

SECTION **PB**
PARKING BRAKE SYSTEM

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PREPARATION

< SERVICE INFORMATION >

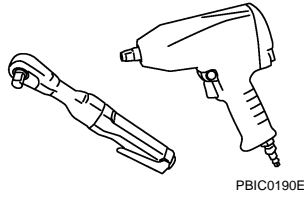
SERVICE INFORMATION

PREPARATION

Commercial Service Tool

INFOID:000000001327645

Tool name	Description
Power tool	Loosening bolts and nuts



PARKING BRAKE SYSTEM

< SERVICE INFORMATION >

PARKING BRAKE SYSTEM

On-Vehicle Inspection

INFOID:000000001327646

PEDAL STROKE

- When parking brake pedal is operated with a force of 200 N (20.4 kg, 44.9 lb), make sure the parking brake pedal stroke is within the specified number of notches. (Check it by listening and counting the ratchet clicks.)

Pedal stroke : 4 – 5 notches

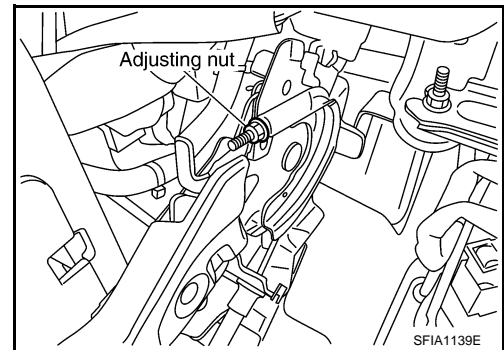
- Make sure that brake warning lamp comes on when parking brake pedal is depressed with in one notch.

INSPECT COMPONENTS

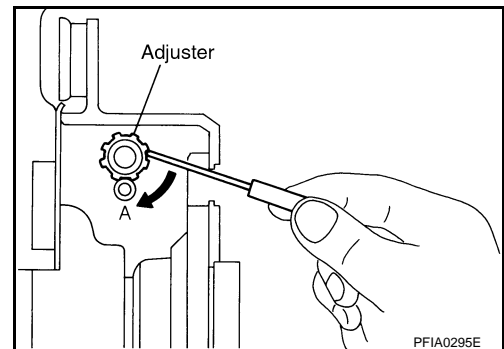
- Make sure the components are installed properly (check for looseness, backlash, etc.).
- Check parking brake pedal assembly for bend, damage and cracks, and replace if necessary.
- Check cable for wear and damage, and replace if necessary.
- Check parking brake switch for malfunction, and replace if necessary.

ADJUSTMENT

1. Insert a deep socket wrench to rotate adjusting nut and loosen cable sufficiently. Then, return pedal.
2. Remove tires from vehicle with power tool.
3. Using wheel nuts, fix disc rotor to hub and prevent it from tilting.



4. Remove adjusting hole plug installed on disc rotor. Using a flat-bladed screwdriver, turn adjuster to clockwise in the figure until disc rotor is locked. After locking, turn adjuster to opposite direction by 5 or 6 notches.
5. Rotate disc rotor to make sure that there is no drag. Then install adjusting hole plug.
6. After adjusting the clearance of rear shoes, with no drag on rear brake, adjuster cable as follows:
 - a. Operate pedal 10 or more times with a force of 490 N (50 kg, 110 lb).
 - b. Depress pedal until a deep socket wrench can be inserted. Insert deep socket, and rotate adjusting nut to adjust pedal stroke.



CAUTION:

Do not reuse adjusting nut after removing it.

- c. When parking brake pedal is operated with a force of 200 N (20.4 kg, 44.9 lb), make sure the stroke is within the specified number of notches. (Check it by listening and counting the ratchet clicks.)

Pedal stroke : 4 – 5 notches

- d. With parking brake pedal completely returned, make sure there is no drag on rear brake.

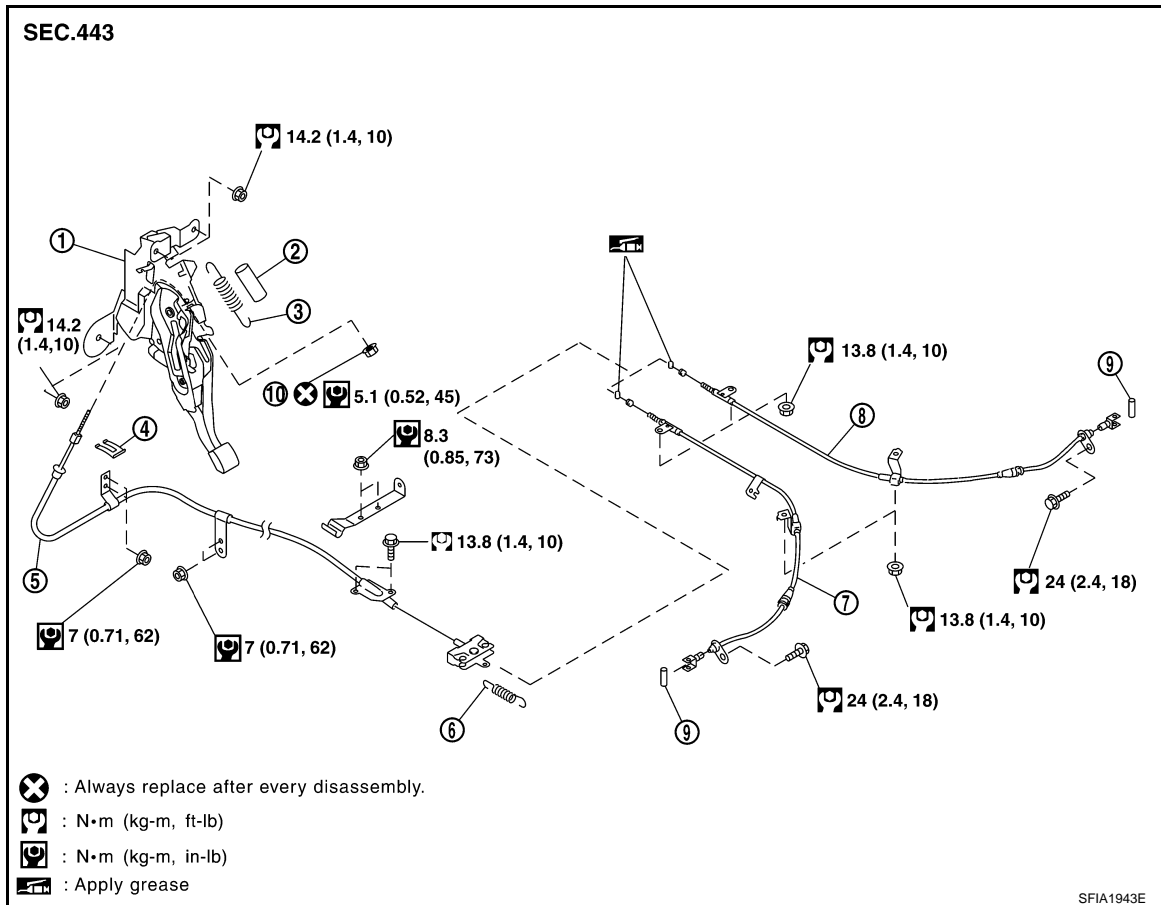
PARKING BRAKE CONTROL

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PARKING BRAKE CONTROL

Component

INFOID:000000001327647



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|--------------------|---------------------|------------------|
| 1. Device assembly | 2. Spring insulator | 3. Return spring |
| 4. Lock plate | 5. Front cable | 6. Return spring |
| 7. Rear left cable | 8. Rear right cable | 9. Pin |
| 10. Adjusting nut | | |

Removal and Installation

INFOID:000000001327648

REMOVAL

1. Remove front kicking plate (driver side). Refer to [IP-11, "Removal and Installation"](#).
2. Remove front body side welt (driver side). Refer to [EI-38](#).
3. Remove dash side finisher (driver side). Refer to [IP-10](#).
4. Remove instrument lower panel (driver side). Refer to [IP-10](#).
5. Remove adjusting nut.
6. Remove front cable installation bolts, nuts, and lock plate, then remove front cable from the vehicle.
7. Remove heat insulator between center muffler and rear propeller shaft.
8. Remove exhaust center muffler. Refer to [EX-3](#).
9. Remove propeller shaft. Refer to [PR-9, "Removal and Installation"](#).
10. Remove rear disc caliper and disc rotors. Refer to [BR-25, "Removal and Installation of Brake Caliper Assembly"](#).
11. Remove parking brake shoe, and remove rear cable from toggle lever. Refer to [PB-6](#).

PARKING BRAKE CONTROL

< SERVICE INFORMATION >

12. Remove right and left rear cables installation nuts, bolts, and remove right and left rear cable assembly from the vehicle.

A

INSTALLATION

1. Install in the reverse order of removal. Tighten the mounting bolts and nuts to the specified torque. Refer to [PB-4. "Component"](#).

B

CAUTION:

Do not reuse adjusting nut after removing it.

2. Adjust parking brake. Refer to [PB-3. "On-Vehicle Inspection"](#).

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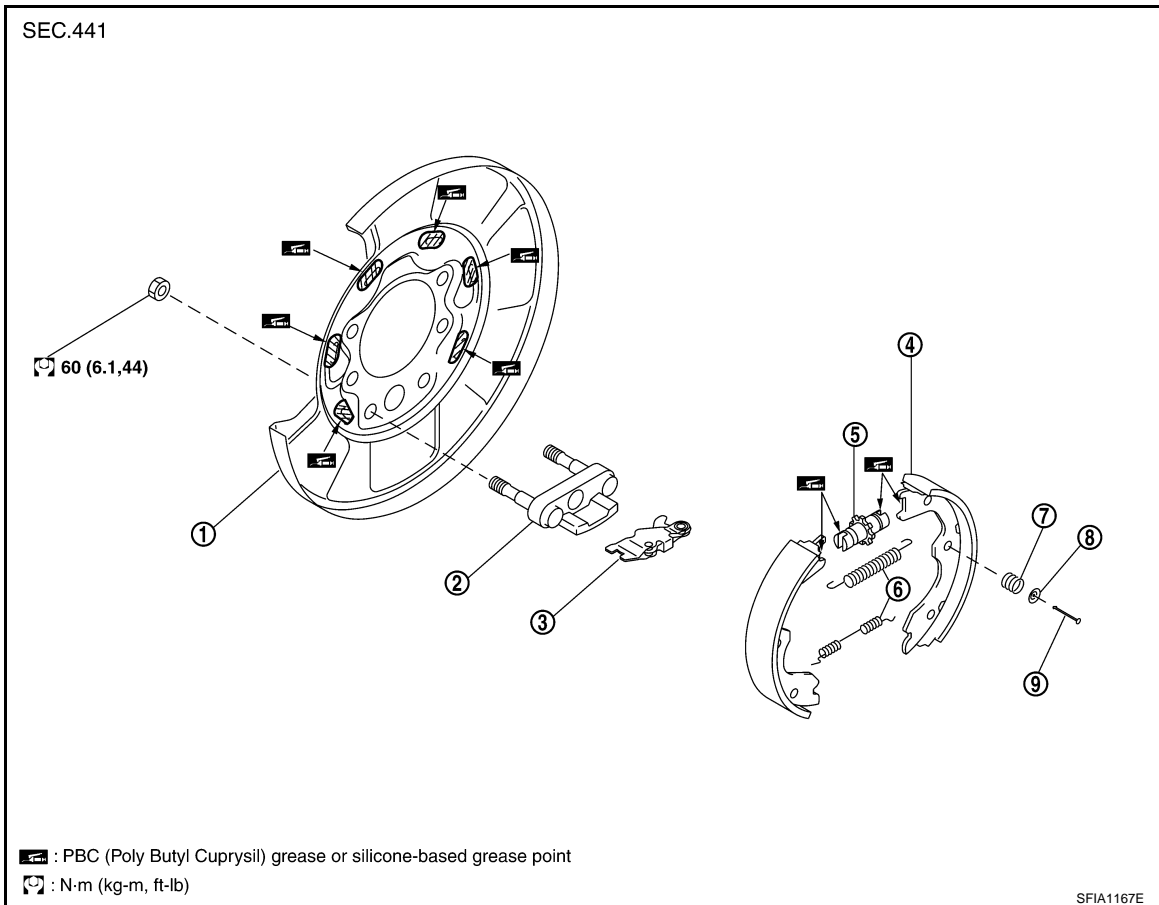
PARKING BRAKE SHOE

< SERVICE INFORMATION >

PARKING BRAKE SHOE

Component

INFOID:000000001327649



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|-----------------------|-----------------|--------------------|
| 1. Back plate | 2. Anchor block | 3. Toggle lever |
| 4. Shoe | 5. Adjuster | 6. Return spring |
| 7. Anti-rattle spring | 8. Retainer | 9. Anti-rattle pin |

Removal and Installation

INFOID:000000001327650

REMOVAL

WARNING:

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

CAUTION:

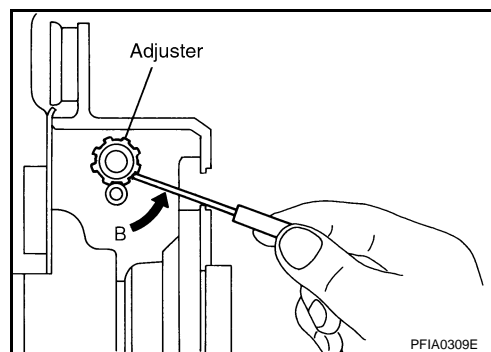
- Remove wheel, and remove disc rotor with parking brake pedal completely released. Refer to [BR-25, "Removal and Installation of Brake Caliper Assembly"](#).
- When removing disc rotor, mark both disc rotor and wheel hub for alignment.

1. Remove rear tires from vehicle with a power tool.
2. Remove disc rotor with the parking brake pedal in the completely released position.
3. Remove disc rotor. If disc rotor cannot be removed, remove as follows:
 - a. Secure the disc rotor in place with wheel nuts and remove adjuster hole plug.

PARKING BRAKE SHOE

< SERVICE INFORMATION >

- b. Using flat-bladed screwdriver, rotate adjuster in direction "B" to retract and loosen brake shoe.
4. Remove anti-rattle pins, retainers, anti-rattle springs, then return springs.
5. Remove parking brake shoes, adjuster assembly, adjuster spring and toggle lever.

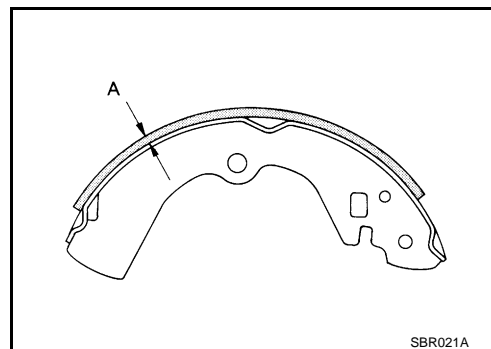


INSPECTION AFTER REMOVAL

- Lining Thickness Inspection
- Check thickness of lining.

Standard thickness "A" : 3.2 mm (0.126 in)

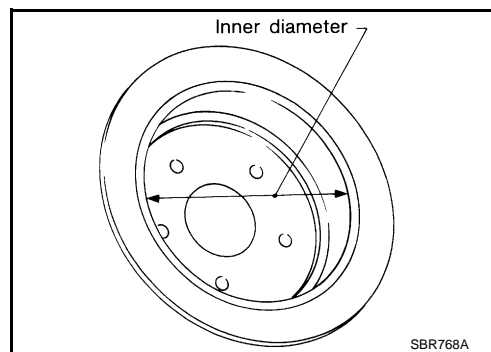
Repair limit thickness "A" : 1.5 mm (0.059 in)



- Drum Inner Diameter Inspection
- Check drum inner diameter.

Standard inner diameter : 190 mm (7.48 in) dia.

Maximum inner diameter : 191 mm (7.52 in) dia.



Other Inspections

- Check the following:
 - Shoe 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.
- Check that adjuster moves smoothly.
- Visually check the inside of drum for excessive wear, cracks, and damage. Check the inside of drum using a pair of vernier calipers.
- Replace with new part if malfunction is detected on the above part.
- When disassembling adjuster, apply PBC (Poly Butyl Cuprysil) grease or equivalent to the threads. Refer to [PB-6, "Component"](#).

INSTALLATION

Be careful of the following:

- Refer to [PB-6, "Component"](#), and apply brake grease to the specified points during assembly.

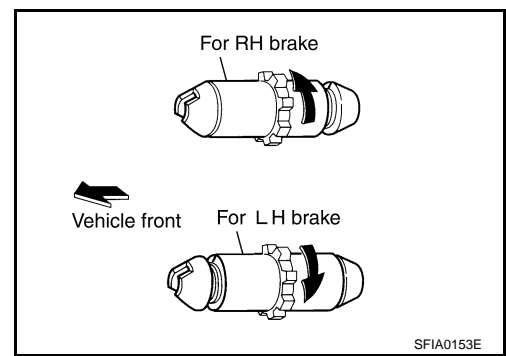
PARKING BRAKE SHOE

< SERVICE INFORMATION >

- Assemble adjuster so that threaded part expands when rotating it in the direction shown by the arrow.
 - Shorten adjuster by rotating it.
 - When disassembling adjuster, apply PBC (Poly Butyl Cuprysil) grease or silicone-based grease to the threads.
 - After replacing brake shoes or disc rotors, or if brakes do not function well, perform break-in operation as follows.
1. Install in the reverse order of the removal.
 2. Adjust parking brake pedal stroke to the specified stroke. Refer to [PB-3. "On-Vehicle Inspection"](#).
 3. Perform parking brake break-in (drag run) operation by driving the vehicle under the following conditions:

Drive forward

- Perform the following
 - Vehicle speed approx. 40 km/h (25 MPH) set (forward)
 - Parking brake operating force approx. 200 N (20.4 kg, 44.9 lb) set
 - Duration approx. 30sec.
4. After break-in operation, check pedal stroke of parking brake. Readjust if it is no longer at the specified stroke. Refer to [PB-3. "On-Vehicle Inspection"](#).
 - 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.



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE INFORMATION >

SERVICE DATA AND SPECIFICATIONS (SDS)

Parking Drum Brake

INFOID:000000001327651

Brake lining	Standard thickness	3.2 mm (0.126 in)
	Repair limit thickness	1.5 mm (0.059 in)
Drum (disc)	Standard inner diameter	190 mm (7.48 in) dia.
	Maximum inner diameter	191 mm (7.52 in) dia.

Parking Brake Control

INFOID:000000001327652

Control type	Foot pedal type
Number of notches [under a force of 200 N (20.4 kg, 44.9 lb)]	4 – 5 notches
Number of notches when brake warning lamp comes on	1 notch

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