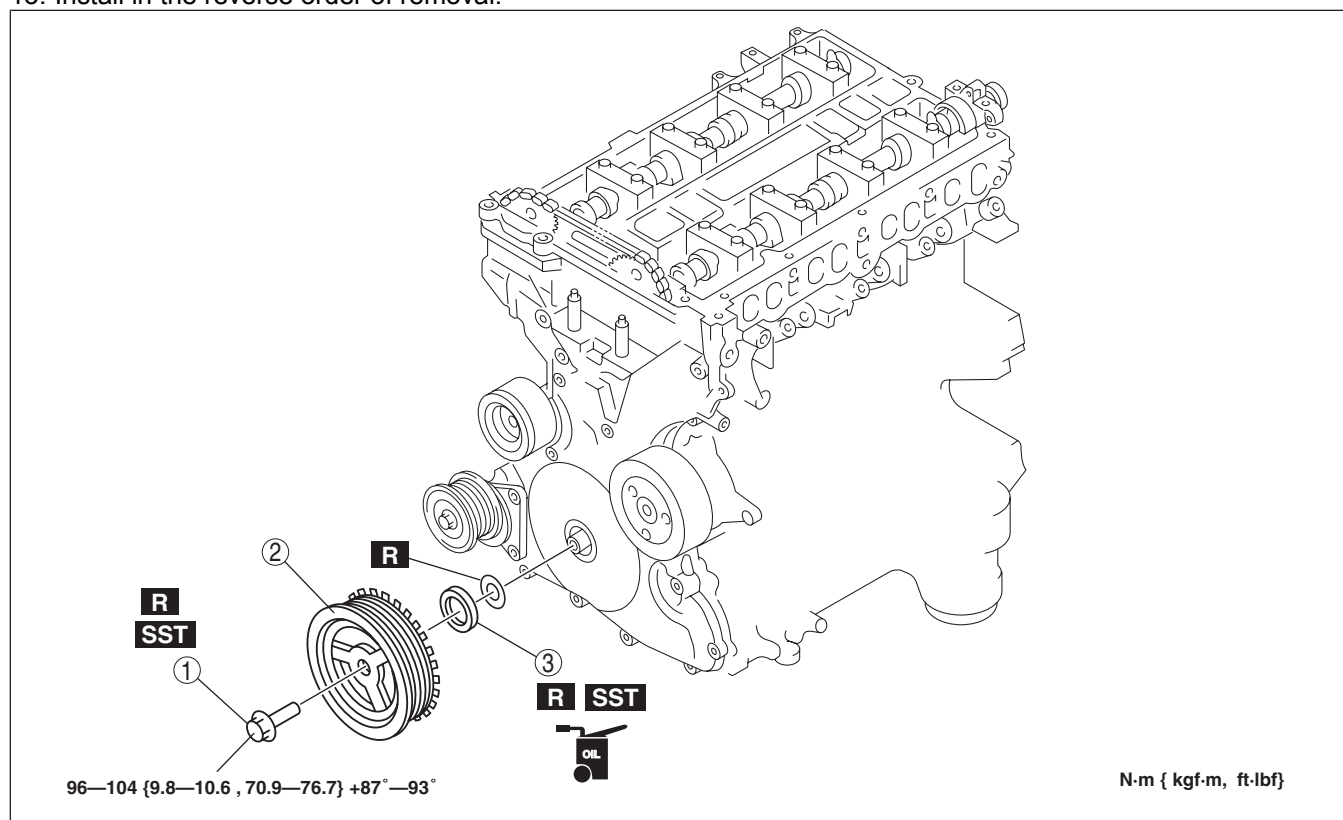


FRONT OIL SEAL REPLACEMENT [L3 Turbo]

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1. Remove the battery cover.
2. Disconnect the negative battery cable.
3. Remove the under cover.
4. Remove the charge air cooler. (See INTAKE-AIR SYSTEM REMOVAL/INSTALLATION [L3 Turbo].)
5. Remove the high pressure fuel pump. (See HIGH PRESSURE FUEL PUMP REMOVAL/INSTALLATION [L3 Turbo].)
6. Remove the drive belt. (See DRIVE BELT REMOVAL/INSTALLATION [L3 Turbo].)
7. Remove the ignition coils. (See IGNITION COIL REMOVAL/INSTALLATION [L3 Turbo].)
8. Disconnect the wiring harness.
9. Remove the ventilation hose.
10. Remove cylinder head cover. (See TIMING CHAIN REMOVAL/INSTALLATION [L3 Turbo].)
11. Remove the crankshaft position (CKP) sensor. (See CRANKSHAFT POSITION (CKP) SENSOR REMOVAL/INSTALLATION [L3 Turbo].)
12. Remove in the order indicated in the figure.
13. Install in the reverse order of removal.



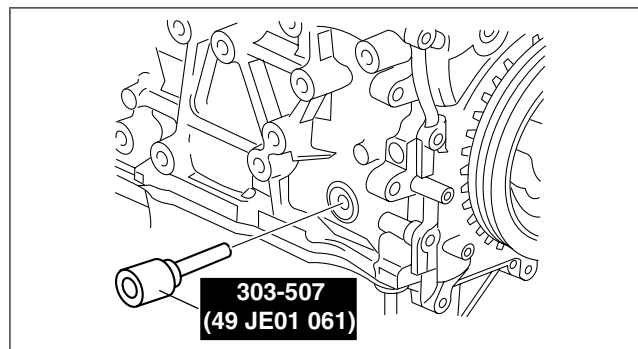
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1	Crankshaft pulley lock bolt (See Crankshaft Pulley Lock Bolt Removal Note .) (See Crankshaft Pulley Lock Bolt Installation Note .)
2	Crankshaft pulley

3	Front oil seal (See Front Oil Seal Removal Note .) (See Front Oil Seal Installation Note .)
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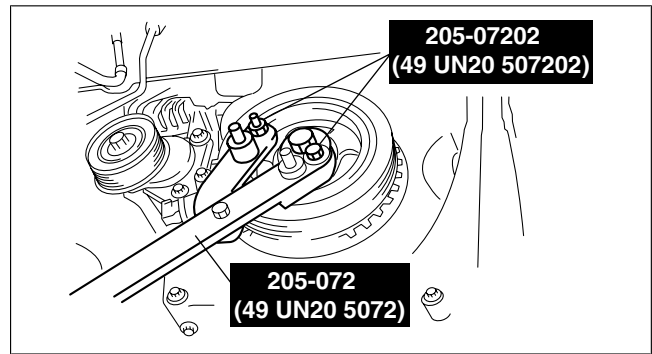
Crankshaft Pulley Lock Bolt Removal Note

1. Rotate the crankshaft in the direction of the engine rotation and remove the cylinder block lower blind plug when the No. 1 cylinder is at the point prior to top dead center (TDC) of compression, then install the **SST**.
2. Rotate the crankshaft in the direction of the engine rotation so that the No.1 piston is at TDC of the compression stroke. (Until the crank weight contacts **SST** and stops.)



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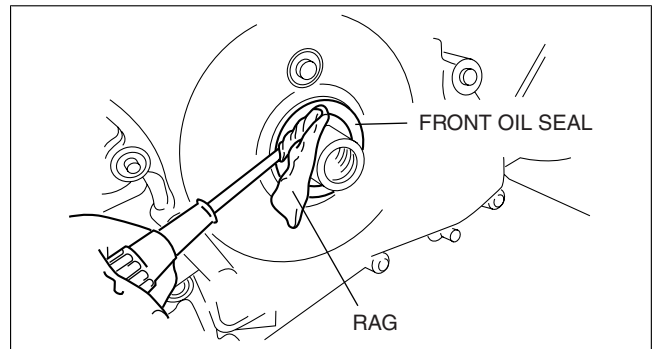
3. Install the **SSTs** to the crankshaft pulley and lock the crankshaft against rotation.



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Front Oil Seal Removal Note

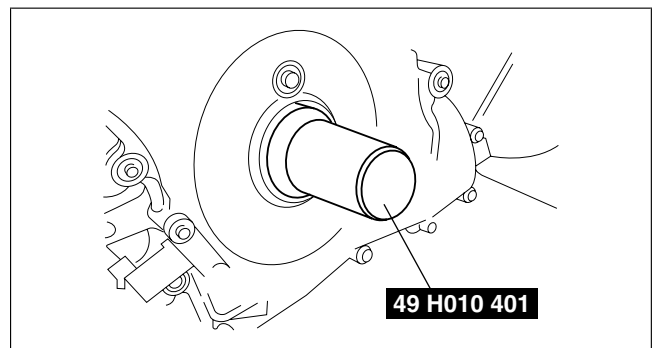
1. Remove the oil seal lip using a razor.
2. Remove the oil seal using a flathead screwdriver with the tip protected by a rag to prevent crankshaft oil seal damage.



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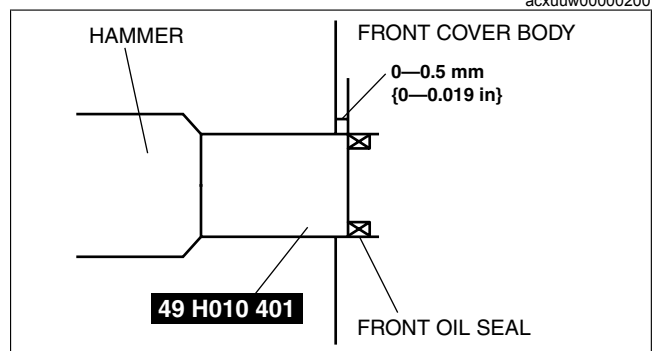
Front Oil Seal Installation Note

1. Apply clean engine oil to a new oil seal.
2. Insert the oil seal into the engine front cover.
3. Tap in the oil seal using the **SST**.



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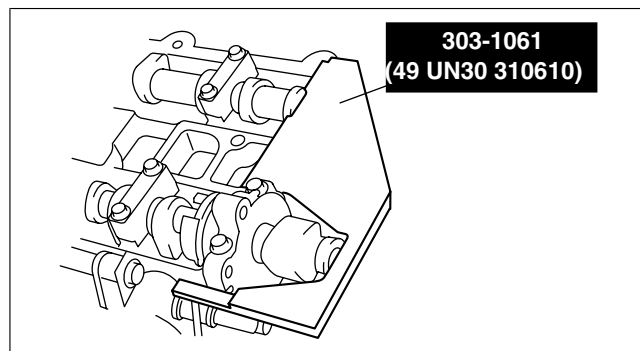
Front oil seal press-in amount
0—0.5 mm {0—0.019 in}



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Crankshaft Pulley Lock Bolt Installation Note

1. Install the **SST** to the camshaft as shown in the figure.
2. Verify that cylinder No.1 is at TDC of the compression stroke. (Position crank weight contacts **SST**.)
3. To position the crankshaft pulley, temporarily tighten it and, using a suitable bolt (**M6 x 1.0**), fix the crankshaft pulley to the engine front cover.



4. Install the **SSTs** to the crankshaft pulley and lock the crankshaft against rotation, and tighten the crankshaft pulley lock bolt using the following two steps.

Tightening procedure

1st step: 96—104 N·m {9.8—10.6 kgf·m, 70.9—76.7 ft·lbf}

2nd step: 87°—93°

5. Remove the crankshaft pulley installation bolt (**M6 X 1.0**).
6. Remove the SST from the camshaft.
7. Remove the SST installed in the cylinder block lower blind plug hole.
8. Rotate the crankshaft clockwise two turns and inspect the valve timing.
 - If not aligned, repeat from Step 1.
9. Install the cylinder block lower blind plug.

Tightening torque

18—22 N·m {1.9—2.2 kgf·m, 14—16 ft·lbf}

