

- (3) Ensure that the mating marks on the belt are aligned with those of the timing belt pulleys, respectively.
- (4) Slacken the attaching bolts of the tensioner which were tightened temporarily in the previous step. Ensure that the timing belt tension is provided by the tension spring.

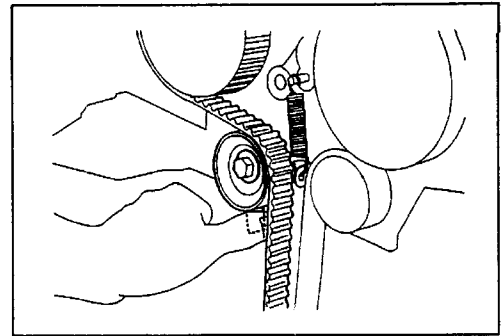


Fig. 5-117

WM-05135

- (5) Turn the crankshaft slightly in the normal rotating direction (clockwise), thus applying tension to the timing belt between the intake camshaft timing belt pulley and the exhaust camshaft timing belt pulley and between the exhaust camshaft timing belt pulley and the crankshaft timing belt pulley.

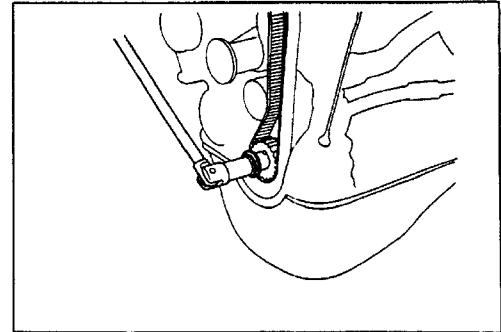


Fig. 5-118

WM-05136

- (6) Turn the crankshaft about two turns in the normal rotating direction, until the mating mark on the cylinder head is aligned with the recessed timing mark on the camshaft.

**NOTE:**

Never make a reverse turn, even if it is the slightest one, during this operation.

WM-05137

- (7) Ensure that the tension spring force is being applied to the tensioner, by slackening the bolts of the timing belt tensioner.
- (8) Tighten the bolts of the timing belt tensioner.

**Tightening Torque:**

M10 bolt 3.0 - 4.5 kg-m (22 - 33 ft-lb)

M6 bolt 0.6 - 0.9 kg-m (4.5 - 6.5 ft-lb)

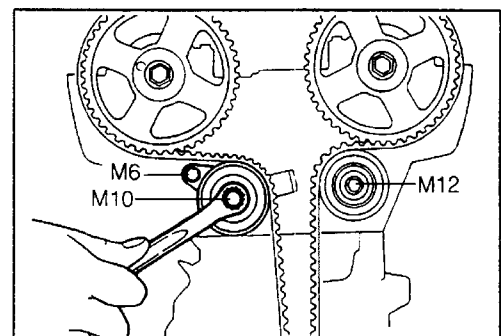


Fig. 5-119

WM-05138

- (9) Push the belt between the camshaft timing belt pulleys by hand. Ensure that the deflection meets the specification.

**Specified Deflection:** About 5 mm (0.197 inch)  
(with a force of 3 kg (6.6 lb) applied)

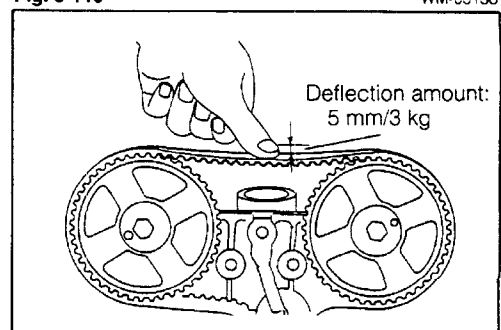


Fig. 5-120

WM-04138A

## ENGINE MECHANICALS

**NOTE:**

Be sure to tighten the timing belt tensioner with the bolts, until it no longer can be moved.

8. Installation of crankshaft timing belt pulley flange  
Install the crankshaft timing belt pulley flange with its hemmed portion at the periphery facing the outside.

9. Install the timing belt lower cover.
10. Install the timing belt upper cover.
11. Install the cylinder head cover.
12. Install the surge tank bracket.
13. Install the surge tank cover.
14. Install the oil filler cap.
15. Install the resistive cords.
16. Install the crankshaft pulley.

**Tightening Torque:** 9.0 - 10.0 kg·m (65 - 72 ft·lb)

**NOTE:**

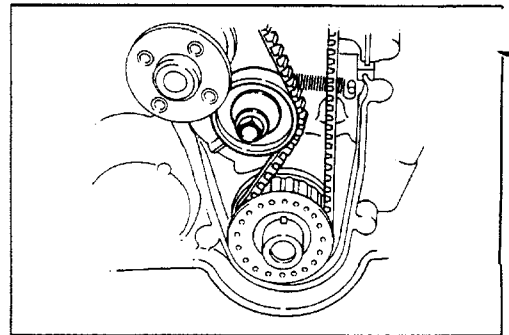
When tightening the crankshaft pulley, use the following SST so as not to apply any excessive force to the timing belt.

**SST:** 09210-87701-000

17. Install the water pump pulley.
18. Install the V-belt.
19. SST removal

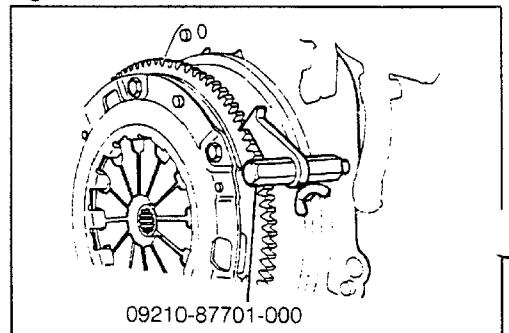
Remove the engine assembly from the following SSTs.

**SST:** 09219-87202-000



**Fig. 5-121**

WM-05139



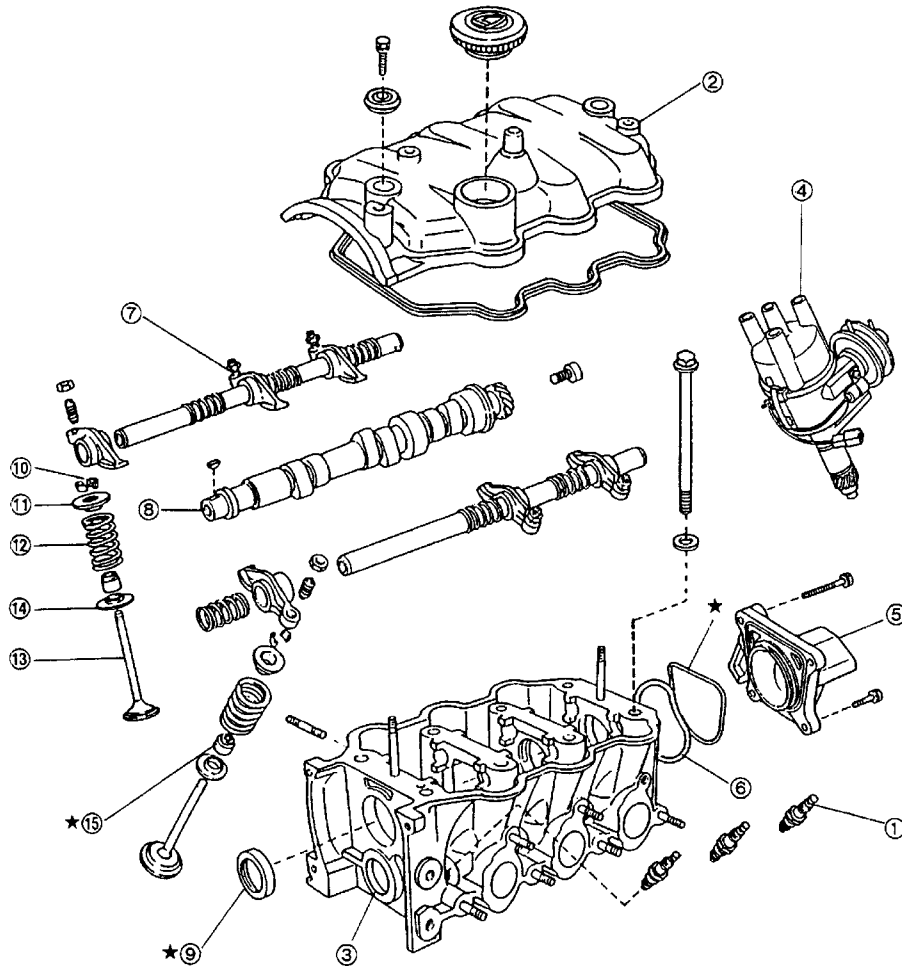
**Fig. 5-122**

WM-05140

WM-05141

CYLINDER HEAD

CB-23 AND CB-61 ENGINES  
COMPONENTS OF CYLINDER HEAD



★ : Non-reusable parts

- |   |                                  |
|---|----------------------------------|
| ① Spark plug  | ⑧ Camshaft                       |
| ② Cylinder head cover   | ⑨ Oil seal                       |
| ③ Cylinder head Ay  | ⑩ Valve spring retainer lock     |
| ④ Distributor   | ⑪ Valve spring retainer          |
| ⑤ Distributor housing   | ⑫ Compression spring (for valve) |
| ⑥ Wave washer   | ⑬ Valve                          |
| ⑦ Valve rocker shaft<br>Valve rocker arm<br>Compression spring (Valve rocker shaft) | ⑭ Valve spring seat              |
|   | ⑮ Valve stem oil seal            |

Fig. 5-123

WM-05142

## ENGINE MECHANICALS

### REMOVAL

1. Remove the spark plugs.
2. Remove the cylinder head cover.
3. Remove the distributor.
4. Remove the distributor housing.
5. Remove the wave washer.
6. Remove the cylinder head assembly.

(1) Loosen the cylinder head bolts gradually over two or three stages, following the specified numerical sequence.

(2) Remove the cylinder head. Attach the cylinder head to the SST. Fit the SST in a vise securely.

SST: 09219-87703-000

#### NOTE:

Be very careful not to scratch the gasket surface of the cylinder head.

7. Removal of valve rocker shafts, valve rocker arms and compression springs (for shafts)  
Slacken all adjusting screws of the valve rocker arm. Pull out the valve rocker shaft, using the following SST.

SST: 09204-87701-000

#### NOTE:

Perform this operation while holding the compression spring by hand so as to prevent it from jumping out.

Arrange the removed parts in order so that their installation positions may be known readily.

8. Removal of camshaft  
Pull out the camshaft toward the rear side of the cylinder head.  
Utmost care must be exercised not to damage the camshaft bearing bores of the cylinder head during this operation.

9. Removal of oil seal  
Remove the oil seal, using a screwdriver or the like.

#### NOTE:

The oil seal is a nonreusable part.

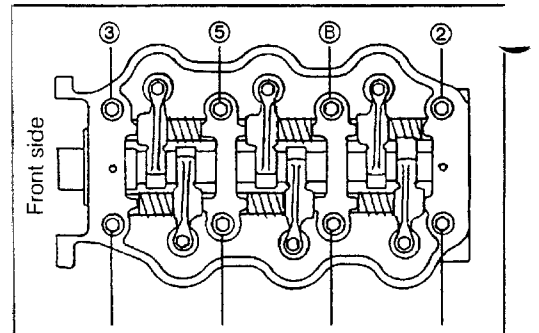


Fig. 5-124

WM-05143

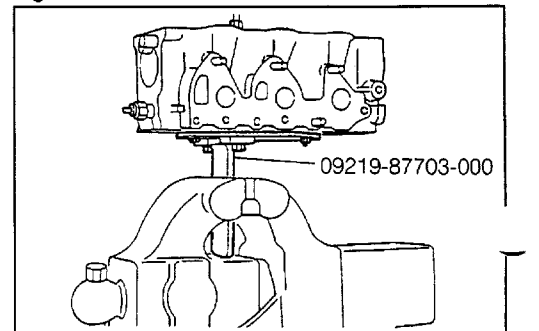


Fig. 5-125

WM-05144

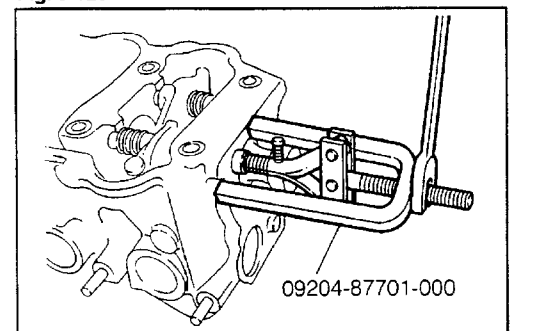


Fig. 5-126

WM-05145

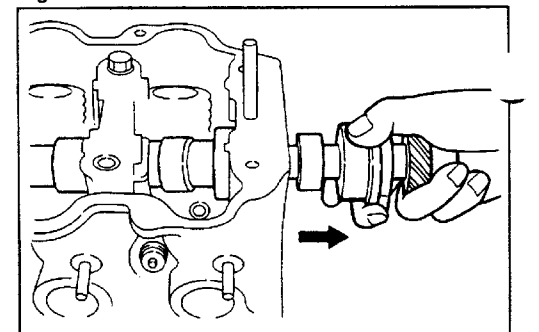


Fig. 5-127

WM-05146

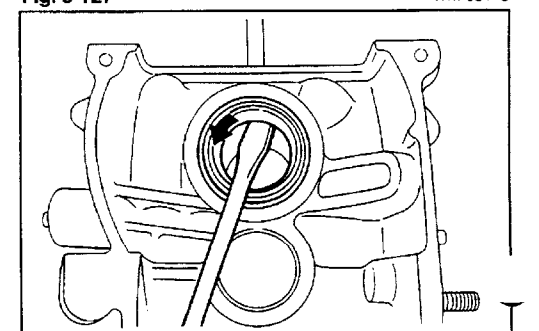


Fig. 5-128

WM-05147

10. Removal of valve spring retainer locks  
 Insert the valve rocker shaft. Compress the valve spring with the SST. Remove the spring retainer locks.  
**SST: 09202-87702-000**

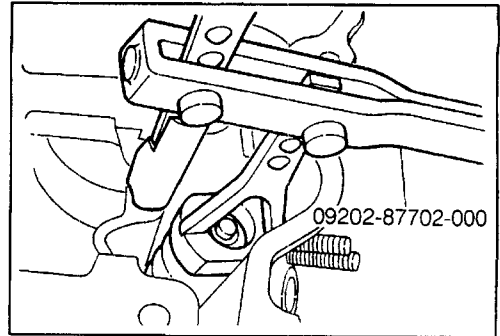


Fig. 5-129

WM-05148

**NOTE:**

As for those parts 11 through 14 given below, group the parts by the kinds of valves or cylinders so that the installation positions of the parts may be known readily.

11. Remove the valve spring retainers.
12. Remove the compression springs.
13. Remove the valves.
14. Remove the valve stem oil seals.
15. Remove the valve spring seats.

**NOTE:**

Wash the removed parts with a cleaning solvent and blow them by compressed air.  
 Do not use a cloth or the like to wipe the parts.  
 Remove the cylinder head from the SST.

WM-05149

### INSPECTION

1. Checking of cylinder head
  - (1) Check the cylinder head for cracks, damage and distortion.  
 If the cylinder head exhibits cracks or damage, replace it, as required.  
 Check the cylinder head for distortion on the following three surfaces.
  - ① Distortion of cylinder block gasket surface  
**Maximum Limit: 0.10 mm (0.039 inch)**

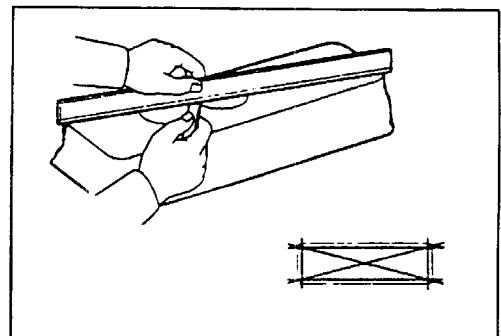


Fig. 5-130

WM-05150

CB-61 and CB-80 engines:

If the distortion of the cylinder block gasket surface exceeds the maximum limit, replace the cylinder head.

CB-23 engine:

If the distortion of the cylinder block gasket surface exceeds the maximum limit, correct the surface, making sure not to exceed the height limit of 125.7 mm (4.949 inches).

## ENGINE MECHANICALS

- ② Distortion of intake manifold attaching surface  
Maximum Limit: 0.1 mm (0.039 inch)
- ③ Distortion of exhaust manifold attaching surface  
Maximum Limit: 0.1 mm (0.039 inch)

CB-23 and CB-61 engines:

If the distortion of the intake manifold or exhaust manifold attaching surface exceeds the maximum limit, correct the surface, making sure not to exceed the width limit of 159.4 mm (6.28 inches).

### (2) Checking valve seats

Apply a thin film of red lead to the valve seat. Let the valve drop by its own weight onto the valve seat two or three times. Take out the valve. Measure the width of the contact surface of the valve seat.

Specified Value: 1.0 - 1.8 mm (0.039 - 0.071 inch)

#### NOTE:

If the valve-to-valve seat contact surface does not conform to the specifications or the contact surface exhibits roughness, correct the cylinder head or replace it, as required.

### (3) Refacing valve seats

Reface the valves, using a valve seat cutter.

#### NOTE:

If the valve guide bush is worn, first replace it. Then, proceed to the valve seat refacing.

#### ● Refacing procedure for intake valve seats

- ① Recondition the roughness on the valve-to-valve seat contact surface, using a 45-degree cutter.
- ② Using a 30-degree cutter, cut the valve seat in such a way that the circumference of the surface refaced by the 45-degree cutter may become  $35 \pm 0.1$  mm ( $1.38 \pm 0.004$  inches).
- ③ Using a 70-degree cutter, cut the valve seat in such a way that the width of the surface refaced by the 45-degree cutter may become 1.4 mm (0.055 inches).

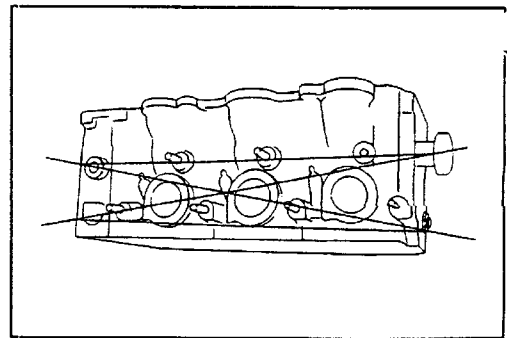


Fig. 5-131

WM-05150A

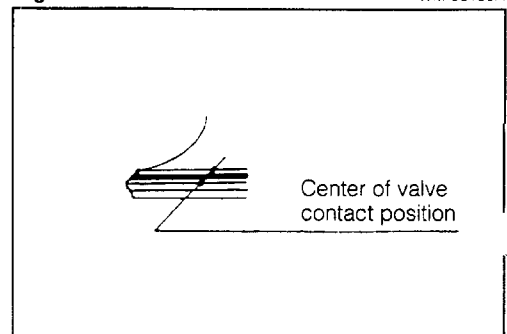


Fig. 5-132

WM-05151

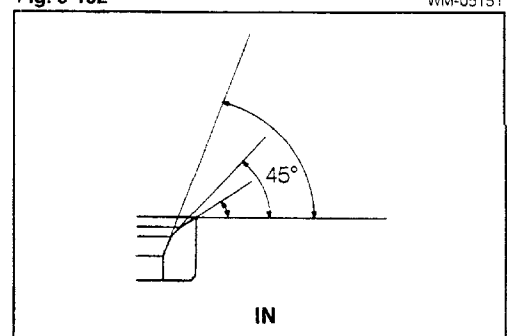


Fig. 5-133

WM-05152

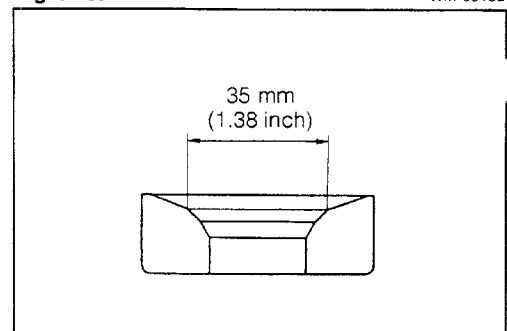


Fig. 5-134

WM-05153

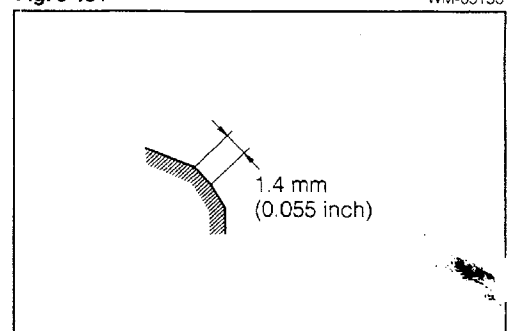


Fig. 5-135

WM-05154