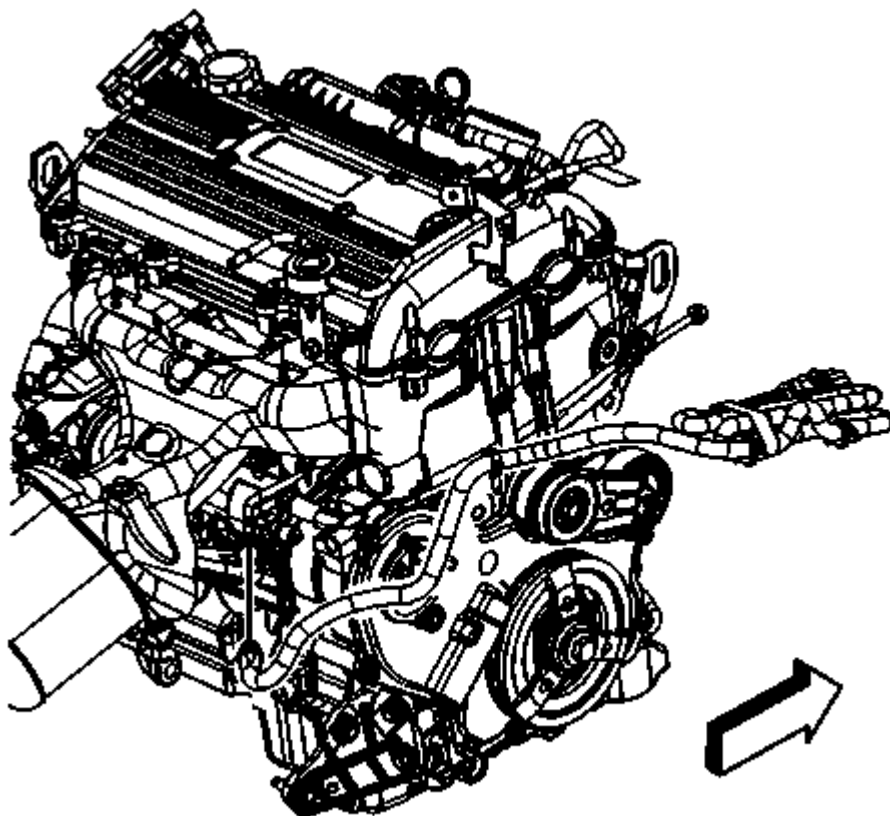


Fig. 99: Coolant Heater Cord
Courtesy of GENERAL MOTORS CORP.

1. Remove the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#) for the 2.2L (L61) engine or [Air Cleaner Assembly Replacement](#) for the 2.4L engine.
2. Disconnect the coolant heater cord.

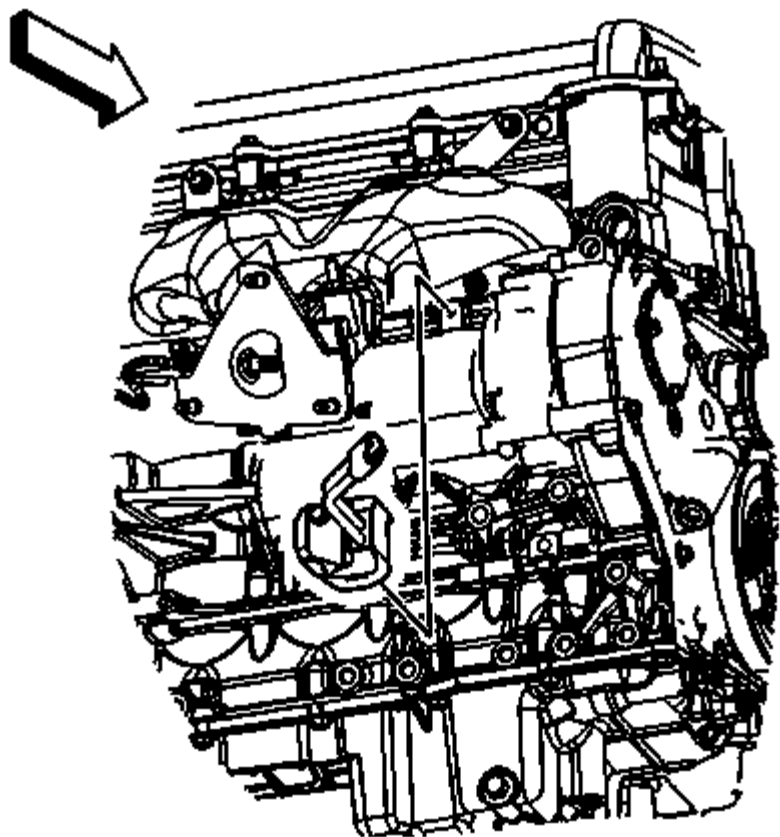


Fig. 100: Coolant Heater
Courtesy of GENERAL MOTORS CORP.

3. Remove the coolant heater bolt.
4. Remove the coolant heater.

Installation Procedure

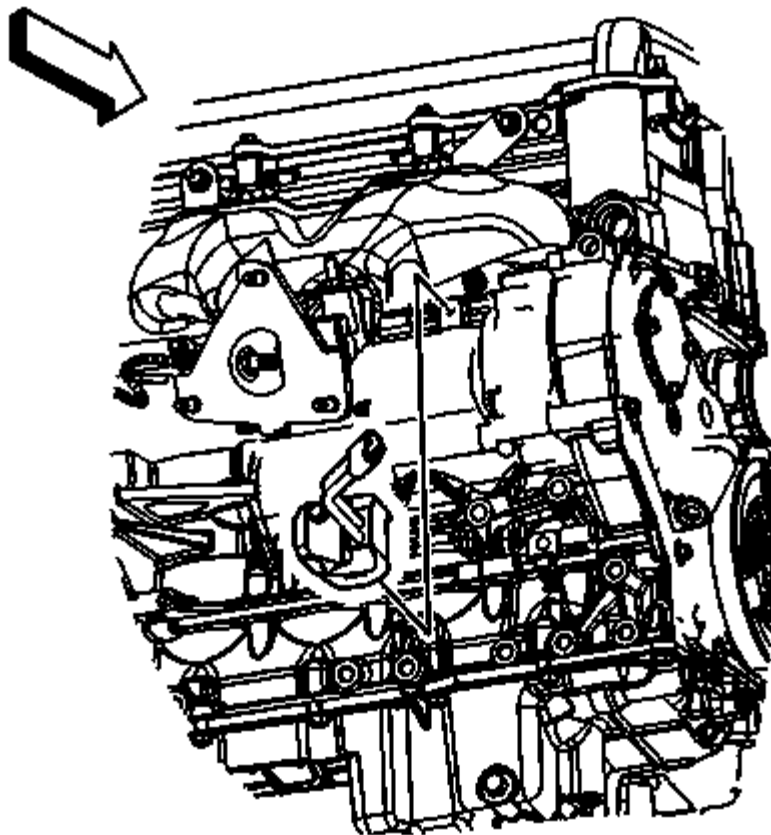


Fig. 101: Coolant Heater
Courtesy of GENERAL MOTORS CORP.

1. Install the coolant heater.

NOTE: Refer to **Fastener Notice** .

2. Install the coolant heater bolt.

Tighten: Tighten the bolt to 10 N.m (89 lb in).

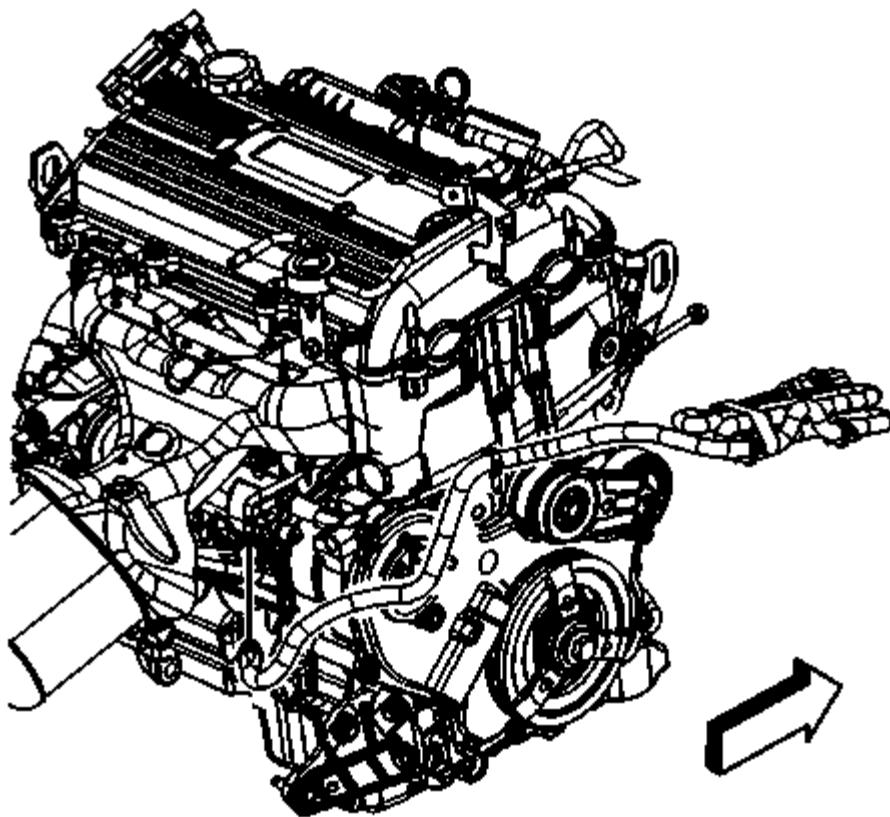


Fig. 102: Coolant Heater Cord
Courtesy of GENERAL MOTORS CORP.

3. Connect the coolant heater cord.
4. Install the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#) for the 2.2L (L61) engine or [Air Cleaner Assembly Replacement](#) for the 2.4L engine.

COOLANT HEATER CORD REPLACEMENT (LNF)

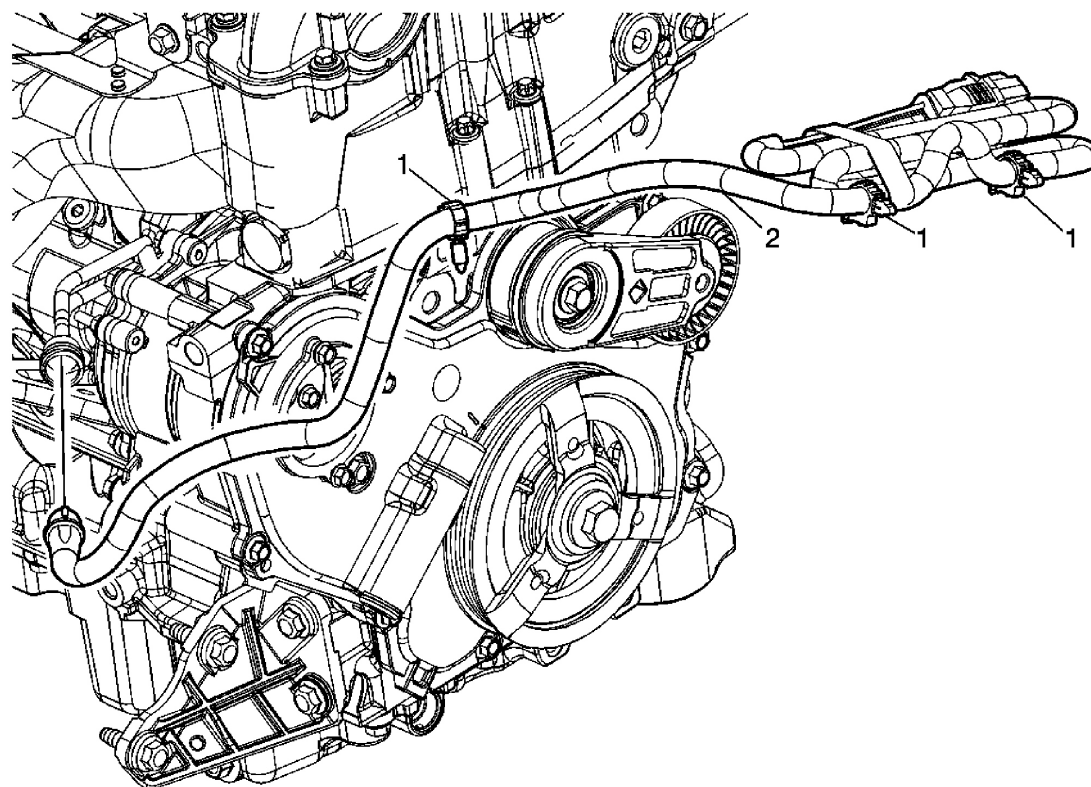


Fig. 103: Coolant Heater Cord
 Courtesy of GENERAL MOTORS CORP.

Callout	Component Name
1	Coolant Heater Plastic Retainer (Qty: 3) Procedure: Disconnect the electrical connectors.
2	Coolant Heater Cord

COOLANT HEATER CORD REPLACEMENT (L61, LE5)

Removal Procedure

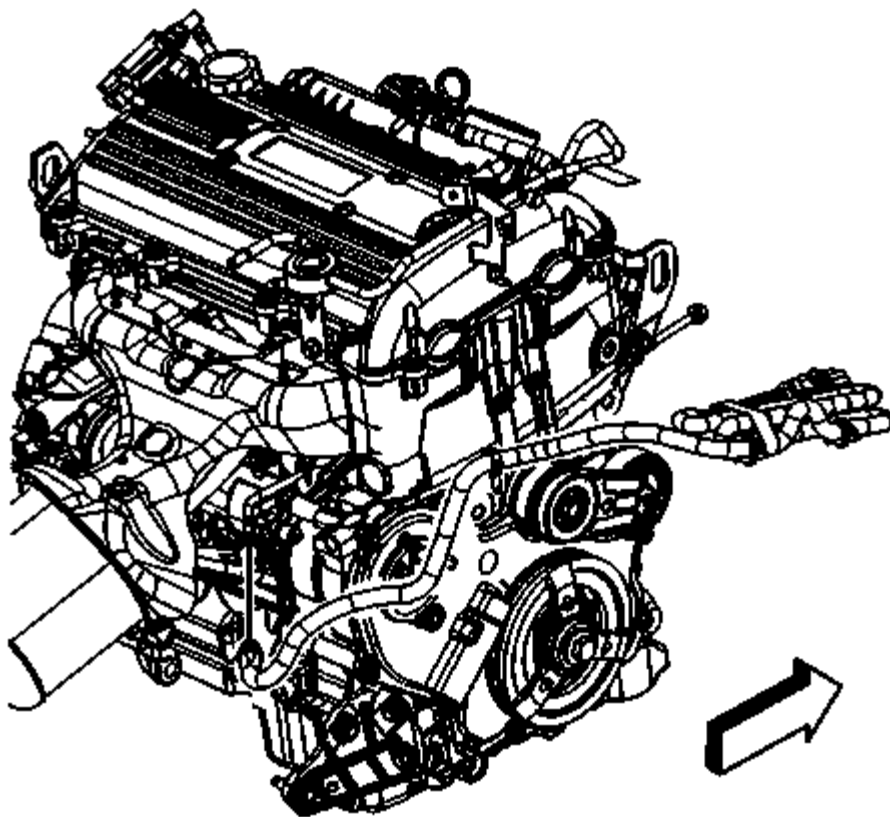


Fig. 104: Coolant Heater Cord
Courtesy of GENERAL MOTORS CORP.

1. Remove the air cleaner assembly. Refer to **Air Cleaner Assembly Replacement** for the 2.2L (L61) engine or **Air Cleaner Assembly Replacement** for the 2.4L engine.
2. Disconnect the engine coolant heater cord.

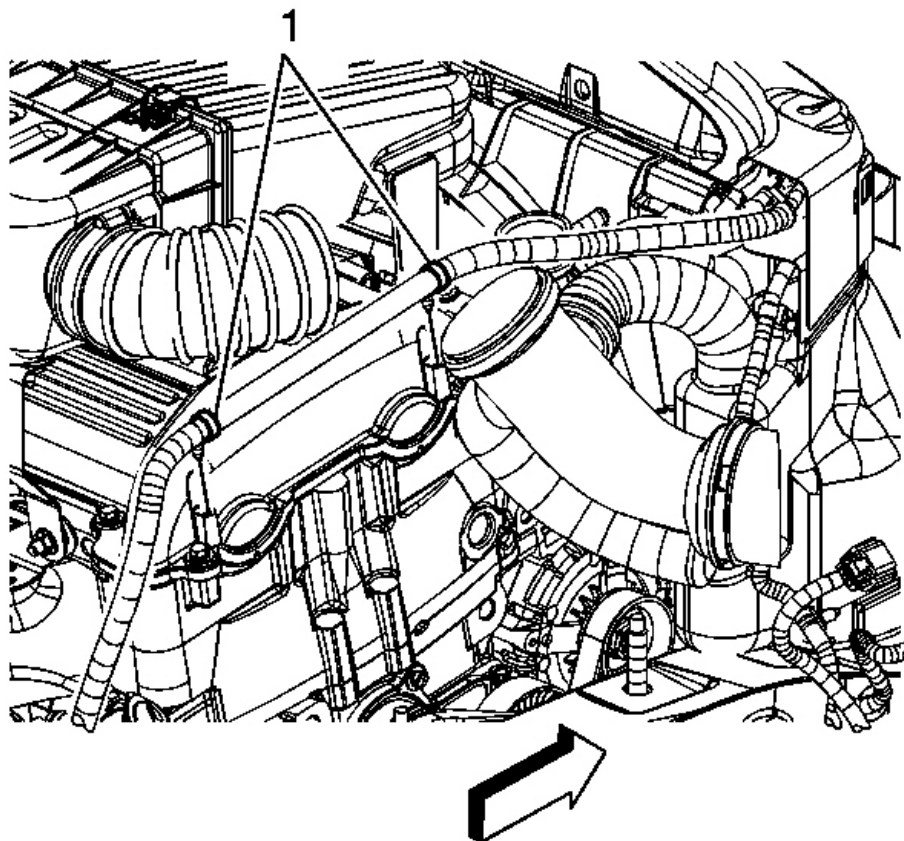


Fig. 105: Coolant Heater Cord Clips
Courtesy of GENERAL MOTORS CORP.

3. If equipped with regular production option (RPO) L61 and a manual transaxle, remove the cord clips (1) from the camshaft cover.

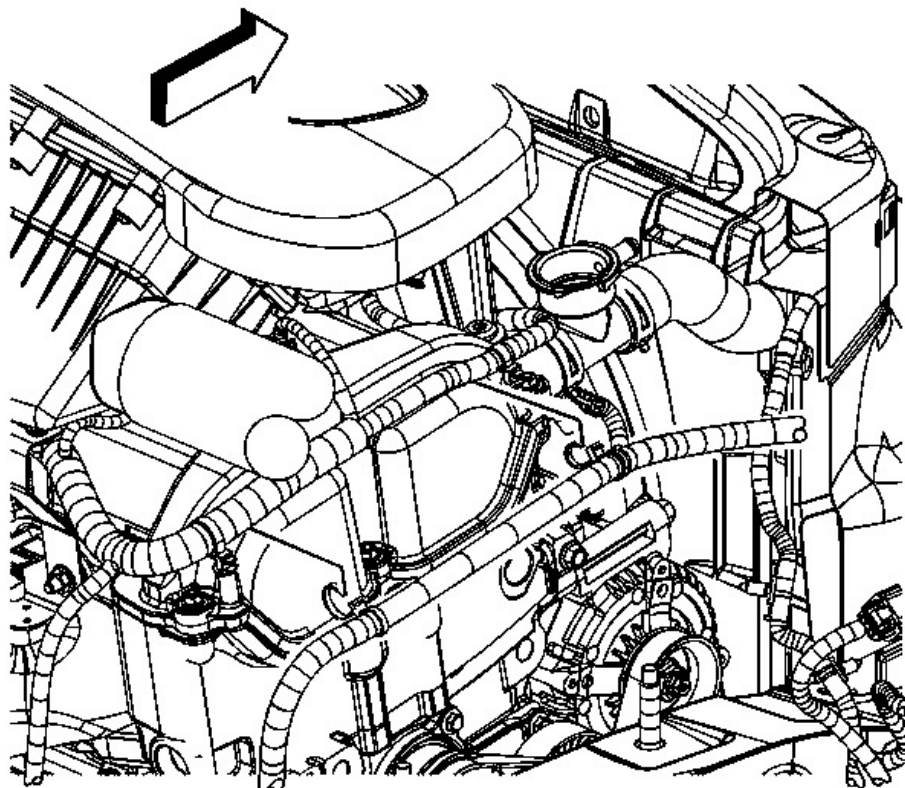


Fig. 106: Coolant Heater Cord
Courtesy of GENERAL MOTORS CORP.

4. If equipped with RPO LE5, or RPO L61 and a automatic transaxle, disconnect the straps from the engine harness.
5. Disconnect the strap from the right front headlamp harness.
6. Remove the heater cord.

Installation Procedure

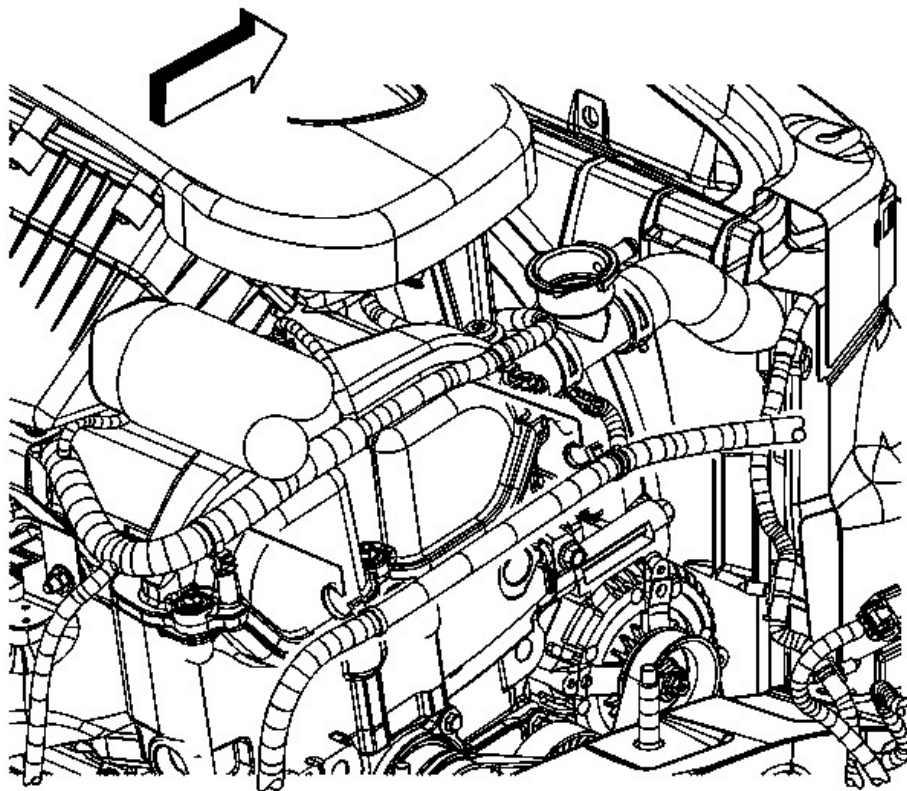


Fig. 107: Coolant Heater Cord
Courtesy of GENERAL MOTORS CORP.

1. Install the heater cord.
2. Connect the strap to the right front headlamp harness.
3. If equipped with RPO LE5, or RPO L61 and a automatic transaxle, connect the straps to the engine harness.

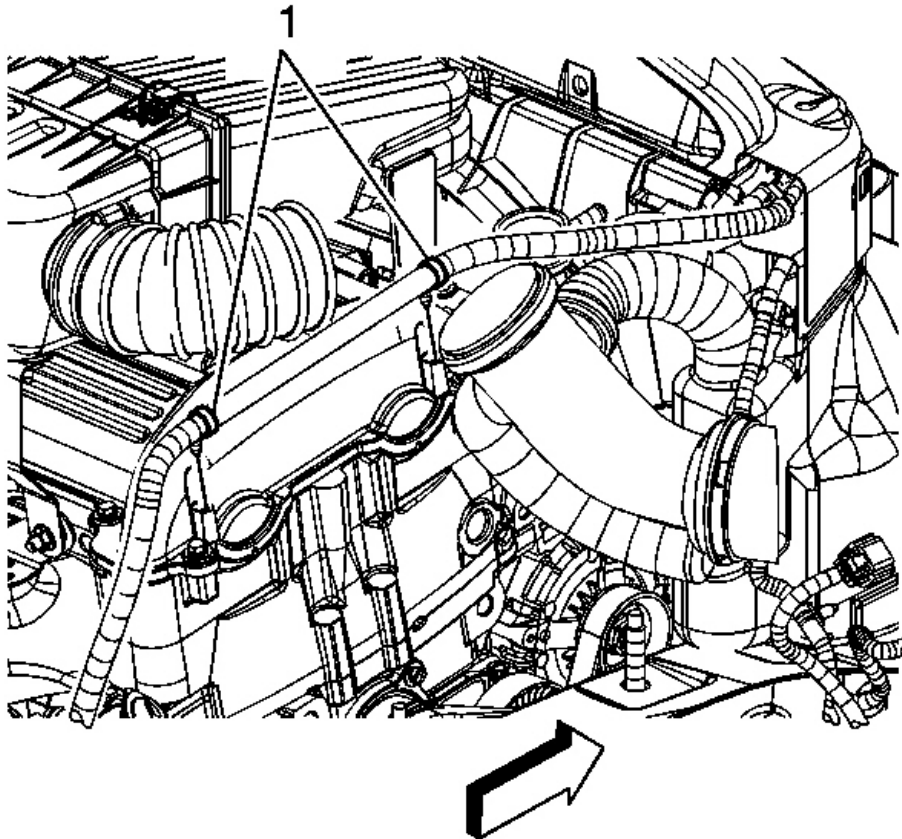


Fig. 108: Coolant Heater Cord Clips
Courtesy of GENERAL MOTORS CORP.

4. If equipped with RPO L61 and a manual transaxle, install the cord clips (1) to the camshaft cover.

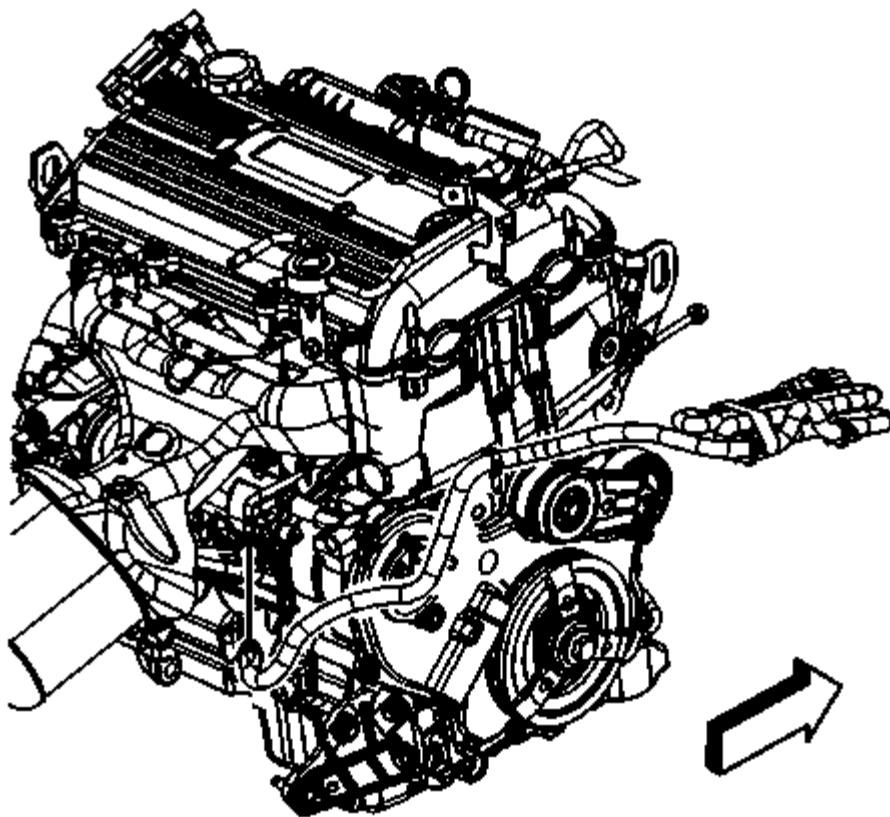


Fig. 109: Coolant Heater Cord
Courtesy of GENERAL MOTORS CORP.

5. Connect the engine coolant heater cord.
6. Install the air cleaner assembly. Refer to [Air Cleaner Assembly Replacement](#) for the 2.2L (L61) engine or [Air Cleaner Assembly Replacement](#) for the 2.4L engine.