

2012 - Mazda6 - Engine

EXHAUST SYSTEM REMOVAL/ INSTALLATION [MZR 2.5]

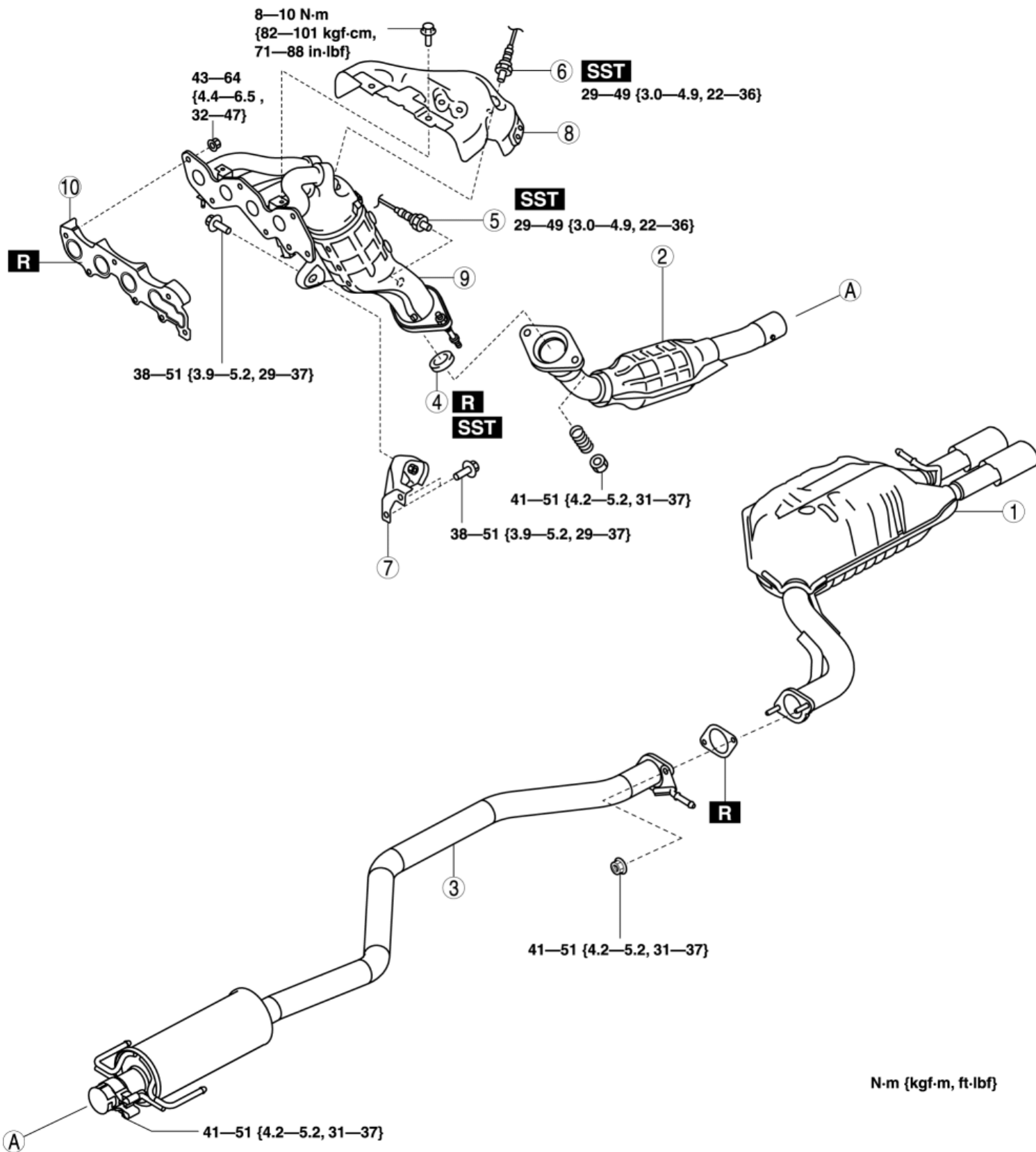
WARNING:

- A hot engine and exhaust system can cause severe burns. Turn off the engine and wait until they are cool before removing the exhaust system.

CAUTION:

- If the exhaust manifold or TWC is reused, sand the flange surface and remove sanding residue, accumulated matter, and friction marks before installing the seal ring.
- If this work is not performed, the seal ring may not be installed correctly. When sanding the flange surface, be careful not to damage the surface.
- When sanding the flange surface, sanding residue may get into the removed part or pipe resulting in deterioration or damage to the part. When sanding, make sure parts are protected from sanding residue or foreign matter penetration.

1. Disconnect the negative battery cable. (See [BATTERY REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
2. Remove the plug hole plate. (See [PLUG HOLE PLATE REMOVAL/ INSTALLATION \[MZR 2.5\]](#).)
3. Remove in the order indicated in the table.
4. Remove the insulator. (See [Exhaust System Insulator Removal/ Installation Note](#).)
5. Install in the reverse order of removal.



1 Main silencer

2 TWC

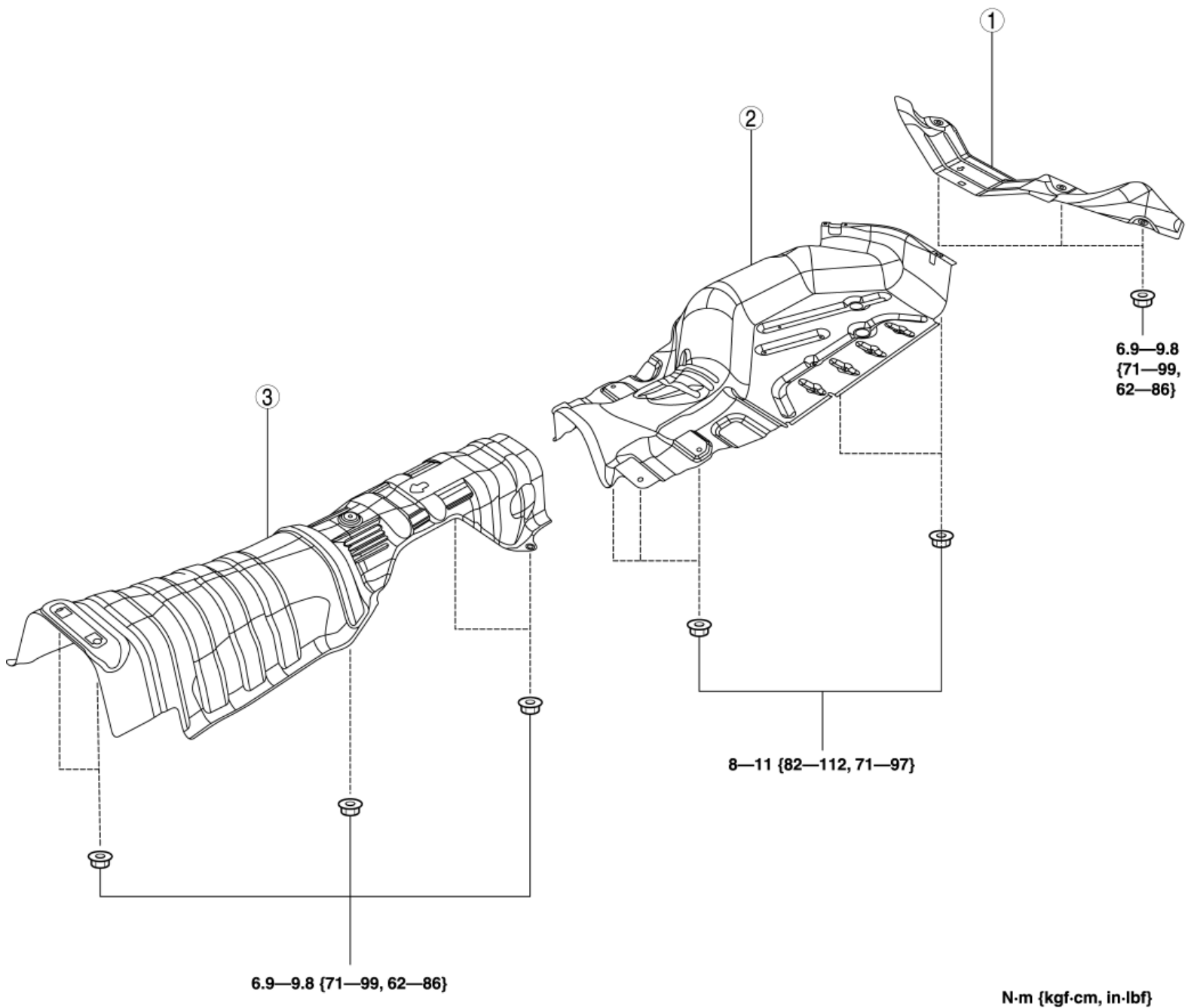
(See [TWC and Middle Pipe Removal Note](#))

(See [Flange Surface Installation Note](#))

	(See TWC and Middle Pipe Installation Note)
3	Middle pipe (See TWC and Middle Pipe Removal Note) (See TWC and Middle Pipe Installation Note)
4	Seal ring (front side) (See Seal Ring Removal Note.) (See Seal Ring Installation Note.)
5	HO ₂ S (See HEATED OXYGEN SENSOR (HO₂S) REMOVAL/ INSTALLATION [MZR 2.5].)
6	A/F sensor (See AIR FUEL RATIO (A/ F) SENSOR REMOVAL/ INSTALLATION [MZR 2.5].)
7	Exhaust manifold bracket
8	Exhaust manifold upper insulator (See Exhaust Manifold Upper Insulator Installation Note)
9	Exhaust manifold (See Flange Surface Installation Note) (See Exhaust Manifold Installation Note)
10	Exhaust manifold gasket

Exhaust System Insulator Removal/ Installation Note

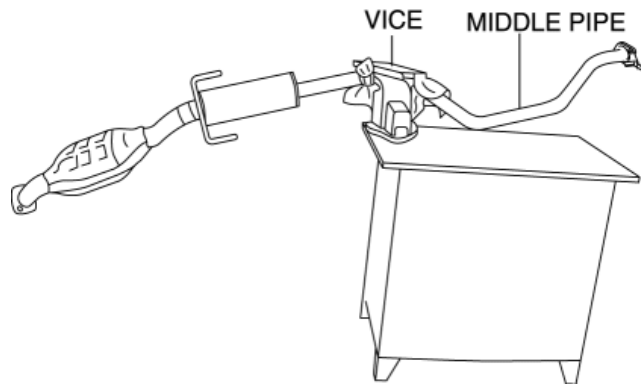
1. Remove the exhaust system insulator in the order shown in the figure.
2. Install in the reverse order of removal.



1	Insulator (rear)
2	Insulator (middle)
3	Insulator (front)

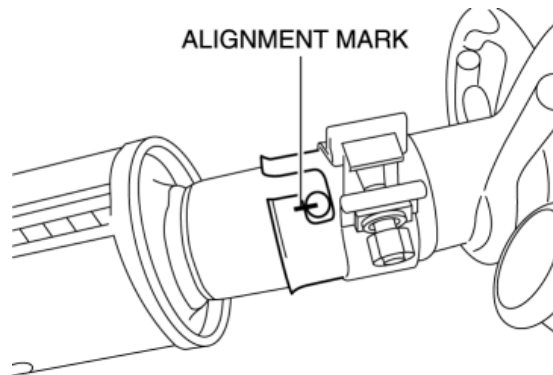
TWC and Middle Pipe Removal Note

1. Remove the aerodynamic under cover No.2. (See [AERODYNAMIC UNDER COVER NO.2 REMOVAL/ INSTALLATION.](#))
2. Remove the TWC and the middle pipe as a single unit.
3. Secure the middle pipe in a vice.

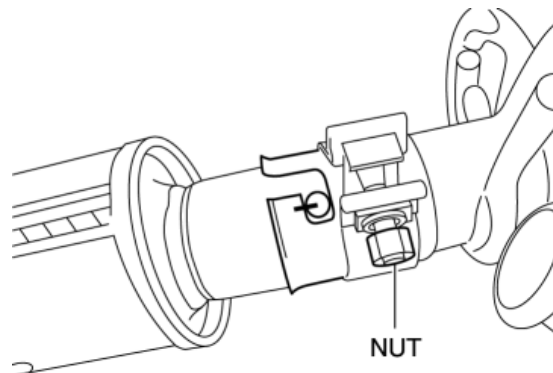


4. Remove the TWC from the middle pipe using the following procedure.

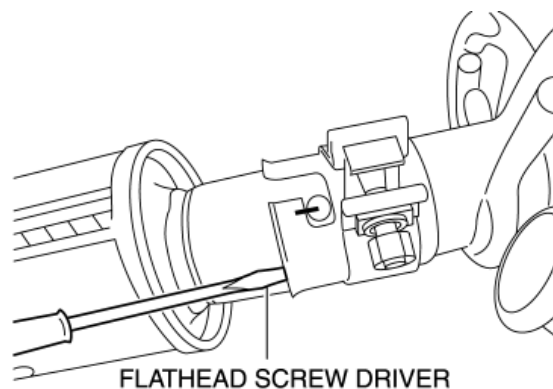
a. As shown in the figure, place alignment marks on the TWC and the middle pipe so that they can be re-assembled to their original position.



b. Loosen the nut shown in the figure.



c. As shown in the figure, spread the connection area of the TWC and the middle pipe outward using a flathead screwdriver.

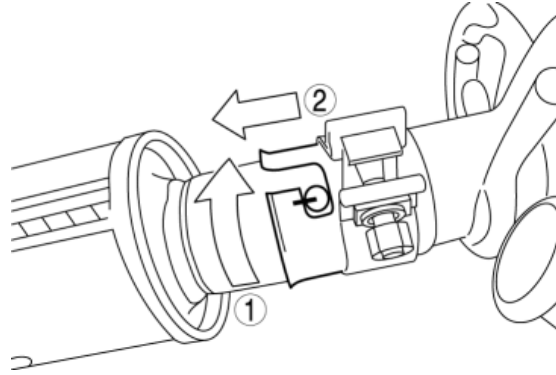


d. Remove the TWC from the middle pipe in the direction of the arrow shown in the figure.

NOTE:

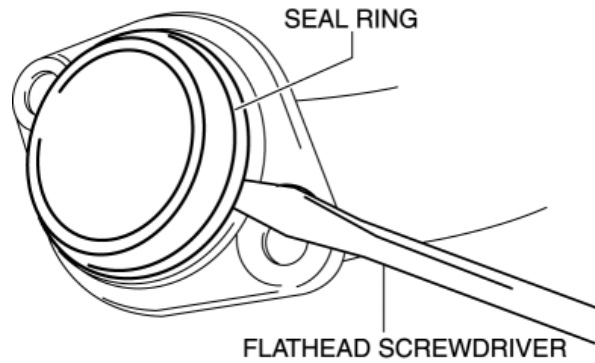
- If the removal is difficult, the middle pipe can be removed easily by spraying penetrant lubricating spray

on the connection area of the TWC and the middle pipe.



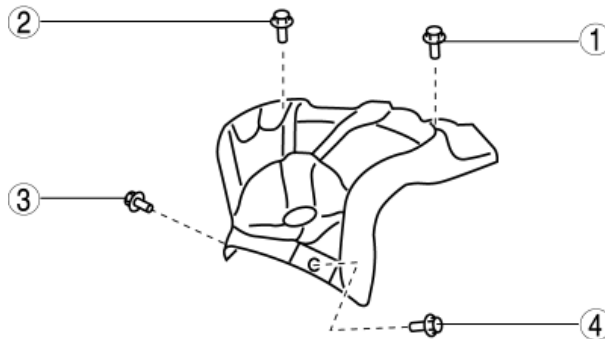
Seal Ring Removal Note

1. Remove the seal ring using a flathead screwdriver being careful not to damage the pipe.



Exhaust Manifold Upper Insulator Installation Note

1. Temporarily tighten the exhaust manifold insulator.
2. Tighten the exhaust manifold insulator in the order shown in the figure.



Tightening torque

- 8—10 N·m {82—101 kgf·cm, 71—88 in·lbf}

Flange Surface Installation Note

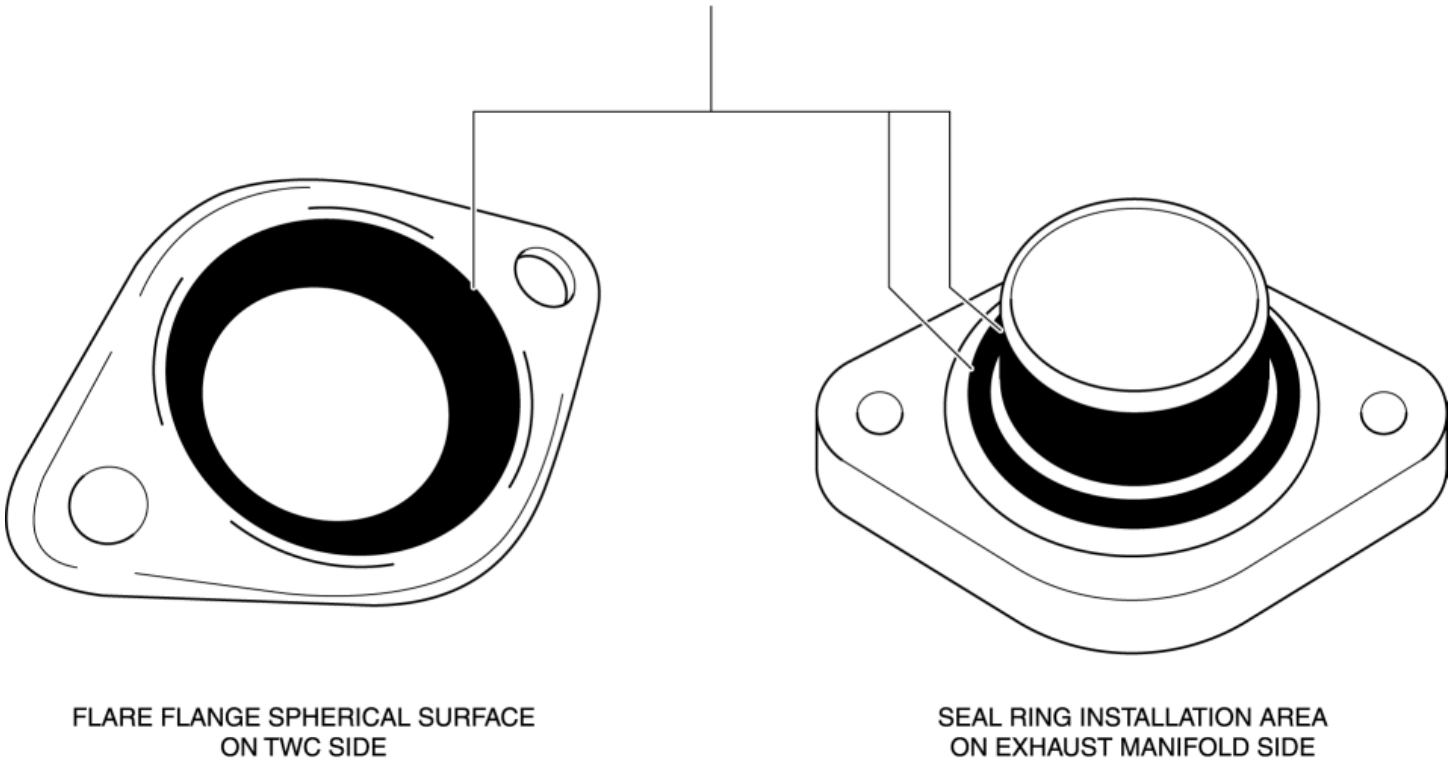
CAUTION:

- If the exhaust manifold or TWC is reused, sand the flange surface and remove sanding residue, accumulated matter, and friction marks before installing the seal ring.
- If this work is not performed, the seal ring may not be installed correctly. When sanding the flange surface, be careful not to damage the surface.
- When sanding the flange surface, sanding residue may get into the removed part or pipe resulting in deterioration or damage

to the part. When sanding, make sure parts are protected from sanding residue or foreign matter penetration.

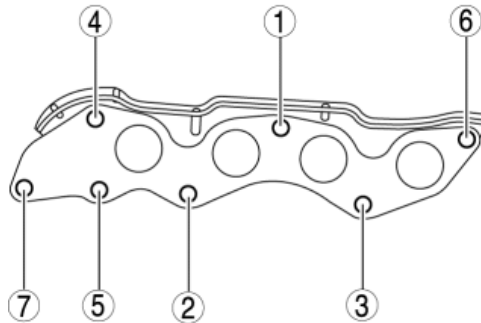
1. Sand the surface shown in the figure using sandpaper and remove sanding residue, accumulated matter, and friction marks.
2. Degrease the sanded surface.

SAND AND DEGREASE SURFACE MARKED IN BLACK



Exhaust Manifold Installation Note

1. Temporarily tighten the exhaust manifold installation nuts.
2. Tighten the exhaust manifold installation nuts in the order shown in the figure.



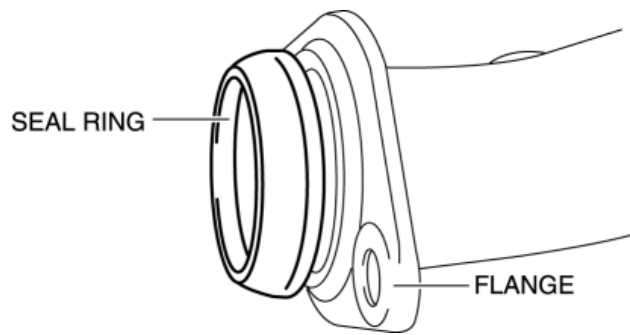
Tightening torque

- 43—64 N·m {4.4—6.5 kgf·m, 32—47 ft·lbf}

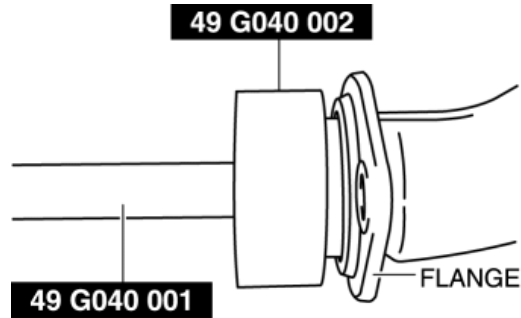
Seal Ring Installation Note

CAUTION:

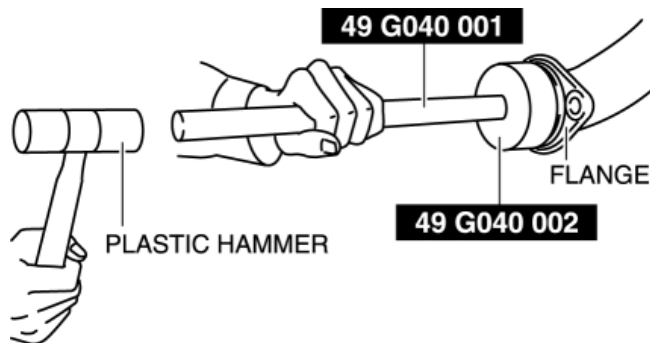
- If the exhaust manifold, or TWC is reused, sand the flange surface and remove sanding residue, accumulated matter, and friction marks before installing the seal ring. If this work is not performed, the seal ring may not be installed correctly. (See [Flange Surface Installation Note](#).)
 - If installation is performed without using the SST, the seal ring will be damaged and deformed, resulting in an incorrect installation. Always use the SST to install the seal ring.
1. Temporarily install the seal ring to the pipe so that the seal ring is even with the flange.



2. Install the **SST** to the seal ring so that the **SST** is even with the flange.



3. Press in the seal ring by tapping the **SST** using a plastic hammer until the seal ring contacts the flange.



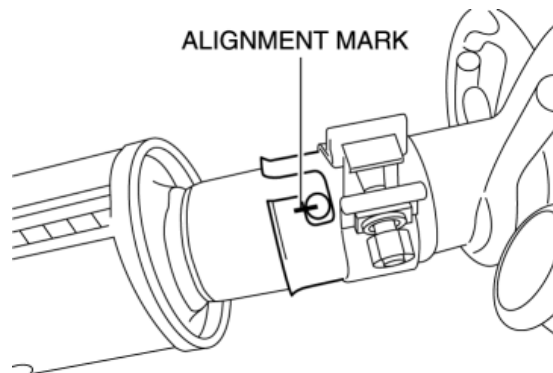
TWC and Middle Pipe Installation Note

NOTE:

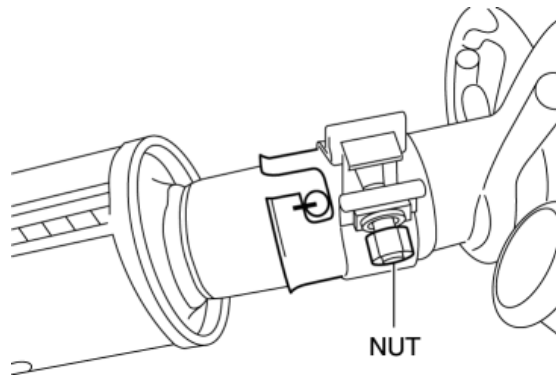
- When newly replacing the TWC or the middle pipe, place alignment marks on the new part in the same position as the removed part.

1. Install the TWC to the middle pipe using the following procedure.

a. Align the TWC and the middle pipe alignment marks.



b. Tighten the nut shown in the figure.



Tightening torque

- 41—51 N·m {4.2—5.2 kgf·m, 31—37 ft·lbf}

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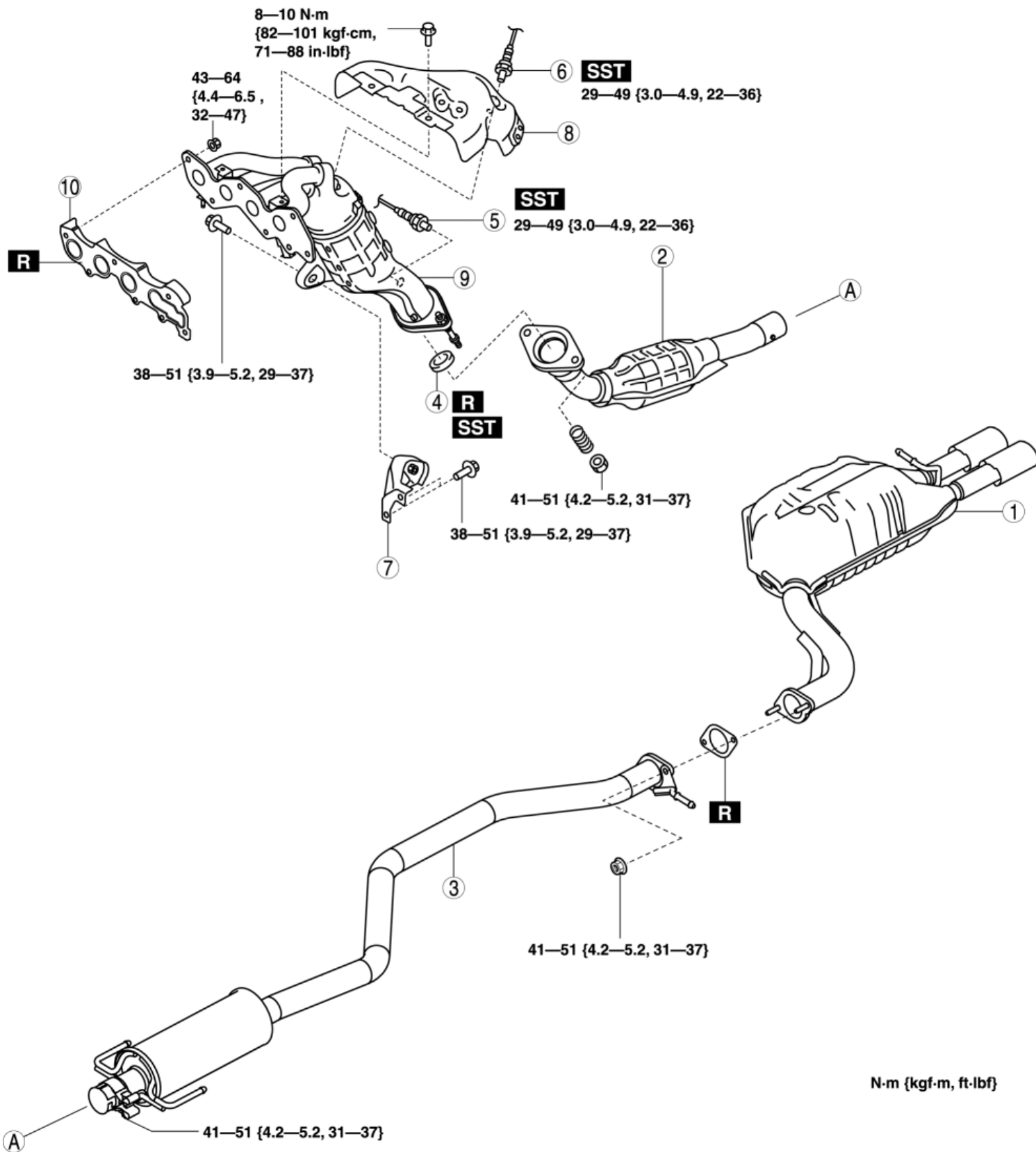
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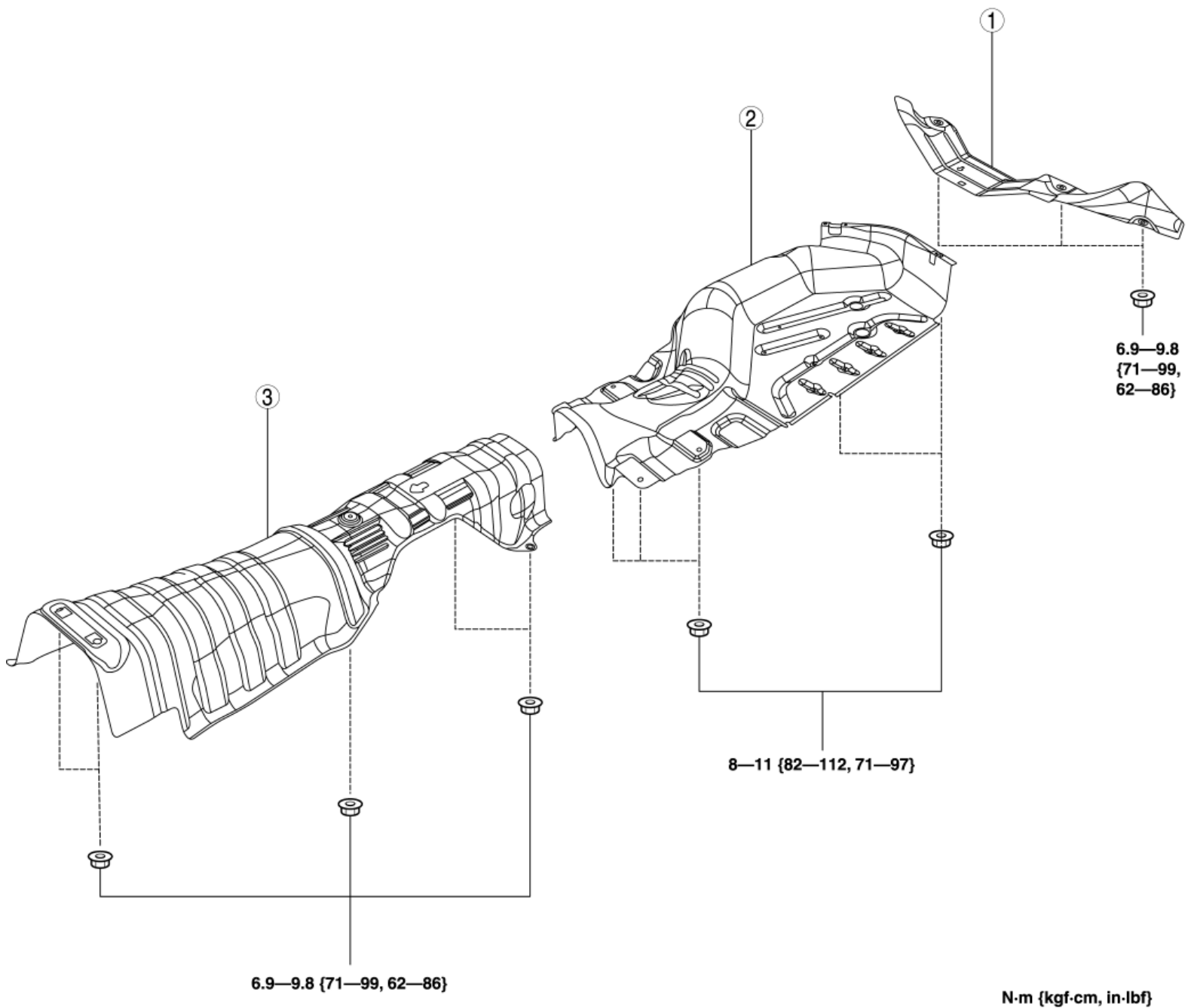
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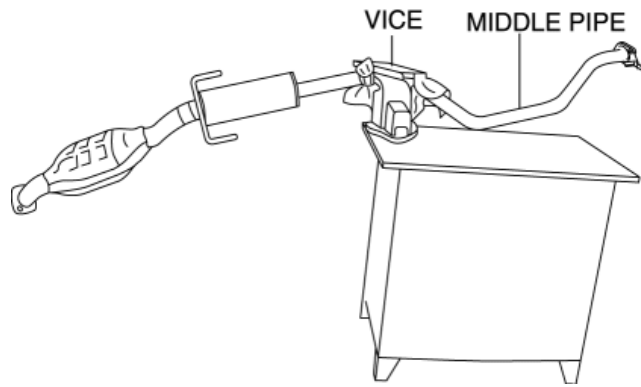
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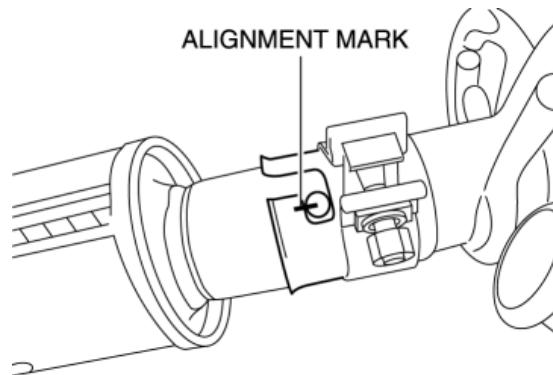
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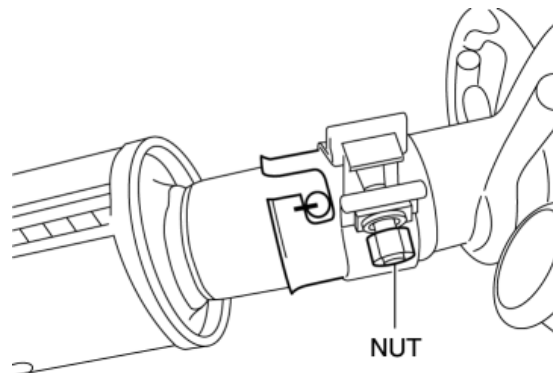


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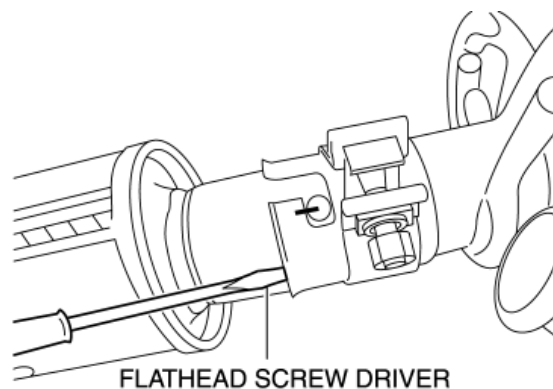
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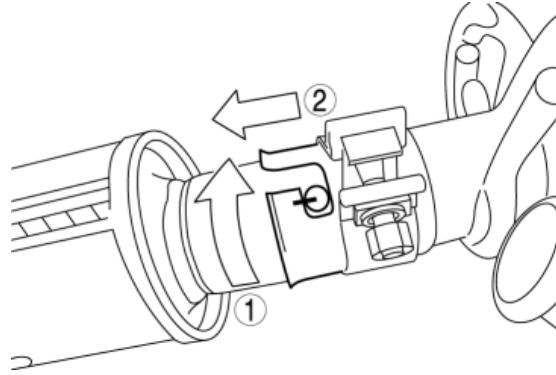


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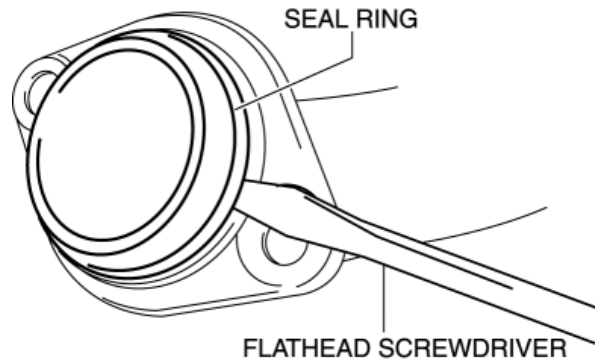
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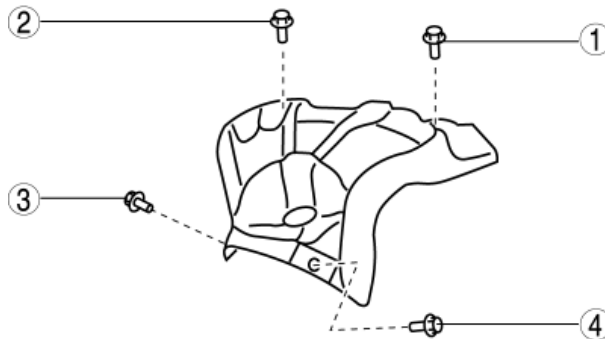
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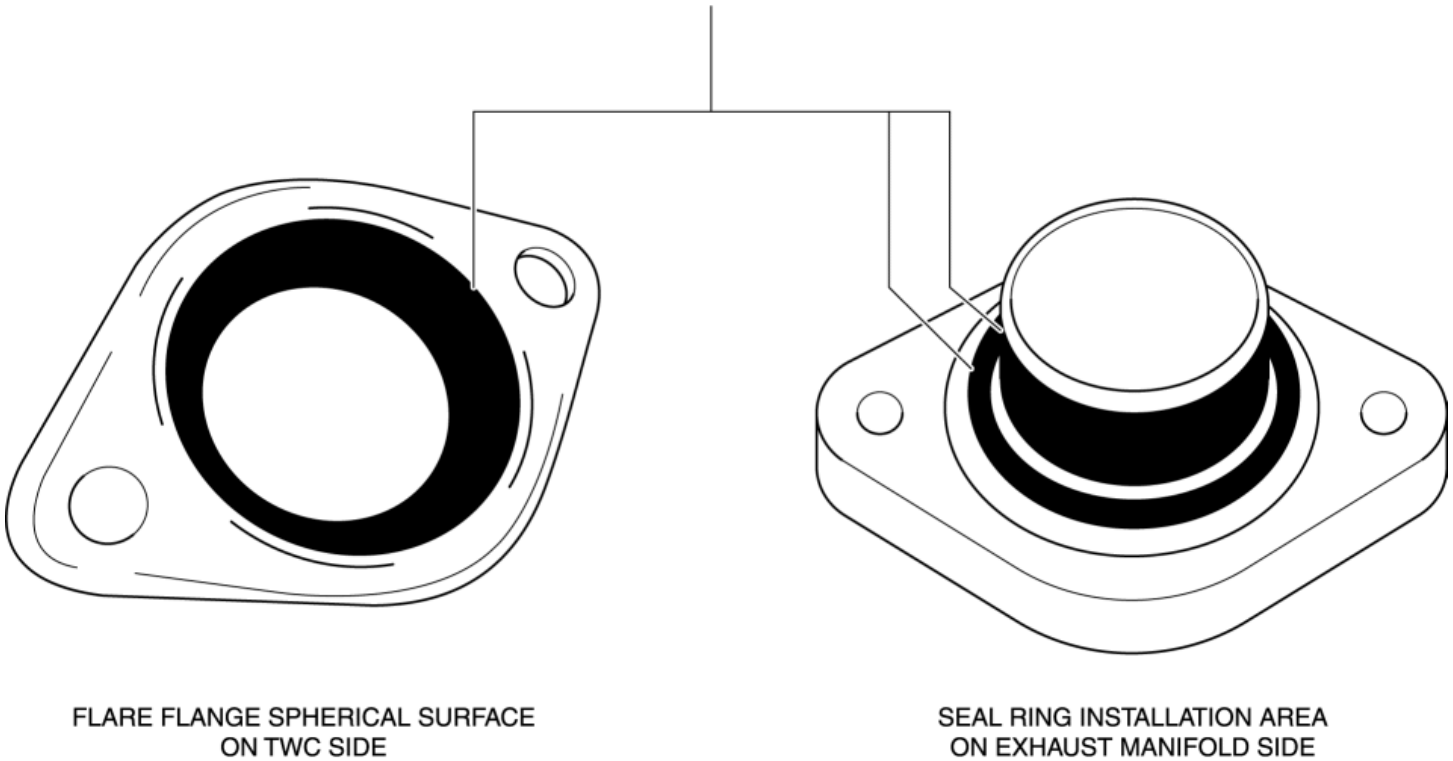
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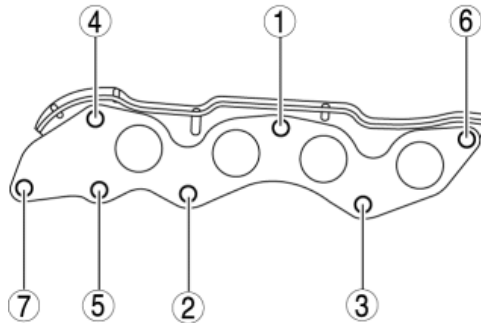
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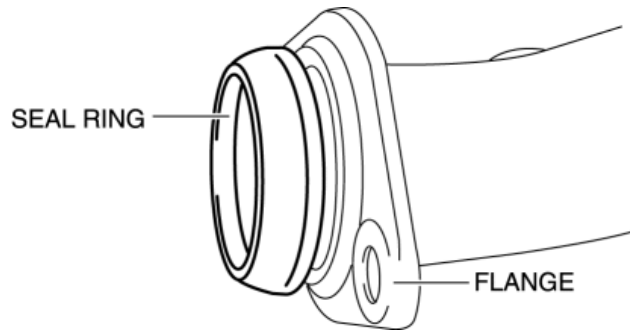
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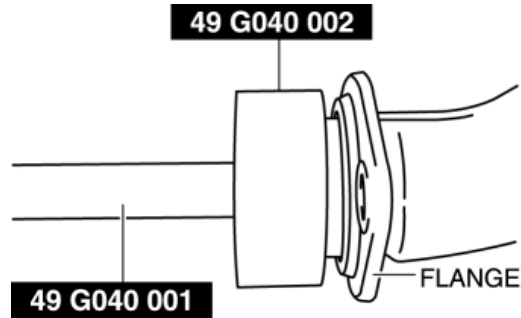
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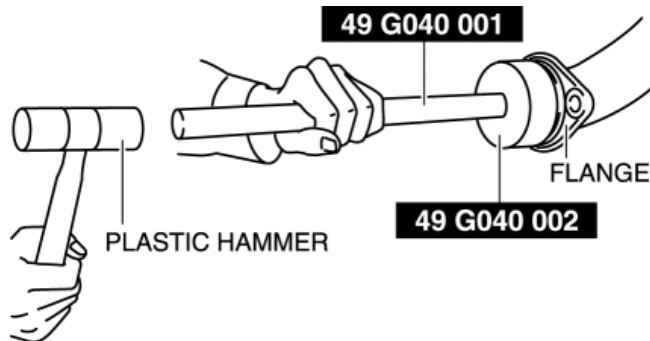
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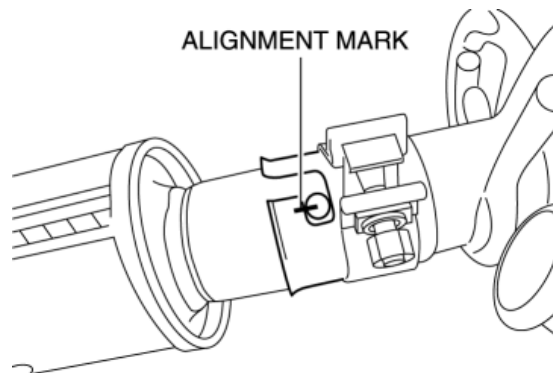
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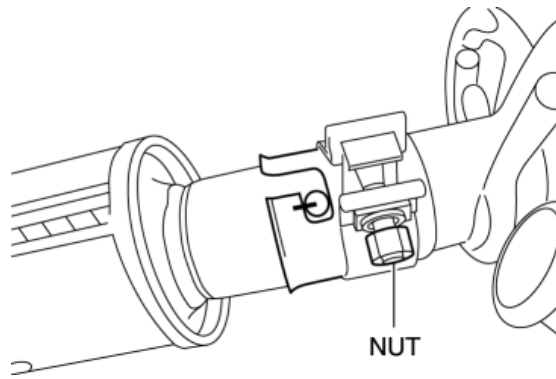
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