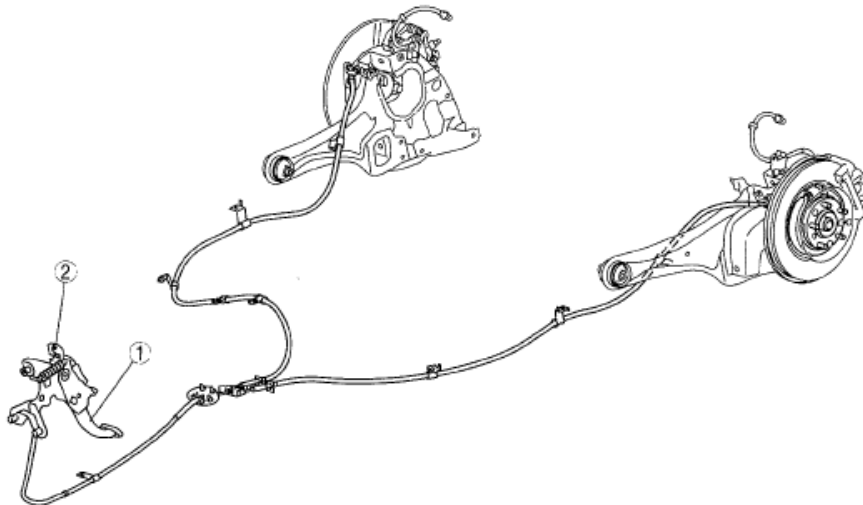


2008 BRAKES

Parking Brake System - Mazda CX-9

PARKING BRAKE SYSTEM LOCATION INDEX



ac8uuw00001127

1	Parking brake (pedal type) (See 04-12-2 PARKING BRAKE INSPECTION.) (See 04-12-2 PARKING BRAKE ADJUSTMENT.) (See 04-12-3 PARKING BRAKE REMOVAL/ INSTALLATION [2WD].) (See 04-12-9 PARKING BRAKE REMOVAL/ INSTALLATION [AWD].)
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2	Parking brake switch (See 04-12-14 PARKING BRAKE SWITCH INSPECTION.)
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Fig. 1: Identifying Parking Brake System Components Location
Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE INSPECTION

1. Depress the parking brake pedal a few times.
2. Depress the brake pedal a few times.
3. Inspect the parking brake stroke by depressing the parking brake pedal with a force of **180 N {18.4 kgf, 40.5 lbf}**.

Parking brake pedal stroke when depressed at 180 N {18.4 kgf, 40.5 lbf}

1-3 notches

PARKING BRAKE ADJUSTMENT

1. Turn the adjusting nut at the front of the parking cable.
2. After adjustment, inspect the following points:

1. Turn the ignition switch on, depress the parking brake pedal one notch, and verify that the brake system warning light illuminates.
2. Verify that the rear brakes do not drag.

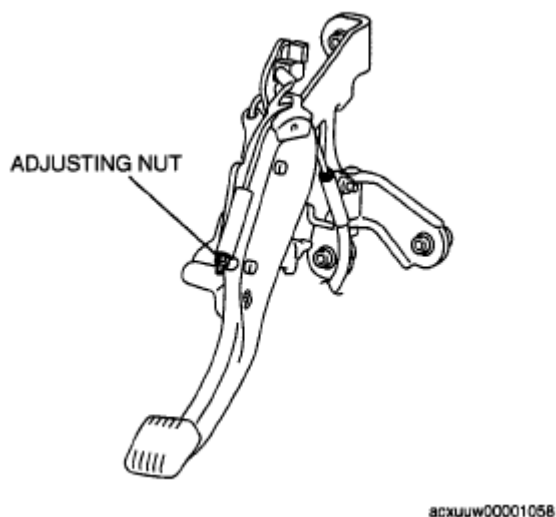


Fig. 2: Identifying Adjusting Nut
Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE REMOVAL/INSTALLATION [2WD]

- 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.

1. Perform the following procedure and remove the parking brake pedal.
 1. Remove the dashboard under cover (LH). (See **DASHBOARD UNDER COVER REMOVAL/INSTALLATION** .)
2. Perform the following procedure and remove the front parking brake cable.
 1. Remove the front seat (Driver side). (See **FRONT SEAT REMOVAL/INSTALLATION** .)
 2. Remove the decoration panel. (See **DECORATION PANEL REMOVAL/INSTALLATION** .)
 3. Remove the front console box mat, (See **FRONT CONSOLE BOX MAT REMOVAL/INSTALLATION** .)
 4. Remove the indicator panel. (See **INDICATOR PANEL REMOVAL/INSTALLATION** .)
 5. Remove the front console box. (See **FRONT CONSOLE BOX REMOVAL/INSTALLATION** .)
 6. Remove the dashboard under cover (LH). (See **DASHBOARD UNDER COVER REMOVAL/INSTALLATION** .)

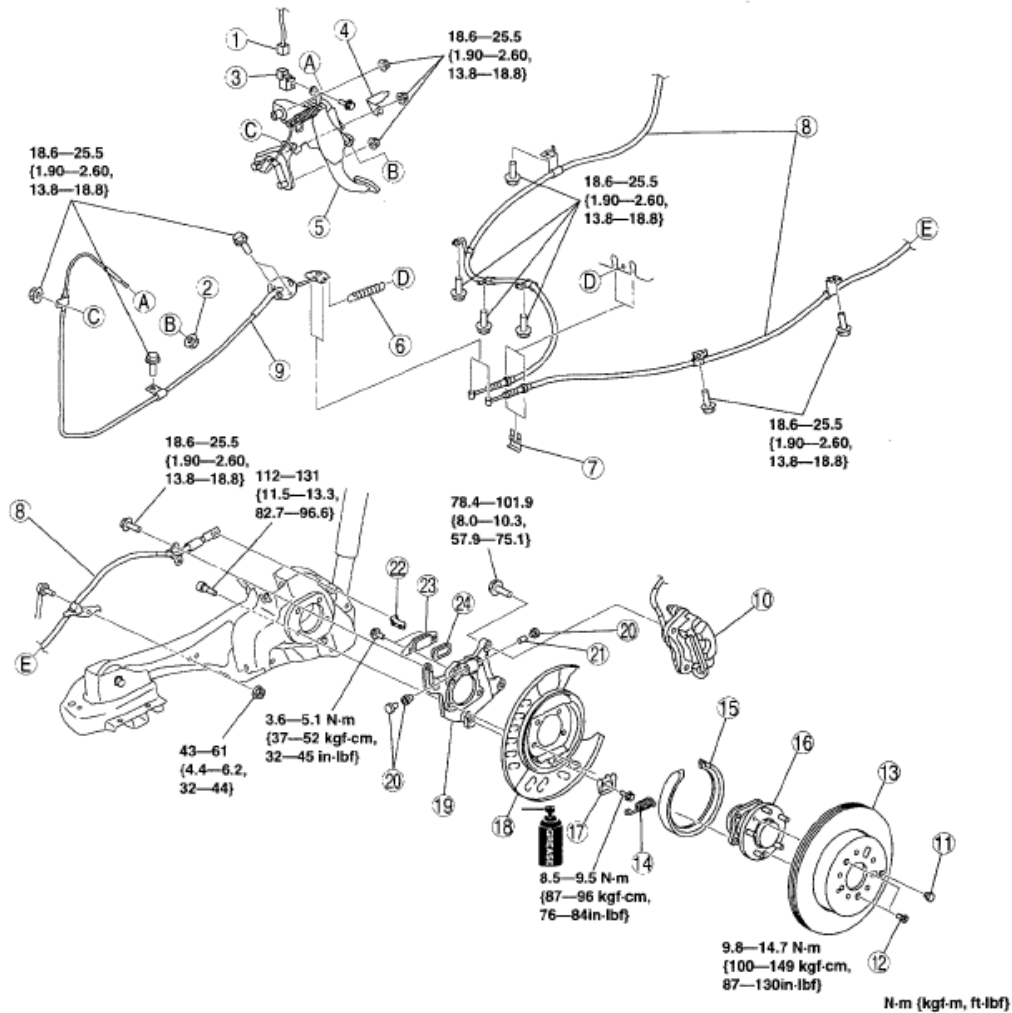
2008 Mazda CX-9 Grand Touring

2008 BRAKES Parking Brake System - Mazda CX-9

7. Remove the side wall. (See **SIDE WALL REMOVAL/INSTALLATION** .)
 8. Remove the console panel. (See **CONSOLE PANEL REMOVAL/INSTALLATION** .)
 9. Remove the console cover. (See **CONSOLE COVER REMOVAL/INSTALLATION** .)
 10. Remove the console. (See **CONSOLE REMOVAL/INSTALLATION** .)
 11. Remove the dust cover.
 12. Remove the front side trim (LH). (See **FRONT SIDE TRIM REMOVAL/INSTALLATION** .)
 13. Remove the front scuff plate (LH). (See **FRONT SCUFF PLATE REMOVAL/INSTALLATION** .)
 14. Remove the fuel-filler lid release lever cover.
 15. Turn the floor covering over until the front parking brake cable cover appears.
 16. Remove the rear heat duct (LH). (See **REAR HEAT DUCT COMPONENT REMOVAL/INSTALLATION** .)
 17. Remove the under guard (LH). (See **CHARCOAL CANISTER, CANISTER VENT (CV) SOLENOID VALVE, AIR FILTER COMPONENT REMOVAL/INSTALLATION [MZI-3.7]** .)
3. Perform the following procedure and remove the rear parking brake cable.
 1. Remove the under guard (LH). (See **CHARCOAL CANISTER, CANISTER VENT (CV) SOLENOID VALVE, AIR FILTER COMPONENT REMOVAL/INSTALLATION [MZI-3.7]** .)
 4. Perform the following procedure and remove the parking brake plate, back plate and wheel hub.
 1. Remove the rear ABS wheel-speed sensor from the rear wheel hub. (See **REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [2WD]** .)
 5. Remove in the order indicated in the table.
 6. Install in the reverse order of removal.
 7. Adjust the parking brake stroke. (See **PARKING BRAKE ADJUSTMENT**.)

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2008 BRAKES Parking Brake System - Mazda CX-9



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1	Parking brake switch connector
2	Adjusting nut (See 04-12-8 Adjusting Nut Installation Note.)
3	Parking brake switch
4	Dashboard under cover bracket
5	Parking brake pedal
6	Spring
7	Clip
8	Rear parking brake cable
9	Front Parking brake cable, equalizer (See 04-12-8 Front Parking Brake Cable Installation Note.)
10	Brake caliper component (See 04-12-5 Brake Caliper Component Removal Note)
11	Plug
12	Screw (See 04-12-7 Disc Plate, Screw Installation Note)

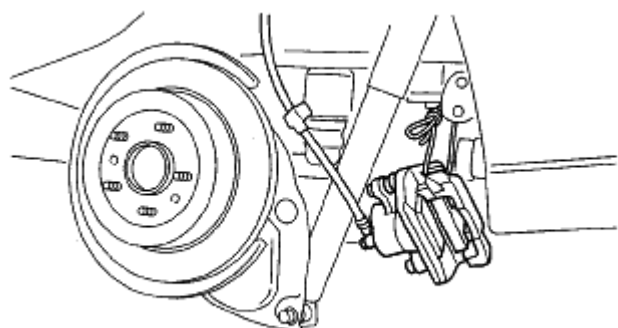
13	Disc plate (See 04-12-5 Disc Plate Removal Note) (See 04-12-7 Disc Plate, Screw Installation Note)
14	Spring
15	Parking brake shoe (See 04-12-5 Parking Brake Shoe Removal Note) (See 04-12-6 Parking Brake Shoe Installation Note)
16	Rear wheel hub component
17	Shoe stopper
18	Backing plate
19	Parking brake plate
20	Adjuster bolt and nut, tappet (See 04-12-6 Operation lever, Pin, Adjuster Bolt and Nut, Tappet Installation Note)
21	Pin (See 04-12-6 Operation lever, Pin, Adjuster Bolt and Nut, Tappet Installation Note.)
22	Operation lever (See 04-12-6 Operation lever, Pin, Adjuster Bolt and Nut, Tappet Installation Note.)
23	Plate
24	Dust boot

Fig. 3: Exploded View Of Parking Brake With Torque Specification

Courtesy of MAZDA MOTORS CORP.

BRAKE CALIPER COMPONENT REMOVAL NOTE

1. Remove the brake caliper assembly from the trailing link and suspend it with a cable so it does not interfere.

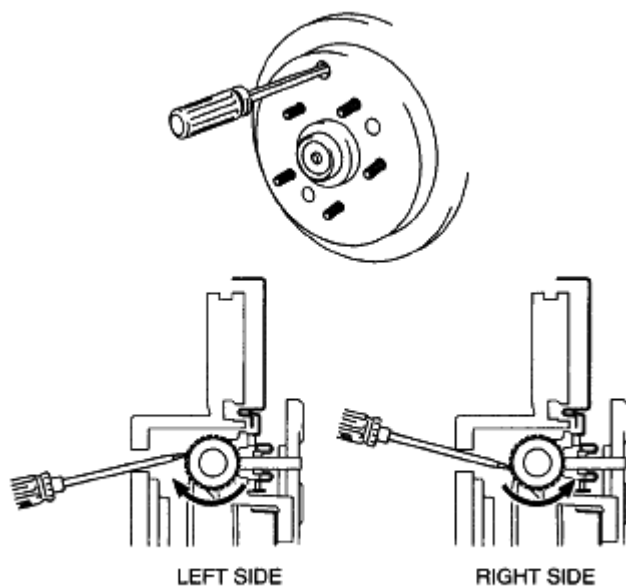


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Fig. 4: Identifying Brake Caliper Component
Courtesy of MAZDA MOTORS CORP.

DISC PLATE REMOVAL NOTE

1. If any disc plate is difficult to remove, perform the following steps to remove it.
 1. Insert a flathead screwdriver into the service hole and turn the adjuster in the direction of the arrow to compress the parking brake shoe.
 2. Remove the disc plate.



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Fig. 5: Removing Disc Plate
 Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE SHOE REMOVAL NOTE

1. Pull the parking brake shoe downward and disengage it from the shoe stopper.
2. Press the adjuster bolt and tappet by hand, and slowly remove the parking brake shoe.

NOTE:

- When removing the parking brake shoe, firmly press the adjuster bolt and tappet by hand and slowly remove the parking brake shoe to prevent the adjuster bolt, tappet, operation lever and other parts from flying off.

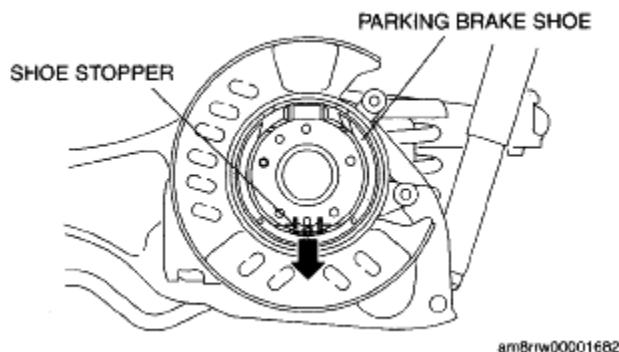


Fig. 6: Pulling Parking Brake Shoe
 Courtesy of MAZDA MOTORS CORP.

OPERATION LEVER, PIN, ADJUSTER BOLT AND NUT, TAPPET INSTALLATION NOTE

1. Install the operation lever, pin, adjuster bolt and nut, and tappet so that the adjuster nut is facing toward the vehicle front.
2. Completely tighten the adjuster bolt and nut.
3. Move the operation lever by hand and verify that it operates properly.
 - If proper operation cannot be verified, reinstall.

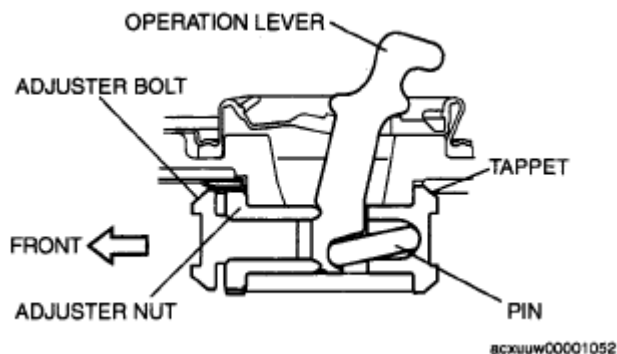


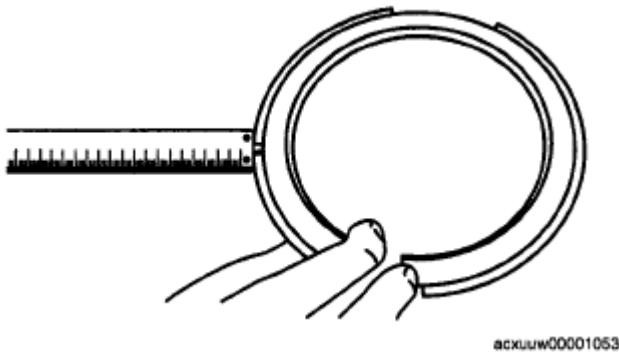
Fig. 7: Identifying Operation Lever, Pin, Adjuster Bolt And Nut, Tappet
Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE SHOE INSTALLATION NOTE

1. Measure the parking brake lining thickness with a vernier caliper or measuring scale.
 - If it is less than the minimum thickness, install a new parking brake shoe.

Minimum parking brake shoe thickness 1.0 mm {0.04 in}

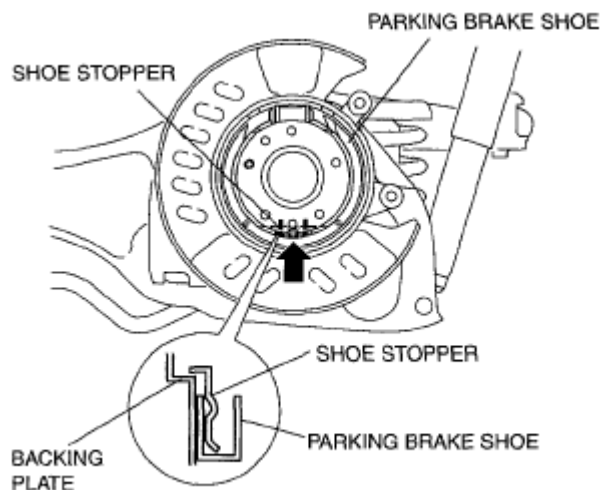
2. Apply grease to the contact surface of the parking brake shoe and shoe stopper.



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Fig. 8: Measuring Parking Brake Lining Thickness
Courtesy of MAZDA MOTORS CORP.

3. After installing the opening of the parking brake shoe to the adjuster bolt and tappet, push the brake shoe upward and attach it to the shoe stopper.



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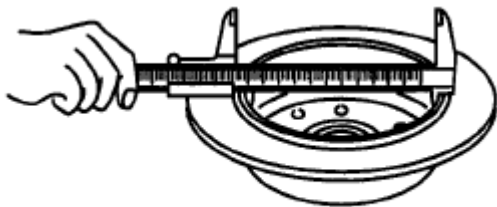
Fig. 9: Pushing Brake Shoe To Shoe Stopper
Courtesy of MAZDA MOTORS CORP.

DISC PLATE, SCREW INSTALLATION NOTE

1. Measure the inner diameter of the disc plate with a vernier caliper.
 - If it exceeds the maximum diameter, install the new disc plate.

Maximum rear disc plate inner diameter 191.0 mm {7.52 in}

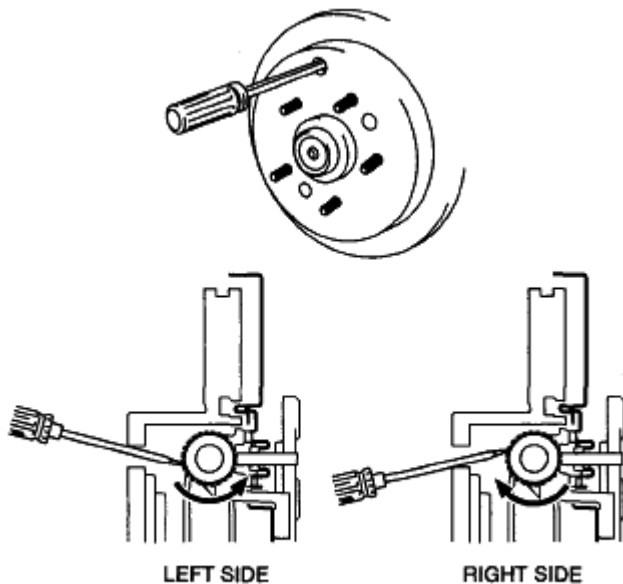
2. Install the disc plate and screw.
3. Perform the following steps to adjust the shoe clearance after installing the disc plate and the screws.



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Fig. 10: Measuring Inner Diameter Of Disc Plate
Courtesy of MAZDA MOTORS CORP.

1. Insert a flathead screwdriver into the service hole and turn the adjuster in the direction of the arrow to expand the parking brake shoe until the disc plate cannot rotate.



ac9uuw00002286

Fig. 11: Adjusting Disc Plate Adjuster
Courtesy of MAZDA MOTORS CORP.

- Return the adjuster **13-25 notches** in the direction of the arrow.

NOTE:

- Shoe clearance can be adjusted to **0.15 mm {0.006 in}** by returning the adjuster **15 notches**.

- Rotate the disc plate and make sure it does not drag.

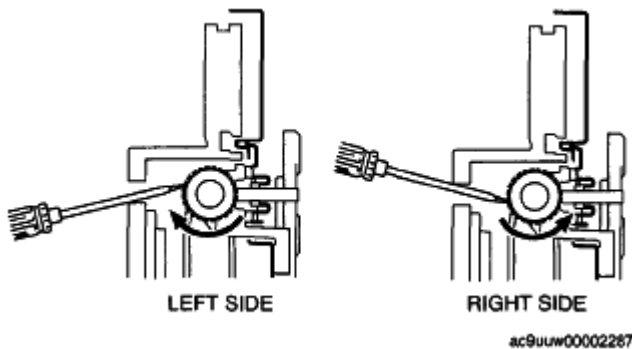


Fig. 12: Rotating Disc Plate
Courtesy of MAZDA MOTORS CORP.

FRONT PARKING BRAKE CABLE INSTALLATION NOTE

- Install the front parking brake cable and equalizer so that the installation area of the equalizer spring is on the underside of the vehicle as shown in the vehicle.

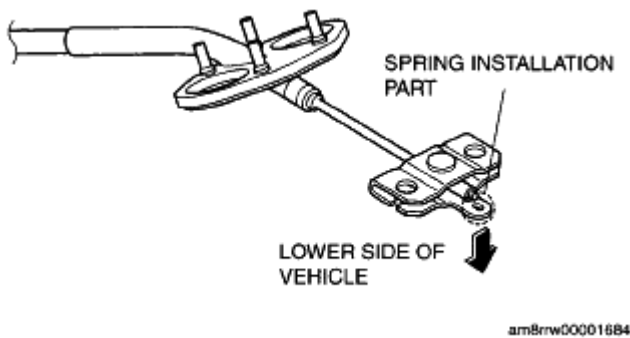


Fig. 13: Installing Parking Brake Cable
Courtesy of MAZDA MOTORS CORP.

ADJUSTING NUT INSTALLATION NOTE

- Verify that the front parking brake cable is installed below the cable deviation prevention tab of the brake cable.
- Install the adjusting nut.

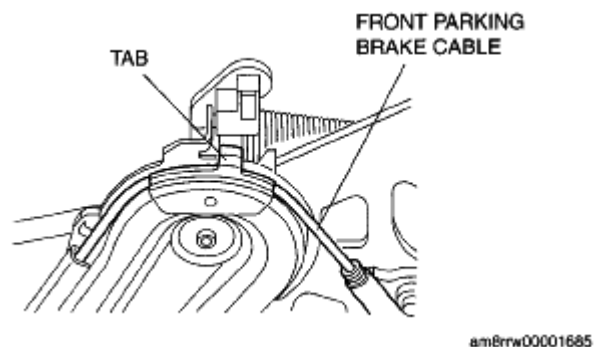


Fig. 14: Identifying Front Parking Brake Cable And Tab
Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE REMOVAL/INSTALLATION [AWD]

- 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.

1. Perform the following procedure and remove the parking brake pedal.
 1. Remove the dashboard under cover (LH). (See **DASHBOARD UNDER COVER REMOVAL/INSTALLATION** .)
2. Perform the following procedure and remove the front parking brake cable.
 1. Remove the front seat (Driver side). (See **FRONT SEAT REMOVAL/INSTALLATION** .)
 2. Remove the decoration panel. (See **DECORATION PANEL REMOVAL/INSTALLATION** .)
 3. Remove the front console box mat. (See **FRONT CONSOLE BOX MAT REMOVAL/INSTALLATION** .)
 4. Remove the indicator panel. (See **INDICATOR PANEL REMOVAL/INSTALLATION** .)
 5. Remove the front console box. (See **FRONT CONSOLE BOX REMOVAL/INSTALLATION** .)
 6. Remove the dashboard under cover (LH). (See **DASHBOARD UNDER COVER REMOVAL/INSTALLATION** .)
 7. Remove the side wall. (See **SIDE WALL REMOVAL/INSTALLATION** .)
 8. Remove the console panel. (See **CONSOLE PANEL REMOVAL/INSTALLATION** .)
 9. Remove the console cover. (See **CONSOLE COVER REMOVAL/INSTALLATION** .)
 10. Remove the console. (See **CONSOLE REMOVAL/INSTALLATION** .)
 11. Remove the dust cover.
 12. Remove the front side trim (LH). (See **FRONT SIDE TRIM REMOVAL/INSTALLATION** .)
 13. Remove the front scuff plate (LH). (See **FRONT SCUFF PLATE REMOVAL/INSTALLATION** .)

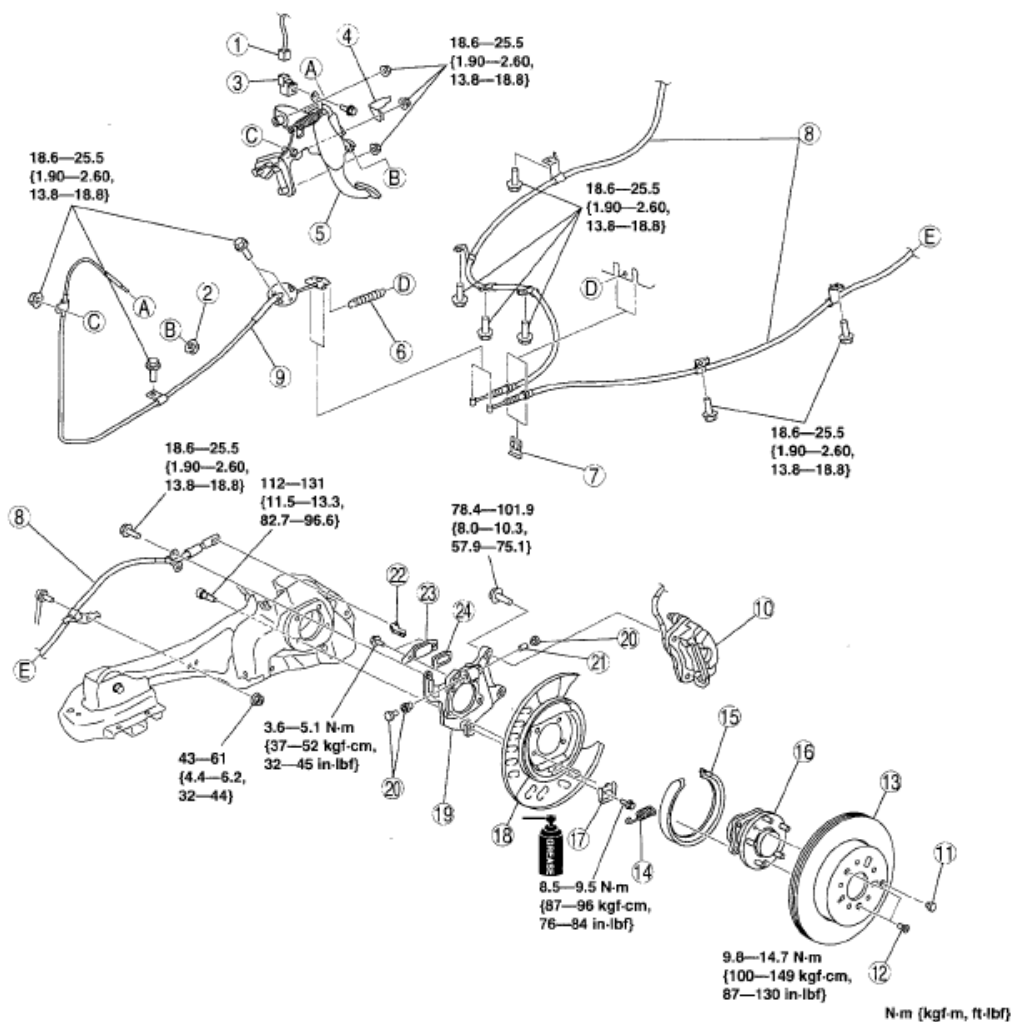
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14. Remove the fuel-filler lid release lever cover.
15. Turn the floor covering over until the front parking brake cable cover appears.
16. Remove the rear heat duct (LH). (See **REAR HEAT DUCT COMPONENT REMOVAL/INSTALLATION** .)
17. Remove the under guard (LH). (See **CHARCOAL CANISTER, CANISTER VENT (CV) SOLENOID VALVE, AIR FILTER COMPONENT REMOVAL/INSTALLATION [MZI-3.7]** .)
3. Perform the following procedure and remove the rear parking brake cable.
 1. Remove the under guard. (See **CHARCOAL CANISTER, CANISTER VENT (CV) SOLENOID VALVE, AIR FILTER COMPONENT REMOVAL/INSTALLATION [MZI-3.7]** .)
4. Perform the following procedure and remove the parking brake plate, back plate and wheel hub.
 1. Remove the rear ABS wheel-speed sensor from the trailing link. (See **REAR ABS WHEEL-SPEED SENSOR REMOVAL/INSTALLATION [AWD]** .)
 2. Remove the rear lateral link. (See **REAR LATERAL LINK REMOVAL/INSTALLATION** .)
 3. Remove the rear coil spring. (See **REAR COIL SPRING REMOVAL/INSTALLATION** .)
 4. Remove the trailing link component. (See **REAR TRAILING LINK REMOVAL/INSTALLATION [AWD]** .)
5. Remove in the order indicated in the table.
6. Install in the reverse order of removal.
7. Adjust the parking brake stroke. (See **PARKING BRAKE ADJUSTMENT**.)
8. Inspect the rear wheel alignment. (See **REAR WHEEL ALIGNMENT [AWD]** .)

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2008 BRAKES Parking Brake System - Mazda CX-9



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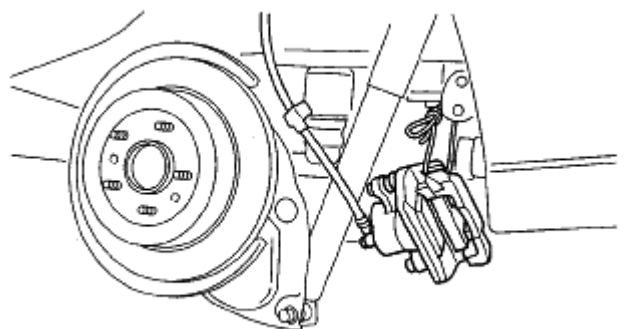
1	Parking brake switch connector
2	Adjusting nut
3	Parking brake switch
4	Dashboard under cover bracket
5	Parking brake pedal
6	Spring
7	Clip
8	Rear parking brake cable
9	Front Parking brake cable, equalizer
10	Brake caliper component (See 04-12-11 Brake Caliper Component Removal Note)
11	Plug
12	Screw (See 04-12-13 Disc Plate, Screw Installation Note)
13	Disc plate (See 04-12-11 Disc Plate Removal Note) (See 04-12-13 Disc Plate, Screw Installation Note)
14	Spring

15	Parking brake shoe (See 04-12-11 Parking Brake Shoe Removal Note) (See 04-12-12 Parking Brake Shoe Installation Note)
16	Rear wheel hub component
17	Shoe stopper
18	Backing plate
19	Parking brake plate
20	Adjuster bolt and nut, tappet (See 04-12-12 Operation lever, Pin, Adjuster Bolt and Nut, Tappet Installation Note)
21	Pin (See 04-12-12 Operation lever, Pin, Adjuster Bolt and Nut, Tappet Installation Note)
22	Operation lever (See 04-12-12 Operation lever, Pin, Adjuster Bolt and Nut, Tappet Installation Note)
23	Plate
24	Dust boot

Fig. 15: Exploded View Of Parking Brake With Torque Specification
 Courtesy of MAZDA MOTORS CORP.

BRAKE CALIPER COMPONENT REMOVAL NOTE

1. Remove the brake caliper assembly from the trailing link and suspend it with a cable so it does not interfere.

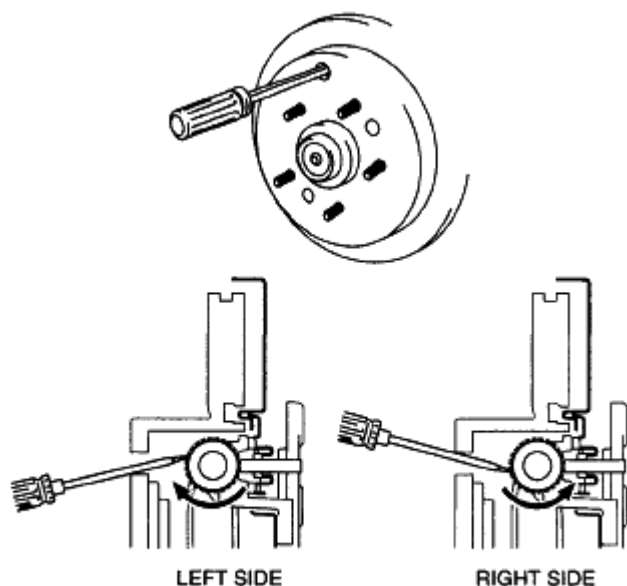


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Fig. 16: Identifying Brake Caliper Component
Courtesy of MAZDA MOTORS CORP.

DISC PLATE REMOVAL NOTE

1. If any disc plate is difficult to remove, perform the following steps to remove it.
 1. Insert a flathead screwdriver into the service hole and turn the adjuster in the direction of the arrow to compress the parking brake shoe.
 2. Remove the disc plate.



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Fig. 17: Adjusting Disc Plate Adjuster
Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE SHOE REMOVAL NOTE

1. Pull the parking brake shoe downward and disengage it from the shoe stopper.
2. Press the adjuster bolt and tappet by hand, and slowly remove the parking brake shoe.

NOTE:

- When removing the parking brake shoe, firmly press the adjuster bolt and tappet by hand and slowly remove the parking brake shoe to prevent the adjuster bolt, tappet, operation lever and other parts from flying off.

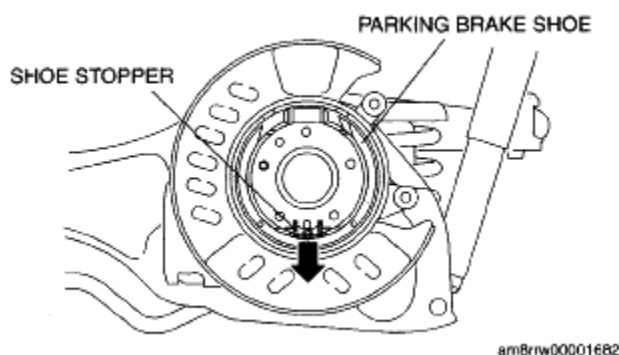


Fig. 18: Pulling Parking Brake Shoe
Courtesy of MAZDA MOTORS CORP.

OPERATION LEVER, PIN, ADJUSTER BOLT AND NUT, TAPPET INSTALLATION NOTE

1. Install the operation lever, pin, adjuster bolt and nut, and tappet so that the adjuster nut is facing toward the vehicle front.
2. Completely tighten the adjuster bolt and nut.
3. Move the operation lever by hand and verify that it operates properly.
 - If proper operation cannot be verified, reinstall.

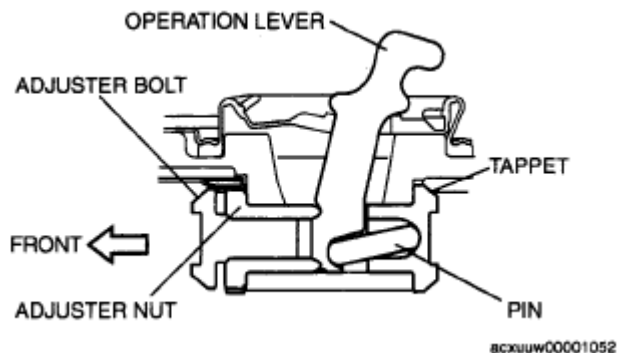


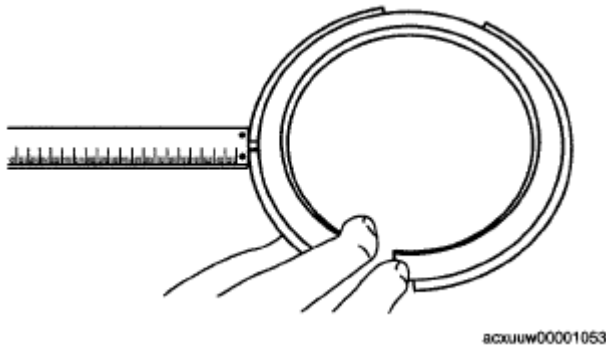
Fig. 19: Identifying Operation Lever, Pin, Adjuster Bolt, Nut & Tappet
Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE SHOE INSTALLATION NOTE

1. Measure the parking brake lining thickness with a vernier caliper or measuring scale.
 - If it is less than the minimum thickness, install a new parking brake shoe.

Minimum parking brake shoe thickness 1.0 mm {0.04 in}

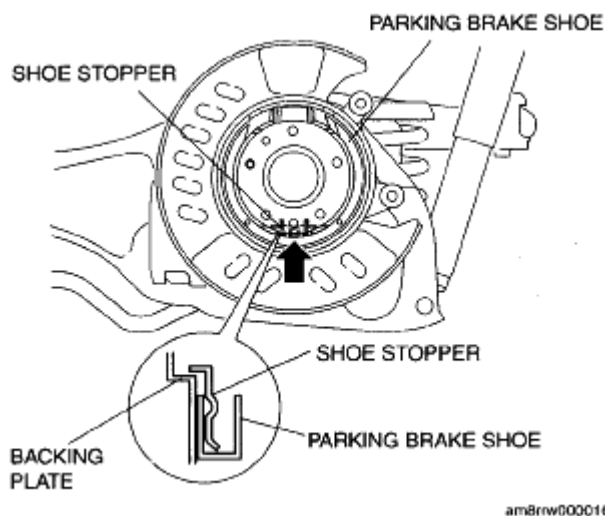
2. Apply grease to the contact surface of the parking brake shoe and shoe stopper.



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Fig. 20: Measuring Parking Brake Lining Thickness
Courtesy of MAZDA MOTORS CORP.

3. After installing the opening of the parking brake shoe to the adjuster bolt and tappet, push the brake shoe upward and attach it to the shoe stopper.



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Fig. 21: Pushing Brake Shoe To Shoe Stopper
Courtesy of MAZDA MOTORS CORP.

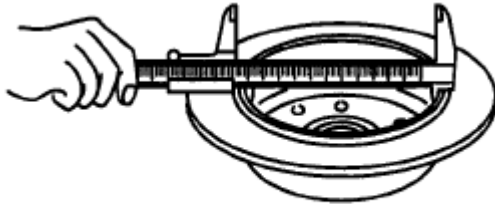
DISC PLATE, SCREW INSTALLATION NOTE

1. Measure the inner diameter of the disc plate with a vernier caliper.

- If it exceeds the maximum diameter, install the new disc plate.

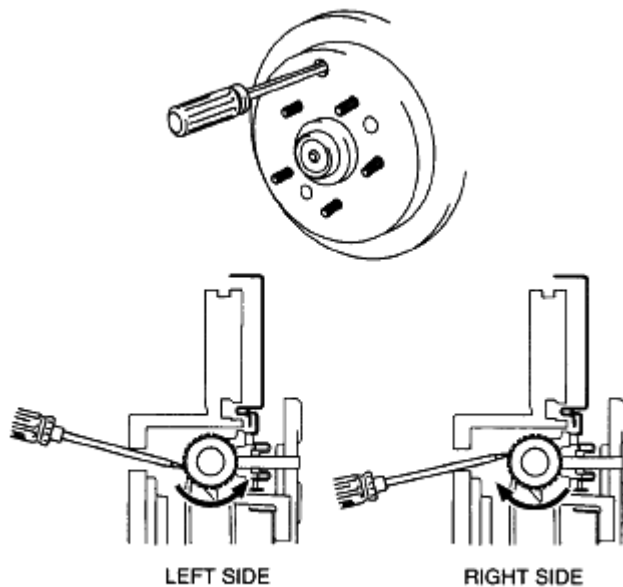
Maximum rear disc plate inner diameter 191.0 mm {7.52 in}

2. Install the disc plate and screw.
3. Perform the following steps to adjust the shoe clearance after installing the disc plate and the screws.
 1. Insert a flathead screwdriver into the service hole and turn the adjuster in the direction of the arrow to expand the parking brake shoe until the disc plate cannot rotate.



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Fig. 22: Measuring Inner Diameter Of Disc Plate
Courtesy of MAZDA MOTORS CORP.



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Fig. 23: Adjusting Disc Plate Adjuster
Courtesy of MAZDA MOTORS CORP.

2. Return the adjuster **13-25 notches** in the direction of the arrow.

NOTE:

- Shoe clearance can be adjusted to **0.15 mm {0.006 in}** by

returning the adjuster *15 notches*.

3. Rotate the disc plate and make sure it does not drag.

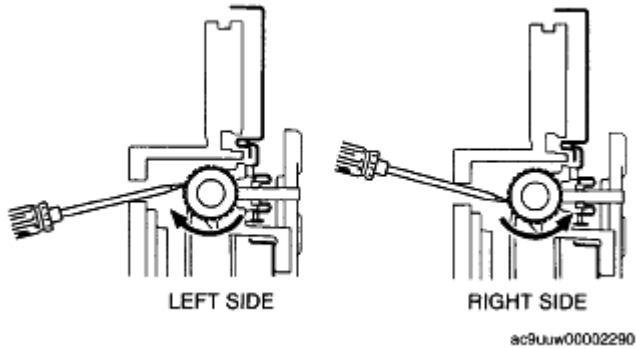


Fig. 24: Rotating Disc Plate Adjuster
Courtesy of MAZDA MOTORS CORP.

FRONT PARKING BRAKE CABLE INSTALLATION NOTE

1. Install the front parking brake cable and equalizer so that the installation area of the equalizer spring is on the underside of the vehicle as shown in the vehicle.

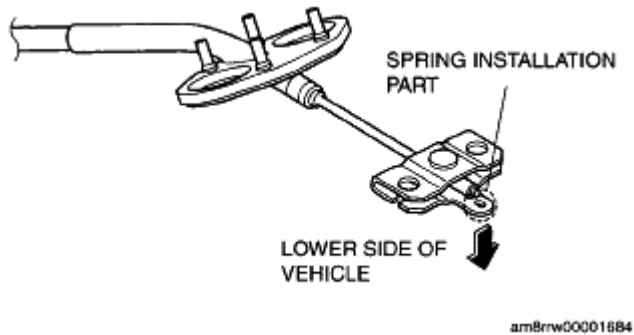
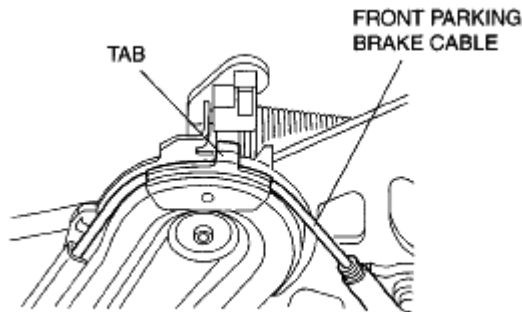


Fig. 25: Installing Parking Brake Cable
Courtesy of MAZDA MOTORS CORP.

ADJUSTING NUT INSTALLATION NOTE

1. Verify that the front parking brake cable is installed below the cable deviation prevention tab of the brake cable.
2. Install the adjusting nut.



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Fig. 26: Identifying Front Parking Brake Cable And Tab
 Courtesy of MAZDA MOTORS CORP.

PARKING BRAKE SWITCH INSPECTION

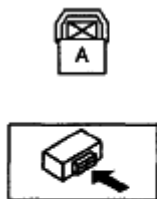
1. Disconnect the parking brake switch connector.
2. Verify that the continuity is as indicated in the table.
 - If not as indicated in the table, replace the parking brake switch. (See **PARKING BRAKE REMOVAL/INSTALLATION [2WD].**) (See **PARKING BRAKE REMOVAL/INSTALLATION [AWD].**)

○—○: Continuity

Condition	Terminal	
	A	Body ground
Parking brake pedal depressed	○—○	○
Parking brake pedal released	○	○

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Fig. 27: Connector Terminal Reference
 Courtesy of MAZDA MOTORS CORP.



ampjw00002631

Fig. 28: Identifying Parking Brake Switch Connector Terminal
 Courtesy of MAZDA MOTORS CORP.