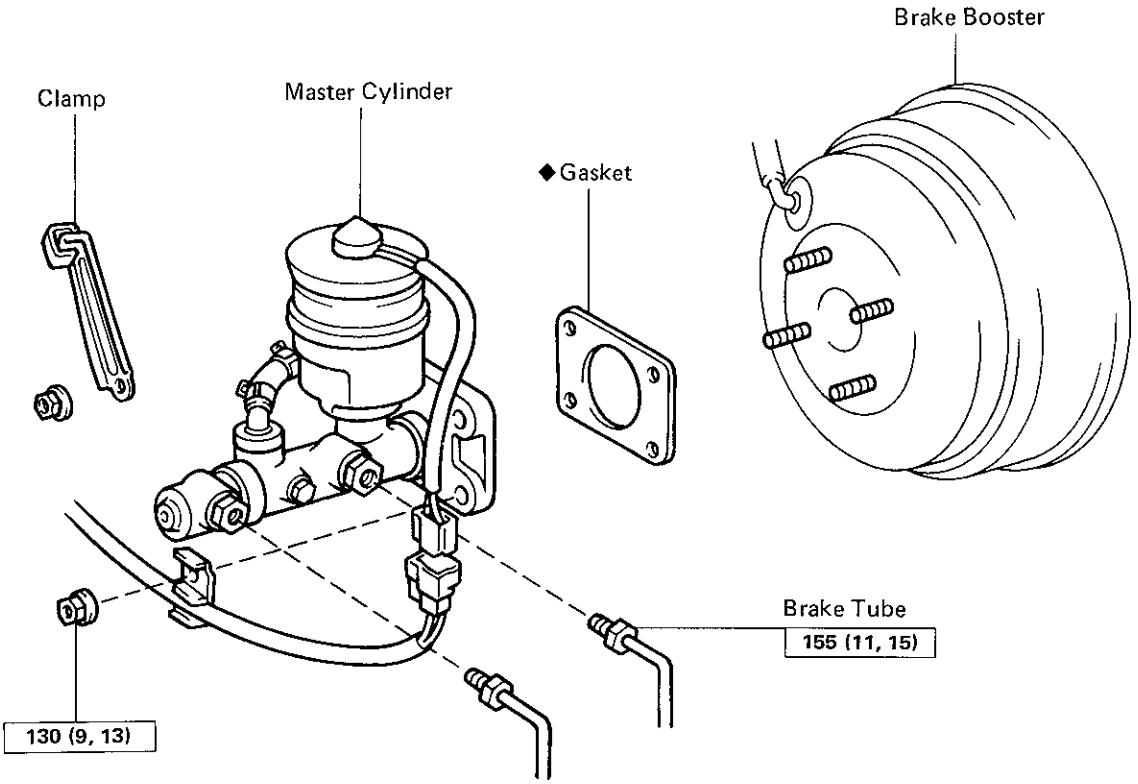
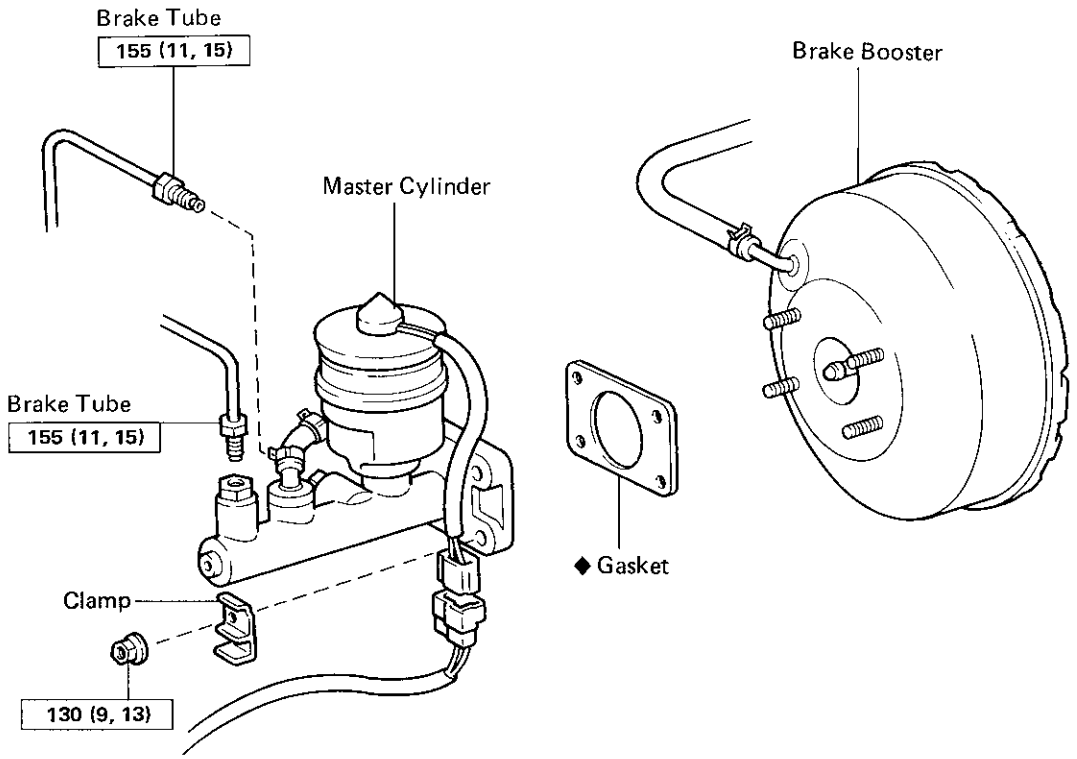
# MASTER CYLINDER

## COMPONENTS

Ex. 2L-T Engine (RHD)




2L-T Engine (RHD)




155 (11, 15) : Specified torque

◆ Non-reusable part

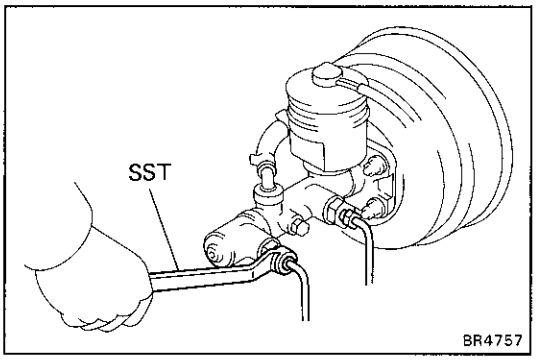
BR4799
BR4800

## REMOVAL OF MASTER CYLINDER

1. **DISCONNECT LEVEL WARNING SWITCH CONNECTOR**

2. **TAKE OUT FLUID WITH SYRINGE**

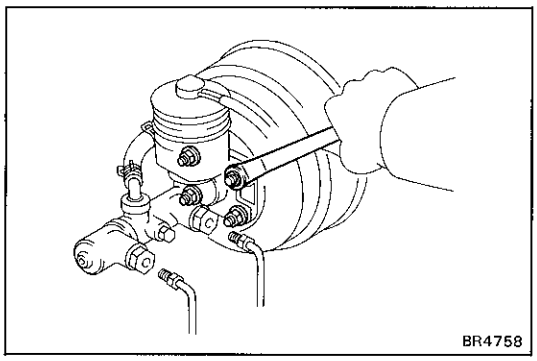
   **NOTICE: Do not let brake fluid remain on a painted surface. Wash it off immediately.**




3. **DISCONNECT TWO BRAKE TUBES**

   Using SST, disconnect two brake tubes from the master cylinder.

   SST 09751-36011

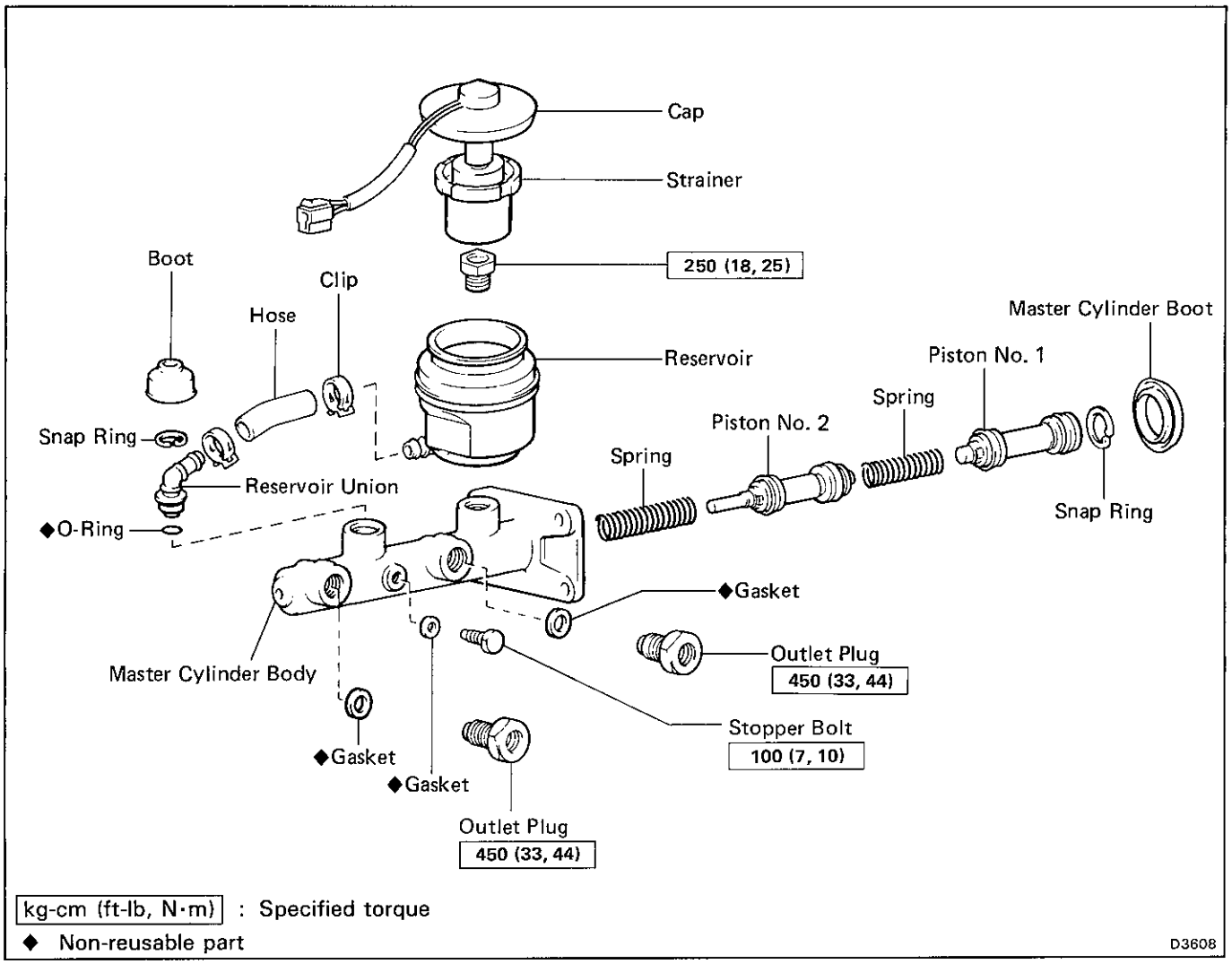


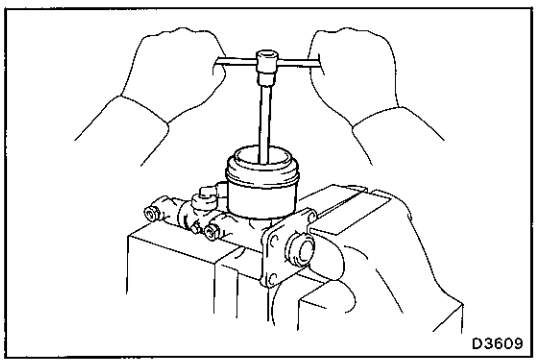

4. **REMOVE MASTER CYLINDER**

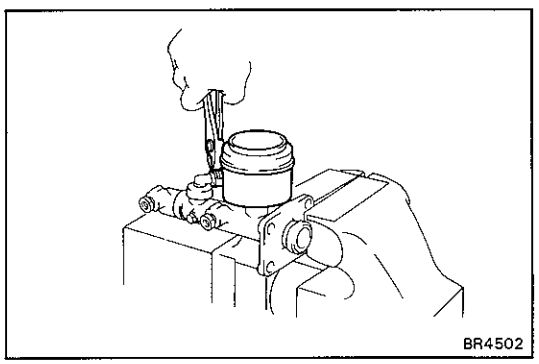
   (a) Remove the four nuts.

   (b) Remove the master cylinder, clamp and gasket from the brake booster.

## DISASSEMBLY OF MASTER CYLINDER




**1. PLACE CYLINDER IN VISE**

**2. REMOVE RESERVOIR AND HOSE**

(a) Using pliers, slide the union side hose clip toward the reservoir.

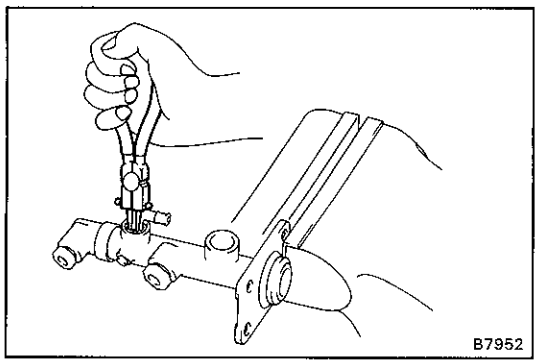
(b) Remove the cap and strainer.

(c) Remove the set bolt from the reservoir.

(d) Remove the reservoir with the hose from the master cylinder.

(e) If necessary, remove the hose from the reservoir.

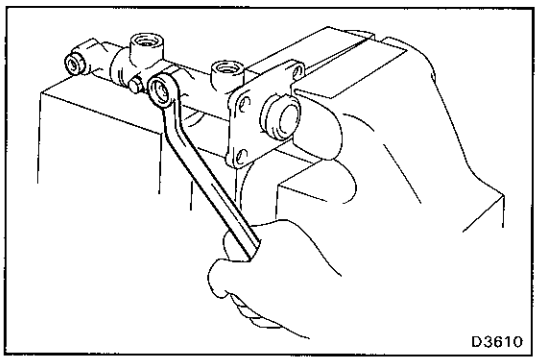
**3. REMOVE BOOT**




**4. REMOVE RESERVOIR UNION**

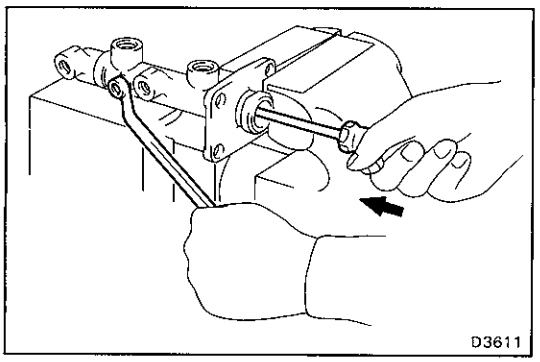
(a) Using snap ring pliers, remove the snap ring.

(b) Remove the reservoir union and O-ring.




**5. REMOVE OUTLET PLUGS**

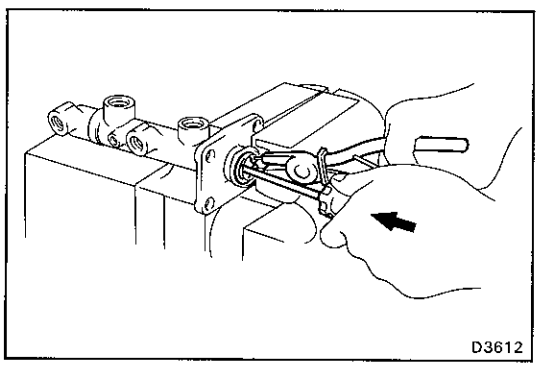
Remove the two outlet plugs and gaskets.




**6. REMOVE PISTON STOPPER BOLT**

Using a screwdriver, push the pistons in all the way, and remove the piston stopper bolt and gasket.

HINT: Tape the screwdriver tip before use.

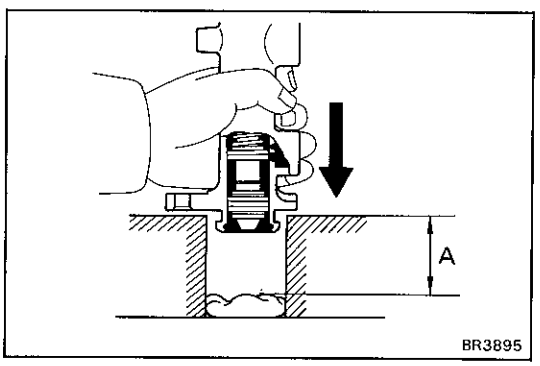



**7. REMOVE TWO PISTONS AND SPRINGS**

(a) Push in the piston with a screwdriver and remove the snap ring with snap ring pliers.

(b) Remove the No.1 piston and spring by hand, pulling straight out, not at an angle.

**NOTICE: If pulled out at an angle, there is posibility of damaging the cylinder.**




(c) Place a rag and two wooden block on the work table and lightly tap the cylinder flange against the block edges until the piston drops out of the cylinder.

HINT: Make sure the distance (A) from the rag to the top of the block is at least 100 mm (0.394 in.).

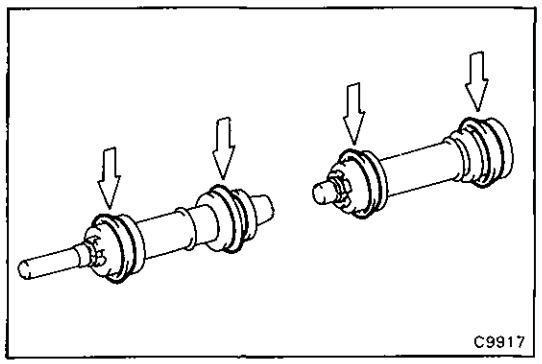
## INSPECTION OF MASTER CYLINDER COMPONENTS

HINT: Clean the disassembled parts with compressed air.

1. **INSPECT CYLINDER BORE FOR RUST AND SCORING**

2. **INSPECT CYLINDER FOR WEAR OR DAMAGE**

   If necessary, clean or replace the cylinder.




## ASSEMBLY OF MASTER CYLINDER

(See page BR-12)

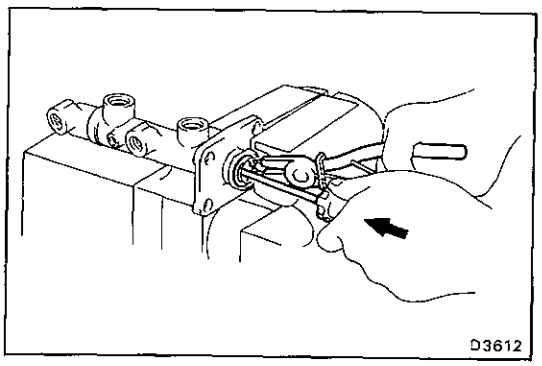
1. **APPLY LITHIUM SOAP BASE GLYCOL GREASE TO RUBBER PARTS INDICATED BY ARROWS**

2. **INSTALL TWO SPRING AND PISTONS**

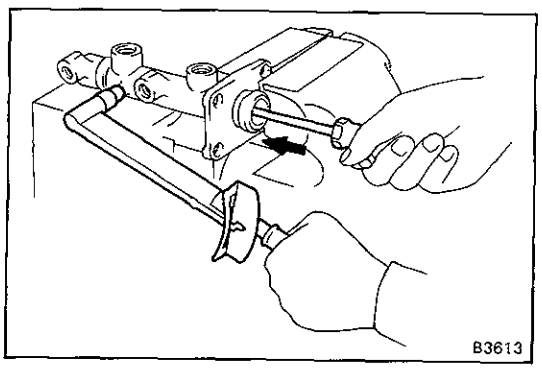
   **NOTICE: Be careful not to damage the rubber lips on the pistons.**

   (a) Insert two springs and pistons straight in, not at an angle.

   **NOTICE: If inserted at an angle, there is posibility of damaging the cylinder bore.**




   (b) Push in the piston with a screwdriver and install the snap ring with snap ring pliers.

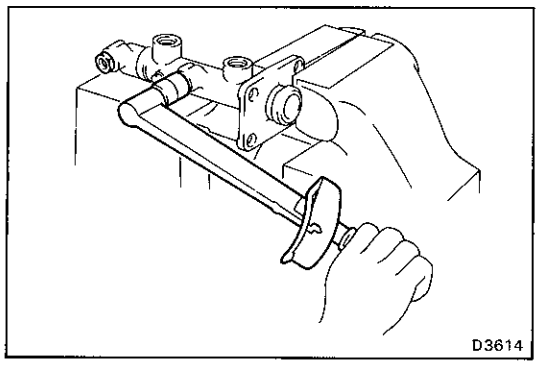



3. **INSTALL PISTON STOPPER BOLT AND NEW GASKET**

   Using a screwdriver, push the pistons in all the way and install the piston stopper bolt over a new gasket.

   Torque the bolt.

   **Torque: 100 kg-cm (7 ft-lb, 10 N·m)**

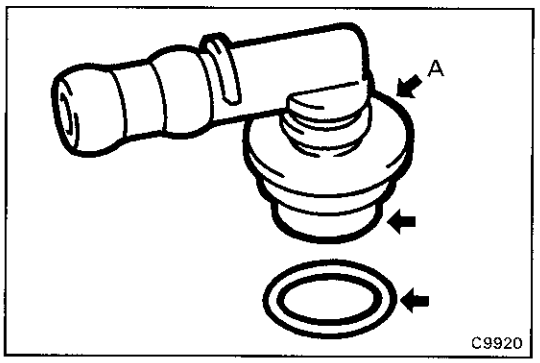



**4. INSTALL OUTLET PLUGS**

Install the two outlet plugs over a new gasket.

Torque the plugs.

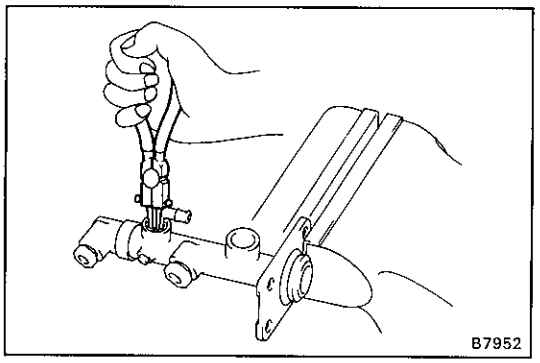
**Torque: 450 kg-cm (33 ft-lb, 44 N·m)**




**5. INSTALL RESERVOIR UNION**

(a) Apply lithium soap base glycol grease to the reservoir union.

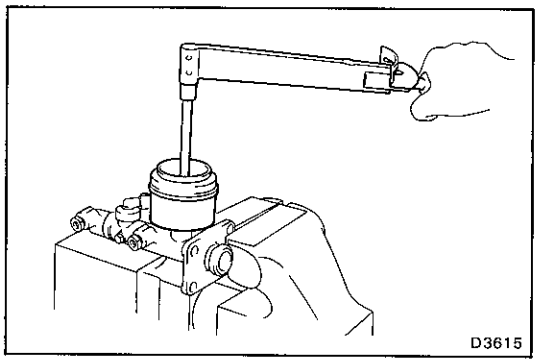
(b) Pack the lithium soap base glycol grease on the union (A).




(c) Install the union to the master cylinder through the new O-ring.

(d) Using snap ring pliers, install the snap ring.

(e) Install the bolt.



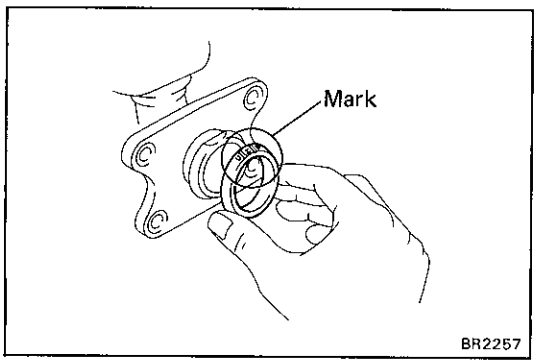

**6. INSTALL RESERVOIR AND HOSE**

(a) Connect the hose to union and reservoir.

(b) Install the reservoir on the master cylinder with the "MAX" mark facing toward the front.

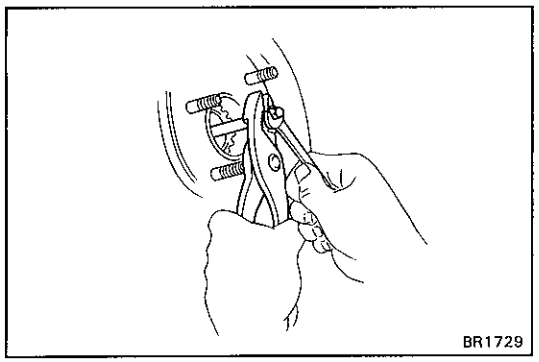
(c) Install the gasket and torque the bolt.

**Torque: 250 kg-cm (18 ft-lb, 25 N·m)**



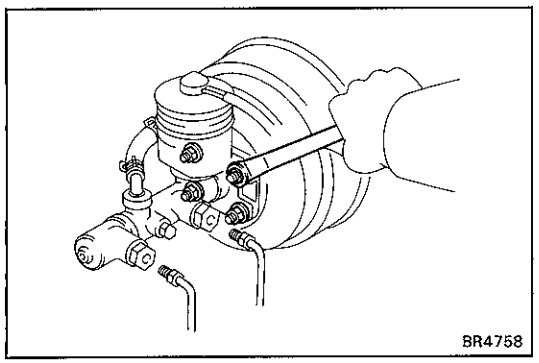

**7. CLEAN OUT GROOVE ON LOWER INSTALLATION SURFACE OF MASTER CYLINDER**

**8. CONFIRM THAT " UP " MARK ON MASTER CYLINDER BOOT IS IN CORRECT POSITION**




## INSTALLATION OF MASTER CYLINDER

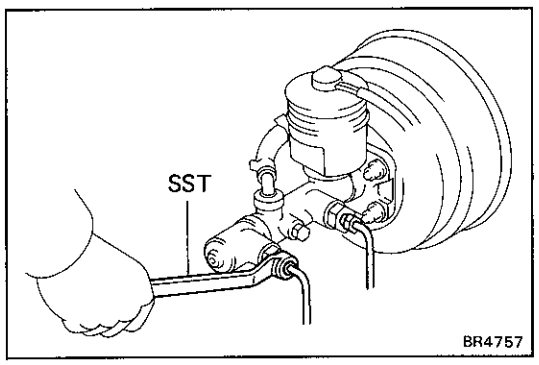
1. **ADJUST LENGTH OF BRAKE BOOSTER PUSH ROD BEFORE INSTALLING MASTER CYLINDER**
**(See page BR-47)**




2. **INSTALL MASTER CYLINDER**

Install the master cylinder and clamp on the brake booster with the four nuts over a new gasket.

**Torque: 130 kg-cm (9 ft-lb, 13 N·m)**




3. **CONNECT TWO BRAKE TUBES**

(a) Finger tighten the union nuts.

(b) Using SST, torque the union nuts.

SST 09751-36011

**Torque: 155 kg-cm (11 ft-lb, 15 N·m)**

4. **CONNECT LEVEL WARNING SWITCH CONNECTOR**

5. **FILL BRAKE RESERVOIR WITH BRAKE FLUID AND BLEED BRAKE SYSTEM**
**(See page BR-7)**

6. **CHECK FOR FLUID LEAKAGE**

7. **CHECK AND ADJUST BRAKE PEDAL**