

SECTION **PB**

PARKING BRAKE SYSTEM

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PARKING BRAKE SYSTEM

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

PARKING BRAKE SYSTEM

PEDAL TYPE

PEDAL TYPE : Inspection

INFOID:000000003110845

PEDAL STROKE

- Operate parking brake pedal with a force of 196 N (20 kg-f, 44 lb-f), make sure pedal stroke is within the specified number of notches. (Check it by listening and counting ratchet clicks.)

Pedal stroke : 4 - 5 notches

INSPECT COMPONENTS

- Make sure that the mounting conditions (looseness, backlash, etc.) of each component are normal.
- Check the following:
 - Device assembly for bend, damage and cracks. Replace if there are.
 - Cables and equalizer for wear and damage. Replace if there are.
 - Parking brake switch. Replace if it does not work correctly.

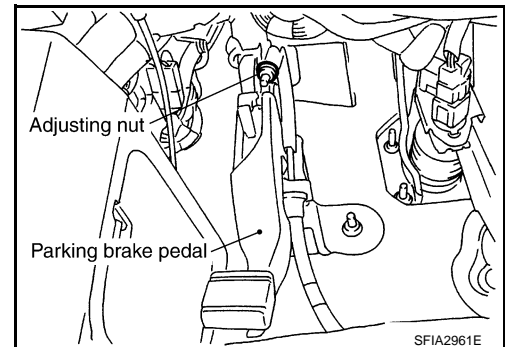
PEDAL TYPE : Adjustment

INFOID:000000003110846

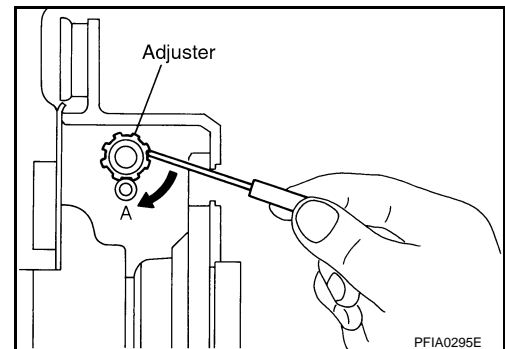
ADJUSTMENT

- To perform adjustment operations, remove rear tires from vehicle with power tool.

1. Insert a deep socket wrench onto adjusting nut. Rotate adjusting nut to fully loosen cable, and then release parking brake pedal.
2. Secure disc rotor to hub using wheel nut so as not to tilt disc rotor.



3. Remove adjuster hole plug installed on the disc rotor. Turn the adjuster in direction "A" using a suitable tool or a flat-bladed screwdriver as shown, until disc rotor is locked. Turn the adjuster in the opposite direction by 5 or 6 notches after locking.
4. Rotate disc rotor to make sure that there is no drag. Install the adjuster hole plug.
5. Adjust parking brake cable with the following procedure.
 - a. Operate parking brake pedal 10 or more times with the force 294 N (30 kg, 66 lb).
 - b. Rotate adjusting nut to adjust parking brake pedal stroke using a deep socket wrench.



CAUTION:

Do not reuse adjusting nut after removing it.

- c. Operate parking brake pedal with a force of 196 N (20 kg-f, 44 lb-f), make sure the pedal stroke is within the specified number of notches. (Check it by listening and counting ratchet clicks.)

Pedal stroke : 4 - 5 notches

- d. Make sure that there is no drag on rear brake with parking brake pedal completely released.

LEVER TYPE

PARKING BRAKE SYSTEM

< ON-VEHICLE MAINTENANCE >

LEVER TYPE : Inspection

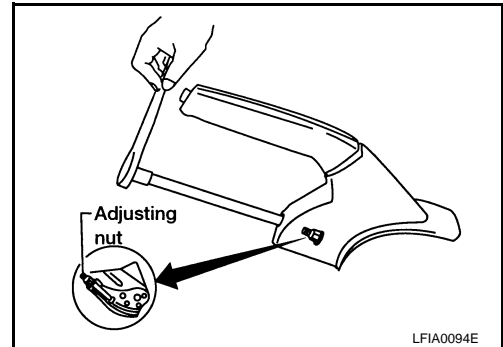
INFOID:000000003110847

- Check control lever for wear or other damage. Replace if necessary.
- Check wires for wear or damage. Replace if necessary.
- Check warning lamp and switch. Replace if necessary.
- Check parts at each connecting portion and, if found deformed or damaged, replace.
- Check if the control lever stroke is within specification. Refer to [PB-3. "LEVER TYPE : Adjustment"](#).

LEVER TYPE : Adjustment

INFOID:000000003110848

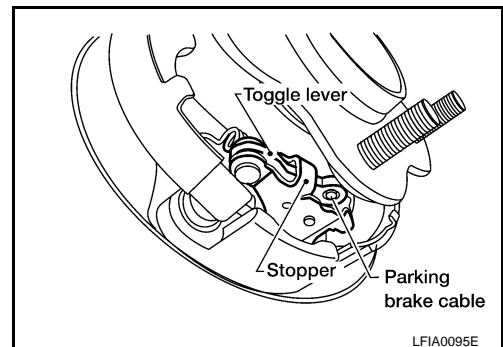
1. Fully engage the control lever.
2. Loosen the parking brake cable adjusting nut and fully release the control lever.
3. Adjust clearance of the rear parking brake shoes. Refer to [PB-12. "Removal and Installation"](#).
4. Depress the brake pedal fully more than five times.
5. Make sure that no drag exists while rotating the rear wheels.
6. Operate control lever 10 times or more with a full stroke [216 mm (8.5 in)].
7. Adjust control lever by turning adjusting nut.
8. Pull control lever with specified amount of force. Check control lever stroke and ensure smooth operation.



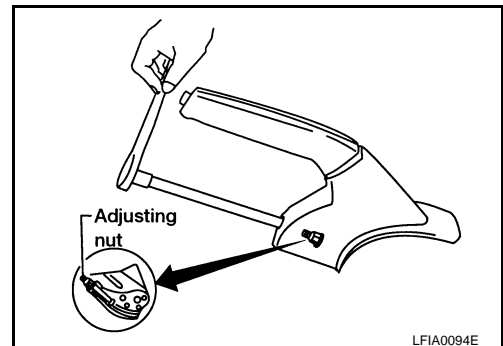
Lever stroke (number of notches) : 5 - 7

Force : 196 N (20 kg-f, 44 lb-f)

9. After adjustment, check that there is no drag while the control lever is being released. If drag exists, perform the following:
 - Remove the rear disc rotor, refer to [BR-31. "Removal and Installation \(Rotor\)"](#). Verify the toggle lever returns to stopper when the parking brake lever is released.



- If toggle lever does not return to stopper, loosen adjusting nut.
- Install rear disc rotor and adjust shoe clearance. Refer to [PB-12. "Removal and Installation"](#).



PARKING BRAKE SHOE

< ON-VEHICLE MAINTENANCE >

PARKING BRAKE SHOE

Inspection

INFOID:000000003110849

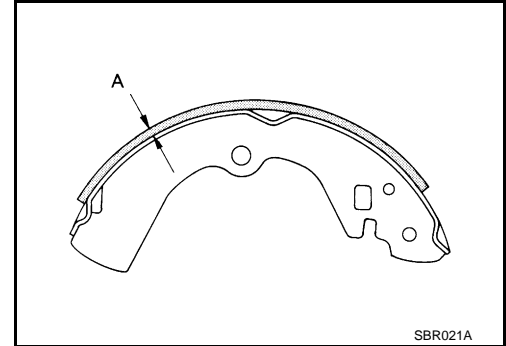
INSPECTION

Lining Thickness Inspection

- Check thickness of lining.

Standard thickness (new) "A" : 3.2 mm (0.126 in)

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

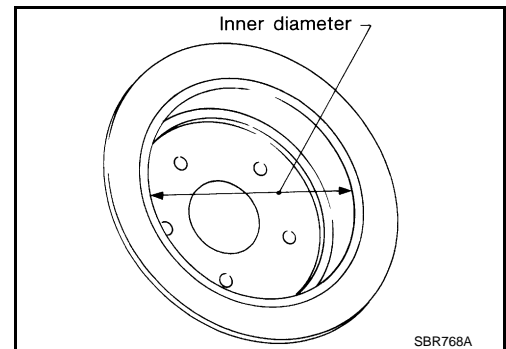


Drum Inner Diameter Inspection

- Check inner diameter of drum.

Standard inner diameter (new) : 172 mm (6.77 in) dia.

Maximum inner diameter : 173 mm (6.81 in) dia.



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 for sagging.
- Make sure that adjuster moves smoothly.
- Visually check the inside of drum for excessive wear, cracks, and damage. Check the inside of drum using a pair of vernier calipers.
- Replace with new part as necessary.

PARKING BRAKE CONTROL

< ON-VEHICLE REPAIR >

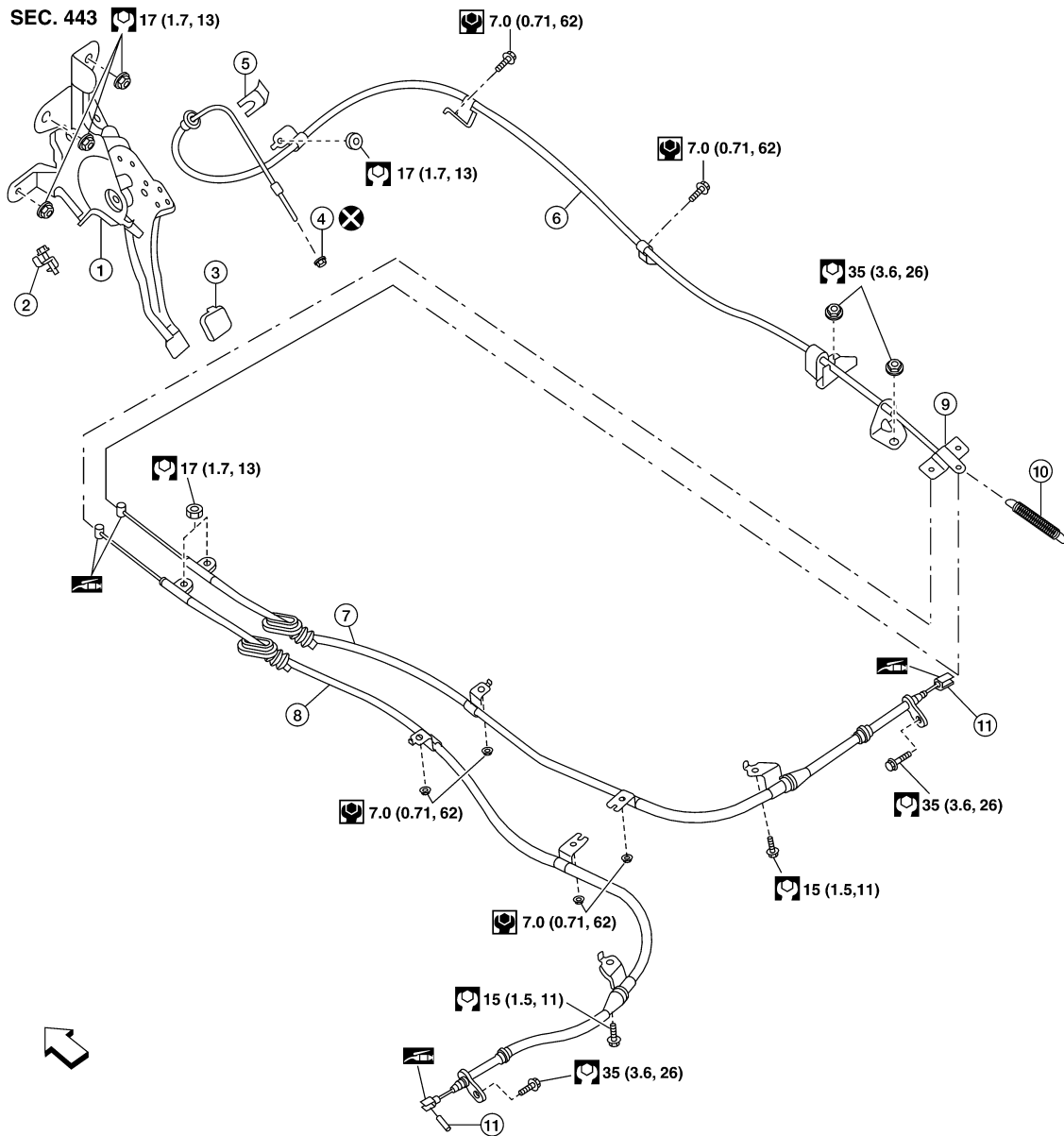
ON-VEHICLE REPAIR

PARKING BRAKE CONTROL

PEDAL TYPE

PEDAL TYPE : Exploded View

INFOID:000000003110850



- | | | |
|--------------------|-------------------------|----------------|
| 1. Device assembly | 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 |

: Multi purpose grease

LEVER TYPE

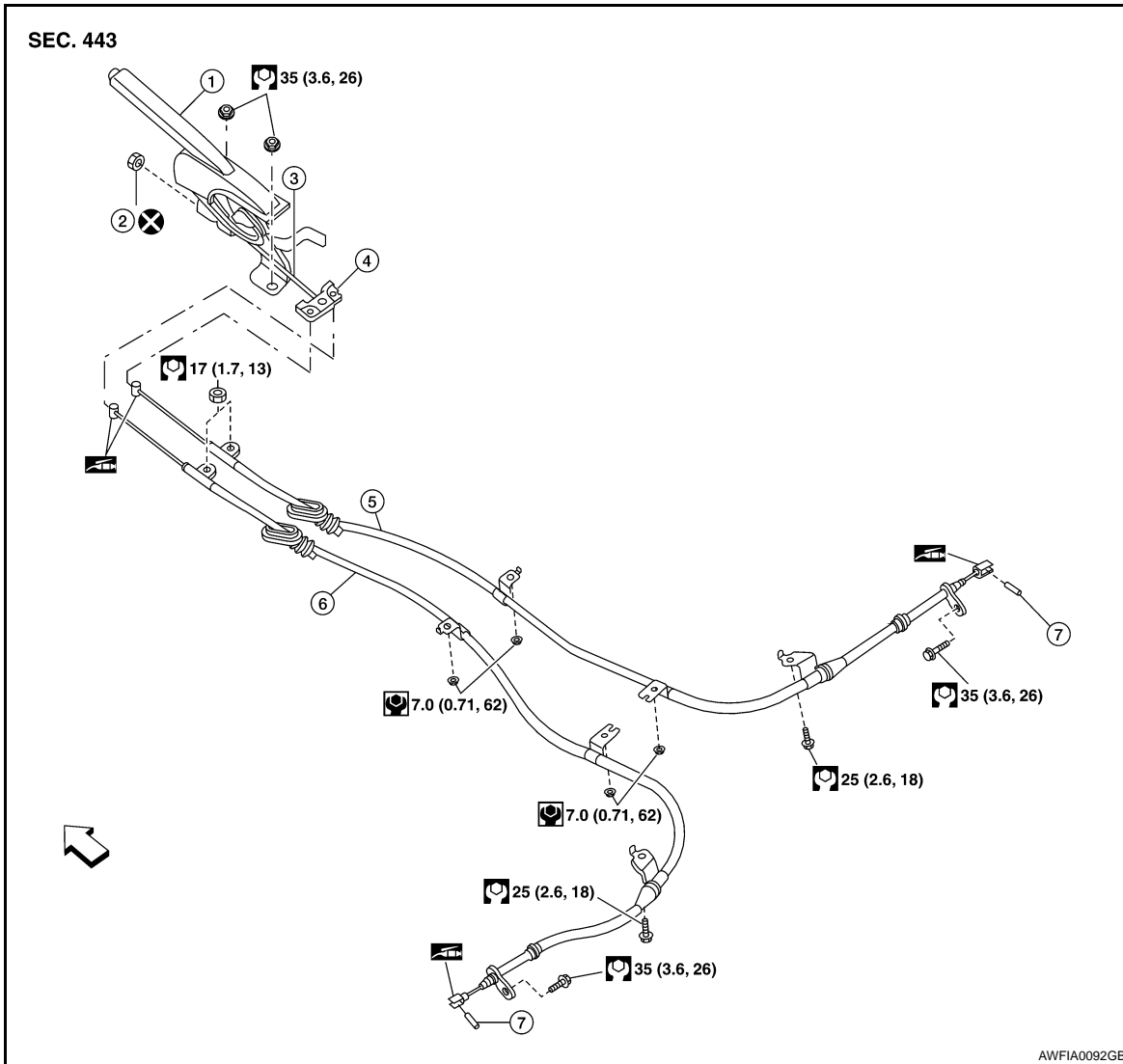
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PARKING BRAKE CONTROL

< ON-VEHICLE REPAIR >

LEVER TYPE : Exploded View

INFOID:000000003110851



1. Device assembly

2. Adjusting nut

3. Front cable

4. Equalizer

5. Rear cable (RH)

6. Rear cable (LH)

7. Pin

: Multi purpose grease

← Front

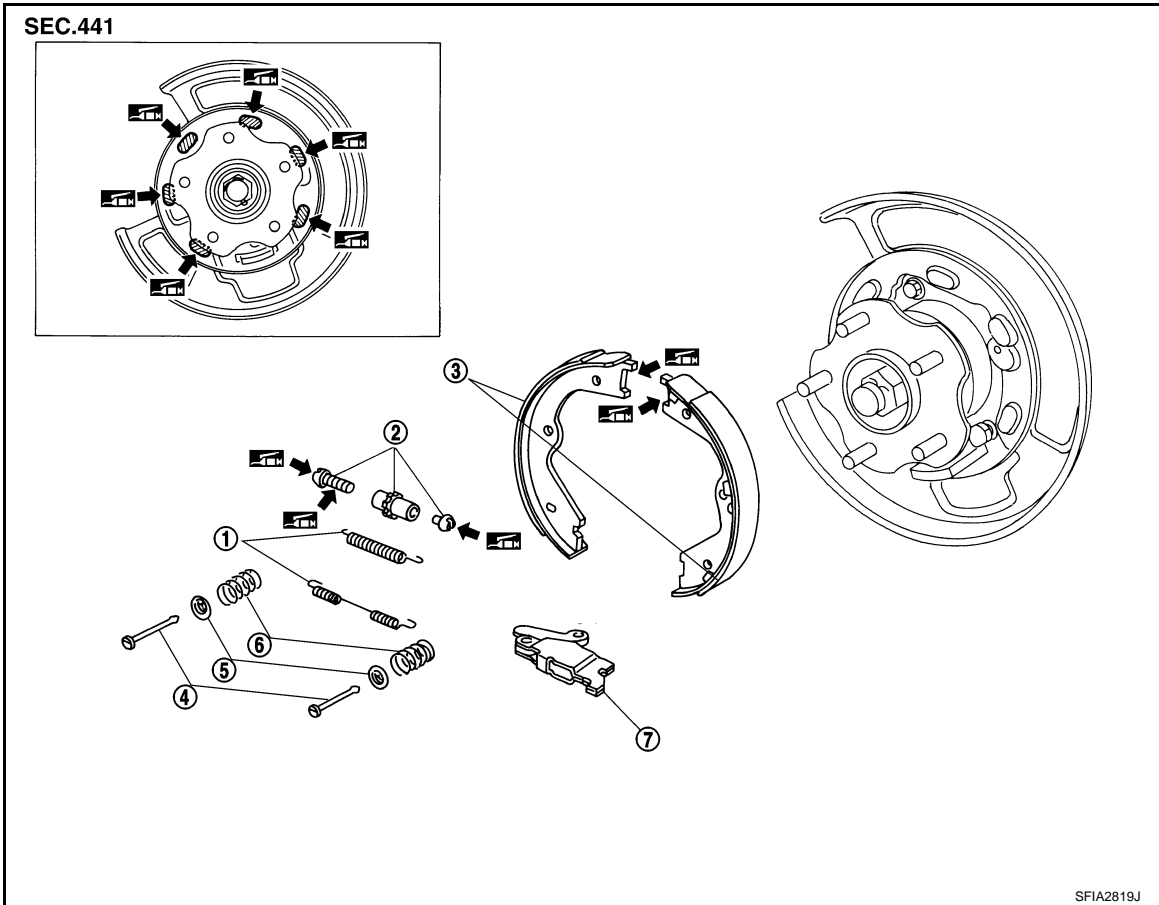
PARKING BRAKE SHOE

< ON-VEHICLE REPAIR >

PARKING BRAKE SHOE

Exploded View

INFOID:000000003110852



1. Return spring

2. Adjuster


3. Brake shoe

4. Anti-rattle pin

5. Retainer

6. Anti-rattle spring

7. Toggle lever

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

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PARKING BRAKE CONTROL

< REMOVAL AND INSTALLATION >

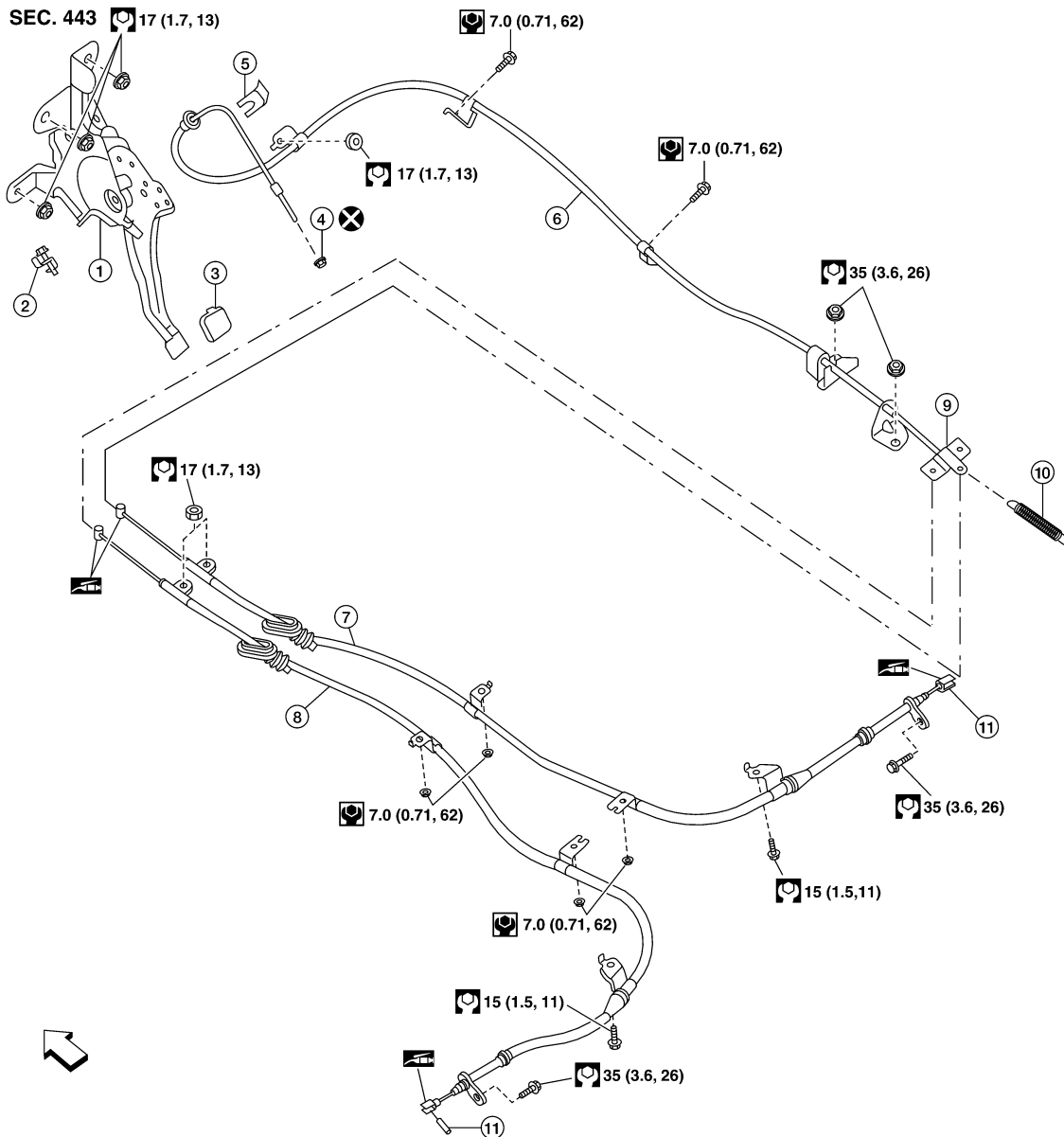
REMOVAL AND INSTALLATION

PARKING BRAKE CONTROL

PEDAL TYPE

PEDAL TYPE : Exploded View

INFOID:000000003110853



- | | | |
|--------------------|-------------------------|----------------|
| 1. Device assembly | 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 |

: Multi purpose grease

AWFIA0187GB

PEDAL TYPE : Removal and Installation

INFOID:000000003110854

REMOVAL

PARKING BRAKE CONTROL

< REMOVAL AND INSTALLATION >

1. Remove rear tires from vehicle with power tool.
2. Remove instrument lower cover and lower knee protector. Refer to [IP-11, "Removal and Installation"](#).
3. Disconnect parking brake switch connector.
4. Remove adjusting nut and loosen front cable.
5. Remove device assembly nuts and remove device assembly from vehicle.
6. Remove center console. Refer to [IP-16, "Exploded View"](#).
7. Separate rear cable from front cable, remove front cable from vehicle.
8. Remove heat insulator of the exhaust center tube from vehicle.
9. Remove parking brake shoe, and remove rear cable from toggle lever. Refer to [PB-12, "Removal and Installation"](#).
10. Remove rear cable bolts and nuts, pull out rear cable from vehicle.

INSTALLATION

1. Installation is in the reverse order of the removal. Refer to [PB-8, "PEDAL TYPE : Exploded View"](#) for specified torque.
CAUTION:
Do not reuse adjusting nut.
2. Adjust parking brake. Refer to [PB-2, "PEDAL TYPE : Adjustment"](#).

LEVER TYPE

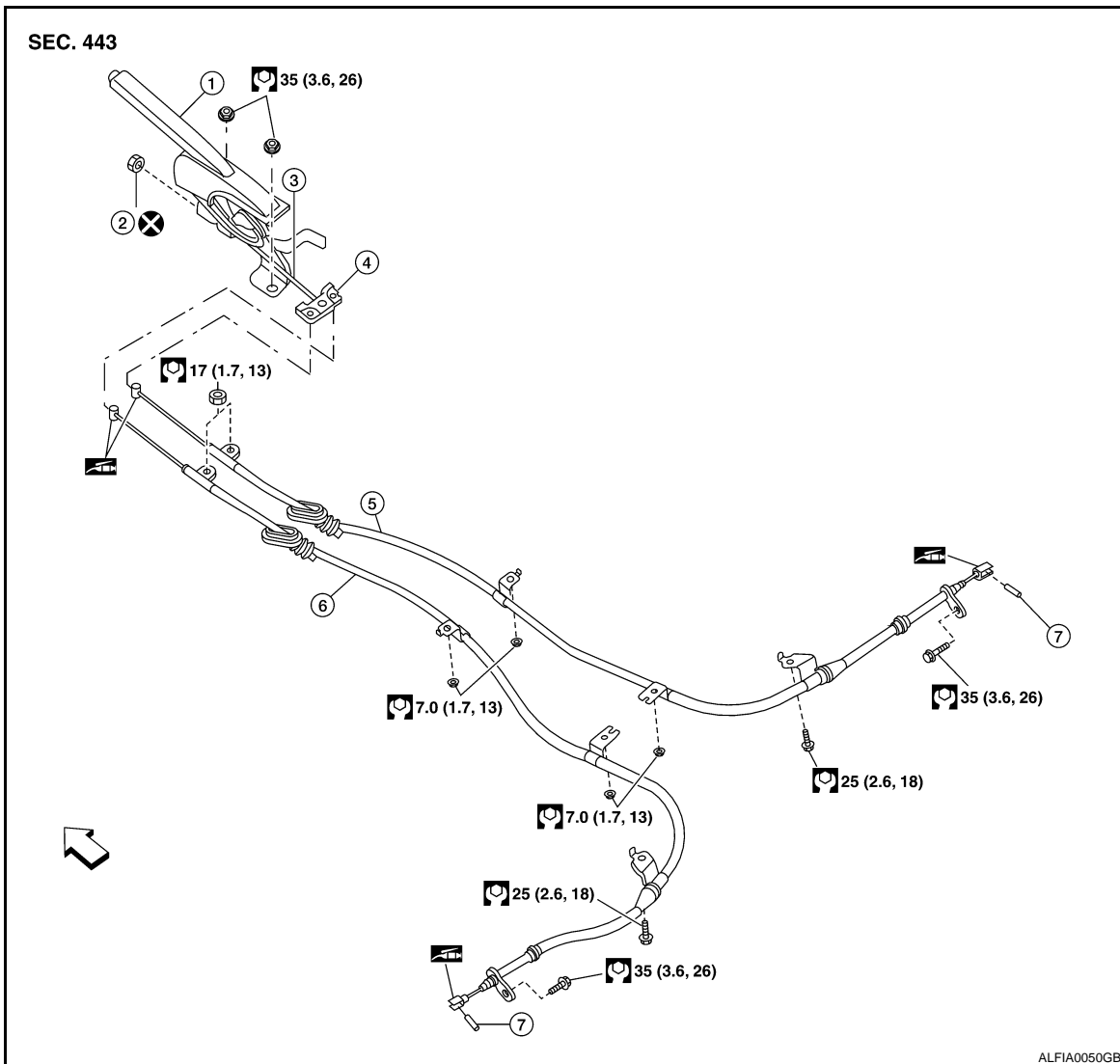
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PARKING BRAKE CONTROL

< REMOVAL AND INSTALLATION >

LEVER TYPE : Exploded View

INFOID:000000003110855



- 1. Device assembly
- 4. Equalizer
- 7. Pin

- 2. Adjusting nut
- 5. Rear cable (RH)
- : Multi purpose grease

- 3. Front cable
- 6. Rear cable (LH)
- ← Front

LEVER TYPE : Removal and Installation

INFOID:000000003110856

REMOVAL

1. Remove rear tires from vehicle with power tool.
2. Remove center console. Refer to [IP-17, "Disassembly and Assembly"](#).
3. Disconnect parking brake switch connector.
4. Remove adjusting nut and loosen cable, then separate rear cables from equalizer.
5. Remove device assembly nuts and remove device assembly from vehicle.
6. Remove heat insulator of the exhaust center tube from vehicle.
7. Remove parking brake shoe, and remove rear cable from toggle lever. Refer to [PB-12, "Removal and Installation"](#).
8. Remove rear cable bolts and nuts, pull out rear cable from vehicle.

INSTALLATION

PARKING BRAKE CONTROL

< REMOVAL AND INSTALLATION >

1. Installation is in the reverse order of the removal. Refer to [PB-10, "LEVER TYPE : Exploded View"](#) for specific torque.
CAUTION:
Do not reuse adjusting nut.
2. Adjust parking brake. Refer to [PB-2, "PEDAL TYPE : Adjustment"](#) (Pedal type), [PB-3, "LEVER TYPE : Adjustment"](#) (lever type).

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PARKING BRAKE SHOE

< REMOVAL AND INSTALLATION >

PARKING BRAKE SHOE

Removal and Installation

INFOID:000000003110857

REMOVAL

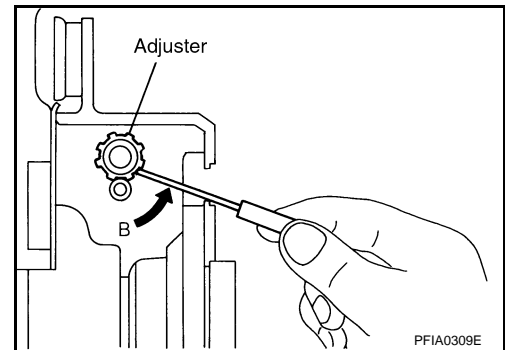
WARNING:

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

CAUTION:

- Clean dust on disc rotor and back plate using a vacuum dust collector. Do not blow with compressed air.
- Put matching marks on both disc rotor and wheel hub when removing disc rotor.

1. Remove rear tires from vehicle with power tool.
2. Remove disc rotor with parking brake control lever completely in the released position. Refer to [BR-31, "Removal and Installation \(Rotor\)"](#).
3. If disc rotor cannot be removed, remove as follows:
 - a. Secure the disc rotor in place with wheel nuts and remove adjuster hole plug.
 - b. Rotate adjuster in direction "B" to retract and loosen brake shoe, using tool as shown.
4. Remove anti-rattle pins, retainers, anti-rattle springs, and return springs.
5. Remove parking brake shoes, adjuster assembly, and toggle lever.
6. About the removal of back plate, refer to [BR-30, "Exploded View"](#).



INSTALLATION

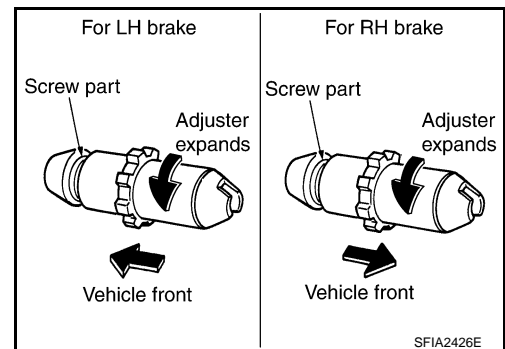
Installation is in the reverse order of removal. Note the following.

- Refer to [PB-7, "Exploded View"](#) and apply PBC (Poly Butyl Cuprysil) grease or equivalent to the specified points during assembly.
 - Assemble adjusters so that threaded part is expanded when rotating it in the direction shown.
 - Shorten adjuster by rotating it.
 - Check shoe sliding surface and drum inner surface for grease. Wipe it off if it adhere on the surfaces.
 - Perform break-in operation as follows after replacing brake shoes or disc rotors, or if brakes do not function well.
1. Adjust parking brake control lever stroke to the specified amount. Refer to [PB-3, "LEVER TYPE : Adjustment"](#) lever type.
 2. Perform parking brake break-in (drag run) operation by driving vehicle under the following conditions:

Drive forward

- **Vehicle speed: Approx. 40 km/h (25 MPH) set (constant and forward)**
- **Parking brake operating force: Approx. 400 N (40 kg, 88 lb) set constant**
- **Time: Approx. 10 sec.**

3. Check parking brake control lever stroke of parking brake. Adjust again if it is outside the standard.



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Parking Drum Brake

INFOID:000000003110858

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

Parking Brake Control

INFOID:000000003110859

Control type	Foot pedal	Lever
Number of notches [under force of 196 N (20 kg-f, 44 lb-f)]	3 -4	7 - 8
Number of notches when parking brake warning lamp switch comes on	1	1