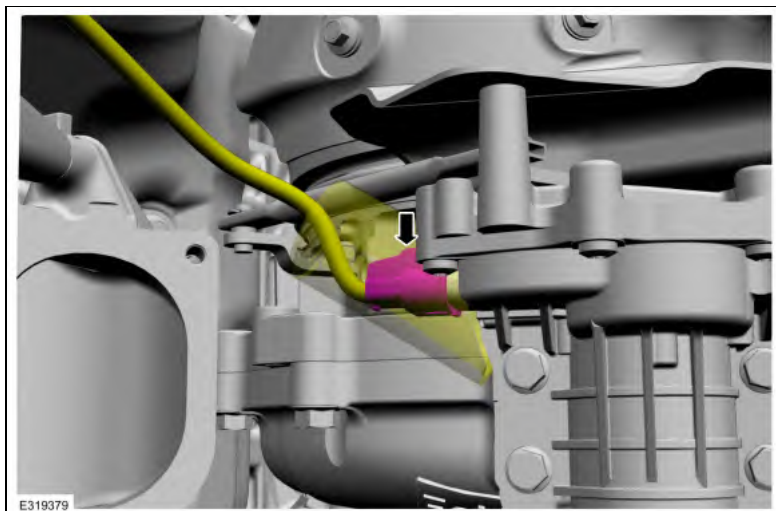


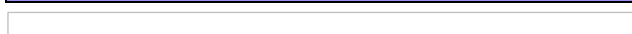
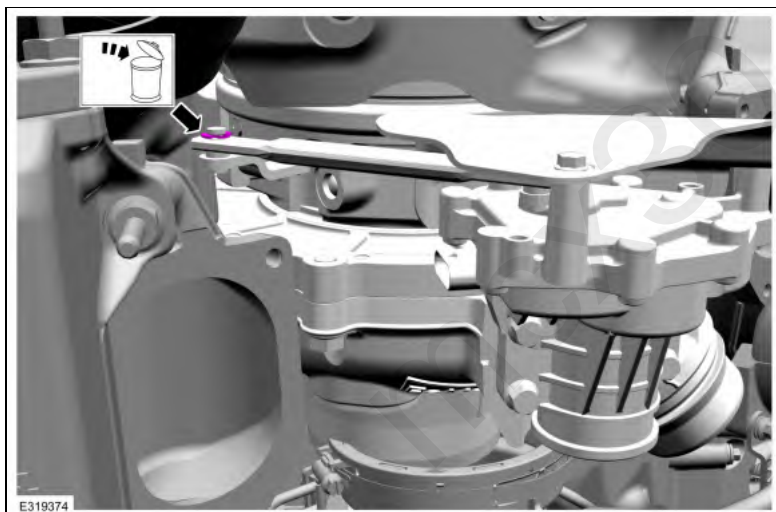
Turbocharger Variable Vane Actuator

Removal

1. Remove the upper intake manifold.
Refer to: Upper Intake Manifold (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
2. Slide the cover back out of the way, then disconnect the turbocharger actuator electrical connector.

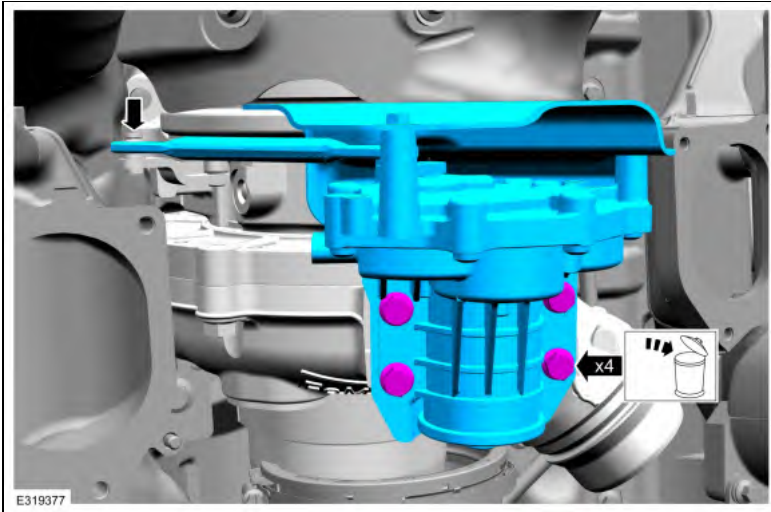


3. Remove and discard the actuator rod lower retaining clip.



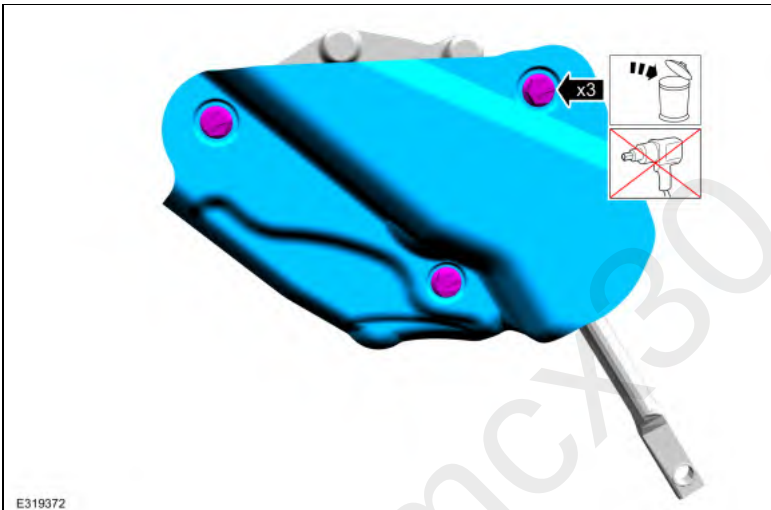
4. **NOTE:** Disconnect the actuator rod from the turbocharger arm while removing the actuator.

Remove and discard the bolts, then remove the turbocharger variable vane actuator.



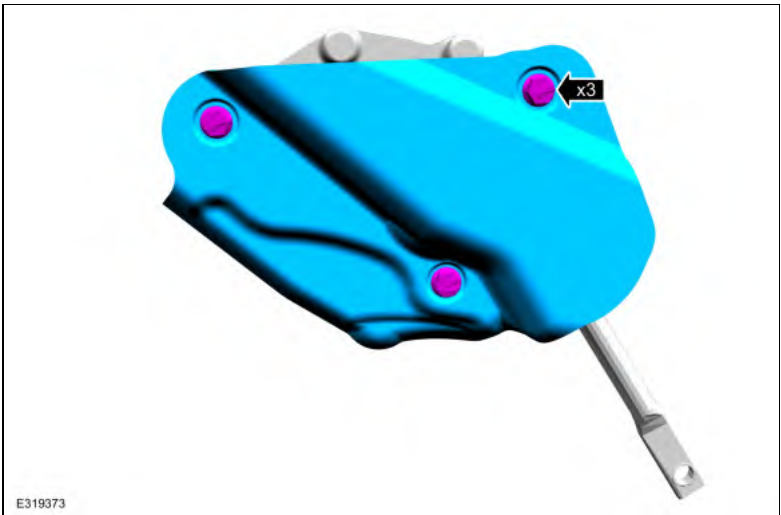
5. **NOTICE: Do not use power tools to remove the bolts.**

Remove and discard the bolts using hand tools only, then remove the heat shield.

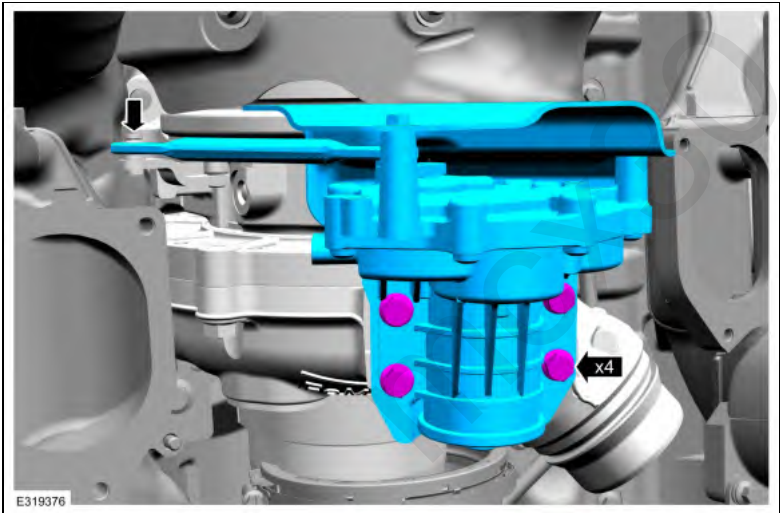


Installation

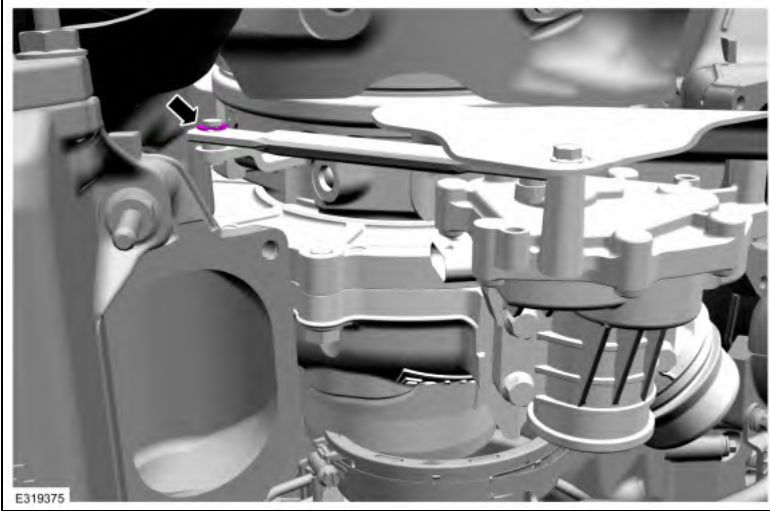
1. Install the heat shield, then install and tighten the bolts.
Torque: 35 lb.in (4 Nm)



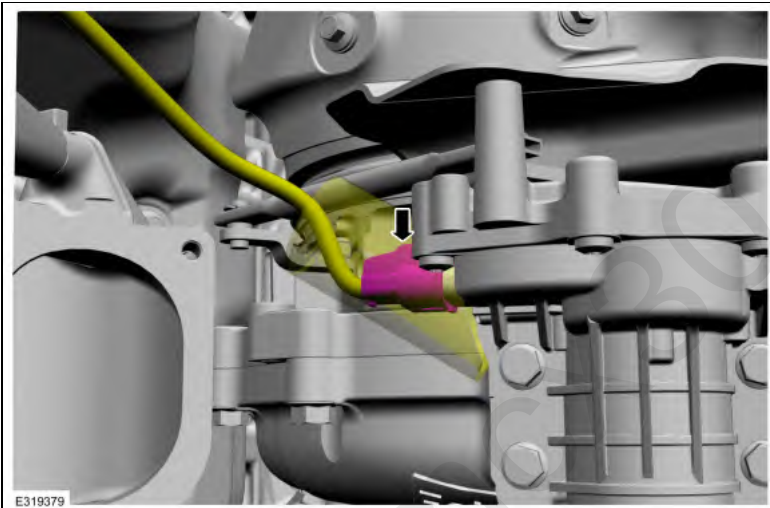
2. **NOTE:** Connect the actuator rod to the turbocharger arm while installing the actuator.
- Install the turbocharger variable vane actuator, then install and tighten the bolts.
Torque: 62 lb.in (7 Nm)



3. Install a new actuator rod lower retaining clip.



4. Connect the turbocharger actuator electrical connector, then slide the cover back into place.



5. Install the upper intake manifold.

Refer to: Upper Intake Manifold (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).

6. **NOTE:** This step is required only when a new turbocharger variable vane actuator is being installed.

After a new turbocharger variable vane actuator is installed, using the scan tool, follow the on-screen instructions and perform the following:

- Turbocharger variable vane actuator offset learn.
- Clear the continuous PCM DTC's and reset the emissions monitors information in the PCM. Refer to Section 2 of the PC/ED.