SECTION PB
PARKING BRAKE SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000005713815

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 SR 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 SR 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.**

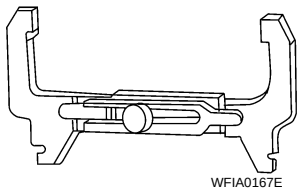
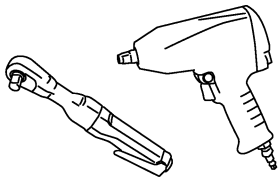
PREPARATION

PREPARATION

Commercial Service Tool

INFOID:0000000005386834

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

(Kent-Moore No.) Tool name		Description
(J-21177-A) Brake drum clearance gauge	 WFIA0167E	Measuring rear rotor drum to parking brake shoe clearance
Power tool	 PBIC0190E	Loosening bolts and nuts

ON-VEHICLE MAINTENANCE

PARKING BRAKE SYSTEM

On-Vehicle Service

INFOID:0000000005386835

PEDAL STROKE

- When parking brake pedal is operated with the specified force, make sure the stroke is within the specified number of notches. Check by listening and counting the ratchet clicks.

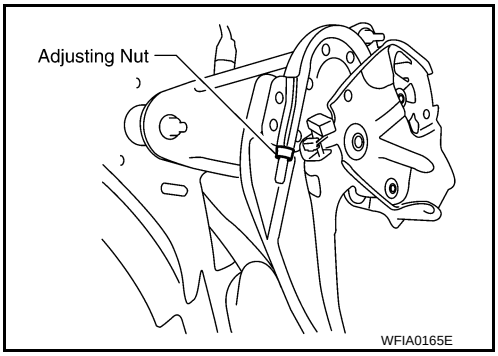
Pedal stroke : Refer to PB-11, "Parking Brake Control".

INSPECTION

- Make sure the components are attached properly, checking for looseness or backlash.
- Check parking brake pedal assembly for bends, damage and cracks, and replace if necessary.
- Check cable for wear and damage, and replace if necessary.
- Check parking brake warning lamp switch for malfunction, and replace if necessary. Refer to MWI-40, "Component Function Check".

ADJUSTMENT

1. Remove the lower instrument panel LH. Refer to IP-16, "Removal and Installation".
2. Partially engage parking brake pedal to access adjusting nut.
3. Insert a deep socket wrench to rotate adjusting nut and loosen cable sufficiently. Then, disengage the parking brake pedal.



4. Remove the wheel and tire using power tool.
5. Remove the disc rotor and measure inner diameter at widest point using suitable tool.

Tool number : — (J-21177-A)

6. Transfer measurement less 0.6 mm (0.024 in) to the parking brake shoes and adjust accordingly.
7. Using wheel nuts, secure the disc rotor to the hub to prevent it from tilting.
8. Rotate the disc rotor to make sure there is no drag.
9. Adjust cable as follows:

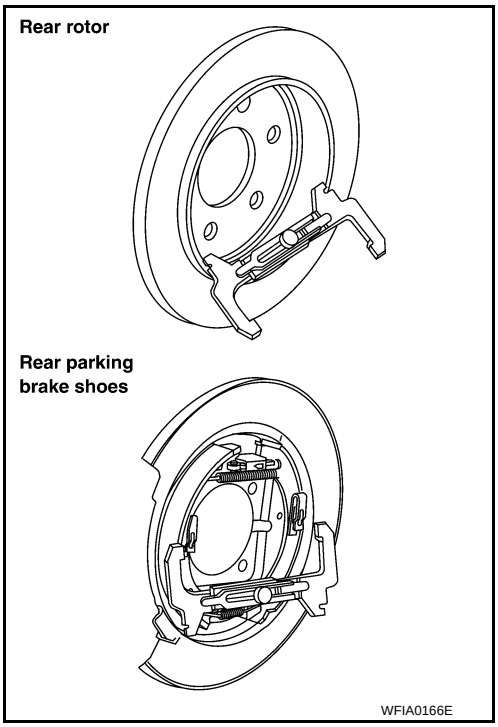
a. Operate pedal 10 or more times with a force of 490 N (50 kg-f, 110 lb-f).

b. Rotate adjusting nut with deep socket to adjust pedal stroke to specification.

Pedal stroke : Refer to PB-11, "Parking Brake Control".

c. With parking brake pedal completely disengaged, make sure there is no drag on the parking brake.

10. Install the disc rotor.
11. Install the wheel and tire using power tool.



12. Install the lower instrument panel LH. Refer to IP-16, "Removal and Installation".

ON-VEHICLE REPAIR

PARKING BRAKE CONTROL

Component

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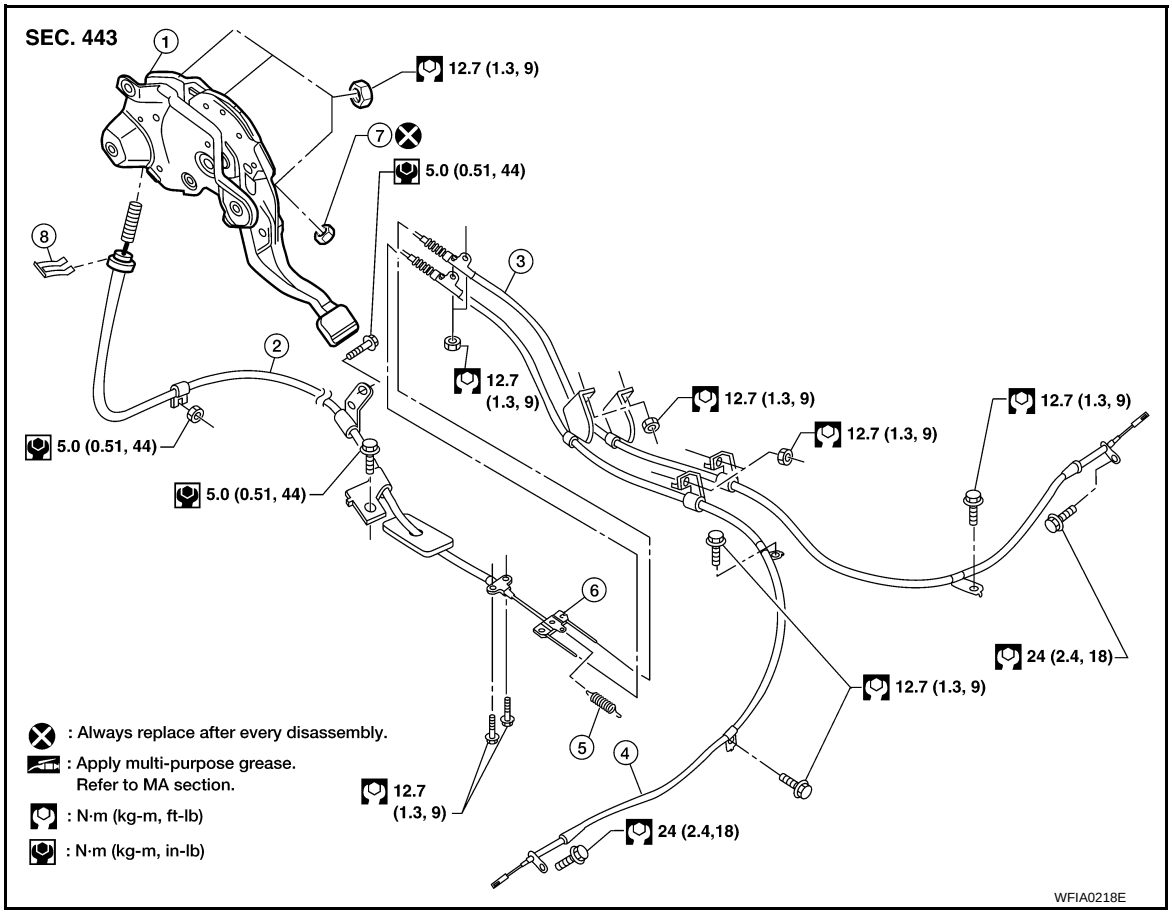


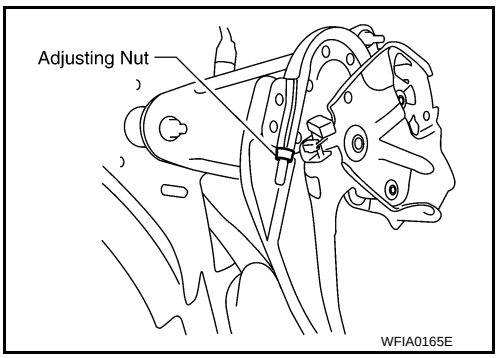
1.	Pedal assembly	2.	Front cable	3.	Right rear cable
4.	Left rear cable	5.	Return spring	6.	Equalizer
7.	Adjusting nut	8.	Lock plate		

Removal and Installation

INFOID:0000000005386837

REMOVAL

1. Remove lower instrument panel LH. Refer to IP-16, "Removal and Installation".
2. On models with floor shift, remove center console. Refer to IP-18, "Removal and Installation".
3. Remove floor trim. Refer to INT-19, "Removal and Installation".
4. Remove adjusting nut and discard.
   CAUTION:
   Do not reuse adjusting nut after removing it.
5. Remove the lock plate from the front cable.
6. Remove front cable retaining bolts and nut.
7. Disconnect return spring from equalizer.
8. Disconnect right and left rear cables from equalizer.
9. Remove rear disc rotors. Refer to BR-36, "Removal and Installation of Brake Caliper and Disc Rotor".



10. Remove parking brake shoe, and remove rear cable from toggle lever. Refer to PB-8, "Removal and Installation".
11. Remove right and left rear cables retaining bolts and nuts, then remove right and left rear cables.

INSTALLATION

Installation is in the reverse order of removal.

- Adjust parking brake. Refer to PB-4, "On-Vehicle Service".

CAUTION:

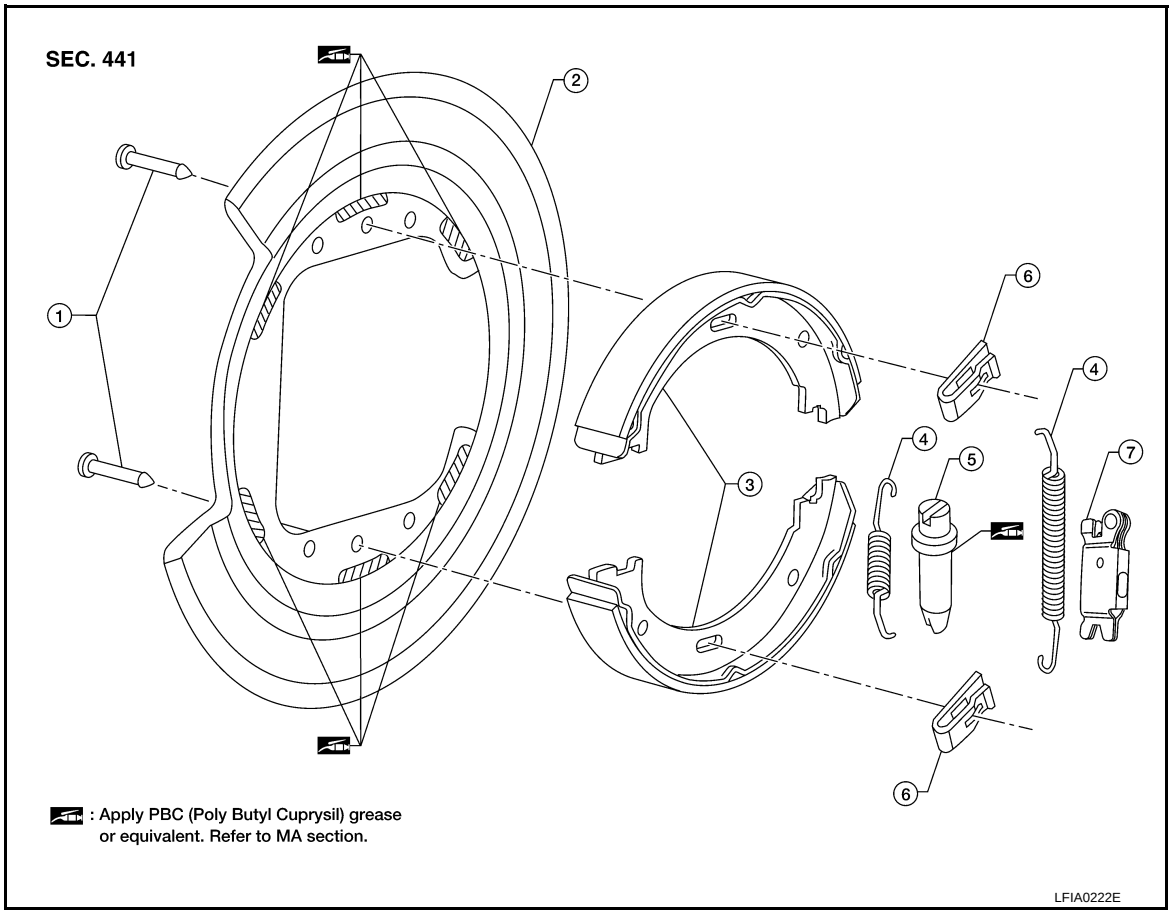
Do not reuse adjusting nut after removing it.

PARKING BRAKE SHOE

Removal and Installation

INFOID:0000000005386838

COMPONENTS



1. Anti-rattle pins
2. Back plate
3. Shoes
4. Return springs
5. Adjuster
6. Retainers
7. Toggle lever

REMOVAL

WARNING:

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

NOTE:

Remove the disc rotor only with the parking brake pedal completely in the released position.

1. Remove the rear disc rotor. Refer to BR-36, "Removal and Installation of Brake Caliper and Disc Rotor".
2. Remove the return springs.
3. Remove the adjuster.
4. Disconnect the rear cable from the toggle lever, if necessary.
   - Remove pin retainer and withdraw cable end from toggle lever.
5. Remove the retainers, anti-rattle pins and shoes.

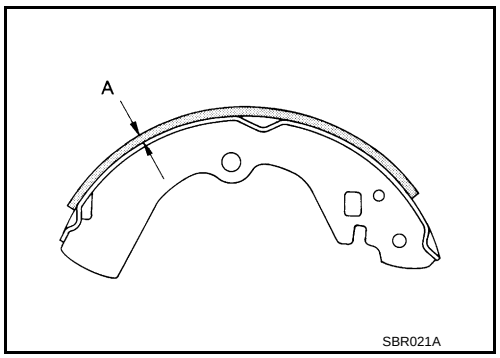
INSPECTION AFTER REMOVAL

Lining Thickness Inspection

- Check thickness of lining.

Standard thickness (A) : Refer to PB-11, "Parking Brake".

Wear limit thickness (A) : Refer to PB-11, "Parking Brake".

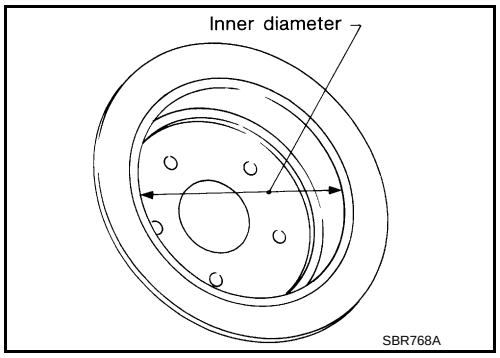


Disc Rotor Inner Diameter Inspection

- Check inner diameter inside drum area of disc rotor.

Standard inner diameter : Refer to PB-11, "Parking Brake".

Wear limit of inner diameter : Refer to PB-11, "Parking Brake".



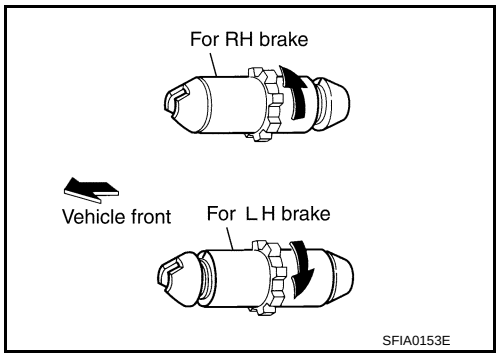
Other Inspections

- Check shoe sliding surface on back plate for excessive wear and damage.
- Check anti-rattle pins for excessive wear and corrosion.
- Check return springs for sagging.
- Check adjuster for rough operation.
- When disassembling adjuster, apply PBC (Poly Butyl Cuprysil) grease or equivalent to the threads.
- Check either visually or with a vernier caliper to see if there is any excessive wear, cracks, or damage inside drum area of disc rotor.

INSTALLATION

Installation is in the reverse order of removal.

- Apply brake grease to the specified points during assembly.
- Assemble adjuster so that threaded part expands when rotating it in the direction shown by the arrow.
- Shorten adjuster by rotating it.



NOTE:

After replacing brake shoes or disc rotors, or if brakes do not function well, perform break-in operation as follows.

1. Adjust parking brake pedal stroke. Refer to PB-4, "On-Vehicle Service".
2. Perform parking brake break-in operation by driving the vehicle forward under the following conditions:
   - Vehicle speed at 40 km/h (25 MPH)
   - Apply parking brake with an operating force of 196 N (20.0 kg-f, 44.1 lb-f) set
   - Apply parking brake for a period of 30 seconds

   CAUTION:
   - **To prevent lining from getting too hot, allow a cool off period of approximately 5 minutes after every break-in operation.**

- **Do not perform excessive break-in operations, because it may cause uneven or early wear of lining.**

3. After break-in operation, check pedal stroke of parking brake. Readjust if it is no longer at the specified stroke. Refer to PB-4, "On-Vehicle Service".

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Parking Brake

INFOID:0000000005386839

Unit: mm (in)

Type		Disc rotor with inner drum
Brake lining	Standard thickness (new)	3.79 ± 0.21 (0.149 ± 0.008)
	Wear limit thickness	0.5 (0.020)
Drum inner diameter (drum in disc)	Standard inner diameter (new)	205 ± 0.13 (8.07 ± 0.01)
	Wear limit of inner diameter	205.7 (8.10)

Parking Brake Control

INFOID:0000000005386840

Control type	Foot pedal
Number of notches [under force of 196 N (20.0 kg-f, 44.1 lb-f)]	3 – 4 notches
Number of notches when warning lamp switch comes on	1 notch