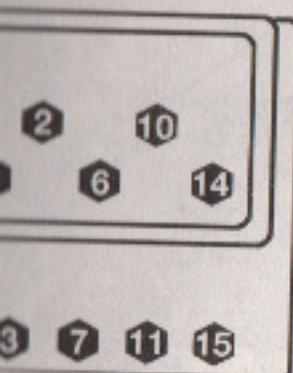


installed with the raised bead
ing UP

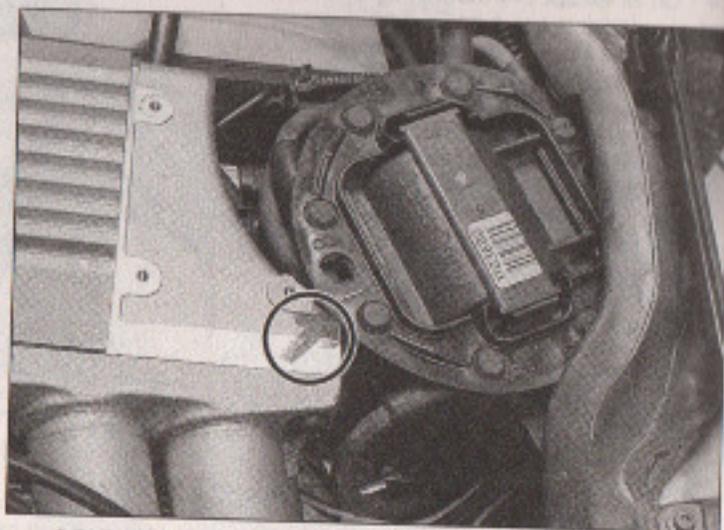
ONT



24064-2A-8-106 HAYNES

sequence - note that the bolts
(arrow) are shorter than

8.15 The head bolts **MUST** be coated with a non-hardening sealant (such as Permatex no. 2) before they are installed - coolant will leak past the bolts if this is not done



9.5 On later models, make a mark on the plenum directly opposite the number one spark plug wire terminal in the distributor cap (in this photo the number one on the wire retainer has been highlighted with chalk for clarity)

9 Top Dead Center (TDC) for number 1 piston - locating

Refer to illustrations 9.5, 9.7 and 9.8

1991 and earlier models

1 Top Dead Center (TDC) is the highest point in the cylinder that each piston reaches as it travels up-and-down when the crankshaft turns. Each piston reaches TDC on the compression stroke and again on the exhaust stroke, but TDC generally refers to piston position on the compression stroke. The timing marks on the vibration damper installed on the front of the crankshaft are referenced to the number one piston at TDC on the compression stroke.

2 Positioning the piston(s) at TDC is an essential part of many procedures such as rocker arm removal, valve adjustment, timing chain and sprocket replacement and distributor removal.

3 In order to bring any piston to TDC, the crankshaft must be turned using one of the methods outlined below. When looking at the front of the engine, normal crankshaft rotation is clockwise. **Warning:** Before beginning this procedure, be sure to place the transmission in Neutral and disconnect the BAT wire at the distributor cap to disable the ignition system.

- The preferred method is to turn the crankshaft with a large socket and breaker bar attached to the vibration damper bolt that is threaded into the front of the crankshaft.
- A remote starter switch, which may save some time, can also be used. Attach the switch leads to the S (switch) and B (battery) terminals on the starter motor. Once the piston is close to TDC, use a socket and breaker bar as described in the previous paragraph.
- If an assistant is available to turn the ignition switch to the Start position in

9.7 Turn the crankshaft until the line on the vibration damper is directly opposite the zero mark on the timing plate as shown here

short bursts, you can get the piston close to TDC without a remote starter switch. Use a socket and breaker bar as described in Paragraph a to complete the procedure.

4 On 1984 models, make a mark on the air cleaner assembly housing directly across from the number one spark plug wire terminal on the distributor. **Note:** The terminal numbers are marked on the spark plug wire retainer attached to the top of the distributor.

5 On later models, remove the screws and detach the distributor cover from the plenum. Using a felt tip pen, make a mark on the plenum directly across from the number one spark plug wire terminal on the distributor (see illustration). The terminal numbers are marked on the spark plug wire retainer attached to the top of the distributor.

6 Remove the distributor cap as described in Chapter 1.

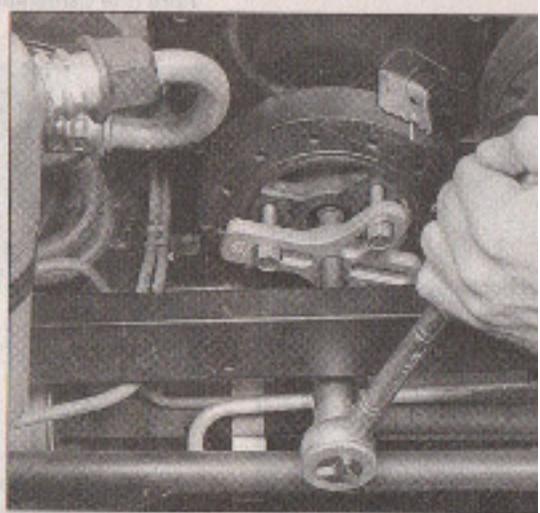
7 Turn the crankshaft (see Paragraph 3 above) until the line on the vibration damper is aligned with the zero mark on the timing plate (see illustration). The timing plate and vibration damper are located low on the front of the engine, near the pulley that turns the drivebelt.

8 The rotor should now be pointing directly at the mark on the air cleaner housing or plenum (see illustration). If it isn't, the piston is at TDC on the exhaust stroke.

9 To get the piston to TDC on the compression stroke, turn the crankshaft one complete turn (360-degrees) clockwise. The rotor should now be pointing at the mark. When the rotor is pointing at the number one spark plug wire terminal in the distributor cap (which is indicated by the mark on the plenum or housing) and the timing marks are aligned, the number one piston is at TDC on the compression stroke.

10 After the number one piston has been positioned at TDC on the compression stroke, TDC for any of the remaining cylinders can be located by turning the crankshaft

9.8 If the rotor is pointing directly at the mark on the air cleaner housing, as shown here, the number one piston is at TDC on the compression stroke



90-degrees at a time and following the firing order (refer to the Specifications).

1992 and later models

11 Insert a compression gauge (screw-in type with a hose) in the number 1 spark plug hole and zero it. Place the gauge dial where you can see it while turning the balancer hub bolt.

12 Turn the crankshaft until the arrow on the balancer approaches straight up (or 12 o'clock) (see illustration 14.9). If you see compression building up on the gauge, you are on the compression stroke for number one. Stop turning when the arrow is straight up. If you did not see compression build up, continue rotating one more complete revolution to achieve TDC for number one.

13 After the number one piston has been positioned at TDC on the compression stroke, TDC for any of the remaining cylinders can be located by turning the crankshaft 90-degrees (1/4-turn) at a time and following the firing order (refer to the Specifications). For example, turning 90-degrees past number one TDC would give you TDC for number eight cylinder, the next in the firing order.