

## 2.3 DISTRIBUTOR

### REMOVE

1. Depressurise fuel system, refer to Section 6C2 POWERTRAIN MANAGEMENT, in the VS Series Service Manual.
2. Disconnect battery earth lead.
3. Remove bolts securing engine trim covers to inlet manifold, remove covers.

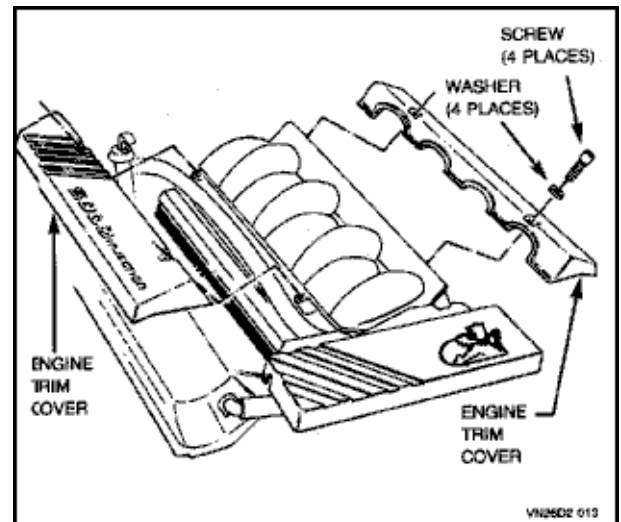


Figure 6D2-3-8

4. Remove fuel pressure (supply) line from fuel rail connection.

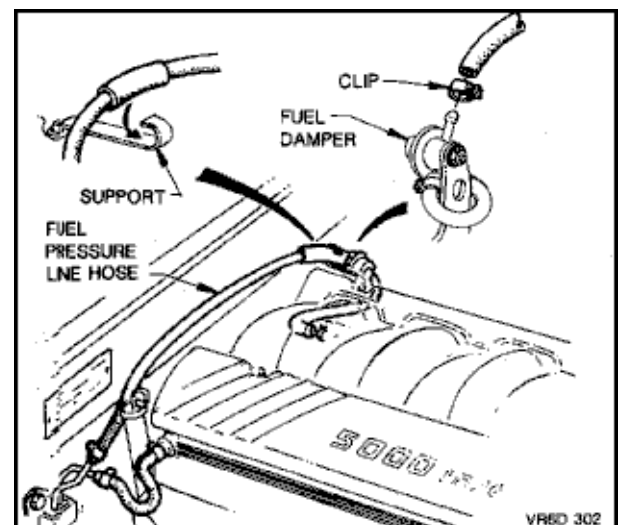


Figure 6D2-3-9

5. Disconnect spark plug leads from spark plugs and rocker cover retainers.  
Open spark plug lead harness retainers at end of each cylinder head.

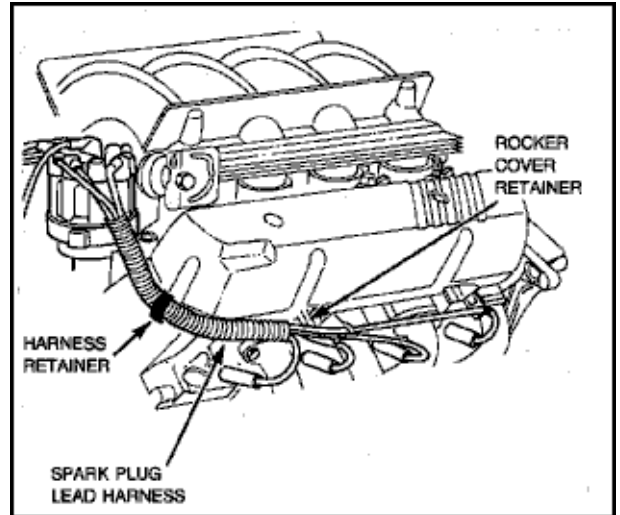


Figure 6D2-3-10

6. To improve accessibility, pull up left hand heater hose over inlet manifold, and tie back.

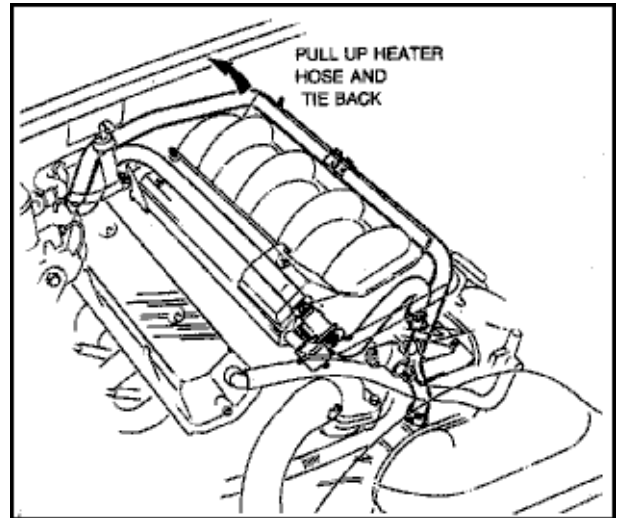


Figure 6D2-3-11

7. Remove high tension lead from coil terminal.
8. Disconnect wiring harness connector from distributor.
9. Push back distributor cap retaining clips, remove distributor cap and leads.

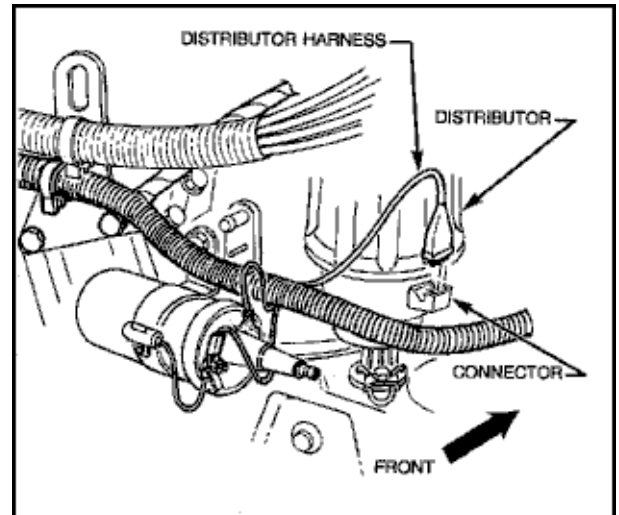


Figure 6D2-3-12

10. Using a suitable size socket and bar on crankshaft torsional damper retaining bolt, rotate crankshaft until distributor rotor is in number one cylinder position and timing mark on torsional damper is aligned at T.D.C. position.

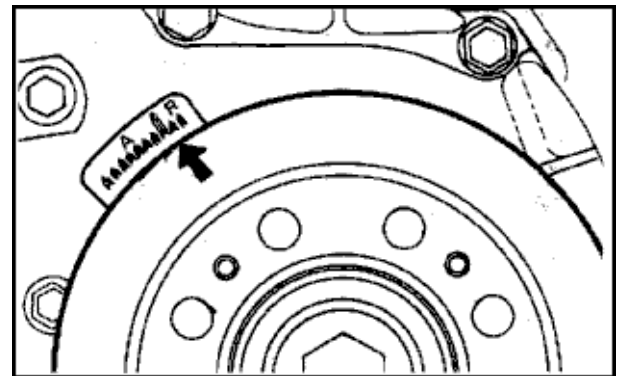


Figure 6D2-3-13

11. Remove distributor rotor button.
12. Using a suitable size 'crows foot' socket and bar, remove distributor clamp securing bolt, remove retainer and clamp.

13. Remove distributor and discard sealing gasket.

**NOTE:** Do not rotate the crankshaft after the distributor has been removed.

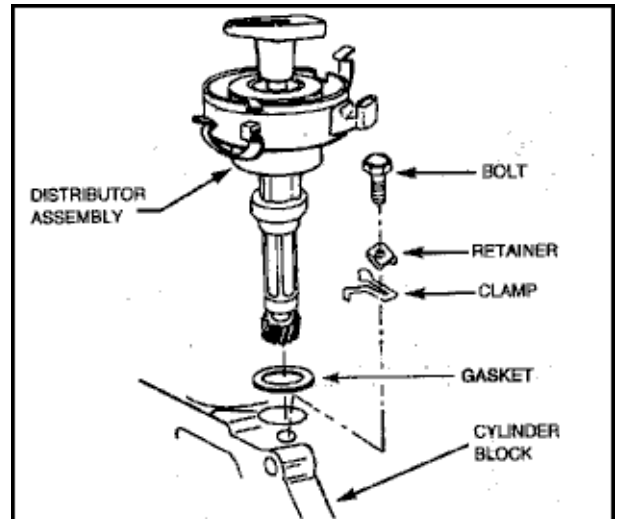


Figure 6D2-3-14

## REINSTALL

Reinstallation of the distributor, cap and leads is the reverse of removal procedures, noting the following points:

1. The timing mark on torsional damper should be at T.D.C. position, and both valves on number one cylinder should be closed. If necessary, rotate crankshaft to achieve correct timing.

2. Install rotor button and align with number one cylinder reference mark. Rotate rotor button counter clockwise approximately 42 degrees until drive gear roll pin is aligned with oil drain hole in distributor body, refer Fig 6D2-3-12.

3. Remove rotor button, maintaining alignment described in step 2.

4. Install distributor into cylinder block.

**NOTE:** The distributor shaft will rotate during installation as the helical gears mesh.

5. Install distributor clamp, retainer and securing bolt. Leave bolt finger tight.
6. Check to ensure that rotor button is pointing to number one reference mark and tighten clamp securing bolt.
7. Ensure that engine harness connector is correctly installed into distributor connector.

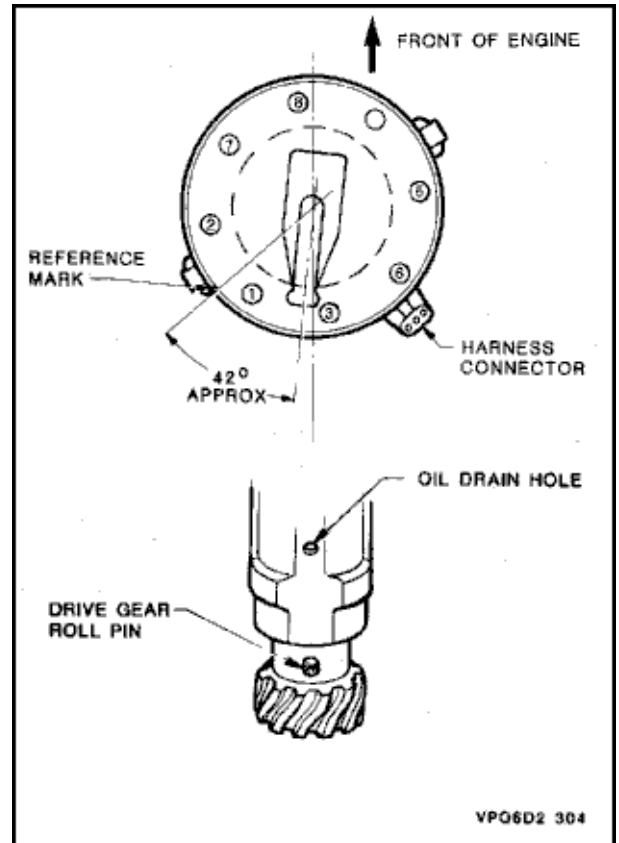


Figure 6D2-3-15

8. Ensure that spark plugs leads are correctly routed, refer [2.5 SPARK PLUG LEADS](#) in this Section.
9. Pressurise fuel system, refer to Section [6C2 POWERTRAIN MANAGEMENT](#), in the VS Series Service Manual. Check for leaks. Repair as necessary.
10. Check and set ignition timing as necessary, refer [2.4 IGNITION TIMING](#) in this Section.
11. Tighten distributor clamp bolt to the correct torque specification.

**DISTRIBUTOR CLAMP BOLT  
TORQUE SPECIFICATION**

20 - 27  
Nm

**TEST**

**NOTE:** Perform the distributor hall effect sensor test with the distributor assembled.

1. Rotate the distributor shaft until a trigger vane of toothed disc is outside the Hall effect sensor air gap.
2. Connect the positive side of a regulated 12 volt power source to an ammeter, then connect the ammeter to the '+' terminal on the distributor connector.
3. Connect the negative side of the power source to a voltmeter, then connect the positive side of the voltmeter to the '0' terminal on the distributor connector.
4. Connect a 1.5 K ohm resistor between the positive side of the voltmeter and the ammeter (refer Fig. 6D2-3-13).
5. Connect the '-' distributor terminal to the negative side of the power source.
6. The voltmeter should indicate 0.4 volts (400 mV), or less, and the ammeter should read less than 20 mA (at 24 degrees C.).
7. Rotate the distributor shaft until any trigger vane is within the Hall effect sensor air gap.
8. With the trigger vane within the air gap the voltmeter should indicate 11.0 volts and the ammeter should read less than 20 mA (at 24 degrees C.).
9. Replace any Hall effect sensor assemblies damaged or out of specification.

#### DISASSEMBLE

1. Remove distributor cap.
2. Remove the distributor rotor button.
3. Remove connector housing retainer clip, using a small screwdriver as a lever, then separate the housing from terminal connector.
4. Remove two screws securing the Hall effect sensor plate.
5. Support the drive gear in a wooden 'V' block, then drive out the roll pin, using a suitable pin punch and hammer. Remove the drive gear and thrust washer set.
6. Push shaft from housing by applying a light force at drive shaft end.
7. Remove circlips from shaft, using circlip pliers.
8. Remove the plastic bush and Hall effect sensor plate from shaft.
9. Drive the toothed disc from the shaft, using a suitable sleeve and a hammer.

**NOTE:** Do not misplace the drive key when removing the disc (refer Fig. 6D2-3-14).

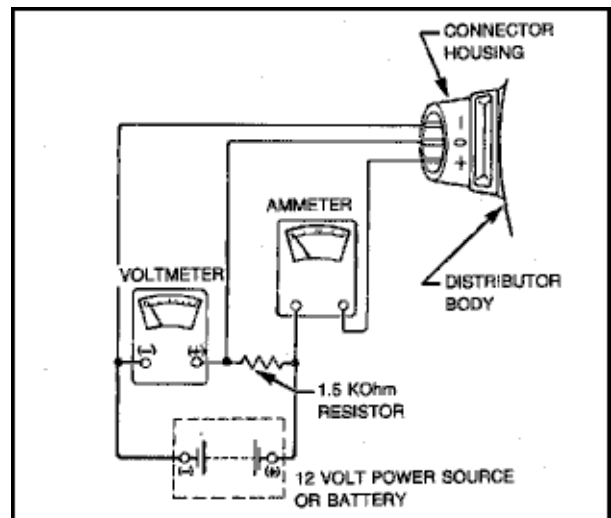


Figure 6D2-3-16

10. Press the bushes from the housing using a suitable press, if replacement is required.

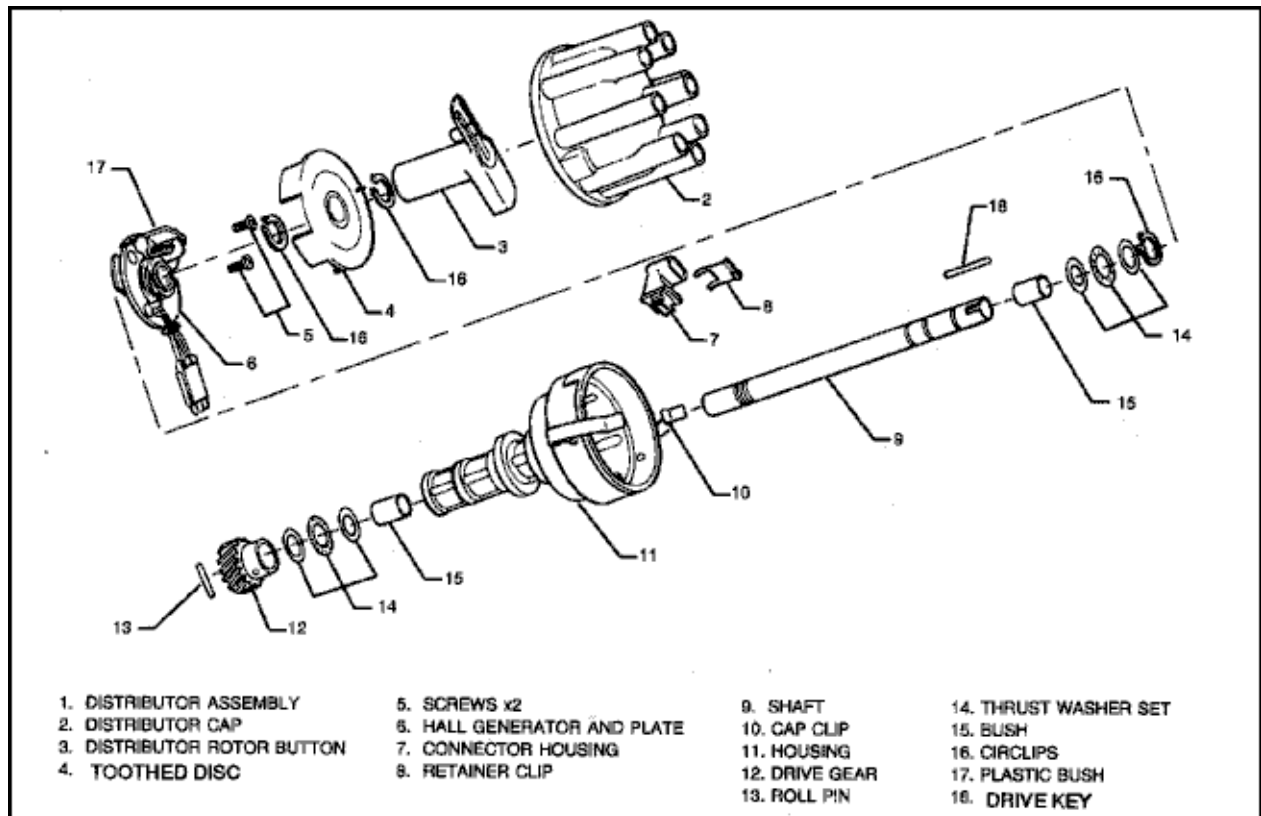


Figure 6D2-3-17

## REASSEMBLE

Reassembly is the reverse of DISASSEMBLE procedure, note the following points;

1. Align the toothed disc drive slot and shaft keyway, and install drive key.
2. Support the distributor in a soft jaw vice, and lightly tap the toothed disc into position using a suitable sleeve and hammer.

**NOTE:** Check to ensure that there is no foreign debris trapped within the Hall effect sensor air gap.