SECTION PB
PARKING BRAKE SYSTEM

CONTENTS

NOISE, VIBRATION, AND HARSHNESS (NVH) TROUBLESHOOTING

PFP:00003

NVH Troubleshooting Chart

EFS000TJ

Use the chart below to help you find the cause of the symptom. If necessary, repair or replace these parts.

Reference page			Refer to BR section	Refer to BR section.	Refer to BR section	Refer to BR section	—	Refer to BR section	—	—	—	Refer to BR section	NVH in FAX AND RAX section	NVH in FAX AND RAX section	NVH in FSU AND RSU section	NVH in WT section	NVH in WT section	NVH in PS section
Possible cause and SUSPECTED PARTS			Pads - damaged	Pads - uneven wear	Shims damaged	Rotor imbalance	Rotor damage	Rotor runout	Rotor deformation	Rotor deflection	Rotor rust	Rotor thickness variation	DRIVE SHAFT	AXLE	SUSPENSION	TIRES	ROAD WHEEL	STEERING
Symptom	BRAKE	Noise	X	X	X								X	X	X	X	X	X
		Shake				X							X	X	X	X	X	X
		Shimmy, Judder				X	X	X	X	X	X	X		X	X	X	X	X

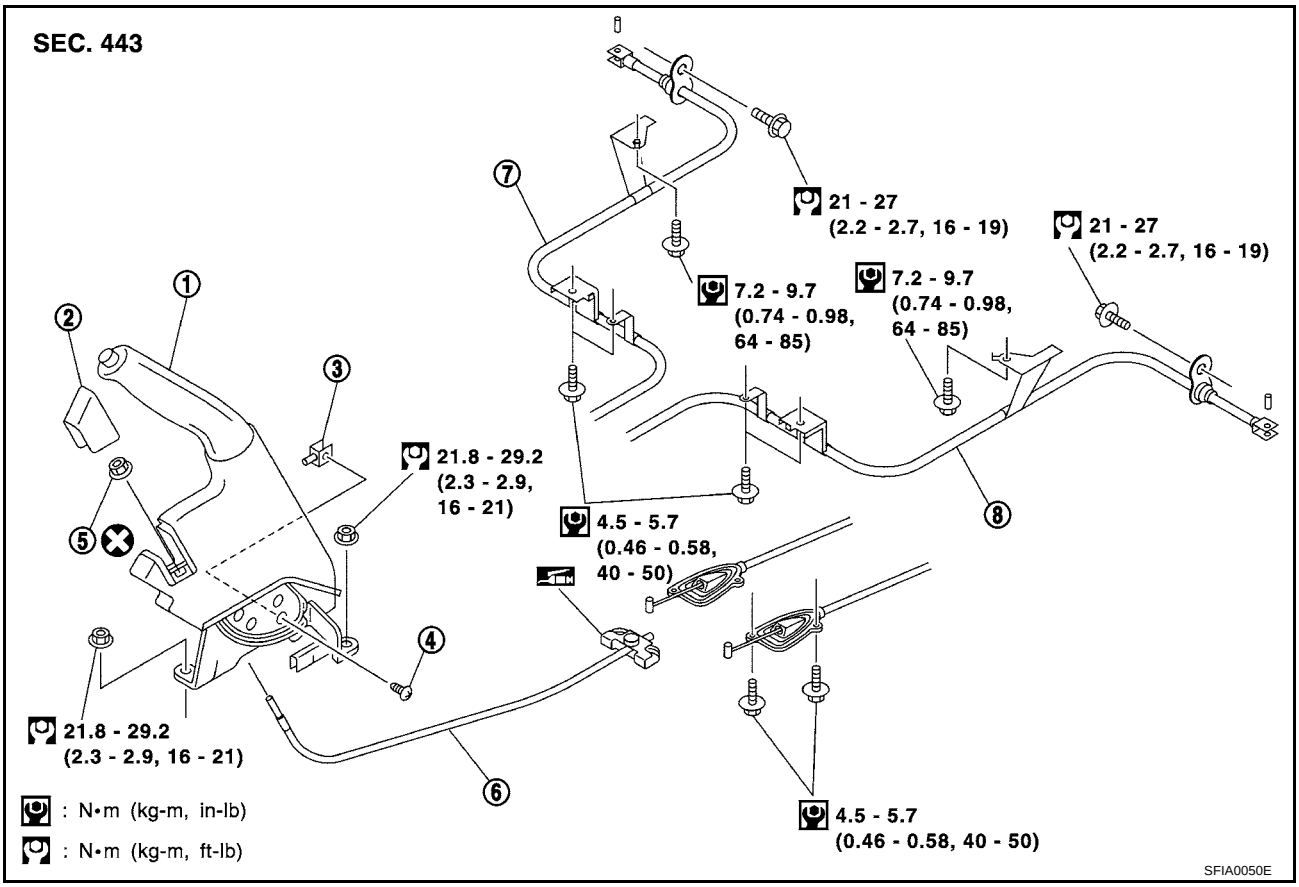
X: Applicable

PARKING BRAKE CONTROL

PFP:36010

Components

EFS0017I

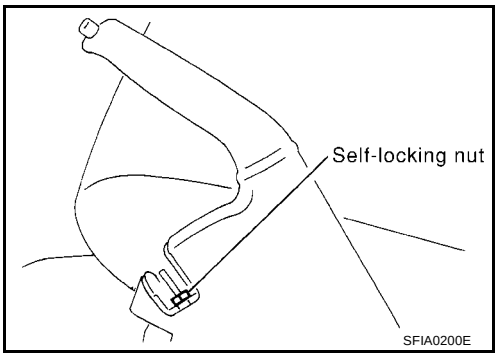


1. Control lever assembly
2. Cap
3. Parking brake warning lamp switch
4. Screw
5. Self-locking nut
6. Front cable
7. RH rear cable
8. LH rear cable

Removal and Installation

EFS0017J

1. Remove center console.
2. Disconnect warning lamp switch connector.
3. Remove cable mounting bolt. Loosen cable and remove self-locking nut.
4. Remove cable from toggle lever of disc brake.



Inspection

EFS0017L

- Operate parking brake lever with a force of 196 N (20 kg, 44 lb). Check stroke is within specified number of notches. (Check it by hearing clicks of ratchet.)

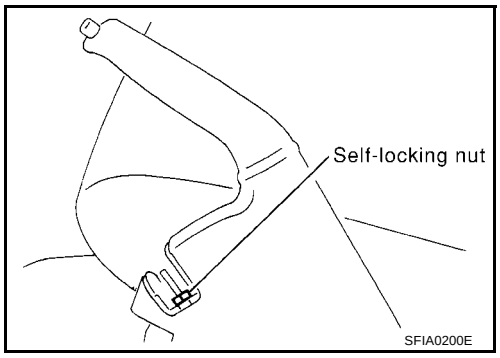
  Lever stroke : 6 - 7 notches

- Check parking lever assembly for bend, damage and cracks, and replace if necessary.
- Check cables and equalizer for wear and damage. If a malfunction is detected, replace applicable part.
- Check parking brake warning lamp switch. If a malfunction is detected, replace applicable part.
- Check each part for deformation, or damage by contact with other parts. If a malfunction is detected, replace applicable part.

Adjustment

EFS0017M

1. Insert a deep-well socket wrench into opening of parking brake lever. Rotate self-locking nut to fully loosen cable. Return parking brake lever and adjust rear brake shoe clearance.

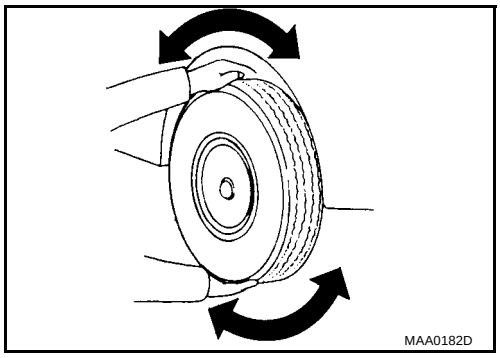


2. Rotate road wheels to be sure that there is no drag.
3. After adjusting clearance of rear shoes, with no drag on rear brake, adjust cable as follows:

a. Pull parking brake lever up so that a deep-well socket wrench can be inserted.

b. Insert a deep-well socket wrench into opening of parking brake lever. Rotate self-locking nut to adjust lever stroke.

CAUTION:
Do not reuse self-locking nut after removing it.



c. Operate parking brake lever 3 to 4 times with a force of 196 N (20 kg, 44 lb). Be sure lever stroke is within the specified number of notches.

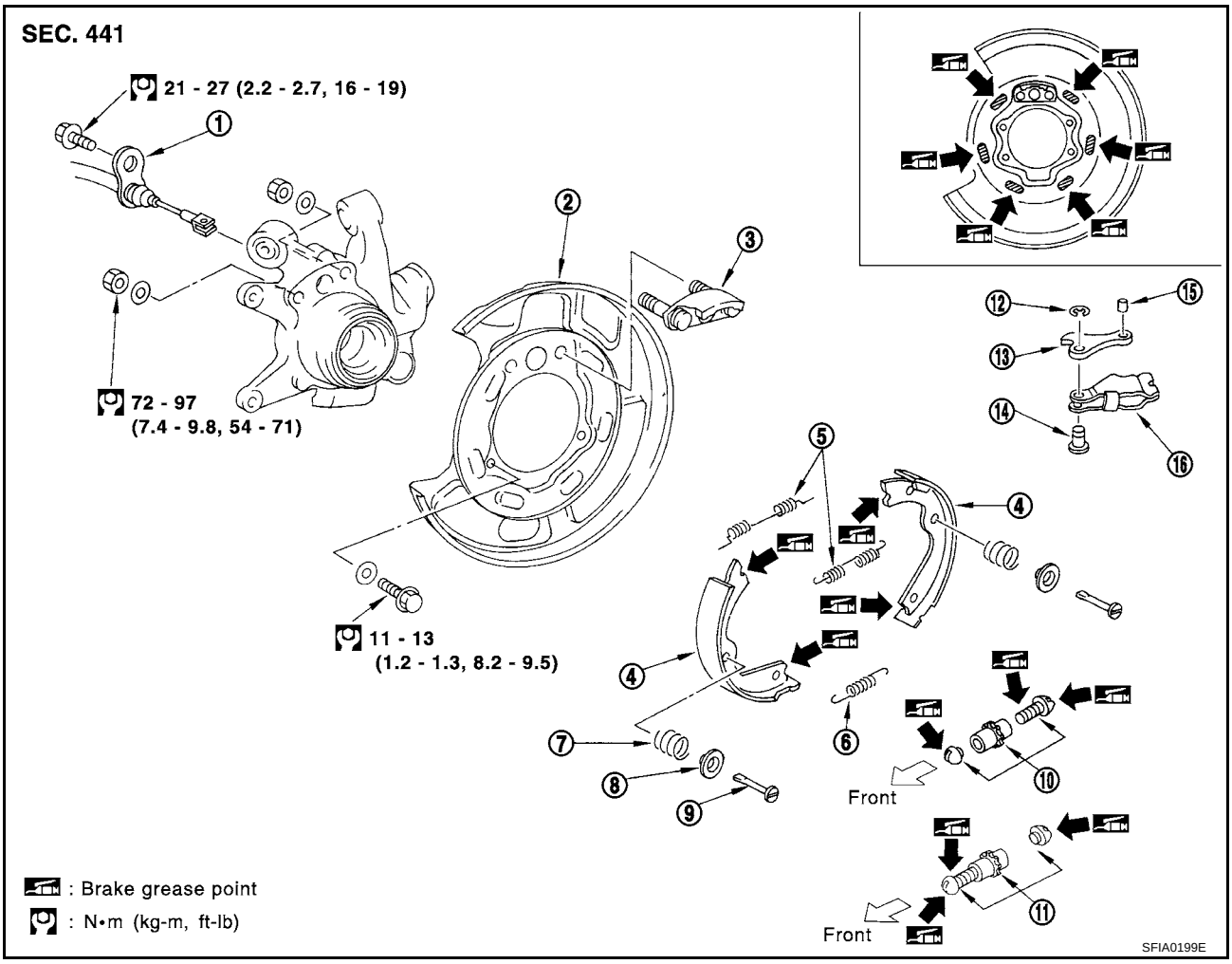
d. Return parking brake lever completely. Be sure there is no drag on rear brake.

PARKING BRAKE SHOE

PFP:44060

Components

EFS0017K



1. Parking cable
2. Back plate
3. Anchor block
4. Brake shoe
5. Return spring
6. Return spring
7. Spring
8. Retainer
9. Shoe hold pin
10. Adjust assembly LH
11. Adjuster assembly RH
12. E-ring
13. Toggle lever
14. Pin
15. Pin
16. Toggle lever

Removal and Installation

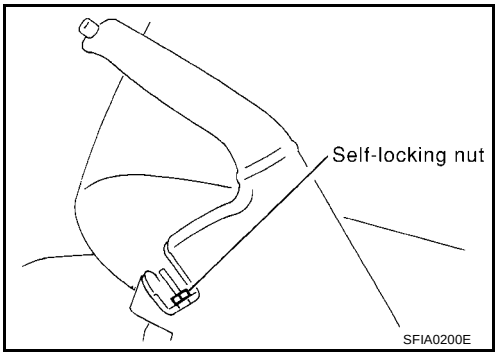
EFS0017N

REMOVAL

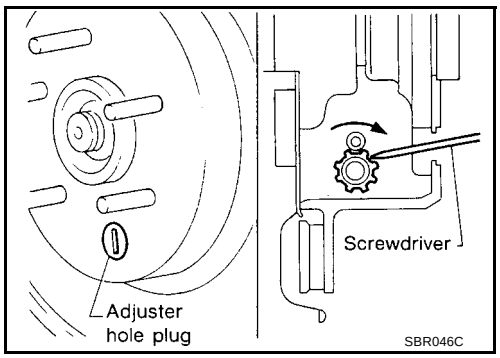
CAUTION:

Clean dust on brake disc and back plate with a vacuum dust collector.

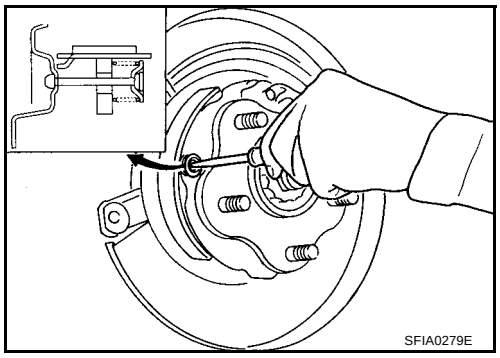
1. Remove wheel. With parking brake pedal completely returned, loosen self-locking adjusting nut and slacken cable.
2. Remove rear disc brake caliper.



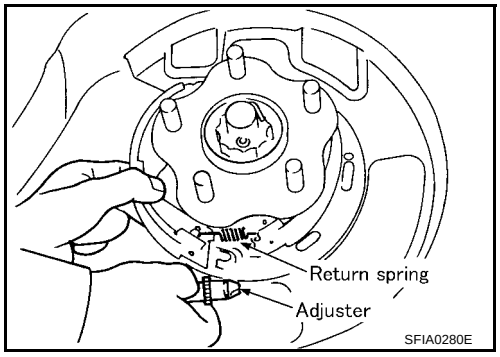
3. Remove disc rotor. If it cannot be removed, do as follows:
   1. Remove adjusting plug attached to disc as shown in the figure. Using a screwdriver, compress and rotate star wheel on adjuster assembly in direction B. Then retract the brake shoes.



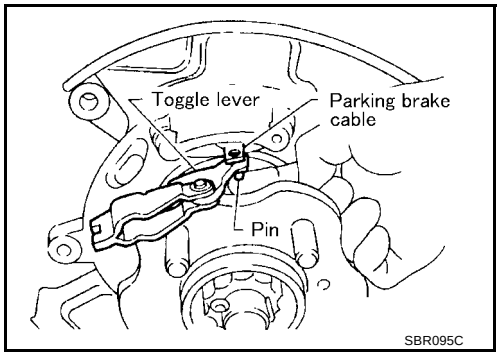
4. Push retainer as shown in the figure to compress spring. Remove brake shoe holding pins from mounting holes in back plate.



5. Pull brake shoes apart and remove adjuster assembly. Then remove lower-side return spring.



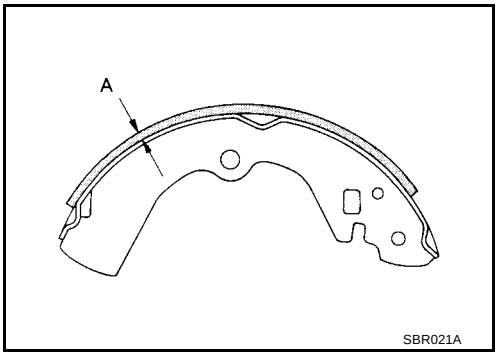
6. Remove torque lever-to-parking brake cable connecting pin as shown in the figure, and remove torque lever.



INSPECTION

- Visually check lining for abnormal wear, damage, and peeling.
- Using a scale, check thickness of lining.

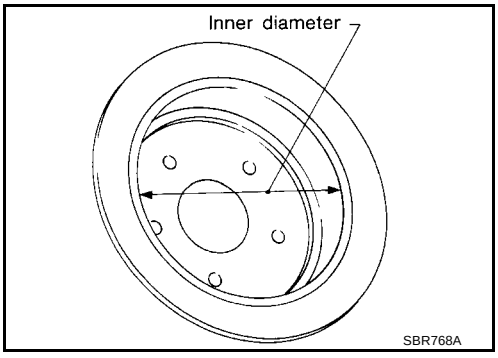
Standard lining thickness : 3.5 mm (0.138 in)
Lining limit (A) : 1.5 mm (0.059 in)



CAUTION:
If necessary, remove brake shoe, and check as follows.

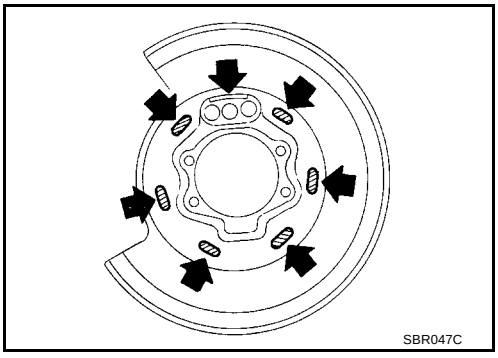
- Check shoe sliding surface for abnormal wear and damage.
- Check anchor pin for abnormal wear and corrosion.
- Check return spring for sagging.
- Check adjuster for rough operation.
- Visually check inside of drum for abnormal wear, damage, and cracks. Using a pair of vernier calipers, check inside of drum.

Standard inner diameter : 172 mm (6.77 in)
Maximum inner diameter : 173 mm (6.81 in)

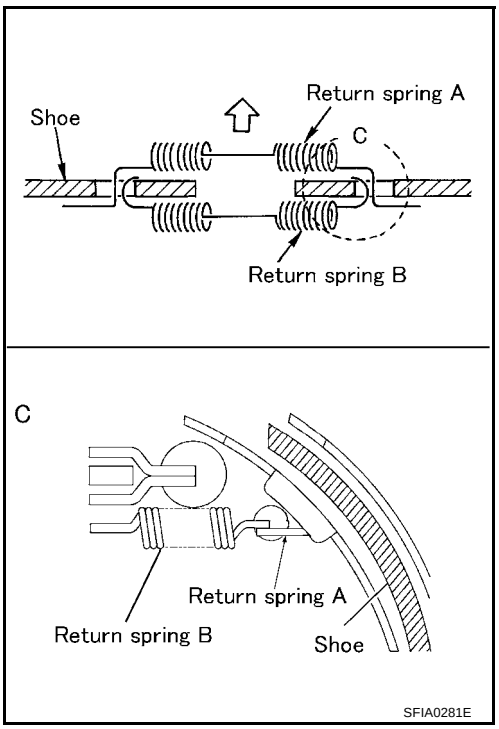


INSTALLATION

1. Apply brake grease to the contact area of show at left.

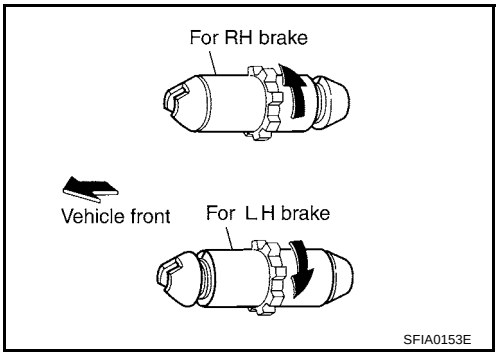


2. Attach upper-side return springs to brake shoe as shown in the figure. Be sure to install return spring B over return spring A.

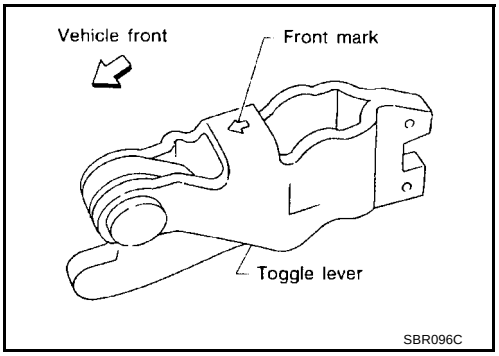


3. Orientation of adjusters is different for LH adjuster and RH adjuster. Assemble adjusters so that threaded part is expanded when rotating it to direction shown by arrow. Contract adjuster to assemble.

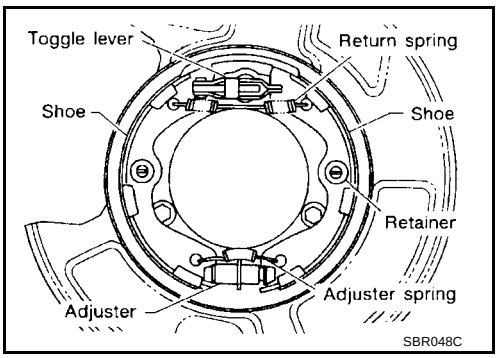
CAUTION:
When adjuster was disassembled, apply brake grease to thread.



4. Assemble torque lever in direction of installation as shown in the figure.

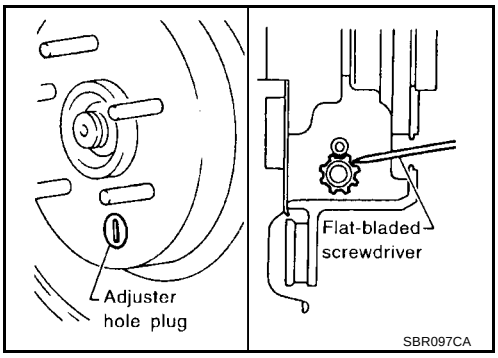


5. After assembly, be sure that each part is installed properly.



6. Fix disc rotor with wheel nut, and adjust brake shoe clearance. Remove adjusting hole plug. Turn star wheel on adjuster in direction A (for both wheels) until disc rotor locks. Then turn star wheel in the opposite direction for 6 notches.
7. Rotate disc rotor to be sure that there is no drag. Then install adjusting hole plug.
8. Adjust parking brake cable.

CAUTION:
If brake shoes were replaced with new ones. Carry out break-in operation.



SERVICE DATA AND SPECIFICATIONS (SDS)

PFP:00030

Parking Brake

EFS000D2

Type		DS17H
Brake lining	Standard thickness (new)	3.5 mm (0.138 in)
	Repair limit thickness	1.5 mm (0.059 in)
Drum (disc)	Standard inner diameter (new)	172 mm (6.7 7in)
	Wear limit of inner diameter	173 mm (6.81 in)
Lever stroke [operating force 196 N (20 kg,44 lb)]		6 to 7 notches
Total stroke		18 notches
Brake warning lamp stroke		Within 1 notch