Component Procedures: Oxygen Sensor

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Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Oxygen Sensor > Front	12634062	Oxygen Sensor	123.43	
Oxygen Sensor > Rear > Right	12640453	Oxygen Sensor	91.72	
Oxygen Sensor > Rear > Left	12634063	Oxygen Sensor	103.30	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Powertrain Control > Oxygen Sensor, R&R > Fro?	B	0.3	0.2
Remove & Replace	Powertrain Control > Oxygen Sensor, R&R > Fro?	B	0.4	0.3
Remove & Replace	Powertrain Control > Oxygen Sensor, R&R > Rea?	B	0.3	0.2

Heated Oxygen Sensor Wiring Repairs (Article 12985)

If the heated oxygen sensor pigtail wiring, connector, or terminal is damaged the entire oxygen sensor assembly must be replaced. Do not attempt to repair the wiring, connector, or terminals. In order for the sensor to function properly it must have a clean air reference. This clean air reference is obtained by way of the oxygen sensor signal and heater wires. Any attempt to repair the wires, connectors or terminals could result in the obstruction of the air reference and degrade oxygen sensor performance.
The following guidelines should be used when servicing the heated oxygen sensor:
- Do not apply contact cleaner or other materials to the sensor or vehicle harness connectors. These materials may get into the sensor, causing poor performance. Also, the sensor pigtail and harness wires must not be damaged in such a way that the wires inside are exposed. This could provide a path for foreign materials to enter the sensor and cause performance problems.
- Neither the sensor nor vehicle lead wires should be bent sharply or kinked. Sharp bends, kinks, etc ., could block the reference air path through the lead wire.
- Do not remove or defeat the oxygen sensor ground wire (where applicable). Vehicles that utilize the ground wire sensor may rely on this ground as the only ground contact to the sensor. Removal of the ground wire will also cause poor engine performance.
- To prevent damage due to water intrusion, be sure that the peripheral seal remains intact on the vehicle harness connector.

Heated Oxygen Sensor Replacement - Bank 1 Sensor 1 (Article 11446)

Callout Component Name
Preliminary Procedure Remove the fuel injector sight shield.
Preliminary Procedure
Remove the fuel injector sight shield.
1 Heated Oxygen Sensor Caution: Refer to Heated Oxygen and Oxygen Sensor Caution . Caution: Refer to Fastener Caution . Procedure Disconnect the heated oxygen sensor harness connector. If reinstalling the old sensor, coat the threads with anti-seize compound. Note: A special anti-seize compound is used in the HO2S threads. The compound consists of liquid graphite and glass beads. The graphic tends to burn away, but the glass beads remain, making the sensor easier to remove. New, or service replacement sensors already have the compound applied to the threads. If the sensor is removed from an exhaust component and if for any reason the sensor is to be reinstalled, the threads must have anti-seize compound applied before reinstallation. Tighten 42 Nm (31 lb in)
Procedure
- Disconnect the heated oxygen sensor harness connector.
- If reinstalling the old sensor, coat the threads with anti-seize compound.
42 Nm (31 lb in)

Heated Oxygen Sensor Replacement - Bank 1 Sensor 2 (Article 11447)

Callout Component Name
Preliminary Procedure Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
Preliminary Procedure
Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .

1 Heated Oxygen Sensor Caution: Refer to Heated Oxygen and Oxygen Sensor Caution . Caution: Refer to Fastener Caution . Procedure Disconnect the heated oxygen sensor harness connector. If reinstalling the old sensor, coat the threads with anti-seize compound. Note: A special anti-seize compound is used in the HO2S threads. The compound consists of liquid graphite and glass beads. The graphite tends to burn away, but the glass beads remain, making the sensor easier to remove. New, or service replacement sensors already have the compound applied to the threads. If the sensor is removed from an exhaust component and if for any reason the sensor is to be reinstalled, the threads must have anti-seize compound applied before reinstallation. Tighten 42 Nm (31 lb in)
Procedure
- Disconnect the heated oxygen sensor harness connector.
- If reinstalling the old sensor, coat the threads with anti-seize compound.
42 Nm (31 lb in)

Heated Oxygen Sensor Replacement - Bank 2 Sensor 1 (Article 11448)

Callout Component Name
Preliminary Procedure Remove the fuel injector sight shield.
Preliminary Procedure
Remove the fuel injector sight shield.
1 Heated Oxygen Sensor Caution: Refer to Heated Oxygen and Oxygen Sensor Caution . Caution: Refer to Fastener Caution . Procedure Disconnect the heated oxygen sensor harness connector. If reinstalling the old sensor, coat the threads with anti-seize compound. Note: A special anti-seize compound is used in the HO2S threads. The compound consists of liquid graphite and glass beads. The graphite tends to burn away, but the glass beads remain, making the sensor easier to remove. New, or service replacement sensors already have the compound applied to the threads. If the sensor is removed from an exhaust component and if for any reason the sensor is to be reinstalled, the threads must have anti-seize compound applied before reinstallation. Tighten 42 Nm (31 lb in)
Procedure
- Disconnect the heated oxygen sensor harness connector.
- If reinstalling the old sensor, coat the threads with anti-seize compound.
42 Nm (31 lb in)

Heated Oxygen Sensor Replacement - Bank 2 Sensor 2 (Article 11449)

Callout Component Name
Preliminary Procedure Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
Preliminary Procedure
Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
1 Heated Oxygen Sensor Caution: Refer to Heated Oxygen and Oxygen Sensor Caution . Caution: Refer to Fastener Caution . Procedure Disconnect the heated oxygen sensor harness connector. If reinstalling the old sensor, coat the threads with anti-seize compound. Note: A special anti-seize compound is used in the HO2S threads. The compound consists of liquid graphite and glass beads. The graphite tends to burn away, but the glass beads remain, making the sensor easier to remove. New, or service replacement sensors already have the compound applied to the threads. If the sensor is removed from an exhaust component and if for any reason the sensor is to be reinstalled, the threads must have anti-seize compound applied before reinstallation. Tighten 42 Nm (31 lb in)
Procedure
- Disconnect the heated oxygen sensor harness connector.
- If reinstalling the old sensor, coat the threads with anti-seize compound.
42 Nm (31 lb in)

Heated Oxygen and Oxygen Sensor Caution (Article 13060)

- Do not apply contact cleaner or other materials to the sensor or vehicle harness connectors. These materials may get into the sensor causing poor performance.
- Do not damage the sensor pigtail and harness wires in such a way that the wires inside are exposed. This could provide a path for foreign materials to enter the sensor and cause performance problems.
- Ensure the sensor or vehicle lead wires are not bent sharply or kinked. Sharp bends or kinks could block the reference air path through the lead wire.
- Do not remove or defeat the oxygen sensor ground wire, where applicable. Vehicles that utilize the ground wired sensor may rely on this ground as the only ground contact to the sensor. Removal of the ground wire will cause poor engine performance.

- Ensure that the peripheral seal remains intact on the vehicle harness connector in order to prevent damage due to water intrusion. The engine harness may be repaired using an appropriate crimp and splice seals terminal repair kit. Under no circumstances should repairs be soldered since this could result in the air reference being obstructed.

Heated Oxygen Sensor Resistance Learn Reset Caution (Article 13061)

- A code clear with a scan tool, regardless of whether or not a DTC is set
- HO2S heater resistance learn reset with a scan tool, where available

Oxygen Sensor Caution (Article 13067)

Document ID: 2062096
Caution:
Handle the
oxygen sensor
s carefully in order to prevent damage to the component. Keep the electrical connector and the exhaust inlet end free of contaminants. Do not use cleaning solvents on the sensor. Do not drop or mishandle the sensor.

Silicon Contamination of Heated Oxygen Sensors Caution (Article 13090)

Document ID: 2062103
Caution:
Contamination of the
oxygen sensor
can
result from the use of an inappropriate RTV sealant (not oxygen sensor safe) or excessive engine coolant or oil consumption. Remove the
HO2S
and visually inspect the portion of the sensor exposed to the exhaust stream in order to check for contamination. If contaminated, the portion of the sensor exposed to the exhaust stream will have a white powdery coating. Silicon contamination causes a high but false HO2S signal voltage (rich exhaust indication).
The
control module
will then reduce the amount of fuel delivered to the engine, causing a severe driveability problem. Eliminate the source of contamination before replacing the oxygen sensor.

All Technical Service Bulletins (itype_100)

Tsbs
- SES Light with Fuel Trim and or Oxygen Sensor Codes (PIP4925B, 2018/12/03)