

SECTION **PB**
PARKING BRAKE SYSTEM

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PARKING BRAKE SYSTEM

PARKING BRAKE SYSTEM

PFPA:36010

On-Vehicle Service PEDAL STROKE

EFS00377

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

Pedal force : 196 N (20 kg, 44 lb)

Pedal stroke : 5 to 6 notches

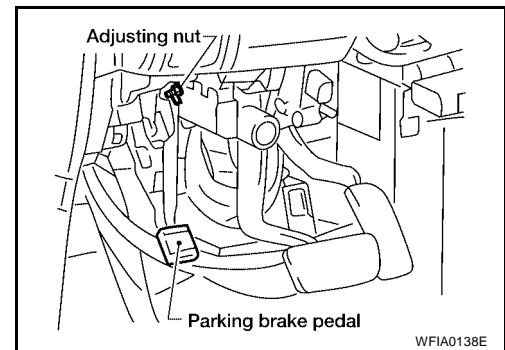
- If the pedal stroke is not within specification, perform the adjustment operation. Refer to [PB-2, "ADJUSTMENT"](#).

INSPECT COMPONENTS

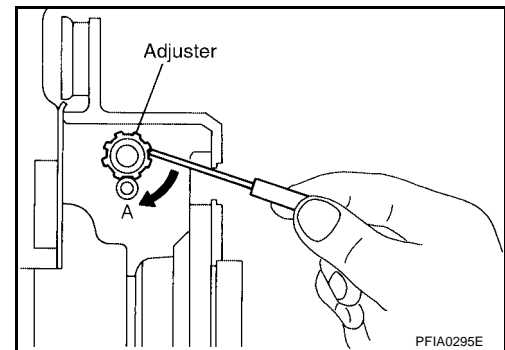
- Make sure the components are attached properly (check for looseness, backlash, etc.).
- Check parking brake pedal assembly for bend, damage and cracks, and replace if necessary.
- Check cable for wear and damage, and replace if necessary.
- Check parking brake warning lamp switch for malfunction, and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

ADJUSTMENT

- Remove tire from the vehicle with power tool.
- Insert a deep socket wrench to rotate adjusting nut and loosen the cable sufficiently. Then, return the pedal to the free height.
- Using wheel nuts, secure the disc to the hub and prevent it from tilting.



- Remove adjusting hole plug installed on the disc rotor. Using a screwdriver, rotate the adjuster in direction "A" as shown, until the disc rotor is locked. After locking, turn the adjuster in the opposite direction by 5 or 6 notches.
- Rotate the disc rotor to make sure there is no drag. Install the adjusting hole plug.
- Adjust cable as follows:
 - Operate pedal 10 or more times with a force of 294 N (30 kg, 66 lb).
 - Rotate adjusting nut with deep socket to adjust pedal stroke.



NOTE:

Do not reuse the adjusting nut after removing it.

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

Pedal force : 196 N (20 kg, 44 lb)

Pedal stroke : 5 to 6 notches

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

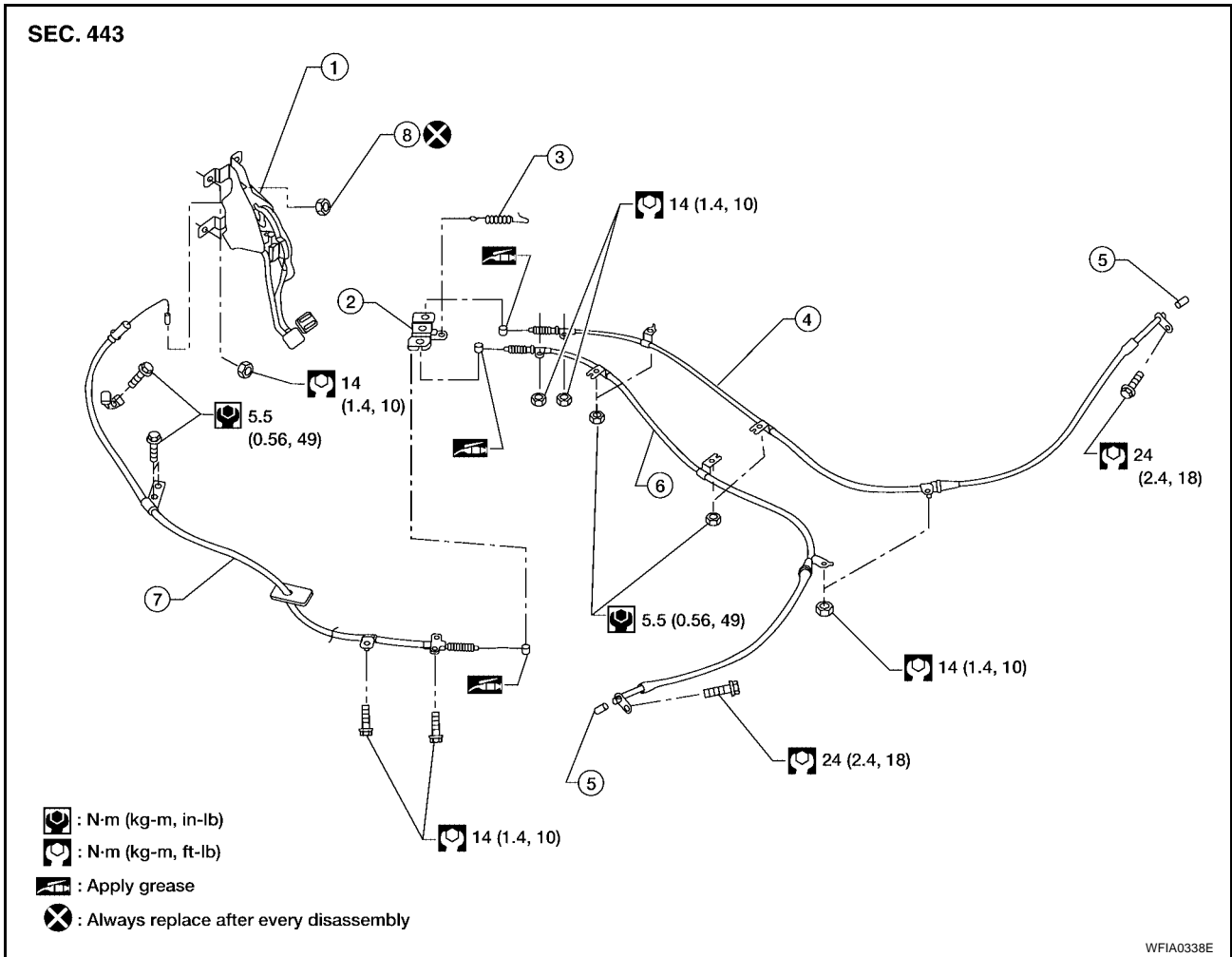
PARKING BRAKE CONTROL

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EFS00378

PARKING BRAKE CONTROL

Components



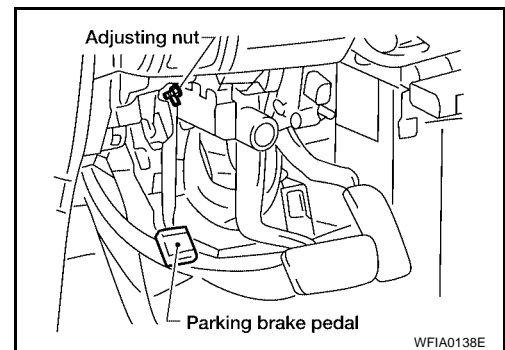
- | | | |
|---------------------------------|------------------|--------------------|
| 1. Parking brake pedal assembly | 2. Equalizer | 3. Return spring |
| 4. Rear right cable | 5. Pin | 6. Rear left cable |
| 7. Front cable | 8. Adjusting nut | |

Removal and Installation

REMOVAL

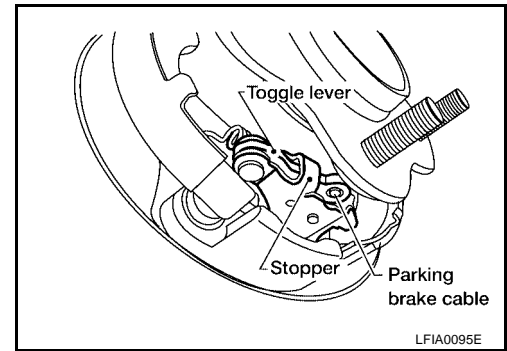
EFS00379

1. Remove lower driver instrument panel using power tool. Refer to [IP-10, "Removal and Installation"](#).
2. Disconnect parking brake switch electrical connector.
3. Remove adjusting nut.
4. Remove parking brake pedal assembly mounting nuts.
5. Disconnect front cable from parking brake pedal assembly.
6. Remove parking brake pedal assembly.
7. Remove center console. Refer to [IP-10, "Removal and Installation"](#).
8. Remove front cable mounting bolts, then remove front cable from vehicle.
9. Remove rear disc rotors. Refer to [BR-33, "Removal and Installation of Caliper Assembly and Disc Rotor"](#).



PARKING BRAKE CONTROL

10. Remove rear cables from toggle levers.
11. Remove right and left rear cables mounting nuts and bolts, then remove right and left cable assemblies from vehicle.



INSTALLATION

Install in the reverse order of removal.

- Tighten the nuts and bolts to specification.
- Adjust the parking brake. Refer to [PB-2, "ADJUSTMENT"](#).

NOTE:

Do not reuse the adjusting nut.

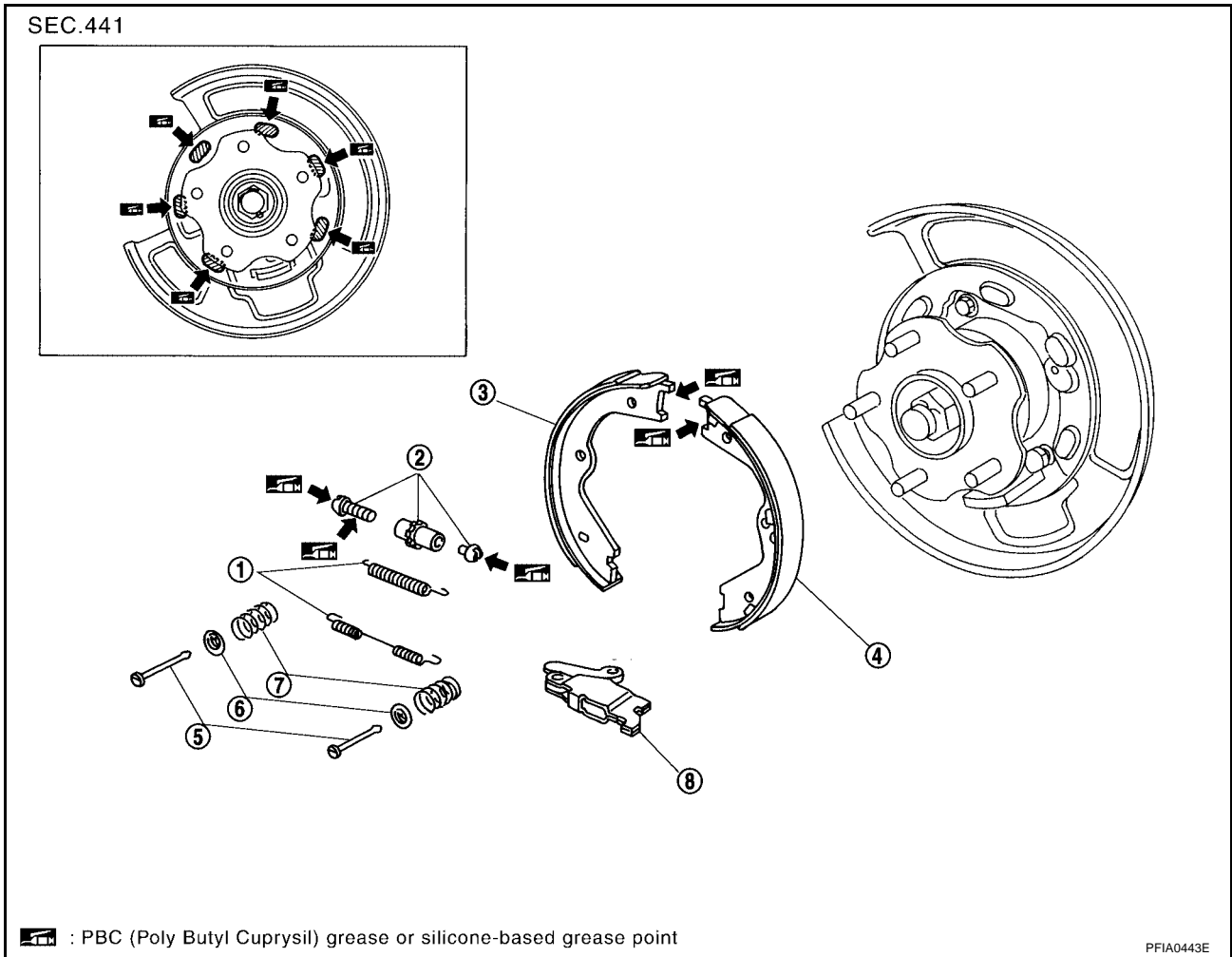
PARKING BRAKE SHOE


PFPA:44060

EFS0037A

PARKING BRAKE SHOE

Components



 : PBC (Poly Butyl Cuprysil) grease or silicone-based grease point

- | | | |
|------------------------|----------------------|---------------------|
| 1. Return spring | 2. Adjuster assembly | 3. Shoe (secondary) |
| 4. Shoe (primary) | 5. Anti-rattle pins | 6. Retainers |
| 7. Anti-rattle springs | 8. Toggle lever | |

Removal and Installation

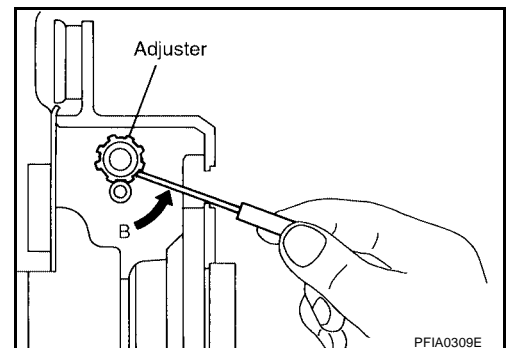
REMOVAL

EFS0037B

CAUTION:

Clean dust on the disc and back plate with a vacuum dust collector. Do not blow with compressed air.

1. Remove wheel and tire using power tool.
2. Remove the disc rotor with the parking brake pedal completely in the released position.
3. If disc rotor cannot be removed, remove as follows:
 - a. Secure the disc rotor in place with wheel nuts and remove disc rotor plug.
 - b. Using a screwdriver, rotate adjuster in direction "B" to retract and loosen brake shoes.
4. Remove the anti-rattle pins, retainers, and anti-rattle springs, then return springs.
5. Remove the parking brake shoes, adjuster assembly, and toggle lever.



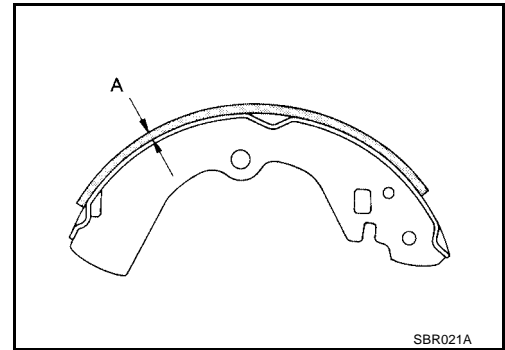
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PARKING BRAKE SHOE

INSPECTION AFTER REMOVAL

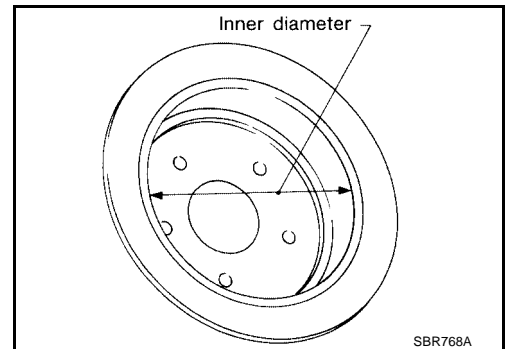
Lining Thickness Inspection

- Check thickness of lining.
 - Standard thickness (new) "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 (new) : 190 mm (7.48 in)**
 - Wear limit of inner diameter : 191 mm (7.52 in)**



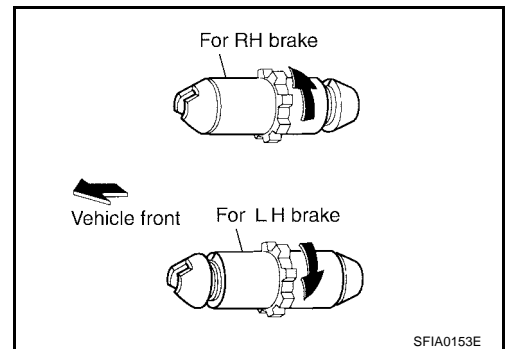
Other Inspections

- Check shoe sliding surface for excessive wear and damage.
- Check anti-rattle pin for excessive wear and corrosion.
- Check return spring for sagging.
- Check that adjuster moves smoothly.
- Check either visually or with a vernier caliper to see if there is any excessive wear, cracks, or damage inside the drum.

INSTALLATION

Installation is in the reverse order of removal, observing the following:

- Refer to [PB-5, "Components"](#) and apply brake grease to the specified points during assembly.
 - There is a difference between the adjusters orientation from left and right. Assemble the adjuster so the threaded part expands when rotating it in the direction shown by the arrow.
 - Shorten adjuster by rotating it.
 - When disassembling the adjuster, apply PBC (Poly Butyl Cuprysil) grease or silicone based grease to the threads. Refer to [MA-10, "RECOMMENDED FLUIDS AND LUBRICANTS"](#).
 - After replacing brake shoes or disc rotors, or if brakes do not function well, perform break-in operation as follows.
1. Adjust the parking brake pedal stroke to the specified stroke. Refer to [PB-2, "PEDAL STROKE"](#).
 2. Perform break-in (drag run) operation by driving the vehicle under the following conditions:



Drive forward

- **Vehicle speed approx. 40 km/h (25 MPH) set (forward)**
 - **Parking brake operating force approx. 147 N (15 kg, 33 lb) set**
 - **Distance approx. 100 m (328 ft)**
3. After break-in operation, check lever stroke of the parking brake. Readjust if it is no longer at the specified stroke.
 - To prevent the 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 the lining.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Parking Drum Brake

EFS0037C

Type		DS19HC
Brake lining	Standard thickness (new)	3.2 mm (0.126 in)
	Wear limit thickness	1.5 mm (0.059 in)
Drum (disc)	Standard inner diameter (new)	190 mm (7.48 in)
	Wear limit of inner diameter	191 mm (7.52 in)

Parking Brake Control

EFS0037D

Control type	Foot pedal
Number of notches [under force of 196 N (20 kg, 44 lb)]	5 to 6 notches
Number of notches when warning lamp switch activates warning lamp	1 notch

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SERVICE DATA AND SPECIFICATIONS (SDS)
