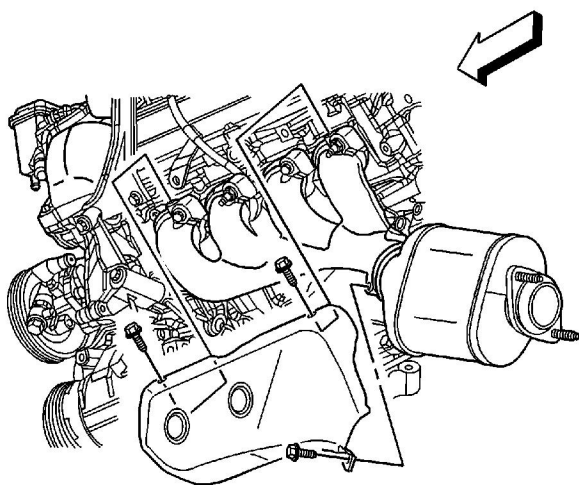


## Exhaust Manifold Replacement - Left Side (V8 and LHD)

### Removal Procedure

**Caution:** Refer to [Exhaust Service Caution](#) in the Preface section.

**Caution:** Refer to [Protective Goggles and Glove Caution](#) in the Preface section.



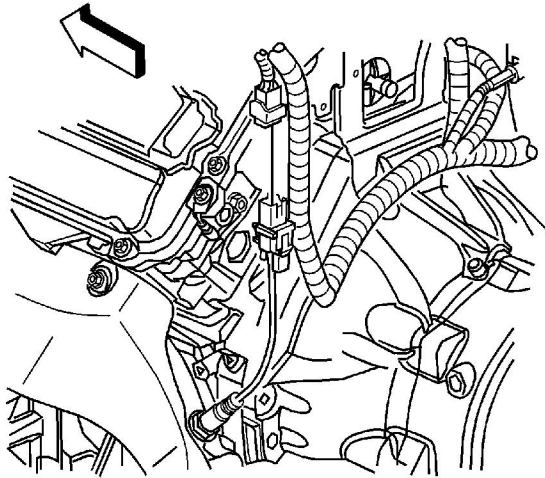
1. Remove the air cleaner housing assembly. Refer to [Air Cleaner Assembly Replacement](#).
2. Remove the nut securing the air conditioning (A/C) lines to the left hand shock tower.

Position the lines aside to provide tool access to the exhaust manifold shield front bolt.

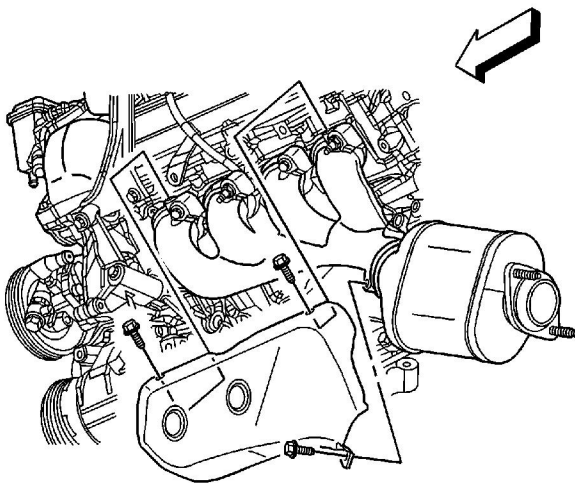
3. Remove the front upper heat shield bolt.
4. Disconnect the master cylinder electrical connector.
5. Remove the master cylinder mounting nuts.

Position the master cylinder towards the engine to gain tool access to the exhaust manifold shield rear bolt.

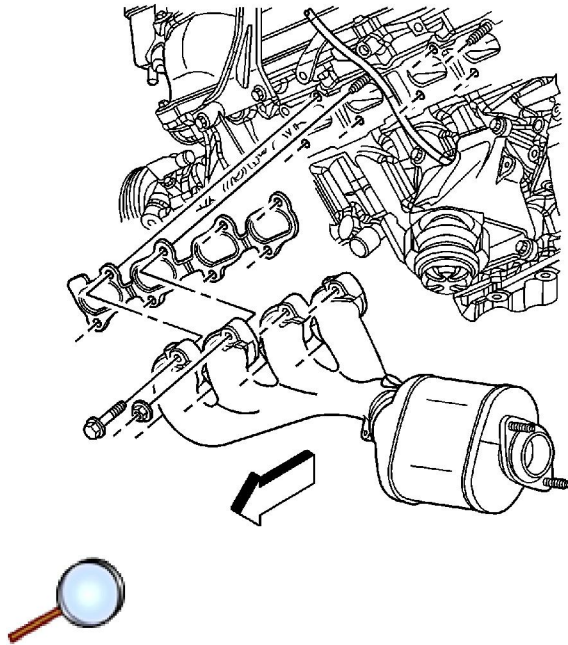
6. Remove the rear upper heat shield bolt.



7. Disconnect both Bank 2 heated oxygen sensor pigtail connectors from the wiring harness connector.
8. Remove the power steering gear. Refer to [Steering Gear Replacement](#) .
9. Remove the lower intermediate steering shaft. Refer to [Lower Intermediate Steering Shaft Replacement](#) .

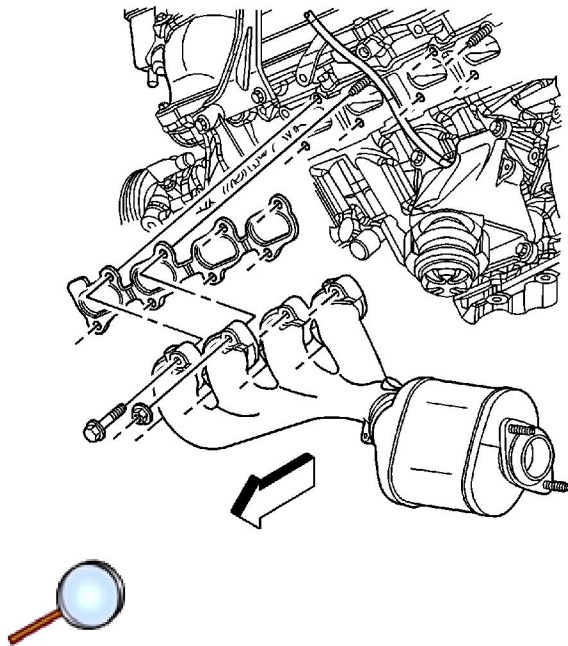


10. Remove the exhaust system. Refer to [Exhaust System Replacement](#) .
11. Remove the Bank 2, Sensor 1 heated oxygen sensor. Refer to [Heated Oxygen Sensor Replacement - Bank 2 Sensor 1](#) .
12. Remove the remaining exhaust manifold heat shield bolt and remove the shield.



13. Remove the left exhaust manifold bolts and nuts. Discard the exhaust manifold bolts.
14. Remove the exhaust manifold studs, if necessary.
15. Remove the left exhaust manifold and gasket from the engine. Do not reuse the gasket.
16. Clean and inspect the left exhaust manifold. Refer to [Exhaust Manifold Cleaning and Inspection - Left Side](#).

## Installation Procedure



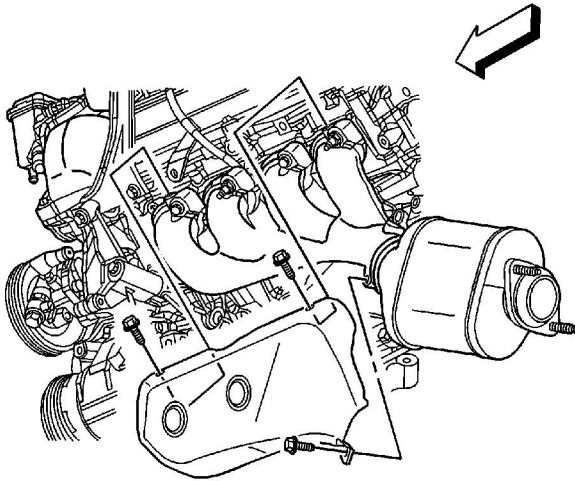
1. Use a NEW exhaust manifold gasket.
2. Position the left exhaust manifold and gasket to the left cylinder head.

**Notice:** Refer to [Fastener Notice](#) in the Preface section.

3. Install the left exhaust manifold studs, nuts and NEW bolts.

**Tighten**

- Tighten the exhaust manifold studs to 6 N·m (53 lb in).
- Tighten the exhaust manifold nuts to 25 N·m (18 lb ft).
- Tighten the exhaust manifold bolts to 25 N·m (18 lb ft).

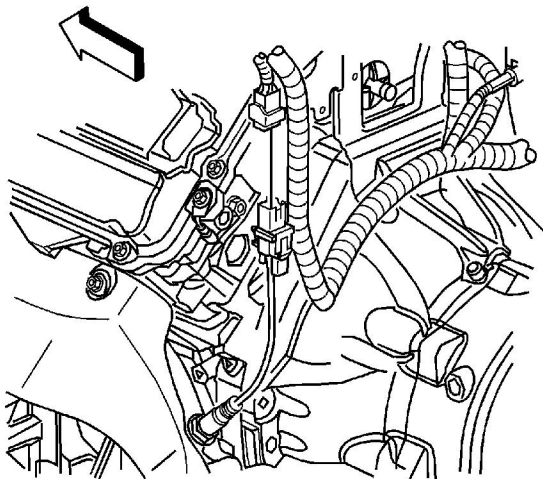


4. Install the exhaust manifold heat shield to the manifold with the lower bolt.

**Tighten**

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

5. Install the Bank 2, Sensor 1 heated oxygen sensor. Refer to [Heated Oxygen Sensor Replacement - Bank 2 Sensor 1](#).
6. Install the exhaust system. Refer to [Exhaust System Replacement](#).





7. Install the lower intermediate steering shaft. Refer to [Lower Intermediate Steering Shaft Replacement](#) .
8. Install the power steering gear. Refer to [Steering Gear Replacement](#) .
9. Lower the vehicle.
10. Connect the heated oxygen sensor pigtail connectors to the wiring harness connector.
11. Install the rear upper heat shield bolt.

**Tighten**

Tighten the bolts to 10 N·m (89 lb in).

12. Install the master cylinder and connect the master cylinder electrical connector. Refer to [Master Cylinder Replacement](#) .
13. Install the front upper heat shield bolt.

**Tighten**

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

14. Install the nut securing the A/C lines to the left hand shock tower.

**Tighten**

Tighten the nut to 10 N·m (89 lb in).

15. Install the air cleaner housing assembly. Refer to [Air Cleaner Assembly Replacement](#) .