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WARNING: Prior to commencing this installation:

Wash engine if necessary.

Park vehicle (vehicle will be disabled until completion of installation).

Engage parking brake; select neutral with standard transmission or park with automatic transmission.

Remove keys from ignition disconnect positive & negative battery terminals

1. Remove the dipstick mounting bolt and upper intake manifold retaining bolts. (FIGURE A). Lift off intake manifold and hose one unit. Intake manifold gasket is normally reused.

NOTE: Lift the electrical grid heater and the intake manifold as one unit. Move the intake off to the side just enough to access the injector lines.

2. Cover manifold opening and inter-cooler connection with tape or towels to keep foreign objects out.

3. Remove the 3 13mm throttle assembly bracket. (FIGURE B).

Note: Leave all wires and cables connected.

4. Remove the 3 10mm injector line retaining bracket bolts. (FIGURE C).

5. Loosen the 8mm rear Injector line retaining bolt. (FIGURE D).

6. Remove the rear cylinder head lifting bracket. (FIGURE E).

7. Loosen the six 19mm fuel injector lines at the cylinder head. Slide the injector line nuts up the lines. (FIGURE F).

8. Loosen the five valve cover bolts. Remove the valve cover the valve cover bolts will stay in the cover. (FIGURE G).

Note: When removing the valve cover hold down the upper heater hose and move the valve cover toward the passenger side to clear the valve cover bolts.

9. Remove the 8mm forward most injector retaining clamp bolts only.

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Note: It is not necessary to remove the rear injector retaining clamp bolts. (FIGURE H).

10. Remove the injector retaining clamp by pulling up and out. (FIGURE I).

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11. Thread one of the short intake manifold bolts removed in STEP1 into the top of each injector in turn and with the bent nose pliers (FIGURE J) remove each injector while prying back slightly on the fuel cross over tube. (FIGURE K).
Note: It is very important to take note when removing each injector whether the copper sealing washer is attached to the injector or has been left behind in the cylinder head. If the washer is in the cylinder head it must be removed. A flat blade screwdriver that will start into the copper washer but will not completely pass through the washer may be used to retrieve the washer.
12. Take each of the new **True Torque** Injectors in turn and apply a slight amount of grease to the copper sealing washers. This will help hold the washers in position. Apply some oil to the rubber injector sealing rings.
13. Each injector has a feed hole. This feed hole must face toward the fuel injector line when being installed. Press each injector in turn into the cylinder head while prying out slightly on the fuel cross over tube. Prying down gently on the top of each injector (FIGURE L) will help seat the injector into the cylinder head.
14. Install each injector retaining clamp in turn. It may be necessary to turn the injector slightly to allow the injector clamp to seat into position.
Note: If any of the hold down clamps do not fit the injectors the particular injector is probably 180 degrees off and must be removed and rotated.
15. Once all the injector retaining clamps are in position start the 8mm hold down bolts into the cylinder head. **Do not tighten** the 8mm hold down bolts at this time.
16. Start the injector lines into the cylinder head. Tighten the injector line nuts hand tight. **Do not tighten** the 19mm injector line nuts at this time.
17. Tighten the 8mm injector retaining clamp bolts to 89 inch-lbs.
18. Tighten the 19mm injector line retaining nuts at this time.
19. Install the valve cover at this time. The valve cover gasket can be re-used.
20. Install the rear cylinder head lifting bracket.
21. Tighten the 8mm rear Injector line retaining bolt. (FIGURE D).
22. Install the 3 10mm injector line retaining bracket bolts. (FIGURE C).
23. Install the 3 13mm throttle assembly bracket. (FIGURE B).
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24. Install upper intake manifold. Start the rubber hose on the air intake tube first then rotate intake manifold into position. Install manifold retaining bolts into there original positions and torque to 18lb-ft. (FIGURE A).
NOTE: Bolts should be cleaned and a small amount of RTV silicone applied to threads.

25. Position and tighten the manifold air connection clamp.
26. Make sure all tools are removed from the engine compartment and reconnect the battery terminals.
27. Turn the ignition key to the start position just enough to bump the engine and turn the ignition key back to the off position. You will here the electric lift pump. Repeat this process 3 – 4 times to help bleed the air out of the system.
28. Crank engine holding the throttle pedal down about half way. If the engine does not start within 30 seconds stop cranking. Allow the starter motor to cool down and then repeat. The engine will usually restart within a few seconds. Upon start up the engine will probably run rough until any remaining air bubbles are evacuated form the injector lines. Check for any leaks.

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FIGURE A

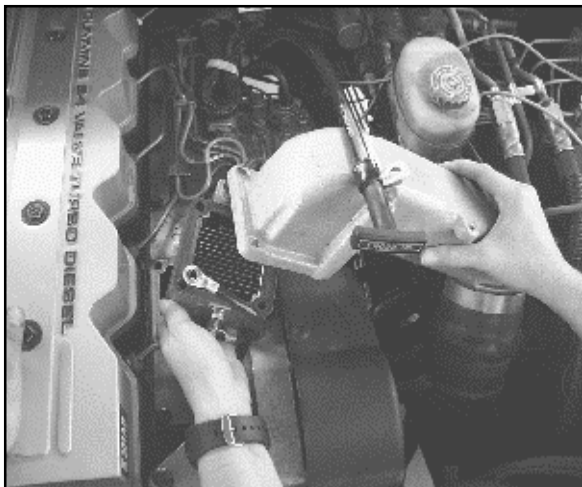


FIGURE B

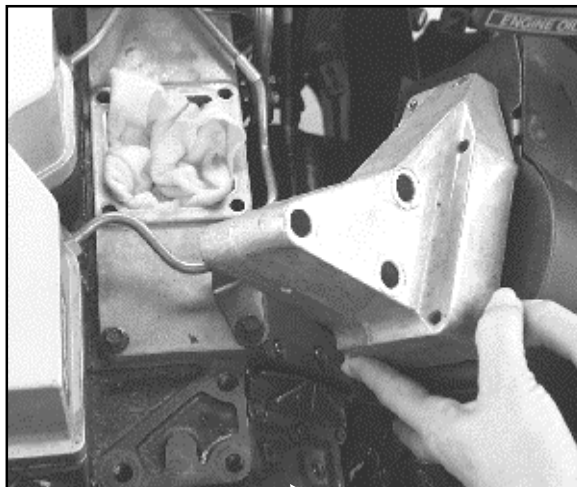


FIGURE C

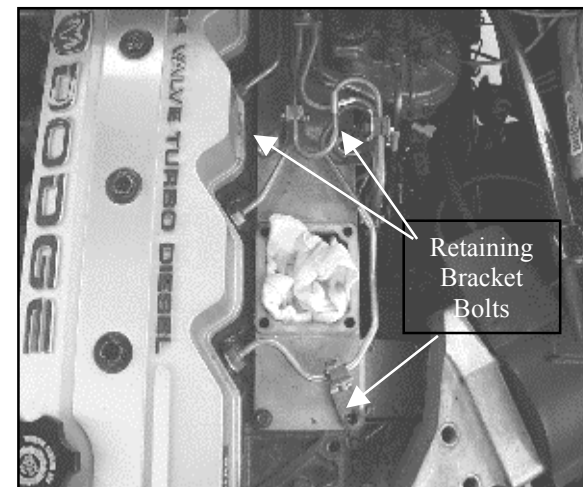


FIGURE D

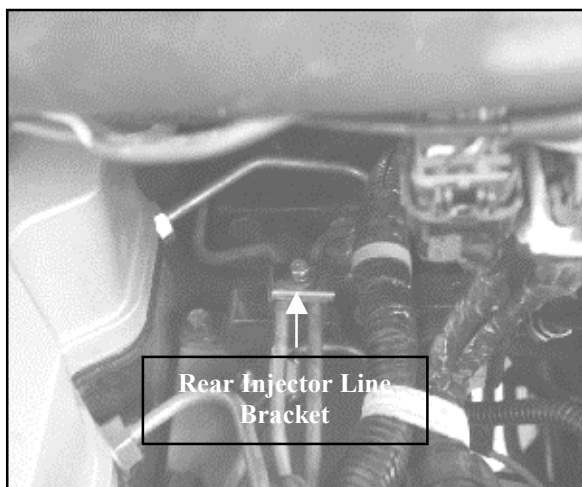


FIGURE E

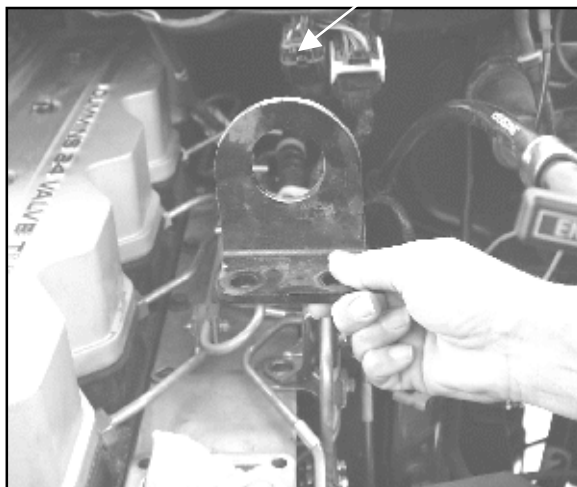


FIGURE F

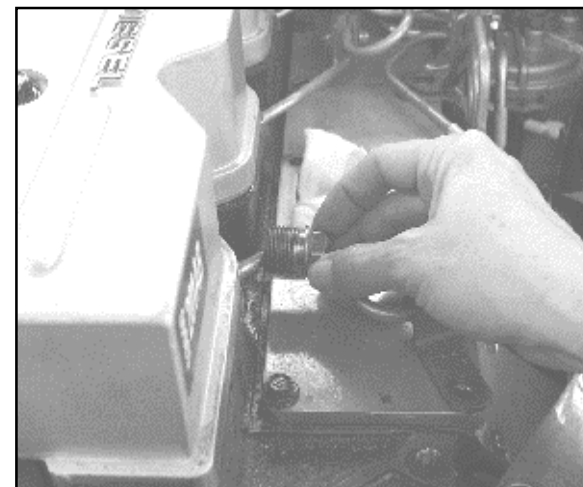


FIGURE G

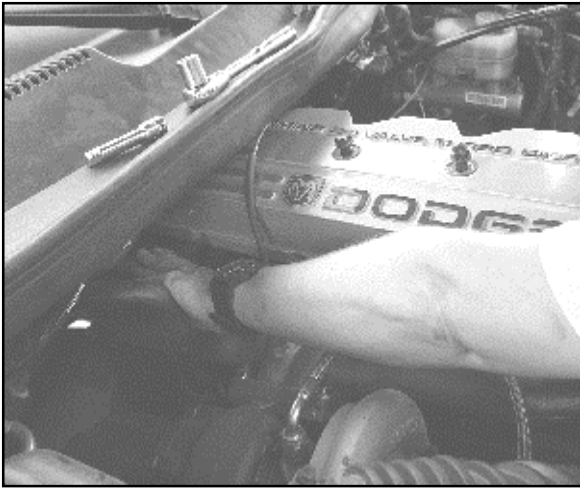


FIGURE H

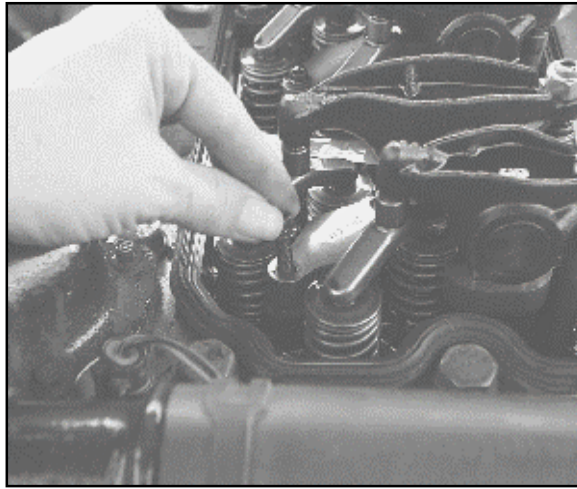


FIGURE I

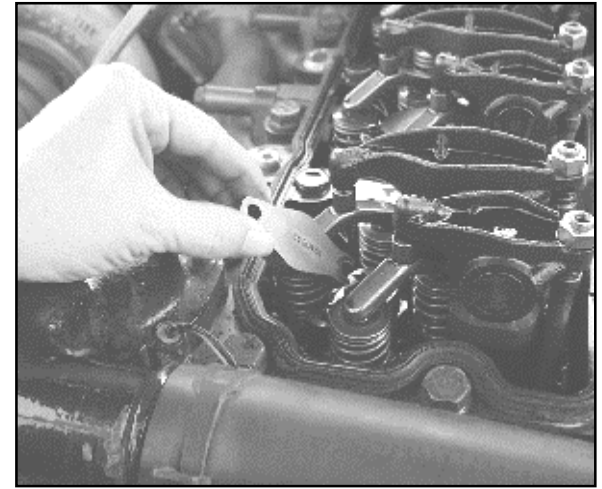


FIGURE J

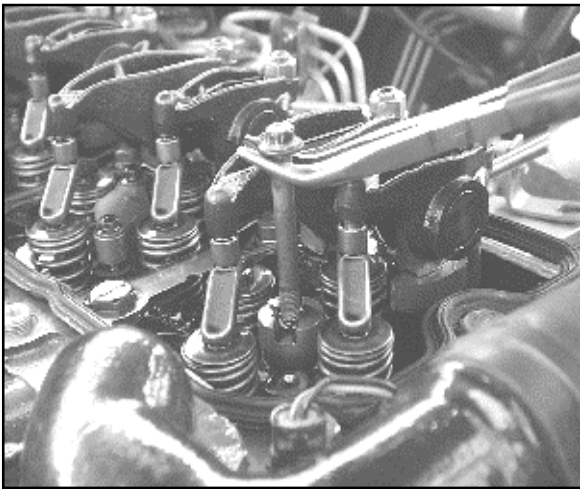


FIGURE K

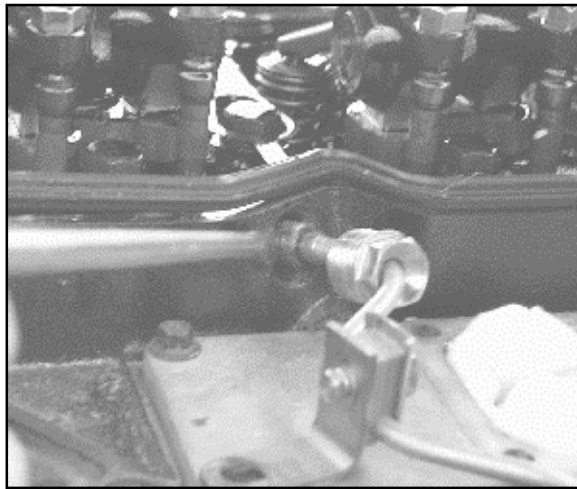


FIGURE L

