



Diesel Care & Performance Inc
“Care is at the center of everything we do”

Service and Repair

REMOVAL

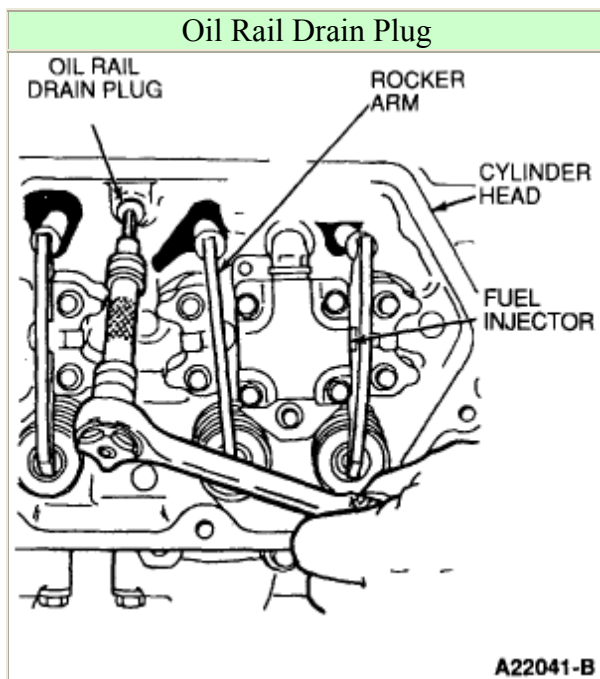
WARNING: RED-STRIPED WIRE HARNESS CARRIES 115V DC. SEVERE ELECTRICAL SHOCK MAY BE RECEIVED. DO NOT PIERCE.

CAUTION: Do not pierce engine electrical wires or damage to the harness may occur.

CAUTION: Do not attempt to service the fuel injector. The fuel injector is serviced as an assembly. If the fuel injector is disassembled for any reason, the calibration of the fuel injector will be inaccurate.

CAUTION: There are two different fuel injectors used in the 7.3L Direct Injection (DI) turbo diesel engine: a 49-state injector and the California injector (rate change injector). These two injectors must not be interchanged because the [Powertrain Control Modules \(PCM\)](#) are calibrated to the specific injector. Before replacing any injectors, refer to the Vehicle Emission Control Information (VECI) decal for proper injector selection. Failure to do so may cause poor engine performance, high emissions levels and/or damage to engine.

1. Remove the [valve cover](#).
2. Disconnect the fuel injector electrical connector.

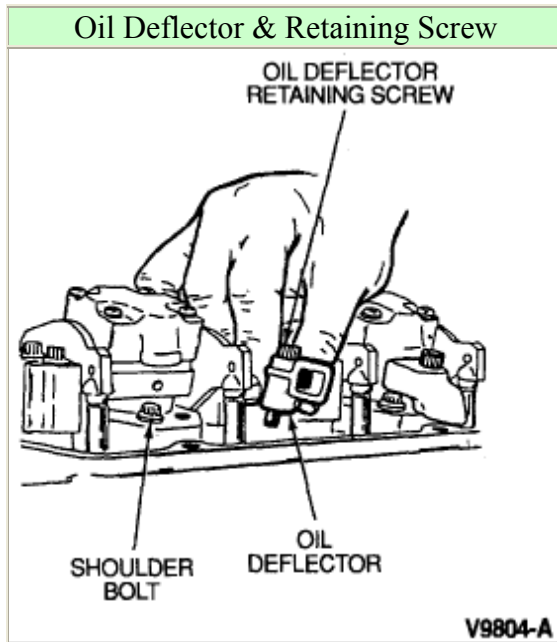




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WARNING: REMOVE OIL AND FUEL FROM CYLINDERS BEFORE REINSTALLING INJECTORS. FAILURE TO DO SO COULD CAUSE HYDROSTATIC LOCK RESULTING IN SEVERE ENGINE DAMAGE.

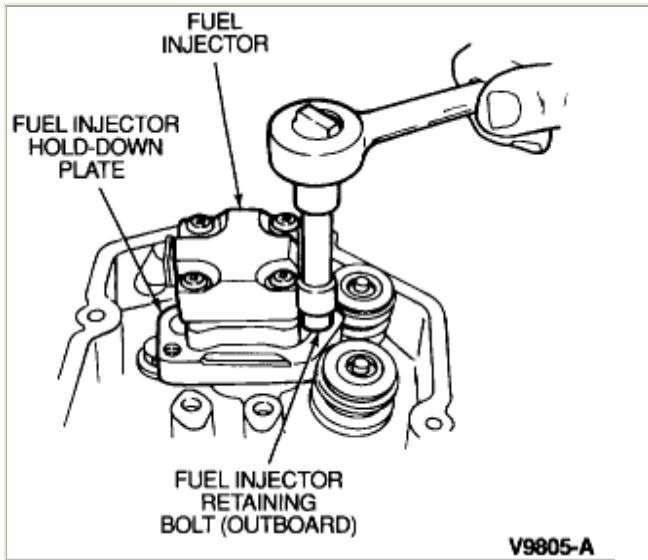
3. Remove the internal oil rail drain plugs in the cylinder head to drain the cylinder head.



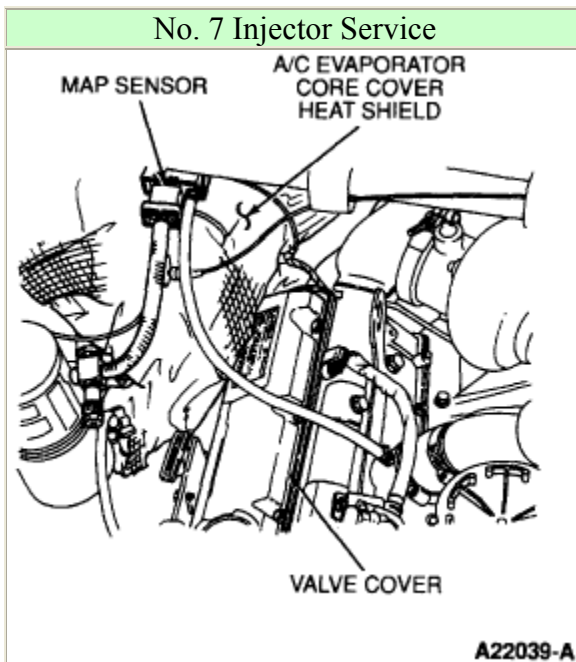
4. Remove the retaining screw and oil deflector. The shoulder bolt on the inboard side of the fuel injector does not require removal.



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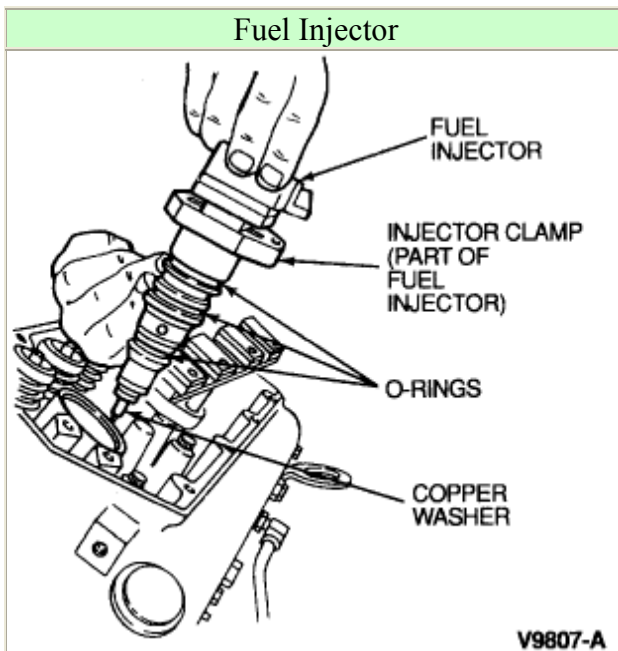
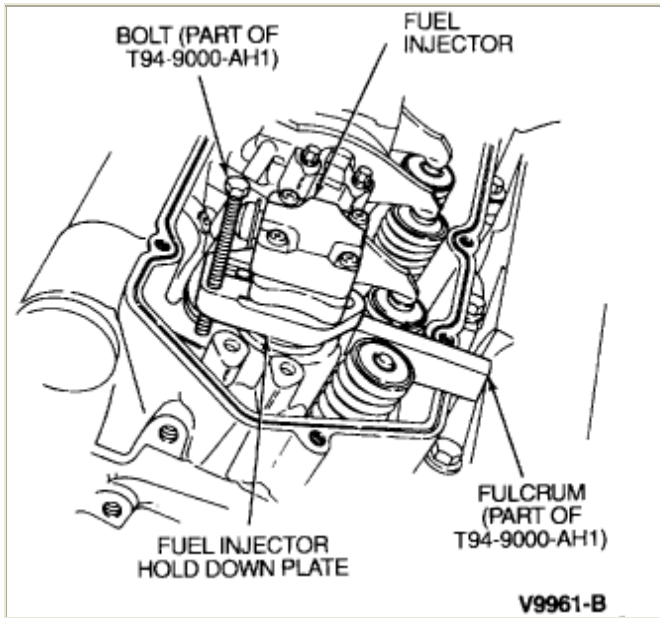
5. Remove the outboard fuel injector retaining bolt.



6. Remove the heater distribution box screws, nuts, and clip. Remove the outer half of the case (to service No. 7 fuel injector only).



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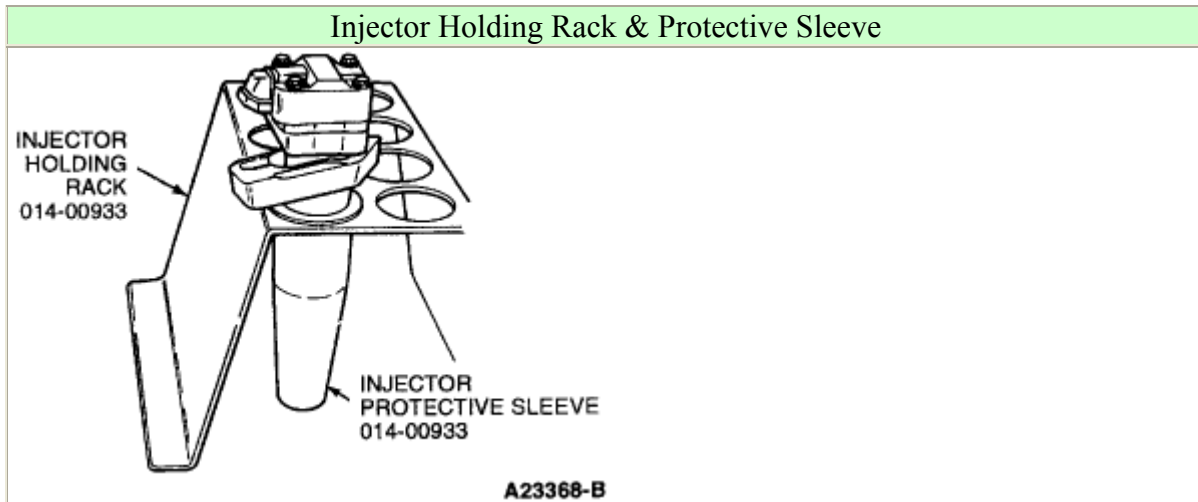


7. Carefully remove the fuel injector using Injector Remover T94T-9000-AH1.

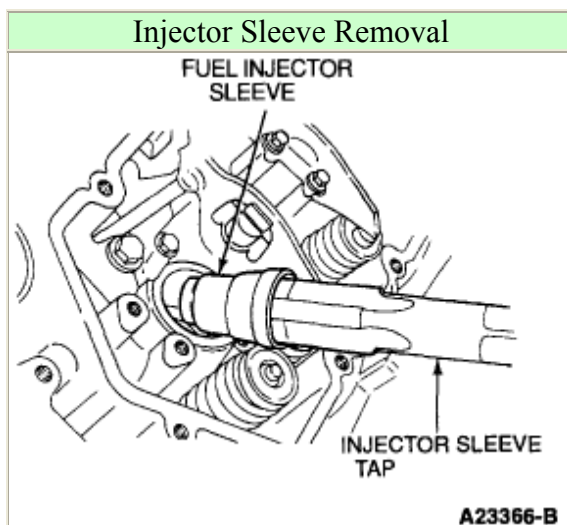


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CAUTION: When servicing the fuel injector, it is important that all three injector O-rings and the injector tip copper washer are retrieved from the injector bore.



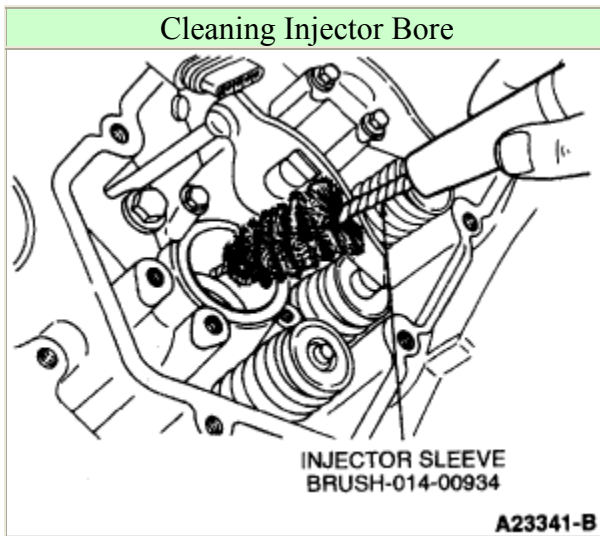
8. Place fuel injector in Rotunda Injector Protective Sleeve 014-00933 or equivalent and set fuel injector in Rotunda Injector Holding Rack 014-00933 or equivalent.





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9. Remove fuel injector sleeves, if required. Rotunda Insert Injector Sleeve Tap Plug 014-00934 or equivalent into injector sleeve to prevent debris from entering the combustion chamber. Insert Rotunda Injector Sleeve Tap 014-00934 and Rotunda Injector Sleeve Tap Pilot 014-00934 or equivalents into fuel injector sleeve and tighten **1.5 - 2 turns** . Attach Impact Slide Hammer T50T-100-A to Rotunda Injector Sleeve Tap 014-00934 and Rotunda Injector Sleeve Tap Pilot 014-00934 or equivalents and remove fuel injector sleeve from fuel injector bore.



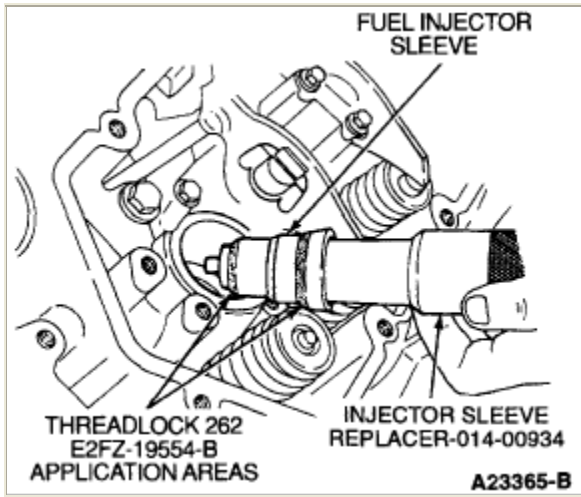
10. Use Rotunda Injector Sleeve Brush 014-00934-5 or equivalent to clean the injector bores of any sealant residue. Make sure to remove any debris.

INSTALLATION

Injector Sleeve Installation



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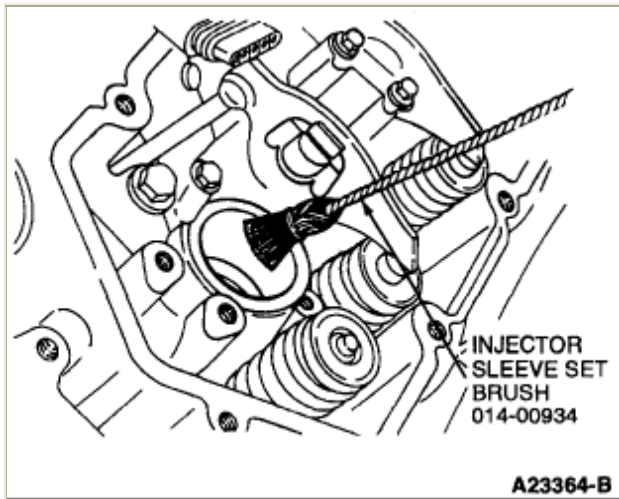
CAUTION: There are two different fuel injectors used in the 7.3L DI turbo diesel engine: a 49-state injector and the California injector (rate change injector). These two injectors must not be interchanged because the PCMs are calibrated to the specific injector. Before replacing any injectors, refer to the Vehicle Emission Control Information (VECI) decal for proper injector selection. Failure to do so may cause poor engine performance, high emissions levels and/or damage to engine.

1. If removed, install fuel injector sleeves using Rotunda Injector Sleeve Replacer 014-00934 or equivalent. Apply Threadlock(**R**) 262 E2FZ-19554-B or equivalent meeting Ford Specification WSK-M2G351-A6 to the fuel injector sleeves as shown. Using a rubber mallet, tap on tool to seat fuel injector bore. Remove tool from fuel injector sleeve and clean any sealant residue from fuel injector bore.

Cleaning Injector Sleeve

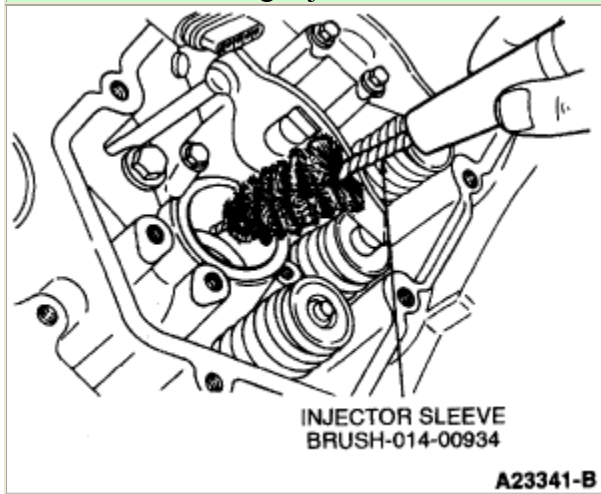


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2. To ensure a good seal for the fuel injector 0-rings, clean fuel injector sleeve using Rotunda Injector Sleeve Brush 014-00934 and Rotunda Injector Sleeve Brush Set 014-00934 or equivalents. Clean any debris from fuel injector sleeve.
3. Clean the injector bore and sleeve carefully with a clean shop towel.

Cleaning Injector Bore



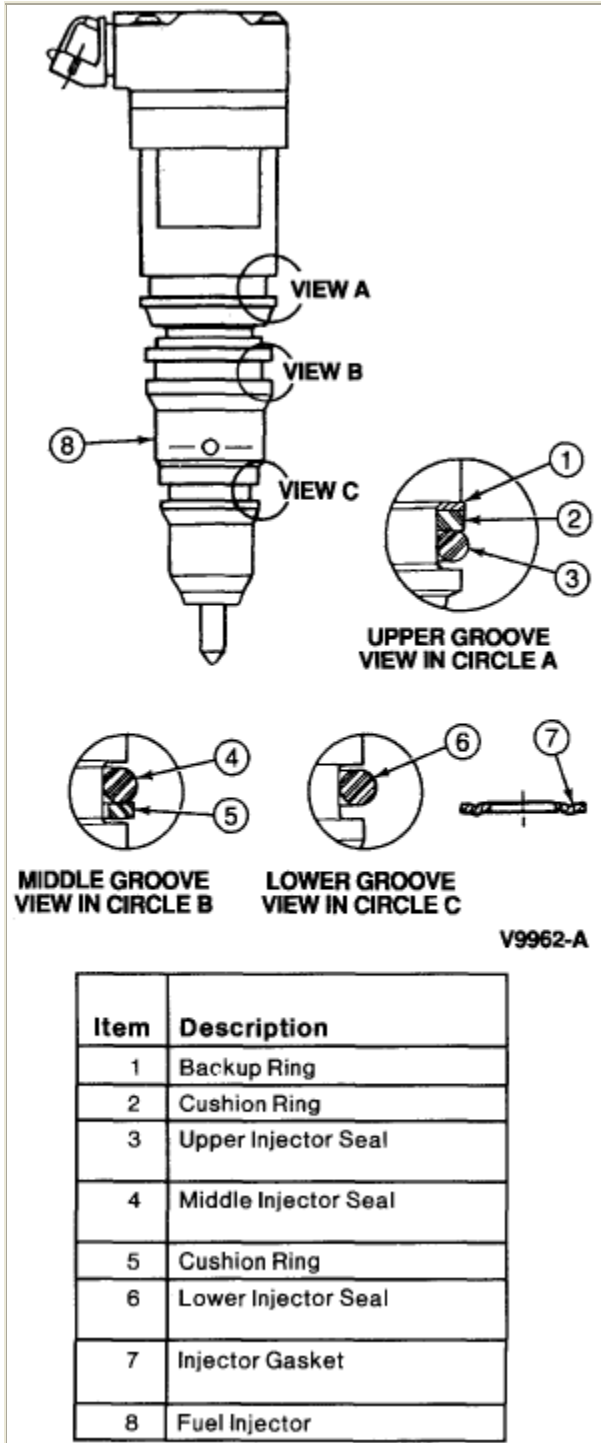
4. Make sure a good seating surface is provided for the fuel injector. Use Injector Sleeve Brush 014-00934 or equivalent.

Fuel Injector

2740 Whitten Rd Bldg 103 Memphis, TN 38133
Telephone 901-380-9290 Email Bwilliams@Dieselcare.net



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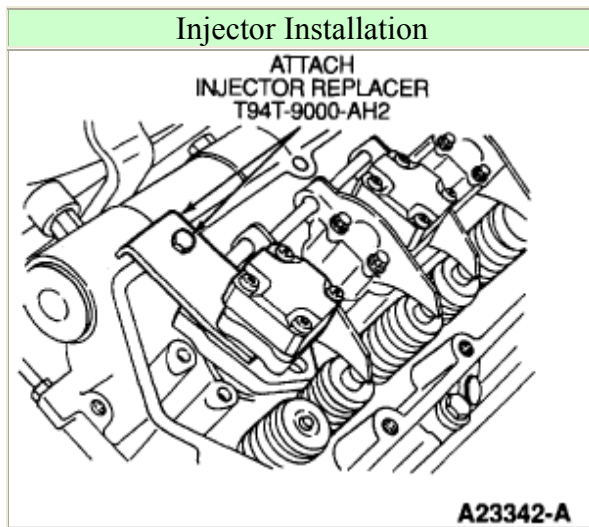




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WARNING: REMOVE OIL AND FUEL FROM CYLINDERS BEFORE REINSTALLING FUEL INJECTORS. FAILURE TO DO SO COULD CAUSE HYDROSTATIC LOCK RESULTING IN SEVERE ENGINE DAMAGE.

5. Lubricate the fuel injector and 0-rings liberally with clean engine oil.



CAUTION: Do not strike top of fuel injector to seat fuel injector in bore. Damage to fuel injector will occur. Use hand pressure on top of fuel injector until fuel injector hold-down plate is positioned under head of shoulder bolt.

CAUTION : When installing the fuel injectors into the cylinder head, make sure the copper washer does not shift or fall free from the injector. Failure to do so will cause severe engine damage.

6. Install the fuel injector, with three new 0-rings, backup ring and a new injector copper washer. Carefully install fuel injector using Injector Replacer T94T-9000-AH2.

NOTE : Apply a thin coat of High-Temperature 4x4 Front Axle and Wheel Bearing Grease E8TZ-19590-A or equivalent meeting Ford Specifications ESA M1C198-A to the copper washer to hold it in place during fuel injector installation.



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7. Install outer half of the heater distribution box and the retaining screws, nuts, and clip (to service No. 7 fuel injector only).
8. Install the oil deflector and bolt. Tighten bolt to **12 Nm (9 ft lb)** .
9. Install the outboard injector retaining bolt. Tighten bolt to **12 Nm (9 ft lb)** .
10. Install the oil rail drain plugs. Tighten oil rail drain plugs to **6 Nm (53 in lb)** .
11. Connect the fuel injector electrical connector.
12. Install the [valve cover](#).