# REAR DRIVE SHAFT REMOVAL/INSTALLATION

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**Replacement Part**

| | |
|---|---|
| Locknut<br>Quantity: 1<br>Location of use: Rear drive shaft | Rear drive shaft clip<br>Quantity: 1<br>Location of use: Rear drive shaft |

**Oil and Chemical Type**

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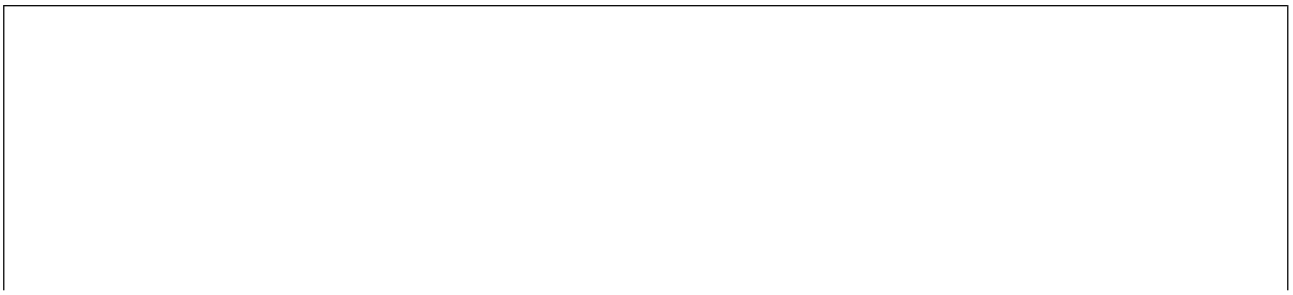
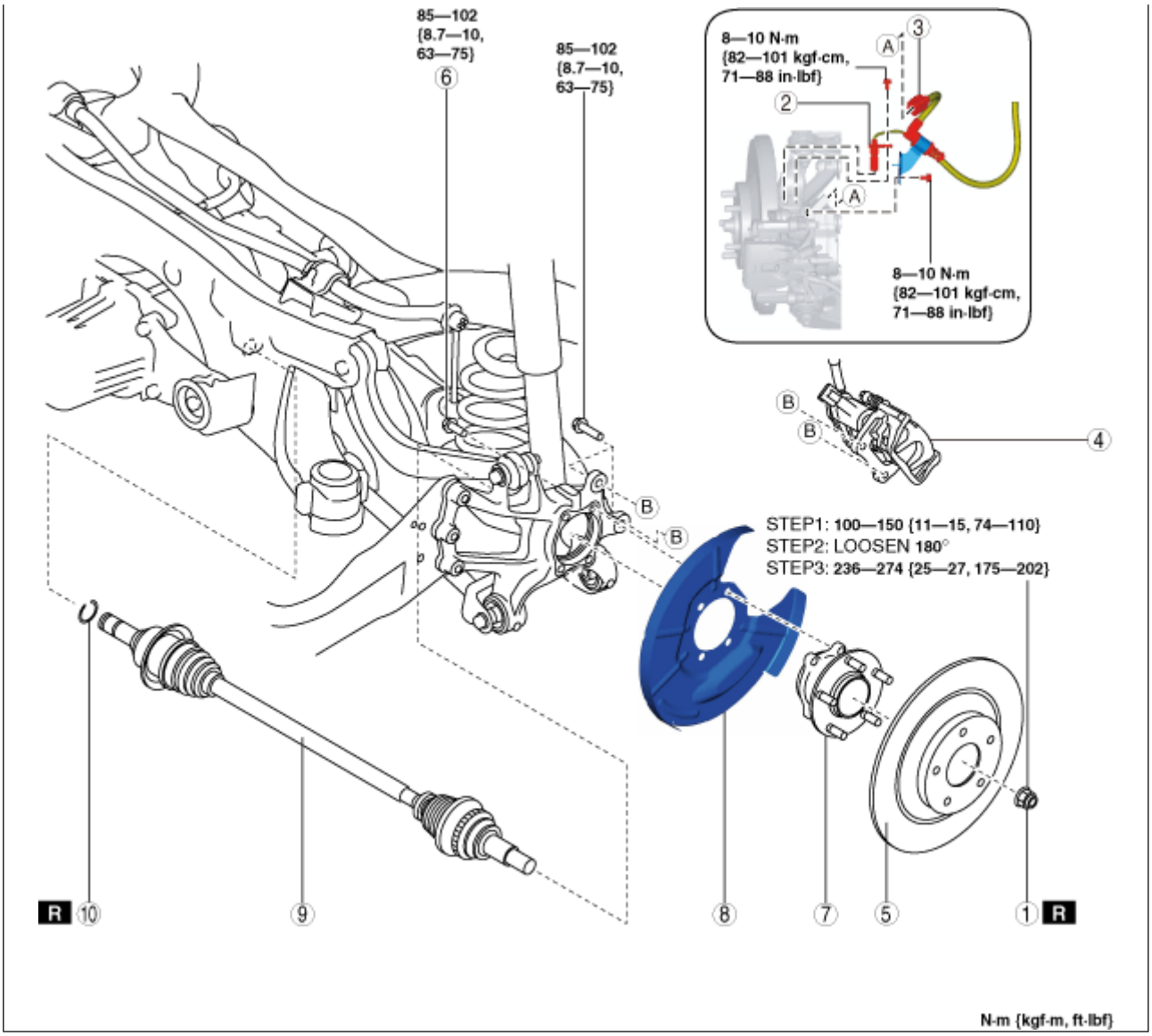
|---|
| Rear differential oil<br>Type: MAZDA LONG LIFE HYPOID GEAR OIL SG1 |

**Caution**

- Performing the following procedures could cause an open circuit in the rear ABS wheel-speed sensor wiring harness if it is pulled by mistake. Before servicing, disconnect the rear ABS wheel-speed sensor and set it aside so that the wiring harness will not be pulled by mistake.
- Do not allow a magnetized tool such as a magnetized screwdriver to come into contact with the ABS sensor rotor. If the ABS sensor rotor becomes magnetized it will be unable to read the ABS wheel speed sensor waveform correctly resulting in an ABS system malfunction to be determined and the inability to perform ABS control. If a magnetized object comes into contact with the ABS sensor rotor, it will be necessary to newly replace the rear drive shaft (ABS sensor rotor).

1. Switch the ignition ON (engine off).
2. Release the electric parking brake.
3. Switch the ignition off.
4. Disconnect the negative battery terminal. (See NEGATIVE BATTERY TERMINAL DISCONNECTION/CONNECTION.)
5. Remove the wheel and tire. (See WHEEL AND TIRE REMOVAL/INSTALLATION.)
6. Drain the differential oil. (See DIFFERENTIAL OIL REPLACEMENT.)
7. Remove in the order shown in the figure.
8. Install in the reverse order of removal.
9. Add differential oil. (See DIFFERENTIAL OIL REPLACEMENT.)





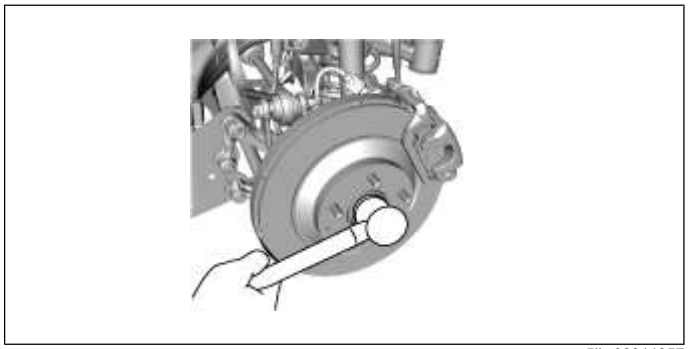

| | |
|---|---|
| 1 | Locknut<br>(See Locknut Removal Note.)<br>(See Locknut Installation Note.) |
| 2 | Rear ABS wheel-speed sensor |
| 3 | Electric parking brake motor gear unit connector |
| 4 | Brake caliper component<br>(See Brake Caliper Component Removal Note.) |
| 5 | Disc plate |
| 6 | Bolt (wheel hub) |
| 7 | Wheel hub |
| 8 | Dust cover |
| 9 | Rear drive shaft<br>(See Rear Drive Shaft Removal Note.)<br>(See Rear Drive Shaft Installation Note.) |
| 10 | Rear drive shaft clip<br>(See Rear Drive Shaft Clip Installation Note.) |

## Locknut Removal Note

**Caution**

- When removing the locknut, remove it manually without using an electric or pneumatic tool. Otherwise, the locknut may seize.
- When removing the locknut, do not apply load at the ground to the axle. Otherwise, it could damage the wheel hub.

1. Remove the locknut with the brake pedal depressed.
2. Install a spare nut onto the drive shaft.
3. Tap the nut with a copper hammer and separate the drive shaft from the axle.



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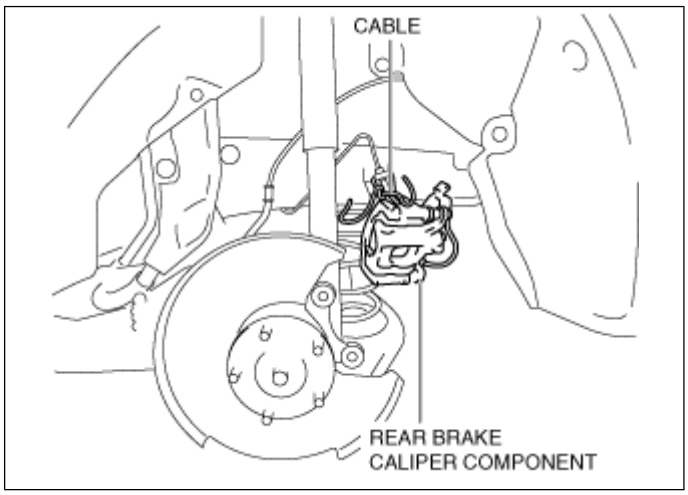
## Brake Caliper Component Removal Note

1. Remove the rear brake caliper component and suspend it out of the way using a cable.

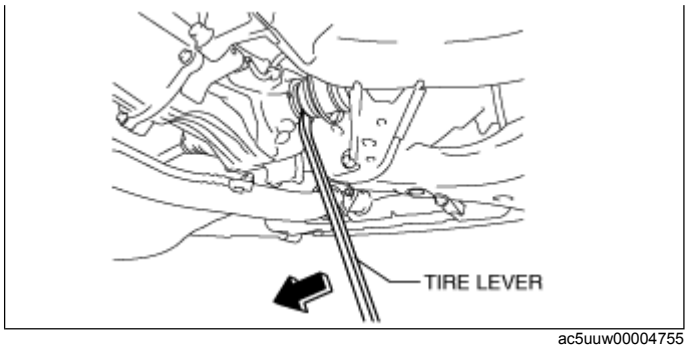



## Rear Drive Shaft Removal Note

**Caution**

- The oil seal could be damaged by the end of the drive shaft. When removing the rear drive shaft, be careful not to damage the oil seal. If the oil seal is damaged, replace it with a new one.
- Be careful not to damage the rear drive shaft boot.
- Be careful not to damage the rear ABS sensor rotor.

1. Insert a tire lever or equivalent tool between the rear differential-side outer ring and the rear differential.



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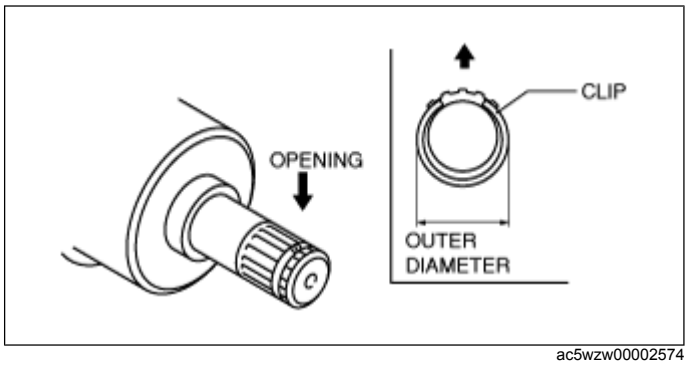
2. Move the tire lever or the equivalent in the direction of the arrow shown in the figure and detach the rear differential and the rear drive shaft.

3. Remove the rear drive shaft by pulling it to the wheel side until it is removed from the differential.

## Rear Drive Shaft Clip Installation Note

1. Install a new clip to the clip groove at the end of the rear drive shaft with the clip opening facing upward.



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2. Verify that the outer diameter of the clip is within the specification.

**SPECIFICATION**

Less than 25.2 mm {0.992 in}

- If it exceeds the specification, repeat installation using a new clip.

## Rear Drive Shaft Installation Note

**Caution**
- The oil seal could be damaged by the end of the rear drive shaft. When installing the rear drive shaft to the rear differential, be careful not to damage the oil seal. If the oil seal is damaged, replace it with a new one.

1. Apply rear differential oil to the oil seal lip.

2. Insert the rear drive shaft to the wheel hub component.

3. Install the rear drive shaft to the rear differential.

4. After installation, verify that the rear drive shaft is securely held by the clip by pulling the outer ring on the rear differential side towards the axle side.

## Locknut Installation Note

**Caution**

- When installing the locknut, install it manually without using an electric or pneumatic tool. Otherwise, the locknut may seize and the tightening force of the wheel hub may decrease and cause excessive play or abnormal noise.
- When installing the locknut, do not apply load at the ground to the axle. Otherwise, it could damage the wheel hub.

1. If dust or grease is on the drive shaft thread area, wipe it off with a cloth.

2. Tighten the locknut using the following procedure and with the brake pedal depressed.

   (1) Tighten locknut to 100—150 N·m {11—15 kgf·m, 74—110 ft·lbf} torque.

   (2) Loosen locknut to 180°

   (3) Tighten locknut to 236—274 N·m {25—27 kgf·m, 175—202 ft·lbf} torque.