

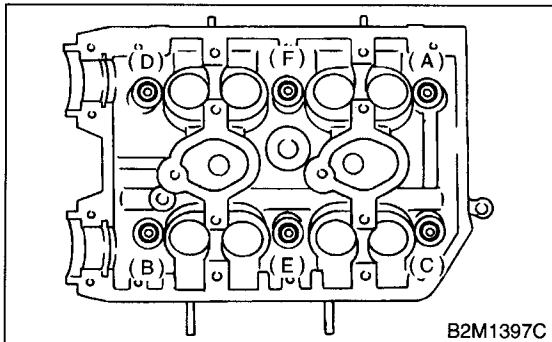
## 19. Cylinder Head Assembly

### A: REMOVAL

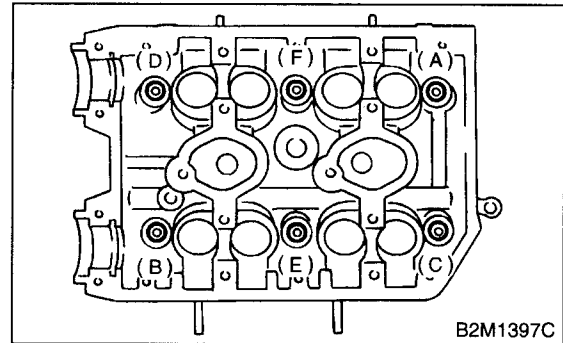
- 1) Remove the V-belt. <Ref. to ME(DOHC TURBO)-44, REMOVAL, V-belt.>
- 2) Remove the crankshaft pulley. <Ref. to ME(DOHC TURBO)-46, REMOVAL, Crankshaft Pulley.>
- 3) Remove the belt cover. <Ref. to ME(DOHC TURBO)-47, REMOVAL, Belt Cover.>
- 4) Remove the timing belt assembly. <Ref. to ME(DOHC TURBO)-48, REMOVAL, Timing Belt Assembly.>
- 5) Remove the camshaft sprocket. <Ref. to ME(DOHC TURBO)-57, REMOVAL, Camshaft Sprocket.>
- 6) Remove the intake manifold. <Ref. to FU(DOHC TURBO)-15, REMOVAL, Intake Manifold.>
- 7) Remove the bolt which installs the A/C compressor bracket on cylinder head.
- 8) Remove the camshaft. <Ref. to ME(DOHC TURBO)-59, REMOVAL, Camshaft.>
- 9) Remove the cylinder head bolts in alphabetical sequence shown in the figure.

#### CAUTION:

Leave bolts (A) and (D) engaged by three or four threads to prevent the cylinder head from falling.



- 10) While tapping the cylinder head with a plastic hammer, separate it from cylinder block. Remove the bolts (A) and (D) to remove the cylinder head.



- 11) Remove the cylinder head gasket.

#### CAUTION:

Do not scratch the mating surface of cylinder head and cylinder block.

- 12) Similarly, remove the right side cylinder head.

### B: INSTALLATION

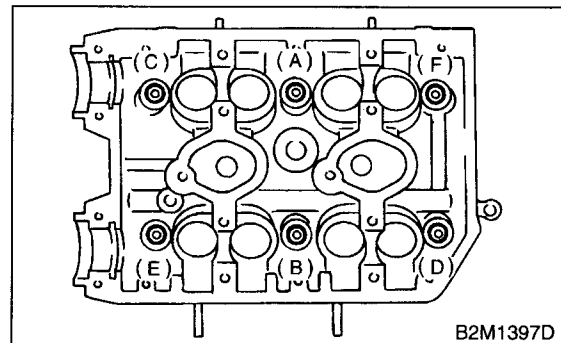
- 1) Install the cylinder head and gaskets on cylinder block.

#### CAUTION:

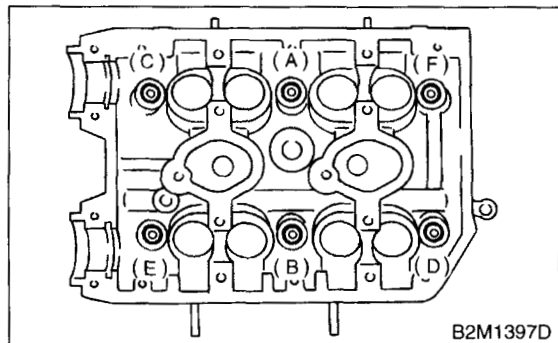
- Use new cylinder head gaskets.
- Be careful not to scratch the mating surface of cylinder head and cylinder block.

- 2) Tighten the cylinder head bolts.

- (1) Apply a coat of engine oil to washers and bolt threads.
- (2) Tighten all bolts to 29 N·m (3.0 kgf-m, 22 ft-lb) in alphabetical sequence. Then tighten all bolts to 69 N·m (7.0 kgf-m, 51 ft-lb) in alphabetical sequence.
- (3) Back off all bolts by 180° first; back them off by 180° again.
- (4) Tighten the bolts (A) and (B) to 34 N·m (3.5 kgf-m, 25 ft-lb).



(5) Tighten the bolts (C), (D), (E) and (F) to 15 N·m (1.5 kgf-m, 11 ft-lb).



(6) Tighten all bolts by 80 to 90° in alphabetical sequence.

**CAUTION:**

**Do not tighten the bolts more than 90°.**

(7) Further tighten all bolts by 80 to 90° in alphabetical sequence.

**CAUTION:**

**Ensure the total "re-tightening angle" [in the two previous steps] do not exceed 180°.**

3) Install the camshaft. <Ref. to ME(DOHC TURBO)-60, INSTALLATION, Camshaft.>

4) Install the A/C compressor bracket on cylinder head.

5) Install the intake manifold. <Ref. to FU(DOHC TURBO)-18, INSTALLATION, Intake Manifold.>

6) Install the camshaft sprocket. <Ref. to ME(DOHC TURBO)-57, INSTALLATION, Camshaft Sprocket.>

7) Install the timing belt assembly. <Ref. to ME(DOHC TURBO)-50, INSTALLATION, Timing Belt Assembly.>

8) Install the belt cover. <Ref. to ME(DOHC TURBO)-47, INSTALLATION, Belt Cover.>

9) Install the crankshaft pulley. <Ref. to ME(DOHC TURBO)-46, INSTALLATION, Crankshaft Pulley.>

10) Install the V-belt. <Ref. to ME(DOHC TURBO)-44, INSTALLATION, V-belt.>

## C: DISASSEMBLY

1) Remove the valve shims and valve lifters.

2) Compress the valve spring and remove the valve spring retainer key. Remove each valve and valve spring.

ST1 498267600 CYLINDER HEAD TABLE

ST2 499718000 VALVE SPRING REMOVER

**CAUTION:**

- Keep the removed parts in order for re-installing in their original positions.

- Mark each valve to prevent confusion.

- Use extreme care not to damage the lips of the intake valve oil seals and exhaust valve oil seals.

