

2012 - Mazda6 - Engine

OIL PAN REMOVAL/ INSTALLATION [MZR 2.5]

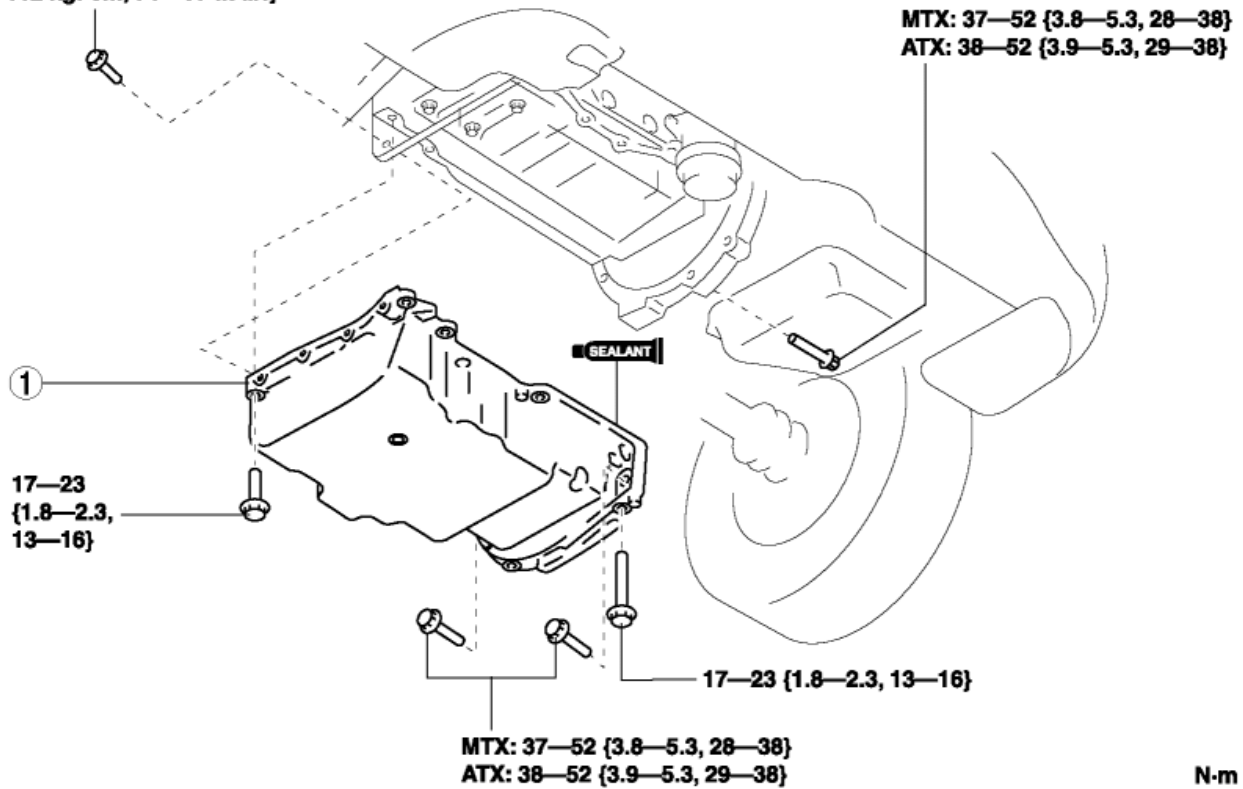
WARNING:

- Hot engines and engine oil can cause severe burns. Turn off the engine and wait until it and the engine oil have cooled.
- A vehicle that is lifted but not securely supported on safety stands is dangerous. It can slip or fall, causing death or serious injury. Never work around or under a lifted vehicle if it is not securely supported on safety stands.
- Continuous exposure to USED engine oil has caused skin cancer in laboratory mice. Protect your skin by washing with soap and water immediately after working with engine oil.

NOTE:

- Before removing the oil pan, loosen the bolts securing the engine and transaxle, and secure an approx. 3 mm (0.1 in) clearance between the engine and the transaxle.
1. Remove the battery and battery tray. (See [BATTERY REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
 2. Remove the air cleaner, air hose and fresh air duct component. (See [INTAKE-AIR SYSTEM REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
 3. Remove the aerodynamic under cover No.2. (See [AERODYNAMIC UNDER COVER NO.2 REMOVAL/ INSTALLATION](#).)
 4. Remove the front wheel and tire (RH). (See [GENERAL PROCEDURES \(SUSPENSION\)](#).)
 5. Remove the splash shield (RH).
 6. Drain the engine oil. (See [ENGINE OIL REPLACEMENT \[MZR 2.5\]](#).)
 7. Remove in the order indicated in the table.
 8. Install in the reverse order of removal.
 9. Refill with the specified type and amount of the engine oil. (See [ENGINE OIL REPLACEMENT \[MZR 2.5\]](#).)
 10. Start the engine and confirm that there is no oil leakage.
 - If there is oil leakage, repair or replace the applicable part.
 11. Inspect the oil level. (See [ENGINE OIL LEVEL INSPECTION \[MZR 2.5\]](#).)

8—11 N·m {82—112 kgf·cm, 71—97 in·lbf}



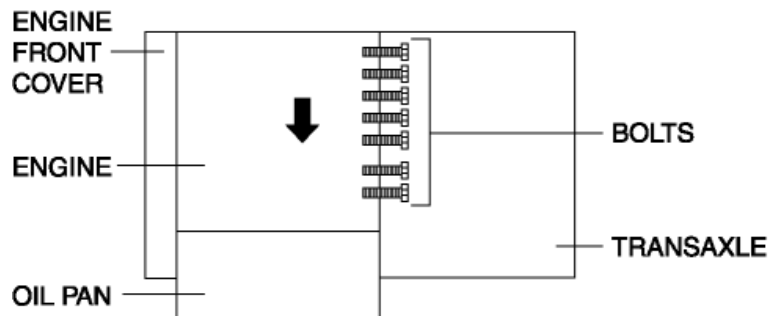
1 Oil pan

(See [Oil Pan Removal Note.](#))

(See [Oil Pan Installation Note.](#))

Oil Pan Removal Note

1. Set the wiring harness and harness bracket out of the way to access the transaxle upper fitting bolts.
2. Before loosening the bolts securing the engine and transaxle, put a mark on each transaxle bolt and the transaxle (to determine when they have been turned one full turn), then loosen the bolts one full turn (360°).



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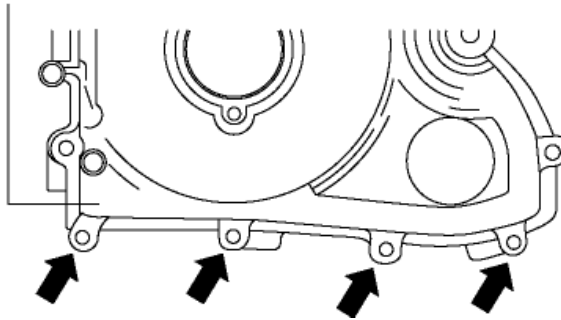
- Do not loosen the bolts more than one turn (360°), otherwise the transaxle could be damaged.

NOTE:

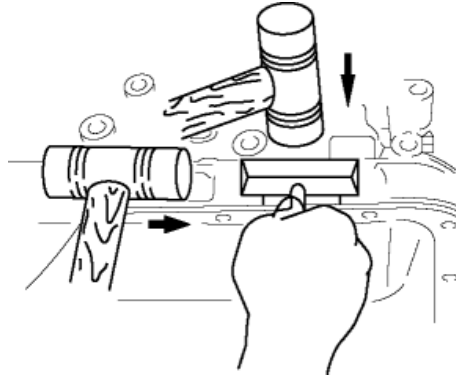
- Loosen the bolts in the order of top to bottom.

3. Remove the four bolts that secure the engine front cover to the oil pan.

**ENGINE FRONT
COVER**



4. Remove the No.1 engine mount bracket. (See [ENGINE REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
5. Remove the oil pan using a separator tool.

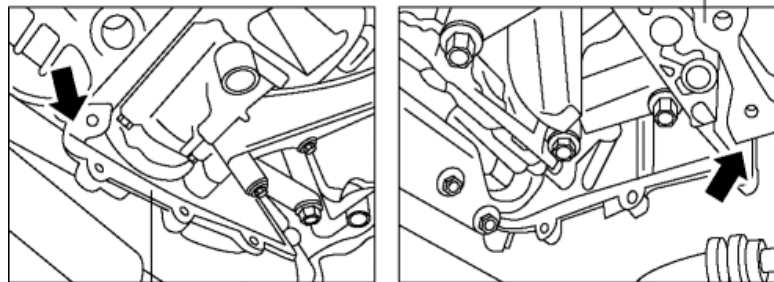


Oil Pan Installation Note

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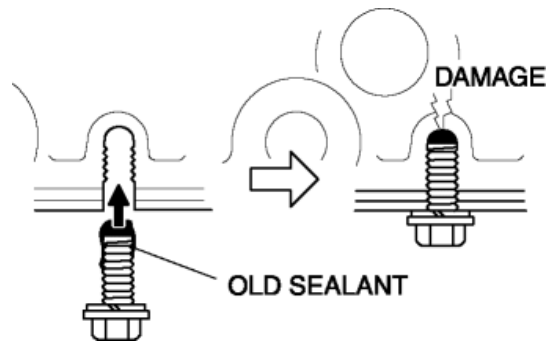
1. Do not allow the gasket residue to enter the oil pan. Using cleaning fluid, completely remove the oil from the joint. Especially be sure to completely remove oil and gasket residue from the corner section of the engine front cover and the cylinder block.

CYLINDER BLOCK



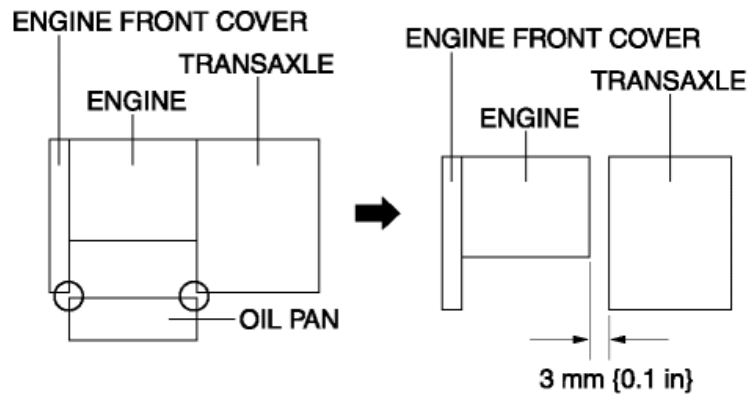
ENGINE FRONT COVER

2. Apply the silicon sealant in a single, unbroken line.
3. Install the oil pan before the applied silicone sealant starts to harden.
4. Using bolts with the old seal adhering could cause cracks in the cylinder block.

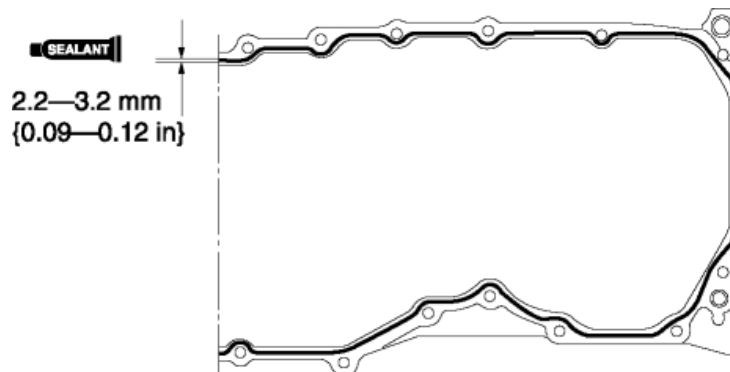


NOTE:

- The thickness of silicone sealant tends to be thin because the clearance between the oil pan and the transaxle and the engine front cover and transaxle is almost zero during oil pan reinstallation. Allow **3 mm { 0.1 in }** space maximum between the engine and transaxle with the transaxle bolts loosened one full turn before reinstalling the oil pan.

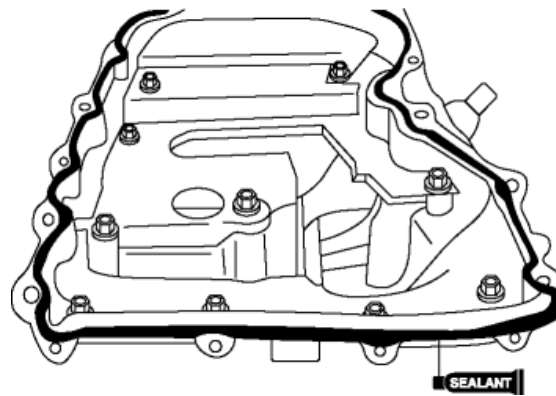


1. Completely clean and remove any oil, dirt, sealant or other foreign material that may be adhering to the cylinder block, engine front cover and oil pan.
2. When reusing the oil pan installation bolts, clean any old sealant from the bolts.
3. Apply silicone sealant to the oil pan along the inside of the bolt holes as shown in the figure.



Thickness

1. 2.2—3.2 mm {0.09—0.12 in}
4. Apply silicone sealant to the front edge of the oil pan and to the engine front cover where the two pieces attach together.

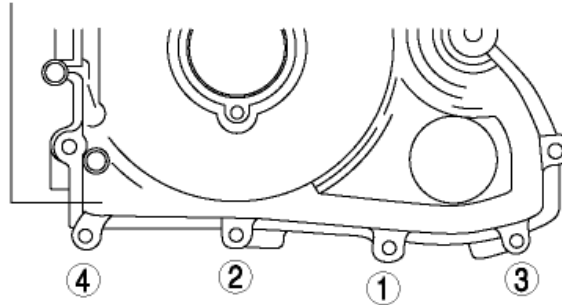


5. Apply an ample amount to the engine front cover where the oil pan is fitted, and also apply an extra amount (a ball of approximately **5 mm { 0.2 in }** in diameter) of silicone sealant to the corners of the engine front cover and the cylinder block.

6. Install the oil pan to the cylinder block.

7. Tighten the four engine front cover bolts in the order shown in the figure.

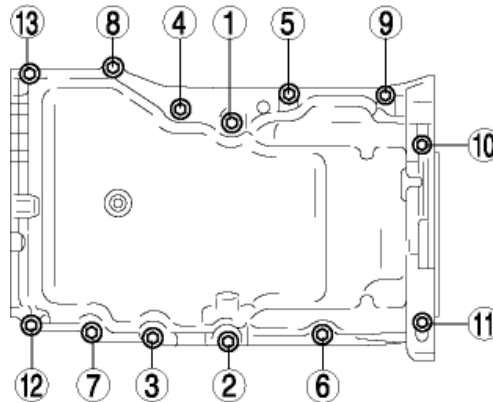
ENGINE FRONT COVER



Tightening torque

- 8—11 N·m {82—112 kgf·cm, 71—97 in·lbf}

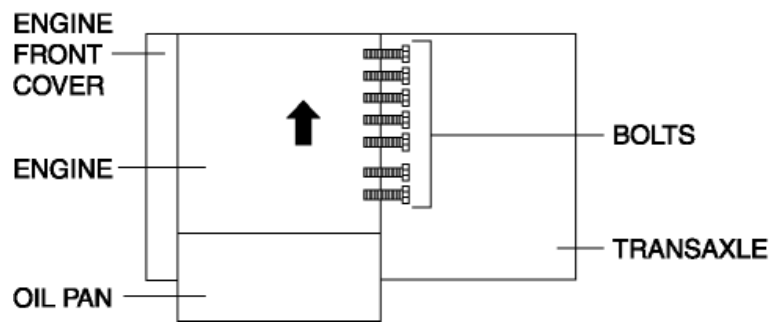
8. Tighten the oil pan bolts in the order shown in the figure.



Tightening torque

- 17—23 N·m {1.8—2.3 kgf·m, 13—16 ft·lbf}

9. Tighten all the bolts securing the engine and transaxle.



NOTE:

- Tighten the bolts from the bottom of the transaxle to the top of the transaxle.

Tightening torque

- MTX : 37—52 N·m {3.8—5.3 kgf·m, 28—38 ft·lbf}
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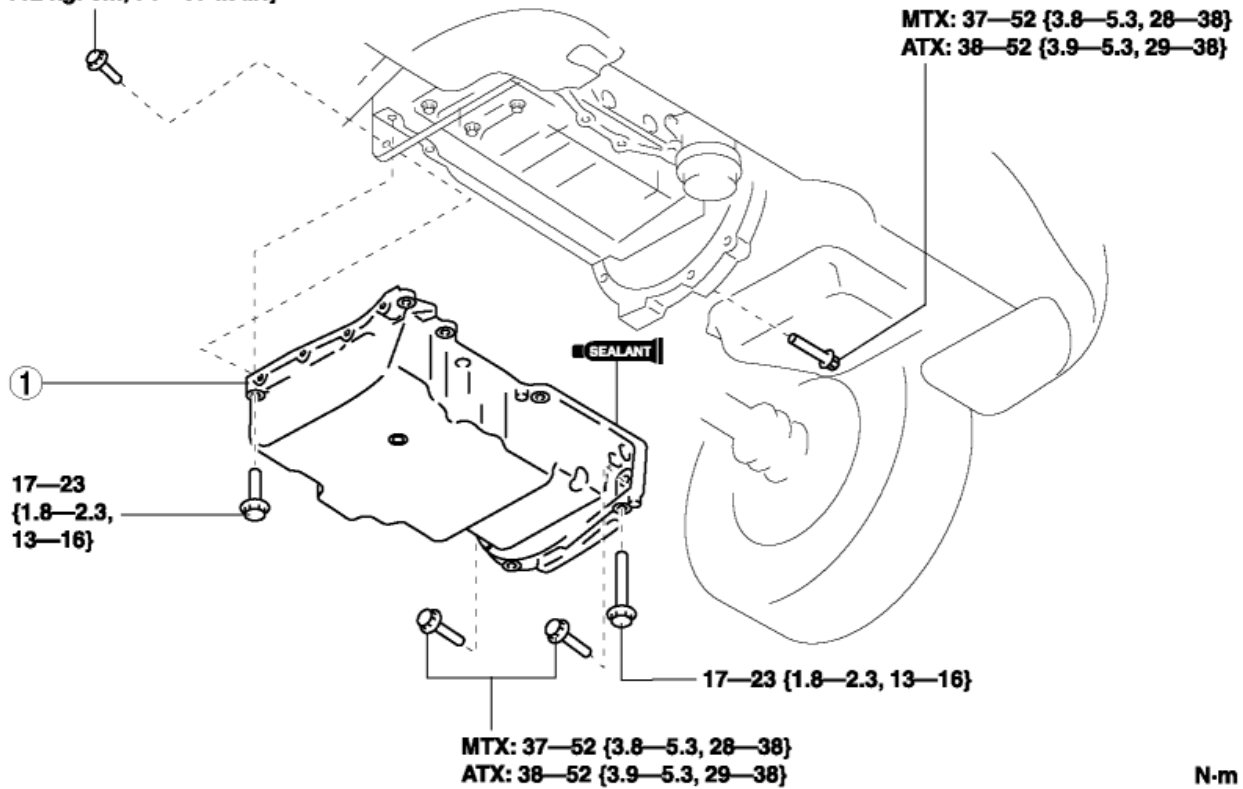
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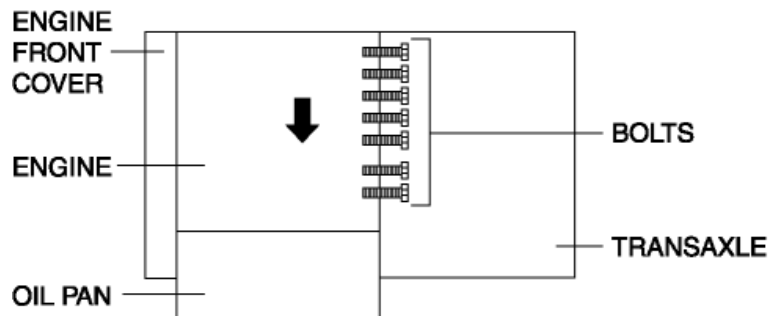
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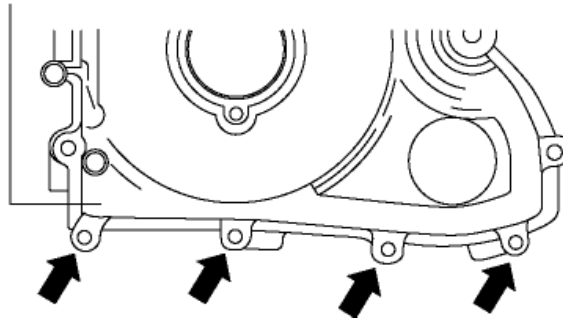
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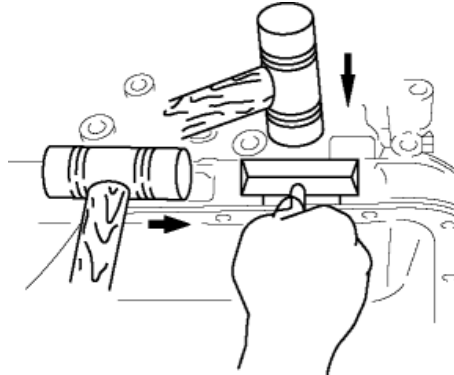
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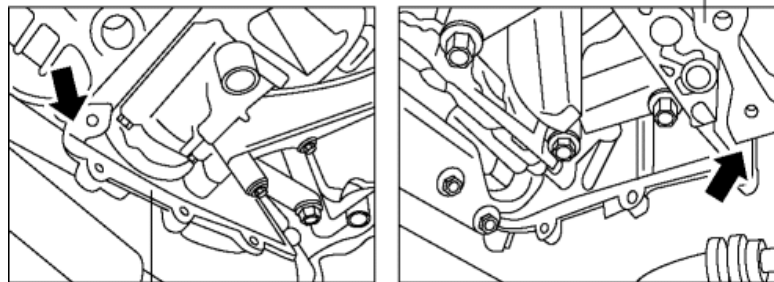


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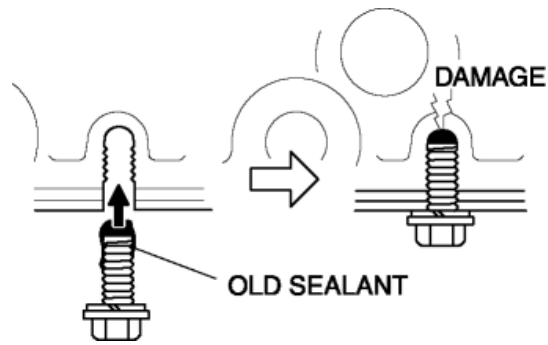
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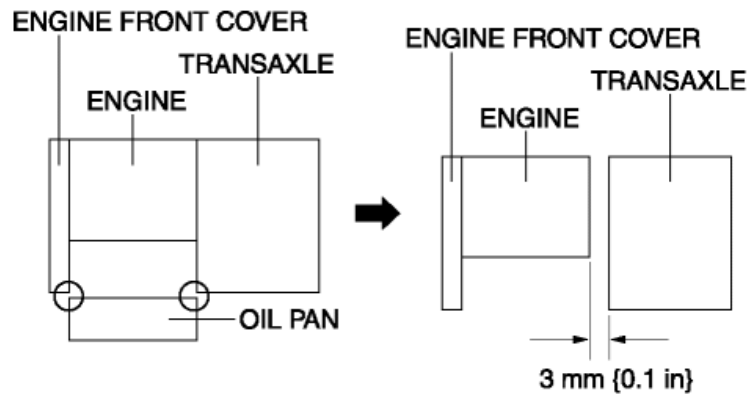
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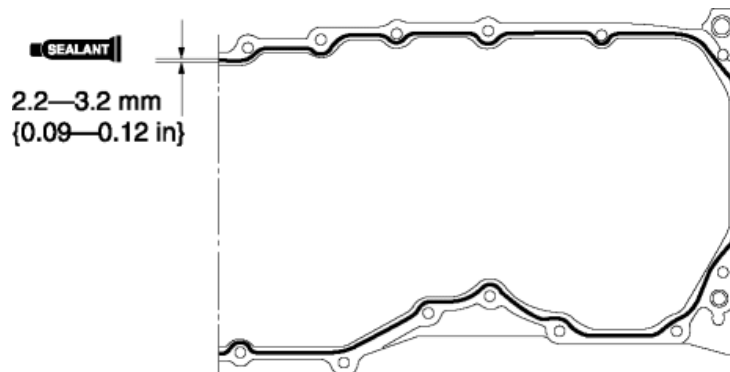


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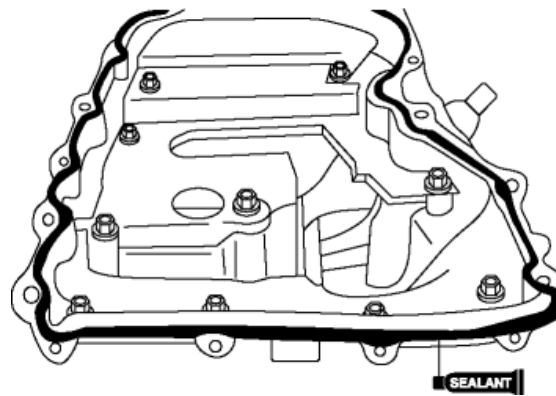


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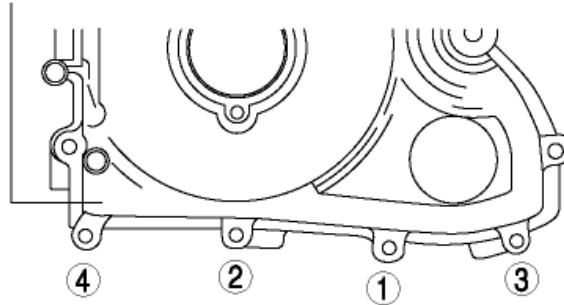


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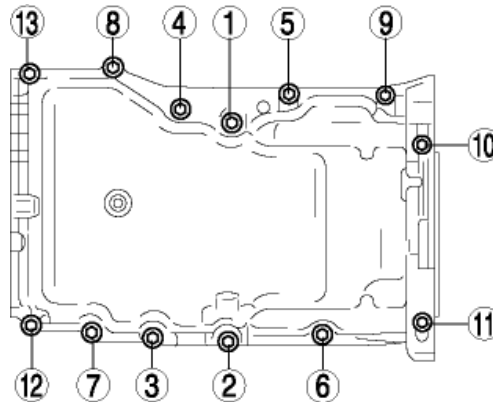
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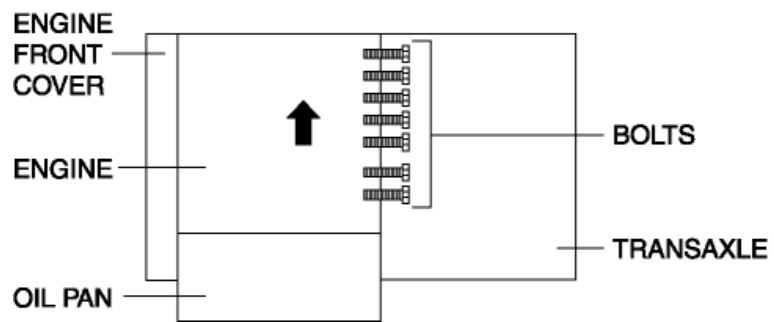
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