

Section : Chassis/
Power Train
Ref. No. : CP-1025
Date : Aug., 2001
Page : 1 of 8

Area Application : General, G.C.C. Countries, Australia

Model Name : HIACE

Model Code : ALL

Subject : SUPPLEMENT FOR REPAIR MANUAL (REAR AXLE SHAFT)

This Service Bulletin is to inform you of the repair procedure for Rear Axle Shaft.

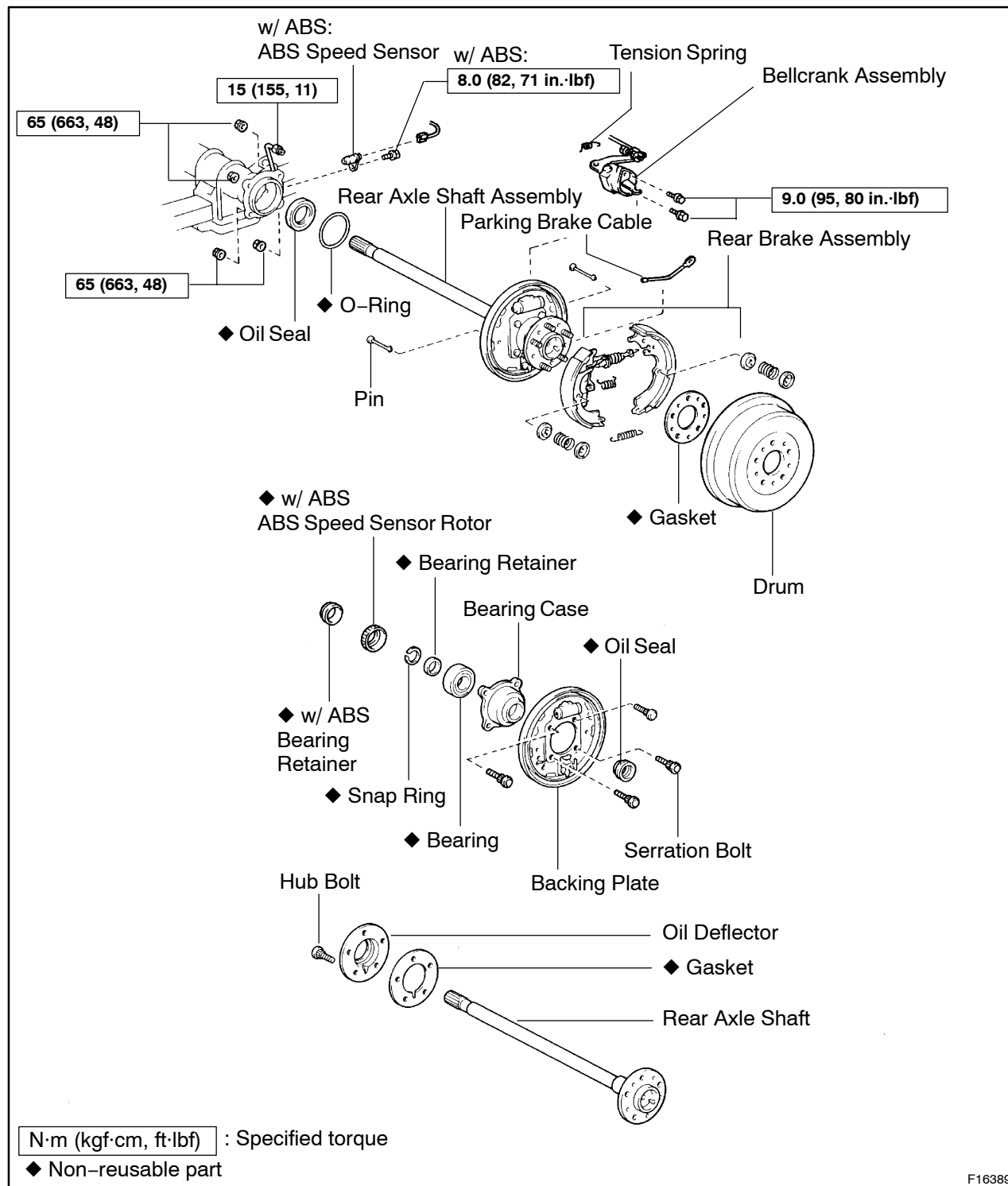
The attached pages will be applied to the following manual.

| Pub. No. | Publication Name |
|----------|---|
| RM156E | HIACE Repair Manual For Chassis & Body |
| RM471E | HIACE Repair Manual Supplement for Chassis & Body |
| RM670E | HIACE Repair Manual Supplement for Chassis & Body |
| RM709E | HIACE Repair Manual Supplement for Chassis & Body |

Production Effective :

| VIN | Production Date |
|-----|-------------------|
| — | From August, 2001 |

REAR AXLE SHAFT COMPONENTS

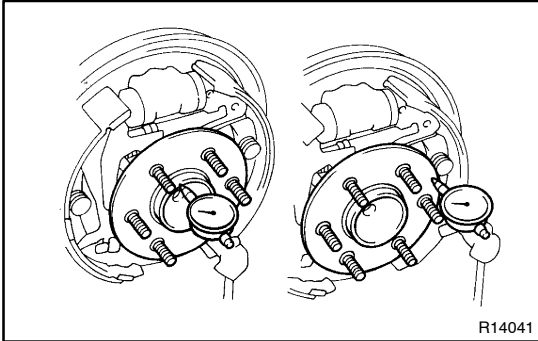


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REMOVAL

1. REMOVE REAR WHEEL AND BRAKE DRUM

Torque: 100 N·m (1,050 kgf·cm, 76 ft·lbf)



2. CHECK BEARING BACKLASH AND AXLE SHAFT DEVIATION

- (a) Using a dial indicator, check the backlash in the bearing shaft direction.

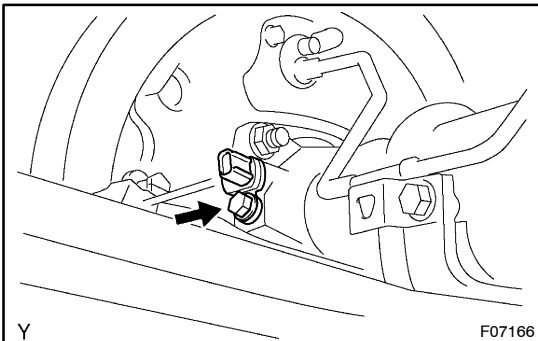
Maximum: 0.7 mm (0.027 in.)

If the backlash exceeds the maximum, replace the bearing.

- (b) Using a dial indicator, check the deviation at the surface of the axle shaft outside the hub bolt.

Maximum: 0.1 mm (0.004 in.)

If the deviation is the maximum, replace the axle shaft.



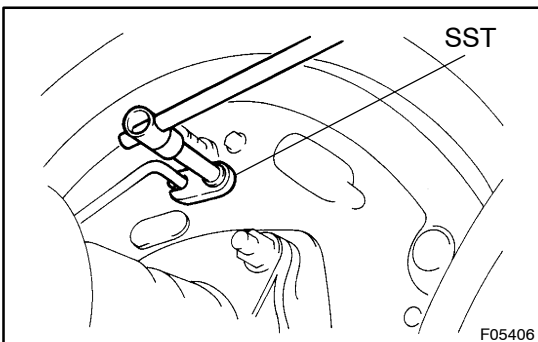
3. w/ ABS:

REMOVE ABS SPEED SENSOR

- (a) Disconnect the ABS speed sensor connector.
(b) Remove the bolt and ABS speed sensor from the rear axle housing.

Torque: 8.0 N·m (82 kgf·cm, 71 in·lbf)

4. REMOVE REAR BRAKE ASSEMBLY (Refer to Pub. No. RM156E on BR section)

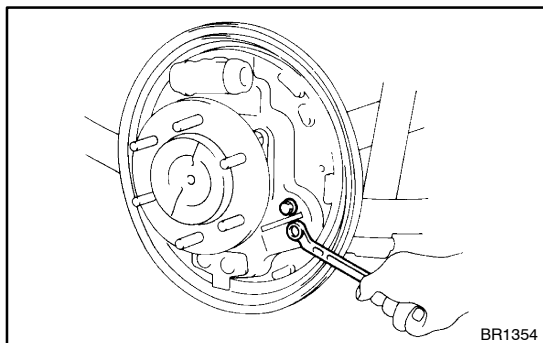


5. DISCONNECT BRAKE LINE

- (a) Using SST, disconnect the brake line from the wheel cylinder.

SST 09023-00100

Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)



6. REMOVE BELLCRANK ASSEMBLY

- (a) Remove the tension spring.
- (b) Remove the 2 bolts and the parking brake bellcrank assembly from the backing plate.

Torque: 9.0 N·m (95 kgf·cm, 80 in·lbf)

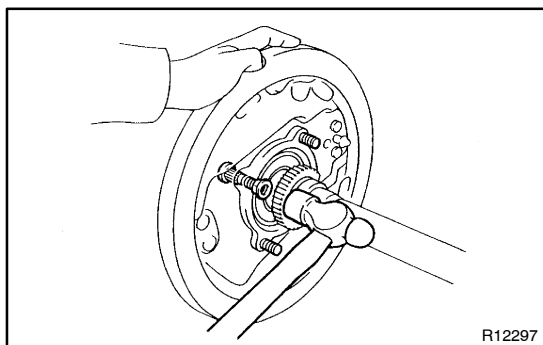
7. REMOVE REAR AXLE SHAFT ASSEMBLY

- (a) Remove the 4 backing plate mounting nuts.
Torque: 65 N·m (663 kgf·cm, 48 ft·lbf)
- (b) Pull out the rear axle shaft assembly from the rear axle housing.

NOTICE:

Be careful not to damage the oil seal.

8. REMOVE O-RING FROM REAR AXLE HOUSING



DISASSEMBLY

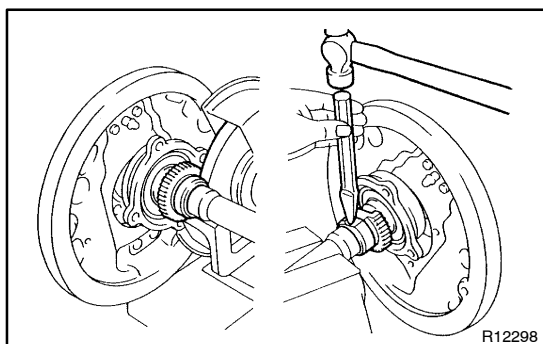
1. w/ ABS:

REMOVE BEARING RETAINER (DIFFERENTIAL SIDE) AND ABS SPEED SENSOR ROTOR

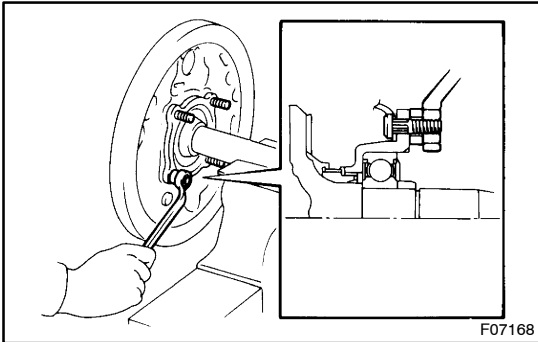
- (a) Attach the 4 nuts to the serration bolts and remove the serration bolts from the backing plate using a hammer.

NOTICE:

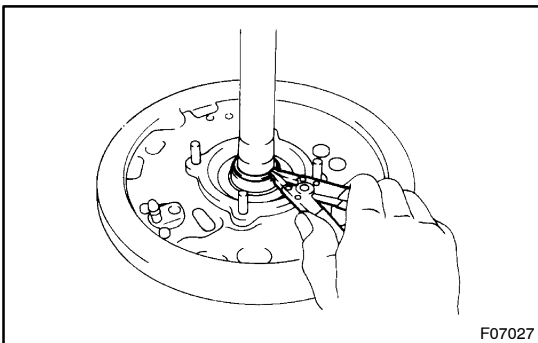
Do not reuse the nuts previously removed from the vehicle.



- (b) Grind the retainer and sensor rotor surfaces using a grinder, then chisel them out with a chisel and hammer.

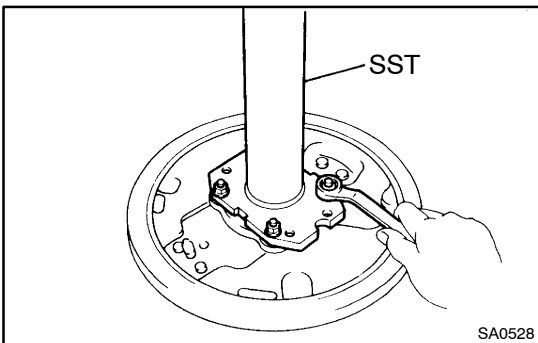


- (c) Attach the washer and nut to the serration bolts, then torque the nut to install the serration bolts to the backing plate.
- (d) Remove the 4 nuts from the serration bolts.



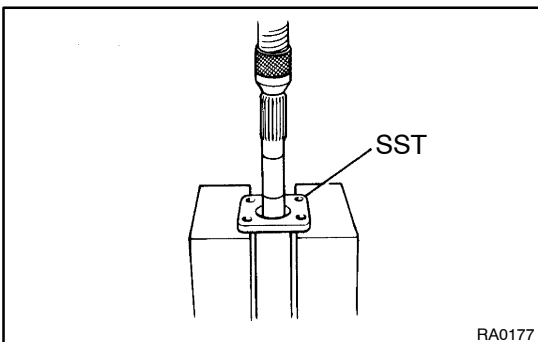
2. REMOVE SNAP RING FROM AXLE SHAFT

Using a snap ring expander, remove the snap ring.

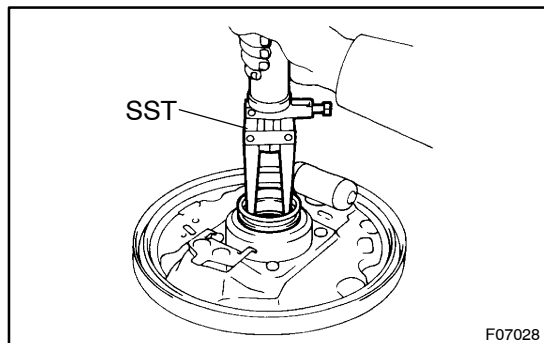


3. REMOVE REAR AXLE SHAFT FROM BACKING PLATE

- (a) Position SST on the backing plate with the 4 nuts.
SST 09521-25011



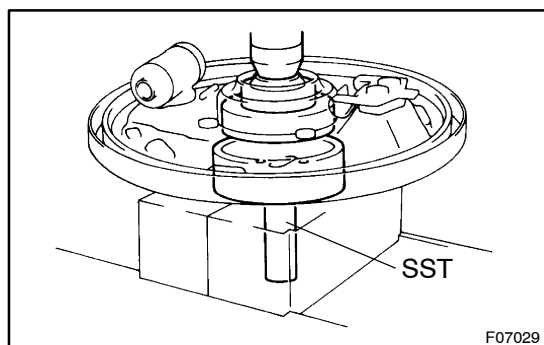
- (b) Using a press, remove the rear axle shaft with the bearing retainer from the backing plate.
- (c) Remove the SST.
SST 09521-25011



4. REMOVE OUTER OIL SEAL

Using SST, remove the oil seal from the bearing case.

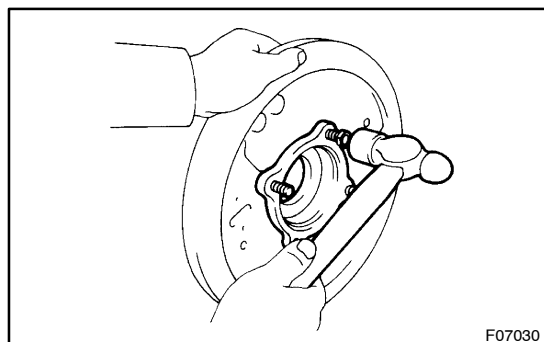
SST 09308-00010



5. REMOVE REAR AXLE BEARING

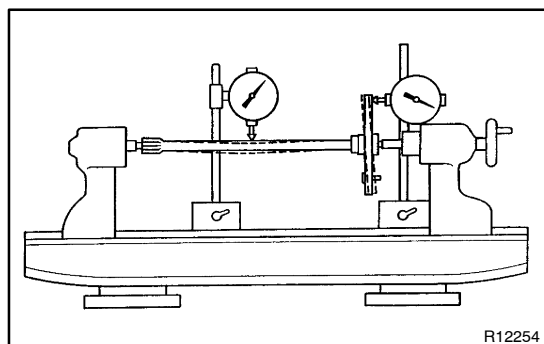
Using SST and a press, remove the bearing.

SST 09223-56010, 09950-60010
(09951-00560)



6. REMOVE BEARING CASE

- (a) Install the 4 nuts to the serration bolts.
- (b) Using a hammer, remove the serration bolts and bearing case.



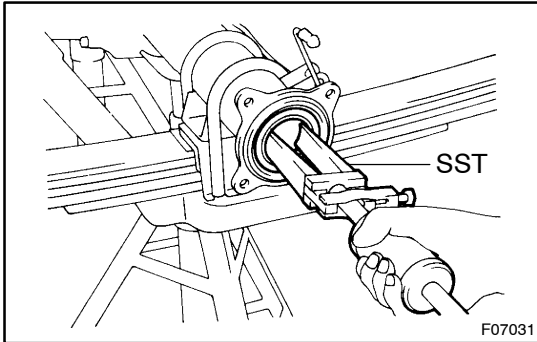
INSPECTION

INSPECT AXLE SHAFT AND FLANGE FOR WEAR, DAMAGE OR RUNOUT

Maximum shaft runout: 2.0 mm (0.079 in.)

Maximum flange runout: 0.1 mm (0.004 in.)

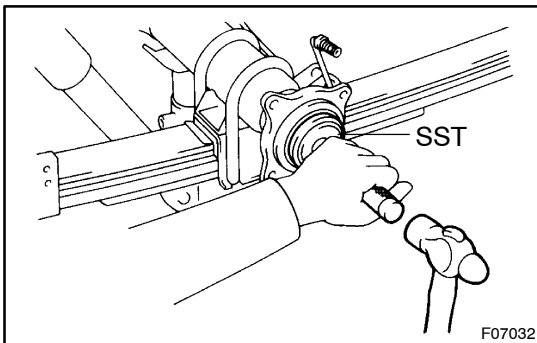
If the rear axle shaft or flange are damaged or worn, or if runout is greater than maximum, replace the rear axle shaft.



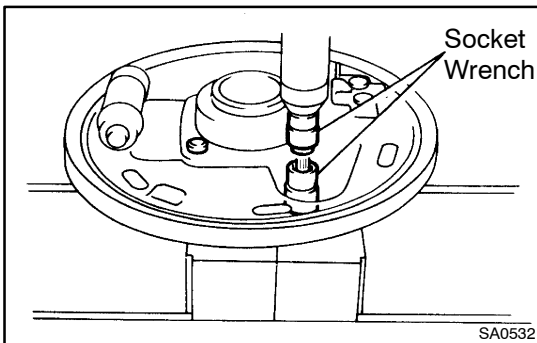
REPLACEMENT

REPLACE OIL SEAL (INNER SIDE)

- (a) Using SST, remove the oil seal.
SST 09308-00010



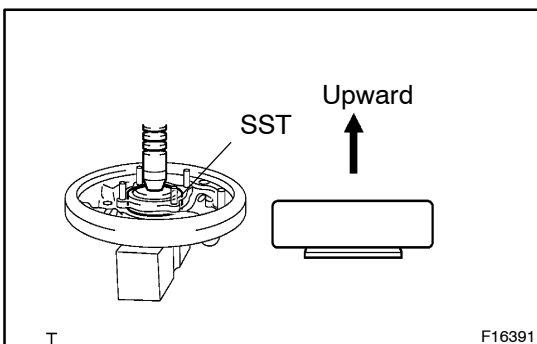
- (b) Coat the lip of a new oil seal with MP grease.
(c) Using SST and a hammer, install a new oil seal.
SST 09950-60020 (09951-00710),
09950-70010 (09951-07150)



REASSEMBLY

1. INSTALL BEARING CASE

Position the backing plate on the bearing case and using a press and 2 socket wrenches, install the 4 serration bolts.



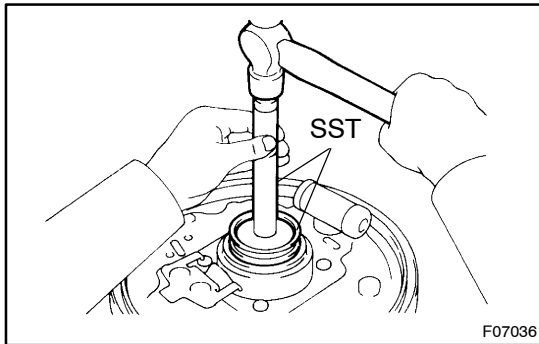
2. INSTALL REAR AXLE BEARING

Using SST and a press, install a new bearing.

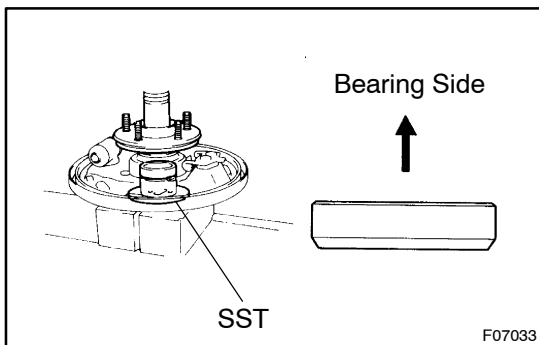
SST 09515-30010, 09950-60020
(09951-00890)

NOTICE:

- Be sure to install a new bearing in the correct direction, as shown in the illustration.
- Be careful not to damage the wheel cylinder.

**3. INSTALL NEW OUTER OIL SEAL**

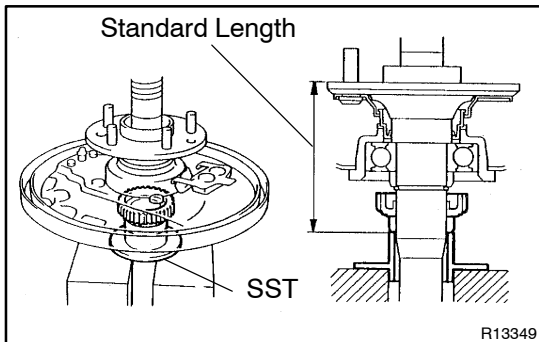
- (a) Coat the lip of the oil seal with MP grease.
- (b) Using SST and a hammer, install a new oil seal.
SST 09950-60010 (09951-00610),
09950-70010 (09962-07150)

**4. INSTALL REAR AXLE SHAFT IN BACKING PLATE**

- (a) Apply MP grease to the oil seal lip.
- (b) Install the backing plate and bearing retainer on the rear axle shaft.
- (c) Using SST and a press, install the rear axle shaft into the backing plate.
SST 09316-60011 (09316-00051)

5. INSTALL SNAP RING

Using snap ring pliers, install a new snap ring on the rear axle shaft.

**6. w/ ABS:****INSTALL ABS SPEED SENSOR ROTOR AND BEARING RETAINER (DIFFERENTIAL SIDE)**

Using SST and a press, install a new sensor rotor and new bearing retainer to the axle shaft.

SST 09316-60011 (09316-00051)

Standard length: 122.3 ± 1.0 mm (4.815 ± 0.039 in.)

INSTALLATION

Installation is in the reverse order of removal.

HINT:

- After installation, bleed the brake system (See Pub. No. RM156E on page BR-7).
- w/ ABS
After installation, check ABS speed sensor signal (See Pub. No. RM670E on page DI-52).