

SECTION **PB**

PARKING BRAKE SYSTEM

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

CONTENTS

PREPARATION	2	PARKING BRAKE CONTROL	6
PREPARATION	2	PEDAL TYPE	6
Commercial Service Tool	2	PEDAL TYPE : Exploded View	6
ON-VEHICLE MAINTENANCE	3	PEDAL TYPE : Removal and Installation	6
PARKING BRAKE SYSTEM	3	LEVER TYPE	7
PEDAL TYPE	3	LEVER TYPE : Exploded View	7
PEDAL TYPE : Inspection	3	LEVER TYPE : Removal and Installation	8
PEDAL TYPE : Adjustment	3	PARKING BRAKE SHOE	9
LEVER TYPE	3	Exploded View	9
LEVER TYPE : Inspection	3	Removal and Installation	9
LEVER TYPE : Adjustment	4	SERVICE DATA AND SPECIFICATIONS	
PARKING BRAKE SHOE	5	(SDS)	11
Inspection	5	SERVICE DATA AND SPECIFICATIONS	
ON-VEHICLE REPAIR	6	(SDS)	11
		Parking Drum Brake	11
		Parking Brake Control	11

PREPARATION

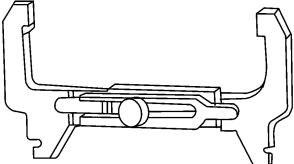

< PREPARATION >

PREPARATION

PREPARATION

Commercial Service Tool

INFOID:000000004505093

(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	 PIIB1407E	Removing bolts and nuts

PARKING BRAKE SYSTEM

< ON-VEHICLE MAINTENANCE >

ON-VEHICLE MAINTENANCE

PARKING BRAKE SYSTEM

PEDAL TYPE

PEDAL TYPE : Inspection

INFOID:000000004513195

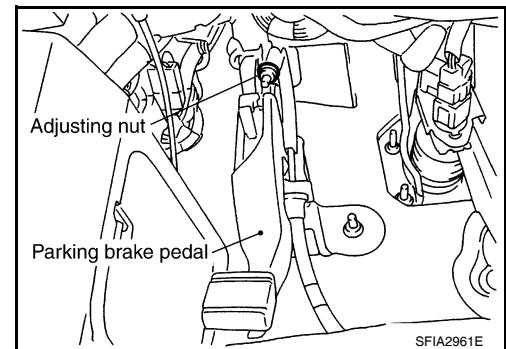
- Check control device for wear or other damage. Replace if necessary.
- Check wires for wear or damage. Replace if necessary.
- Check warning lamp and switch. Replace if necessary.
- Check parts at each connecting position and if found deformed or damaged, replace as necessary.
- Check if the parking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

PEDAL TYPE : Adjustment

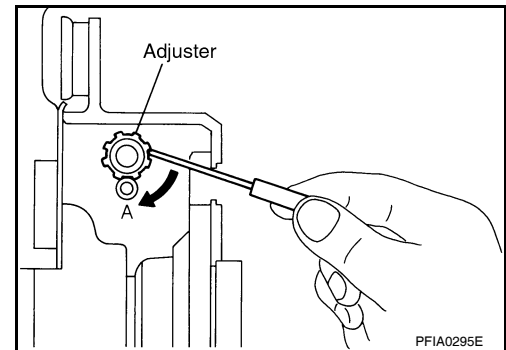
INFOID:000000004513196

ADJUSTMENT

1. Remove rear wheel and tires. Refer to [WT-66, "Adjustment"](#).
2. Insert a deep socket wrench onto adjusting nut. Rotate adjusting nut to fully loosen cable, and then release parking brake pedal.
3. Secure disc rotor to hub using wheel nut so as not to tilt disc rotor.



4. 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.
5. Rotate disc rotor to make sure that there is no drag. Install the adjuster hole plug.
6. Adjust parking brake cable with the following procedure.
 - a. Operate parking brake pedal 10 or more times with a full stroke of 194.3 mm (7.6 in).
 - b. Rotate adjusting nut to adjust parking brake pedal stroke using a deep socket wrench.
 - c. Operate parking brake pedal with a force of 294 N (30 kg-f, 66 lb-f), make sure the pedal stroke is within the specified number of notches. Check it by listening and counting the ratchet clicks.



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

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

LEVER TYPE

LEVER TYPE : Inspection

INFOID:000000004206767

- Check control device 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 position and if found deformed or damaged, replace as necessary.
- Check if the control lever stroke is within specification. Refer to [PB-4, "LEVER TYPE : Adjustment"](#).

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

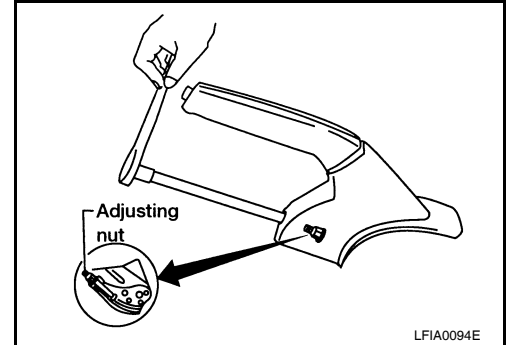
PARKING BRAKE SYSTEM

< ON-VEHICLE MAINTENANCE >

LEVER TYPE : Adjustment

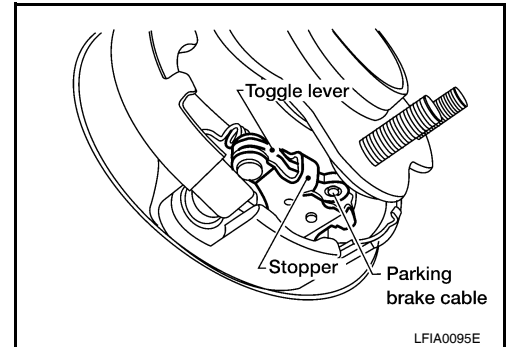
INFOID:000000004206768

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-9. "Removal and Installation"](#).
4. Depress the brake pedal fully more than five times.
5. Make sure that no drag exists while rotating the rear wheel and tires.
6. Operate control lever 10 times or more with a full stroke of 99.5 mm (3.9 in).
7. Adjust control lever by turning adjusting nut.
8. Pull control lever with a force of 294 N (30 kg-f, 66 lb-f). Check control lever stroke and ensure smooth operation.

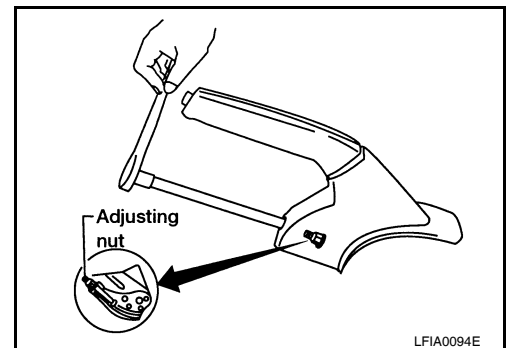


Lever stroke (number of notches) : Refer to [PB-11, "Parking Brake Control"](#).

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-35. "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#). 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-9. "Removal and Installation"](#).

PARKING BRAKE SHOE

< ON-VEHICLE MAINTENANCE >

PARKING BRAKE SHOE

Inspection

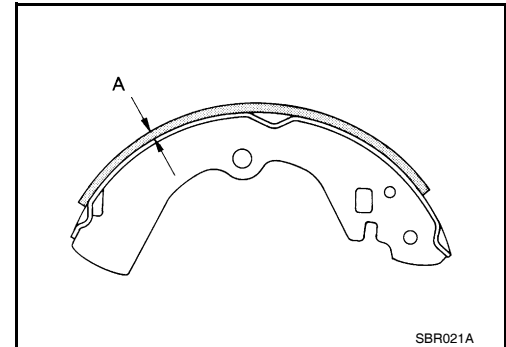
INFOID:000000004206769

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"](#).

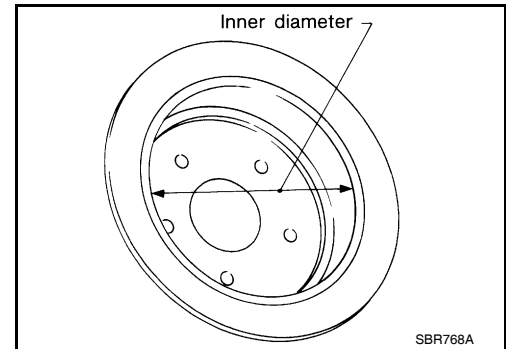


DRUM INNER DIAMETER INSPECTION

- Check inner diameter of drum in rear disc rotor.

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 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 parts as necessary.

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

PARKING BRAKE CONTROL

< ON-VEHICLE REPAIR >

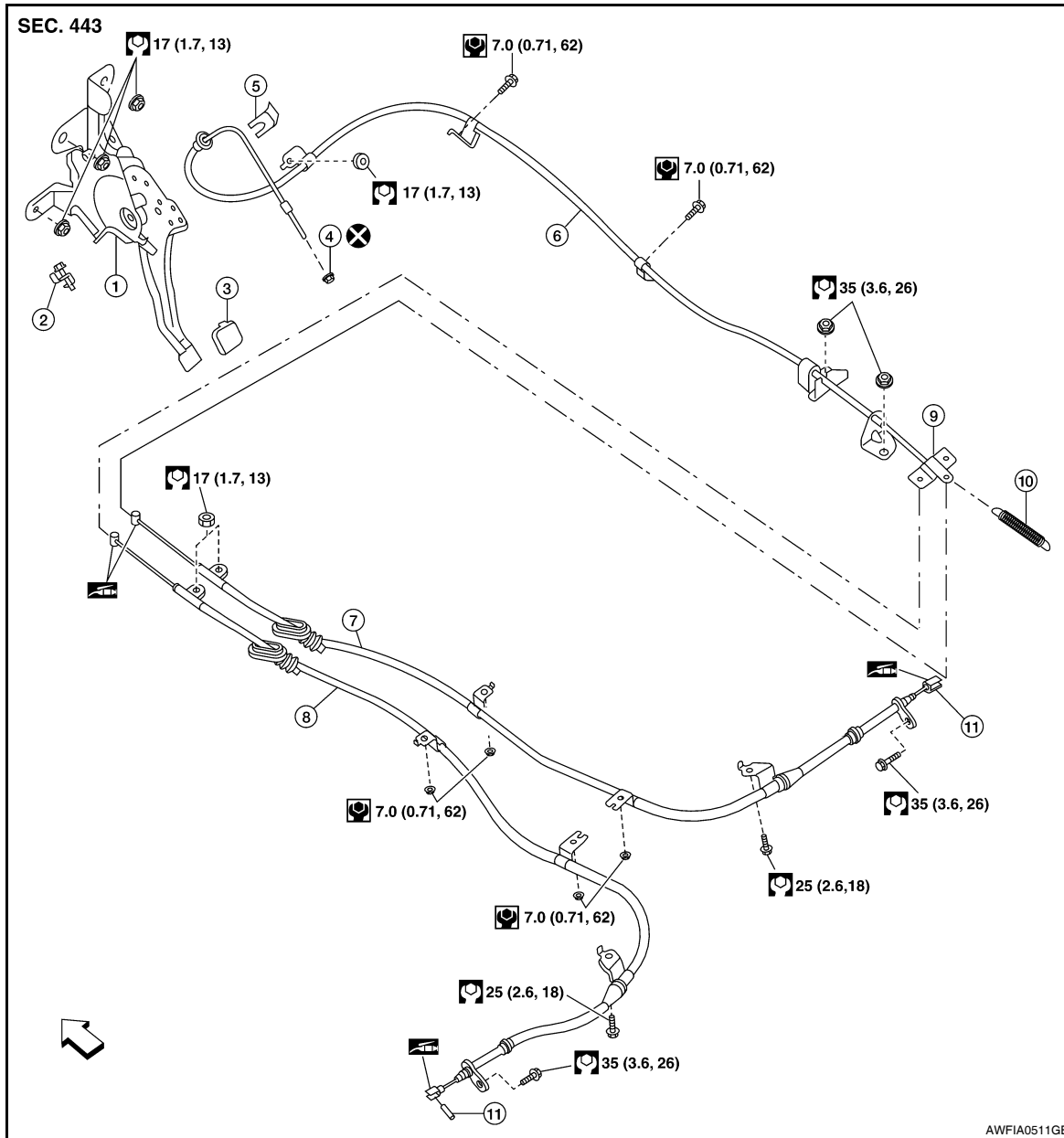
ON-VEHICLE REPAIR

PARKING BRAKE CONTROL

PEDAL TYPE

PEDAL TYPE : Exploded View

INFOID:000000004513199



- | | | |
|----------------------------|-------------------------|----------------|
| 1. Control 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 |

PEDAL TYPE : Removal and Installation

INFOID:000000004513201

REMOVAL

1. Remove rear wheel and tires. Refer to [WT-66, "Adjustment"](#).

PARKING BRAKE CONTROL

< ON-VEHICLE REPAIR >

2. Remove instrument lower cover and lower knee protector. Refer to [IP-11. "Exploded View"](#).
3. Disconnect parking brake switch connector.
4. Remove adjusting nut and discard, then loosen front cable.
CAUTION:
Do not reuse adjusting nut.
5. Remove control device assembly nuts and remove control device assembly.
6. Remove center console. Refer to [IP-11. "Exploded View"](#).
7. Separate rear cables from front cable, remove front cable.
8. Remove heat insulator of the exhaust center tube.
9. Remove parking brake shoe, and remove rear cables from toggle lever. Refer to [IP-11. "Exploded View"](#).
10. Remove rear cable bolts and nuts, then remove rear cables.

INSTALLATION

Installation is in the reverse order of removal.

- Adjust the parking brake with new adjusting nut. Refer to [PB-3. "PEDAL TYPE : Adjustment"](#).

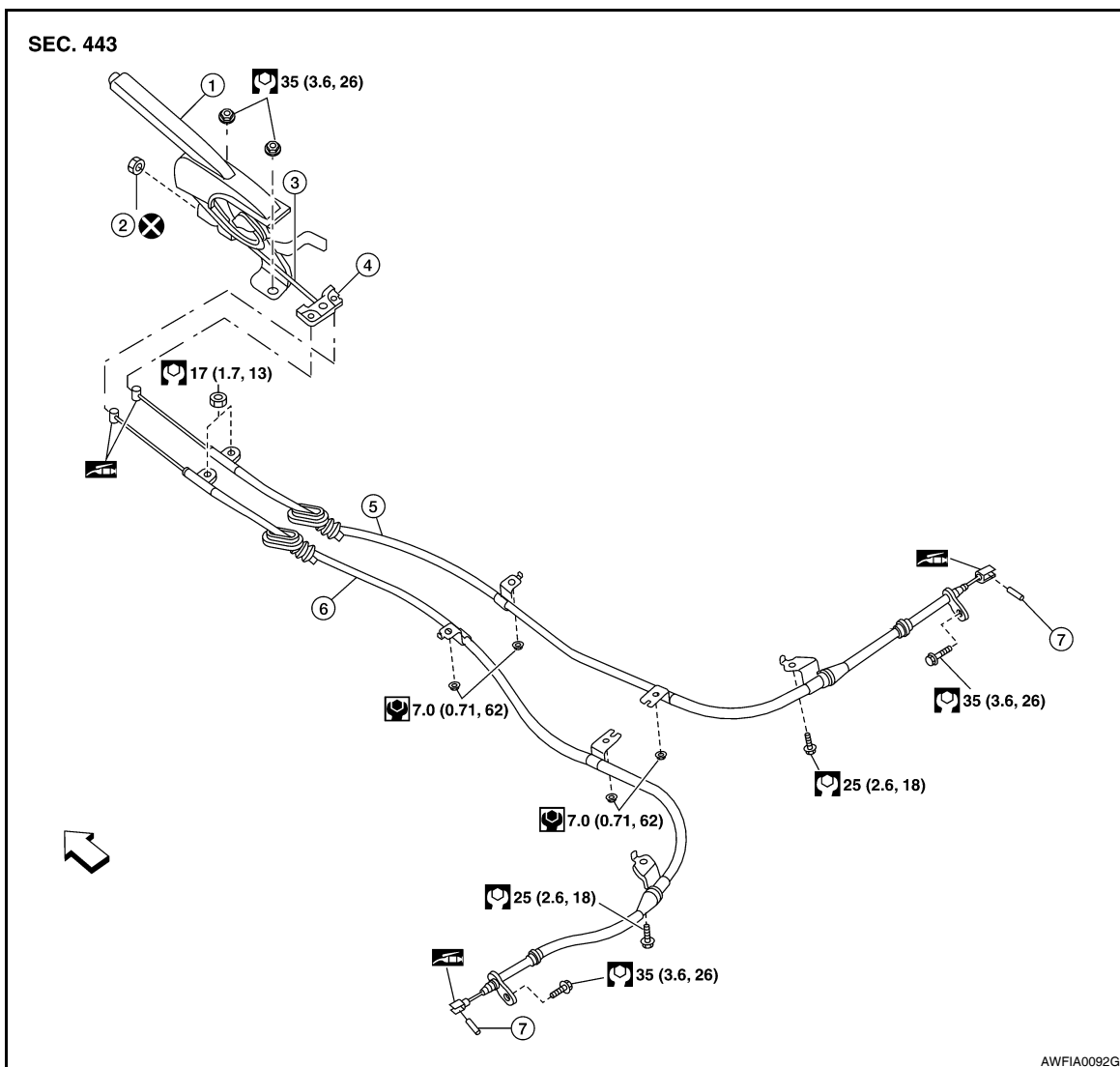
CAUTION:

Do not reuse adjusting nut.

LEVER TYPE

LEVER TYPE : Exploded View

INFOID:000000004206771



PARKING BRAKE CONTROL

< ON-VEHICLE REPAIR >

- | | | |
|----------------------------|--------------------|--------------------|
| 1. Control device assembly | 2. Adjusting nut | 3. Front cable |
| 4. Equalizer | 5. Rear cable (RH) | 6. Rear cable (LH) |
| 7. Pin | ↔ Front | |

LEVER TYPE : Removal and Installation

INFOID:000000004206776

REMOVAL

1. Remove rear wheel and tires. Refer to [WT-66, "Adjustment"](#).
2. Remove center console. Refer to [IP-18, "Disassembly and Assembly"](#).
3. Disconnect parking brake switch connector.
4. Remove adjusting nut and discard. Loosen cable, then disconnect rear cables from equalizer.
CAUTION:
Do not reuse adjusting nut.
5. Remove control device assembly nuts and remove control device assembly.
6. Remove heat insulator for the exhaust center tube.
7. Remove parking brake shoes, and disconnect rear cable from toggle lever. Refer to [PB-9, "Removal and Installation"](#).
8. Remove rear cable bolts and nuts, then remove rear cables.

INSTALLATION

Installation is in the reverse order of removal.

- Adjust parking brake. Refer to [PB-4, "LEVER TYPE : Adjustment"](#).

CAUTION:

Do not reuse adjusting nut.

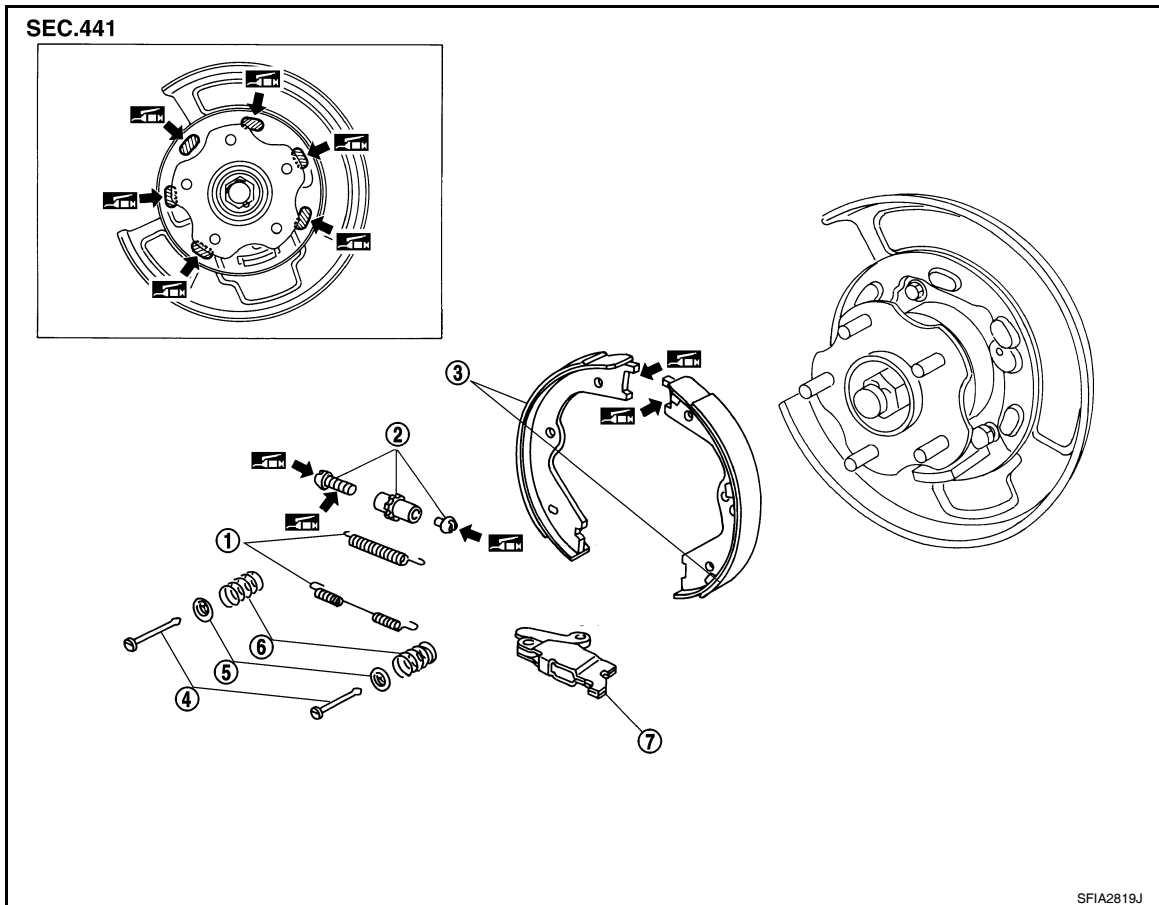
PARKING BRAKE SHOE

< ON-VEHICLE REPAIR >


PARKING BRAKE SHOE

Exploded View

INFOID:000000004206772



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

Removal and Installation

INFOID:000000004206772

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.

CAUTION:

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

REMOVAL

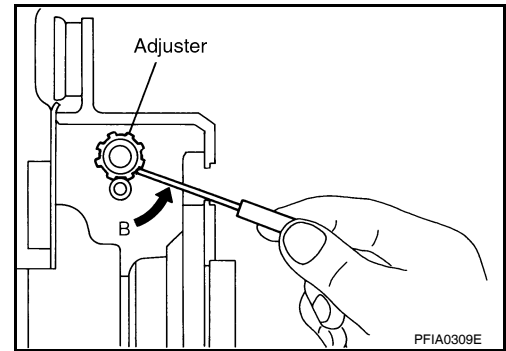
1. Remove rear wheel and tires. Refer to [WT-66. "Adjustment"](#).
2. Remove rear disc rotor with parking brake control device assembly in the fully released position. Refer to [BR-35. "BRAKE CALIPER ASSEMBLY : Removal and Installation"](#).
3. If disc rotor cannot be removed, remove as follows:
 - a. Secure the disc rotor in place with wheel nuts and remove adjuster hole plug.

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

PARKING BRAKE SHOE

< ON-VEHICLE REPAIR >

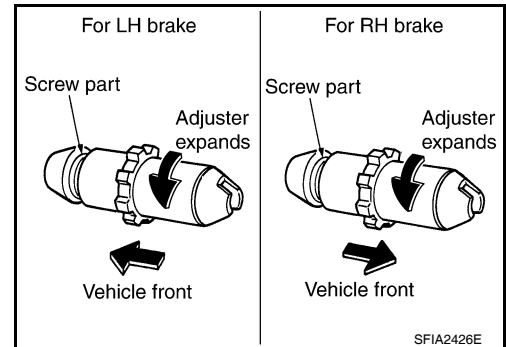
- b. Rotate adjuster in direction (B) to retract and loosen brake shoe, using tool as shown.
4. Remove anti-rattle pins, retainers, anti-rattle springs, and return springs.
5. Remove parking brake shoes, adjuster assembly, and toggle lever.
6. Remove the back plate.



INSTALLATION

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

- 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 as shown.
 - Check shoe sliding surface and drum inner surface for grease. Wipe it off if it adheres 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 device assembly stroke to the specified amount. Refer to [PB-4, "LEVER TYPE : Adjustment"](#).
 2. Perform parking brake break-in (drag run) operation by driving vehicle under the following conditions:
 - Drive the vehicle forward.
 - Maintain vehicle speed at approximately 40 km/h (25 MPH) keeping it constant in forward direction.
 - Apply the parking brake at an operating force of approximately 400 N (40 kg, 88 lb) with constant force.
 - Release the parking brake after approximately 10 seconds.
 3. Check parking brake control device assembly stroke of parking brake. Readjust as necessary if it is outside the standard specifications.



SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Parking Drum Brake

INFOID:000000004206778

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

Parking Brake Control

INFOID:000000004206779

Control type	Foot pedal	Lever
Number of notches [under force of 294 N (30 kg-f, 66 lb-f)]	4 - 5	5 - 7
Number of notches when parking brake warning lamp switch comes on	1	1

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