NITROGEN OXIDES (NOX) SENSOR

Nitrogen Oxides (NOx) Sensor

Special Tool(s)

 ST2834-A	Vehicle Communication Module (VCM) and Integrated Diagnostic System (IDS) software with appropriate hardware, or equivalant scan tool.

Material

Item	Specification
Motorcraft® High Temperature Nickel Anti-Seize Lubricant XL-2	—
Motorcraft® Penetrating and Lock Lubricant (US); Motorcraft® Penetrating Fluid (Canada) XL-1 (US); CXC-51-A (Canada)	—

Removal

NOTICE: Do not use silicone based sprays or lubricants on any components installed onto or around the diesel exhaust system or intake air distribution and filtering system. Silicone reacts with the Nitrogen Oxides (NOx) sensor and may cause permanent damage to the NOx (Nitrogen Oxides) sensor.

NOTE: If the NOx (Nitrogen Oxides) sensor function is suspect, replace the sensor, do not attempt to clean the sensor.

All NOx (Nitrogen Oxides) Sensors

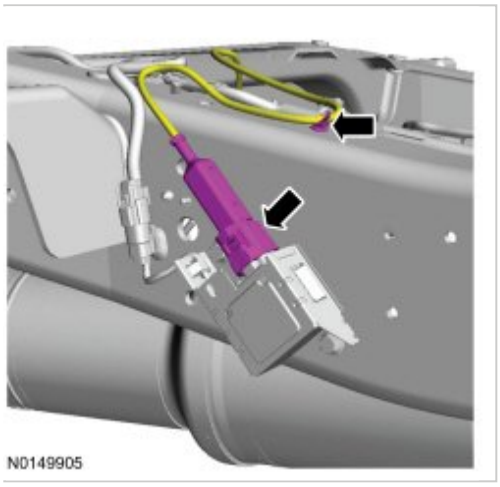
1. **NOTICE: Make sure the ignition switch is in the OFF position prior to working on the electronic engine controls or the vehicle may be damaged.**

Turn the ignition switch to the OFF position.

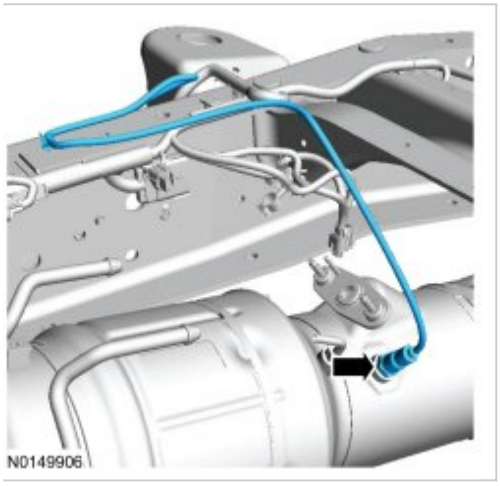
Regular Cab Front NOx (Nitrogen Oxides) Sensor

2. **NOTE:** If the NOx (Nitrogen Oxides) sensor wiring protective sheath is damaged, inspect the wires. If there are any abrasions or cuts on the wires, replace the sensor.

NOTE: Any melting of plastic connectors indicates overheating of the Diesel Particulate Filter (DPF). Address any DPF (Diesel Particulate Filter) concerns before installing a new sensor.



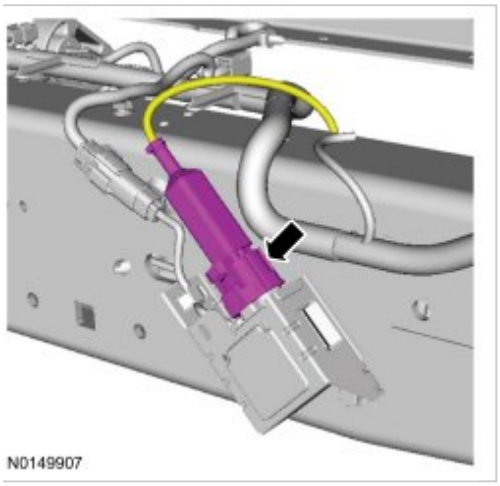
3. **NOTE:** If necessary, lubricate the NOx (Nitrogen Oxides) sensor with penetrating and lock lubricant to ease removal.



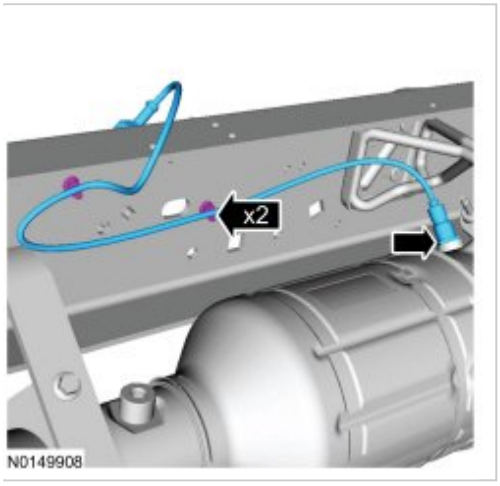
Club Cab and Super Cab Front NOx (Nitrogen Oxides) Sensor

4. **NOTE:** If the NOx (Nitrogen Oxides) sensor wiring protective sheath is damaged, inspect the wires. If there are any abrasions or cuts on the wires, replace the sensor.

NOTE: Any melting of plastic connectors indicates overheating of the DPF (Diesel Particulate Filter). Address any DPF (Diesel Particulate Filter) concerns before installing a new sensor.



5. **NOTE:** If necessary, lubricate the NOx (Nitrogen Oxides) sensor with penetrating and lock lubricant to ease removal.



Rear NOx (Nitrogen Oxides) Sensor

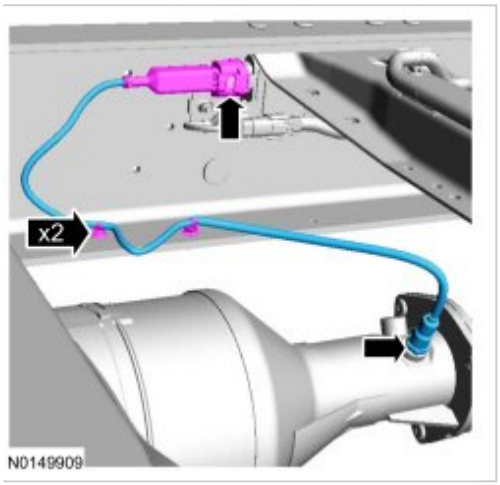
6. **NOTE:** If the NOx (Nitrogen Oxides) sensor wiring protective sheath is damaged, inspect the wires. If there are any

abrasions or cuts on the wires, replace the sensor.

NOTE: Any melting of plastic connectors indicates overheating of the DPF (Diesel Particulate Filter). Address any DPF (Diesel Particulate Filter) concerns before installing a new sensor.

NOTE: The NOx (Nitrogen Oxides) sensor wiring harness routing and position of retainers varies by wheel base. Typical application shown in graphic. Note the location of the wiring harness retainers for installation reference.

NOTE: If necessary, lubricate the NOx (Nitrogen Oxides) sensor with penetrating and lock lubricant to ease removal.



Installation

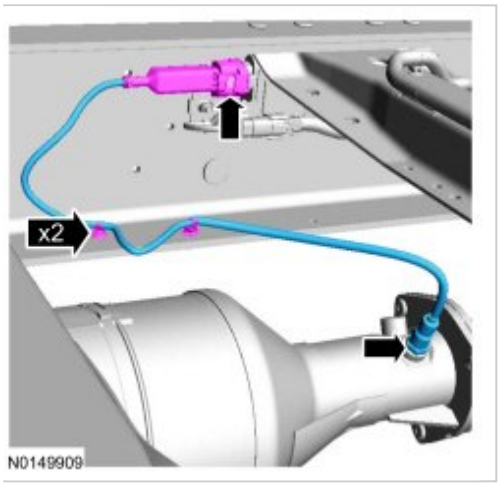
Rear NOx (Nitrogen Oxides) Sensor

1. **NOTE:** Check for the presence of anti-seize on the first 3 threads of the sensor. If there is no anti-seize present or is partially missing, apply anti-seize to the first 3 threads of the NOx (Nitrogen Oxides) sensor prior to installation.

NOTE: The NOx (Nitrogen Oxides) sensor wiring harness routing and position of retainers varies by wheel base. Typical application shown in graphic. Attach the wiring harness retainers as noted during removal.

NOTE: Do not apply any type of electrical grease or lubricants to the electrical connector.

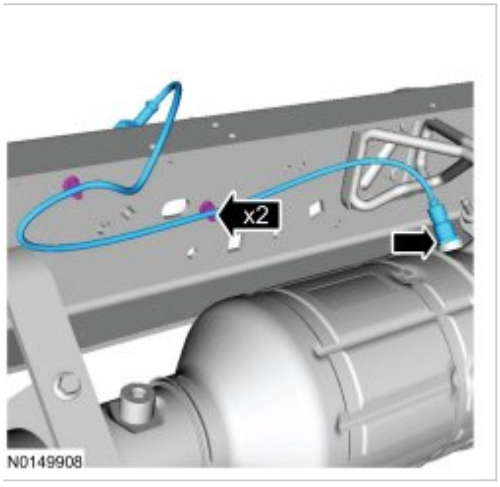
- Tighten to 47 Nm (35 lb-ft).



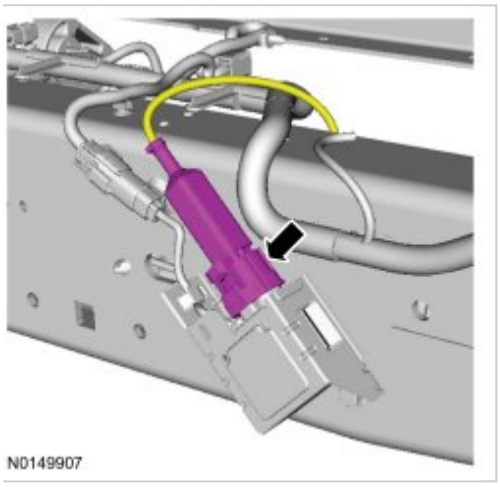
Club Cab and Super Cab Front NOx (Nitrogen Oxides) Sensor

2. **NOTE:** Check for the presence of anti-seize on the first 3 threads of the sensor. If there is no anti-seize present or is partially missing, apply anti-seize to the first 3 threads of the NOx (Nitrogen Oxides) sensor prior to installation.

- Tighten to 47 Nm (35 lb-ft).



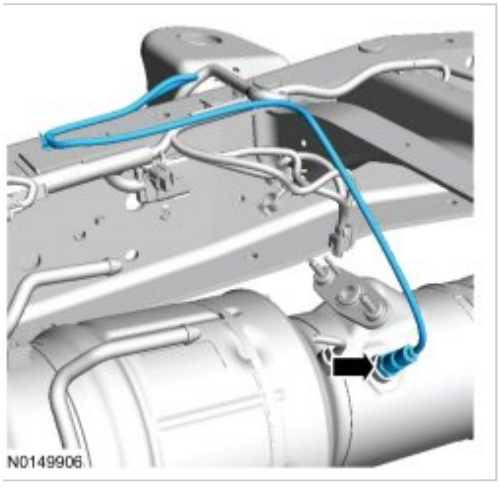
3. **NOTE:** Do not apply any type of electrical grease or lubricants to the electrical connector.



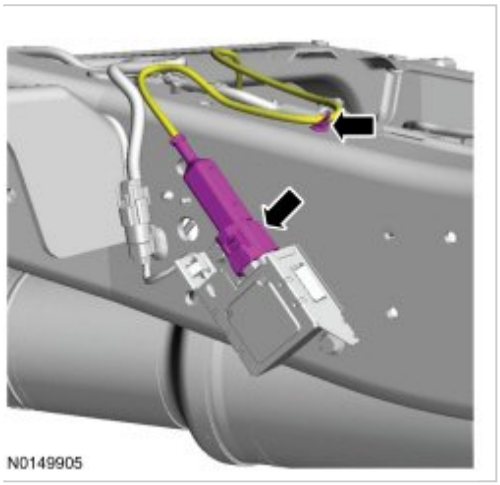
Regular Cab Front NOx (Nitrogen Oxides) sensor

4. **NOTE:** Check for the presence of anti-seize on the first 3 threads of the sensor. If there is no anti-seize present or is partially missing, apply anti-seize to the first 3 threads of the NOx (Nitrogen Oxides) sensor prior to installation.

- Tighten to 47 Nm (35 lb-ft).



5. **NOTE:** Do not apply any type of electrical grease or lubricants to the electrical connector.



All NOx (Nitrogen Oxides) Sensors

6. **NOTE:** This step is required only when a new NOx (Nitrogen Oxides) sensor is being installed.

After the new NOx (Nitrogen Oxides) sensor is installed, using a diagnostic scan tool, perform the following:

- Reset/clear the specified function for the nitrogen oxide.

- Clear the continuous PCM DTCs and reset the emissions monitors information in the PCM. Refer to Diagnostic Methods of Computers and Control Systems Information. See: Computers and Control Systems > Testing and Inspection