



Technical Service BULLETIN

September 10, 2004

Title: **BRAKE ROTOR RUST**
Models: **All ECHO**

T S B

BRAKES
BR006-04

Introduction Some customers may experience brake vibration on all model year ECHO vehicles due to front brake rotor rust. This condition may occur after the customer has driven the vehicle for an extended period of time in an environment where road salt is used for snow or ice removal. To correct this concern, it is recommended to replace the rotors and pads as a set.

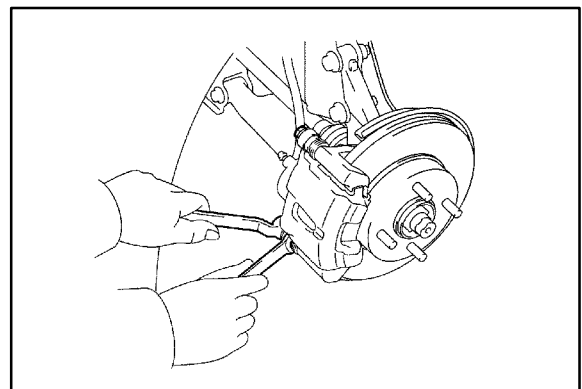
- Applicable Vehicles**
- **All ECHO** vehicles.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
N/A	Not Applicable to Warranty	-	-	-	-

Repair Procedure

- 1. Remove Front Wheel.**
 - A. Remove the wheel and temporarily fasten the disc with hub nuts.
- 2. Remove Brake Caliper.**
 - A. Hold the sliding pin and loosen the 2 installation bolts, and remove the 2 installation bolts.
 - B. Remove the caliper from the torque plate.
 - C. Support the brake caliper securely.
- 3. Remove Brake Pads With Anti-squeal Shims.**



Repair Procedure
(Continued)

4. Replace Disc Rotor.

- A. Remove the 2 mounting bolts and torque plate from the knuckle.
- B. Remove the disc rotor.
- C. Install the new disc rotor.

NOTE:

Check rotor runout to ensure new rotor is properly phase matched to the hub assembly. Refer to the Technical Information System (TIS), applicable model year ECHO Repair Manual: *Brake: Front Brake Caliper: Inspection.*

- D. Install torque plate to the knuckle with the 2 mounting bolts.

Torque: 88 N•m (900 kgf•cm, 65 ft•lbf)

5. Install New Pads.

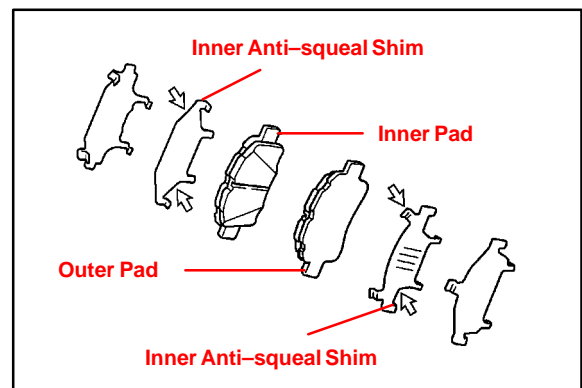
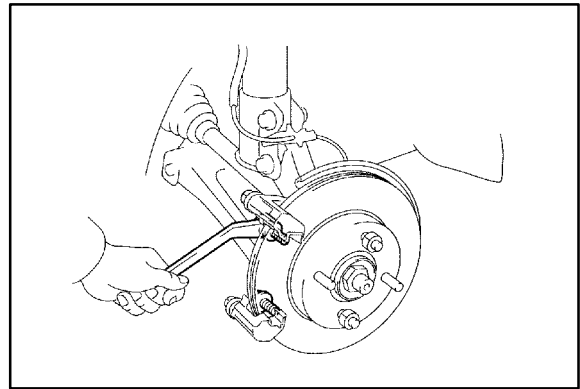
NOTE:

When replacing worn pads, the anti-squeal shims and pad wear indicator plates must be replaced together with the pads.

- A. Apply disc brake grease to both sides of the anti-squeal shims.
- B. Install the 2 anti-squeal shims on the outer pad.
- C. Install the 2 anti-squeal shims on the inner pad.
- D. Install the inner pad with the pad wear indicator plate facing upward.
- E. Install the outer pad.

NOTE:

There should be no oil or grease adhering to the friction surfaces of the pads or the disc.



**Repair
Procedure**
(Continued)

6. Install Caliper.

- A. Draw out a small amount of brake fluid from the reservoir.
- B. Press in the piston with a hammer handle or similar implement.

HINT:

If the piston is difficult to push in, loosen the bleeder plug and push in the piston while letting some brake fluid escape.

- C. Install the caliper.
- D. Hold the sliding pin and install the installation bolt.

Torque: 34 N•m (350 kgf•cm, 25 ft•lbf)

7. Install Front Wheel.

Torque: 103 N•m (1,050 kgf•cm, 76 ft•lbf)

