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# SECTION **PB**

## PARKING BRAKE SYSTEM

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# PRECAUTIONS

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## PRECAUTION

### PRECAUTIONS

#### Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

INFOID:000000005783577

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 SR 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 SR 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.

#### PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

# PREPARATION

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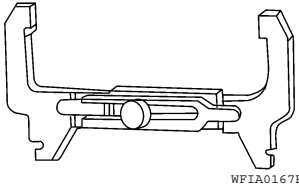

## PREPARATION

### PREPARATION

#### Commercial Service Tool

INFOID:000000005281300

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

| Tool number<br>(Kent-Moore No.)<br>Tool name   |  | Description   |
|--|--|---|
| —<br>(J-21177-A)<br>Brake drum clearance gauge |  <p style="text-align: center;">WFIA0167E</p> | Measuring rear rotor drum to parking brake shoe clearance |
| Power tool                                     |  <p style="text-align: center;">PIIB1407E</p> | Loosening bolts, screws and nuts                          |

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# PARKING BRAKE SYSTEM

< ON-VEHICLE MAINTENANCE >

## ON-VEHICLE MAINTENANCE

### PARKING BRAKE SYSTEM

#### On-Vehicle Service

INFOID:000000005281301

#### LEVER STROKE

- When parking brake lever 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.

**Lever stroke** : Refer to [PB-10. "Parking Brake Control"](#).

#### INSPECTION

- Check that the components are attached properly, check for looseness or backlash.
- Check the parking brake lever assembly for bends, damage and cracks, and replace if necessary.
- Check the cables for wear and damage, and replace if necessary.
- Check the parking brake warning lamp switch for any malfunction, and repair if necessary. Refer to [BRC-40. "Description"](#).

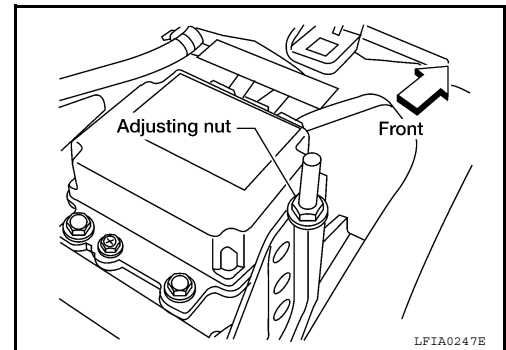
#### ADJUSTMENT

1. Remove rear half of the center console. Refer to [IP-16. "Disassembly and Assembly"](#).

2. Rotate the adjusting nut and loosen the parking brake cable until tension is fully released.

**CAUTION:**

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



3. Remove the rear wheels and tires. Refer to [WT-45. "Adjustment"](#).
4. Using the wheel nuts, secure the disc to the hub to prevent it from tilting.

5. Remove the adjuster hole plug installed on the disc rotor. Turn the adjuster (1) in direction (A) using a suitable tool as shown, until disc rotor is locked. Turn the adjuster (1) in the opposite direction by 5 or 6 notches after locking.

6. Rotate the disc rotor to make sure there is no drag.

- B: Left
- C: Right
- ←: Front

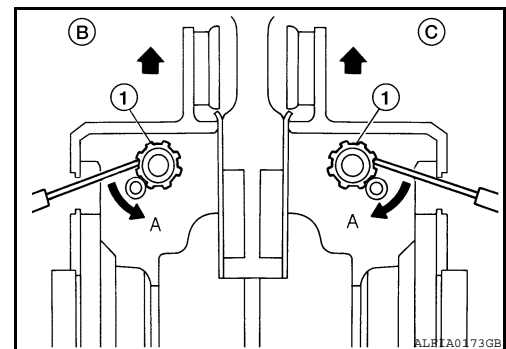
7. Adjust the parking brake cable as follows:

- a. Rotate the adjusting nut to adjust the parking brake lever operating force to 294 N (29.9 kg-f, 66.0 lb-f) just before a full lever stroke 229.0 mm (9.0 in).

**CAUTION:**

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

- b. When replacing the parking brake cable, operate parking brake lever 10 or more times with a full stroke of 229.0 mm (9.0 in).
- c. Release the parking brake lever and rotate the disc rotor to make sure there is no drag.
- d. Rotate adjusting nut to adjust lever stroke to specification.



**Lever stroke** : Refer to [PB-10. "Parking Brake Control"](#).

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

# PARKING BRAKE CONTROL

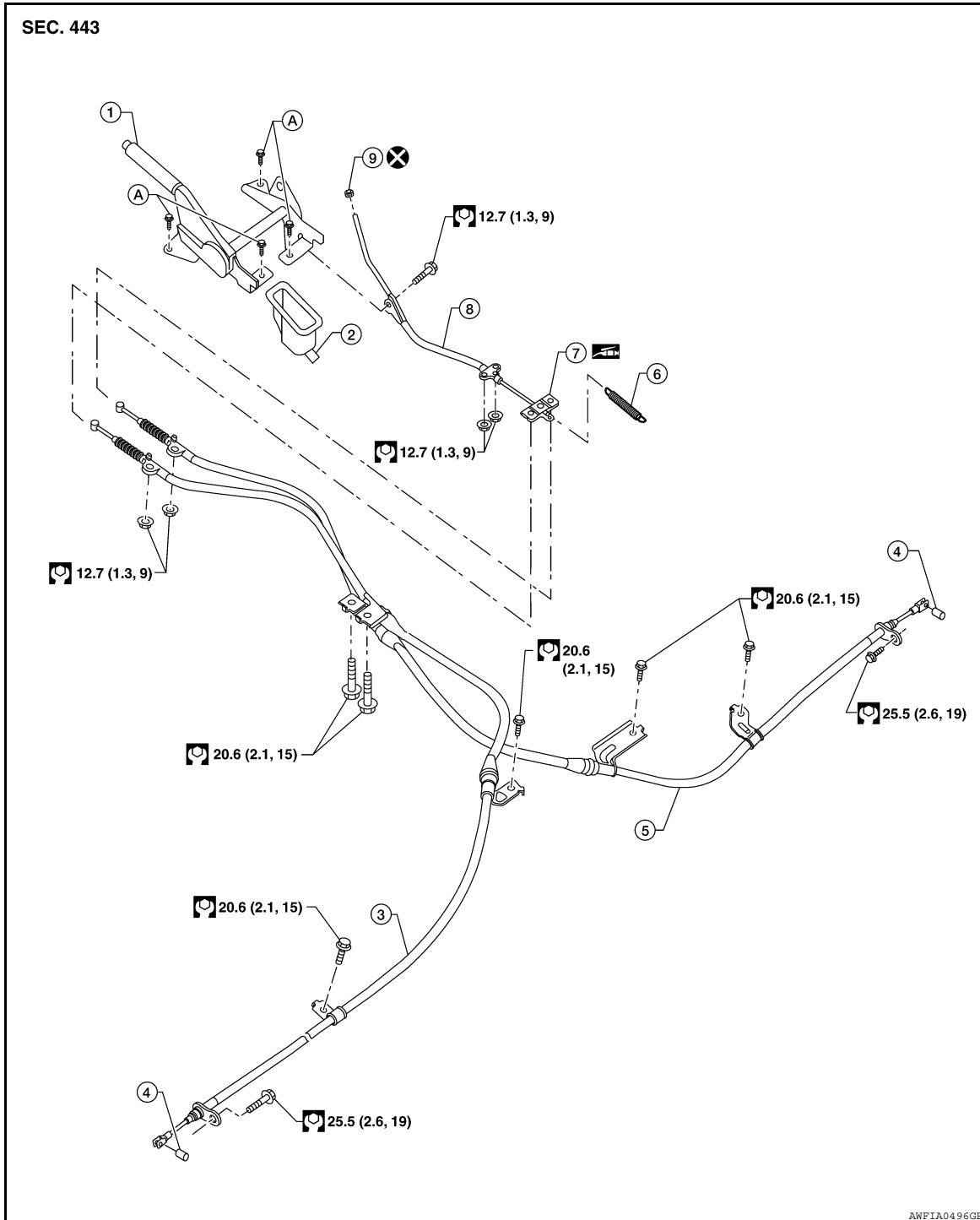
< ON-VEHICLE REPAIR >

## ON-VEHICLE REPAIR

### PARKING BRAKE CONTROL

Exploded View

INFOID:000000005281302



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|---|------------------------|--------------------|
| 1. Control lever assembly                     | 2. Front cable grommet | 3. Left rear cable |
| 4. Pin  | 5. Right rear cable    | 6. Return spring   |
| 7. Equalizer                                  | 8. Front cable         | 9. Adjusting nut   |
| A. Refer to Installation for tightening order |                        |                    |

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# PARKING BRAKE CONTROL

< ON-VEHICLE REPAIR >

## Removal and Installation

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### REMOVAL

1. Disconnect the return spring from the equalizer.
2. Remove the right and left rear cables from the equalizer.
3. Remove the front cable nuts from underneath the vehicle.
4. Remove the rear half of the center console. Refer to [IP-16, "Disassembly and Assembly"](#).
5. Remove the four control lever assembly bolts, then remove the control lever assembly.
6. Remove the front cable grommet from the control lever assembly.
7. Remove the front cable to control lever assembly bolt.
8. Remove the adjusting nut and discard, then remove the front cable.  
**CAUTION:**  
**Do not reuse the adjusting nut, use a new adjusting nut for installation.**
9. Remove the rear disc rotors. Refer to [BR-42, "Removal and Installation of Brake Caliper and Disc Rotor"](#).
10. Remove the left and right parking brake shoes, then disconnect the rear cables from the toggle levers.
11. Remove the left and right rear cable bolts and nuts, then remove the left and right rear cables.

### INSTALLATION

Installation is in the reverse order of removal.

- The control lever assembly bolts must be installed in the following order:

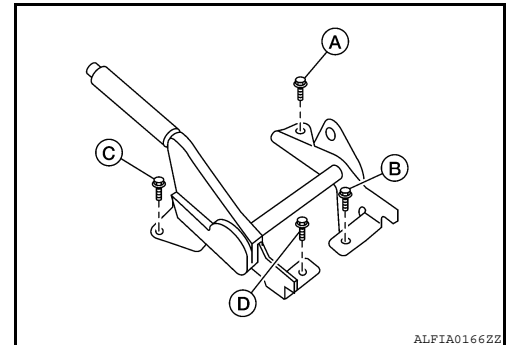
**Control lever assembly bolts : 12.7 N·m (1.3 kg-m, 9 ft-lb)**

1. Install and temporarily tighten the control lever assembly bolts (A), (B) and (D).
2. Install and tighten the control lever assembly bolt (C) to specification.
3. Tighten the control lever assembly bolt (D) to specification.
4. Tighten the control lever assembly bolt (A) to specification.
5. Tighten the control lever assembly bolt (B) to specification.

- Adjust the parking brake. Refer to [PB-4, "On-Vehicle Service"](#).

#### **CAUTION:**

- **Do not reuse the adjusting nut, use a new adjusting nut for installation.**
- **Install the control lever assembly bolts in the specified order and pattern.**



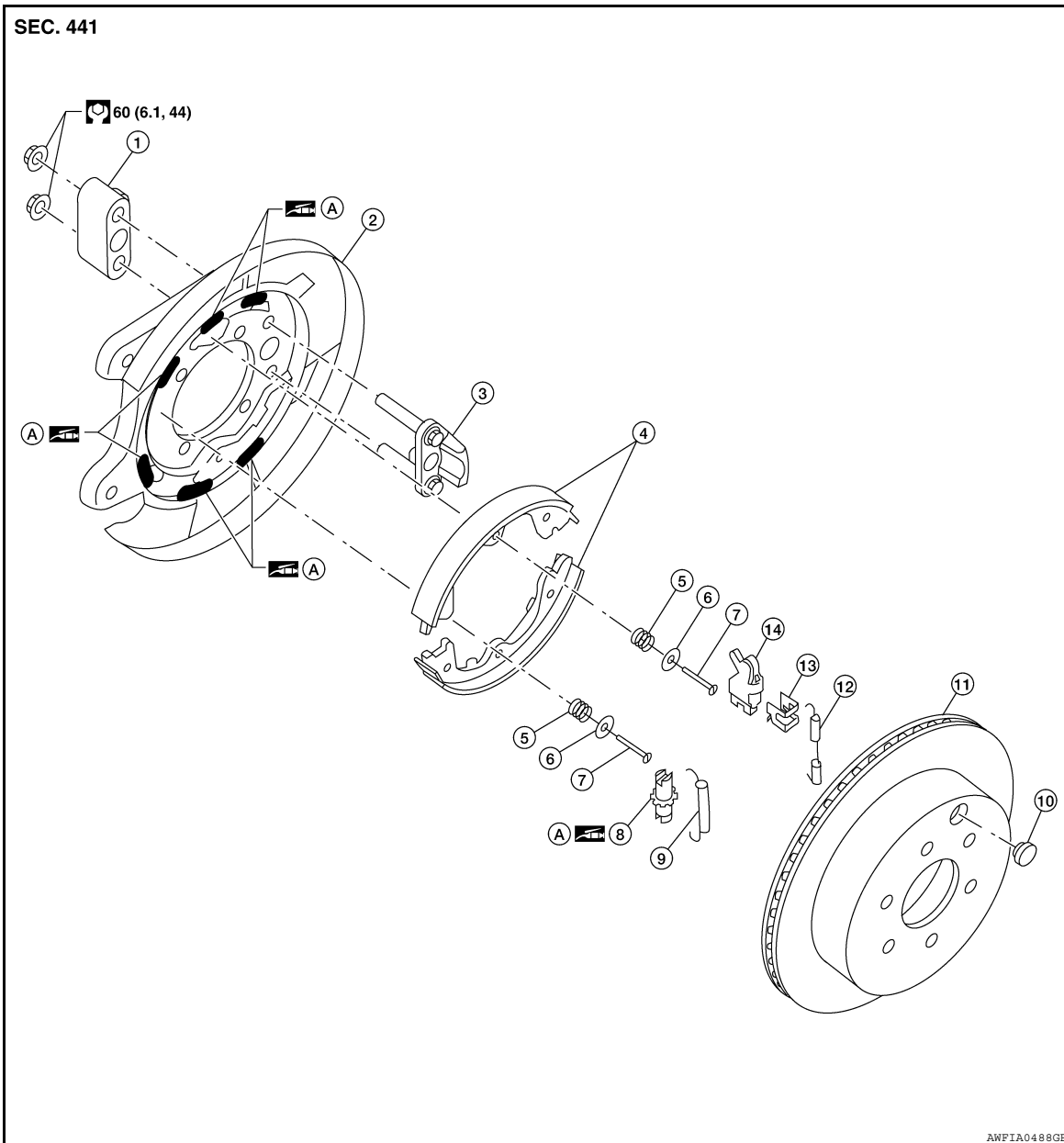
# PARKING BRAKE SHOE

< ON-VEHICLE REPAIR >

## PARKING BRAKE SHOE

Exploded View

INFOID:000000005281304



- |                          |                          |                                     |
|--------------------------|--------------------------|-------------------------------------|
| 1. Anchor block          | 2. Back plate            | 3. Anchor                           |
| 4. Shoes                 | 5. Shoe hold-down spring | 6. Retainer                         |
| 7. Shoe hold-down pin    | 8. Adjuster              | 9. Rear return spring               |
| 10. Adjuster access plug | 11. Disc rotor           | 12. Front return spring             |
| 13. Pin retainer         | 14. Toggle lever         | A. PBC (Poly Butyl Cuprysil) grease |

### Removal and Installation

INFOID:000000005281305

#### REMOVAL

#### **WARNING:**

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

#### **NOTE:**

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# PARKING BRAKE SHOE

## < ON-VEHICLE REPAIR >

Remove the disc rotor only with the parking brake lever completely disengaged.

1. Remove the rear disc rotor. Refer to [BR-42, "Removal and Installation of Brake Caliper and Disc Rotor"](#).
2. Remove the return springs.
3. Remove the adjuster.
4. Remove the retainers, anti-rattle pins and shoes.
5. Remove the pin retainer, then disconnect the parking brake cable from the toggle lever.
6. Remove the back plate.

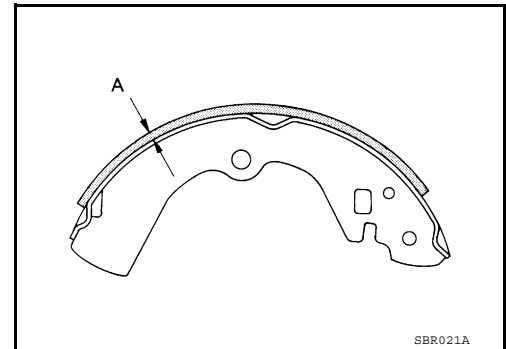
## INSPECTION AFTER REMOVAL

Lining Thickness Inspection

- Check the thickness of the shoe lining.

**Standard thickness (A)** :Refer to [PB-10, "Parking Drum Brake"](#).

**Wear limit thickness (A)** :Refer to [PB-10, "Parking Drum Brake"](#).

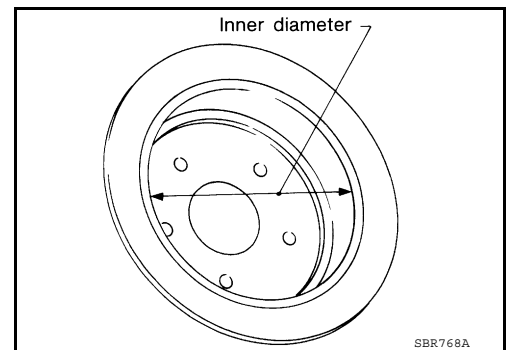


Drum Inner Diameter Inspection

- Check the drum inner diameter.

**Standard inner diameter** :Refer to [PB-10, "Parking Drum Brake"](#).

**Wear limit of inner diameter** :Refer to [PB-10, "Parking Drum Brake"](#).



Other Inspections

- Check the shoe sliding surface for excessive wear and damage.
- Check the shoe anti-rattle pin for excessive wear and corrosion.
- Check the front and rear return springs for sagging.
- Check the adjuster for rough operation.
- When disassembling adjuster, apply PBC (Poly Butyl Cuprysil) grease or equivalent to the adjuster threads.
- Check either visually or with a vernier caliper for any excessive wear, cracks, or damage inside the drum.

## INSTALLATION

Installation is in the reverse order of removal.

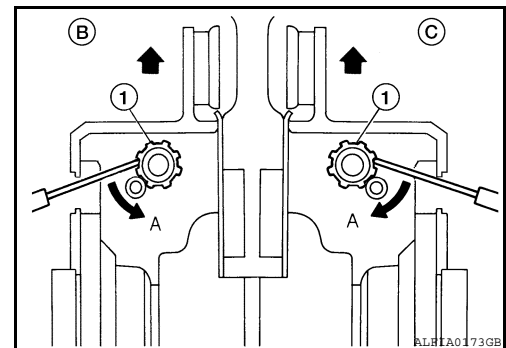
- Apply PBC grease to the back plate at the specified points during installation.

• Install the adjuster (1) so that the threaded part expands when rotating it in the direction shown (A) using a suitable tool.

- B: Left
- C: Right

- ←: Front

• Shorten adjuster (1) by rotating it in the opposite direction as shown.





# PARKING BRAKE SHOE

## < ON-VEHICLE REPAIR >

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### NOTE:

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

1. Adjust the parking brake lever stroke to specification. Refer to [PB-4, "On-Vehicle Service"](#).
2. Perform the parking brake break-in operation by driving the vehicle forward under the following conditions:
  - Maintain vehicle speed at 40 km/h (25 MPH) moving forward.
  - Apply the parking brake control lever with an operating force of 196 N (20.0 kg-f, 44.1 lb-f).
  - Apply the parking brake control lever for a period of 30 seconds before releasing.

### 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 the break-in operation, check parking brake control lever stroke. Readjust as necessary if it is not within the specified stroke. Refer to [PB-4, "On-Vehicle Service"](#).

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## SERVICE DATA AND SPECIFICATIONS (SDS)

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## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Parking Drum Brake

INFOID:000000005281306

Unit: mm (in)

| Type                       |                               | Drum          |
|----------------------------|-------------------------------|---------------|
| Brake lining               | Standard thickness (new)      | 3.3 (0.131)   |
|                            | Wear limit thickness          | 0.5 (0.020)   |
| Drum inner diameter (disc) | Standard inner diameter (new) | 190 (7.480)   |
|                            | Wear limit of inner diameter  | 190.7 (7.508) |

#### Parking Brake Control

INFOID:000000005281307

|   |               |
|---|---------------|
| Control type  | Control lever |
| Number of notches [under force of 196 N (20.0 kg-f, 44.1 lb-f)] | 6 – 8 notches |
| Number of notches when warning lamp switch comes on             | 1 notch       |