

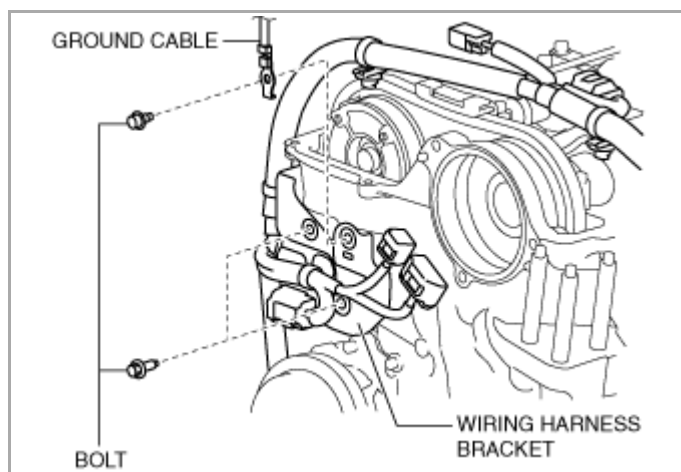
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2006 MAZDA 2 / Demio OEM Service and Repair Workshop Manual

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2. Set the ground cable and wiring harness bracket shown in the figure aside.



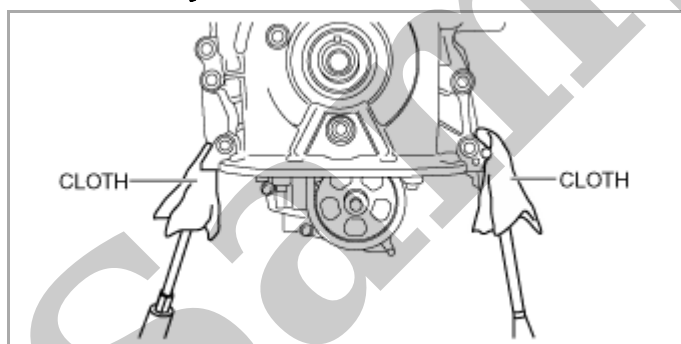
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3. Remove the engine front cover installation bolts.

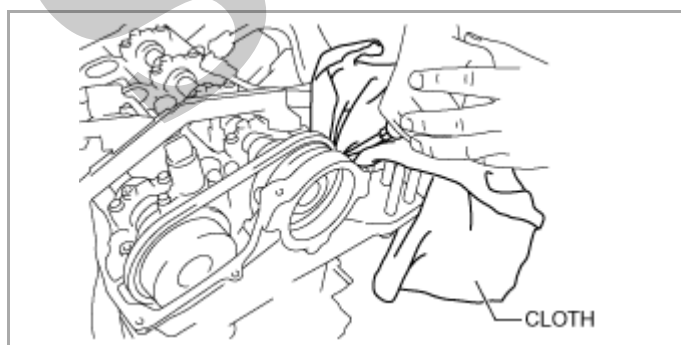
4. Using a screwdriver wrapped in a cloth, peel the silicone sealant away a little at a time, and remove the engine front cover.

Caution

- Do not apply excessive force to the screwdriver. Otherwise, the engine front cover could be damaged.
- Be careful not to scratch or damage the seal surface. Otherwise, it could cause oil leakage.



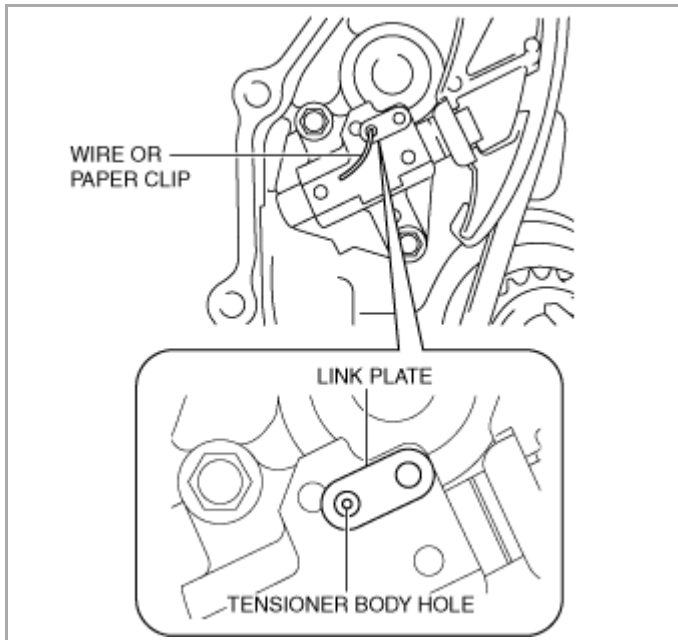
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Timing Chain Removal Note

1. Rotate the crankshaft clockwise to align the timing marks and the key position as shown in the figure, and set cylinder No.1 at top dead center (TDC).



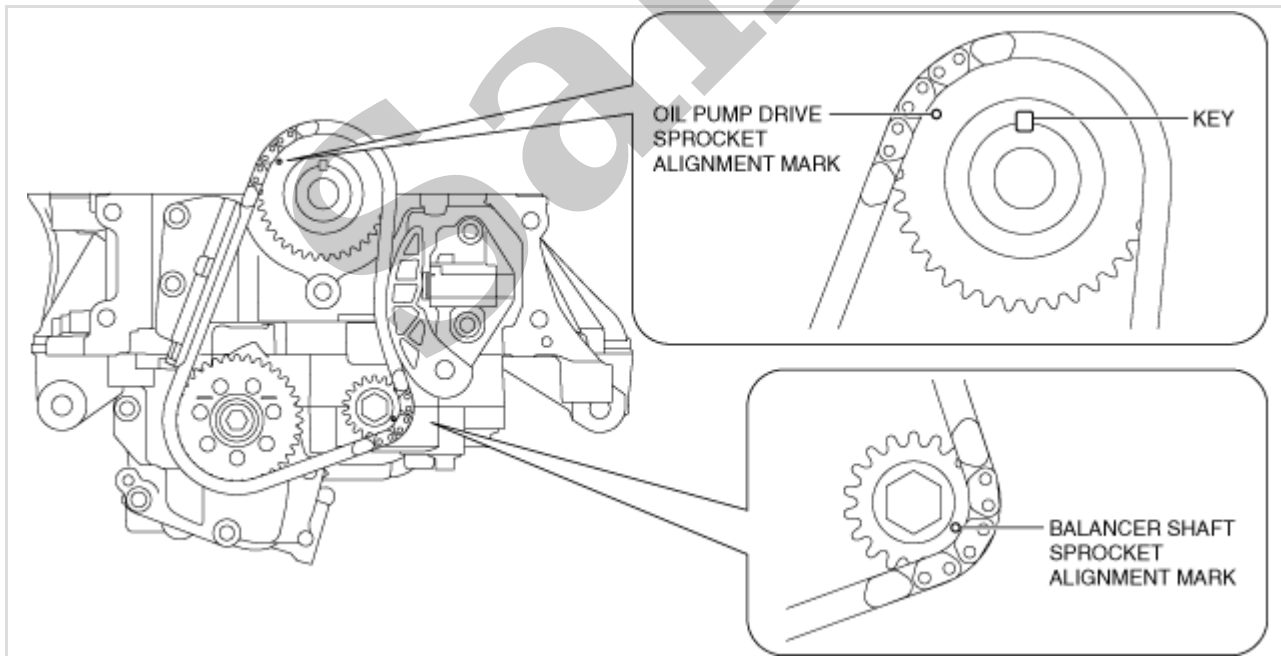
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7.Remove the chain tensioner, tensioner arm, and the chain guide (No.1).

8.Remove the timing chain.

Oil Pump Chain Removal Note

1.Verify that the balancer shaft sprocket alignment mark and key are aligned to the positions shown in the figure.

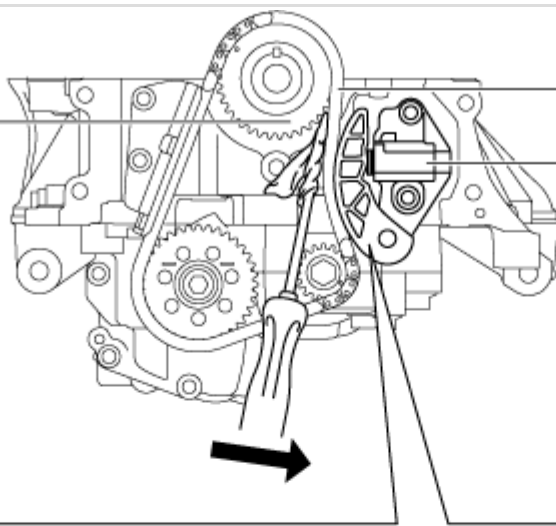


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2.Slightly loosen the balancer shaft sprocket installation bolt using the following procedure:

Note

OIL PUMP DRIVE
SPROCKET

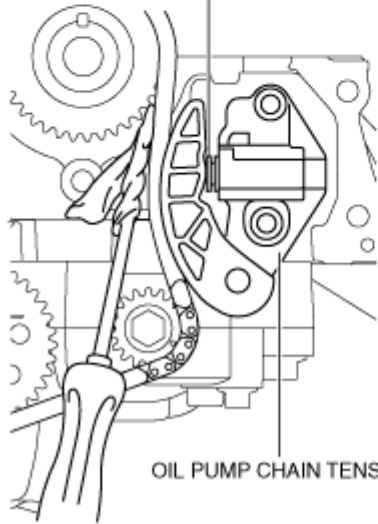


OIL PUMP CHAIN

OIL PUMP CHAIN TENSIONER

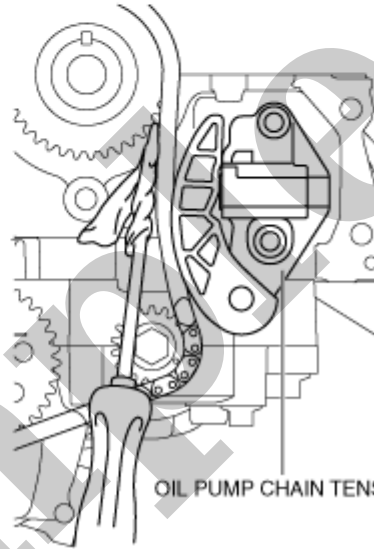
BEFORE PRESSING

PLUNGER



OIL PUMP CHAIN TENSIONER

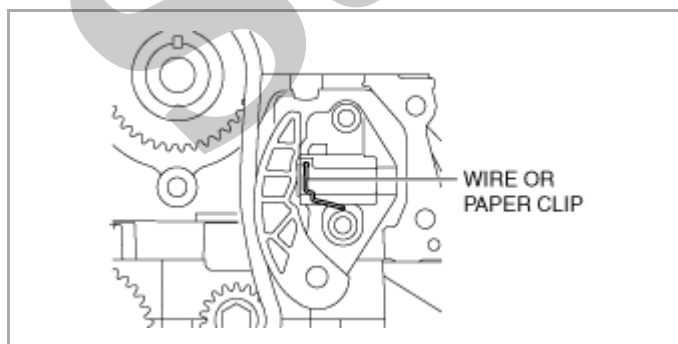
AFTER PRESSING



OIL PUMP CHAIN TENSIONER

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6. Insert a wire with an approx. diameter of 1.4 mm (0.055 in) or a paper clip into the body hole of the oil pump chain tensioner with the plunger pressed.



WIRE OR
PAPER CLIP

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Note

- The wire or paper clip secures the plunger, and the tension can be released.

7. Remove the oil pump chain tensioner.

8. Remove the oil pump chain and balancer shaft sprocket as a single unit.

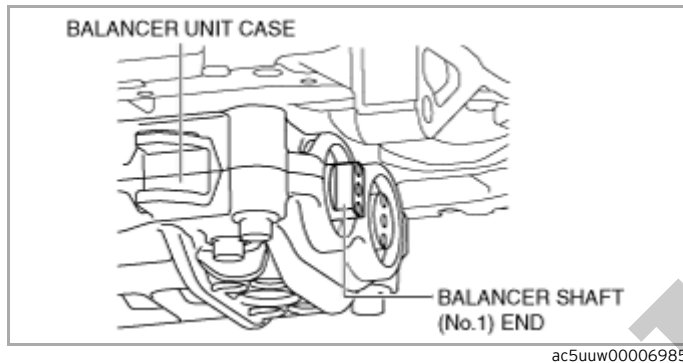
26–36 N·m {2.7–3.6 kgf·m, 20–26 ft·lbf}

(3) Remove the temporarily assembled crankshaft pulley lock bolt.

9. Tighten the balancer shaft sprocket installation bolt using the following procedure:

Note

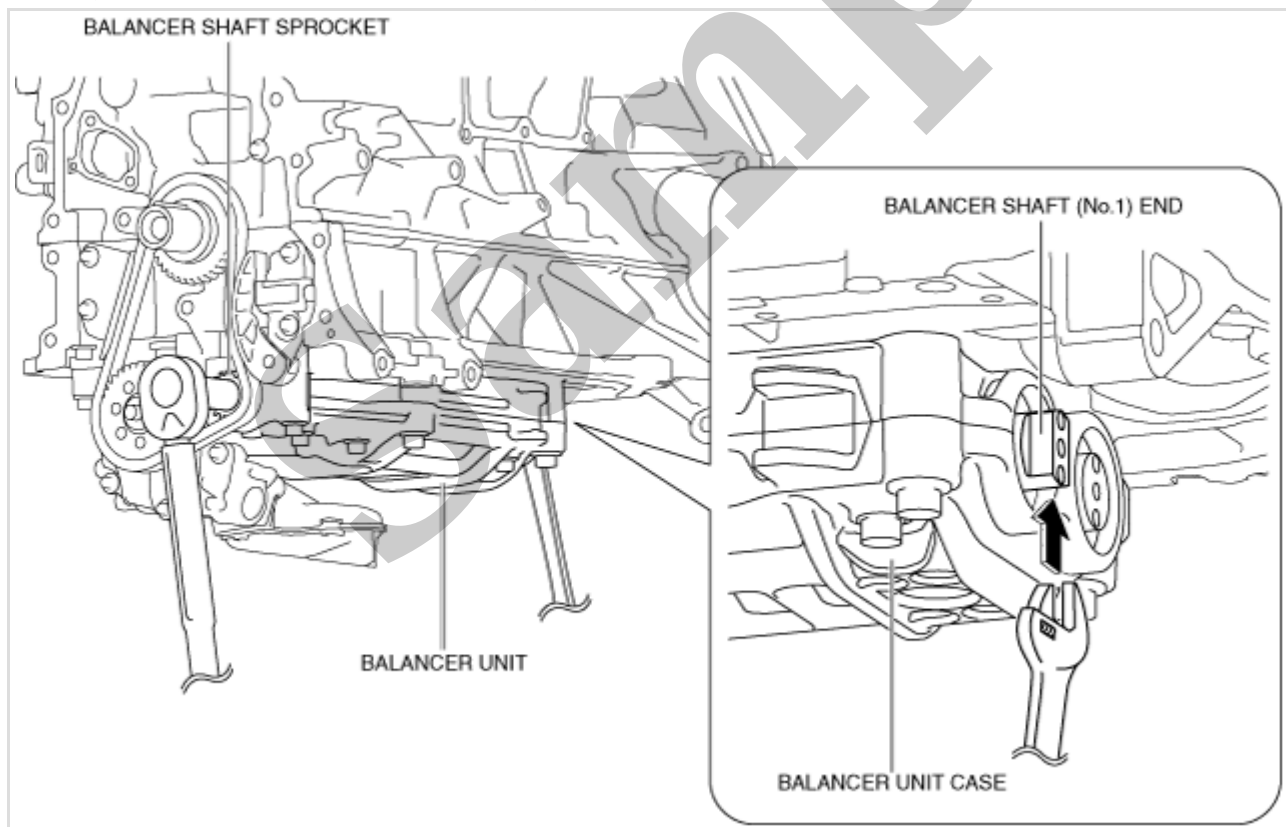
• The balancer unit is constructed such that the end of the balancer shaft (No.1) protrudes from the balancer unit case. The balancer shaft (No.1) can be locked against rotation by holding the end using a wrench.



(1) Lock the balancer shaft (No.1) against rotation as shown in the figure.

Caution

• To prevent damage to the balancer unit, protect the end of the balancer shaft (No.1) with a rag.



(2) Tighten the balancer shaft sprocket installation bolt.

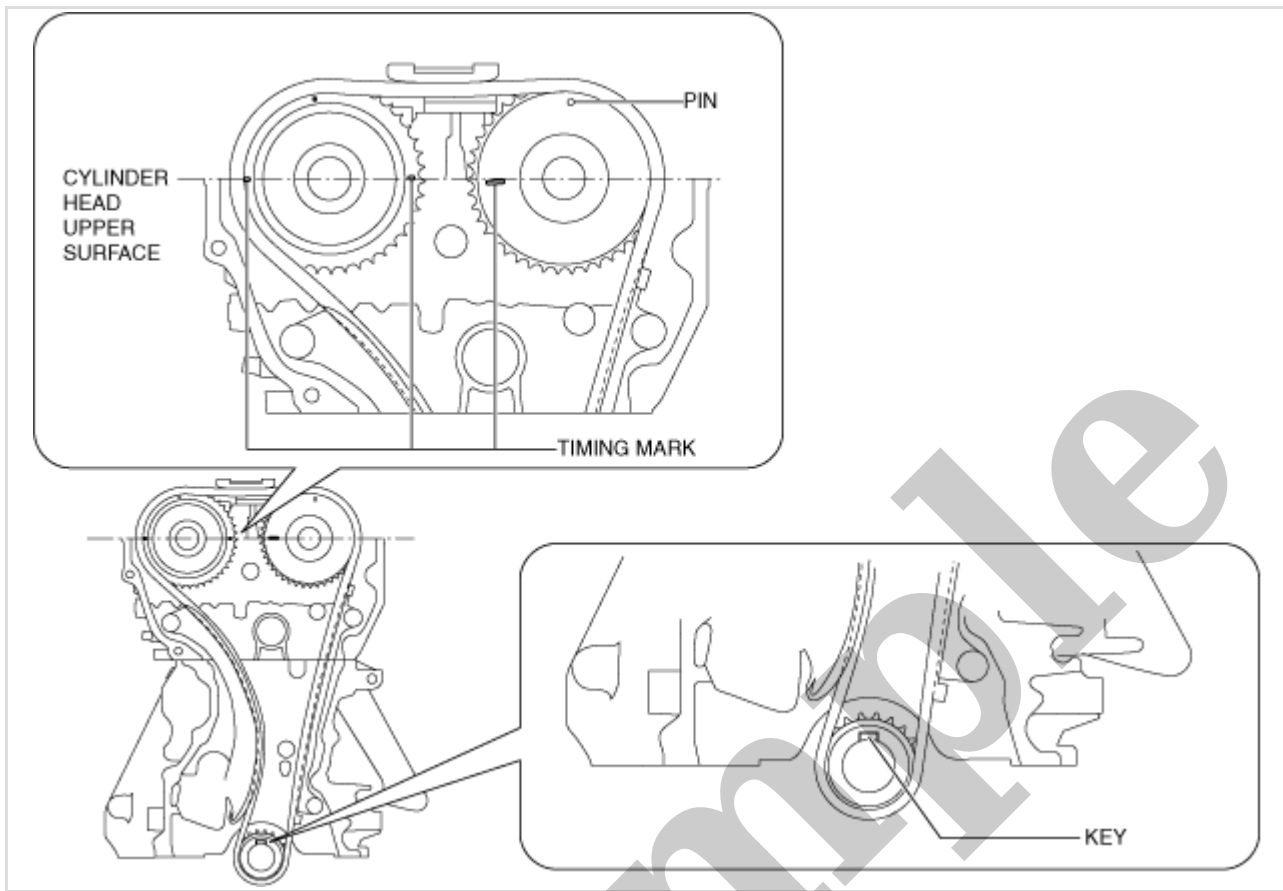
Tightening torque

52–58 N·m {5.4–5.9 kgf·m, 39–42 ft·lbf}

10. Remove the wire or paper clip installed to the oil pump chain tensioner and apply tension to the oil pump chain.

7. Verify that there is no looseness in the timing chain, and re-verify that each sprocket is in the specified location.

8. Rotate the crankshaft clockwise two turns and inspect the valve timing.



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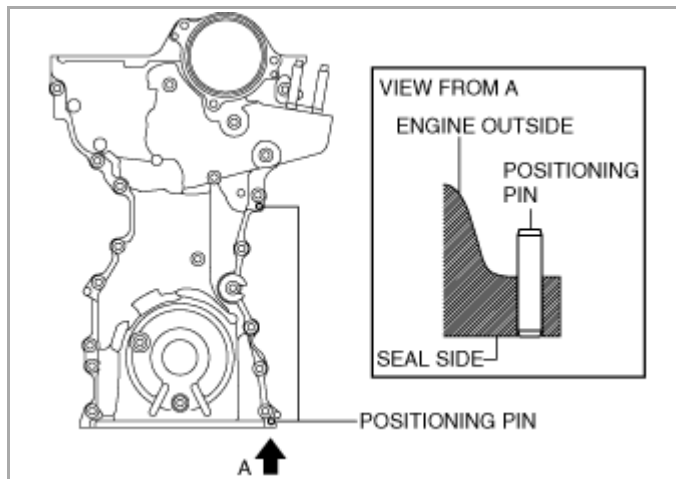
Note

- The timing mark of SKYACTIV-G 2.5 is not parallel with the upper surface of the cylinder head.

Engine Front Cover Installation Note

Note

- For a new engine front cover, the positioning pins in the two locations shown in the figure project to the outside of the engine.

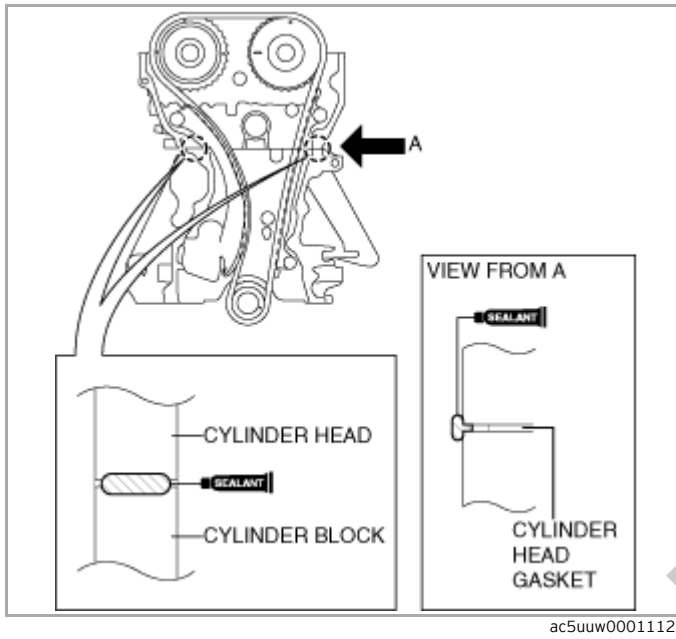


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1. If the engine front cover is newly replaced, tap the positioning pins in the two locations to the seal surface side.

- Apply the silicone sealant so that it goes into the cylinder head gasket.

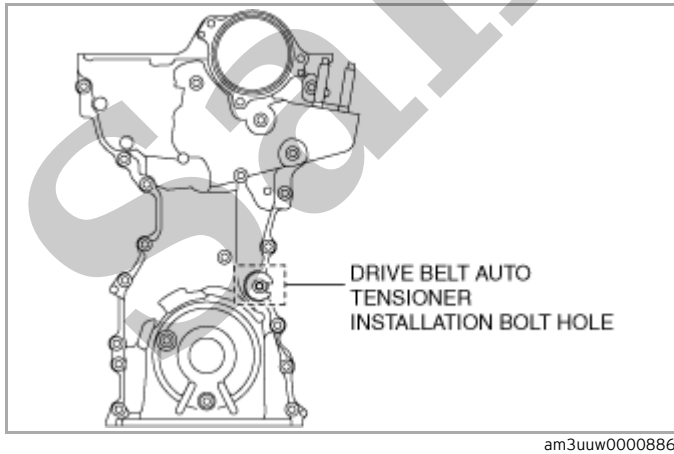
6. Apply silicone sealant (TB1217D or equivalent) to the areas shown in the figure.



7. Install the engine front cover to the engine.

Note

- Temporarily install an appropriate bolt to the drive belt auto tensioner installation bolt hole to prevent:
 - A silicone sealant adhesion malfunction in the drive belt auto tensioner installation bolt hole.
 - A bolt mis-installation due to silicone sealant hardening.

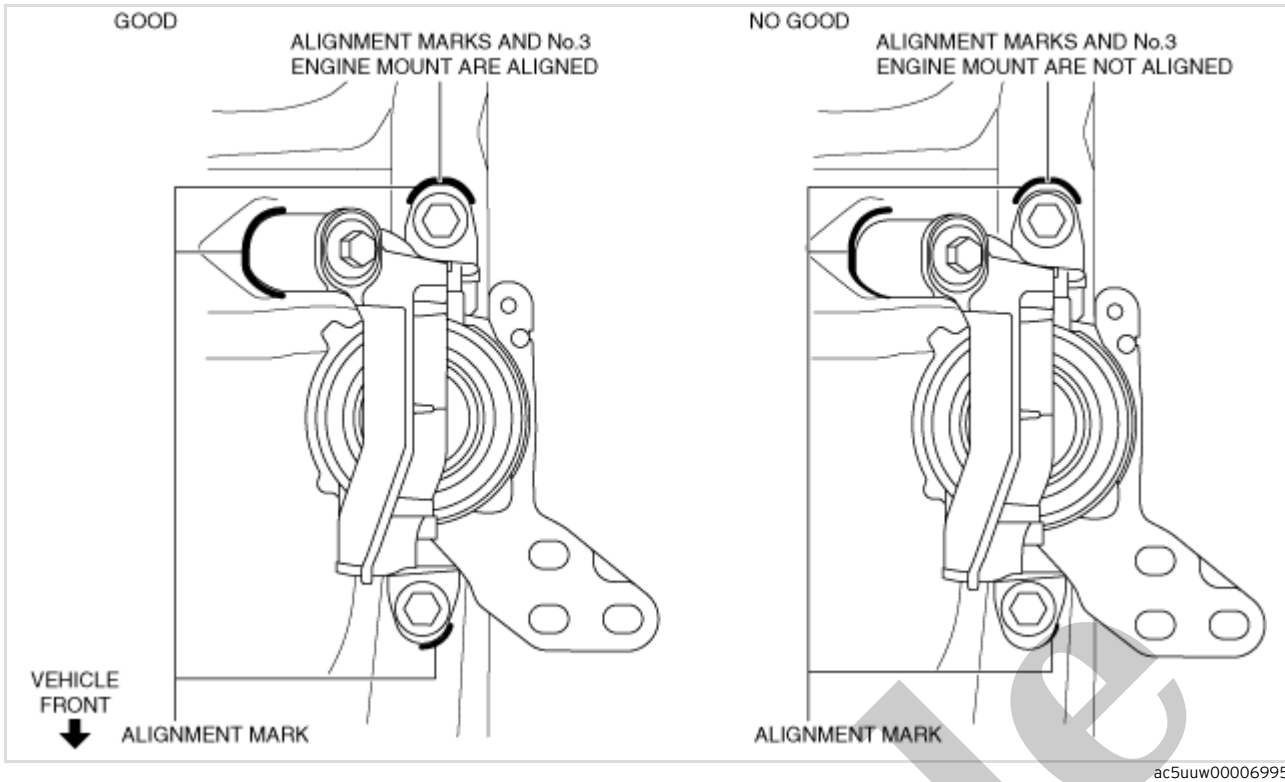


8. Prepare an appropriate M8 x 1.25 bolt (length 40 mm {1.6 in}).

Caution

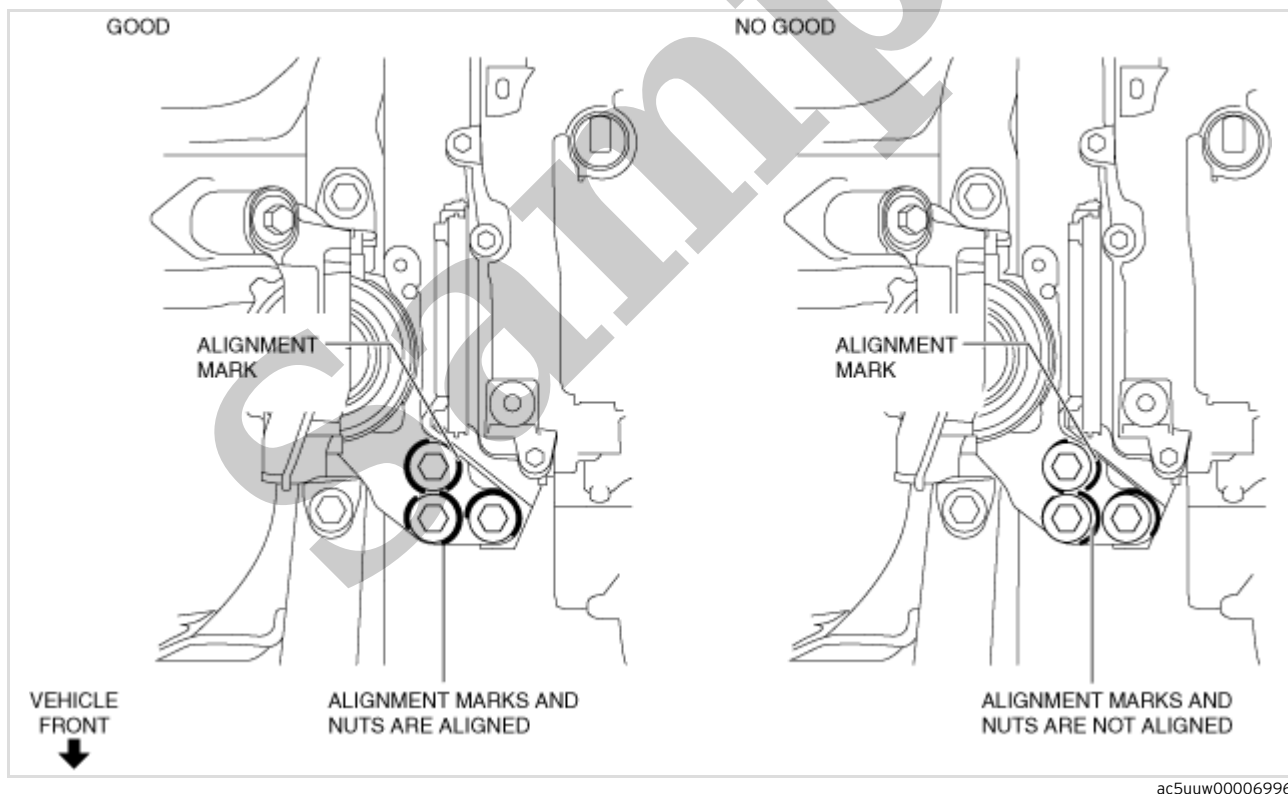
- For the number 10 bolt of the tightening order, install the bolts with new washer.

9. Tighten the engine front cover installation bolts in the order shown in the figure.



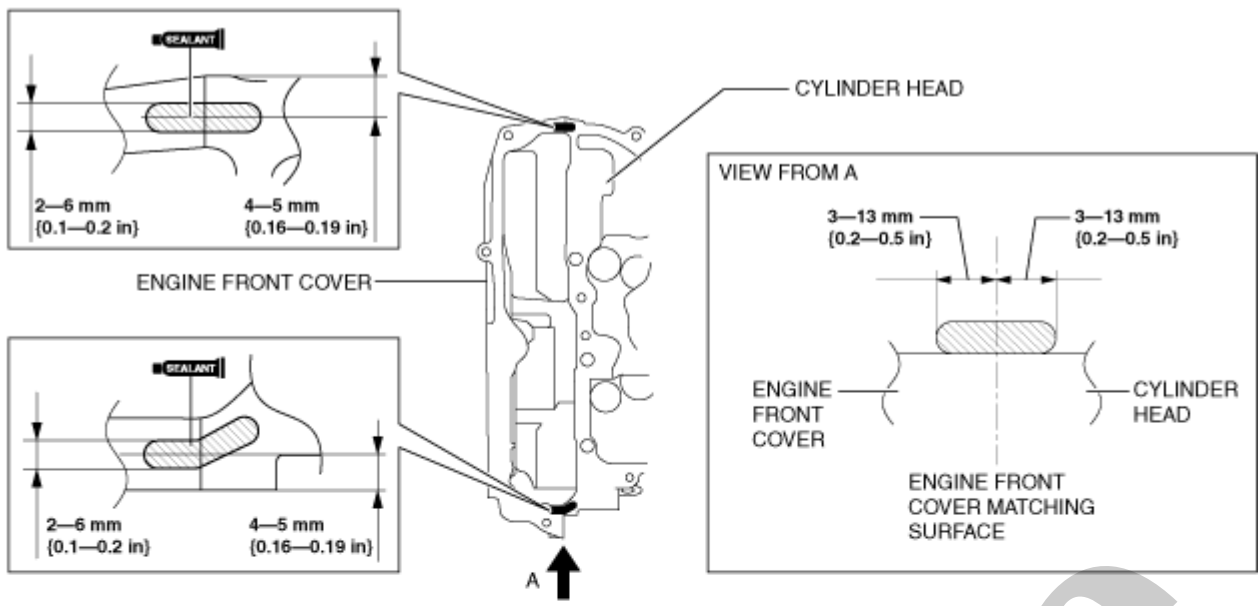
(2) Temporarily tighten the nuts shown in the figure while aligning the alignment marks of the No.3 engine mount and nuts.

- If the alignment marks are not aligned, align the alignment marks while slightly moving the engine and temporarily tighten the nuts.

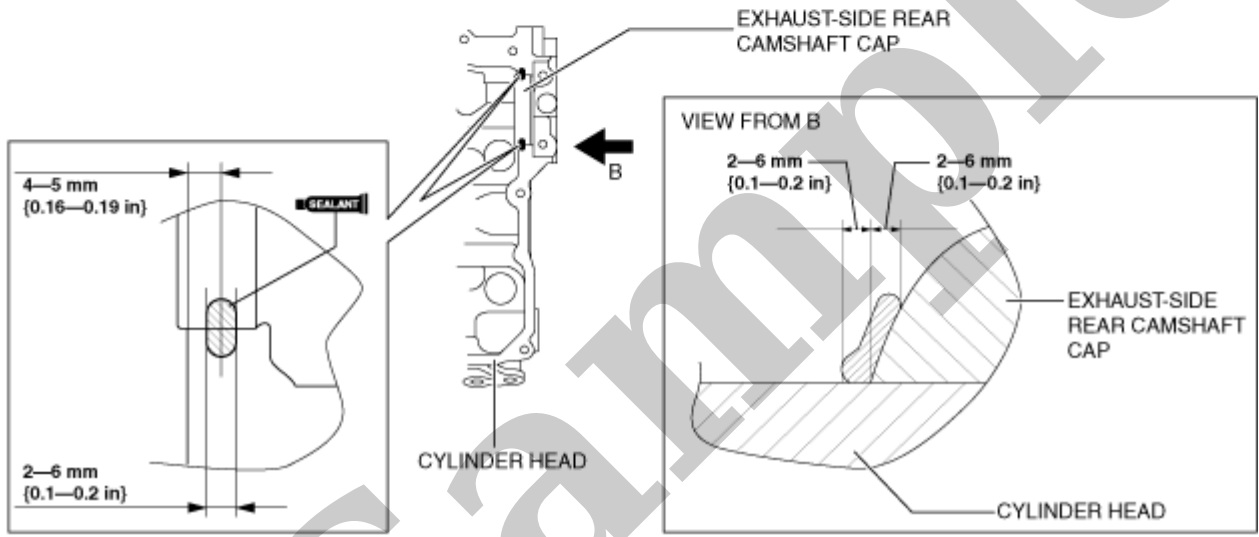


2. Tighten the No.3 engine mount installation bolts and nuts in the order as shown in the figure.

ENGINE FRONT SIDE



ENGINE REAR SIDE

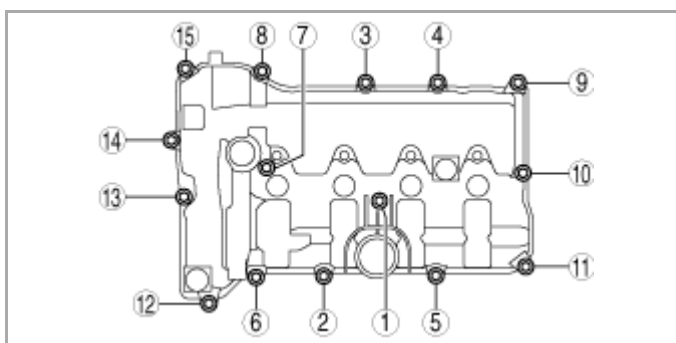


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3. Install the cylinder head cover.

4. Temporarily tighten the cylinder head cover bolts.

5. Tighten the cylinder head cover bolts in the order shown in the figure.



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OIL CONTROL VALVE (OCV) REMOVAL/INSTALLATION [SKYACTIV-G 2.5 (WITHOUT CYLINDER DEACTIVATION)]

SM2897258

id0110t280130

Warning

- A hot engine can cause severe burns. Turn off the engine and wait until it is cool before servicing.

1. Disconnect the negative battery terminal. (See [NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.](#))

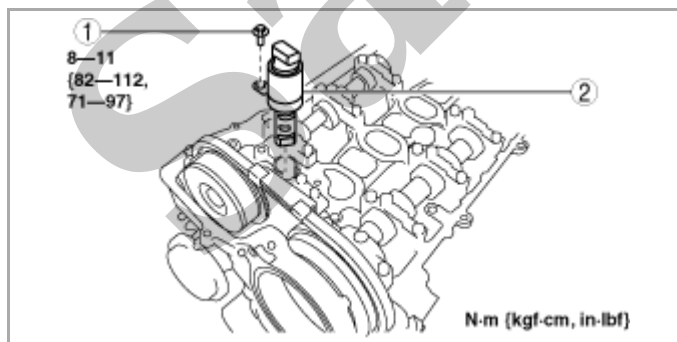
2. Remove the plug hole plate. (See [PLUG HOLE PLATE REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\].](#))

3. Remove the ignition coil/ion sensors. (See [IGNITION COIL/ION SENSOR REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\].](#))

4. Remove the cylinder head cover. (See [TIMING CHAIN REMOVAL/INSTALLATION \[SKYACTIV-G 2.5 \(WITHOUT CYLINDER DEACTIVATION\)\].](#))

5. Remove in the order indicated in the table.

6. Install in the reverse order of removal.



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1	OCV installation bolt
2	OCV