

B2 ON-VEHICLE MAINTENANCE (CYLINDER HEAD GASKET)

CYLINDER HEAD GASKET PREPARATION SST

49 S120 710

Holder, coupling flange

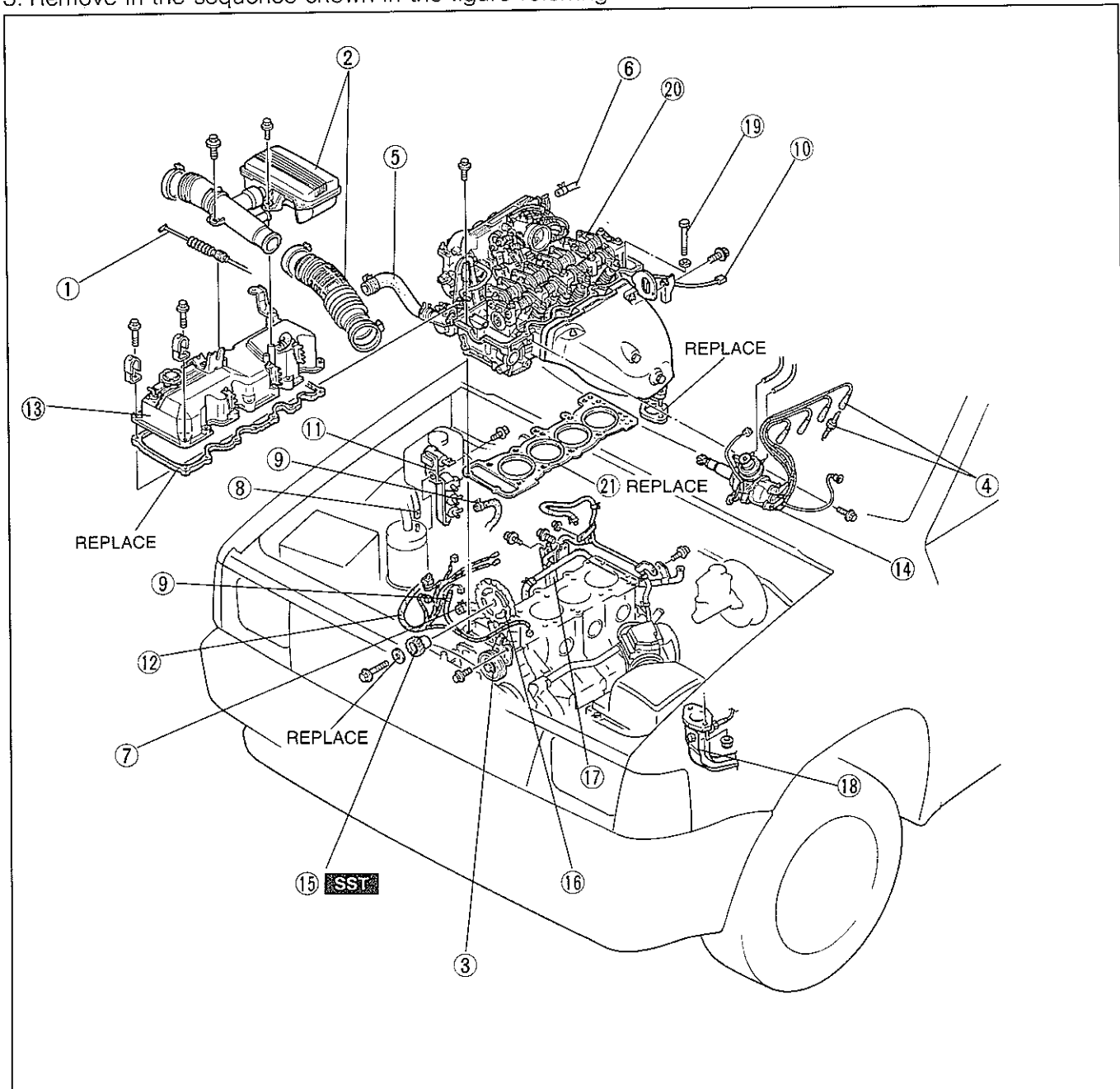


9MU0B2-036

Removal

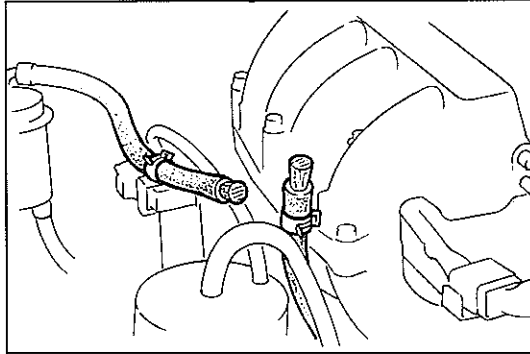
Warning: Release the fuel pressure. (Refer to Section F2.)

1. Disconnect the negative battery cable.
2. Drain the engine coolant.
3. Remove in the sequence shown in the figure referring to the **Removal note**.



- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Accelerator cable 2. Air intake pipe and resonance chamber 3. A/C drive belt and idler 4. High-tension lead and spark plug 5. Radiator upper hose 6. Brake vacuum hose 7. Oil cooler water hose 8. Canister hose 9. Fuel hose 10. Oxygen sensor connector 11. Solenoid valves | <ol style="list-style-type: none"> 12. Emission harness connectors 13. Cylinder head cover 14. Distributor 15. Distributor drive gear 16. Camshaft pulley 17. Intake manifold bracket 18. Exhaust pipe and bracket 19. Cylinder head bolt 20. Cylinder head 21. Cylinder head gasket |
|--|--|

9MU0B2-038



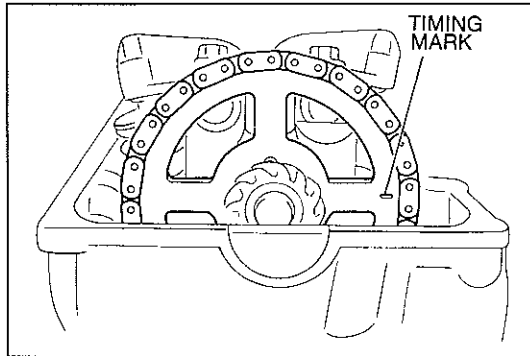
9MU0B2-039

Removal note Fuel hose

Note

- a) Cover the hose with a rag because fuel will spray out when disconnecting.
- b) Keep sparks and open flame away from the fuel area.

Plug the disconnected hoses to avoid fuel leakage.



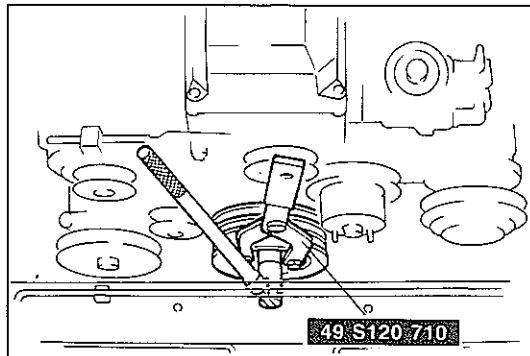
9MU0B2-040

Distributor

1. Turn the crankshaft pulley until the timing mark of the camshaft pulley is 90 degrees to the right as shown.
2. Check that the crankshaft pulley timing mark (yellow) is aligned with the indicator pin.
3. Remove the distributor.

Caution

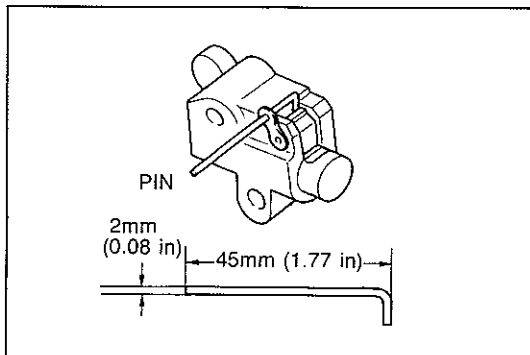
Do not turn the crankshaft during removal and installation.



9MU0B2-041

Distributor drive gear

1. Lock the crankshaft pulley with the **SST**.
2. Remove the distributor drive gear.



9MU0B2-042

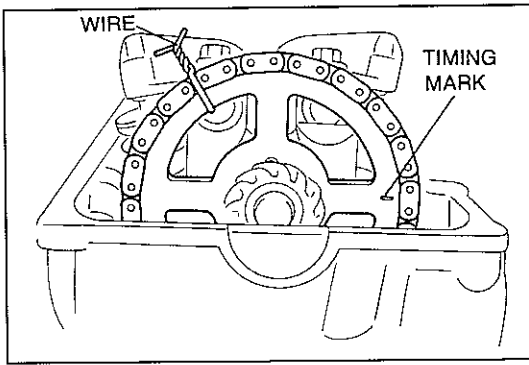
Camshaft pulley

1. Remove the service cover on the chain cover.
2. Push the chain adjuster sleeve in toward the left and insert the pin as shown into the lever hole to hold it.

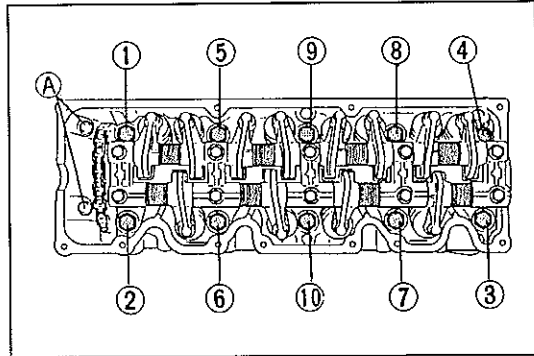
Caution

Be especially careful that the pin does not fall.

B2 ON-VEHICLE MAINTENANCE (CYLINDER HEAD GASKET)



9MU0B2-043



9MU0B2-044

3. Secure the camshaft pulley and the chain with a wire as shown.
4. Remove the camshaft pulley off the camshaft dowel pin.

Cylinder head bolt

1. Remove the bolts (A).
2. Loosen the remaining cylinder head bolts in two or three steps in the order shown in the figure.

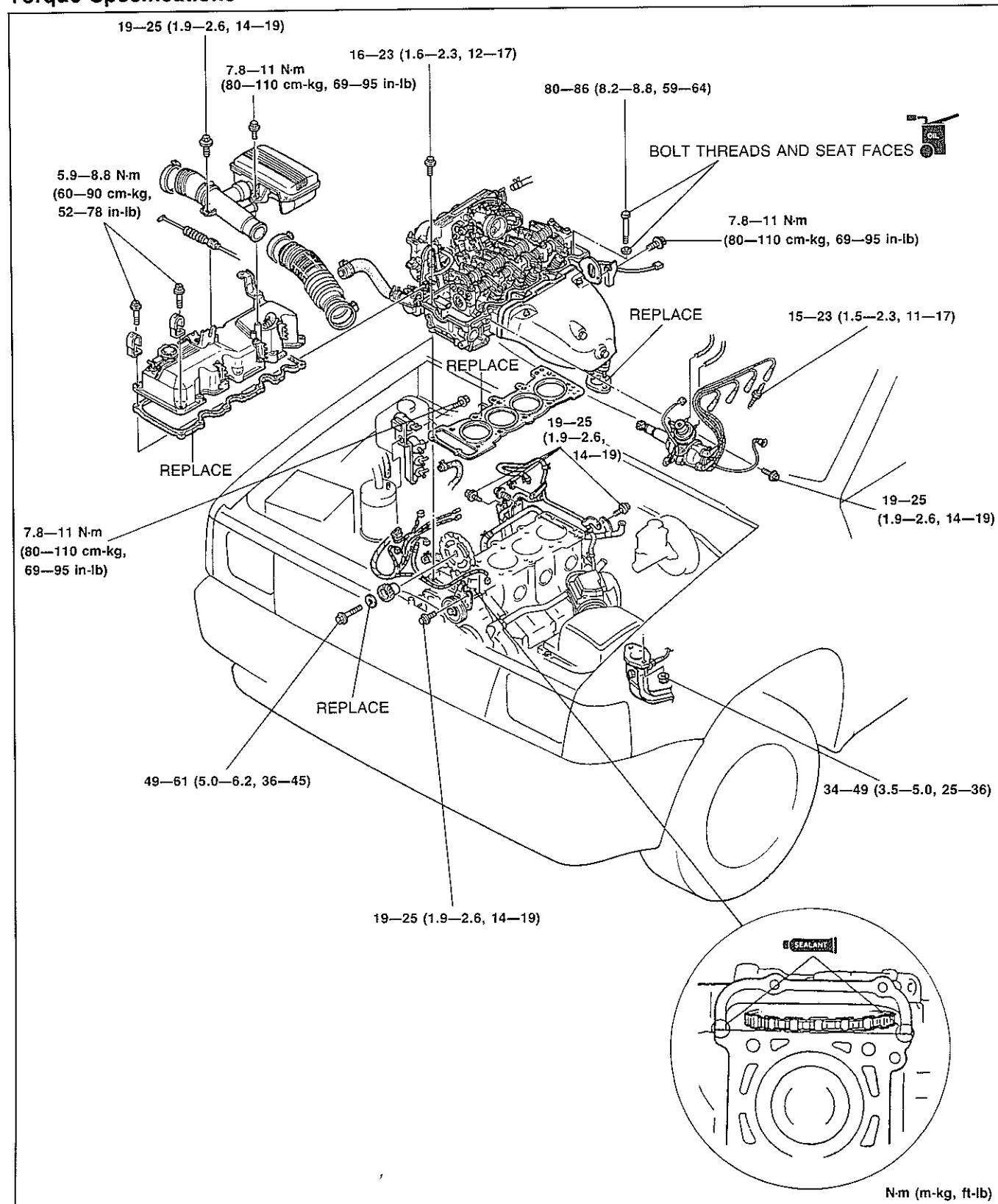
Installation

Install in the reverse order of removal referring to the **Installation note**.

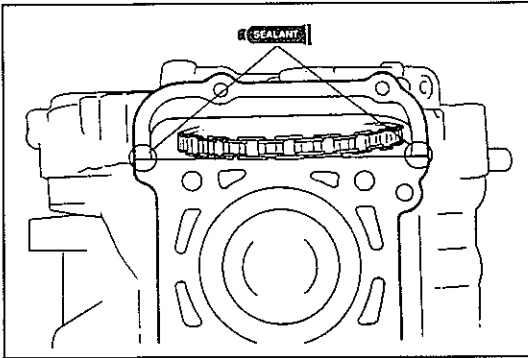
Note

Position the hose clamp in the original location on the hose, and squeeze the clamp lightly with large pliers to ensure a good fit.

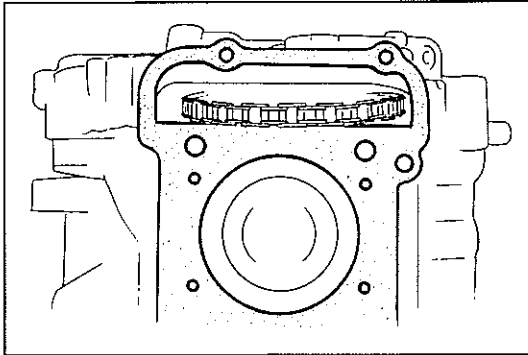
Torque Specifications



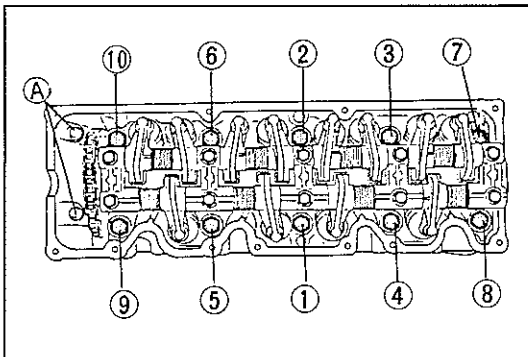
B2 ON-VEHICLE MAINTENANCE (CYLINDER HEAD GASKET)



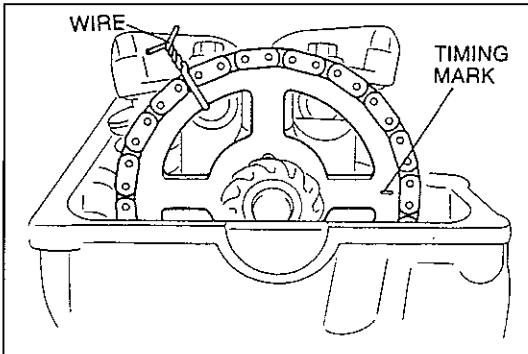
9MU0B2-046



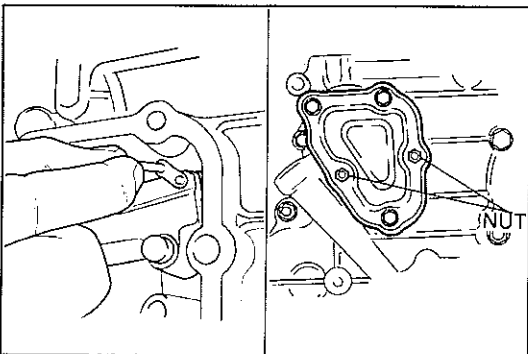
9MU0B2-047



9MU0B2-048



9MU0B2-049



9MU0B2-050

Installation note

Cylinder head gasket

1. Thoroughly remove all dirt and oil from the top of the cylinder block with a rag.
2. Apply silicone sealant to the shaded area.

3. Place a new cylinder head gasket in position.

Cylinder head

1. Set the cylinder head in place.
2. Apply engine oil to the bolt threads and seat faces.
3. Tighten the cylinder head bolts in two or three steps in the order shown in the figure.

Tightening torque:

80—86 N·m (8.2—8.8 m·kg, 59—64 ft·lb)

4. Tighten the remaining small cylinder head bolts (A).

Tightening torque:

16—23 N·m (1.6—2.3 m·kg, 12—17 ft·lb)

Camshaft pulley

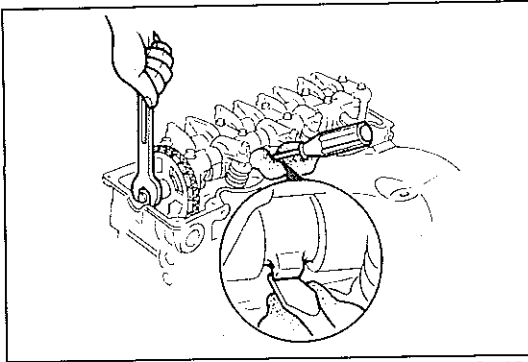
1. Install the camshaft pulley onto the camshaft dowel pin.
2. Remove the wire securing the camshaft pulley and the chain.

3. Remove the retaining pin from the chain adjuster.
4. Install the service cover with a new gasket.

Tightening torque:

Bolt: 7.8—11 N·m (80—110 cm·kg, 69—95 in·lb)

Nut: 6.9—9.8 N·m (70—100 cm·kg, 61—87 in·lb)



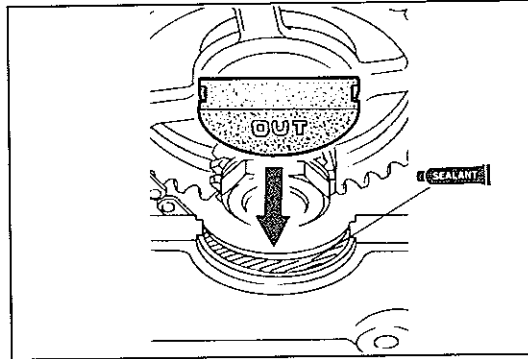
9MU0B2-051

Distributor drive gear

1. Install the distributor drive gear with a new washer and lock bolt.
2. Hold the camshaft with a screwdriver as shown in the figure.
3. Tighten the lock bolt.

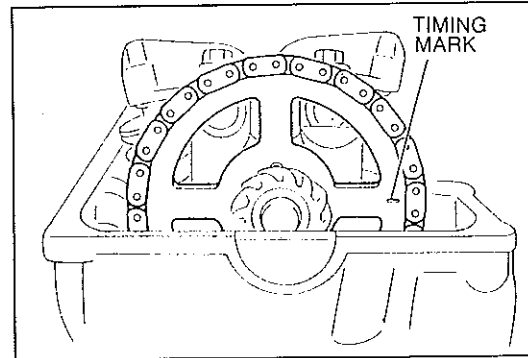
Tightening torque:

49—61 N·m (5.0—6.2 m·kg, 36—45 ft·lb)



9MU0B2-052

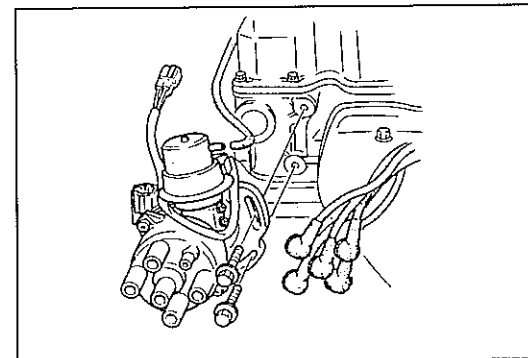
4. Apply sealant to the shaded area as shown, and install the seal cover.



9MU0B2-053

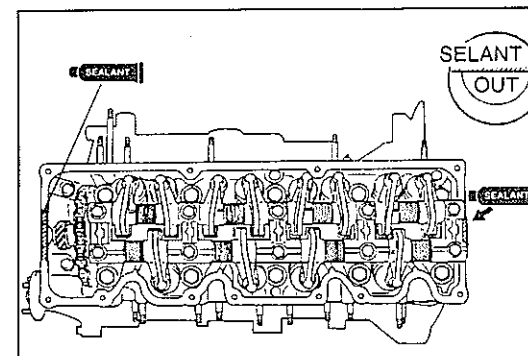
Distributor

1. Verify that the timing mark on the camshaft pulley is 90 degrees to the right, as shown.
2. Verify that the crankshaft pulley timing mark (yellow) is aligned with the indicator pin.



9MU0B2-054

3. Apply engine oil to the O-ring and install it onto the distributor.
4. Apply engine oil to the distributor driven gear.
5. Align the marks and install the distributor.
6. Loosely tighten the distributor mounting bolt.



9MU0B2-055

Cylinder head cover

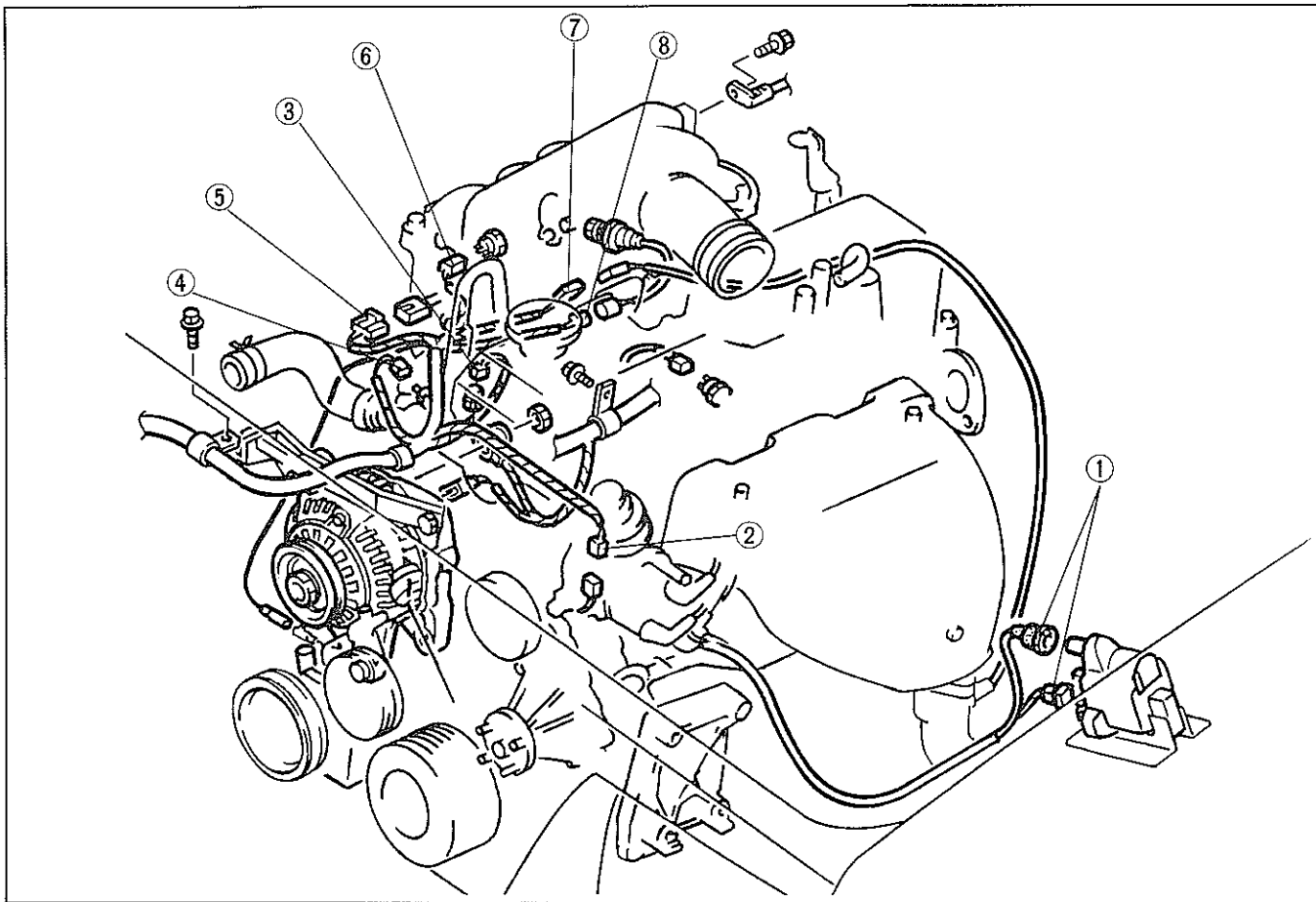
1. Apply engine oil to the valves, rocker arms and timing chain.
2. Apply silicone sealant to the shaded areas shown in the figure.
3. Install the cylinder head cover.

Tightening torque:

5.9—8.8 N·m (60—90 cm·kg, 52—78 in·lb)

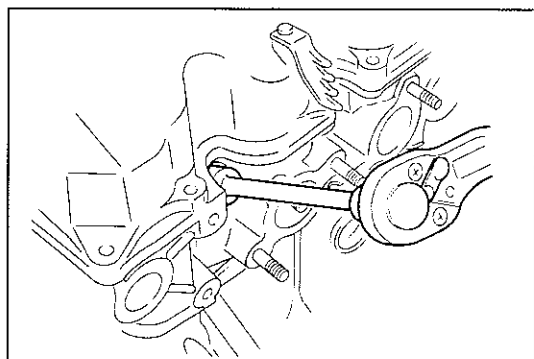
B2 ON-VEHICLE MAINTENANCE (CYLINDER HEAD GASKET)

Emission harness connectors



9MU0B2-056

- | | |
|-----------------------|----------------------------|
| 1. IG coil | 5. Injector harness |
| 2. Distributor | 6. Intake air thermosensor |
| 3. Water thermosensor | 7. Oxygen sensor |
| 4. Heat gauge unit | 8. Idle switch |



9MU0B2-057

Spark plug

1. Apply anti-seize compound or molybdenum-based lubricant to the spark plug threads.
2. Install the spark plugs.

Tightening torque:

15—23 N·m (1.5—2.3 m·kg, 11—17 ft·lb)

Steps After Installation

1. Add engine coolant to the specified levels.
2. Connect the negative battery cable.
3. Start the engine and do the following:
 - (1) Check for leakage of engine coolant.
 - (2) Perform engine adjustments if necessary.
 - (3) Recheck the oil and coolant levels.

9MU0B2-058