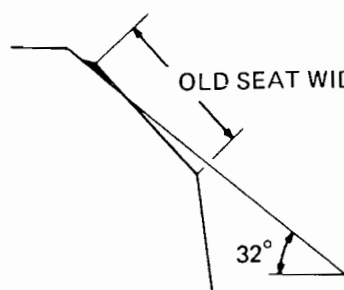
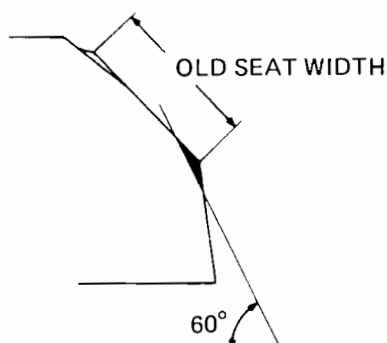




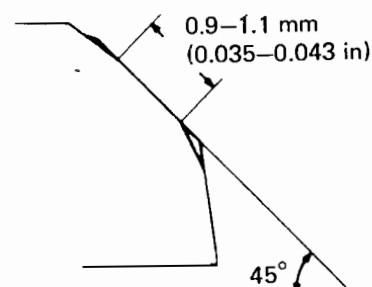
After cutting the seat, apply lapping compound to valve face, and lap the valve using light pressure. After lapping, wash any residual compound off the cylinder head and valve.



FLAT CUTTER 25 mm (IN)  
22.5 mm (EX)



INTERIOR CUTTER 22.5 mm (IN. EX)



SEAT CUTTER 24.5 mm (IN)  
22.5 mm (EX)

## CYLINDER HEAD ASSEMBLY

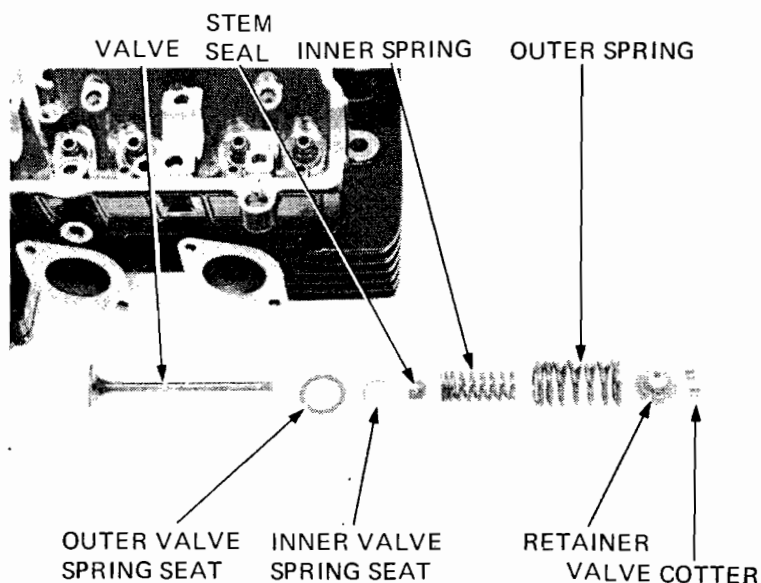
Clean the cylinder head assembly with solvent and blow through all oil passages with compressed air.

Install new valve stem seals.

Lubricate each valve stem with molybdenum disulfide grease and insert the valve into the valve guide.

### NOTE

To avoid damage to the stem seal, turn the valve slowly when inserting.



VALVE SPRING COMPRESSOR  
07757-0010000 or 07957-3290001

Install the valve springs and retainers.

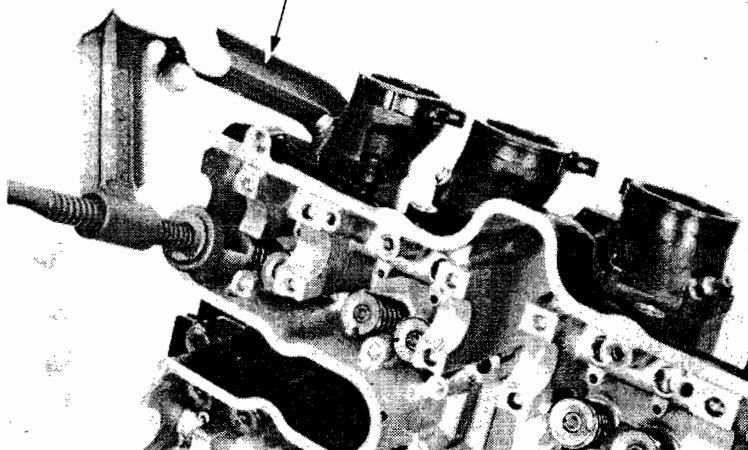
### NOTE

Install the valve springs with the tightly wound coils facing the cylinder head.

Install the valve cotters.

### CAUTION

To prevent loss of tension, do not compress the valve spring more than necessary to install the valve cotters.

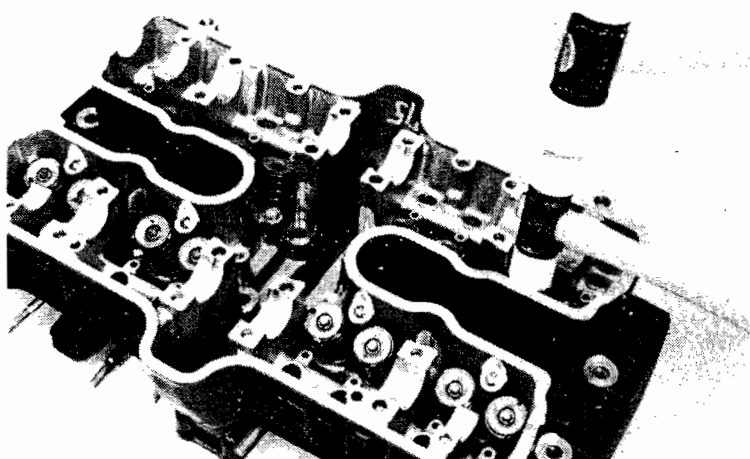




Tap the valve stems gently with a soft hammer to firmly seat the cotters.

### NOTE

Support the cylinder head above the work bench surface to prevent possible valve damage.

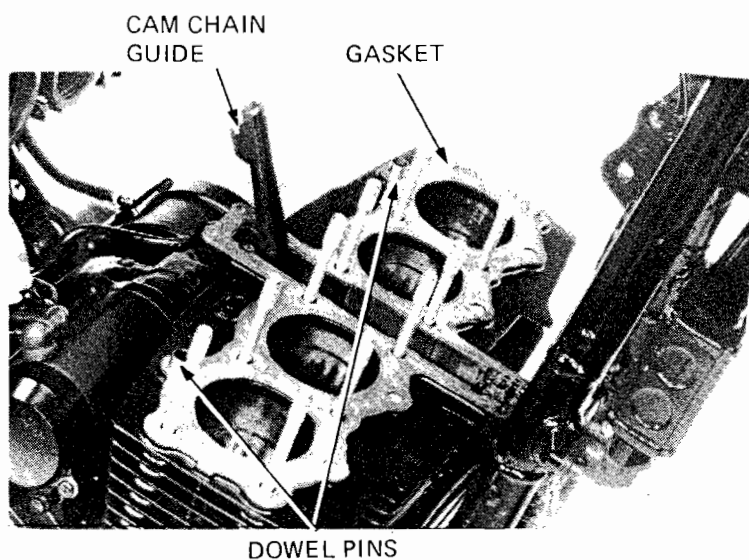


## CYLINDER HEAD INSTALLATION

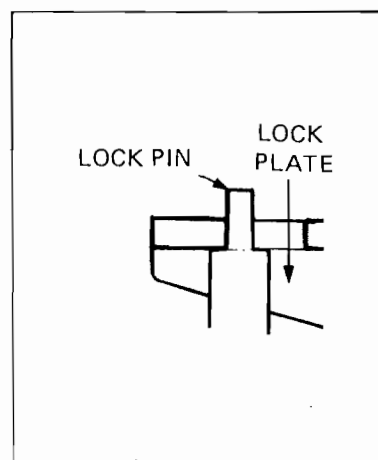
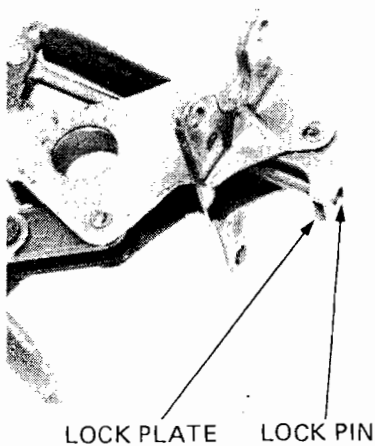
Clean the cylinder head surfaces of any gasket material.

Install the dowel pins and a new gasket.

Install the cam chain guide.



Push on the tensioner arm and lock the arm by setting the lock pin to the lock plate as shown.





Slide the cam chain guide slightly and push it forward, then lower the cylinder head.

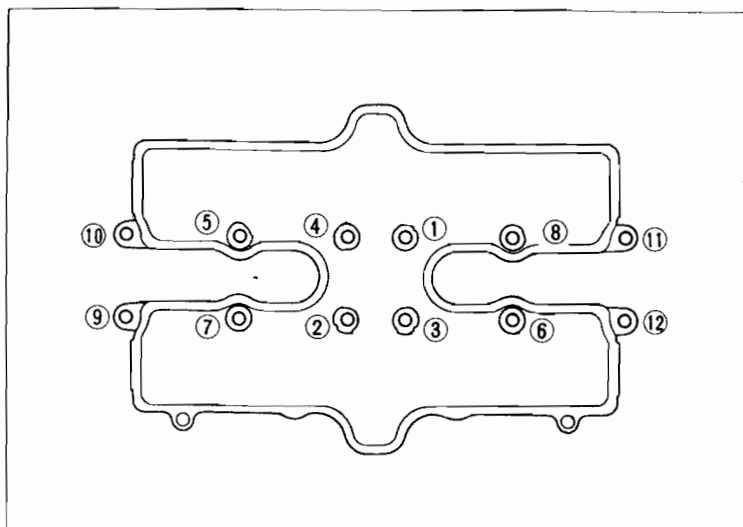
Set the cam chain guide properly and set the cylinder head.

Tighten the 12 cylinder head cap nuts in the sequence shown.

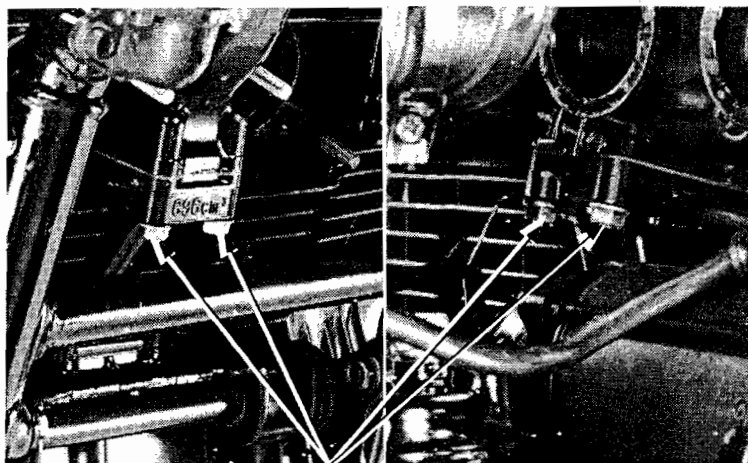
**TORQUE:** 26–30 N·m  
(2.6–3.0 kg-m, 19–22 ft-lb)

**NOTE**

Apply molybdenum disulfide grease to the threads of the cylinder studs.



Tighten the front and rear cylinder head bolts.

**BOLTS**

Blow the oil pipe and oil control bolt with compressed air.

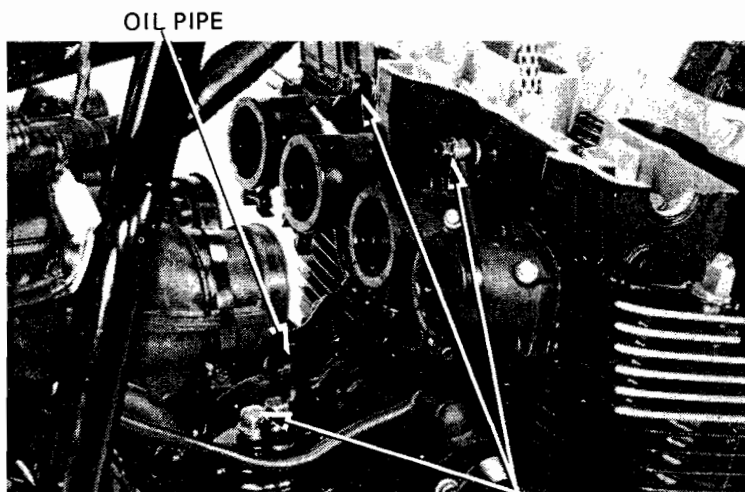
Make sure that the sealing washers are in good condition.

Install the oil pipe with oil bolts and sealing washers.

Tighten the oil bolts.

**TORQUE:**

- 7 mm bolt: 10–14 N·m  
(1.0–1.4 kg-m, 7–10 ft-lb)
- 8 mm bolt: 12–16 N·m  
(1.2–1.6 kg-m, 9–12 ft-lb)
- mm bolt: 16–20 N·m  
(1.6–2.0 kg-m, 12–14 ft-lb)

**OIL BOLTS**

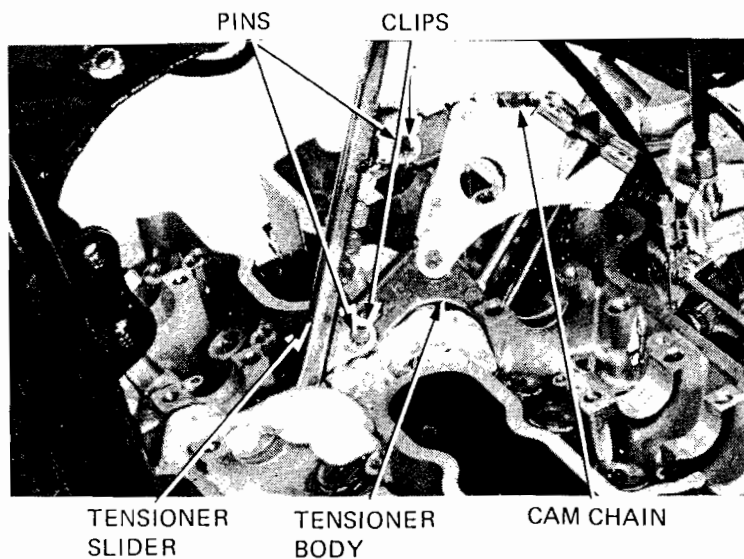
Install the carburetors and exhaust system.



Put the cam chain over the tensioner body and install the tensioner slider with the clips and pins as shown.

### NOTE

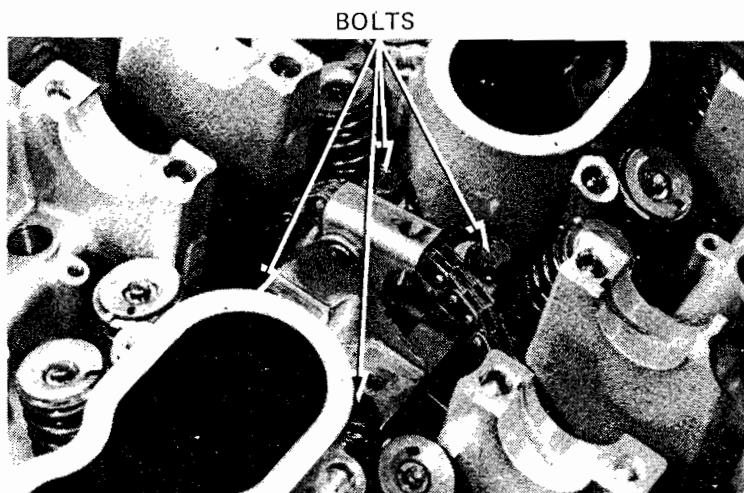
Be careful not to drop the pins and clips into the crankcase.



Tighten the cam chain tensioner with the four bolts.

**TORQUE:** 10–14 N·m  
(1.0–1.4 kg-m, 7–10 ft-lb)

Install the rear and lower engine mount bolts (Page 5-5).

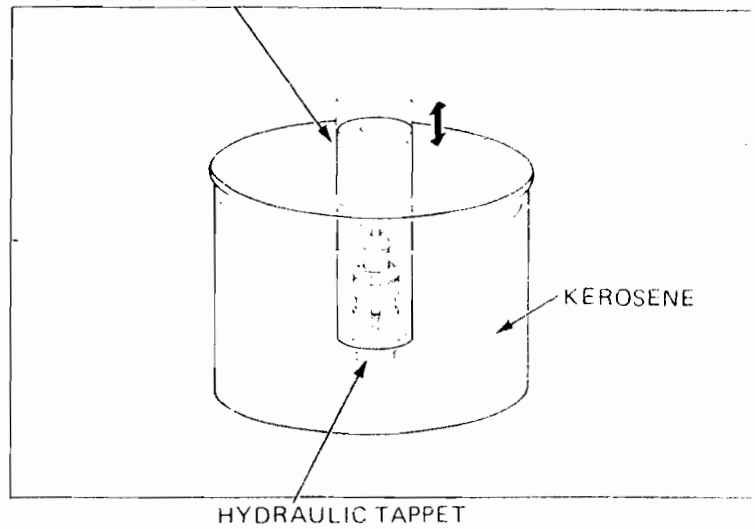




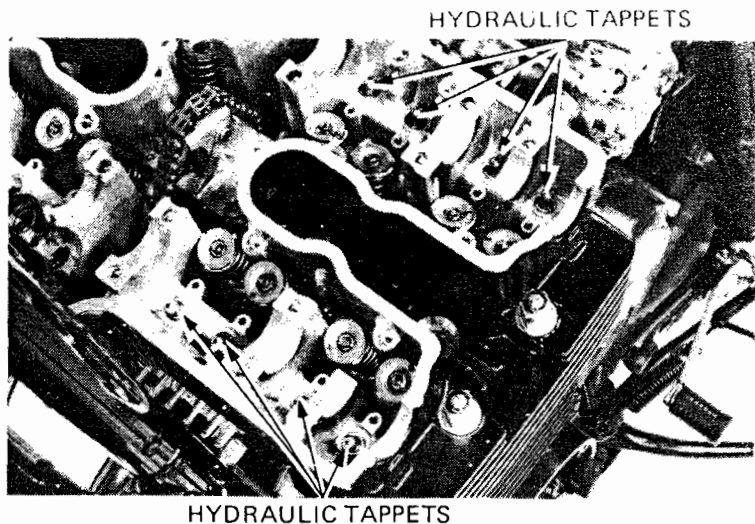
## HYDRAULIC TAPPET INSTALLATION

Place the tappet in a jar filled with kerosene.  
Place the tappet bleeder into the tappet.  
Hold the tappet upright and pump the tappet until air bubbles stop coming out. Remove the tool, and try to quickly compress the tappet by hand. You should not be able to compress it more than 0.2 mm (0.008 in).  
Remove the tappet from the fluid keeping it upright.

HYDRAULIC TAPPET BLEEDER  
07973 - MJ00000



Fill all the tappet holes up with clean engine oil.  
Install the bled hydraulic tappets as described in above procedure.



Install the dowel pins into the cylinder head.

