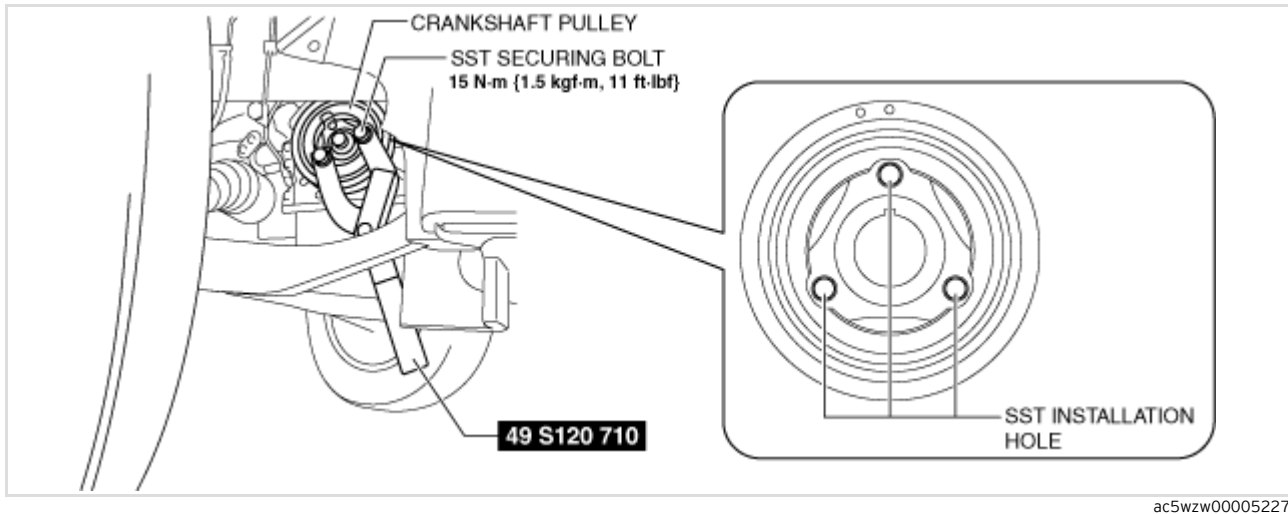


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## 2005 MAZDA 3 / Axela Sedan OEM Service and Repair Workshop Manual

[Go to manual page](#)

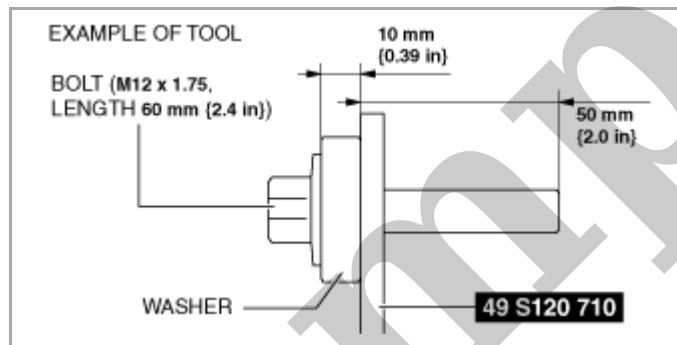


## Note

- If a bolt with a length of 50 mm {2.0 in} or more is used, add the appropriate washer and adjust the length to 48–50 mm {1.89–1.96 in} to use.

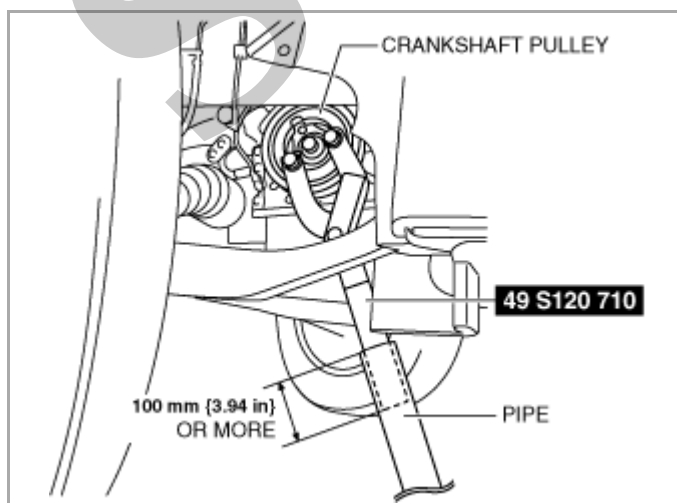
### Example of use

- Using the bolt ( M12 x 1.75 length 60 mm {2.4 in}) supplied with the SST 49 S011 102A (crankshaft lock tool): Add a washer with a 10 mm {0.39 in} thickness and adjust the length of the SST securing bolt to 50 mm {2.0 in}.



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2. One person connects an extension pipe of a suitable length with 100 mm {3.94 in} or more to the SST to prevent the crankshaft pulley from rotating.



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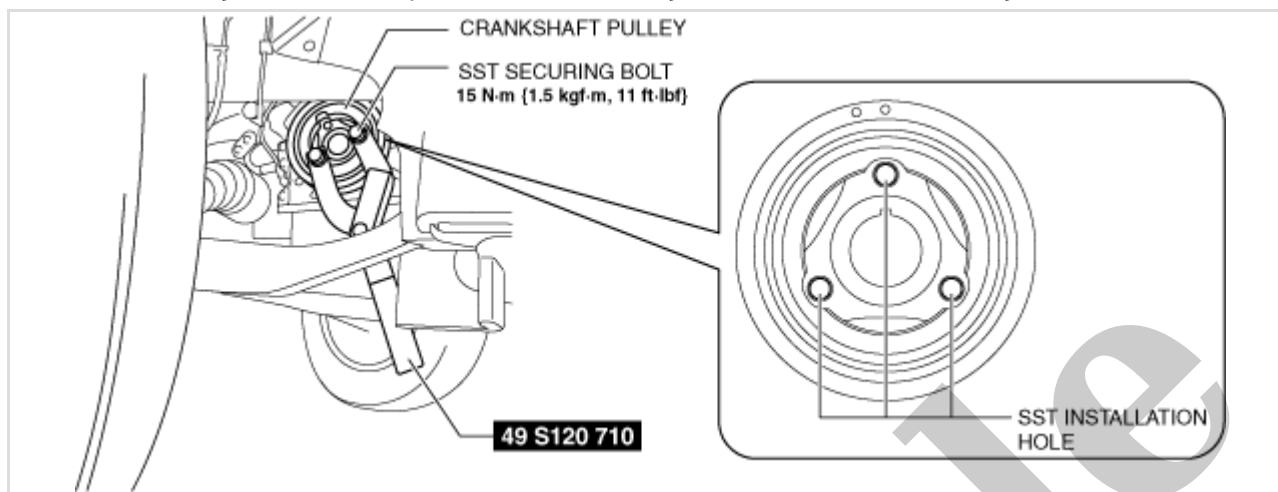
3. Another person loosens the crankshaft pulley lock bolt and removes it.

## SST securing bolt tightening torque

15 N·m {1.5 kgf·m, 11 ft·lbf}

## Caution

- To prevent damage to the crankshaft pulley and engine front cover, always use a bolt and tightening torque of the specification above to install the SSTs to the crankshaft pulley.
- After installing the SSTs, verify that the SST securing bolts do not contact the engine front cover.

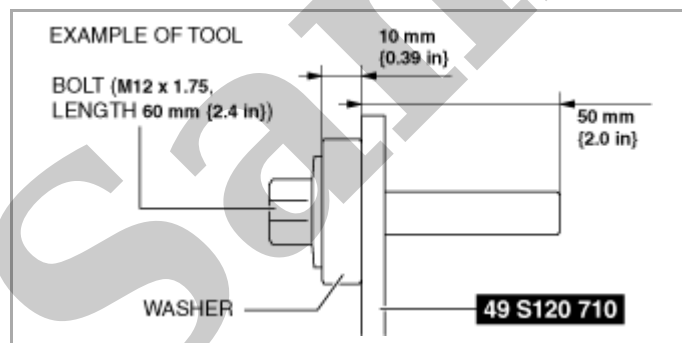


## Note

- If a bolt with a length of 50 mm {2.0 in} or more is used, add the appropriate washer and adjust the length to 48–50 mm {1.89–1.96 in} to use.

### Example of use

— Using the bolt (M12 x 1.75 length 60 mm {2.4 in}) supplied with the SST 49 S011 102A (crankshaft lock tool): Add a washer with a 10 mm {0.39 in} thickness and adjust the length of the SST securing bolt to 50 mm {2.0 in}.



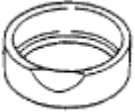
3. Connect an extension pipe of a suitable length of 100 mm {3.94 in} or more to the SST to prevent the crankshaft pulley from rotating.

# REAR OIL SEAL REPLACEMENT [SKYACTIV-D 2.2]

SM2897210

id0110s580090

## Special Service Tool (SST)

49 G033 107A	
Dust cover installer	

## Replacement Part

Rear oil seal
Quantity: 1
Location of use: Cylinder block

## Oil and Chemical Type

Engine oil
Type: Recommended oil

- 1.Remove the transaxle. (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[GW6A-EL \(SKYACTIV-D 2.2\)\] \(2WD\).](#)) (See [AUTOMATIC TRANSAXLE REMOVAL/INSTALLATION \[GW6AX-EL \(SKYACTIV-D 2.2\)\] \(AWD\).](#))
- 2.Remove the drive plate. (See [DRIVE PLATE REMOVAL/INSTALLATION \[GW6A-EL, GW6AX-EL\].](#))
- 3.Remove in the order indicated in the table.
- 4.Install in the reverse order of removal.

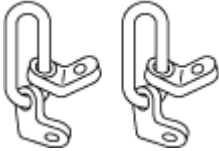
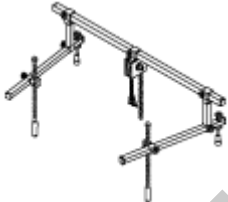
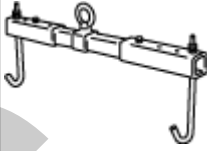



# TIMING CHAIN REMOVAL/INSTALLATION [SKYACTIV-D 2.2]

SM2897211

id0110s580100

## Special Service Tool (SST)

1. : Mazda SST number 2. : Global SST number					
1: 49 UN30 3050 2: 303-050  Engine lifting bracket		1: 49 C017 5A0 2: -  Engine support set		1: 49 L017 5A0 2: -  Support hanger	
1: 49 JP01 001 2: -  Holder		-	-	-	-

## Replacement Part

Cylinder head cover gasket  Quantity: 1  Location of use: Cylinder head cover	Front oil seal  Quantity: 1  Location of use: Engine front cover	O-ring  Quantity: 1  Location of use: Water pipe
Washer  Quantity: 2  Location of use: Engine front cover	-	-

## Oil and Chemical Type

Silicone sealant	Coolant
Type: TB1217D or equivalent	Type: Recommended coolant

## Operation After Replacing Timing Chain

1.After replacing the timing chain, perform the following procedure.

STEP	ACTION	PAGE/CONDITION
1	Perform KOEO self-test procedure.	(See <b>KOEO/KOER SELF TEST [PCM (SKYACTIV-D 2.2)]</b> .)
2	Start the engine.	-

16.If the timing chain is replaced, perform “Operation After Replacing Timing Chain”. (See [Operation After Replacing Timing Chain.](#))

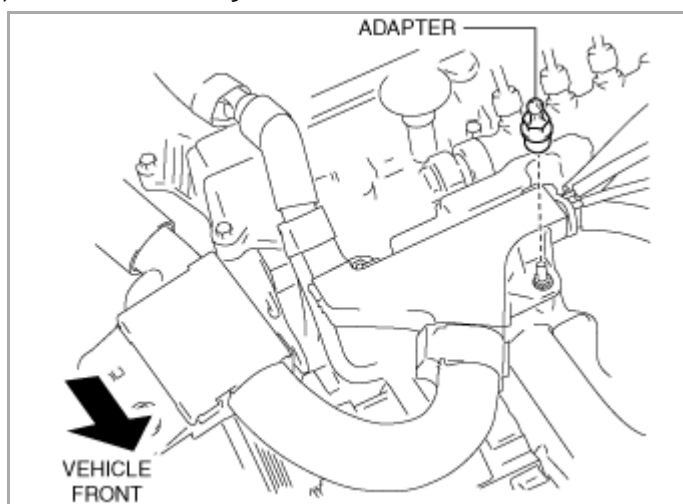
17.Start the engine and inspect the following:

- Leakage of engine oil.
- Oil level (See [ENGINE OIL LEVEL INSPECTION \[SKYACTIV-D 2.2\].](#))
- Runout and contact of pulley and belt.
- Idle speed (See [ENGINE TUNE-UP \[SKYACTIV-D 2.2\].](#))

Sample

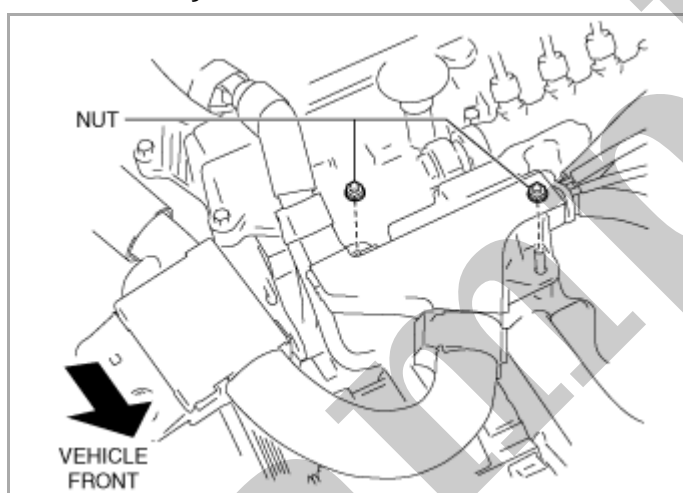
3.Set the wiring harness and ground cable aside using the following procedure:

(1)Remove the adapter shown in the figure.



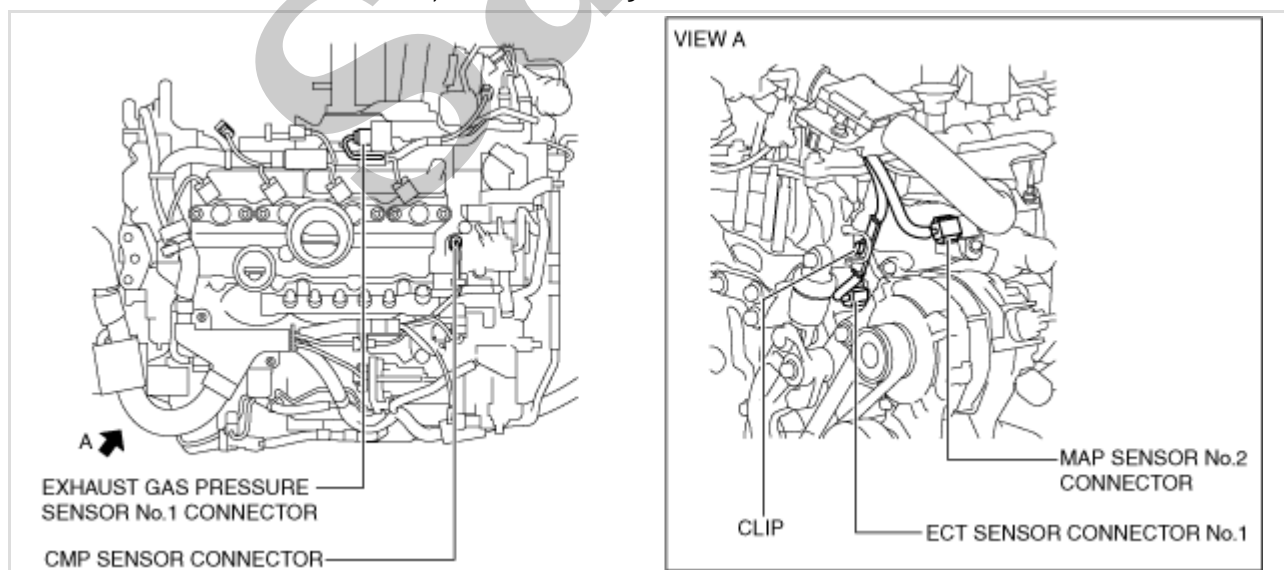
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(2)Remove the nuts shown in the figure.



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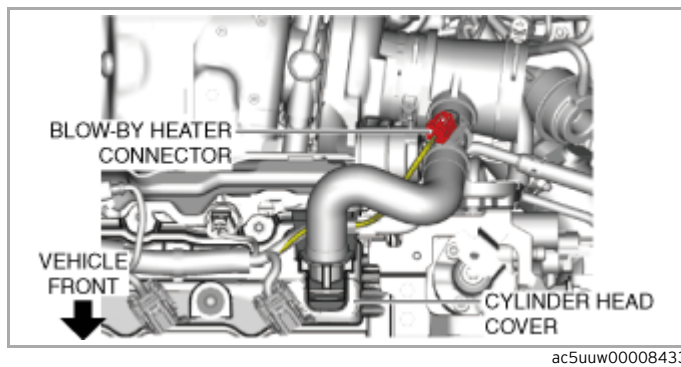
(3)Disconnect the connectors and clip shown in the figure.



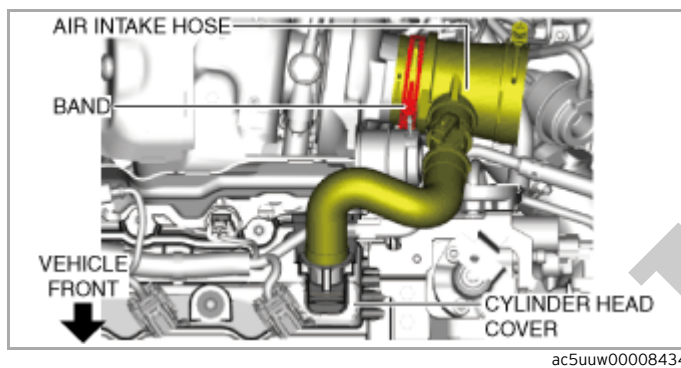
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(4)Remove the clips shown in the figure.

(3) Disconnect the blow-by heater connector.



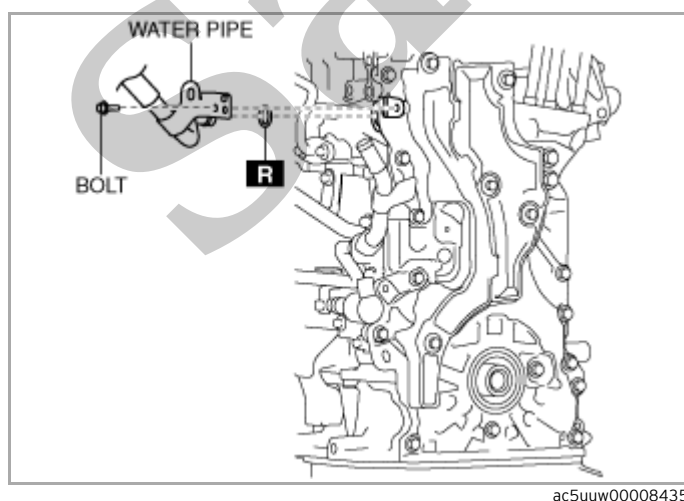
(4) Disconnect the air intake hose from the turbocharger.



7. Remove the cylinder head cover.

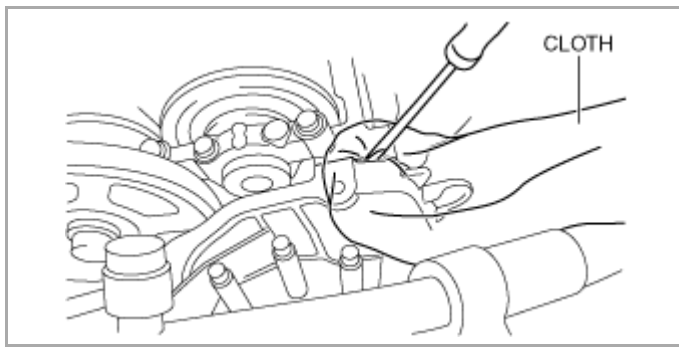
### Water pipe removal note

1. Remove the water pipe with the water hose connected and set it aside out of the way.

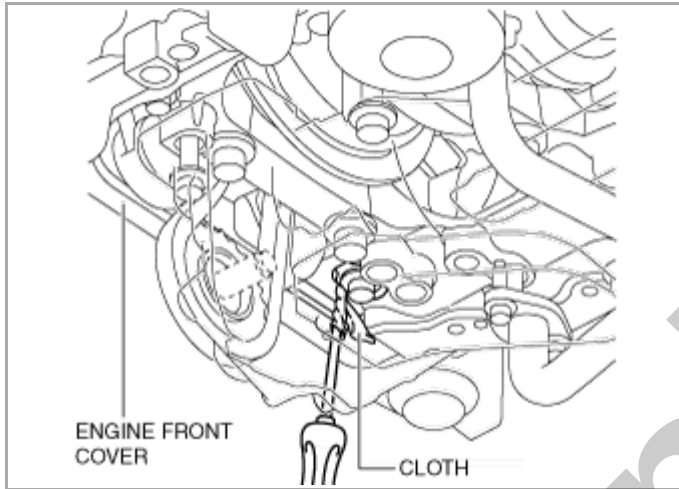


### Noise suppression cover (No.1), noise suppression cover (No.2), seal rubber removal note

1. Remove the noise suppression covers and seal rubbers in the order shown in the figure.



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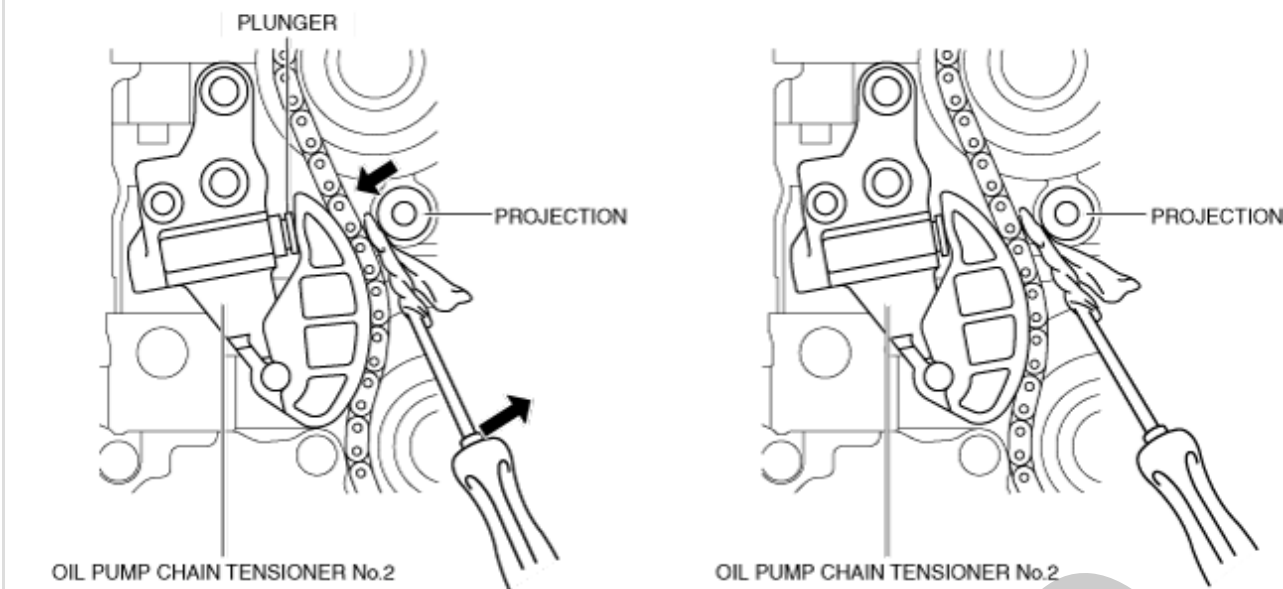
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### Timing chain removal note

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

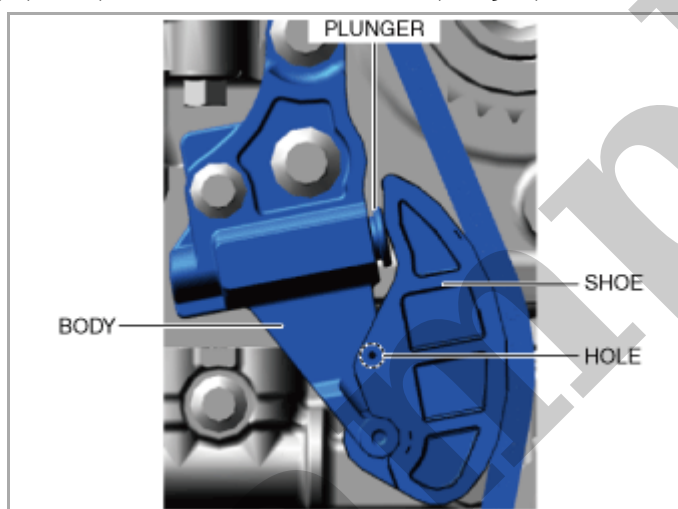
BEFORE PRESSING

AFTER PRESSING



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(2) Insert a wire or paper clip into the shoe hole with the plunger pressed in.

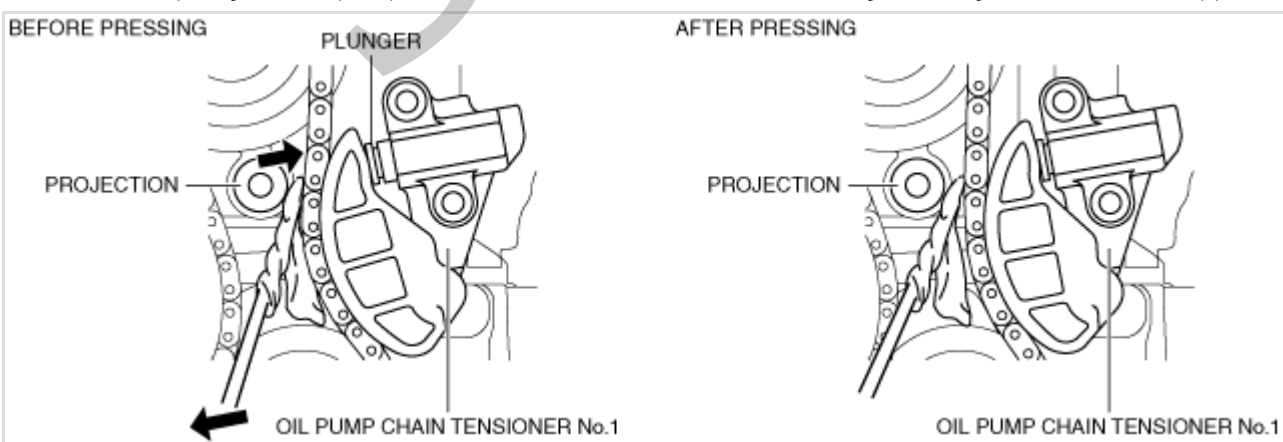


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#### Note

- When inserting a wire or paper clip, the shoe is fixed with the plunger pressed in.

(3) Press in the plunger of oil pump chain tensioner No.1 as shown in the figure using a screwdriver wrapped in a cloth.



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(4) Insert a wire or paper clip into the shoe hole with the plunger pressed in.