

SECTION **PB**  
PARKING BRAKE SYSTEM

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

CONTENTS

<b>PREPARATION</b> .....	2	Removal and Installation .....	4
<b>PREPARATION</b> .....	2	<b>PARKING BRAKE SHOE</b> .....	6
Commercial Service Tool .....	2	Removal and Installation .....	6
<b>ON-VEHICLE REPAIR</b> .....	3	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	9
<b>PARKING BRAKE SYSTEM</b> .....	3	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	9
On-Vehicle Service .....	3	Parking Drum Brake .....	9
<b>REMOVAL AND INSTALLATION</b> .....	4	Parking Brake Control .....	9
<b>PARKING BRAKE CONTROL</b> .....	4		
Component .....	4		

# PREPARATION

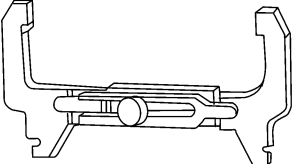
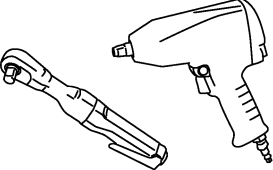
< PREPARATION >

## PREPARATION

### PREPARATION

#### Commercial Service Tool

INFOID:000000001297773

Tool number (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

# PARKING BRAKE SYSTEM

< ON-VEHICLE REPAIR >

## ON-VEHICLE REPAIR

### PARKING BRAKE SYSTEM

#### On-Vehicle Service

INFOID:000000001297776

#### 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.

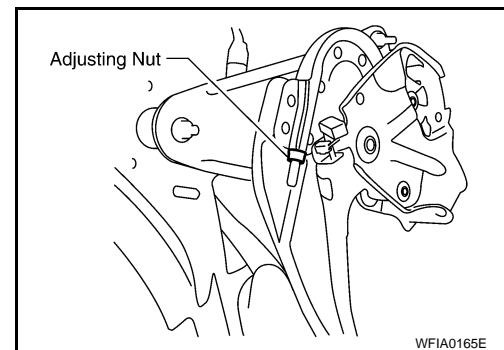
**Pedal stroke : 4 – 5 notches [under force of 196 N (20.0 kg-f, 44.1 lb-f)]**

#### 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-43, "Wiring Diagram"](#).

#### ADJUSTMENT

1. Remove lower instrument panel LH. Refer to [IP-10, "Exploded View"](#).
2. Partially engage parking brake pedal to access adjusting nut.
3. Insert a deep socket wrench to rotate adjusting nut and loosen cable until tension is sufficiently released. Then, disengage the parking brake pedal.



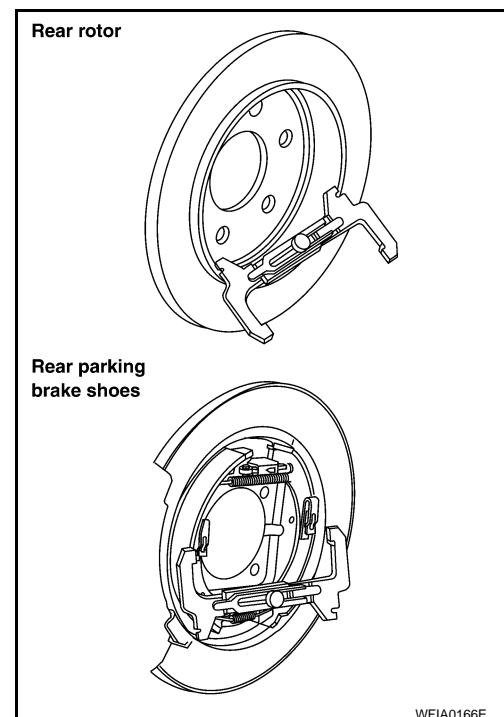
4. Remove the wheel and tire using power tool.
5. Remove the rotor and measure inner diameter at widest point using Tool.

**Tool number : — (J-21177-A)**

6. Transfer measurement less 0.6 mm to the parking brake shoes and adjust accordingly.
7. Using wheel nuts, secure the disc to the hub to prevent it from tilting.
8. Rotate 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 : 4 – 5 notches [under force of 196 N (20.0 kg-f, 44.1 lb-f)]**

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



# PARKING BRAKE CONTROL

< REMOVAL AND INSTALLATION >

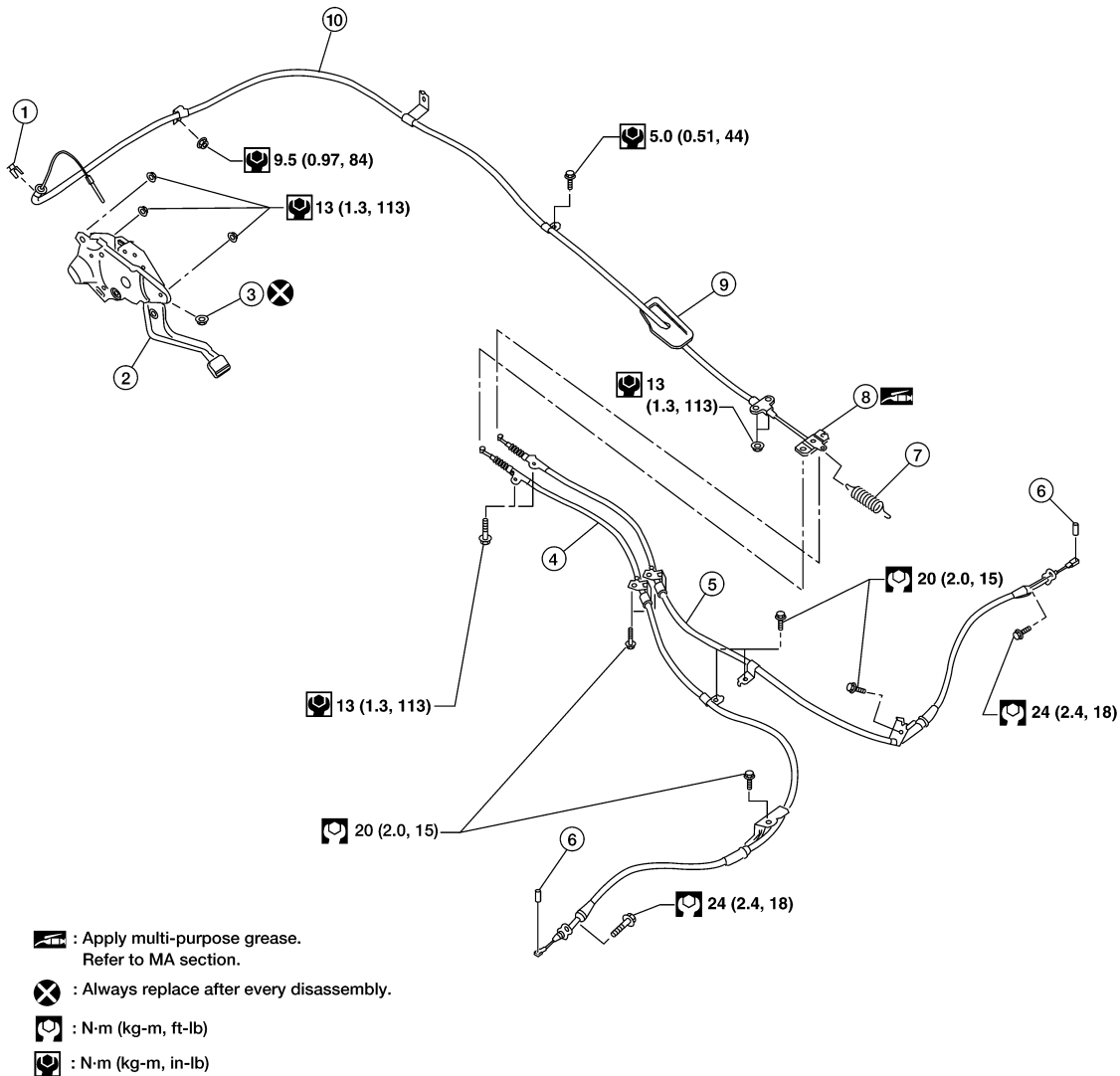
## REMOVAL AND INSTALLATION

### PARKING BRAKE CONTROL

Component

INFOID:00000000129777

SEC. 443



: Apply multi-purpose grease.  
Refer to MA section.

: Always replace after every disassembly.

: N·m (kg-m, ft-lb)

: N·m (kg-m, in-lb)

LFIA0229E

- |                    |                     |                        |
|--------------------|---------------------|------------------------|
| 1. Lock plate      | 2. Pedal assembly   | 3. Adjusting nut       |
| 4. Left rear cable | 5. Right rear cable | 6. Pin                 |
| 7. Return spring   | 8. Equalizer        | 9. Front cable grommet |
| 10. Front cable    |                     |                        |

### Removal and Installation

INFOID:000000001297778

#### REMOVAL

1. Remove the lower instrument panel LH and center console. Refer to [IP-10, "Exploded View"](#) and [IP-15, "Exploded View"](#).
2. Remove the floor trim. Refer to [INT-15, "Removal and Installation"](#).

## PARKING BRAKE CONTROL

### < REMOVAL AND INSTALLATION >

---

3. Remove the parking brake control adjusting nut.

**CAUTION:**

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

4. Remove the lock plate from the front cable.
5. Remove front parking brake cable bolt and nut.
6. Disconnect return spring from equalizer.
7. Disconnect the front parking brake cable from the equalizer and remove front cable.
8. Remove the rear disc rotors. Refer to [BR-29, "Removal and Installation of Brake Caliper and Disc Rotor"](#).
9. Remove parking brake shoes, and remove rear cable from toggle lever. Refer to [PB-6](#).
10. Remove equalizer from right and left rear cables.
11. Remove right and left rear cable bolts and nuts, then remove right and left rear cables.

### INSTALLATION

- Installation is in the reverse order of removal.

**CAUTION:**

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

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

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

# PARKING BRAKE SHOE

< REMOVAL AND INSTALLATION >

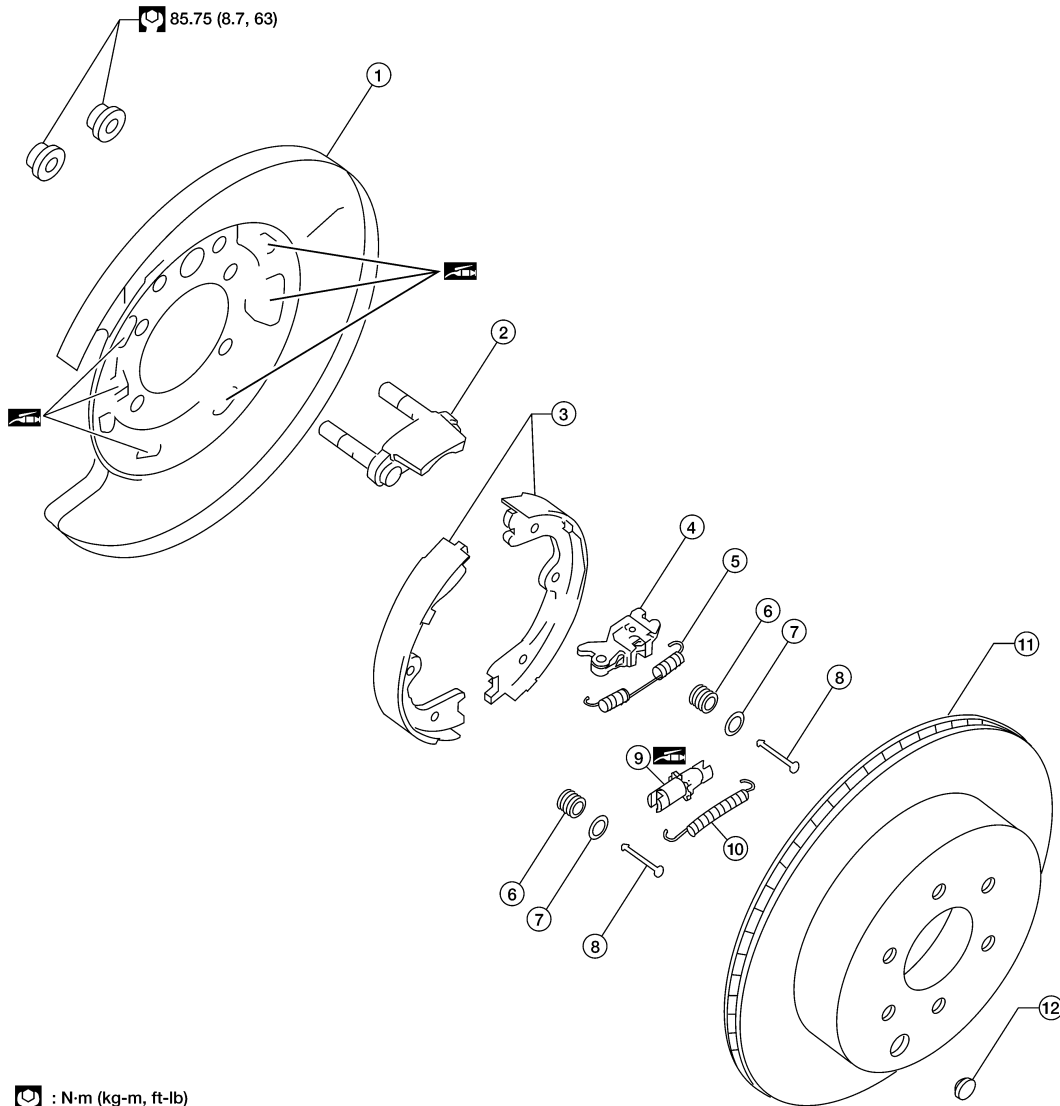
## PARKING BRAKE SHOE


### Removal and Installation


INFOID:000000001297779

### COMPONENTS

SEC. 441



 : N·m (kg·m, ft·lb)

 : Apply PBC (Poly Butyl Cuprysil) grease or equivalent. Refer to MA section.

LFIA0230E

- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| 1. Back plate           | 2. Anchor              | 3. Shoes                 |
| 4. Toggle lever         | 5. Upper return spring | 6. Shoe hold-down spring |
| 7. Retainer             | 8. Shoe hold-down pin  | 9. Adjuster              |
| 10. Lower return spring | 11. Disc rotor         | 12. Adjuster access plug |

### 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 disengaged.

1. Remove the rear disc rotor. Refer to [BR-29, "Removal and Installation of Brake Caliper and Disc Rotor"](#).

# PARKING BRAKE SHOE

## < REMOVAL AND INSTALLATION >

2. Remove the rear drive shaft. Refer to [RAX-9, "Removal and Installation"](#).
3. Disconnect wheel sensor at harness connector. Then remove wheel sensor wire from grommet mounts.
4. Remove wheel hub and bearing assembly. Refer to [RAX-8, "Removal and Installation"](#).
  - Withdraw wheel sensor harness through back plate when removing wheel hub and bearing assembly.
5. Remove the return springs.
6. Remove the adjuster.
7. Remove the retainers, anti-rattle pins and shoes.
8. Disconnect the parking brake cable from the toggle lever.
9. Remove back plate.

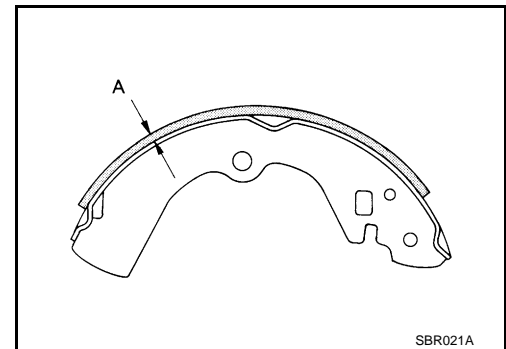
## INSPECTION AFTER REMOVAL

### Lining Thickness Inspection

- Check thickness of lining.

**Standard thickness "A"** :  $5.15 \pm 0.25$  mm  
( $0.203 \pm 0.010$  in)

**Repair limit thickness "A"** : 0.5 mm (0.020 in)

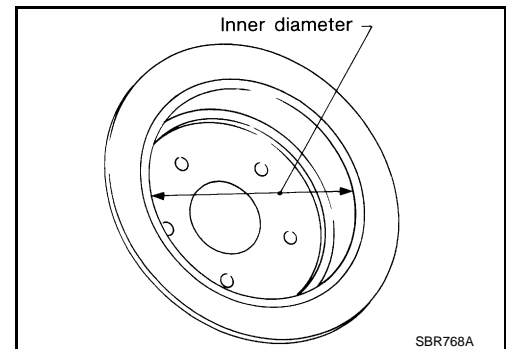


### Drum Inner Diameter Inspection

- Check drum inner diameter.

**Standard inner diameter** :  $205 \pm 0.13$  mm  
( $8.07 \pm 0.01$  in)

**Maximum inner diameter** : 205.7 mm (8.10 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.
- When disassembling adjuster, apply PBC (Poly Butyl Cuprysil) grease or equivalent to the adjuster threads. Refer to [MA-10, "Fluids and Lubricants"](#).
- Check either visually or with a vernier caliper to see if there is any excessive wear, cracks, or damage inside drum.

## INSTALLATION

Installation is in the reverse order of removal.

- Apply brake grease to the specified points during assembly. Refer to "COMPONENTS".

## PARKING BRAKE SHOE

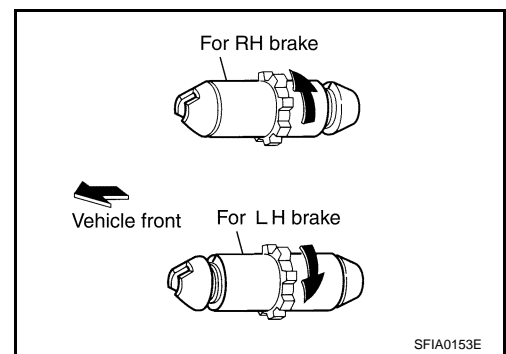
### < REMOVAL AND INSTALLATION >

- Install adjuster so that threaded part expands when rotating it in the direction shown by the arrow.
- Shorten adjuster by rotating it in the opposite direction as shown by the arrow.

#### NOTE:

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

1. Adjust parking brake pedal stroke. Refer to [PB-3, "On-Vehicle Service"](#).



2. Perform parking brake burnishing operation by driving the vehicle forward under the following conditions:

- **Vehicle speed 40 km/h (25 MPH) set (forward)**
- **Parking brake operating force 196 N (20.0 kg-f, 44.1 lb-f) set**
- **Apply time 30 sec.**

#### 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 burnishing operation, check parking brake pedal stroke. Readjust if it is now longer than the specified stroke. Refer to [PB-3, "On-Vehicle Service"](#).



## SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Parking Drum Brake

INFOID:000000001297774

Unit: mm (in)

Type		Drum
Brake lining	Standard thickness (new)	5.15 ± 0.25 (0.203 ± 0.010)
	Wear limit thickness	0.5 (0.020)
Drum inner diameter (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:000000001297775

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