

ENGINE FRONT COVER INSTALLATION NOTE

1. Apply silicone sealant to the engine front cover as shown in the figure.

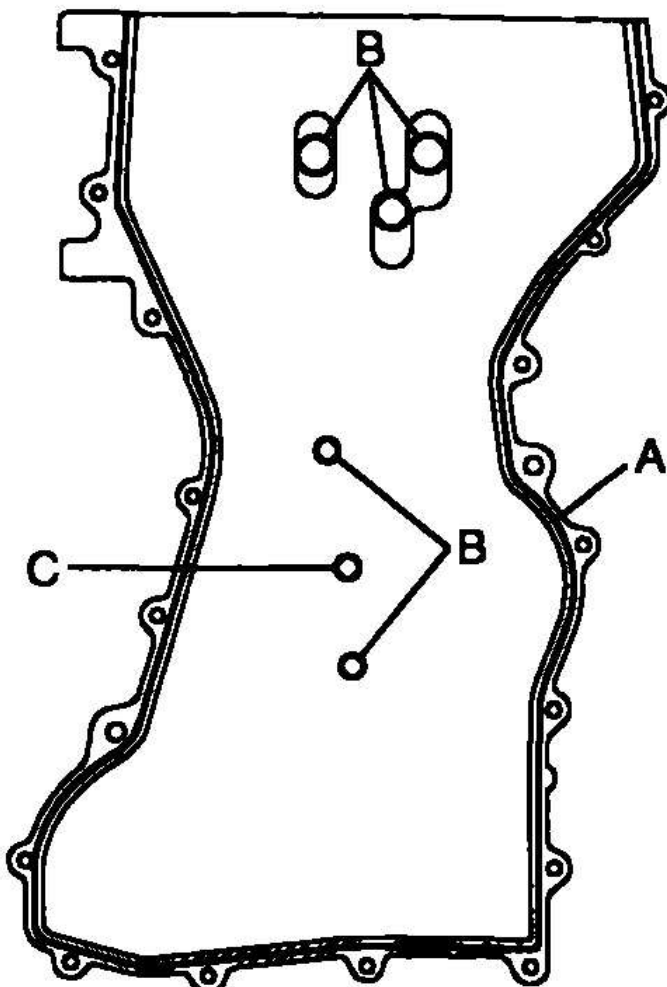
CAUTION:

- Install the engine front cover within 10 min of applying the silicone sealant.
- Silicone sealant is not need in area C as indicated below due to an existing.
- They are oil and a thing without adhesion of dust to a seal side.

Thickness

A: 2.2-3.2 mm {0.087-0.125 in}

B: 1.5-2.5 mm {0.059-0.098 in}



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Fig. 38: Applying Silicone Sealant To Engine Front Cover
 Courtesy of MAZDA MOTORS CORP.

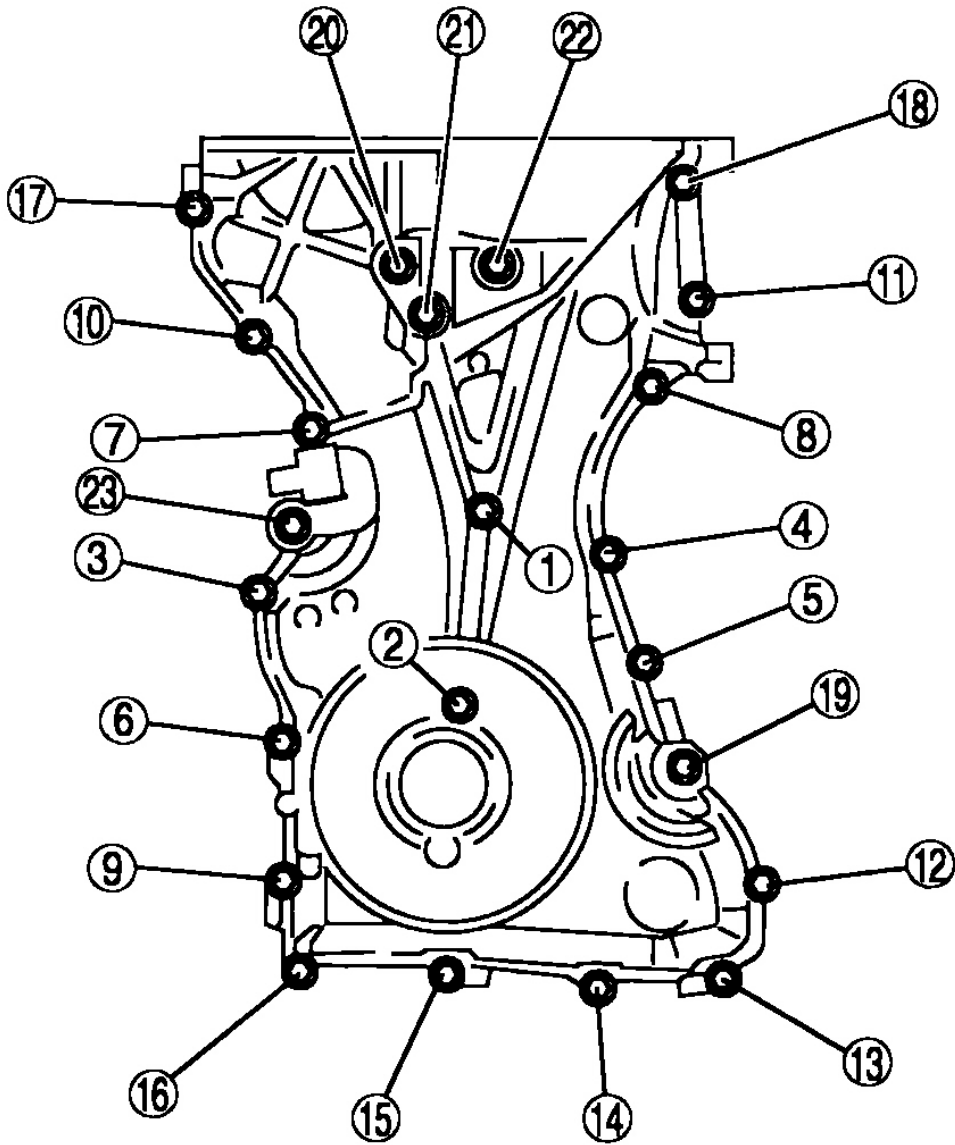
2. Install the engine front cover bolts in the order shown in the figure.

BOLT NO AND TIGHTENING TORQUE

Bolt No.	Tightening torque
1-18	8.0-11.5 N.m {81.6-117.2 kgf.cm, 70.9-101.7 in.lbf}
19-22	40-55 N.m {4.1-5.6 kgf.m, 29.7-40.5 ft.lbf}

23

20-30 N.m {2.1-3.0 kgf.m,
14.8-22.1 ft.lbf}



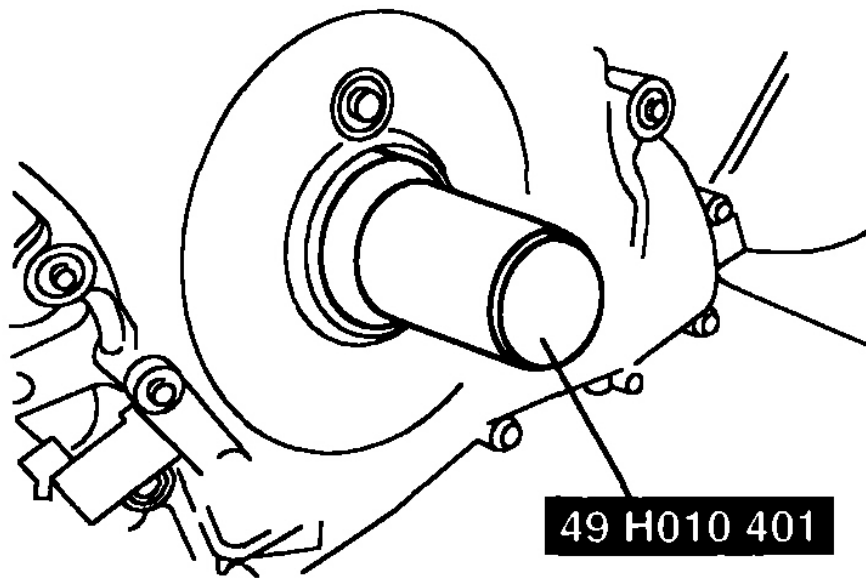
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Fig. 39: Identifying Tightening Sequence Of Engine Front Cover Bolts

Courtesy of MAZDA MOTORS CORP.

FRONT OIL SEAL INSTALLATION NOTE

1. Apply clean engine oil to the oil seal.
2. Push the oil seal slightly in by hand.
3. Compress the oil seal using the **SST** and a hammer.

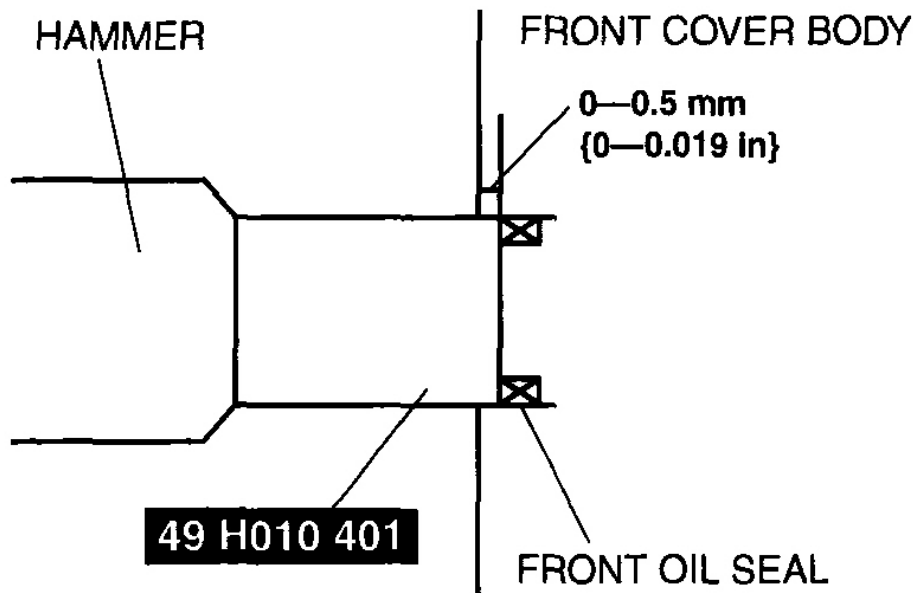


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Fig. 40: Installing Front Oil Seal
Courtesy of MAZDA MOTORS CORP.

Front oil seal press-in amount

0-0.5 mm {0-0.019 in}



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Fig. 41: Identifying Front Oil Seal Installation Recess Value

Courtesy of MAZDA MOTORS CORP.

NO. 3 ENGINE MOUNT RUBBER AND NO. 3 ENGINE MOUNT BRACKET INSTALLATION NOTE

1. Tighten the stud bolt of the No. 3 engine mount bracket.

Tightening torque

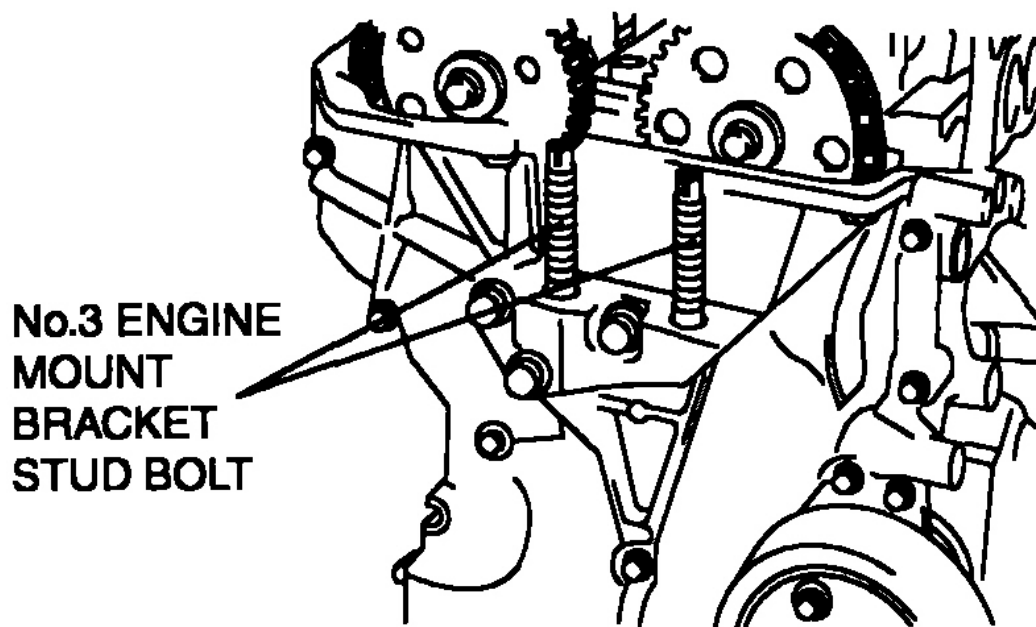
7.0-13 N.m

{71.4-132.5 kgf.cm, 62.0-115.0 in.lbf}

NOTE:

- Tightening stud bolt when the nut of No. 3 engine mount nut is loosened.

2. Hand-tighten the No. 3 engine mount rubber and No. 3 engine mount bracket.
3. Tighten the bolts and nuts in the order as shown in the figure.

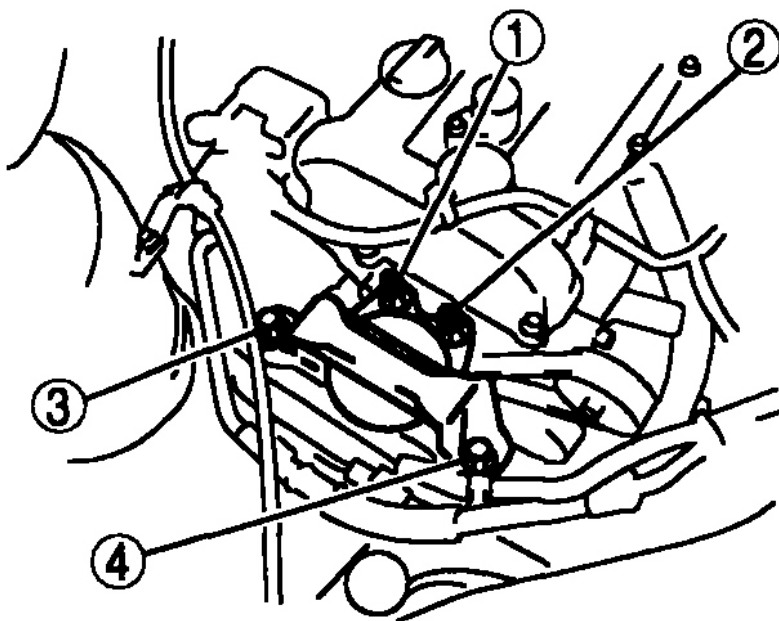


[Fig. 42: Tightening Stud Bolt Of No. 3 Engine Mount Bracket](#)
Courtesy of MAZDA MOTORS CORP.

Tightening torque

Nuts : 74.5-104.9 N.m {7.6-10.6 kgf.m, 55.0-77.3 ft.lbf}

Bolts : 74.5-93.1 N.m {7.6-9.5 kgf.m, 55.0-68.7 ft.lbf}

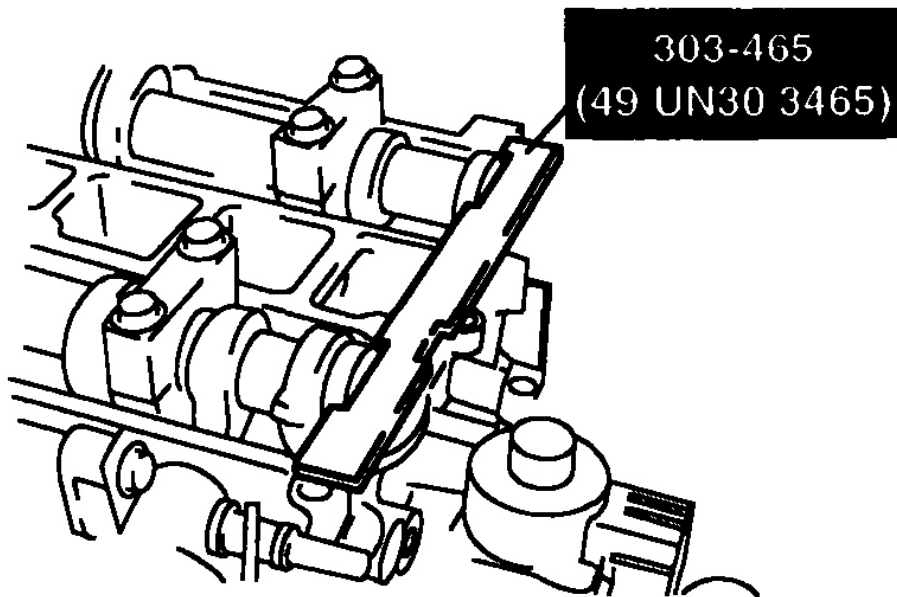


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Fig. 43: Tightening Sequence Of Bolts And Nuts
Courtesy of MAZDA MOTORS CORP.

CRANKSHAFT PULLEY LOCK BOLT INSTALLATION NOTE

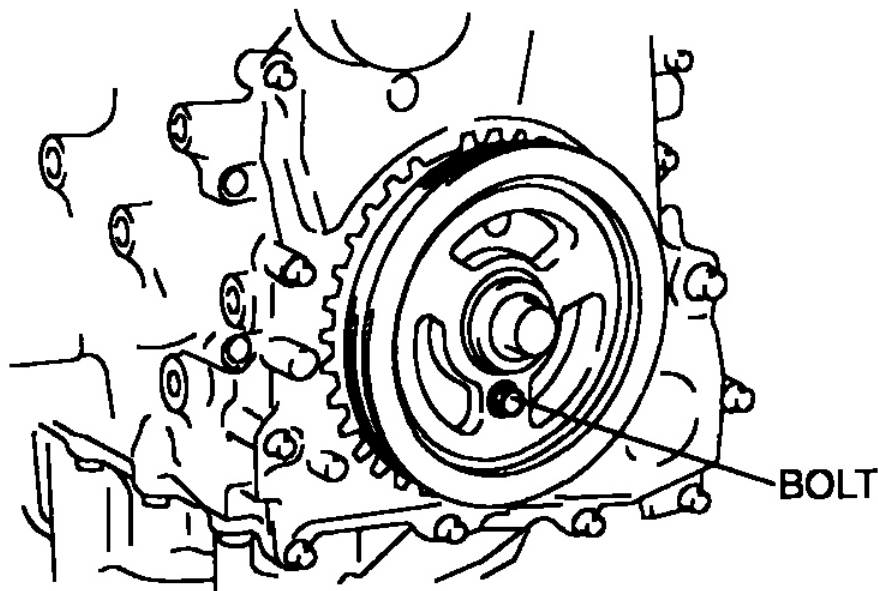
1. Install the SST to the camshaft as shown in the figure.



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Fig. 44: Installing SST To Camshaft
Courtesy of MAZDA MOTORS CORP.

2. Install the **M6 x 1.0** bolt in by hand.
3. Turn the crankshaft clockwise until the crankshaft is in the No. 1 cylinder TDC position (until the balance weight is attached to the **SST**).



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Fig. 45: Installing M6 X 1.0 Bolt

Courtesy of MAZDA MOTORS CORP.

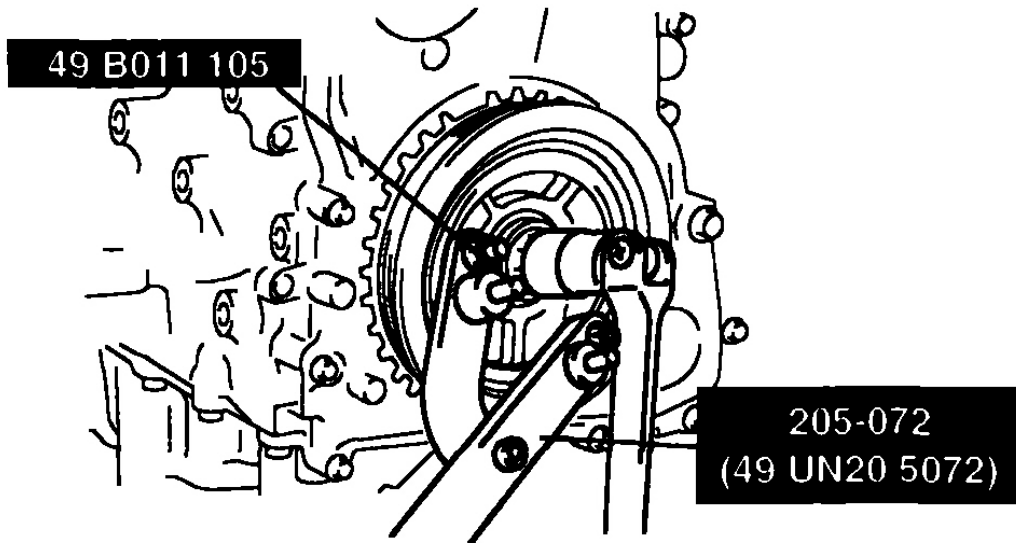
4. Hold the crankshaft pulley using the SST .
5. Tighten the crankshaft pulley lock bolt in the order shown with the following two steps using the SST (49D032 316) .

Tightening torque

1. 96-104 N.m

{9.8-10.6 kgf.m, 70.9-76.7 ft.lbf}

2. 87-93°



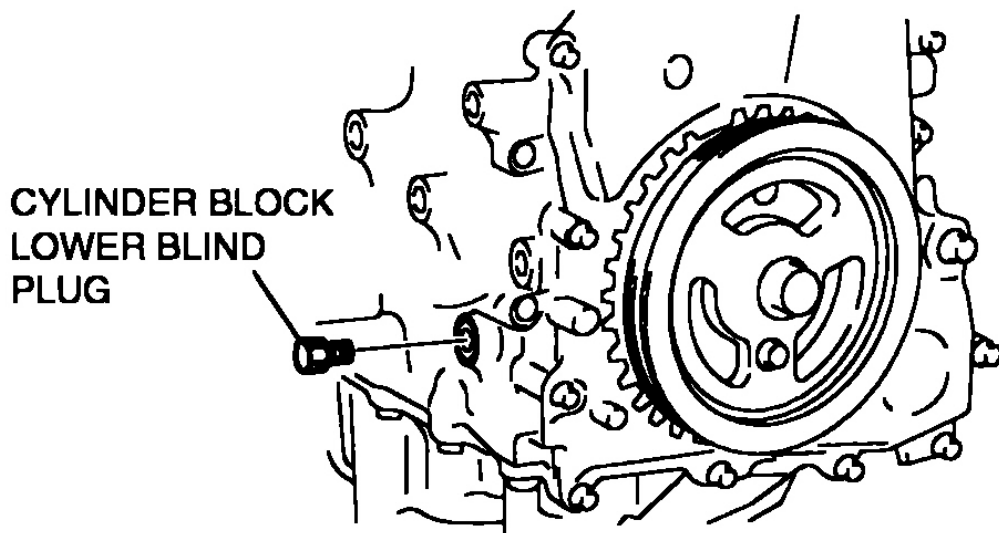
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Fig. 46: Holding Crankshaft Pulley Using SST
Courtesy of MAZDA MOTORS CORP.

6. Remove the **M6 x 1.0** bolt.
7. Remove the **SST** from the camshaft.
8. Remove the **SST** from the cylinder block lower blind plug.
9. Rotate the crankshaft clockwise two turns until the TDC position.
 - If not aligned, loosen the crankshaft pulley lock bolt and repeat from Step 1.
10. Install the cylinder block lower blind plug.

Tightening torque

18-22 N.m {1.9-2.2 kgf.m, 13.3-16.2 ft.lbf}



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Fig. 47: Installing Cylinder Block Lower Blind Plug
Courtesy of MAZDA MOTORS CORP.

CYLINDER HEAD COVER INSTALLATION NOTE

1. Apply silicone sealant to the mating faces as shown in the figure.

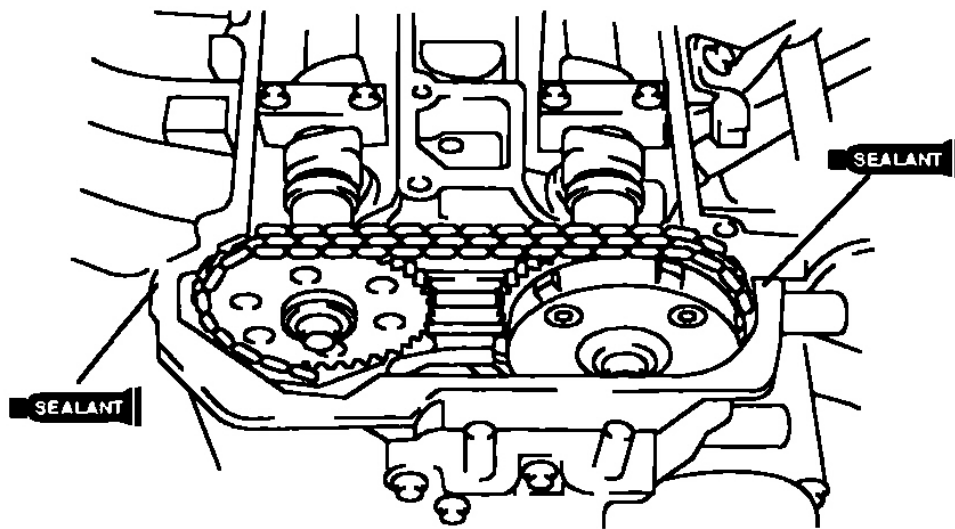
CAUTION:

- Install the cylinder head cover within 10 min of applying the silicone sealant.

Thickness

4.0-7.0 mm {0.16-0.24 in}

2. Install the cylinder head cover with a new gasket.



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Fig. 48: Applying Silicone Sealant To Mating Faces

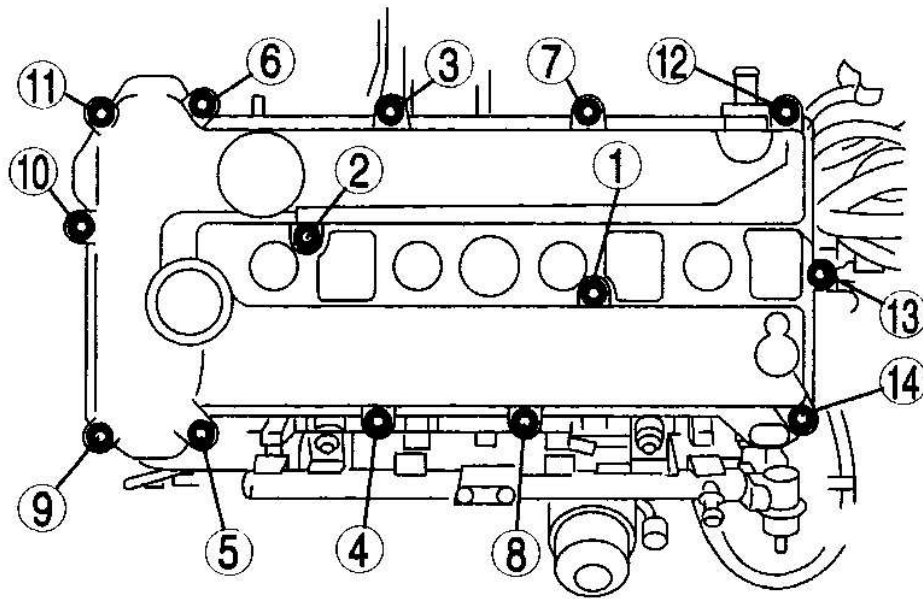
Courtesy of MAZDA MOTORS CORP.

3. Tighten the bolts in the order shown in the figure.

Tightening torque

8.0-10.5 N.m

{81.6-107.1 kgf.cm, 70.9-92.9 in.lbf}



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Fig. 49: Cylinder Head Cover Bolt Tightening Sequence
Courtesy of MAZDA MOTORS CORP.