

SECTION **PB**
PARKING BRAKE SYSTEM

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PRECAUTIONS

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SERVICE INFORMATION

PRECAUTIONS

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000006152602

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SRS and SB section of this Service Manual.

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SRS section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:000000006152603

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYSTEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTE:

Supply power using jumper cables if battery is discharged.

2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
4. Perform the necessary repair operation.

PRECAUTIONS

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5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
6. Perform a self-diagnosis check of all control units using CONSULT-III.

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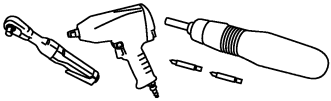
PREPARATION

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PREPARATION

Commercial Service Tool

INFOID:000000006152604

Tool name	Description
<p data-bbox="162 352 267 378">Power tool</p>  <p data-bbox="860 567 933 588">PIIB1407E</p>	<p data-bbox="1055 352 1388 378">Removing nuts, bolts and screws</p>

PARKING BRAKE CONTROL

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PARKING BRAKE CONTROL

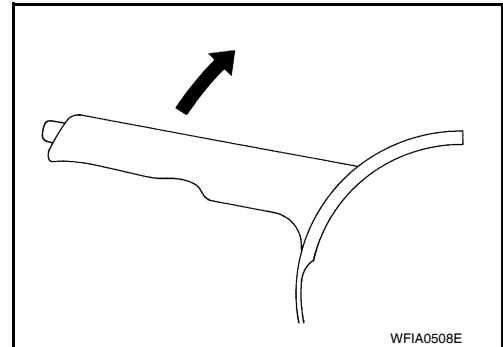
On-Vehicle Service

INFOID:000000006152605

INSPECTION

When parking brake lever is operated with a force of 196 N (20 kg-f, 44 lb-f), make sure parking brake lever stroke is within the specified number of notches. (Check it by listening and counting ratchet clicks.)

Number of notches : [PB-11, "Parking Brake Control"](#)

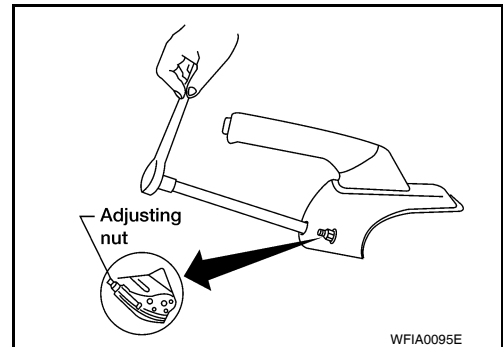


COMPONENTS INSPECTION

- Make sure that the mounting conditions (looseness, backlash, etc.) of each component are normal.
- Check the following:
 - Device assembly for bends, damage and cracks. Replace if any damage is noted.
 - Cables and equalizer for wear and damage. Replace if any damage is noted.
 - Parking brake switch. Replace if it does not work correctly.

ADJUSTMENT

1. Engage parking brake lever to access adjusting nut hole below grip.
2. Insert a deep socket wrench onto adjusting nut. Rotate adjusting nut to fully loosen cable, and then release parking brake lever.



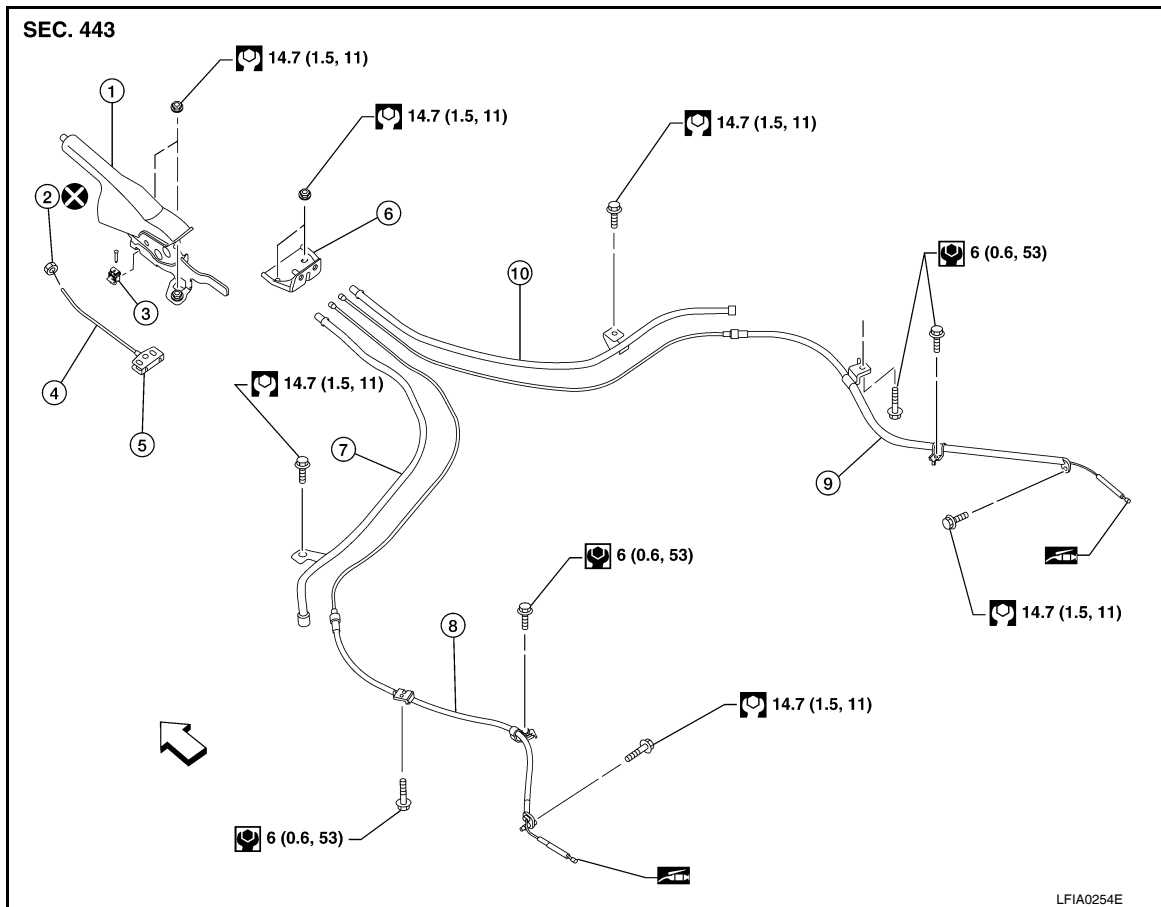
3. Depress the foot brake about 10 times and adjust the rear shoe clearance.
CAUTION:
Be sure to securely depress the foot brake.
4. Rotate brake drum or disc rotor to make sure that there is no drag.
5. Adjust parking brake cable with the following procedure.
 - a. When replace parking brake cable, operate parking brake lever with a force of 490 N (50 kg-f, 110 lb-f) about 10 times.
 - b. Engage parking brake lever to access adjusting nut hole below grip.
 - c. Rotate adjusting nut to adjust parking brake lever stroke using a deep socket wrench.
 - d. Operate parking brake lever with a force of 196 N (20 kg-f, 44 lb-f), make sure the parking brake lever stroke is within the specified number of notches. Refer to [PB-11, "Parking Brake Control"](#). (Check it by listening and counting ratchet clicks.)
 - e. Make sure that there is no drag on rear brake or parking brake shoe with parking brake lever completely released.

PARKING BRAKE CONTROL

< SERVICE INFORMATION >

Component

INFOID:000000006152606



1. Device assembly
4. Front cable
7. LH cable guide

2. Adjusting nut
5. Equalizer
8. LH rear cable
- ↔ Front

3. Parking brake switch
6. Bracket
9. RH rear cable

Removal and Installation

INFOID:000000006152607

REMOVAL

1. Remove center console assembly. Refer to [IP-12, "Removal and Installation"](#).
2. Disconnect parking brake switch connector.
3. Loosen adjusting nut.
4. Remove equalizer from rear cable terminal ends.
5. Remove device assembly nuts, then remove device assembly.
6. Remove rear brake drum or disc rotor. Refer to [BR-40, "Removal and Installation of Drum Brake Assembly"](#) (drum brake), [BR-34, "Removal and Installation of Caliper Assembly"](#) (disc rotor).
7. Remove rear cables from the operating levers. Refer to [BR-40, "Removal and Installation of Drum Brake Assembly"](#) (drum brake), [BR-34, "Removal and Installation of Caliper Assembly"](#) (disc brake).
8. Remove rear cable bolts, and then remove LH and RH rear cables.
9. If replacing LH or RH cable guide, remove carpet and floor insulator. Refer to [EI-41, "Removal and Installation"](#), then perform the following:
 - Remove bracket nuts and bracket.
 - Remove cable guide bolts and cable guides.
10. Remove adjusting nut, and discard, remove front cable from device assembly (if replacing front cable assembly).

PARKING BRAKE CONTROL

< SERVICE INFORMATION >

CAUTION:

Do not reuse the adjusting nut.

INSTALLATION

Installation is in the reverse order of the removal.

- Adjust clearance of rear brake shoes. Refer to [PB-5. "On-Vehicle Service"](#).

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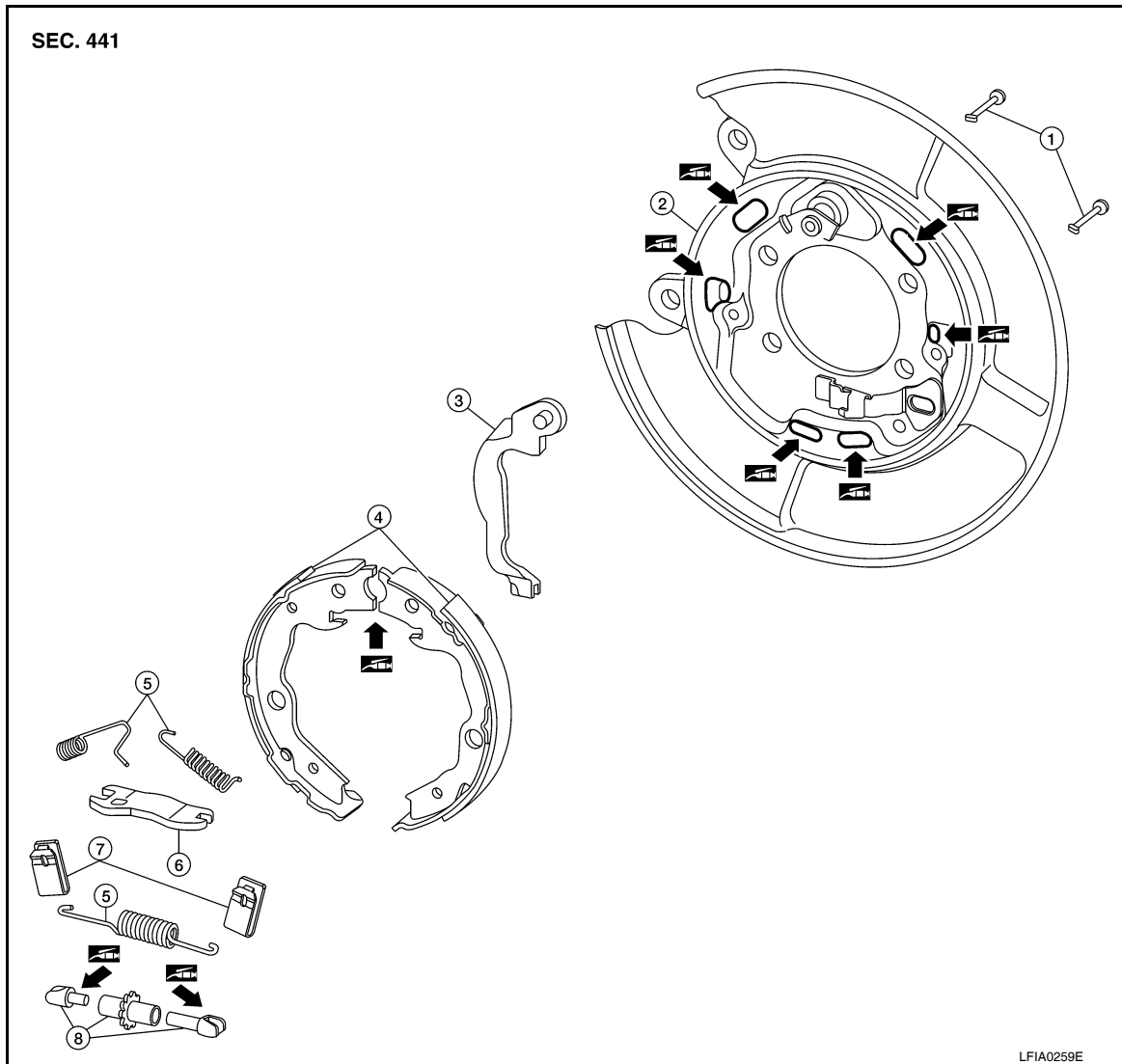
PARKING BRAKE SHOE

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PARKING BRAKE SHOE

Component

INFOID:000000006152608



- | | | |
|--------------------|-----------------|----------|
| 1. Anchor pin | 2. Baffle plate | 3. Lever |
| 4. Brake shoe | 5. Spring | 6. Strut |
| 7. Retainer spring | 8. Adjuster | |

Removal and Installation

INFOID:000000006152609

REMOVAL

WARNING:

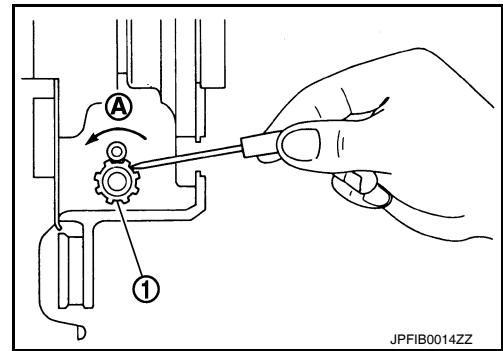
Clean brakes with a vacuum dust collector to minimize the hazard of airborne particles or other materials.

1. Remove wheel and tire.
2. Remove the brake rotor with the parking brake lever completely disengaged. If the brake rotor cannot be removed, remove as follows:

PARKING BRAKE SHOE

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- a. Secure the brake rotor with the wheel nut and remove the adjuster hole plug.
- b. Insert a flat-bladed screwdriver or suitable tool through the plug opening and rotate the star wheel (1) on the adjuster assembly in the direction (A) to retract the parking brake shoes.
3. Remove the parking brake shoe springs.
4. Remove retainer springs, parking brake shoes, strut, and adjuster. Then remove lever from brake shoe.



INSPECTION AFTER REMOVAL

- Visually inspect the lining for abnormal wear, damage and peeling.
- Using a micrometer, measure the thickness (A) of the lining.

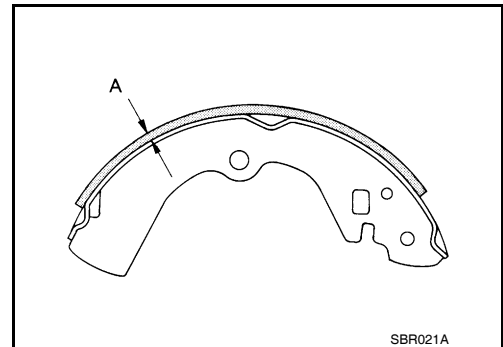
Standard new thickness : [PB-11, "Parking Brake Control"](#)

Wear limit thickness : [PB-11, "Parking Brake Control"](#)

- Visually inspect the inside of the drum for abnormal wear, damage and cracks. Using a pair of vernier calipers, measure the inside diameter of the drum.

Standard inner diameter (new) : [PB-11, "Parking Brake Control"](#)

Wear limit of inner diameter : [PB-11, "Parking Brake Control"](#)



CAUTION:

If necessary, remove the parking brake shoe and check as follows.

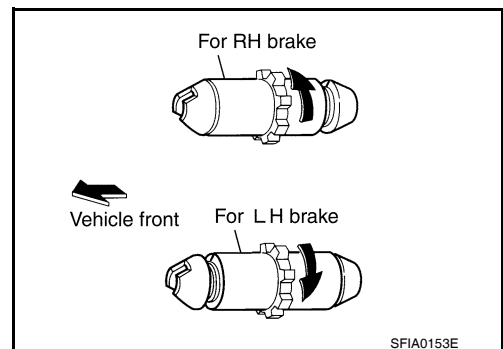
- Check the shoe sliding surface for abnormal wear and damage.
- Check the anchor pin for abnormal wear and corrosion.
- Check the return springs for sagging.
- Check the adjuster for rough operation.

INSTALLATION

Installation is in the reverse order of removal.

- Apply brake grease to the contact areas on baffle plate.

- The orientation of the adjuster is different from LH to RH brakes. Assemble the adjuster so that the threaded part is expanded when rotating it in the direction as shown. Completely retract the adjuster to assemble. When disassembling the adjuster, apply brake grease to the threads.
- After installing parking brake shoes and rotor, adjust the parking brake. Refer to [PB-8, "Removal and Installation"](#).



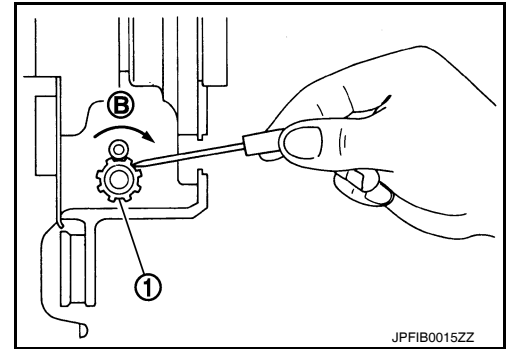
SHOE CLEARANCE ADJUSTMENT

1. Make sure the parking brake control lever is fully released and parking brake cable adjusting nut is loosened.

PARKING BRAKE SHOE

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- Remove the adjuster hole plug on the rotor. Using a screwdriver or suitable tool, turn the adjuster (1) in the direction (B) as shown until the rotor is locked. After locking, turn the adjuster in the opposite direction 5 or 6 notches.
- Rotate the rotor to make sure that there is no drag. Install the adjuster hole plug.
- After adjusting the clearance of the rear shoes, adjust the parking brake cable. Refer to [PB-11, "Parking Drum Brake"](#).
 - After replacing the shoes or the brake rotor or if the parking brake does not function well, perform the break-in procedure. Refer to [PB-11, "Parking Drum Brake"](#).



Drum and Lining Break-in

INFOID:000000006152610

CAUTION:

Do not carry out the break-in procedure excessively. Doing so may cause uneven or premature wear of the brake shoe lining.

When new parking brake shoes or brake rotors are installed or when parking brake performance is poor, perform the following break-in procedure.

- Drive the unloaded vehicle on a safe, level and dry road.
- Pull the parking brake control lever with a force of 147 N (15 kg-f, 33 lb-f).
- While pulling the lever, continue to drive the vehicle forward 100 meters (328 ft) at approximately 35 km/h (22 MPH).
- Allow the parking brake to cool down for approximately five minutes.
- Release the parking brake control lever and drive the vehicle under normal conditions for two minutes to cool down the parking brake.
- Repeat steps 1 through 5 three times and repeat just step 5 once more.
- After performing the break-in procedure, check the stroke of the parking brake control lever. If it is out of specification, adjust again. Refer to [PB-5, "On-Vehicle Service"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE INFORMATION >

SERVICE DATA AND SPECIFICATIONS (SDS)

Parking Drum Brake

INFOID:000000006152611

Brake lining	Standard thickness (new)	3.2 mm (0.126 in)
	Wear limit thickness	1.5 mm (0.06 in)
Drum (in disc)	Standard inner diameter (new)	172 mm (6.77 in)
	Wear limit of inner diameter	173 mm (6.81 in)

Parking Brake Control

INFOID:000000006152612

QR25DE (All Models)

Control type	Hand lever
Number of notches [under a force of 196 N (20 kg-f, 44 lb-f)]	8 – 9
Number of notches when warning lamp switch comes on	1

MR20DE (All Models)

Control type	Hand lever
Number of notches [under a force of 196 N (20 kg-f, 44 lb-f)]	7 – 8
Number of notches when warning lamp switch comes on	1