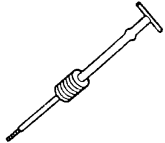
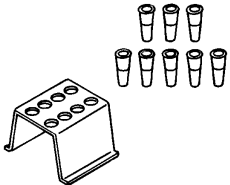
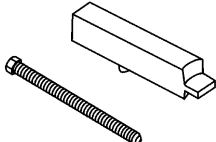
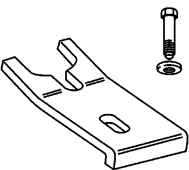
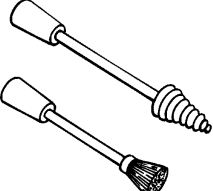


REMOVAL AND INSTALLATION

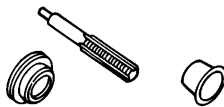
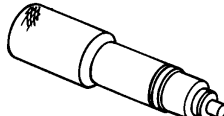
Fuel Injectors

Special Tool(s)

 <p>ST1185-A</p>	<p>Impact Slide Hammer 100-001 (T50T-100-A)</p>
 <p>ST1075-A</p>	<p>Injector Protective Sleeve and Holding Rack 303-D5113 (D94T-9000-E) or equivalent</p>
 <p>ST2049-A</p>	<p>Injector Remover 303-491</p>
 <p>ST2050-A</p>	<p>Injector Replacer 303-492</p>
 <p>ST1529-A</p>	<p>Injector Sleeve Brush Set 303-DS110 (D94T-9000-D) or equivalent</p>

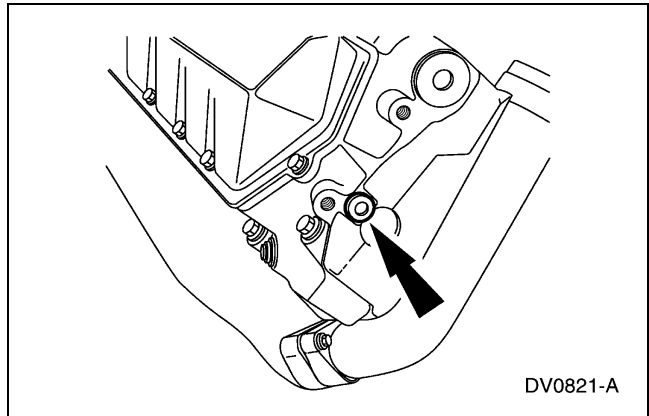
(Continued)

Special Tool(s)

 <p>ST1527-A</p>	<p>Injector Sleeve Remover Set 303-DS105 (D94T-9000-B) or equivalent</p>
 <p>ST1528-A</p>	<p>Injector Sleeve Replacer 303-D109 (D94T-9000-C) or equivalent</p>

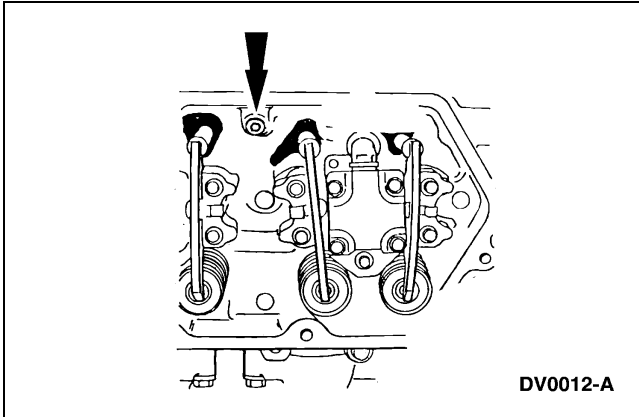
Removal

1. Remove the valve cover. For additional information, refer to Section 303-01C.
2. Drain the fuel from the cylinder heads.
 - Loosen the drain plugs, located at the rear of each cylinder head.

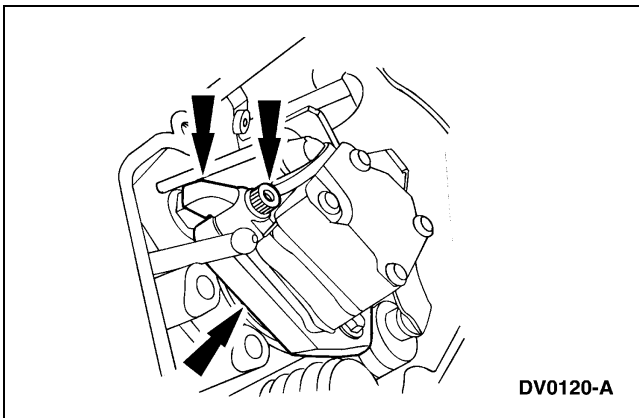


REMOVAL AND INSTALLATION (Continued)

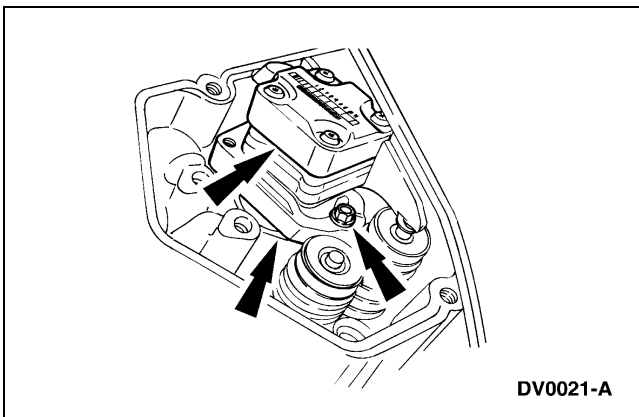
3. Remove the oil drain plugs.



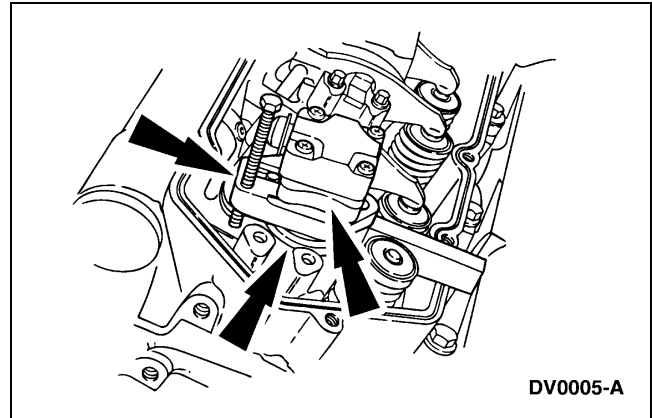
4. **NOTE:** Rocker arm removed for clarity.
Remove the bolt and the oil deflector from the fuel injector hold-down plate.



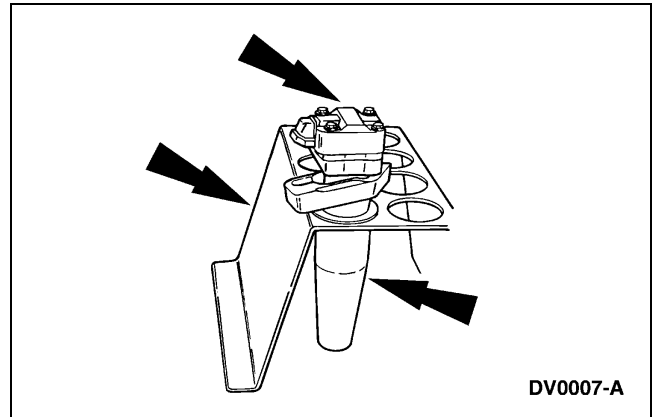
5. Remove the fuel injector outboard retaining bolts.



6. **NOTE:** When removing the fuel injectors, it is important that all three injector O-rings and the injector tip copper washer are removed from the injector bore. If the copper washer is not on the injector when removed from the cylinder head, make sure to remove it from the injector bore.
Using the Injector Remover, remove the fuel injector.



7. Place the fuel injector into the injector protective sleeve.



8. **NOTE:** If engine oil is found in the engine coolant or engine coolant is found in the combustion chambers new injector sleeves may need to be installed.

Place the injector and sleeve into the holding rack.

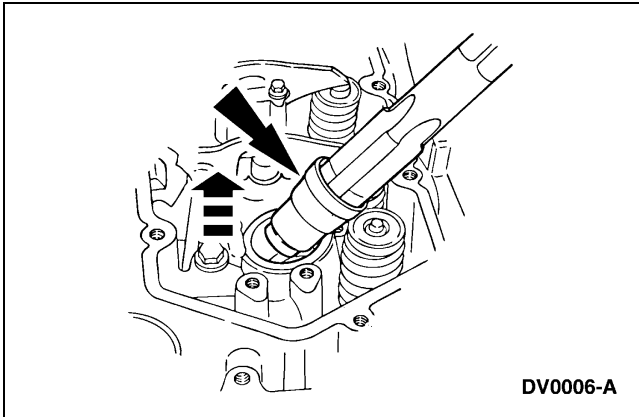
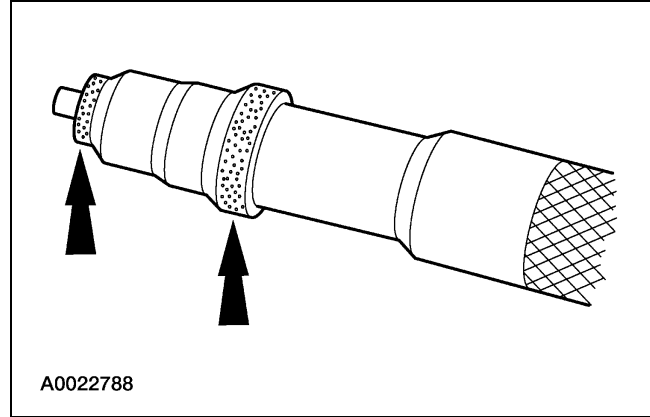
9. **NOTE:** To install new fuel injector sleeves, the cylinder heads must be removed from the vehicle.

If required, remove the cylinder heads from the engine. For additional information, refer to Section 303-01C.

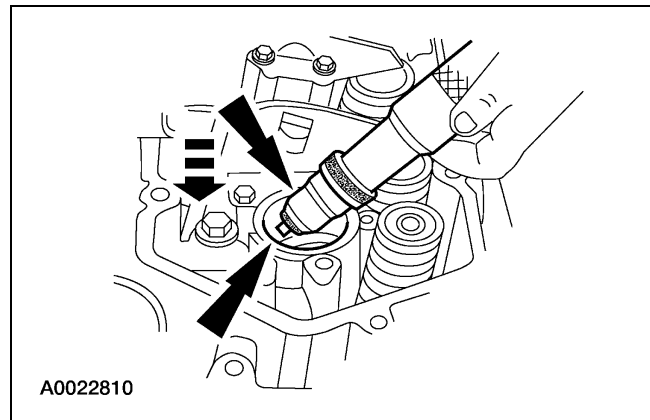
REMOVAL AND INSTALLATION (Continued)

10. **NOTE:** Place a plastic cap or small piece of cork to act as a stop, in the injector sleeve before installing the injector sleeve tap, this will prevent damage to the cylinder head bore.

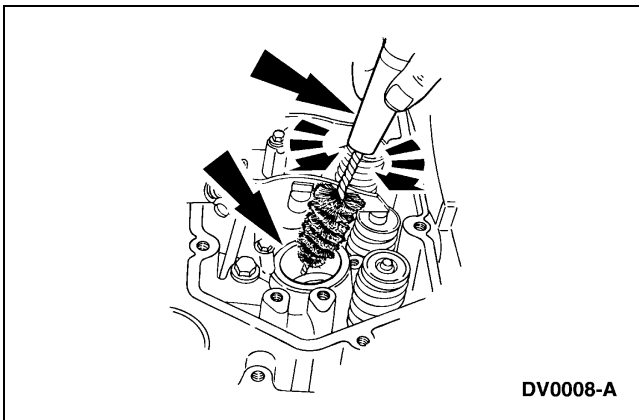
Insert the injector sleeve tap and injector sleeve tap pilot into the cylinder head fuel injector bore. Tighten injector sleeve tap 1-1/2 to 2 turns. Attach the Impact Slide Hammer to the injector sleeve tap pilot, and remove the fuel injector sleeve from the cylinder head fuel injector bore. Discard the sleeve.



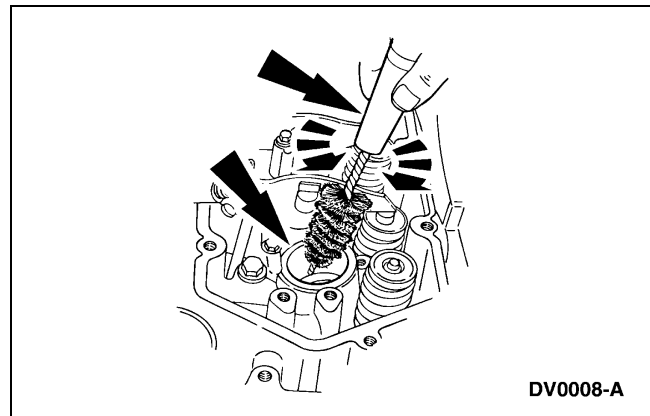
2. Position the fuel injector sleeve into the cylinder head fuel injector bore. Seat the fuel injector sleeve in the fuel injector bore, using a rubber mallet. Remove Injector Sleeve Replacer tool from the cylinder head fuel injector bore.



11. Remove sealant residue and all foreign material from the cylinder head fuel injector bore, using the injector sleeve brush.



3. Clean the fuel injector sleeve and bore, using the fuel injector sleeve brush. Remove any sealant residue from the fuel injector bore.



Installation

1. **NOTE:** Do not apply Threadlock® 620 or equivalent to angled areas.

Position the fuel injector sleeve onto the Injector Sleeve Replacer. Apply Threadlock® 620 or equivalent to the very bottom (smallest diameter) and very top (largest diameter) flat areas.

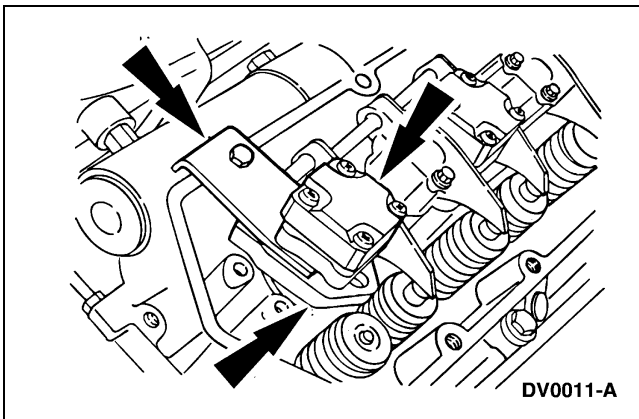
4. Install new O-rings on the fuel injector. Lubricate the fuel injector and O-rings liberally with clean engine oil.

REMOVAL AND INSTALLATION (Continued)

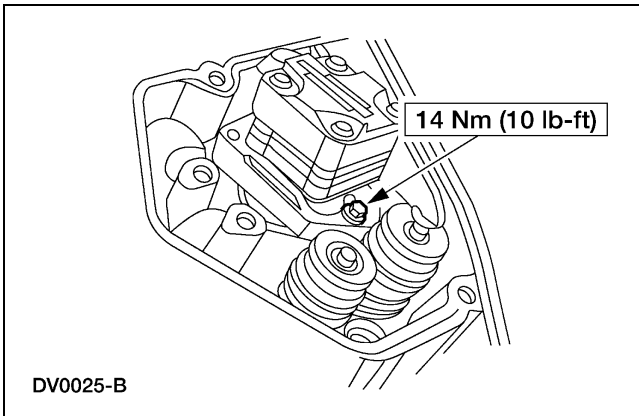
5. If required, install the cylinder heads. For additional information, refer to Section 303-01C.
6. **⚠ CAUTION: Remove all oil and fuel from the cylinders before installing the fuel injectors. Failure to do so can cause hydrostatic lock, resulting in severe engine damage.**

⚠ CAUTION: Do not strike the top of the fuel injector to seat the injector in the cylinder head fuel injector bore. Damage to the fuel injector can occur. Use hand pressure on the top of the fuel injector until the fuel injector hold-down plate is flush with the cylinder head.

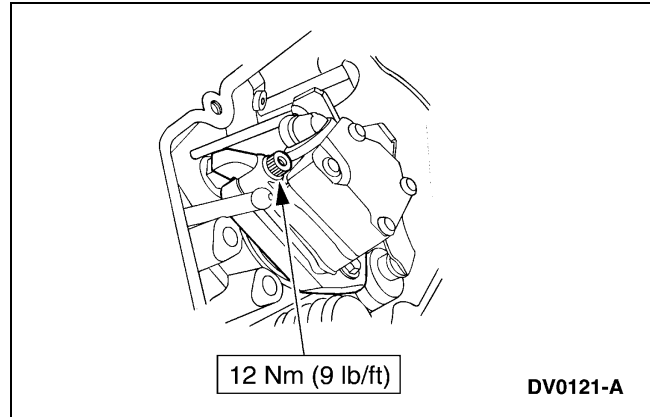
Using the Injector Replacer, seat the fuel injector into the cylinder head fuel injector bore.



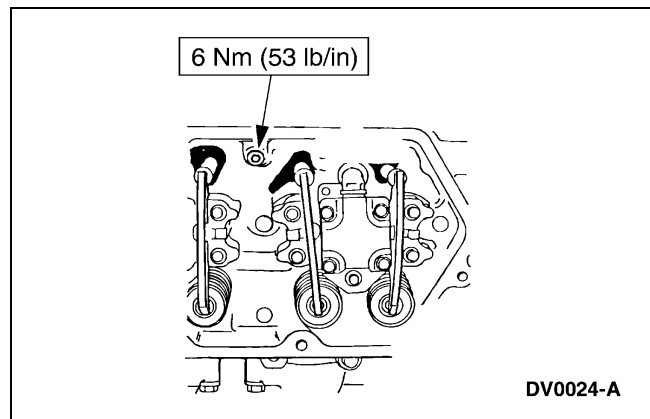
7. Install the fuel injector outboard retaining bolts.



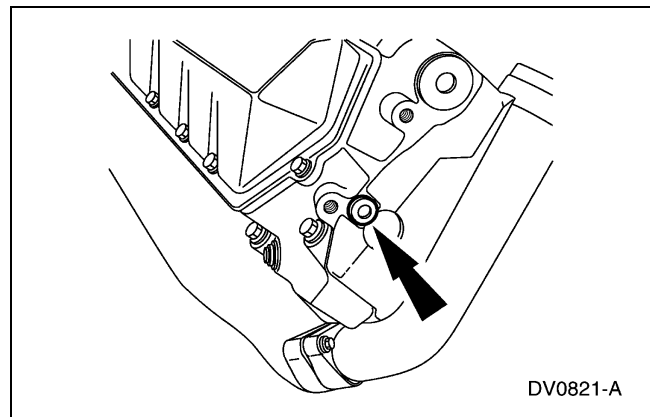
8. Install the oil deflector on the fuel injector hold-down plate.



9. Install the oil drain plugs.



10. Tighten the fuel drain plug located at the rear of each cylinder head.



11. Install the valve covers. For additional information, refer to Section 303-01C.