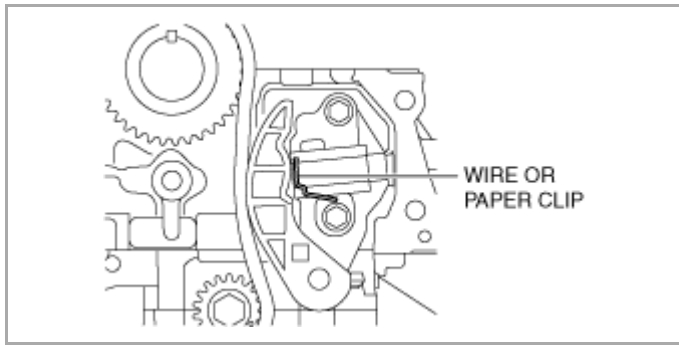


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2004 MAZDA Mazda speed MX-5 / Miata OEM Service and Repair Workshop Manual

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Note

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

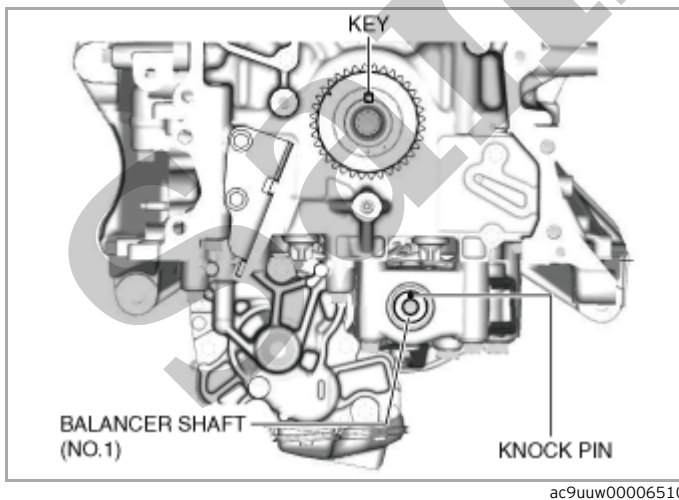
7.Remove the oil pump chain tensioner.

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

9.Remove the oil pump driven sprocket.

Oil Pump Chain Installation Note

1.Verify that the key and knock pin are aligned to the positions shown in the figure.

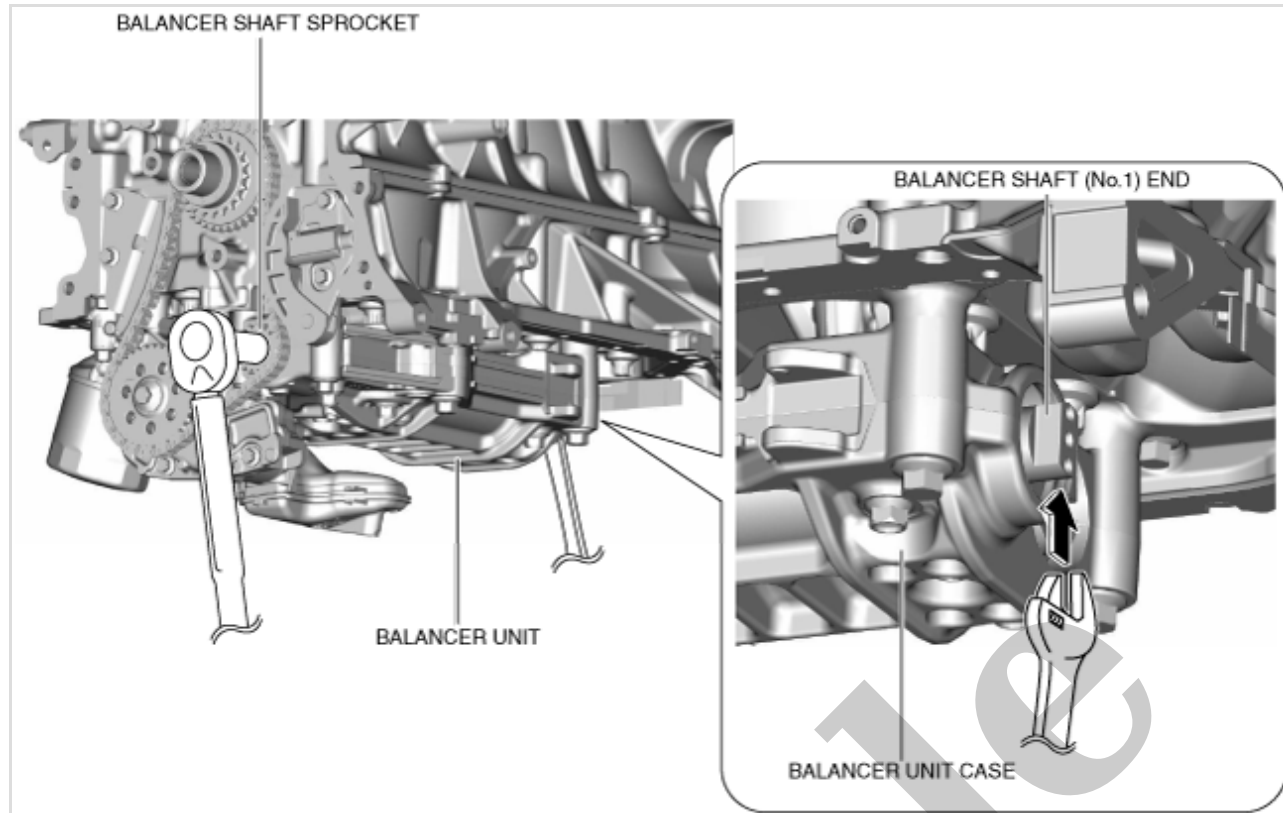


- If they are not in the positions shown in the figure, rotate the crankshaft and balancer shaft (No.1) to set cylinder No.1 to top dead center (TDC).

2.Temporarily assemble the oil pump driven sprocket.

3.Temporarily tighten the oil pump driven sprocket installation bolt.

4.Align the oil pump chain alignment mark with the balancer shaft sprocket alignment mark.



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(2) Tighten the balancer shaft sprocket installation bolt.

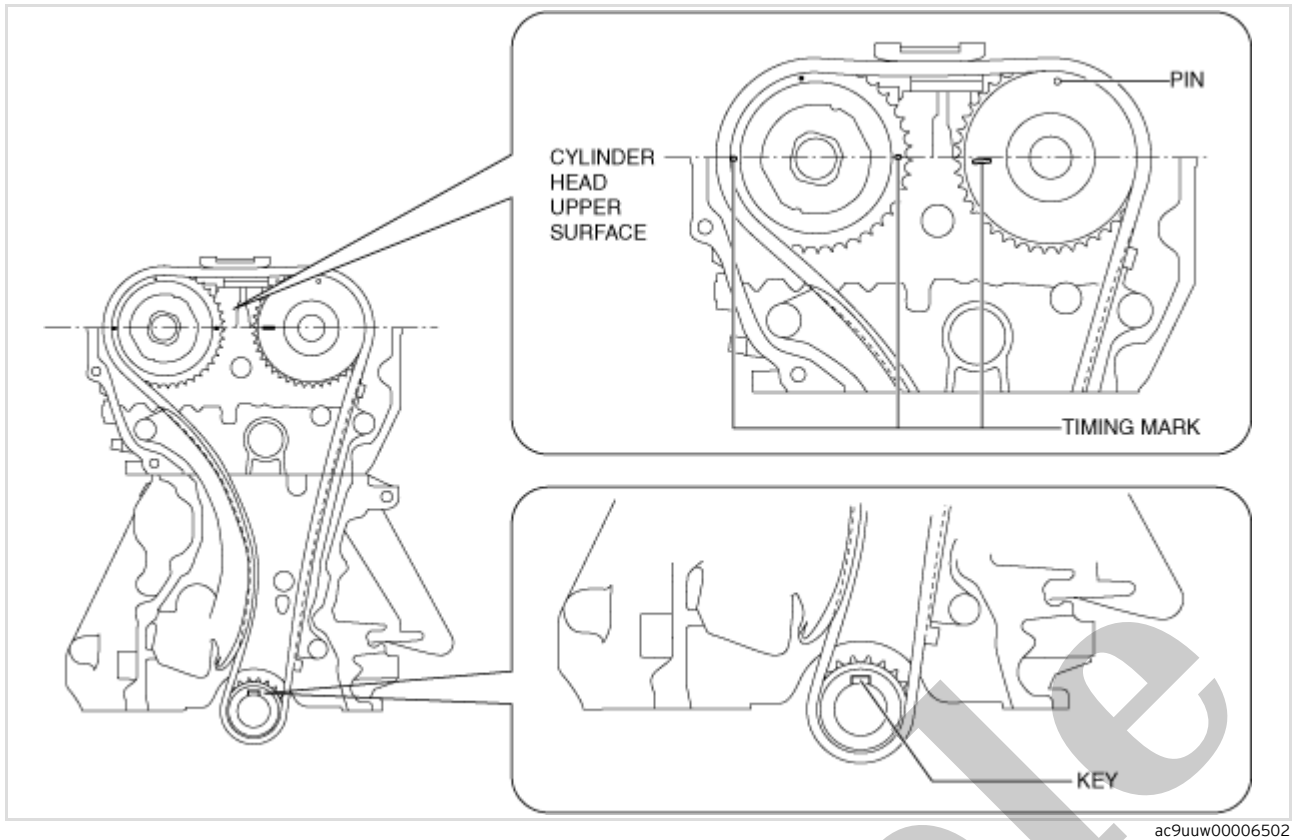
52–58 N·m {5.4–5.9 kgf·m, 39–42 ft·lbf}

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

- If a new oil pump chain tensioner is used, remove the installed stopper.

Timing Chain Installation Note

1. Verify that the timing marks and the key are aligned to the position shown in the figure.



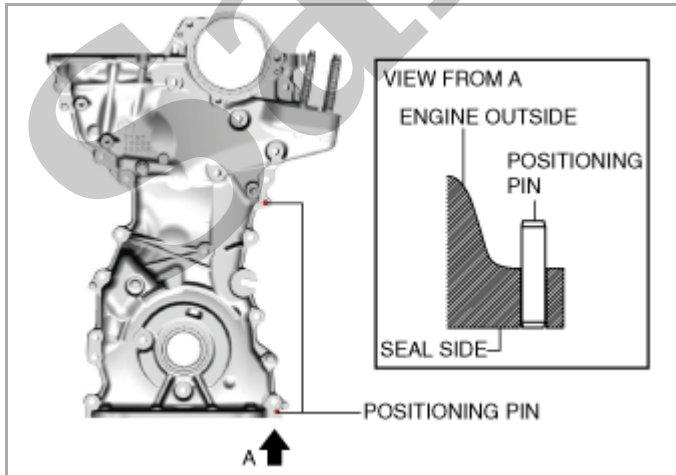
Note

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

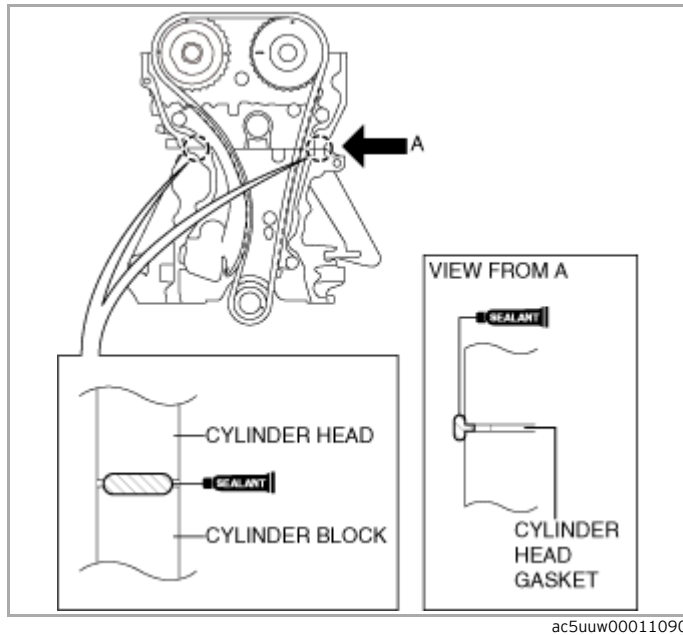
Engine Front Cover Installation Note

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.



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



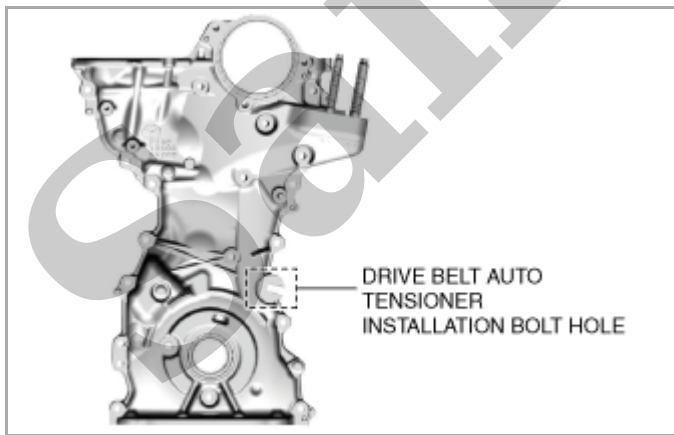
Caution

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

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.

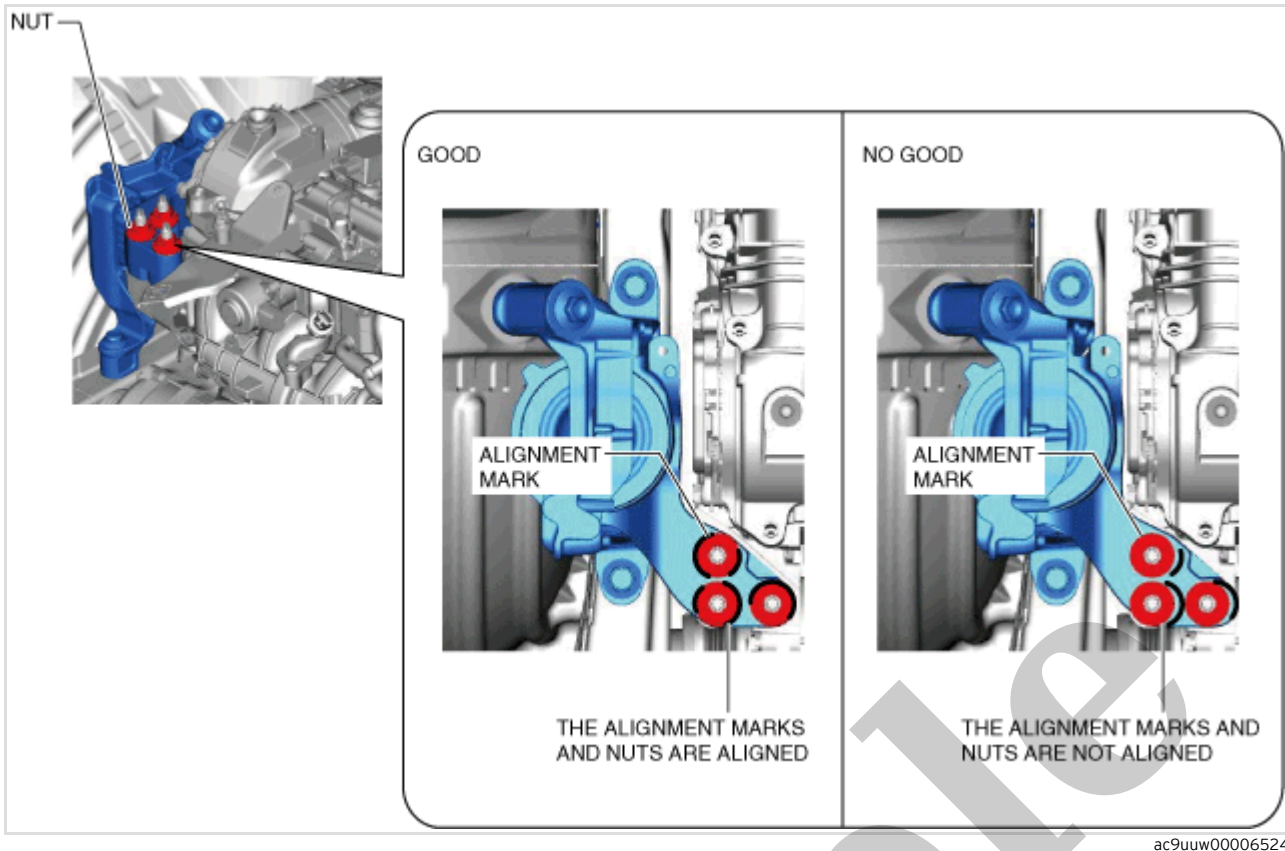


8. Prepare an appropriate M8 x 1.25 bolt (length 40 mm {1.6 in}).

Caution

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

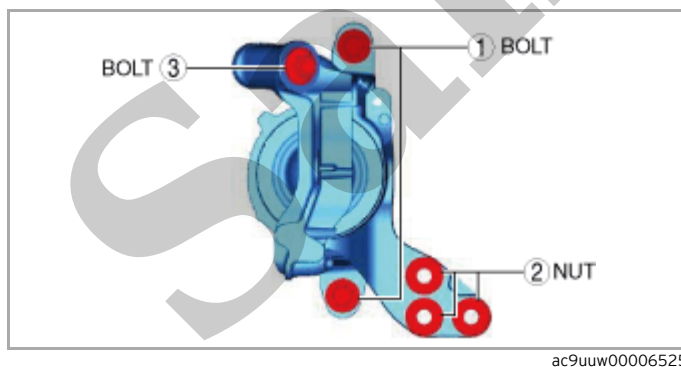
9. Tighten the engine front cover installation bolts in the order shown in the figure.



Note

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

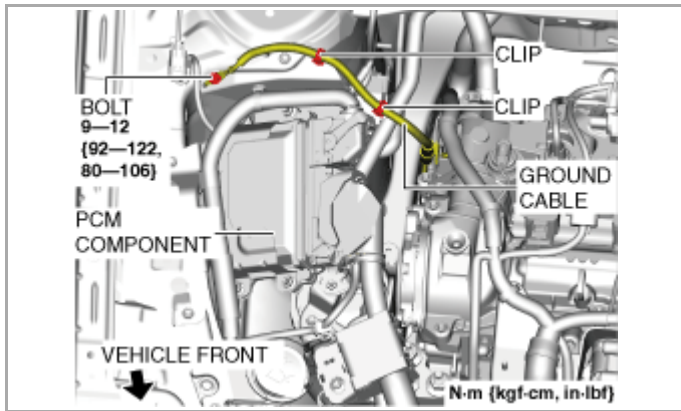
3.Tighten the No.3 engine mount installation bolts and nuts in the order as shown in the figure.



Tightening torque

Installation position	Tightening torque
1	76-95 N·m {7.8-9.6 kgf·m, 57-70 ft·lbf}
2	82-95 N·m {8.4-9.6 kgf·m, 61-70 ft·lbf}
3	49-65 N·m {5.0-6.6 kgf·m, 37-47 ft·lbf}

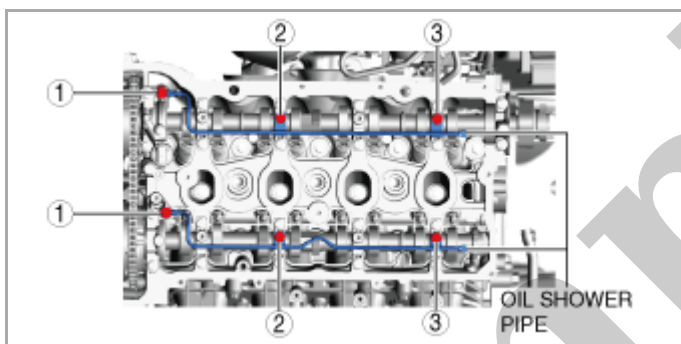
4.Remove the SST.



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Oil Shower Pipe Installation Note

1. Install the oil shower pipe in the order shown in the figure.



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Tightening torque

Installation position	Tightening torque
1	9-12 N·m {92-122 kgf·cm, 80-106 in·lbf}
2, 3	8-10 N·m {82-101 kgf·cm, 71-88 in·lbf}

Cylinder Head Cover Installation Note

Caution

- To assure the sealing performance of the cylinder head cover, be careful of the following:
 - Verify that the cylinder head cover gasket is inserted into the cylinder head cover groove and install the cylinder head cover.
 - Remove oil, dirt, and sealant from the seal surface.
- To prevent silicone sealant from hardening, adhere the cylinder head cover and the cylinder head firmly within 10 min. after applying silicone sealant. After adhering them, tighten the installation bolts immediately.

1. Insert a new cylinder head cover gasket into the cylinder head cover groove.

2. Apply silicone sealant to the areas shown in the figure.

OIL CONTROL VALVE (OCV) REMOVAL/INSTALLATION [SKYACTIV-G 2.5T]

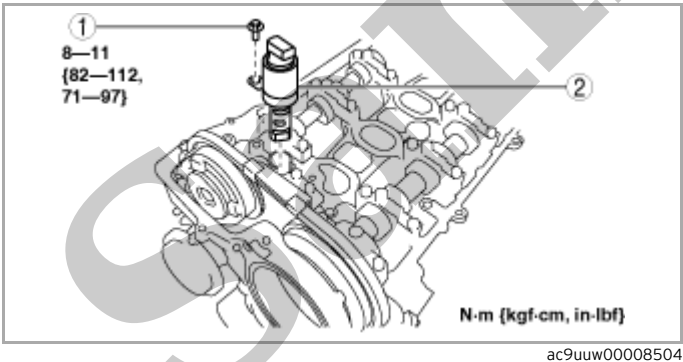
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Warning

- 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 \[SKYACTIV-G 2.5T\].](#))
- 3.Remove the ignition coil/ion sensors. (See [IGNITION COIL/ION SENSOR REMOVAL/INSTALLATION \[SKYACTIV-G 2.5T\].](#))
- 4.Remove the cylinder head cover. (See [TIMING CHAIN REMOVAL/INSTALLATION \[SKYACTIV-G 2.5T\].](#))
- 5.Remove in the order indicated in the table.
- 6.Install in the reverse order of removal.



1	OCV installation bolt
2	OCV

Sample

Water Pump Drive Belt

Note

- The water pump drive belt deflection/tension inspection is not necessary with the adoption of the stretch-type water pump drive belt.

1. Visually inspect or feel that there is no wear, damage, or cracking on the inside and sides of the entire belt.

- Even if there is a little wear, damage, or cracking, replace the water pump drive belt. (See [DRIVE BELT REMOVAL/INSTALLATION \[SKYACTIV-G 2.5T\]](#).)

2. Start the engine to verify that abnormal noise does not occur.

- If abnormal noise occurs, replace the water pump drive belt. (See [DRIVE BELT REMOVAL/INSTALLATION \[SKYACTIV-G 2.5T\]](#).)