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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:000000007254811

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

< PREPARATION >

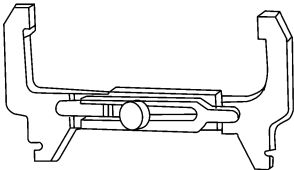

## PREPARATION

### PREPARATION

#### Commercial Service Tool

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

(Kent-Moore No.) Tool name	Description
<p data-bbox="159 470 451 527">(J-21177-A) Brake drum clearance gauge</p>  <p data-bbox="865 688 938 705">WPIA0167E</p>	<p data-bbox="1060 470 1469 499">Measuring rear rotor drum inner diameter</p>
<p data-bbox="159 722 272 751">Power tool</p>  <p data-bbox="865 940 938 957">PIIB1407E</p>	<p data-bbox="1060 722 1396 751">Loosening nuts, screws and bolts</p>

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# PARKING BRAKE SYSTEM

< PERIODIC MAINTENANCE >

## PERIODIC MAINTENANCE

### PARKING BRAKE SYSTEM

#### On-Vehicle Service

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#### 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.

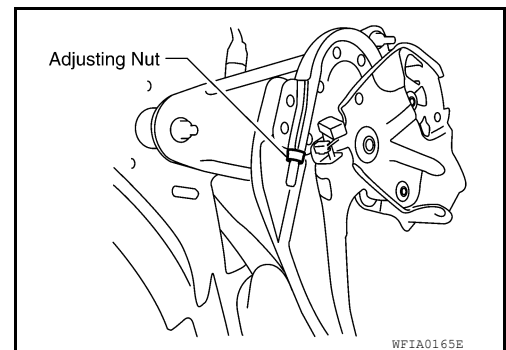
**Pedal stroke** : Refer to [PB-11, "Parking Brake Control"](#).

#### INSPECTION

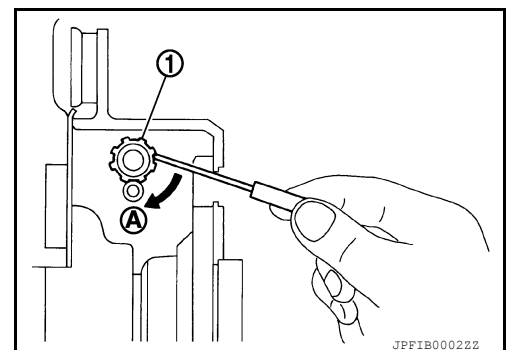
- Make sure the components are attached properly, checking for looseness or backlash.
- Check parking brake pedal assembly for bends, damage and cracks, and replace if necessary.
- Check cable for wear and damage, and replace if necessary.
- Check parking brake warning lamp switch for malfunction, and replace if necessary. Refer to [BRC-70, "Diagnosis Procedure"](#).

#### ADJUSTMENT

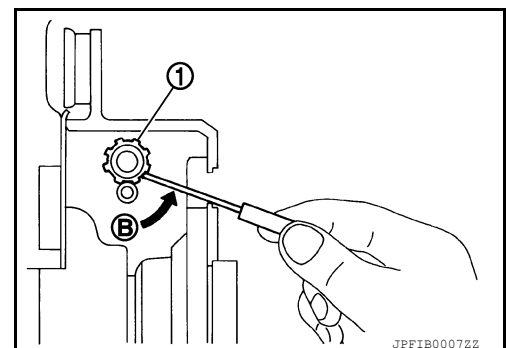
1. Remove the instrument lower panel LH. Refer to [IP-19, "Removal and Installation"](#).
2. Partially engage parking brake pedal to access adjusting nut.
3. Insert a deep socket wrench to rotate adjusting nut and loosen cable sufficiently. Then, disengage the parking brake pedal.



4. Remove the wheel and tire using power tool. Using at least two wheel nuts, secure the disc rotor to the hub to prevent it from tilting.
5. Remove the adjusting hole plug from the disc rotor. Turn the adjuster (1) in the direction (A) as shown using a suitable tool until the disc rotor is locked.



6. Turn the adjuster back 5 or 6 notches from the locked position in the direction (B) as shown using a suitable tool.



## PARKING BRAKE SYSTEM

### < PERIODIC MAINTENANCE >

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7. Rotate the disc rotor to make sure there is no drag.
8. 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** : Refer to [PB-11, "Parking Brake Control"](#).

**CAUTION:**

**Do not reuse the adjusting nut if it is removed.**

- c. With parking brake pedal completely disengaged, make sure there is no drag on the parking brake.
9. Install the wheel and tire using power tool. Refer to [WT-60, "Adjustment"](#).
10. Install the instrument lower panel LH. Refer to [IP-19, "Removal and Installation"](#).

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# PARKING BRAKE CONTROL

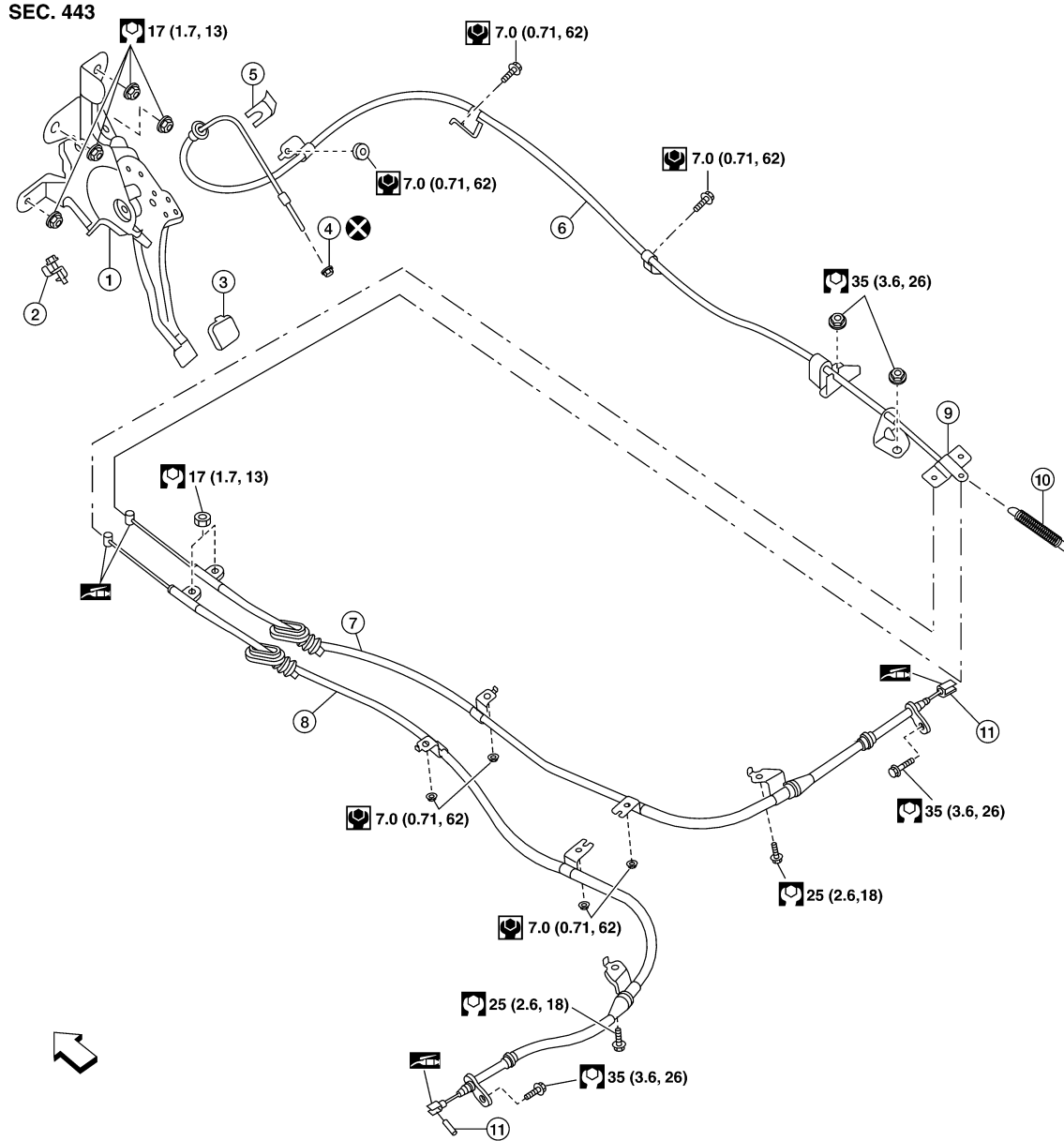
< REMOVAL AND INSTALLATION >

## REMOVAL AND INSTALLATION

### PARKING BRAKE CONTROL

Exploded View

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AWFIA0431GB

- |                        |                         |                |
|------------------------|-------------------------|----------------|
| 1. Parking brake pedal | 2. Parking brake switch | 3. Pedal pad   |
| 4. Adjusting nut       | 5. Lock plate           | 6. Front cable |
| 7. Rear cable (RH)     | 8. Rear cable (LH)      | 9. Equalizer   |
| 10. Spring             | 11. Pin                 | ← Front        |

### Removal and Installation

INFOID:000000007254815

#### REMOVAL

1. Remove rear wheel and tires using power tool.
2. Remove instrument lower panel (LH). Refer to [IP-19, "Removal and Installation"](#).

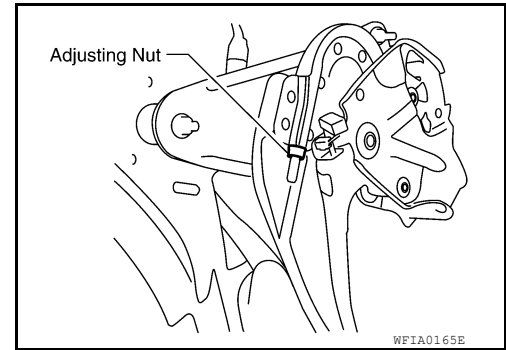
## PARKING BRAKE CONTROL

### < REMOVAL AND INSTALLATION >

3. Remove lower knee protector (LH). Refer to [IP-10, "Exploded View"](#).
4. Disconnect parking brake switch connector.
5. Remove adjusting nut and discard, then loosen the front cable.

**CAUTION:**

**Do not reuse adjusting nut.**



6. Remove parking brake pedal nuts and remove the parking brake pedal.
7. Remove center console. Refer to [IP-14, "Removal and Installation"](#).
8. Reposition the floor carpet aside.
9. Separate the LH and RH rear cables from the equalizer then remove the front cable.
10. Remove the front exhaust tube and the center exhaust tube. Refer to [EX-5, "Removal and Installation"](#).
11. Remove the exhaust center tube heat insulator.
12. Remove the rear brake disc rotors. Refer to [BR-37, "Removal and Installation of Brake Caliper and Rotor"](#).
13. Disconnect the LH and RH rear cables from the toggle lever. Refer to [PB-8, "Exploded View"](#).
14. Remove the LH and RH rear cable bolts and nuts, then remove the LH and RH rear cables.

### INSTALLATION

Installation is in the reverse order of removal.

- Refer to [PB-6, "Exploded View"](#) for torque specifications.
- Adjust parking brake. Refer to [PB-4, "On-Vehicle Service"](#).

**CAUTION:**

**Do not reuse adjusting nut.**

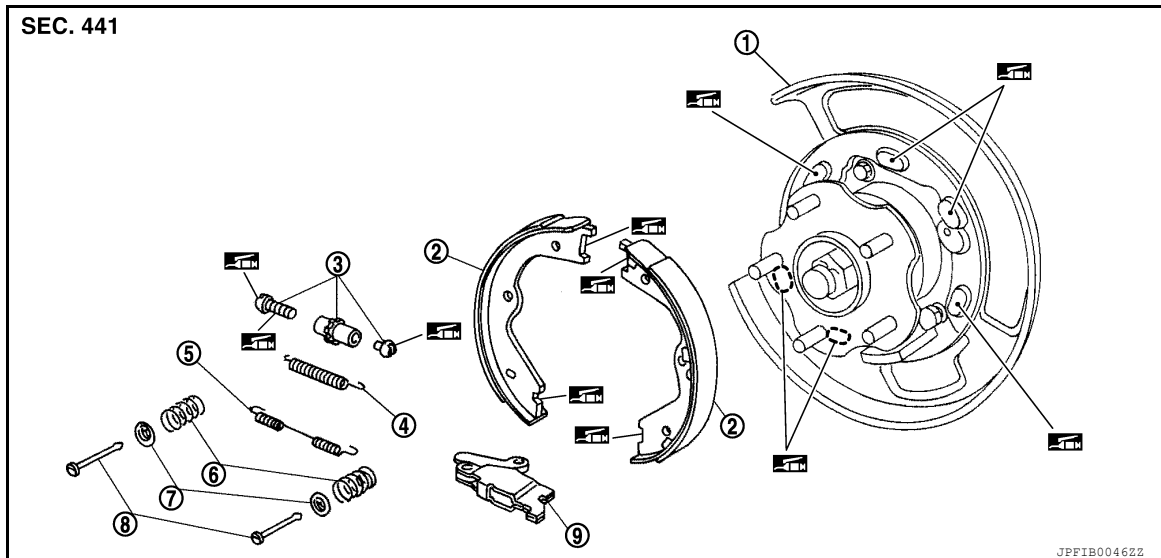
# PARKING BRAKE SHOE

< REMOVAL AND INSTALLATION >


## PARKING BRAKE SHOE

Exploded View

INFOID:000000007254816



- |                    |                    |                       |
|--------------------|--------------------|-----------------------|
| 1. Back plate      | 2. Brake shoe      | 3. Adjuster           |
| 4. Adjuster spring | 5. Return spring   | 6. Anti-rattle spring |
| 7. Retainer        | 8. Anti-rattle pin | 9. Toggle lever       |

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

## Removal and Installation

INFOID:000000007254817

### REMOVAL

#### **WARNING:**

- Clean brakes with a vacuum dust collector to minimize the hazard of air borne particles or other materials.
- Clean dust on disc rotor and back plate using a vacuum dust collector. Do not blow with compressed air.

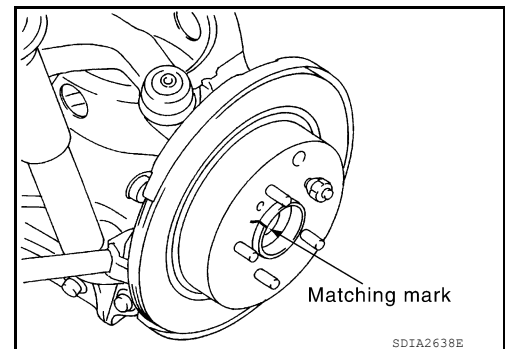
1. Remove rear wheel and tires using power tool.
2. Remove the rear brake calipers. Refer to [BR-37, "Removal and Installation of Brake Caliper and Rotor"](#).
3. With the parking brake pedal in the fully released position, remove the disc rotor.

#### **CAUTION:**

**Put matching marks on both disc rotor and wheel hub when removing disc rotor.**

If the disc rotor cannot be removed, remove as follows:

- a. Secure the disc rotor in place with wheel nuts and remove adjuster hole plug.

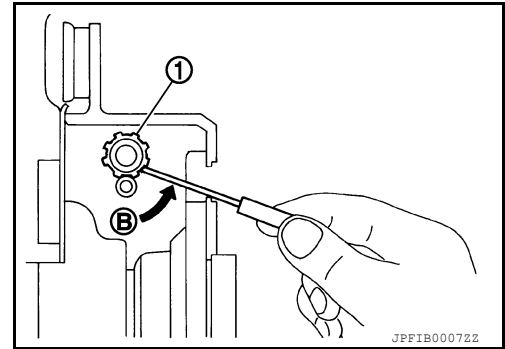




# PARKING BRAKE SHOE

## < REMOVAL AND INSTALLATION >

- b. Rotate adjuster (1) in direction (B) to retract and loosen brake shoe, using suitable tool as shown.



4. Remove anti-rattle pins, retainers, anti-rattle springs, return springs and adjuster spring.  
5. Remove parking brake shoes, adjuster assembly, and toggle lever.

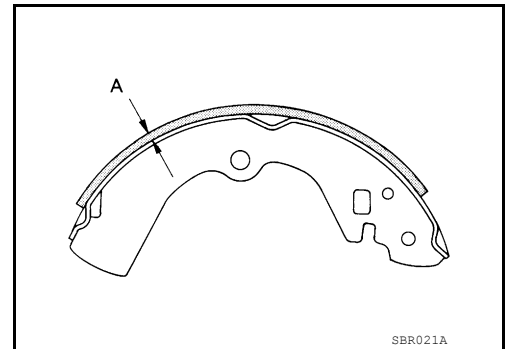
## INSPECTION AFTER REMOVAL

### Lining Thickness Inspection

- Check thickness of lining.

**Standard thickness (new) (A)** : Refer to [PB-11, "Parking Drum Brake"](#).

**Wear limit thickness (A)** : Refer to [PB-11, "Parking Drum Brake"](#).

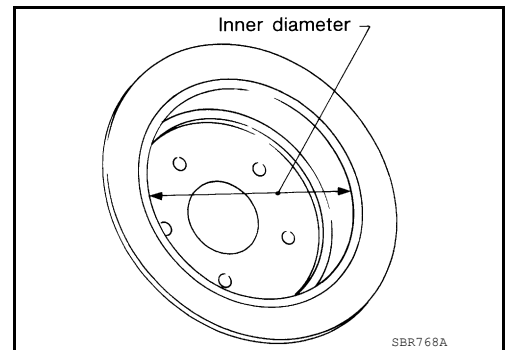


### Disc Rotor Inner Diameter Inspection

- Check inner diameter of drum (in disc).

**Standard inner diameter (new)** : Refer to [PB-11, "Parking Drum Brake"](#).

**Wear limit of inner diameter** : Refer to [PB-11, "Parking Drum Brake"](#).



### Other Inspections

- Check the following:
  - Lining for excessive wear, damage, and peeling.
  - Shoe sliding surface for excessive wear and damage.
  - Anti-rattle pin for excessive wear and corrosion.
  - Return spring and adjuster spring for sagging.
- Make sure that adjuster moves smoothly.
- Visually check the inside of drum for excessive wear, cracks, and damage.
- Replace with new parts as necessary.

## INSTALLATION

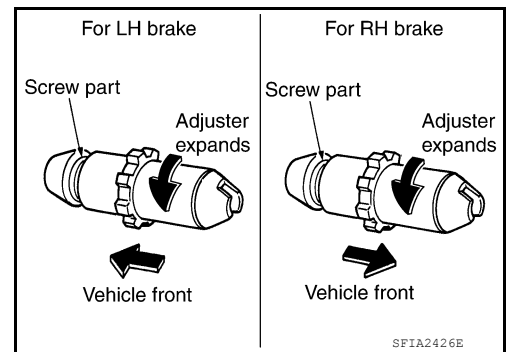
Installation is in the reverse order of removal.

- Refer to [PB-8, "Exploded View"](#) and apply PBC (Poly Butyl Cuprysil) grease or silicone-based grease to the specified points during installation.

## PARKING BRAKE SHOE

### < REMOVAL AND INSTALLATION >

- Assemble adjusters so that threaded part is expanded when rotating it in the direction as shown.
- Shorten adjuster by rotating it the opposite as shown.



- Check parking brake shoe sliding surface and drum inner surface for grease. Wipe off all grease adhering to the friction surfaces.

### ADJUSTMENT

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

1. Adjust parking brake pedal stroke to the specified amount. Refer to [PB-4, "On-Vehicle Service"](#).
2. Perform parking brake break-in (drag run) operation by driving and performing the following steps:
  - Drive forward at a constant speed of approximately 40 km/h (25 mph).
  - Apply the parking brake for approximately 10 seconds at an operating force at approximately 150 - 199 N (15 - 20 kg-f, 34 - 45 lb-f).

#### **CAUTION:**

- **To prevent lining from getting too hot, allow 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 break-in operation, check that the parking brake pedal stroke is at specification and adjust again as necessary. Refer to [PB-4, "On-Vehicle Service"](#).

## SERVICE DATA AND SPECIFICATIONS (SDS)

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## SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

#### Parking Brake Control

INFOID:000000007254818

Control type	Foot pedal
Pedal stroke - number of notches [under force of 196 N (20 kg-f, 44 lb-f)]	4 - 5
Pedal stroke - number of notches when parking brake warning lamp switch comes on	1

#### Parking Drum Brake

INFOID:000000007254819

Unit: mm (in)

Brake lining	Standard thickness (new)	3.2 (0.126)
	Wear limit thickness	1.5 (0.059)
Drum (in disc)	Standard inner diameter (new)	172 (6.77)
	Wear limit of inner diameter	173 (6.81)