

SECTION **PB**  
PARKING BRAKE SYSTEM

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

CONTENTS

<b>PREPARATION</b> .....	2	<b>PARKING BRAKE SHOE</b> .....	6
Commercial Service Tools .....	2	Removal and Installation .....	6
<b>PARKING BRAKE SYSTEM</b> .....	3	COMPONENTS .....	6
On-Vehicle Service .....	3	REMOVAL .....	6
PEDAL STROKE .....	3	INSPECTION AFTER REMOVAL .....	7
INSPECTION .....	3	INSTALLATION .....	7
ADJUSTMENT .....	3	<b>SERVICE DATA AND SPECIFICATIONS (SDS)</b> .....	9
<b>PARKING BRAKE CONTROL</b> .....	4	Parking Drum Brake .....	9
Components .....	4	Parking Brake Control .....	9
Removal and Installation .....	4		
REMOVAL .....	4		
INSTALLATION .....	5		

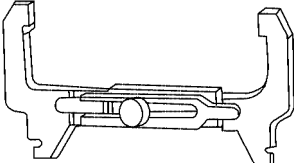
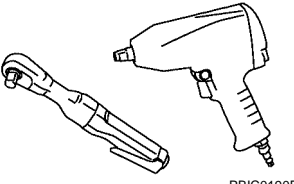
# PREPARATION

## PREPARATION

PF0:00002

### Commercial Service Tools

EFS0064A

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

PFP:36010

EFS0064B

## PARKING BRAKE SYSTEM

### On-Vehicle Service 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.

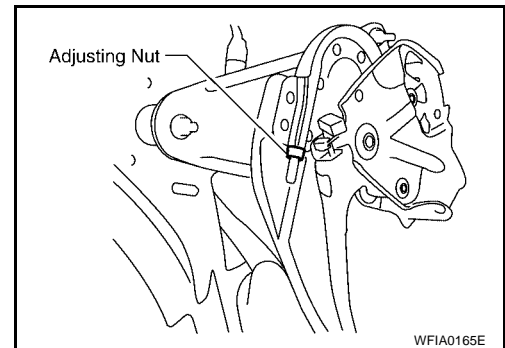
**Pedal stroke : 4 – 5 notches [under force of 196 N (20.0 kg, 44.1 lb)]**

### 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 [DI-34, "Wiring Diagram — WARN —"](#).

### ADJUSTMENT

- Remove lower instrument panel LH. Refer to [IP-14, "LOWER INSTRUMENT PANEL LH"](#).
- Partially engage parking brake pedal to access adjusting nut.
- Insert a deep socket wrench to rotate adjusting nut and loosen cable until tension is sufficiently released. Then, disengage the parking brake pedal.



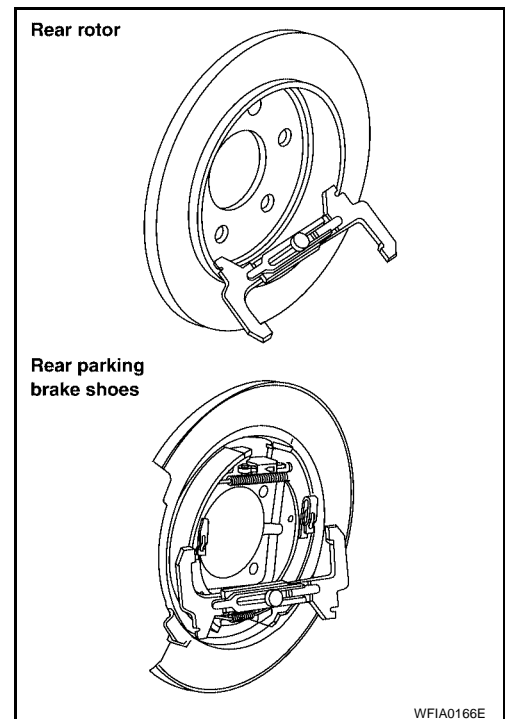
- Remove the wheel and tire using power tool.
- Remove the rotor and measure inner diameter at widest point using Tool.

**Tool number : — (J-21177-A)**

- Transfer measurement less 0.6 mm to the parking brake shoes and adjust accordingly.
- Using wheel nuts, secure the disc to the hub to prevent it from tilting.
- Rotate disc rotor to make sure there is no drag.
- Adjust cable as follows:
  - Operate pedal 10 or more times with a force of 490 N (50 kg, 110 lb).
  - 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, 44.1 lb)]**

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



# PARKING BRAKE CONTROL

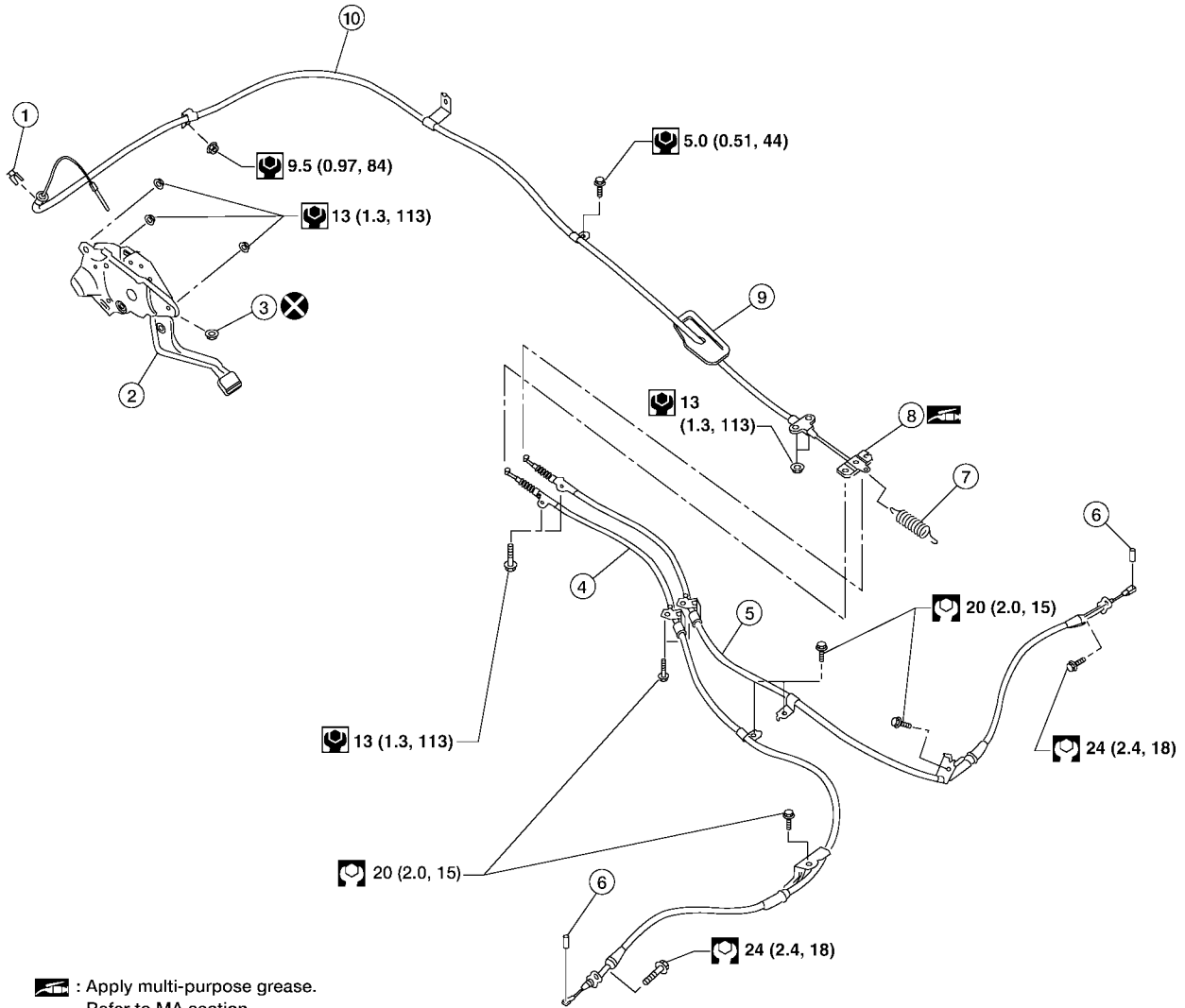
## PARKING BRAKE CONTROL





PFP:36010

### Components

EFS0064C

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)

- |                    |                     |                        |
|--------------------|---------------------|------------------------|
| 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    |                     |                        |

LFIA0229E

### Removal and Installation

#### REMOVAL

EFS0064D

1. Remove the lower instrument panel LH and center console. Refer to [IP-14, "LOWER INSTRUMENT PANEL LH"](#) and [IP-16, "CENTER CONSOLE"](#).
2. Remove the floor trim. Refer to [EI-29, "FLOOR TRIM"](#).
3. Remove the parking brake control adjusting nut.

# PARKING BRAKE CONTROL

---

**CAUTION:**

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

4. Remove the lock plate from the front cable. A
5. Remove front parking brake cable bolt and nut. B
6. Disconnect return spring from equalizer. B
7. Disconnect the front parking brake cable from the equalizer and remove front cable. C
8. Remove the rear disc rotors. Refer to [BR-32, "Removal and Installation of Brake Caliper and Disc Rotor"](#). C
9. Remove parking brake shoes, and remove rear cable from toggle lever. Refer to [PB-6, "PARKING BRAKE SHOE"](#). D
10. Remove equalizer from right and left rear cables. D
11. Remove right and left rear cable bolts and nuts, then remove right and left rear cables. D

## INSTALLATION

- Installation is in the reverse order of removal. E

**CAUTION:**

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

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

GHIJKLM

# PARKING BRAKE SHOE

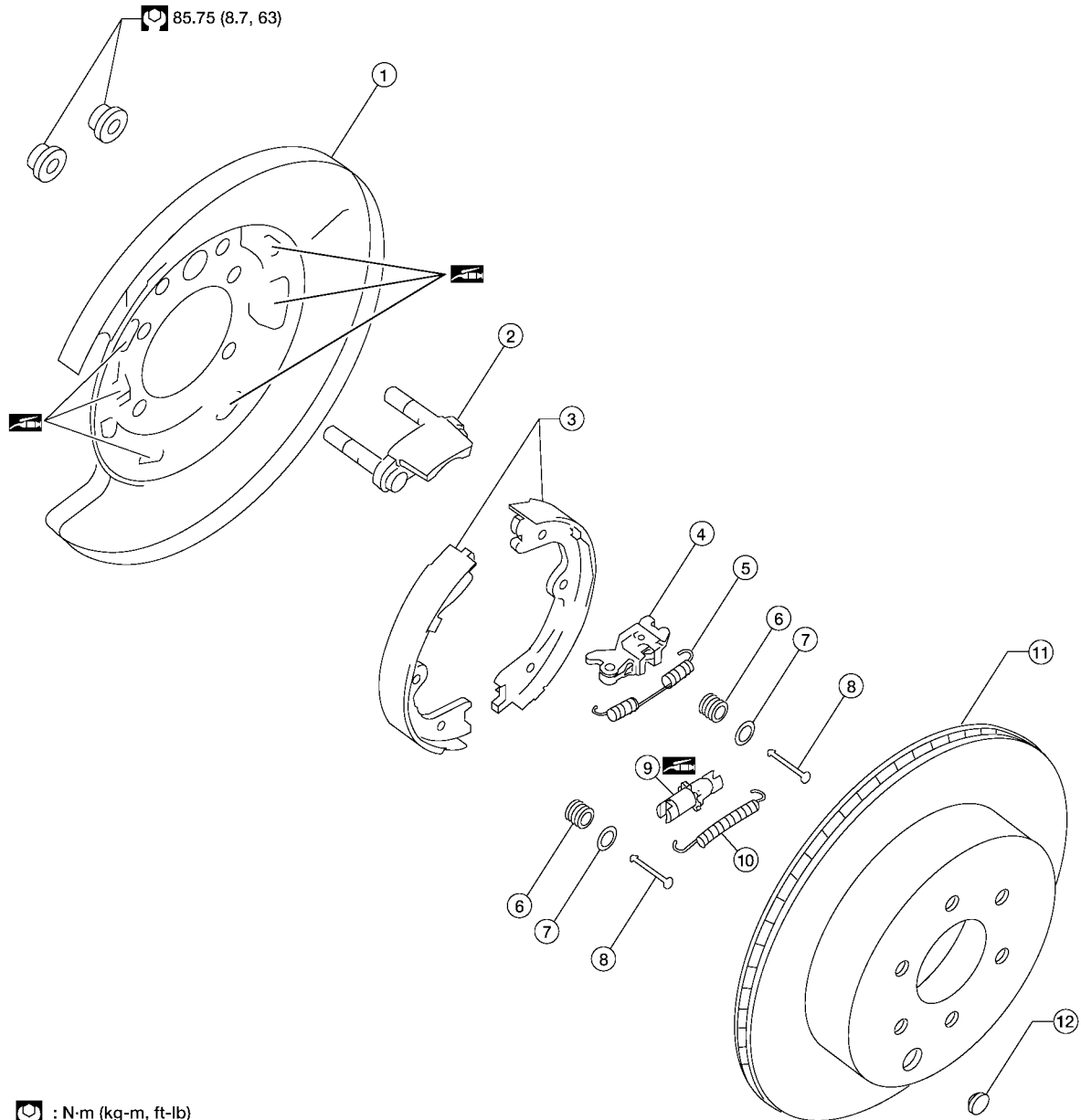
PFP:44060


EFS0064E


## PARKING BRAKE SHOE

### Removal and Installation COMPONENTS

SEC. 441



 : N·m (kg-m, ft-lb)

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

- |                         |                        |                          |
|-------------------------|------------------------|--------------------------|
| 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 |

LFIA0230E

### 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.

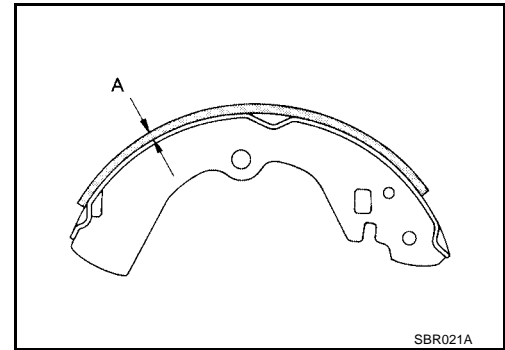
# PARKING BRAKE SHOE

1. Remove the rear disc rotor. Refer to [BR-32, "Removal and Installation of Brake Caliper and Disc Rotor"](#).
2. Remove the rear drive shaft. Refer to [PR-10, "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-5, "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

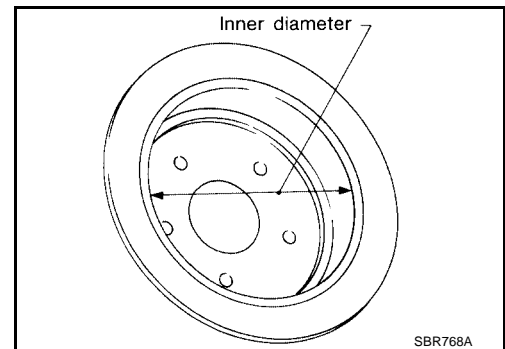
### Lining Thickness Inspection

- 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-11, "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 [PB-6, "COMPONENTS"](#).

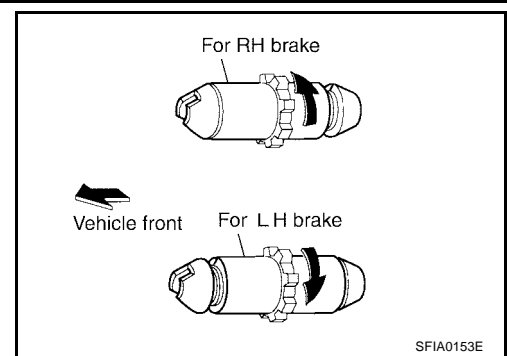
## PARKING BRAKE SHOE

- 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, "ADJUSTMENT"](#).



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, 44.1 lb) 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, "ADJUSTMENT"](#).



# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

### Parking Drum Brake

EFS0064F

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

EFS0064G

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

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

**PB**

# SERVICE DATA AND SPECIFICATIONS (SDS)

---