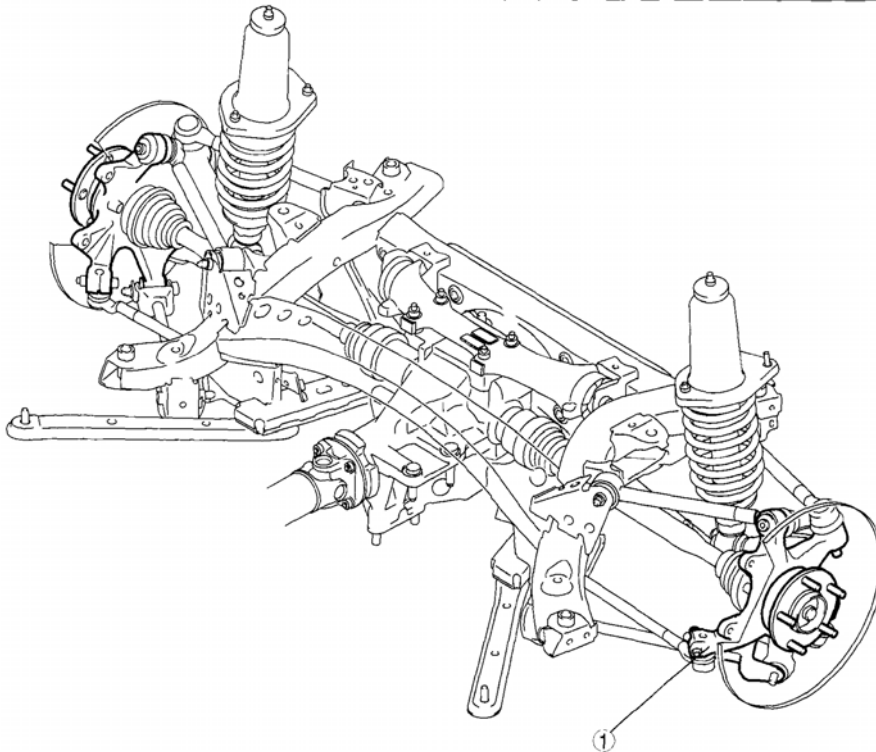


## 2008 DRIVELINE/AXLES

### Rear Axle - MX-5 Miata

## REAR AXLE LOCATION INDEX



ESU312ZW5002

1	Wheel hub, rear knuckle
---	-------------------------

**Fig. 1: Identifying Rear Axle Assembly**  
Courtesy of MAZDA MOTORS CORP.

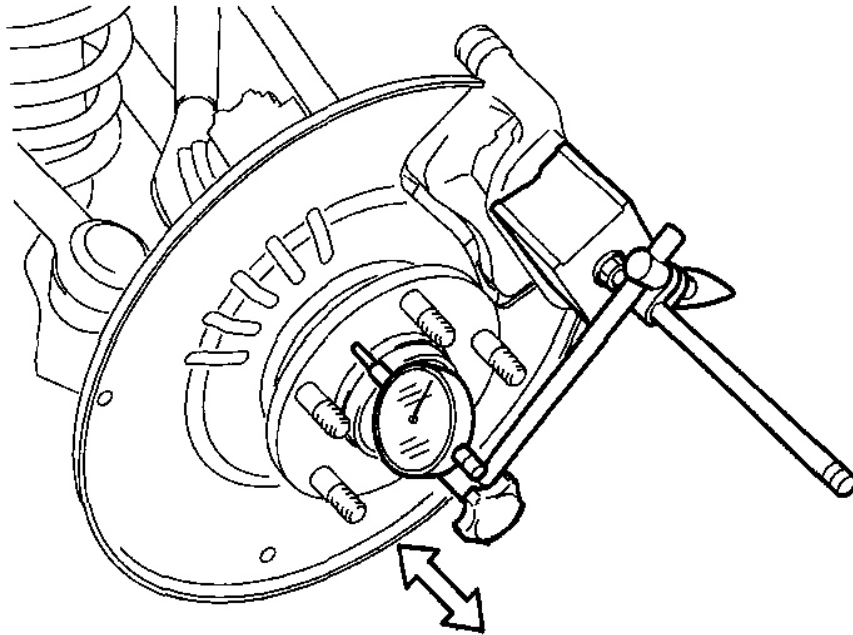
## WHEEL HUB COMPONENT INSPECTION

### WHEEL BEARING LOOSENESS INSPECTION

1. Install the magnetic vane and dial gauge as shown in **Fig. 2** , and inspect the wheel bearing for axial looseness.
  - If it exceeds the maximum specification, replace the wheel hub component.

**Maximum rear wheel bearing play**

**0.05 mm {0.002 in}**



BHJ0312W002

**Fig. 2: View Of Magnetic Vase & Dial Gauge**  
Courtesy of MAZDA MOTORS CORP.

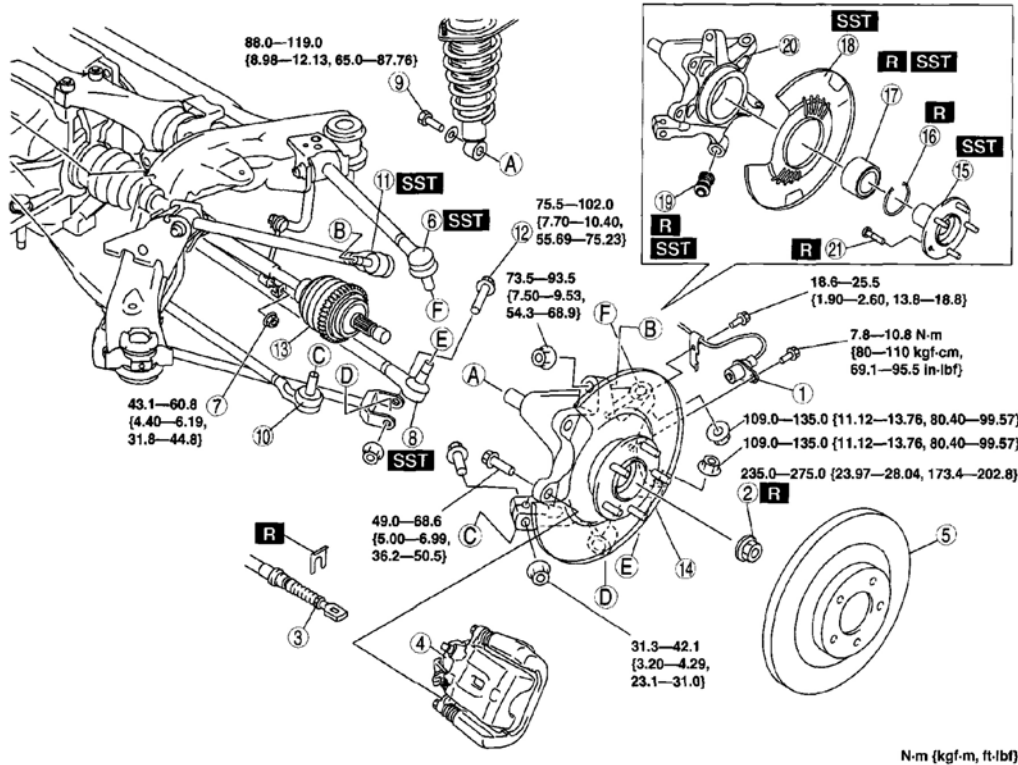
## WHEEL HUB COMPONENT REMOVAL/INSTALLATION

- CAUTION:**
- Performing the following procedures without first removing the ABS wheel-speed sensor may possibly cause an open circuit in the wiring 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.

1. Remove in the order indicated in **Fig. 3**.
2. Install in the reverse order of removal.
3. After installation, inspect rear wheel alignment. (See **REAR WHEEL ALIGNMENT**.)

# 2008 Mazda MX-5 Miata Grand Touring

## 2008 DRIVELINE/AXLES Rear Axle - MX-5 Miata



E5U312ZW5001

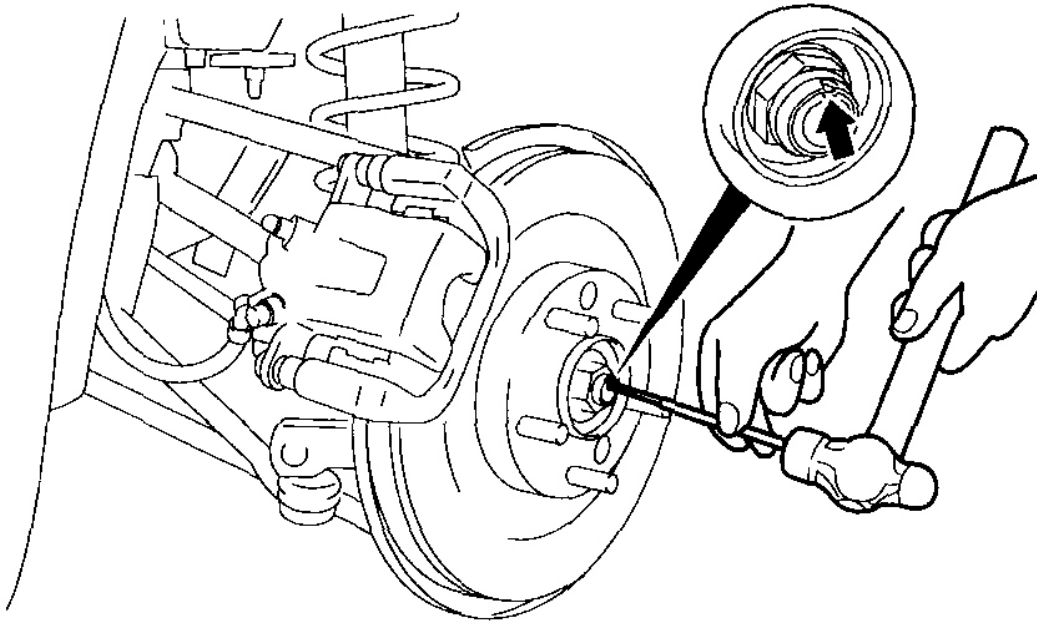
1	ABS wheel-speed sensor
2	Locknut
3	Parking brake cable
4	Brake caliper component
5	Disc plate
6	Rear lateral link (upper) ball joint
7	Stabilizer control link nut (lower)
8	Rear lateral link (lower) ball joint
9	Shock absorber bolt (lower)
10	Toe control link ball joint
11	Rear trailing link (upper) ball joint

12	Rear trailing link (lower) bolt (outer side)
13	Rear drive shaft
14	Rear knuckle component
15	Wheel hub component
16	Retaining ring
17	Wheel bearing
18	Dust cover
19	Bushing
20	Rear knuckle
21	Wheel hub bolt

**Fig. 3: Identifying Wheel Hub Components (With Torque Specifications)**  
 Courtesy of MAZDA MOTORS CORP.

### LOCKNUT REMOVAL NOTE

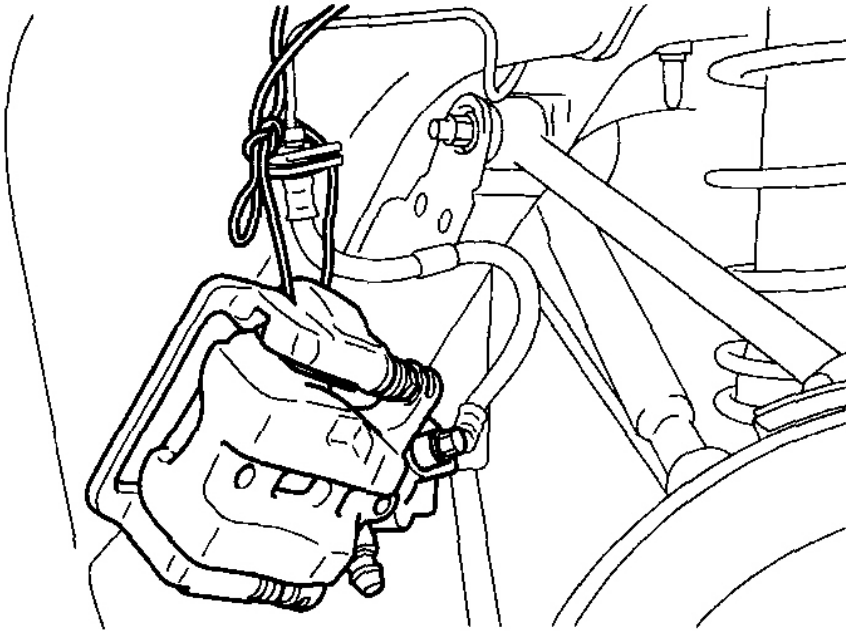
1. Lock the disc plate by applying the brakes.
2. Knock the crimped portion of the locknut outward using a chisel and a hammer.
3. Remove the locknut.



**Fig. 4: Knocking Out Crimped Portion Of Locknut Outward Using Chisel & Hammer**  
Courtesy of MAZDA MOTORS CORP.

**BRAKE CALIPER COMPONENT REMOVAL NOTE**

1. Suspend the brake caliper component using a cable or equivalent.

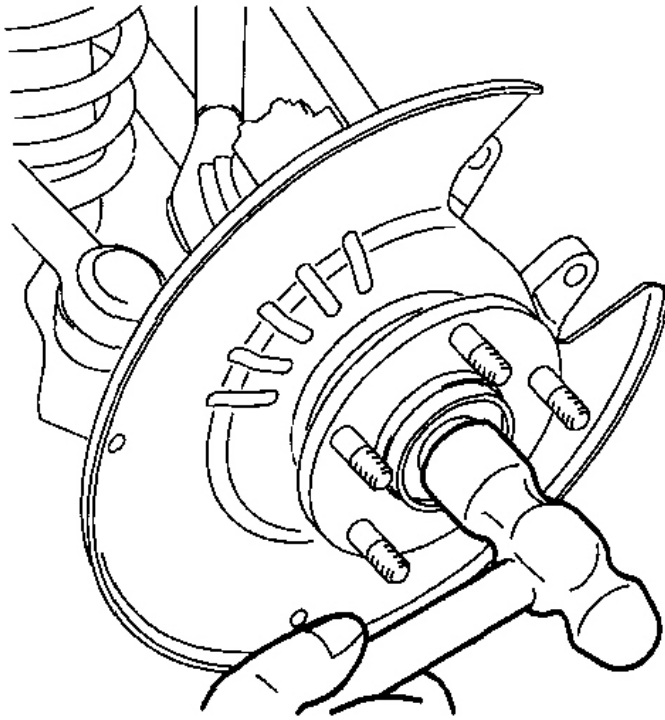


E5U314ZW5001

**Fig. 5: View Of Brake Caliper Components**  
Courtesy of MAZDA MOTORS CORP.

#### **REAR DRIVE SHAFT REMOVAL NOTE**

1. Temporarily install a spare nut onto the end of the rear drive shaft.
2. Tap the nut with a copper hammer to loosen the drive shaft from the wheel hub.
3. Separate the rear drive shaft from the wheel hub.

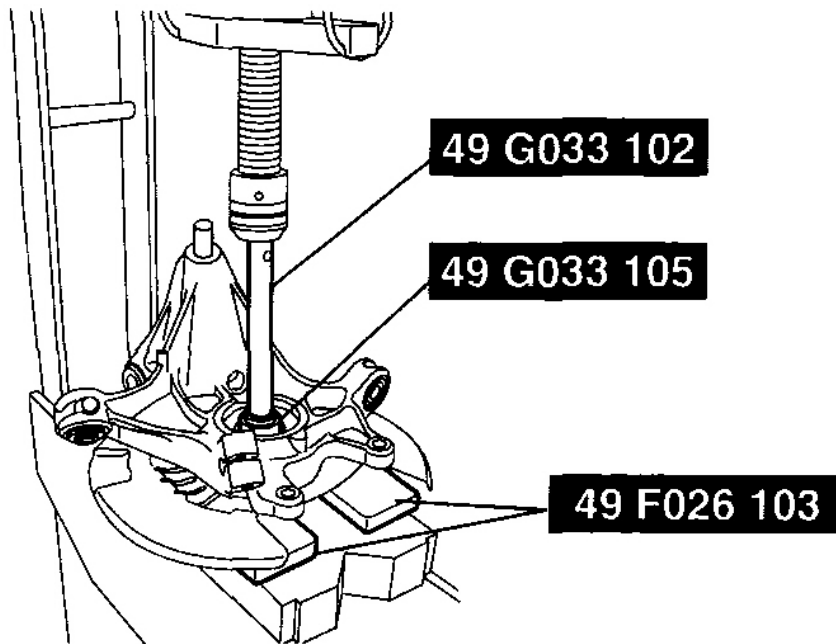


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**Fig. 6: Separating Rear Drive Shaft From Wheel Hub**  
Courtesy of MAZDA MOTORS CORP.

**WHEEL HUB COMPONENT REMOVAL NOTE**

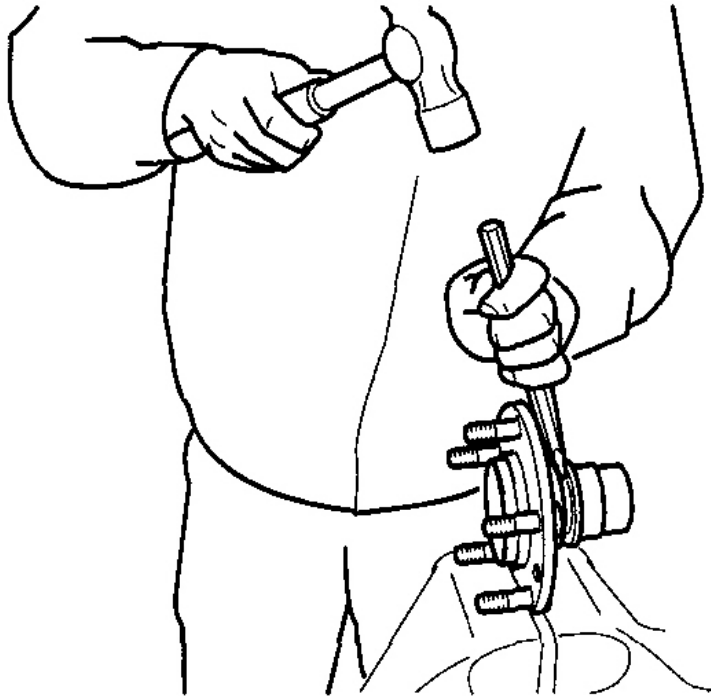
1. Wind the **SST** and backing plate contact area with packing tape two times.
2. Remove the wheel hub component using the **SSTs**.



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**Fig. 7: Removing Wheel Hub Component Using SST's**  
Courtesy of MAZDA MOTORS CORP.

3. If the bearing inner race remains on the wheel hub component, use a chisel to secure a sufficient space for installing the SST between wheel hub component and bearing inner race.

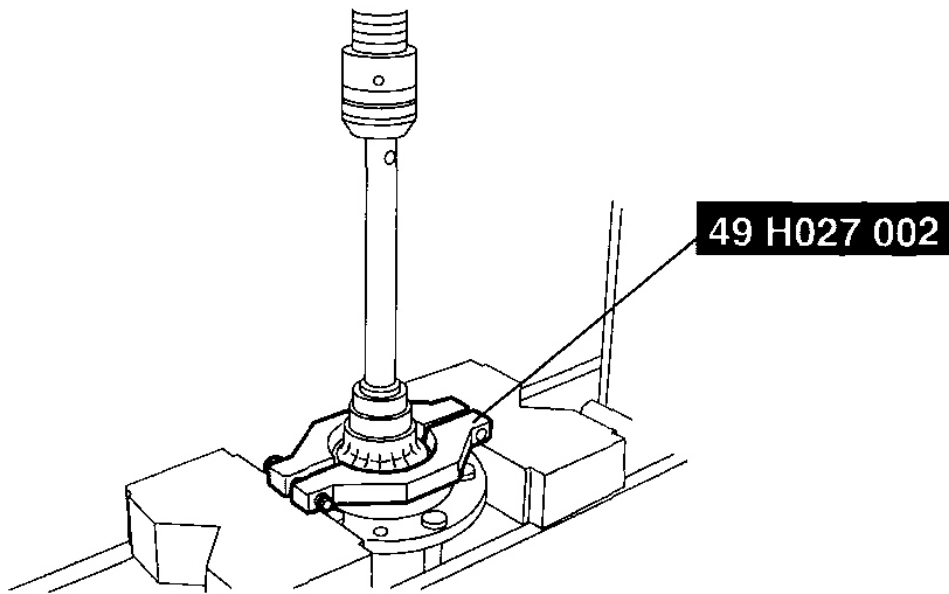


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**Fig. 8: Removing Inner Race Remains On Wheel Hub Component**  
Courtesy of MAZDA MOTORS CORP.

4. Remove the bearing inner race using the SST.
5. After removing the bearing, repair any backing plate deformation.



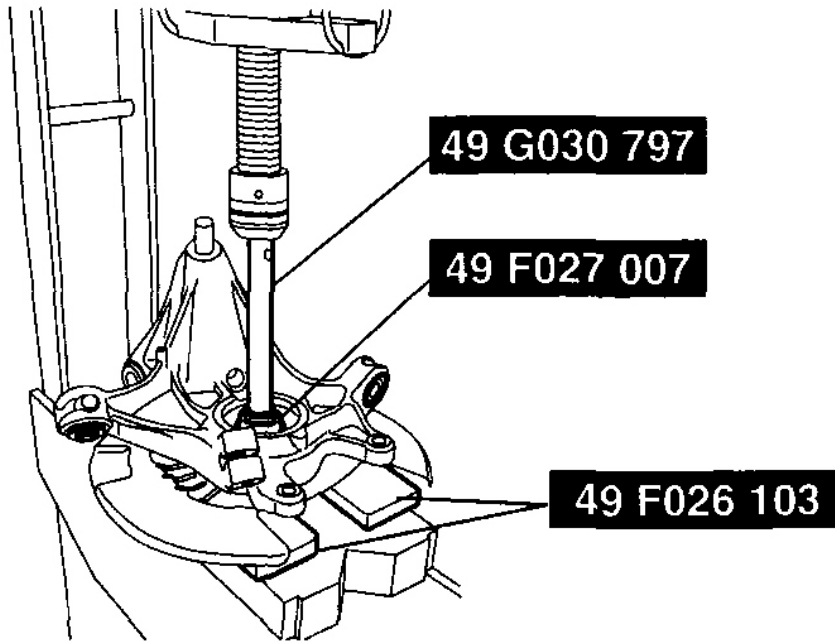


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**Fig. 9: Removing Bearing Inner Race Using SST**  
Courtesy of MAZDA MOTORS CORP.

#### **WHEEL BEARING REMOVAL NOTE**

1. Wind the **SST** and backing plate contact area with packing tape two times.
2. Remove the wheel bearing from the rear knuckle using the **SSTs**.
3. After removing the bearing, repair any backing plate deformation.



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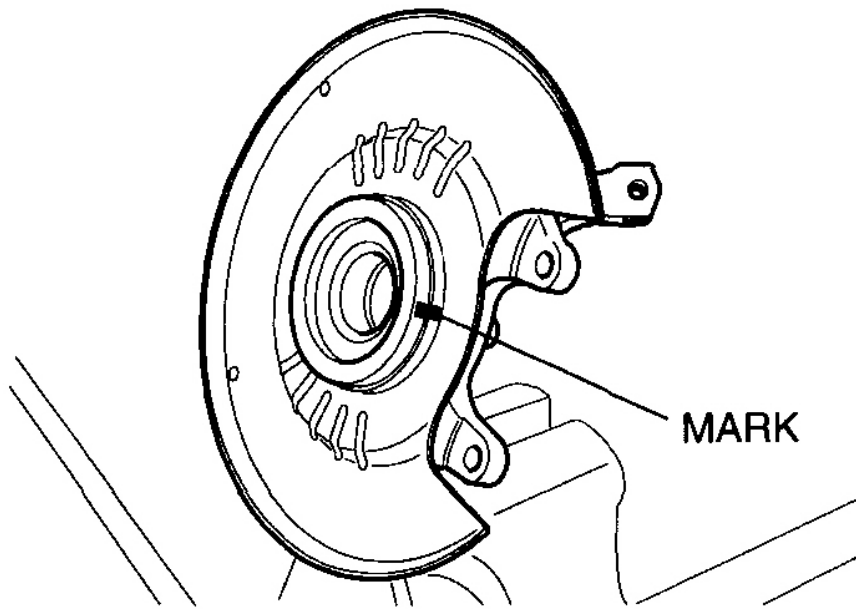
**Fig. 10: Removing Wheel Bearing From Rear Knuckle Using SST's**  
Courtesy of MAZDA MOTORS CORP.

**DUST COVER REMOVAL NOTE**

**NOTE:**

- Remove the dust cover only if there is an abnormality.

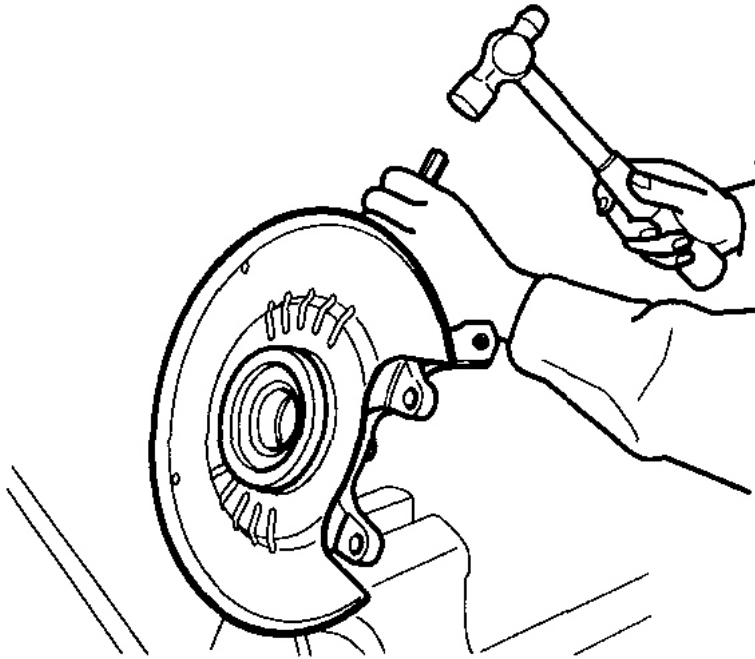
1. Place an alignment mark on the dust cover and rear knuckle for proper installation.



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**Fig. 11: Placing Alignment Mark On Dust Cover & Rear Knuckle**  
Courtesy of MAZDA MOTORS CORP.

2. Remove the dust cover using a chisel.

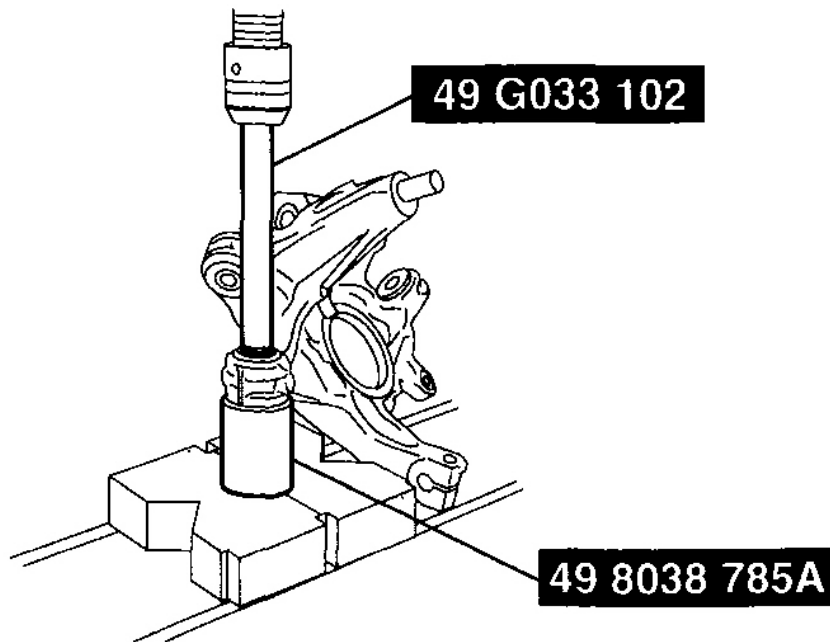


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**Fig. 12: Removing Dust Cover Using Chisel**  
Courtesy of MAZDA MOTORS CORP.

**BUSHING REMOVAL NOTE**

1. Remove the bushing from the rear knuckle using the SSTs.



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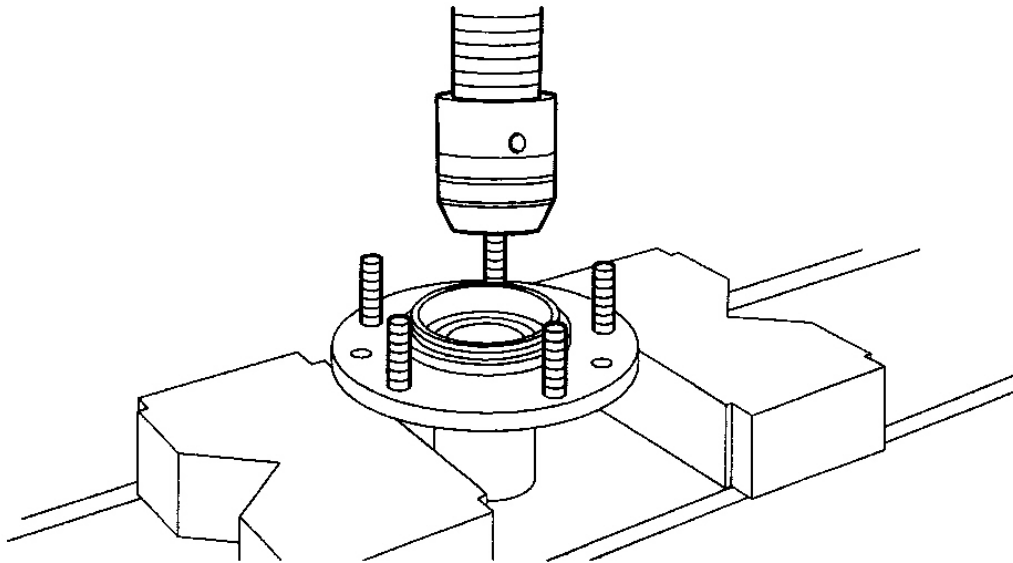
**Fig. 13: Removing Bushing From Rear Knuckle Using SST's**  
**Courtesy of MAZDA MOTORS CORP.**

#### WHEEL HUB BOLT REMOVAL NOTE

**NOTE:**

- Remove the wheel hub bolt only if there is an abnormality.

1. Remove the wheel hub bolts from the wheel hub using a press.

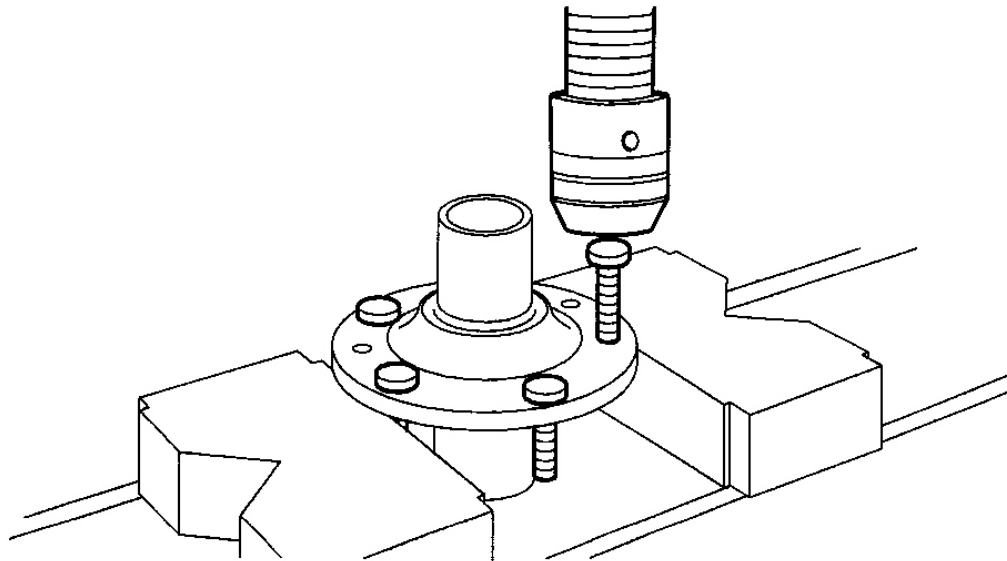


BHJ0312W013

**Fig. 14: Removing Wheel Hub Bolts From Wheel Hub Using Press**  
Courtesy of MAZDA MOTORS CORP.

#### WHEEL HUB BOLT INSTALLATION NOTE

1. Press in new wheel hub bolts into the wheel hub using a press.

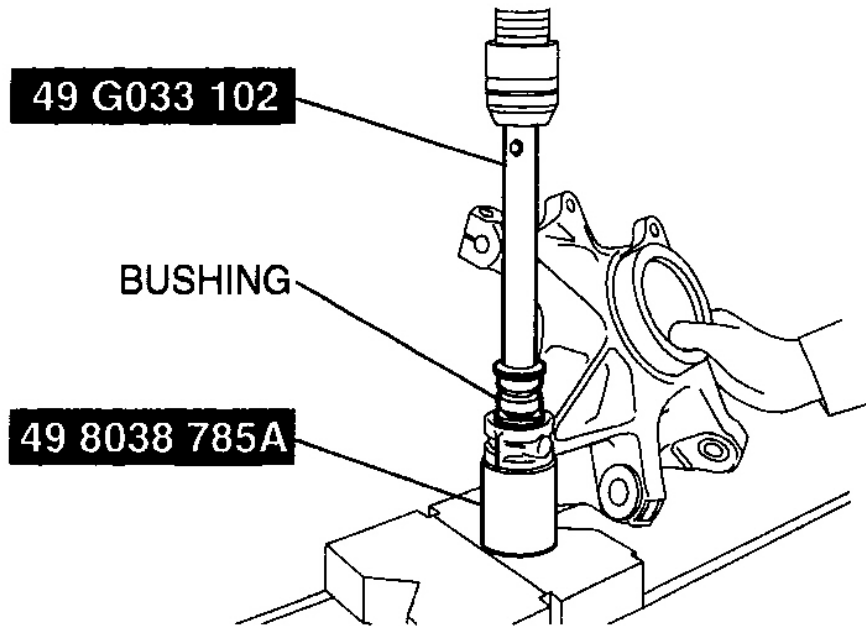


BHJ0312W014

**Fig. 15: Pressing New Wheel Hub Bolts Into Wheel Hub Using Press**  
Courtesy of MAZDA MOTORS CORP.

#### **BUSHING INSTALLATION NOTE**

1. Press the new bushing into the rear knuckle using the SSTs.



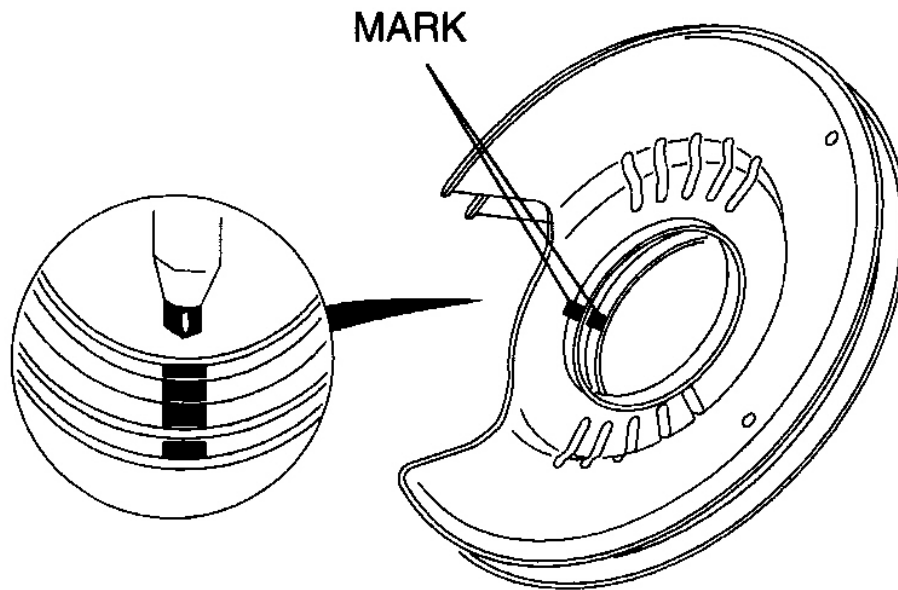
CHU0312W016

**Fig. 16: Pressing New Bushing Into Rear Knuckle Using SST's  
Courtesy of MAZDA MOTORS CORP.**

**DUST COVER INSTALLATION NOTE**

1. Align the new and old dust covers and place alignment marks on the new dust cover.
2. Align the marks on the new dust cover and rear knuckle.

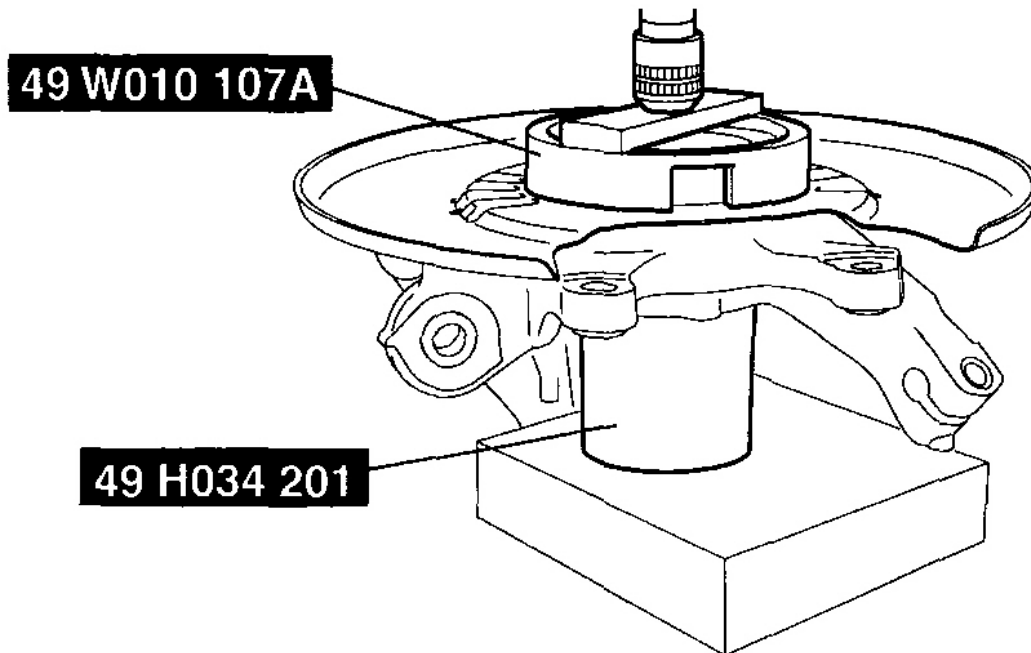




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**Fig. 17: Aligning Marks On New Dust Cover & Rear Knuckle**  
Courtesy of MAZDA MOTORS CORP.

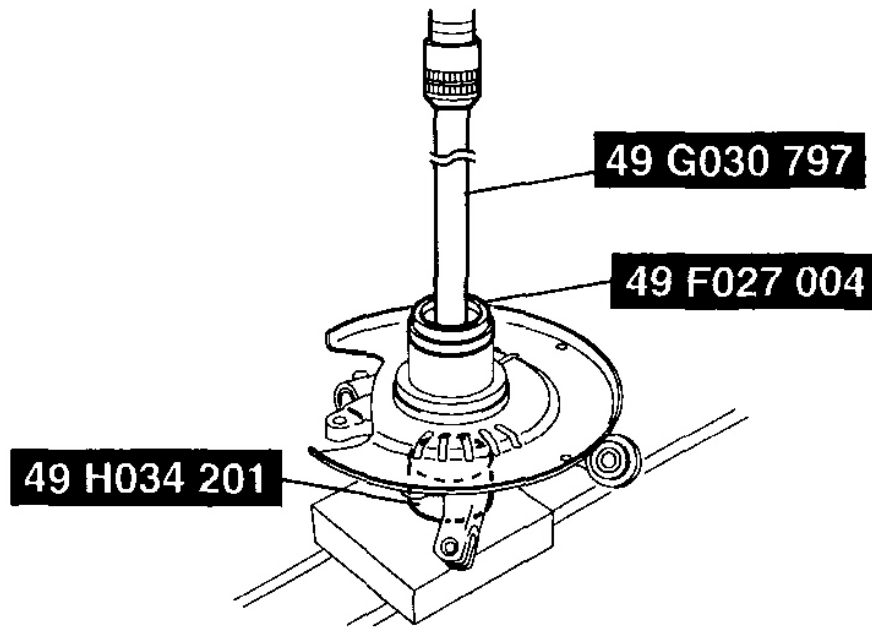
3. Press the new dust cover onto the rear knuckle using the SSTs.



**Fig. 18: Pressing New Dust Cover Onto Rear Knuckle Using SST's**  
Courtesy of MAZDA MOTORS CORP.

**WHEEL BEARING INSTALLATION NOTE**

1. Install a new wheel bearing using the SSTs.

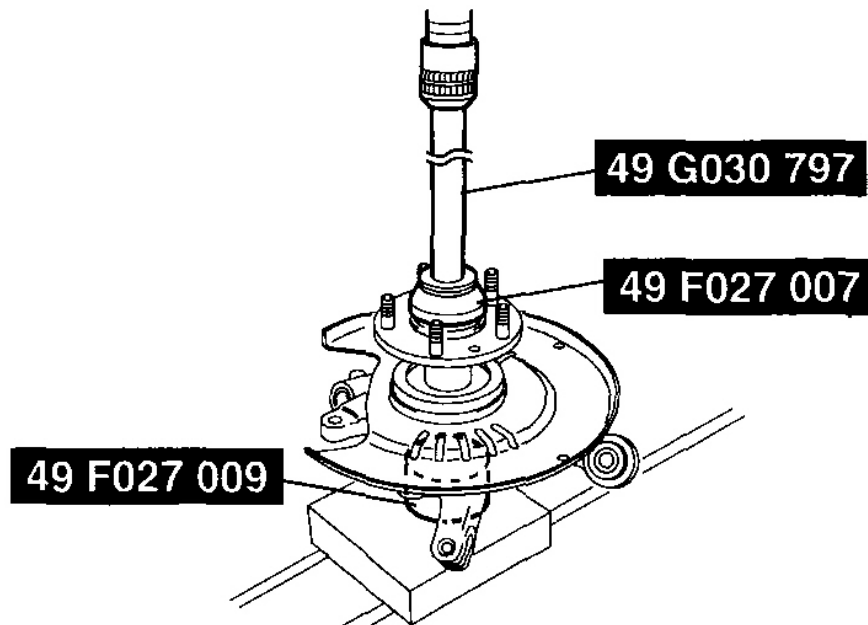


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**Fig. 19: Installing New Wheel Bearing Using SST's**  
Courtesy of MAZDA MOTORS CORP.

**WHEEL HUB COMPONENT INSTALLATION NOTE**

1. Install the wheel hub component using the SSTs.

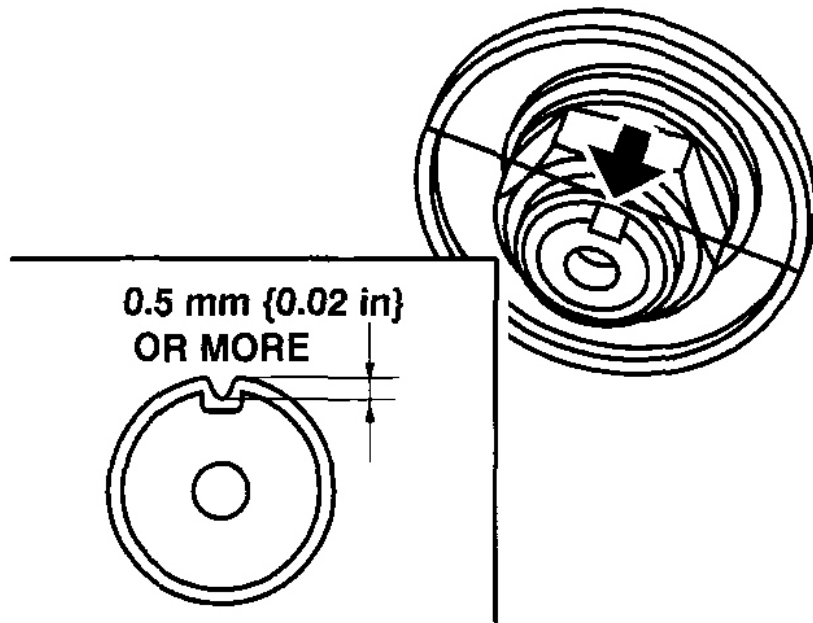


E5U312ZW5005

**Fig. 20: Installing Wheel Hub Components Using SST's**  
Courtesy of MAZDA MOTORS CORP.

#### **LOCKNUT INSTALLATION NOTE**

1. Tighten a new locknut.
2. Install a new locknut and indent as shown to crimp the locknut, using a chisel and hammer.



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**Fig. 21: Installing New Locknut**  
Courtesy of MAZDA MOTORS CORP.