

# BRAKE MASTER CYLINDER SUB-ASSY OVERHAUL

3208L-01

## 1. DRAIN BRAKE FLUID

### NOTICE:

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

## 2. REMOVE AIR CLEANER ASSY (LHD STEERING POSITION TYPE)

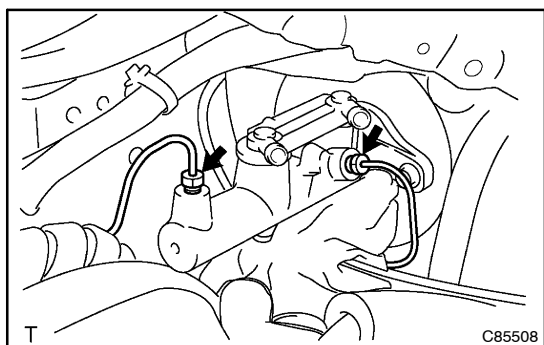
(a) 1AZ-FE ENGINE TYPE (See page 14-20)

(b) 1CD-FTV ENGINE TYPE (See page 14-91)

## 3. REMOVE CHARCOAL CANISTER ASSY (LHD (1AZ-FE) STEERING POSITION TYPE) (See page 14-20)

## 4. REMOVE BRAKE MASTER CYLINDER SUB-ASSY

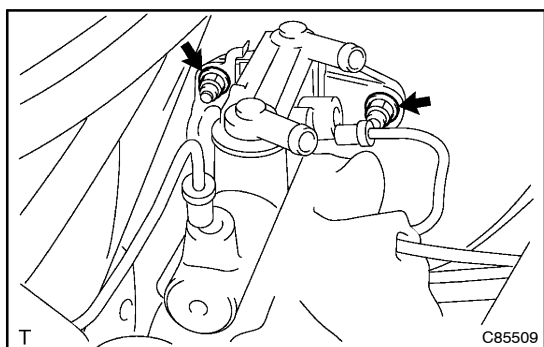
(a) Remove the 2 clips and disconnect the 2 reservoir tubes.



(b) Using SST, disconnect the 2 brake tubes from the master cylinder.

SST 09023-00100

(c) Separate the accelerator control cable from the clamp. (RHD STEERING POSITION TYPE)



(d) Remove the 2 nuts and accelerator control cable clamp, and pull out the master cylinder sub-assy. (RHD STEERING POSITION TYPE)

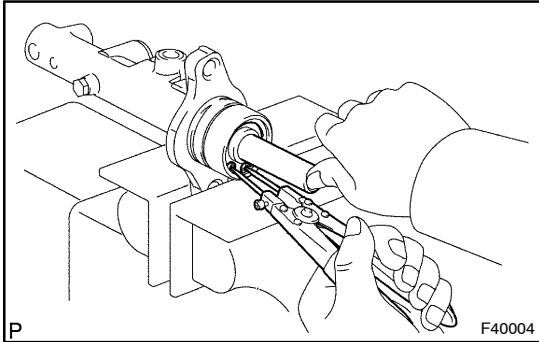
(e) Remove the 2 nuts and vacuum check valve bracket, and pull out the master cylinder sub-assy. (LHD STEERING POSITION TYPE)

## 5. REMOVE BRAKE MASTER CYLINDER UNION

(a) Remove the screw and union.

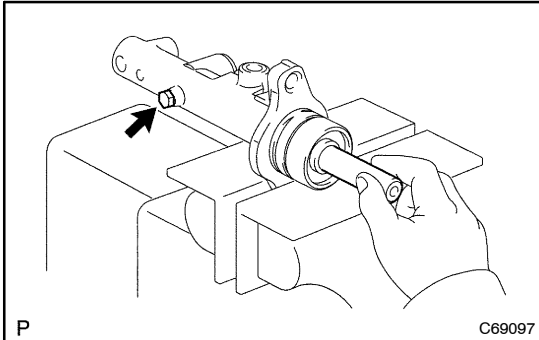
(b) Remove the 2 master cylinder reservoir grommets from the master cylinder body.

## 6. REMOVE MASTER CYLINDER RESERVOIR GROMMET



## 7. REMOVE BRAKE MASTER CYLINDER KIT

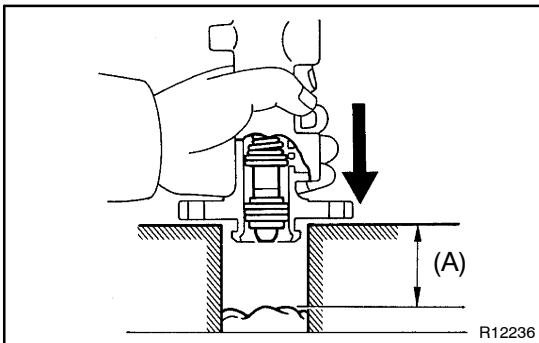
- (a) Place master cylinder in vise.
- (b) Remove the O-ring from the master cylinder body.
- (c) Push in the piston and using snapping pliers, remove the snapping.



- (d) Push in the piston and remove the piston stopper bolt and gasket.
- (e) Remove the No.1 piston sub-assy, pulling straight out not at an angle.

### NOTICE:

**If pulled out at an angle, there is a possibility that the cylinder bore could be damaged.**



- (f) Place a rag and 2 wooden blocks on the work table and lightly edges until the No.2 piston sub-assy drops out of the cylinder.

### HINT:

Make sure the distance (A) from the rag the top of the blocks is at least 100 mm (3.94 in.).

### NOTICE:

**If pulled out at an angle, there is a possibility that the cylinder bore could be damaged.**

## 8. INSPECT MASTER CYLINDER BODY

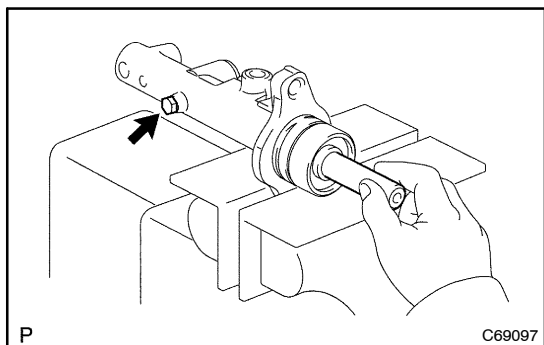
- (a) Check the cylinder bore for rust or scoring.

## 9. INSTALL BRAKE MASTER CYLINDER KIT

- (a) Place master cylinder in vise.
- (b) Apply the lithium soap base glycol grease on are new No.1 and No.2 piston sub-assy.
- (c) Install the No.2 and No.1 piston sub-assy.

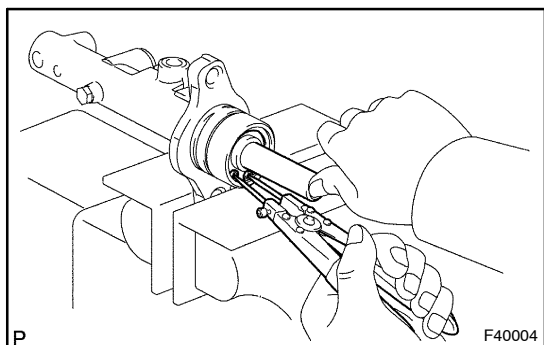
### NOTICE:

- **If the piston is inserted at an angle, there is a possibility that the cylinder bore could be damage.**
- **Be careful not to damage the rubber lips on the pistons.**



- (d) Push in the piston and install a new gasket and a new piston stopper bolt.

**Torque: 10 N·m (102 kgf·cm, 7 ft·lbf)**



- (e) Push in the piston and using snapping pliers, install the snap ring.
- (f) Apply the lithium soap base glycol grease on a new O-ring and install the O-ring to the master cylinder.

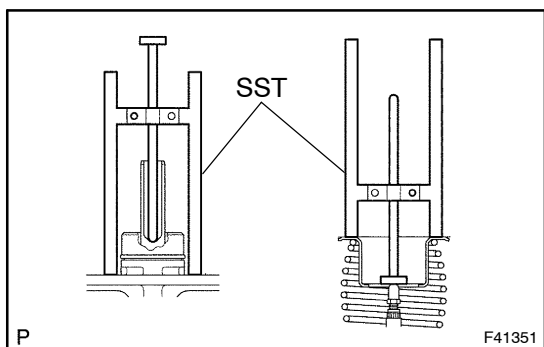
## 10. INSTALL MASTER CYLINDER RESERVOIR GROMMET

- (a) Apply the lithium soap base glycol grease on 2 new brake master cylinder reservoir grommets.
- (b) Install the 2 brake master cylinder reservoir grommets to the master cylinder body.

## 11. INSTALL BRAKE MASTER CYLINDER UNION

- (a) Install the master cylinder union to the master cylinder body with the screw.

**Torque: 1.7 N·m (17.5 kgf·cm, 15.2 in·lbf)**



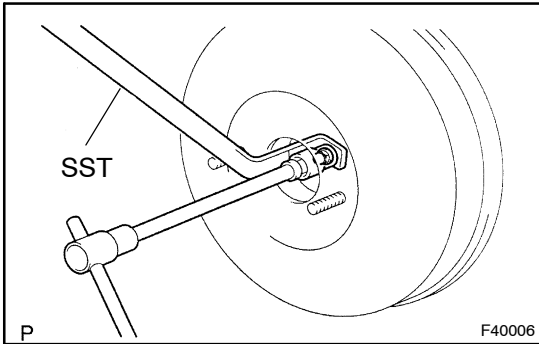
## 12. INSPECT AND ADJUST BRAKE BOOSTER PUSH ROD

- (a) Set SST, on the master cylinder, lower the pin of the SST until it slightly touches the piston.
- SST 09737-00011
- (b) Apply the chalk to the flat surfaced tip of the SST pin.
- (c) Turn SST upside down and place it clearance between the brake booster and SST.

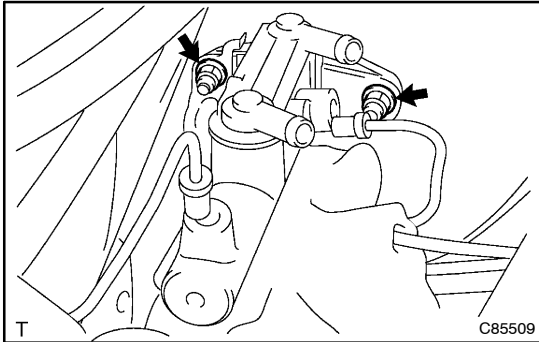
**Clearance: -0.1 mm (-0.0039 in.)**

### HINT:

- If there is a clearance between the SST main body and the booster shell. It means that the specified value, and no chalk attachment on the booster push rod means that it is more than the specified value.
- Brake booster push rod clearance before shipment is adjusted to be -0.21 - 0 mm (-0.0083 - 0 in.).

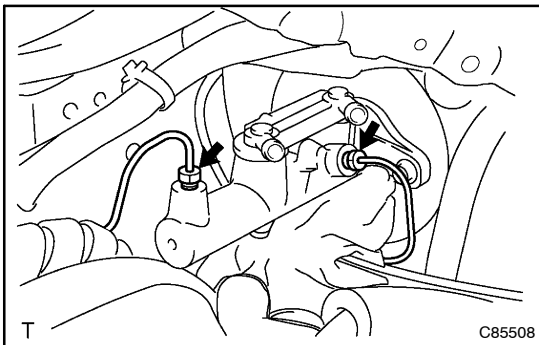


- (d) Using SST, adjust the booster push rod length until the push rod lightly touches the pin head.  
SST 09737-00020



### 13. INSTALL BRAKE MASTER CYLINDER SUB-ASSY

- (a) Install the master cylinder and acceleration cable clamp with the 2 nuts.(RHD STEERING POSITION TYPE)  
**Torque: 12.5 N·m (128 kgf·cm, 9.2 ft·lbf)**
- (b) Install the master cylinder and vacuum check valve bracket with the 2 nuts.(LHD STEERING POSITION TYPE)  
**Torque: 12.5 N·m (128 kgf·cm, 9.2 ft·lbf)**
- (c) Connect the acceleration cable to the clamp.(RHD STEERING POSITION TYPE)
- (d) Using SST, connect the 2 brake tubes to the master cylinder.  
SST 09023-00100  
**Torque: 15.0 N·m (153 kgf·cm, 11.1 ft·lbf)**
- (e) Connect the 2 reservoir tubes with the 2 clips.



### 14. INSTALL CHARCOAL CANISTER ASSY(LHD(1AZ-FE) STEERING POSITION TYPE) (See page 14-20)

### 15. INSTALL AIR CLEANER ASSY(LHD STEERING POSITION TYPE)

- (a) 1AZ-FE ENGINE TYPE (See page 14-20)
- (b) 1CD-FTV ENGINE TYPE (See page 14-91)
16. FILL RESERVOIR WITH BRAKE FLUID (See page 32-4)
17. BLEED MASTER CYLINDER (See page 32-4)  
SST 09023-00100
18. BLEED BRAKE LINE (See page 32-4)
19. CHECK FLUID LEVEL IN RESERVOIR (See page 32-4)
20. CHECK BRAKE FLUID LEAKAGE