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SECTION **PB**

PARKING BRAKE SYSTEM

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PRECAUTIONS

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PRECAUTION

PRECAUTIONS

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

INFOID:000000010482367

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. 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 three minutes before performing any service.

PREPARATION

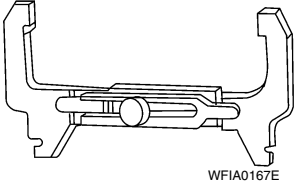

< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

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Tool name	Description
<p data-bbox="159 411 451 441">Brake drum clearance gauge</p>  <p data-bbox="865 632 938 646">WFIA0167E</p>	<p data-bbox="1060 411 1466 441">Measuring rear rotor drum inner diameter</p>
<p data-bbox="159 661 272 690">Power tool</p>  <p data-bbox="865 884 938 898">PIIB1407E</p>	<p data-bbox="1060 661 1401 690">Loosening nuts, screws and bolts</p>

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PARKING BRAKE SYSTEM

< BASIC INSPECTION >

BASIC INSPECTION

PARKING BRAKE SYSTEM

Inspection

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PEDAL STROKE

1. Operate parking brake pedal with a force of 196 N (20.0 kg-f, 44.1 lb-f), make sure pedal stroke is within the specified number of notches. (Check it by listening and counting ratchet clicks.)

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

2. When brake warning lamp turns ON, check that the pedal stroke is within the specified number of notches. (Check it by listening to the clicks of the ratchet.)

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

INSPECT COMPONENTS

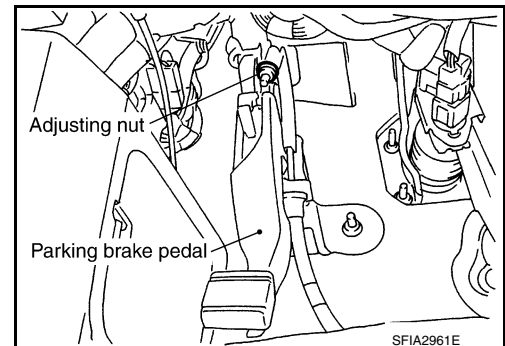
- Make sure that the mounting conditions (looseness, backlash, etc.) of each component are normal.
- Check the following:
 - Device assembly for bend, damage and cracks. Replace if necessary.
 - Cables and equalizer for wear and damage. Replace if necessary.
 - Parking brake switch. Replace if necessary.

Adjustment

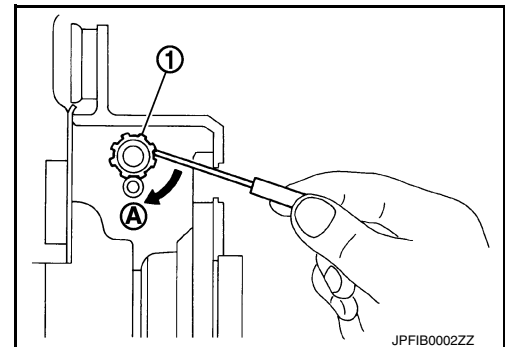
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ADJUSTMENT

1. Secure the disc brake rotor using wheel nuts.
2. Insert a deep socket wrench onto adjusting nut. Rotate adjusting nut to fully loosen cable, and then release parking brake pedal.



3. Remove the adjusting hole plug from the disc brake rotor. Turn the adjuster (1) in the direction (A) as shown using a suitable tool until the disc brake rotor is locked.
4. Turn back the adjuster 5 or 6 notches from the locked position.
5. Rotate the disc brake rotor to check that there is no drag. Install the adjusting hole plug.
6. Adjust the cable with the following procedure.
 - a. Operate the parking brake pedal with a force of 490 N (50.0 kg-f, 110.2 lb-f) for more than 30 minutes.
 - b. Adjust the parking brake pedal stroke by turning the adjusting nut with a deep socket wrench.



CAUTION:

Do not reuse the adjusting nut if the nut is removed.

- c. Operate the parking brake pedal with a force of 196 N (20.0 kg-f, 44.1 lb-f). Check that the pedal stroke is within the specified number of notches. (Check it by listening to the clicks of the ratchet.)

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

PARKING BRAKE SYSTEM

< BASIC INSPECTION >

- d. Rotate the disc brake rotor with the parking brake pedal released and check that there is no drag.

CAUTION:

If any drag is found, verify the parking brake components are installed and adjusted correctly.

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PARKING BRAKE SHOE

< BASIC INSPECTION >

PARKING BRAKE SHOE

Inspection

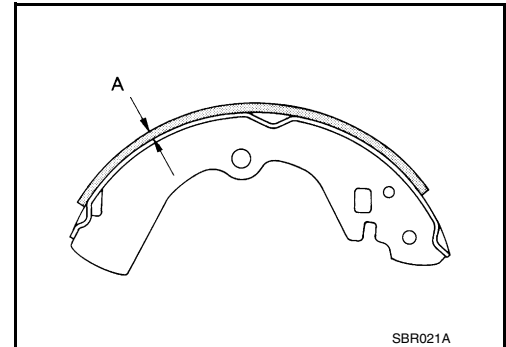
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LINING THICKNESS INSPECTION

- Check thickness of lining.

Standard thickness (new) (A) : Refer to [PB-11, "Parking Drum Brake"](#).

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



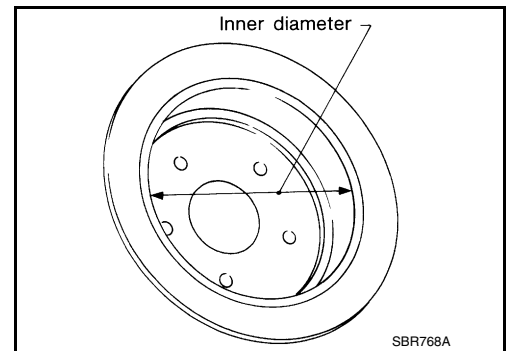
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DRUM INNER DIAMETER INSPECTION

- Check inner diameter of drum in rear disc brake rotor using a suitable tool.

Standard inner diameter (new) : Refer to [PB-11, "Parking Drum Brake"](#).

Wear limit of inner diameter : Refer to [PB-11, "Parking Drum Brake"](#).



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OTHER INSPECTIONS

- Check the following:
 - Lining for excessive wear, damage, and peeling.
 - Shoe sliding surface for excessive wear and damage.
 - Anti-rattle pin for excessive wear and corrosion.
 - Return spring for sagging.
- Make sure that adjuster moves smoothly.
- Visually check the inside of drum for excessive wear, cracks, and damage.
- Replace with new parts as necessary.

Break-in Procedure

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1. Perform parking brake break-in (drag run) operation by driving vehicle under the following conditions:
 - Drive the vehicle forward.
 - Maintain vehicle speed at approximately 40 km/h (25 MPH) keeping it constant in forward direction.
 - Apply the parking brake at the constant operating force specified. Approximately 200+49.0 Nm (20.4+5 kg-f, 45+11 lb-f).
 - Release the parking brake after approximately 5+5/-0 seconds.

CAUTION:

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

2. Check parking brake control device assembly stroke. Refer to [PB-4, "Inspection"](#).

CAUTION:

Readjust as necessary if it is outside the standard specifications.

PARKING BRAKE CONTROL

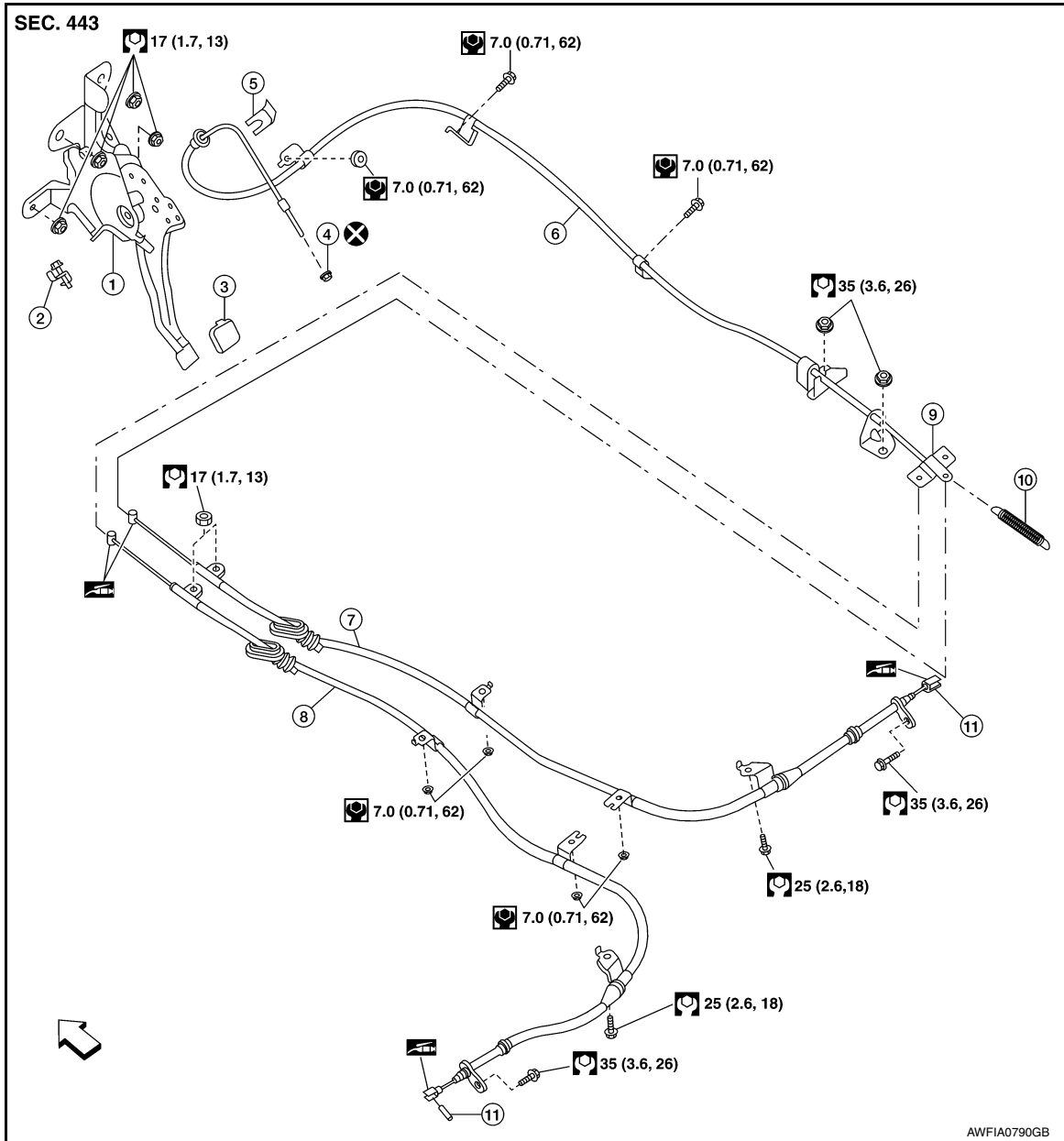
< REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION

PARKING BRAKE CONTROL

Exploded View

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- | | | |
|---------------------------------|-------------------------|----------------|
| 1. Parking brake pedal assembly | 2. Parking brake switch | 3. Pedal pad |
| 4. Adjusting nut | 5. Lock plate | 6. Front cable |
| 7. Rear cable (RH) | 8. Rear cable (LH) | 9. Equalizer |
| 10. Spring | 11. Pin | ⇐ Front |

Removal and Installation

INFOID:000000010482374

REMOVAL

1. Remove rear wheel and tire using power tool. Refer to [WT-55. "Adjustment"](#).
2. Remove instrument lower panel LH. Refer to [IP-21. "Removal and Installation"](#).

PARKING BRAKE CONTROL

< REMOVAL AND INSTALLATION >

3. Disconnect the harness connector from the parking brake switch and remove parking brake switch.
4. Remove adjusting nut and discard, then loosen front cable.
CAUTION:
Do not reuse adjusting nut.
5. Disconnect front cable.
6. Remove parking brake pedal assembly nuts and remove parking brake pedal assembly.
7. Remove ITS control unit. Refer to [AV-434, "Removal and Installation"](#).
8. Remove spring and separate rear cables (LH/RH) from front cable, remove front cable.
9. Remove rear brake caliper and disc brake rotor. Refer to [BR-40, "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#).
10. Remove parking brake shoe, and remove rear cable from toggle lever. Refer to [IP-14, "Exploded View"](#).
11. Remove rear cable bolts and nuts, then remove rear cables.

INSTALLATION

Installation is in the reverse order of removal.

- Adjust the parking brake with new adjusting nut. Refer to [WT-55, "Adjustment"](#).

CAUTION:

- **Do not reuse adjusting nut.**
- **The cables should be free from twists, damage, cracks or corrosion.**

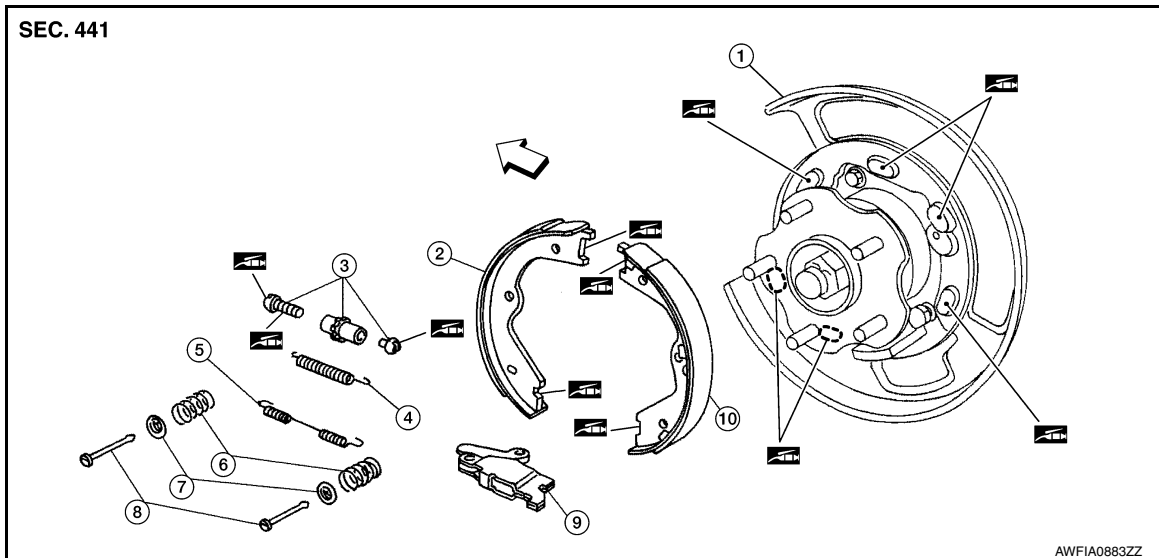
PARKING BRAKE SHOE

< REMOVAL AND INSTALLATION >

PARKING BRAKE SHOE

Exploded View

INFOID:000000010482375



- | | | |
|-------------------------------|-------------------------------|---|
| 1. Back plate | 2. Parking brake shoe (front) | 3. Adjuster |
| 4. Adjuster spring | 5. Return spring | 6. Anti-rattle spring |
| 7. Retainer | 8. Anti-rattle pin | 9. Toggle lever |
| 10. Parking brake shoe (rear) | ↔ Front | Apply PBC (Poly Butyl Cuprysil) grease or silicone based grease |

Removal and Installation

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WARNING:

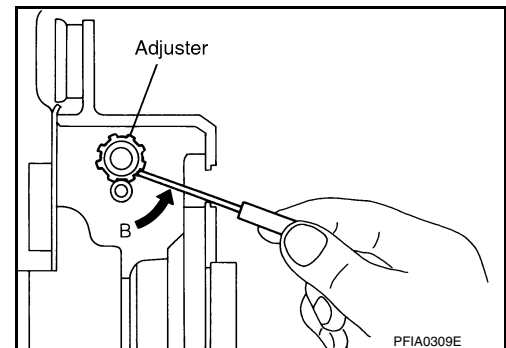
- Clean brakes with a vacuum dust collector to minimize the hazard of air borne particles or other materials.
- Clean dust on disc brake rotor and back plate using a vacuum dust collector. Do not blow with compressed air.

CAUTION:

Put matching marks on both disc brake rotor and wheel hub when removing disc brake rotor.

REMOVAL

1. Remove rear wheel and tire using power tool. Refer to [WT-55, "Adjustment"](#).
2. Remove rear brake caliper and disc brake rotor. Refer to [BR-40, "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#).
3. If disc brake rotor cannot be removed, remove as follows:
 - a. Secure the disc brake rotor in place with wheel nuts and remove adjuster hole plug.
 - b. Rotate adjuster in direction (B) to retract and loosen brake shoe, using tool as shown.
 - c. Remove disc brake rotor.



PARKING BRAKE SHOE

< REMOVAL AND INSTALLATION >

4. Remove anti-rattle pins, retainers, anti-rattle springs, and return springs.
5. Remove parking brake shoes, adjuster assembly, and toggle lever.

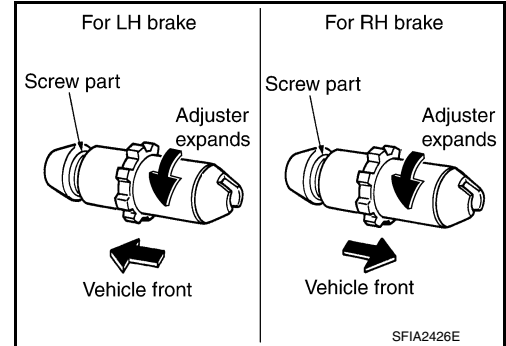
INSPECTION AFTER REMOVAL

After removal, inspect the parking brake components. Refer to [PB-6. "Inspection"](#).

INSTALLATION

Installation is in the reverse order of removal.

- Apply PBC (Poly Butyl Cuprysil) grease or silicone-based grease to the specified points during assembly.
- Assemble adjusters so that threaded part is expanded when rotating it in the direction shown.
- Shorten adjuster by rotating it as shown.



- Check shoe sliding surface and drum inner surface for grease. Wipe it off if it adhere on the surfaces.
- Perform break-in operation after replacing brake shoes or disc brake rotors, or if brakes do not function well. Refer to [PB-6. "Break-in Procedure"](#).
- Adjust parking brake pedal assembly stroke to the specified amount. Refer to [PB-4. "Adjustment"](#).

SERVICE DATA AND SPECIFICATIONS (SDS)

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Parking Drum Brake

INFOID:000000010482377

Unit: mm (in)

Brake lining	Standard thickness (new)	3.2 (0.126)
	Wear limit thickness	1.5 (0.059)
Drum (in disc)	Standard inner diameter (new)	172 (6.77)
	Wear limit of inner diameter	173 (6.81)

Parking Brake Control

INFOID:000000010482378

Control type	Foot pedal
Number of notches [under force of 196 N (20.0 kg-f, 44.1 lb-f)]	4 - 5
Number of notches when parking brake warning lamp turns on	1