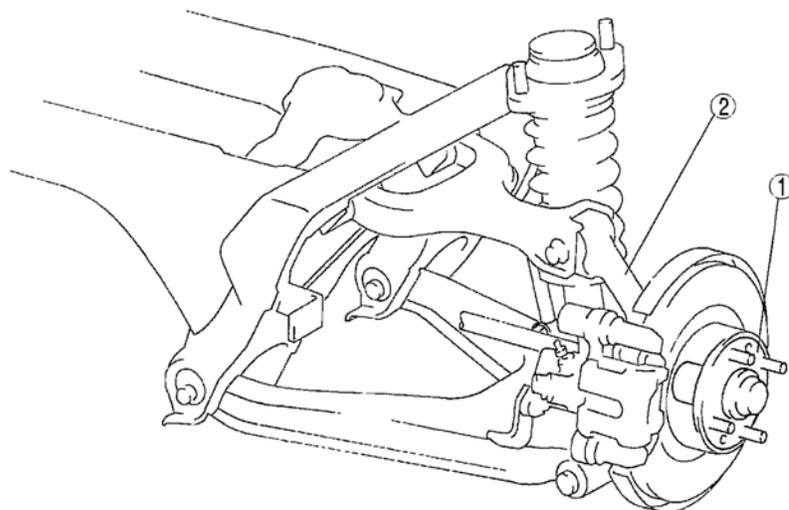


2005 DRIVELINE/AXLE

Rear Axle - MX-5 Miata

REAR AXLE LOCATION INDEX



1	Wheel hub (See WHEEL HUB, KNUCKLE PRE-INSPECTION) (See WHEEL HUB, KNUCKLE REMOVAL/INSTALLATION)
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2	Knuckle (See WHEEL HUB, KNUCKLE REMOVAL/INSTALLATION)
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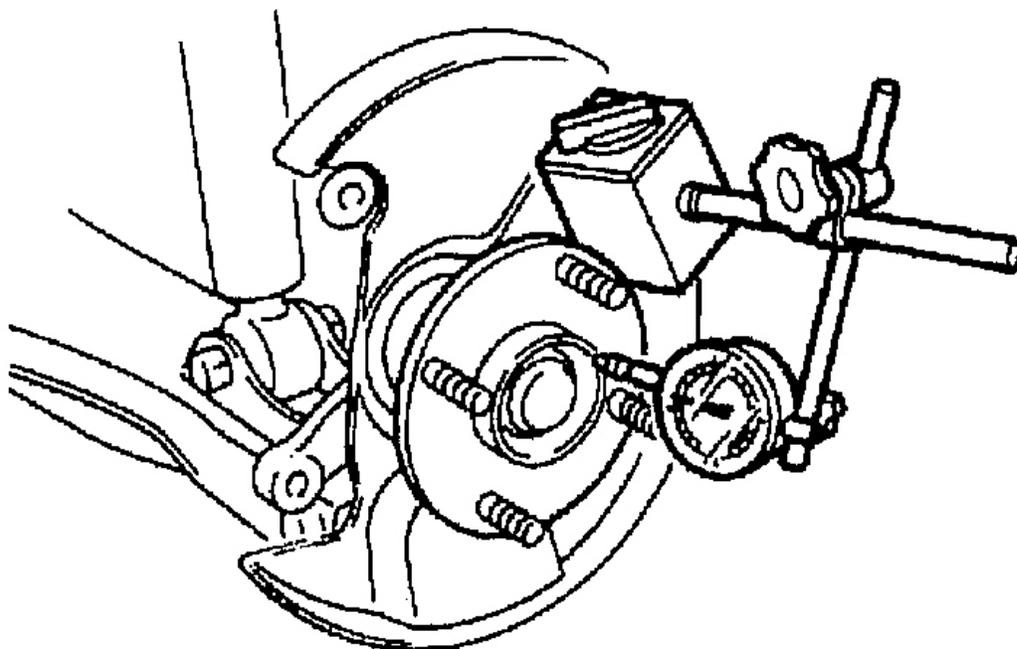
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Fig. 1: Identifying Rear Axle Location
Courtesy of MAZDA MOTORS CORP.

WHEEL HUB, KNUCKLE PRE-INSPECTION

WHEEL BEARING PLAY

1. Remove the wheel, brake caliper component and disc plate.
2. Position a dial indicator against the wheel hub.



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Fig. 2: Positioning A Dial Indicator Against Wheel Hub
Courtesy of MAZDA MOTORS CORP.

3. Push and pull the wheel hub by hand in the axial direction and measure the wheel bearing play.
 - If the bearing play exceeds the specification, replace and tighten the locknut to the specified torque and retest.
 - Replace the wheel hub component as necessary.

Maximum wheel bearing play

0.05 mm {0.002 in}

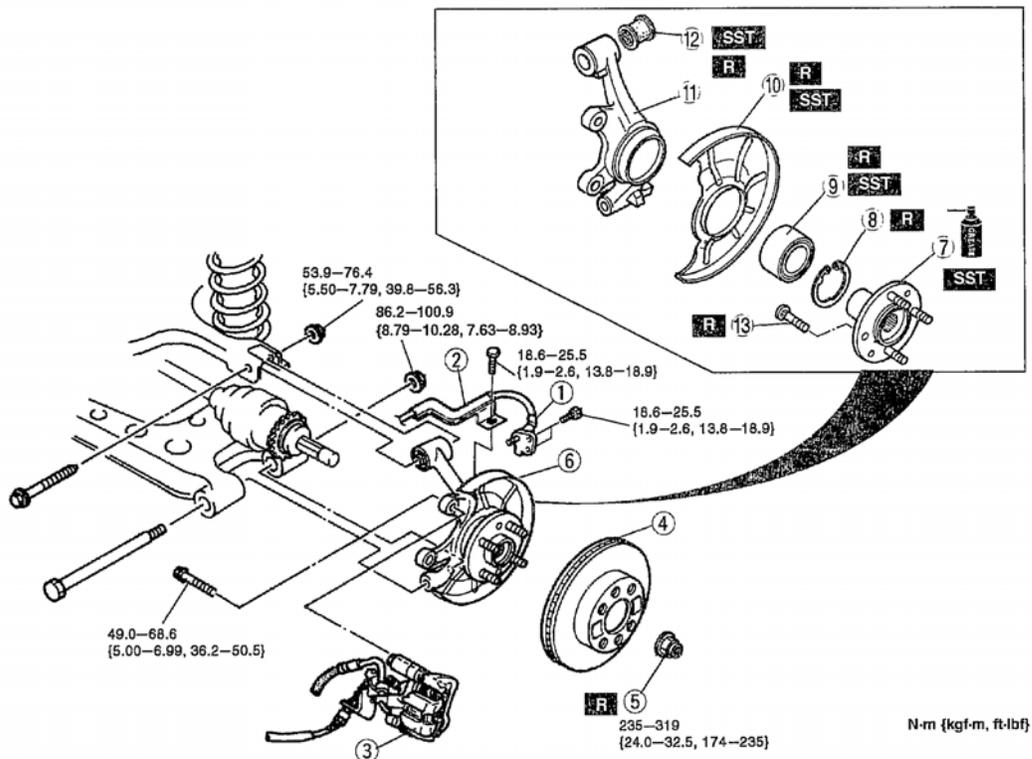
WHEEL HUB, KNUCKLE REMOVAL/INSTALLATION

- CAUTION:**
- Performing the following procedures without first removing the ABS wheel-speed sensor may possibly cause an open circuit in the harness if it is pulled by mistake. Before performing the following procedures, remove the ABS wheel-speed sensor (axle side) and fix it to an appropriate place where the sensor will not be pulled by mistake while servicing the vehicle.

2005 Mazda MX-5 Miata

2005 DRIVELINE/AXLE Rear Axle - MX-5 Miata

1. Remove in the order indicated in the table.
2. Install in the reverse order of removal.



1	ABS wheel-speed sensor (if equipped)
2	Sensor bracket
3	Brake caliper component
4	Disc plate (See Disc Plate Removal Note) (See Disc Plate Installation Note)
5	Locknut (See Locknut Installation Note)
6	Knuckle, wheel hub, and dust cover
7	Rear wheel hub (See Rear Wheel Hub Removal Note) (See Rear Wheel Hub Installation Note)

8	Retaining ring
9	Wheel bearing (See Wheel Bearing Removal Note) (See Wheel Bearing Installation Note)
10	Dust cover (See Dust Cover Removal Note) (See Dust Cover Installation Note)
11	Knuckle
12	Bushing (See Bushing Removal Note) (See Bushing Installation Note)
13	Wheel hub bolt (See Wheel Hub Bolt Removal Note)

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Fig. 3: View Of Wheel Hub Knuckle & Torque Specifications
 Courtesy of MAZDA MOTORS CORP.

REAR WHEEL HUB REMOVAL NOTE

1. Press the rear wheel hub component out using the SSTs.

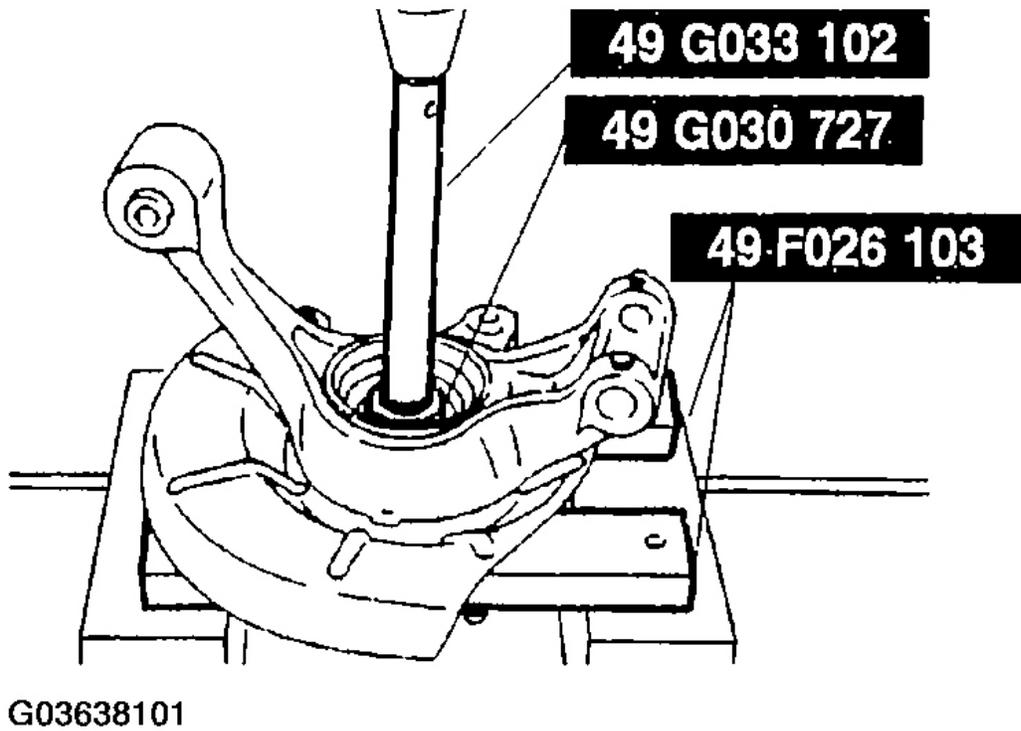
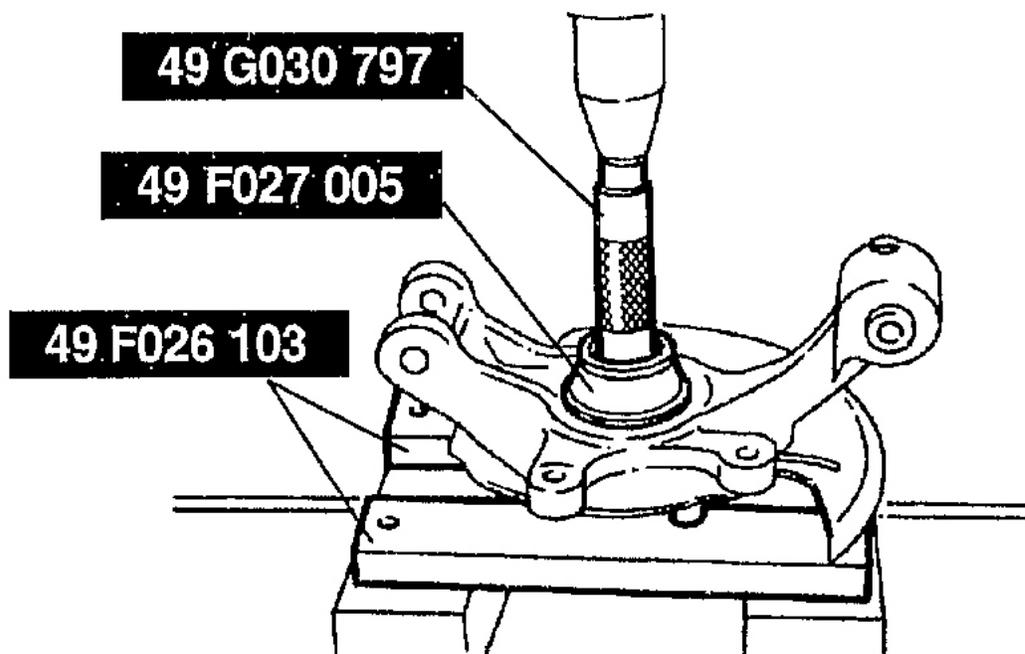


Fig. 4: Pressing Rear Wheel Hub Component Out Using SSTs
Courtesy of MAZDA MOTORS CORP.

WHEEL BEARING REMOVAL NOTE

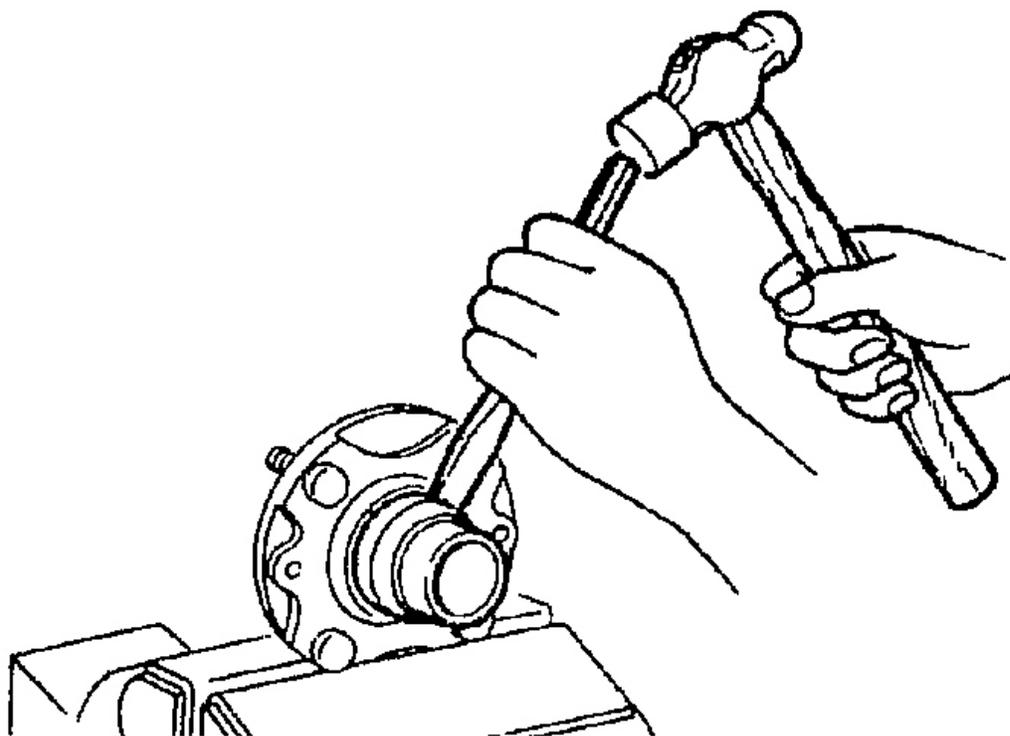
1. Press the wheel bearing out using the SSTs.



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Fig. 5: Pressing Wheel Bearing Out Using SSTs
Courtesy of MAZDA MOTORS CORP.

2. Move the bearing inner race away from the rear wheel hub component using a chisel.



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Fig. 6: Moving Bearing Inner Race Away From Rear Wheel Hub Component Using A Chisel
Courtesy of MAZDA MOTORS CORP.

3. Press the bearing inner race off the wheel hub using the SSTs.

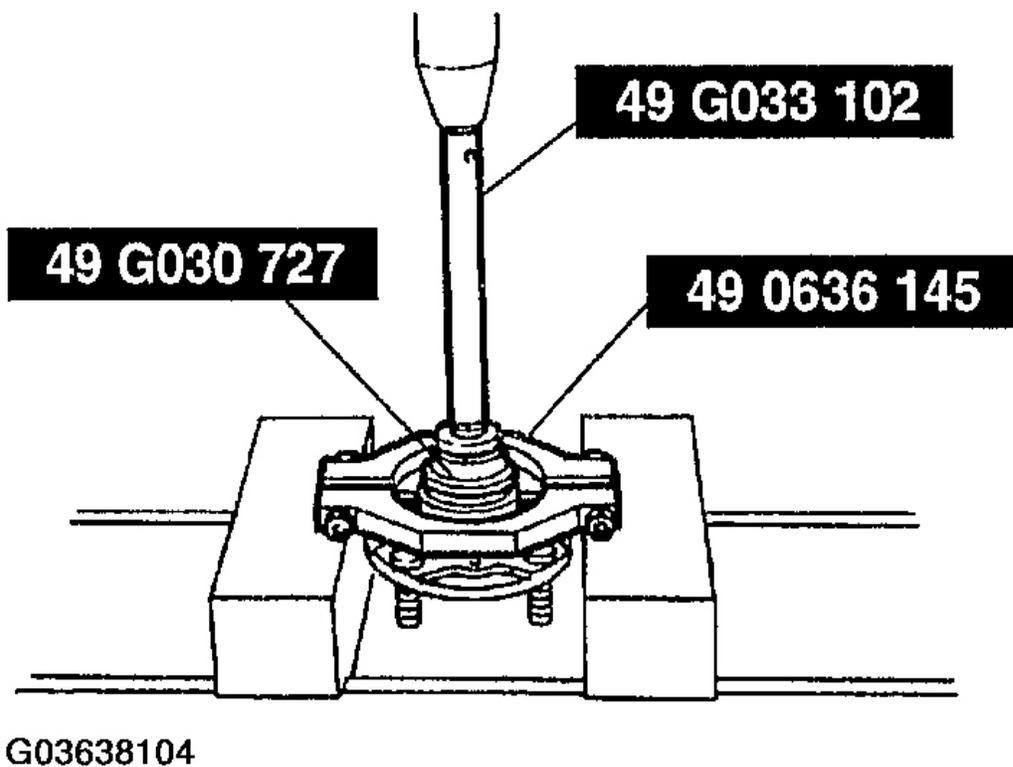
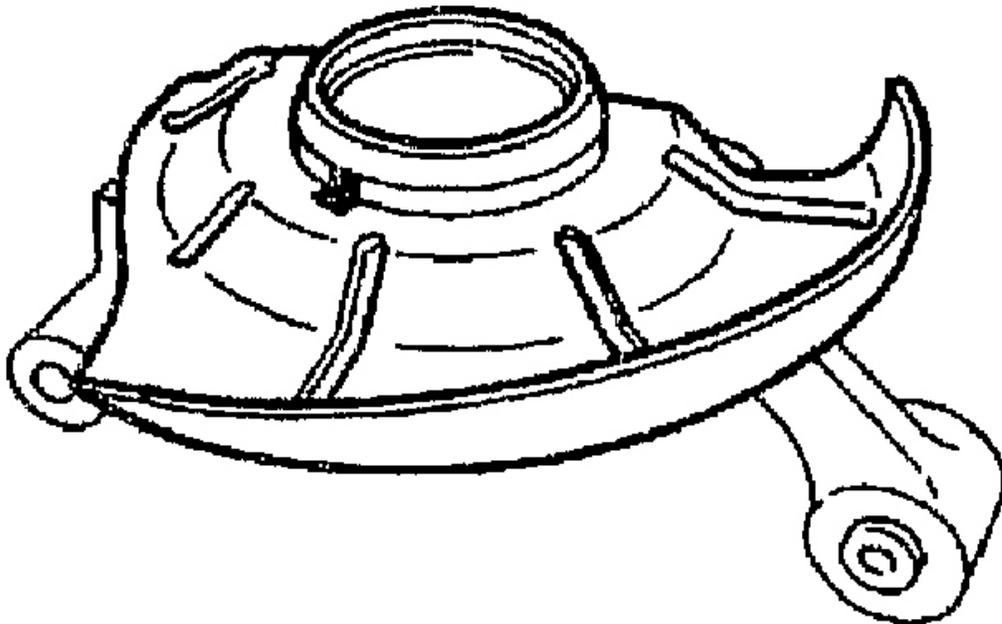


Fig. 7: Pressing Bearing Inner Race Off Wheel Hub Using SSTs
Courtesy of MAZDA MOTORS CORP.

DUST COVER REMOVAL NOTE

NOTE: • The dust cover does not need to be removed unless it is being replaced.

1. Mark the dust cover and knuckle for proper reassembly.



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Fig. 8: Marking Dust Cover And Knuckle For Proper Reassembly
Courtesy of MAZDA MOTORS CORP.

2. Remove the dust cover using a chisel.

BUSHING REMOVAL NOTE

1. Press out the bushing using the **SST** and a socket.

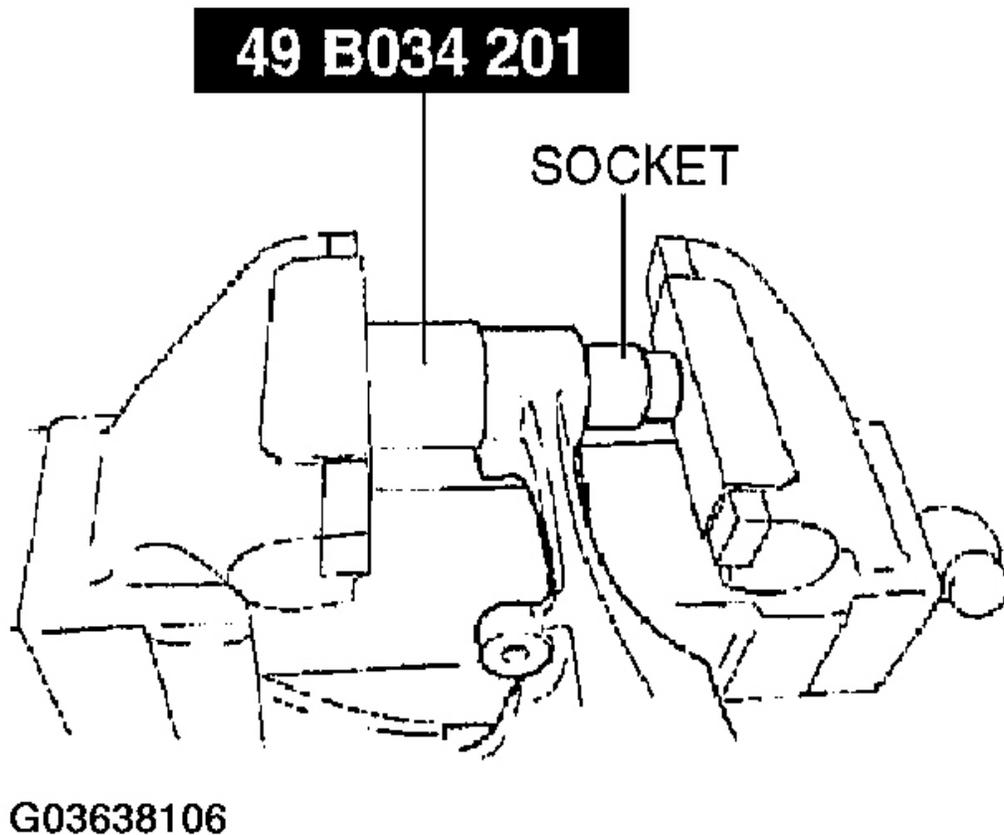
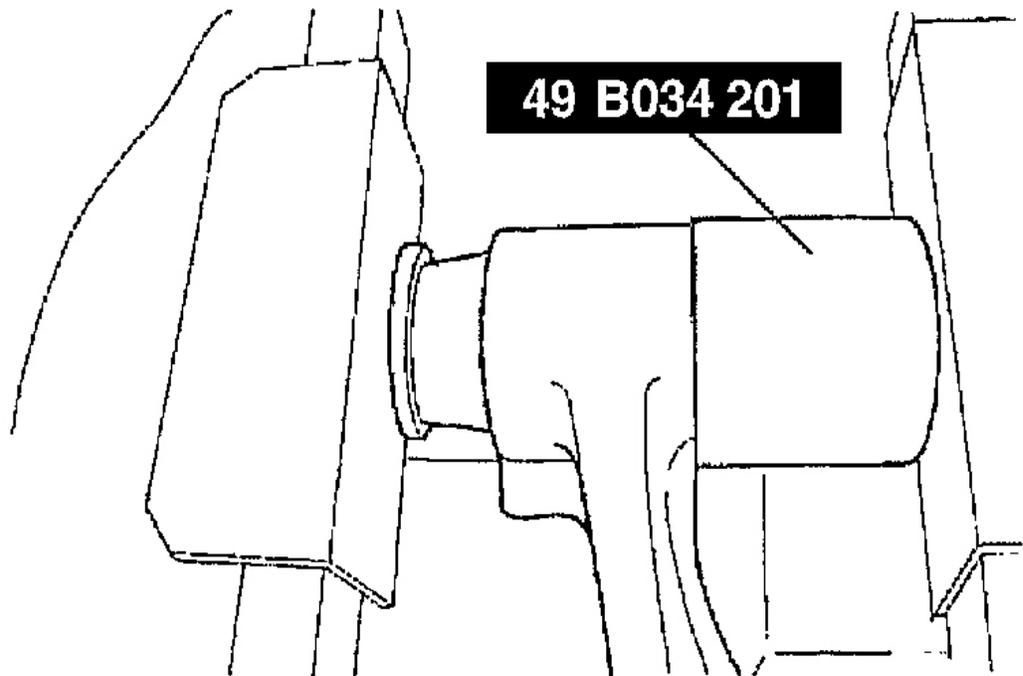


Fig. 9: Pressing Out Bushing Using SST
Courtesy of MAZDA MOTORS CORP.

BUSHING INSTALLATION NOTE

1. Apply soapy water to the bushing, then press it into the knuckle using the **SST**.

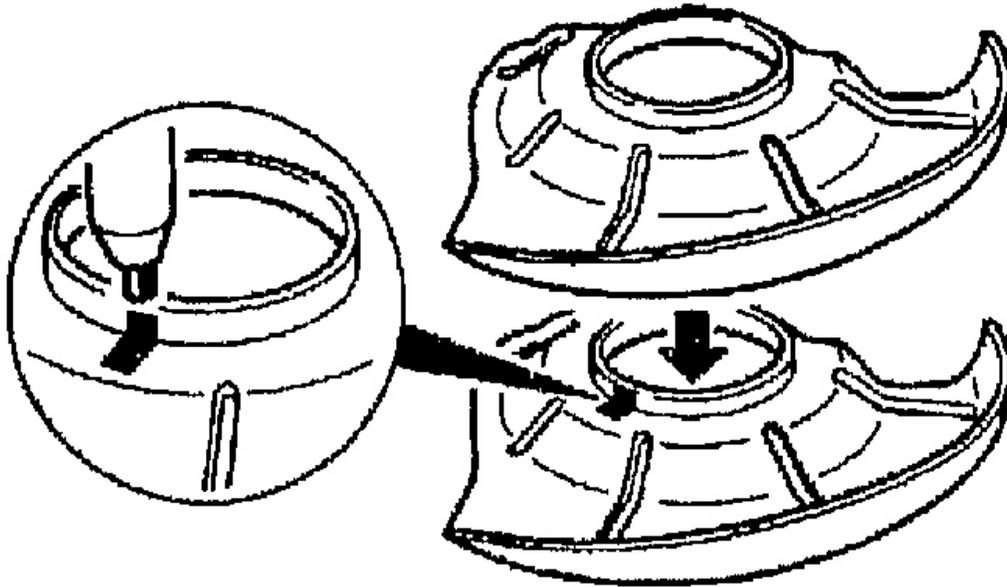


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Fig. 10: Applying Soapy Water To Bushing
Courtesy of MAZDA MOTORS CORP.

DUST COVER INSTALLATION NOTE

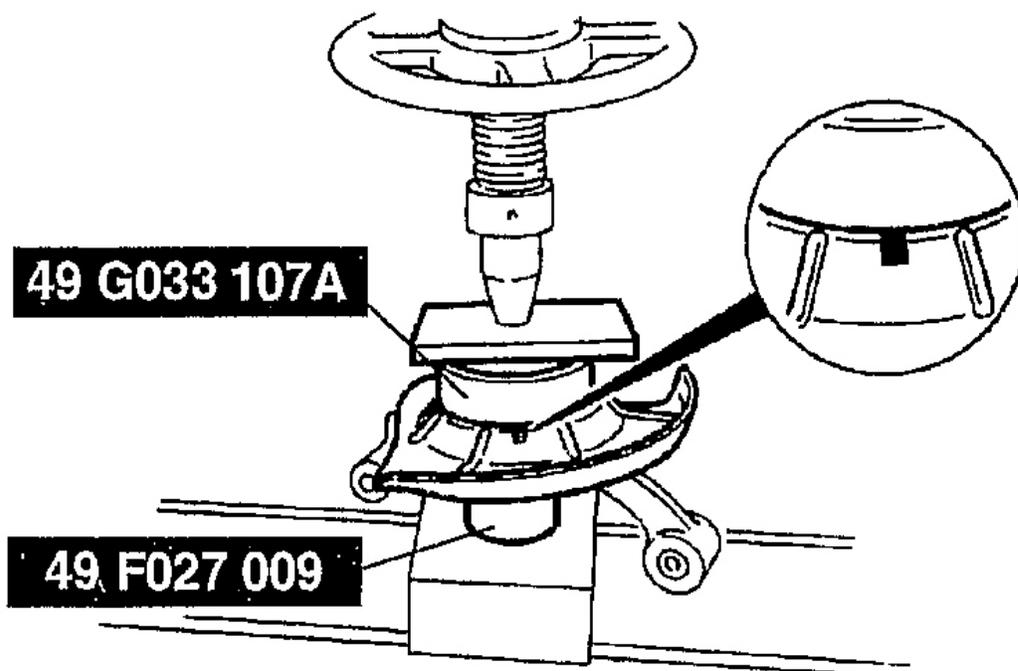
1. Mark the new dust cover as the same point as the removed one.
2. Align the marks of the new dust cover and the knuckle.



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Fig. 11: Aligning Marks Of New Dust Cover And Knuckle
Courtesy of MAZDA MOTORS CORP.

3. Install the new dust cover using the SSTs.



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Fig. 12: Installing New Dust Cover Using SSTs
Courtesy of MAZDA MOTORS CORP.

WHEEL BEARING INSTALLATION NOTE

CAUTION:

- Before installing the wheel bearing, confirm the color of the oil seals, and always install the bearing with the silver-colored oil seal side facing toward the vehicle, fit on the knuckle. If the bearing is installed incorrectly, water and other foreign material could get inside the wheel bearing, negatively affecting durability.

1. Install the new wheel bearing with the silver-colored oil seal side facing toward the vehicle, set on top of the knuckle.

2005 Mazda MX-5 Miata

2005 DRIVELINE/AXLE Rear Axle - MX-5 Miata

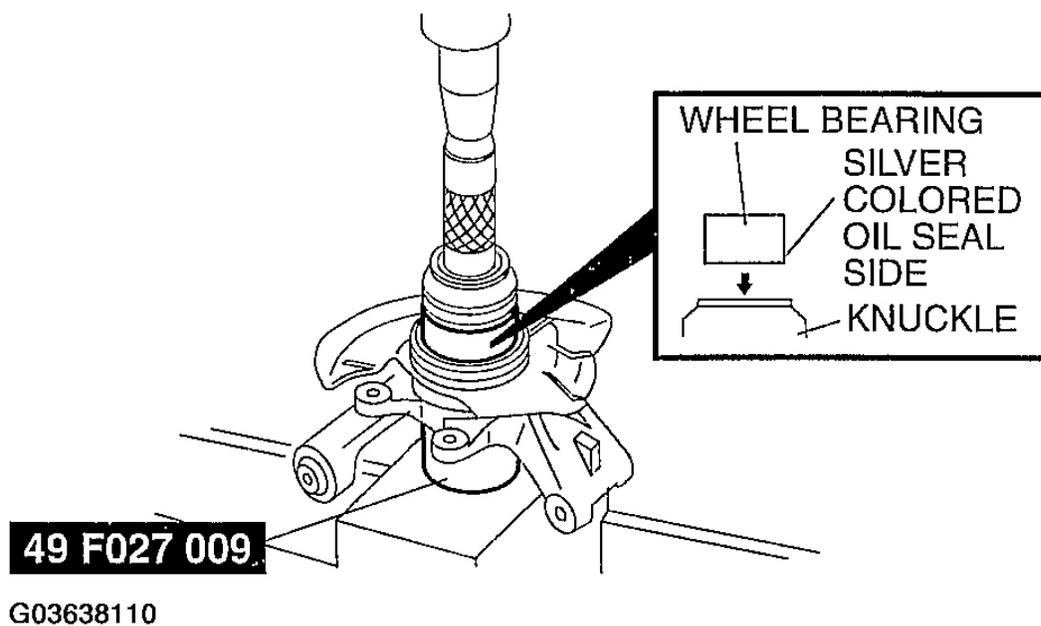


Fig. 13: Installing New Wheel Bearing With Silver-Colored Oil Seal Side Facing Toward Vehicle
Courtesy of MAZDA MOTORS CORP.

2. Press the new wheel bearing into the knuckle using the SSTs.

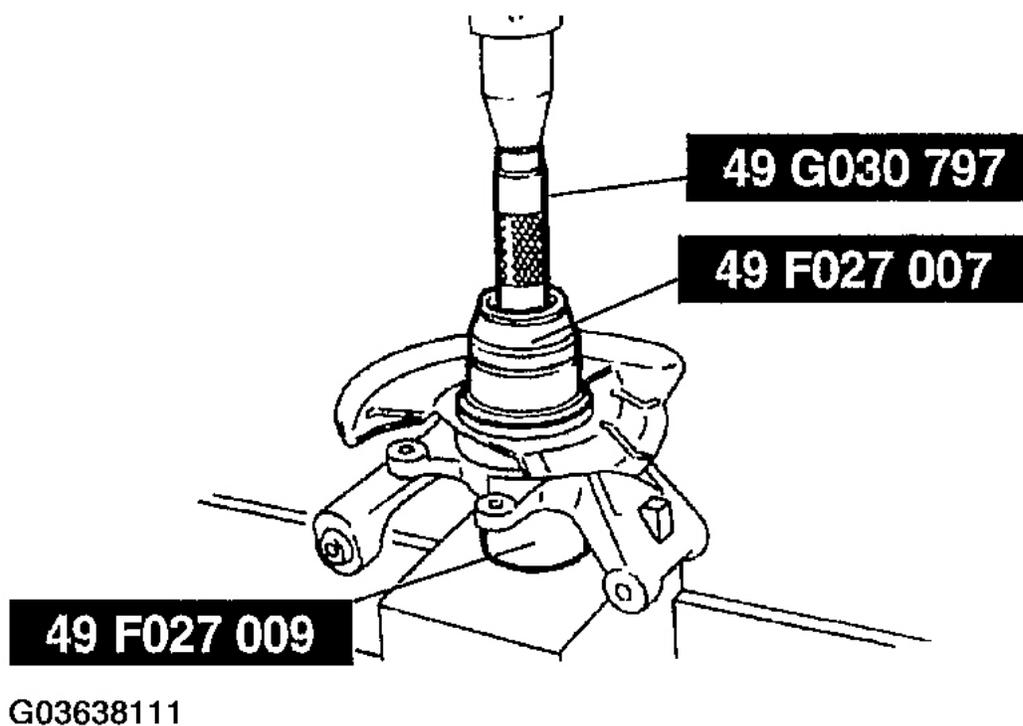


Fig. 14: Pressing New Wheel Bearing Into Knuckle Using SSTs
Courtesy of MAZDA MOTORS CORP.

REAR WHEEL HUB INSTALLATION NOTE

1. Apply grease to the wheel bearing inner race.
2. Press the rear wheel hub component in using the SST.

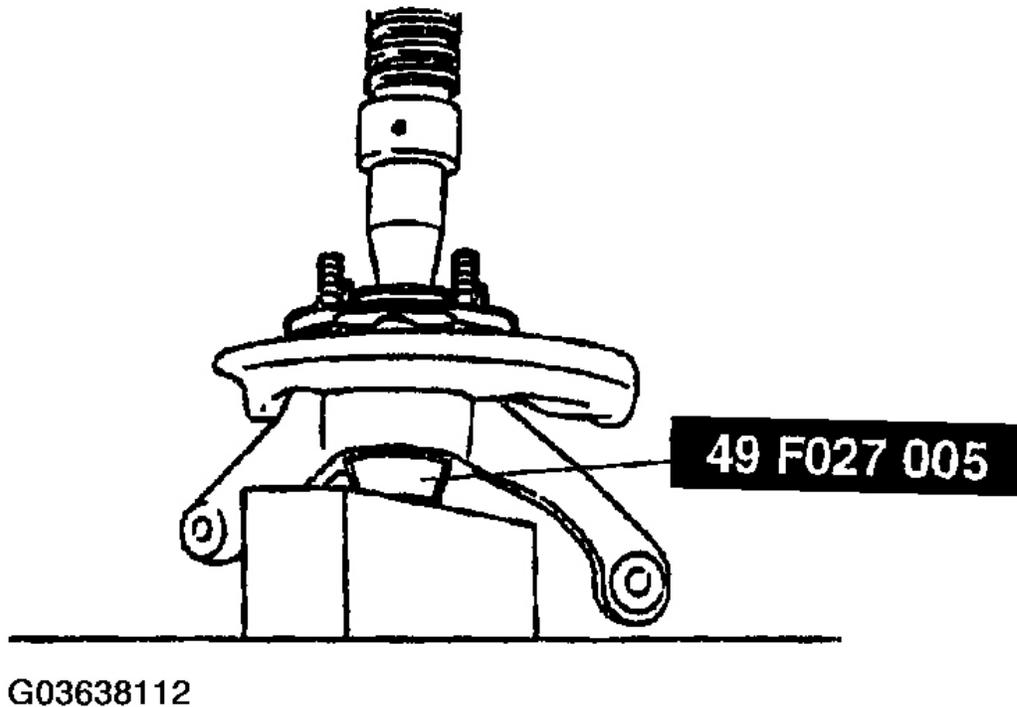


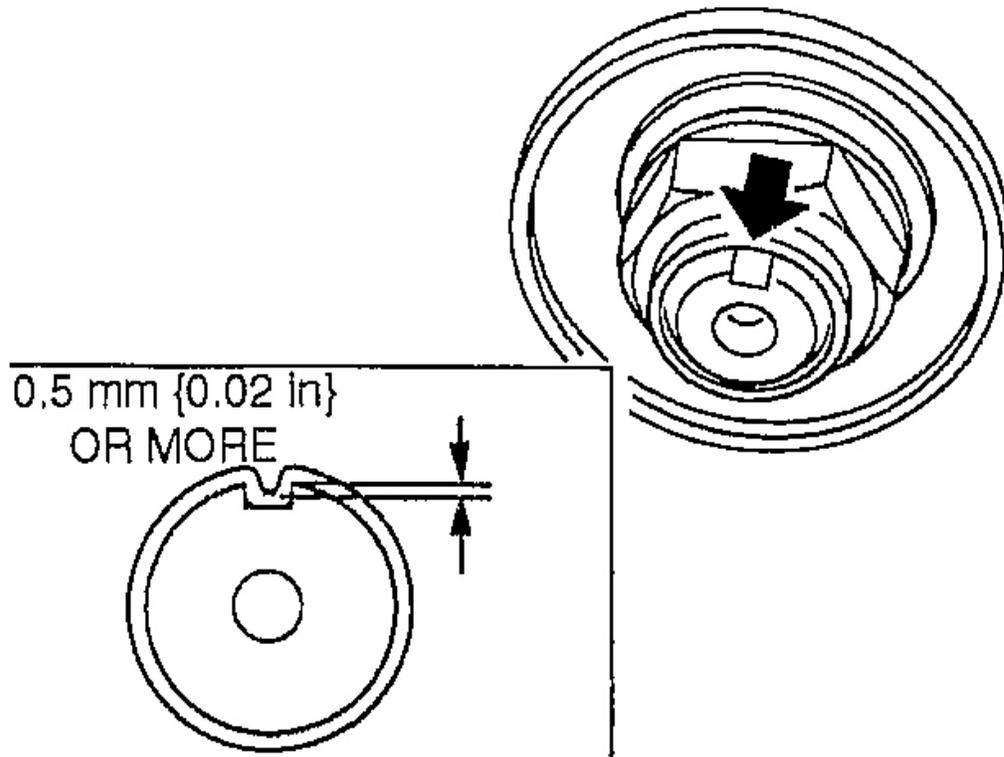
Fig. 15: Applying Grease To Wheel Bearing Inner Race
Courtesy of MAZDA MOTORS CORP.

LOCKNUT INSTALLATION NOTE

1. Install a new locknut and stake it.

Tightening torque

236-318 N.m {24.0-32.5 kgf.m, 174-235 ft.lbf}



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Fig. 16: Installing A New Locknut
Courtesy of MAZDA MOTORS CORP.