

A  
B  
C  
D  
E

# SECTION **PB**

## PARKING BRAKE SYSTEM

### CONTENTS

<p><b>PRECAUTIONS</b> ..... 2</p> <p>  Precautions for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER" ..... 2</p> <p><b>PARKING BRAKE SYSTEM</b> ..... 3</p> <p>  On-Vehicle Service (Foot Lever Type) ..... 3</p> <p>    INSPECTION ..... 3</p> <p>    ADJUSTMENT ..... 3</p> <p>  On-Vehicle Service (Hand Lever Type) ..... 3</p> <p>    INSPECTION ..... 3</p> <p>    ADJUSTMENT ..... 4</p> <p><b>PARKING BRAKE CONTROL</b> ..... 5</p> <p>  Components ..... 5</p> <p>  Removal and Installation ..... 6</p>	<p>    REMOVAL ..... 6</p> <p>    INSTALLATION ..... 6</p> <p>    Inspection ..... 6</p> <p><b>PARKING BRAKE SHOE</b> ..... 7</p> <p>  Components ..... 7</p> <p>  Removal and Installation ..... 7</p> <p>    REMOVAL ..... 7</p> <p>    INSPECTION AFTER REMOVAL ..... 8</p> <p>    INSTALLATION ..... 8</p> <p>    BREAKING IN DRUM AND LINING ..... 9</p> <p><b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> ..... 10</p> <p>  Parking Drum Brake ..... 10</p> <p>  Parking Brake Control ..... 10</p>	<p>PB</p> <p>G</p> <p>H</p> <p>I</p> <p>J</p> <p>K</p> <p>L</p> <p>M</p>
---	---	--

# PRECAUTIONS

---

## PRECAUTIONS

PF0:00001

### Precautions for Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”

AFS0021T

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.

# PARKING BRAKE SYSTEM

## PARKING BRAKE SYSTEM

PFP:36010

### On-Vehicle Service (Foot Lever Type) INSPECTION

AFS0021L

- While depressing parking brake pedal with a force of 196N(20kg, 44lb). Make sure that the parking brake pedal stroke is within the range of the specified number of notches.

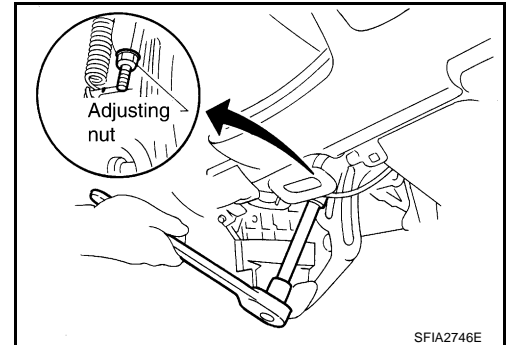
**Number of notches : 2 - 3**

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

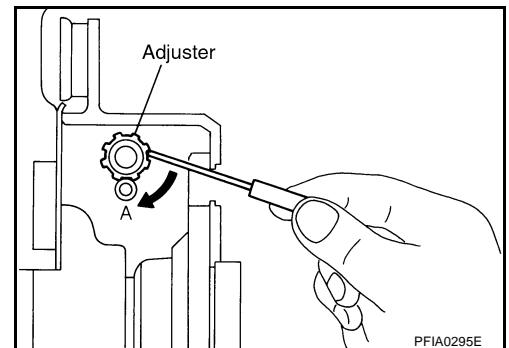
### ADJUSTMENT

- To perform adjustment operations, remove tire from vehicle with a power tool. Using a wheel nut, fix disc to hub preventing it from tilting.

1. Insert a deep-well socket wrench to rotate adjusting nut to loosen cable sufficiently. Then, after releasing parking brake pedal completely, adjust the clearance of rear shoes.



2. Remove adjuster hole plug installed on the disc rotor. Using a flat-bladed screwdriver, turn adjuster to clockwise as shown in the figure until adjuster is locked. After locking, turn adjuster to the opposite direction by 5 or 6 notches.



3. Rotate disc rotor to make sure that there is no drag. Then install adjuster hole plug.

4. After adjusting the clearance of rear shoes, with no drag on the rear brake, adjust cable as follows:

- a. Operate parking brake pedal 10 or more times with a force of 294 N (30 kg, 66 lb).
- b. Depress parking brake pedal until a deep-well socket can be inserted. Insert the deep-well socket, and rotate adjusting nut to adjust a pedal stroke to specified notches.

#### CAUTION:

**Do not reuse adjusting nut after removing it.**

- c. After operating parking brake pedal 3 to 4 times with a force of 196 N (20 kg, 44 lb), make sure that the parking brake pedal stroke is within the specified number of notches.
- d. With parking brake pedal completely returned, make sure that there is no drag on the rear brake.

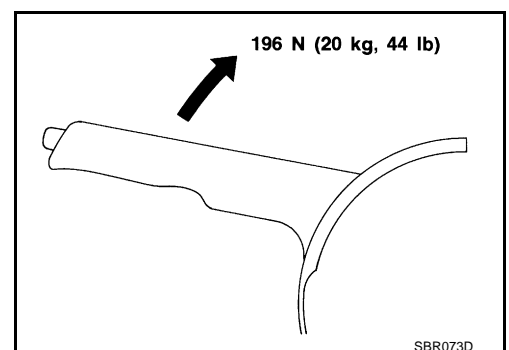
### On-Vehicle Service (Hand Lever Type) INSPECTION

AFS0021M

- While operating parking brake lever to specified amount of force, make sure that the parking brake lever stroke is within the range of the specified stroke amount.

**Number of notches : 6 - 7**

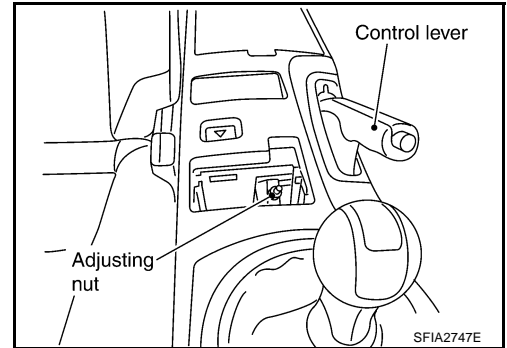
- Make sure that brake warning lamp comes on when parking brake lever is operated with in one notch.



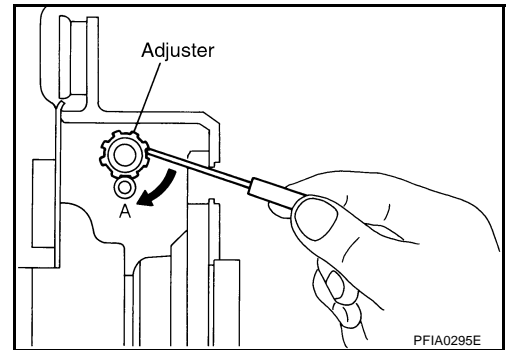
# PARKING BRAKE SYSTEM

## ADJUSTMENT

- To perform adjustment operations, remove tire from vehicle with power tool. Using a wheel nut, fix disc to hub preventing it from tilting.
1. Insert a deep-well socket wrench to rotate adjusting nut to loosen cable sufficiently. Then, after releasing the parking brake lever completely, adjust the clearance of rear shoes.



2. Remove adjuster hole plug installed on the disc rotor. Using a flat-bladed screwdriver, turn adjuster to clockwise as shown in the figure until adjuster is locked. After locking, turn adjuster to the opposite direction by 5 or 6 notches.
3. Rotate disc rotor to make sure that there is no drag. Then install adjuster hole plug.
4. After adjusting the clearance of rear shoes, with no drag on the rear brake, adjust cable as follows:
  - a. Operate parking brake lever 10 or more times with a force of 294 N (30 kg, 66 lb).
  - b. Operate parking brake lever until a deep-well socket can be inserted. Insert deep-well socket, and rotate adjusting nut to adjust a parking brake lever stroke to the specified notches.



### **CAUTION:**

**Do not reuse adjusting nut after removing it.**

- c. After operating parking brake lever 3 to 4 times with a force of 196 N (20 kg, 44 lb), make sure that the parking brake lever stroke is within the specified number of notches.
- d. With parking brake lever completely returned, make sure that there is no drag on the rear brake.

# PARKING BRAKE CONTROL

PF3:36010

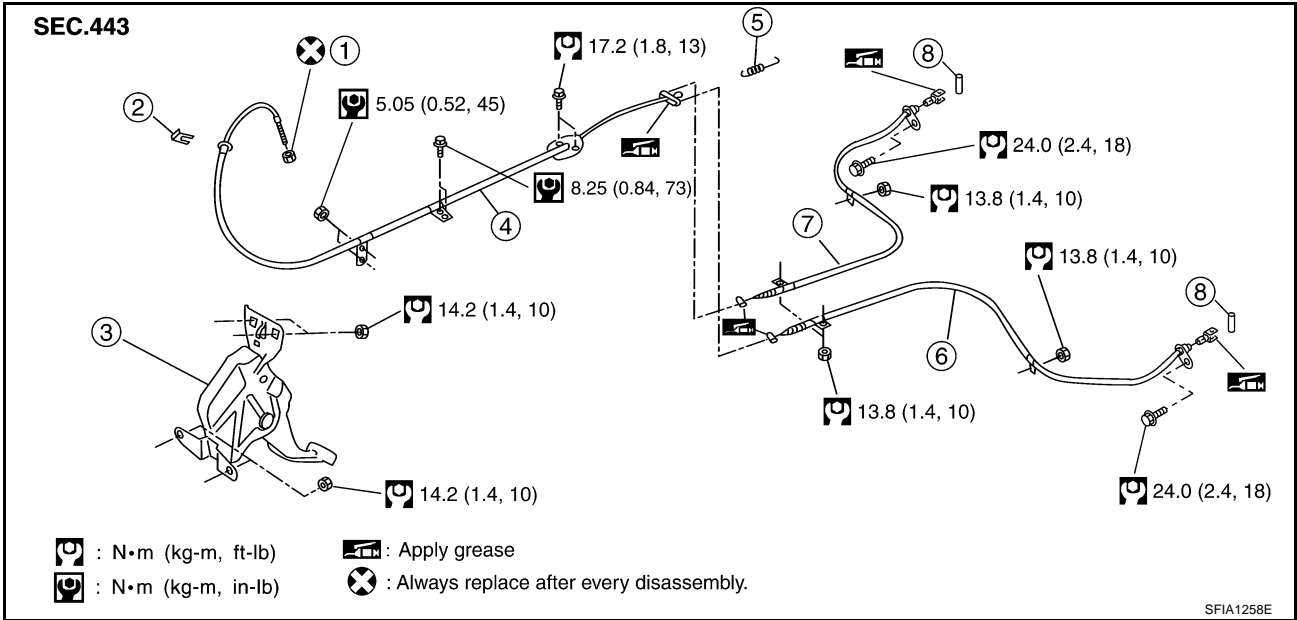
A  
B  
C  
D  
E  
PB  
G  
H  
I  
J  
K  
L  
M

## PARKING BRAKE CONTROL

### Components

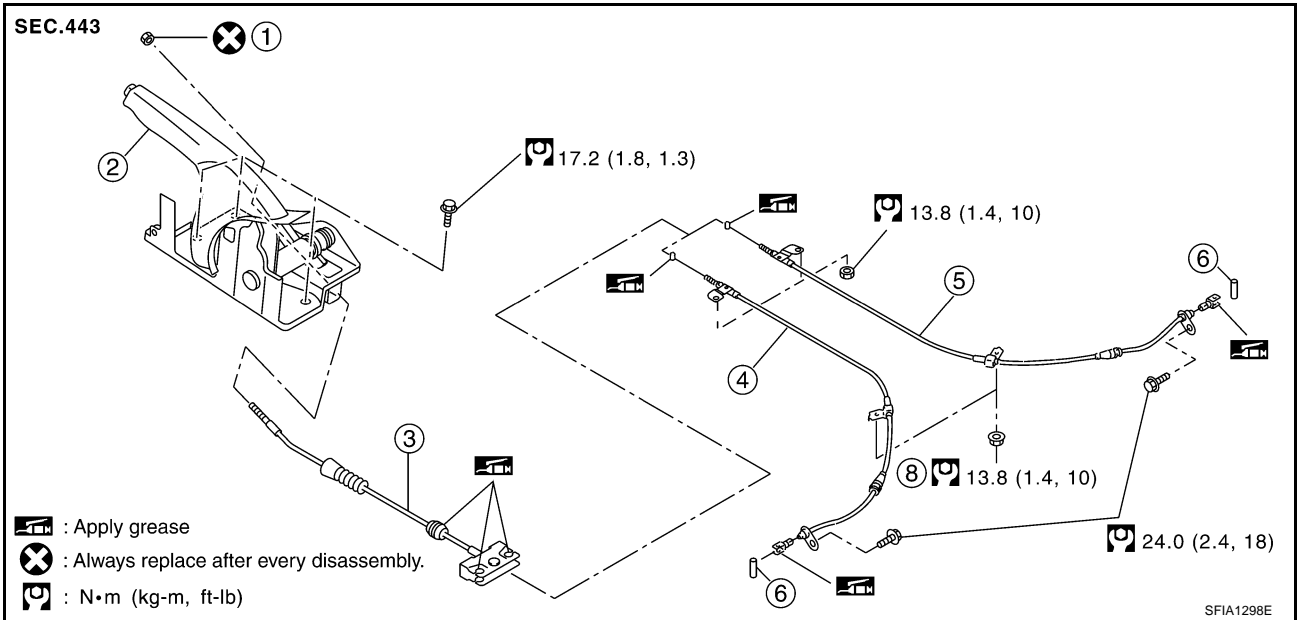
AFS0021N

#### Foot lever type



- |                  |                  |                    |
|------------------|------------------|--------------------|
| 1. Adjusting nut | 2. Lock plate    | 3. Device assembly |
| 4. Front cable   | 5. Return spring | 6. LH rear cable   |
| 7. RH rear cable | 8. Pin           |                    |

#### Hand lever type



- |                  |                    |                |
|------------------|--------------------|----------------|
| 1. Adjusting nut | 2. Device assembly | 3. Front cable |
| 4. LH rear cable | 5. RH rear cable   | 6. Pin         |

# PARKING BRAKE CONTROL

AFS00210

## Removal and Installation

### REMOVAL

1. Remove instrument lower driver panel (foot lever type). Refer to [IP-13, "\(J\) Instrument Driver Lower Panel"](#) .
2. Remove center console. Refer to [IP-15, "\(Y\) Center Console Assembly"](#) .
3. Remove adjusting nut from device assembly.
4. Remove rear tire from vehicle.
5. Remove rear disc caliper and disc rotor. Refer to [BR-38, "REAR DISC BRAKE"](#) .
6. Remove parking brake shoe, and remove rear cable from toggle lever. Refer to [PB-7, "PARKING BRAKE SHOE"](#) .
7. Remove rear cable mounting nuts and bolts.
8. Remove right and left rear cable from vehicle.
9. Remove air bag sensor unit with sensor mount bracket. Refer to [SRS-49, "DIAGNOSIS SENSOR UNIT"](#) .
10. Remove front cable mounting nuts and bolts (foot lever type), and remove front cable from vehicle.
11. Remove mounting bolts of device assembly, and remove device assembly from vehicle.

### INSTALLATION

1. Installation is in the reverse order of the removal. Tighten mounting bolts and nuts to the specified torque.

#### **CAUTION:**

**Do not reuse adjusting nut of parking cable.**

2. Adjust clearance of parking brake shoes. Refer to [PB-3, "On-Vehicle Service \(Foot Lever Type\)"](#) , [PB-3, "On-Vehicle Service \(Hand Lever Type\)"](#) .

### Inspection

AFS00014

- Check device assembly for bend, damage, and cracks. Replace if there are.
- Check cable for wear and damage.
- Check warning lamp switch. Replace if malfunction is detected.
- Check each part for deformation, or damage by contact with other parts. Replace if there are.

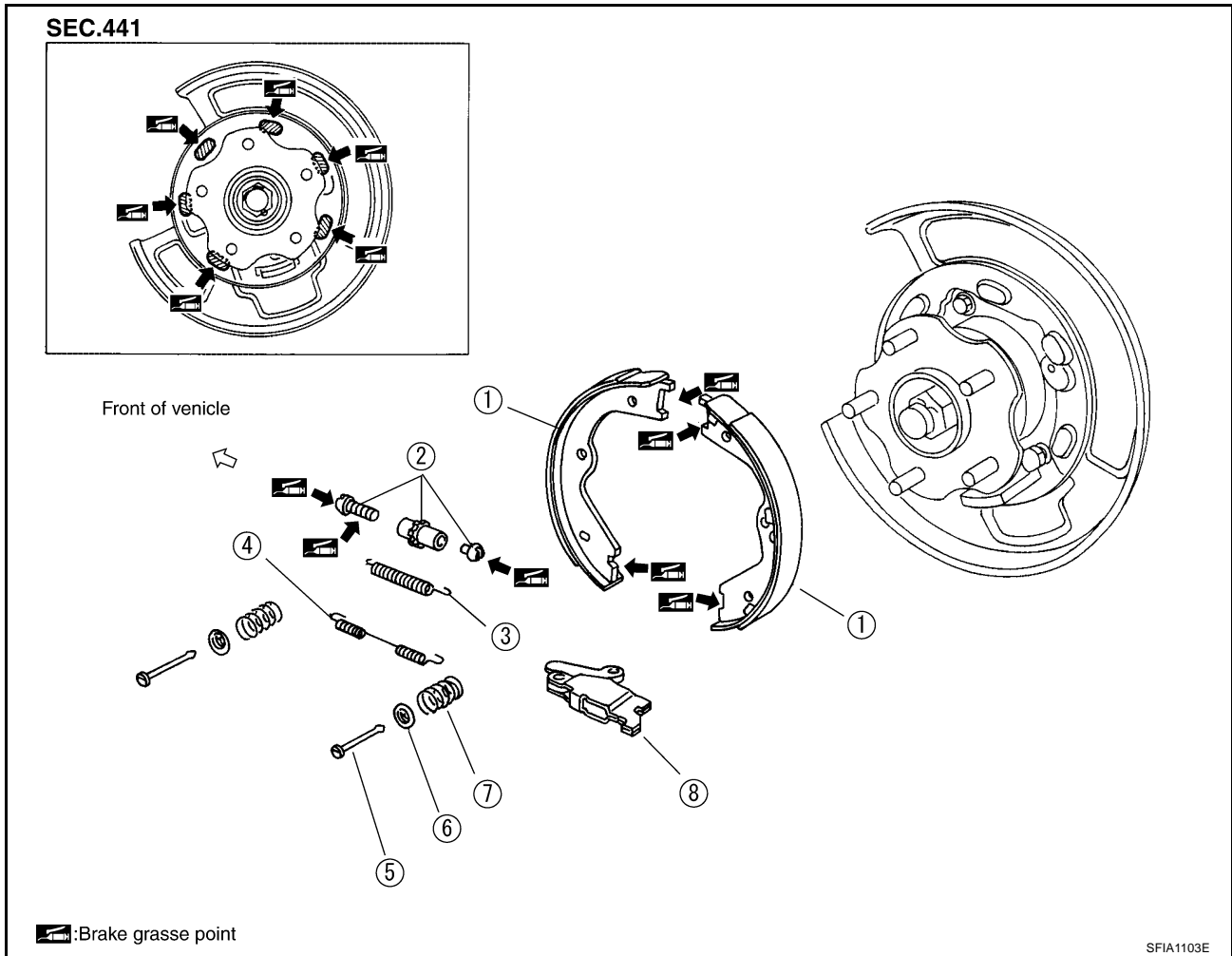
# PARKING BRAKE SHOE

## PARKING BRAKE SHOE

PFP:44060

### Components

AFS0021P



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

## Removal and Installation

### REMOVAL

AFS0021Q

#### **WARNING:**

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

#### **CAUTION:**

- Clean brakes with a vacuum dust collector to minimize a hazard of airborne particles or other materials.
- When removing rear disc rotor, put matching marks on both rear disc rotor and wheel hub.

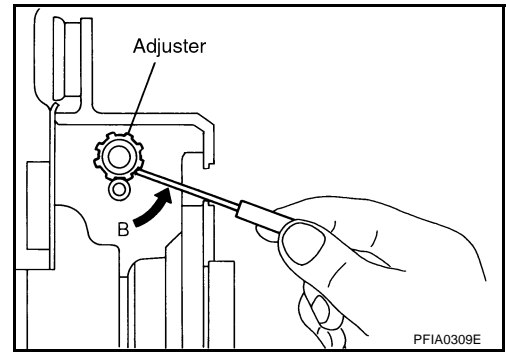
Be careful of the following:

- Remove wheel, and remove disc rotor with parking brake pedal/lever completely returned.
- If disc rotor cannot be removed, remove as follows.

A  
B  
C  
D  
E  
PB  
G  
H  
I  
J  
K  
L  
M

# PARKING BRAKE SHOE

1. Secure disc rotor in place with wheel nut.
2. Remove adjuster hole plug.
3. Insert flat-bladed screwdriver through adjuster hole. Turn adjuster to make clearance between brake shoe and drum.



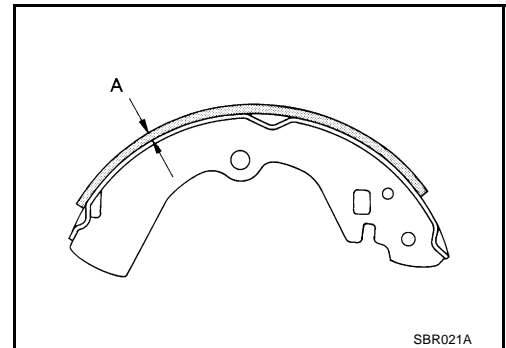
## INSPECTION AFTER REMOVAL

### Lining Thickness Inspection

- Visually check lining for excessive wear, damage, and peeling.
- Using a scale, check the thickness of lining.

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

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

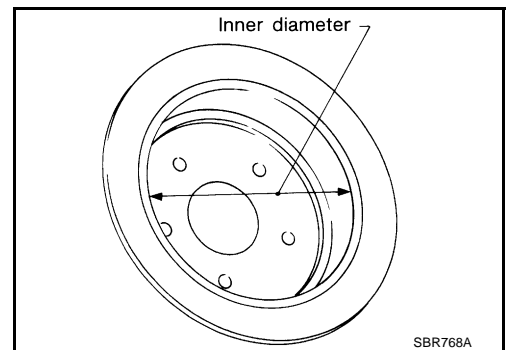


### Drum Inner Diameter Inspection

- Check the inner diameter of drum.

**Standard inner diameter : 172.0 mm (6.77 in)**

**Maximum inner diameter : 173.0 mm (6.81 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 adjuster for rough operation.
- Visually check the inside of drum for excessive wear, damage, and cracks. Using a pair of vernier calipers, check the inside of drum.

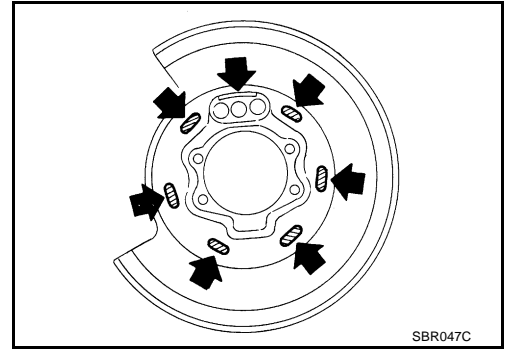
## INSTALLATION

Install all parts in the reverse order of while taking care of the following.

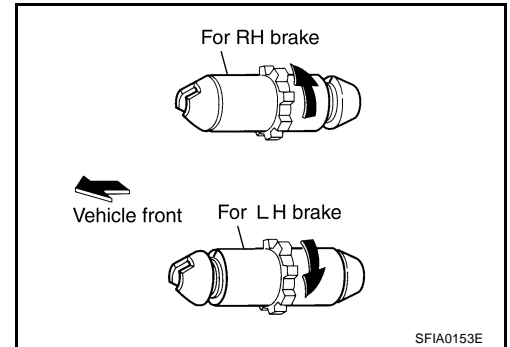


# PARKING BRAKE SHOE

- Apply brake grease to the contact areas shown in the figure.



- The orientation of adjuster is different from left to right. Assemble adjuster so that the threaded part is expanded when rotating it to the direction shown by the arrow. Shorten adjuster to assemble. When disassembling adjuster, apply brake grease to the thread.
- Adjust parking brake pedal or lever stroke to the specified amount.
- After replacing shoe or disc rotor, or if brake does not function well, perform the break-in operation as follows.



## BREAKING IN DRUM AND LINING

### CAUTION:

**Do not perform the break-in procedure excessively, because it may cause the uneven wear or premature wear of lining.**

When a new rotor/parking brake shoe is installed, or when braking performance is poor, perform the following break-in procedure.

1. Drive the unloaded vehicle on a safe, level and dry road.
2. Perform parking brake break-in (drag run) operation by driving the vehicle under the following conditions:

#### Drive forward (2WD MODEL)

- Vehicle speed approx. 35 km/h (22 MPH) set (forward)
- Parking brake operating force approx. 294 N (30 kg, 66 lb) set
- Distance approx. 100 m (328 ft)
- Repeat steps three times.

#### Drive forward (AWD MODEL)

- To prevent lining from getting too hot, allow a cool off period of approximately 5 minutes after every brake-in operation.
- Parking brake operating force approx. 147 N (15 kg, 33 lb) set
- Distance approx. 100 m (328 ft)
- Repeat steps three times.

### CAUTION:

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

3. After the break-in procedure, check parking brake pedal or lever stroke of parking brake. If it is out of the specification, adjust again.

# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

### Parking Drum Brake

AFS0021R

Type		DS17HE	DS17HG
Brake lining	Standard thickness (new)	3.2 mm (0.126 in)	
	Repair limit thickness	1.5 mm (0.059 in)	
Drum (disc)	Standard thickness (new)	172 mm (6.77 in)	
	Repair limit thickness	173 mm (6.81 in)	

### Parking Brake Control

AFS0021S

Control type	Foot lever / Hand lever
Number of notches [under a force of 196 N (20 kg,44lb)]	2 - 3 (foot lever type)
	6 - 7 (hand lever type)
Number of notches when warning lamp switch comes on	1