

BRAKE MASTER CYLINDER SUB-ASSY

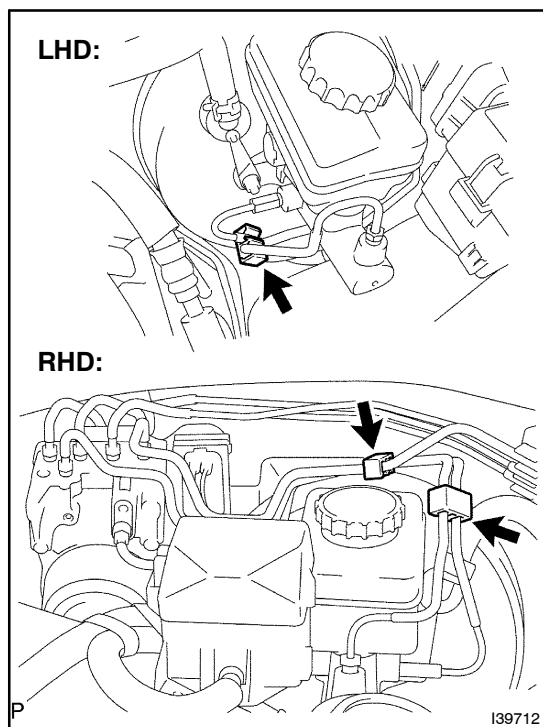
3213W-01

OVERHAUL

1. REMOVE ENGINE ROOM SIDE COVER
2. SEPARATE ENGINE ROOM NO.3 R/B.
 - (a) Remove the bolt and separate the engine room No.3 R/B.
3. DRAIN BRAKE FLUID
 - (a) Draw out fluid with syringe.

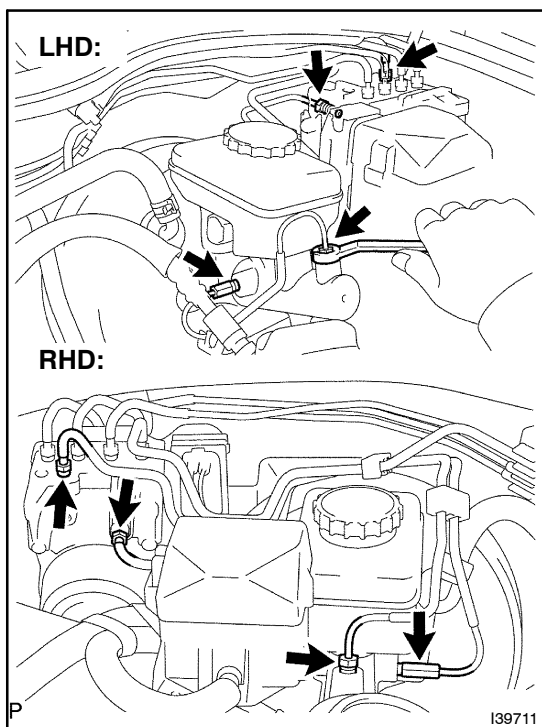
NOTICE:

Wash brake fluid off immediately if it adheres to any painted surfaces.

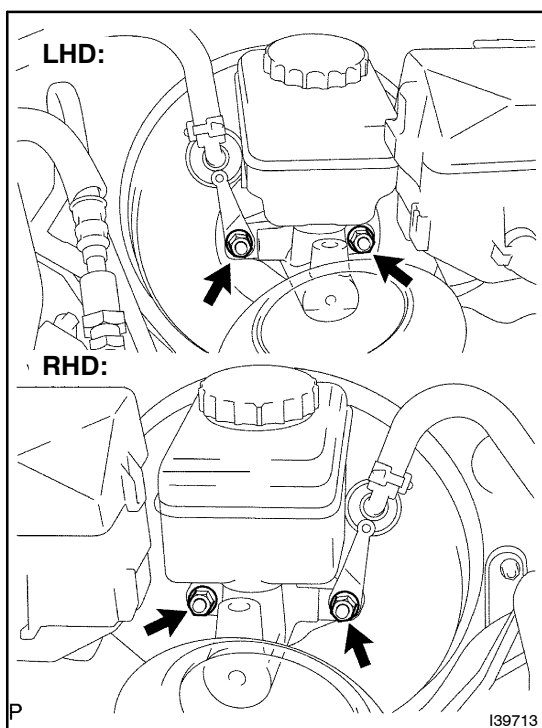


4. REMOVE BRAKE MASTER CYLINDER SUB-ASSY

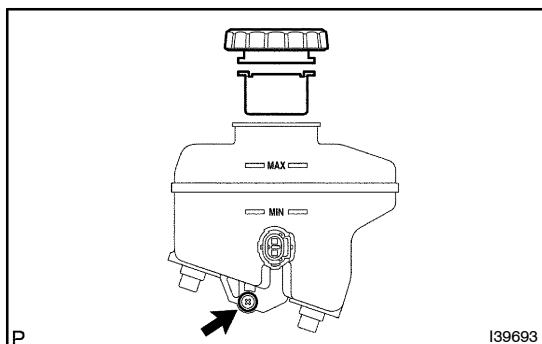
- (a) LHD:
Remove the clamp from the 2 brake tubes.
- (b) RHD:
Remove the 2 clamps from the 2 brake tubes.



- (c) Using SST, remove the 2 brake tubes from the master cylinder and ABS & TRACTION actuator assy.
SST 09751-36011



- (d) Disconnect the brake fluid level warning switch connector from the brake master cylinder reservoir.
(e) Remove the 2 nuts, vacuum check valve bracket and brake master cylinder sub-assy.



5. REMOVE BRAKE MASTER CYLINDER RESERVOIR SUB-ASSY

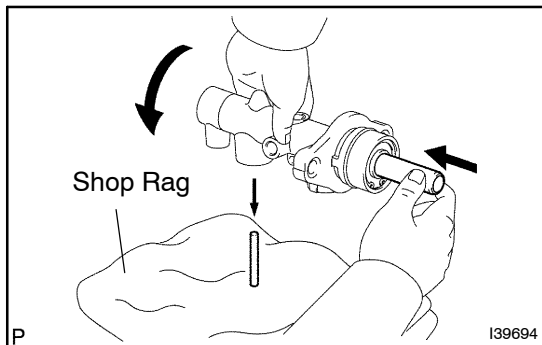
- (a) Remove the brake master cylinder reservoir filler cap and master cylinder reservoir strainer.

HINT:

Using 2 fingers, pull up and turn the master cylinder reservoir strainer counterclockwise to remove.

- (b) Remove the set screw and pull out the reservoir.

6. REMOVE MASTER CYLINDER RESERVOIR GROMMET

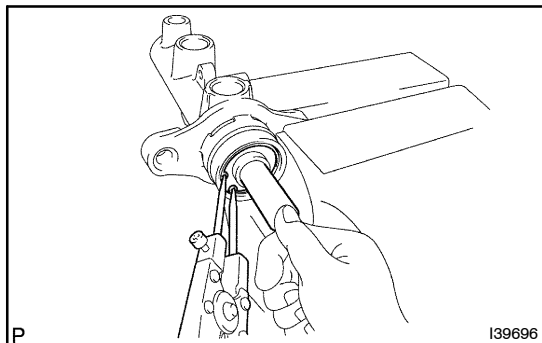


7. REMOVE BRAKE MASTER CYLINDER STRAIGHT PIN

- (a) Push in the piston by hand and remove the master cylinder straight pin by turning over the cylinder body.

HINT:

Place a shop rag to avoid the master cylinder straight pin from getting damaged.



8. REMOVE BRAKE MASTER CYLINDER KIT

- (a) Place the brake master cylinder sub-assy in a vise.

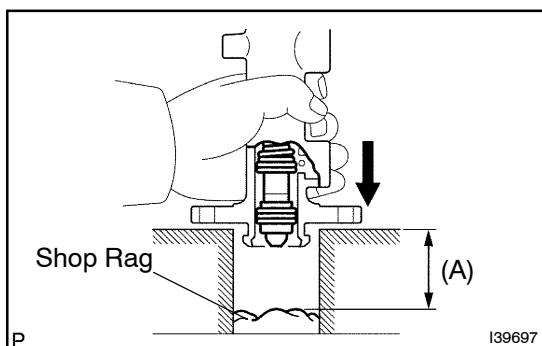
NOTICE:

Do not damage the brake master cylinder sub-assy by over tightening the vise.

- (b) Push in the No.1 piston by hand, and remove the snap ring with snap ring pliers.
 (c) Remove the No.1 piston by hand, pulling straight out, not at an angle.

NOTICE:

- If they are pulled out and installed at an angle, there is a possibility that the cylinder bore could be damaged.
- At the time of reassembly, be careful not to damage the rubber lips on the pistons.



- (d) Place a shop rag and 2 wooden blocks on the work table, and lightly tap the cylinder flange against the block edges until the No.2 piston drops out of the cylinder.

HINT:

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

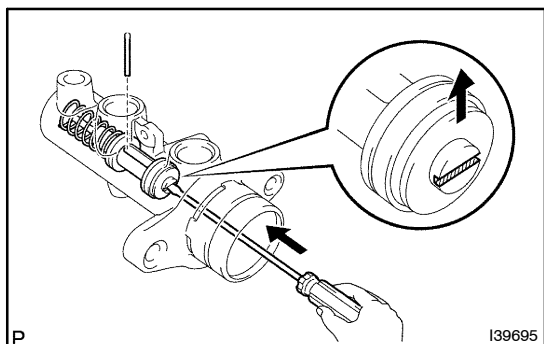
NOTICE:

Be careful not to scratch the master cylinder bore.

- (e) Remove the O-ring from the master cylinder body.

9. INSTALL BRAKE MASTER CYLINDER KIT

- (a) Place the brake master cylinder sub-assy in a vise.
- (b) Apply lithium soap base glycol grease to new No.1 piston sub-assy and No.2 piston sub-assy.
- (c) Using a flat tip driver, insert the No.2 piston sub-assy horizontally and insert the master cylinder straight pin.

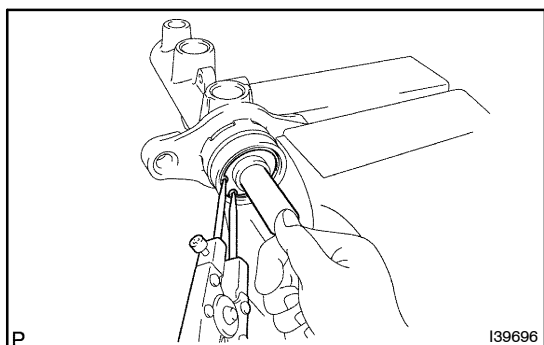
**NOTICE:**

Make sure that the No.2 piston sub-assy and master cylinder straight pin are installed properly.

- (d) Install the No.1 piston sub-assy straight.

NOTICE:

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



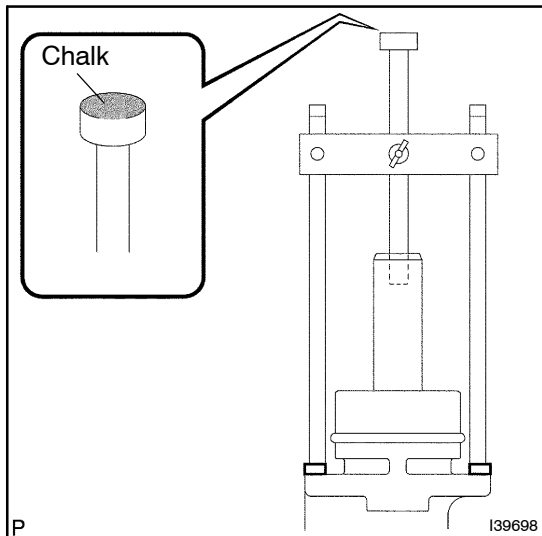
- (e) Push in the piston by hand and install the snap ring using snap ring pliers.
- (f) Apply lithium soap base glycol grease to a new O-ring and install the O-ring to the master cylinder.

10. INSTALL MASTER CYLINDER RESERVOIR GROMMET

- (a) Apply lithium soap base glycol grease to the 2 master cylinder reservoir grommets.
- (b) Install the 2 master cylinder reservoir grommets to the master cylinder reservoir sub-assy.

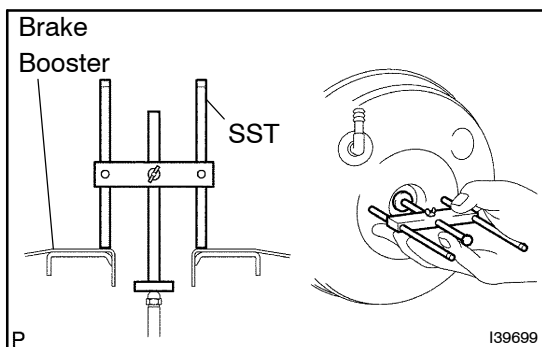
11. INSTALL BRAKE MASTER CYLINDER RESERVOIR SUB-ASSY

- (a) Install the master cylinder reservoir sub-assy to the master cylinder sub-assy with the set screw.
- (b) Install the master cylinder reservoir strainer and master cylinder reservoir filler cap.
- (c) Connect the brake fluid warning switch connector.



12. INSPECT AND ADJUST BRAKE BOOSTER PUSH ROD

- (a) Depress the brake pedal several times while the engine is stopped to release the pressure.
- (b) Set SST on the brake master cylinder sub-assy and lower the pin of the SST until it slightly touches the piston.
- (c) Apply chalk to the flat surfaced tip of the SST pin.
SST 09737-00013

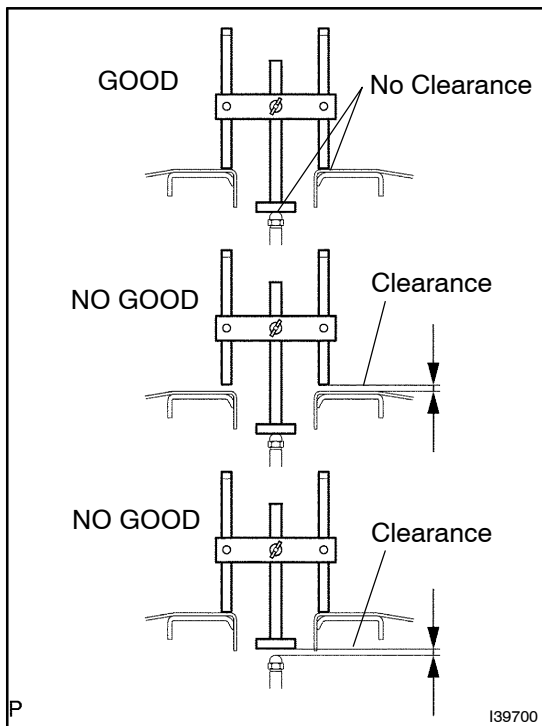


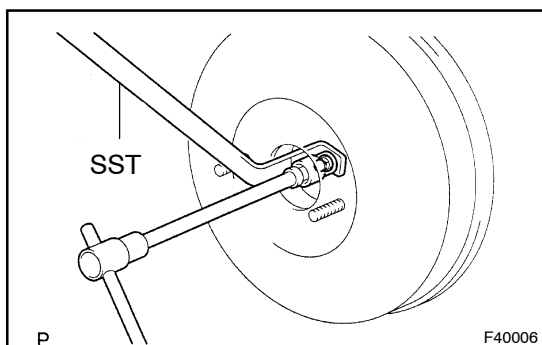
- (d) Turn SST upside down and place it on brake booster assy. Measure the clearance between the brake booster assy and SST.

Clearance: 0 mm (0 in.)

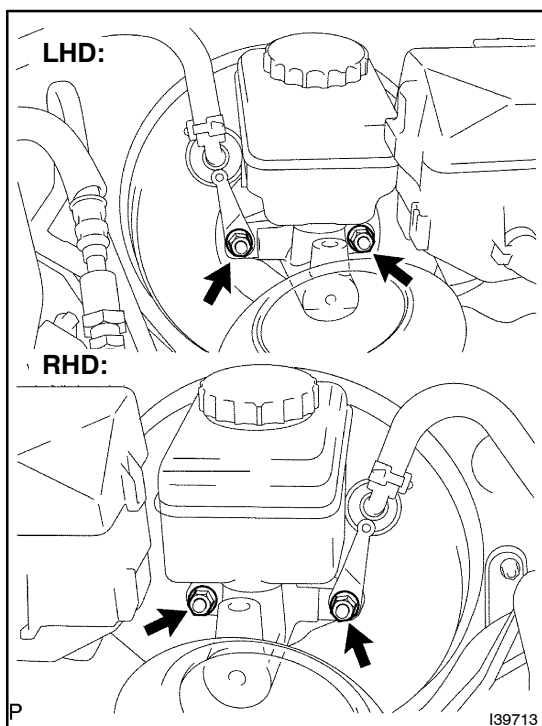
HINT:

- If there is a clearance between the SST main body and the shell of the brake booster assy (floating SST main body), the push rod is protruding too far.
- If the chalk does not stick on the brake booster push rod, the push rod protrusion is insufficient.
- Adjust the clearance if either of the above conditions is detected.



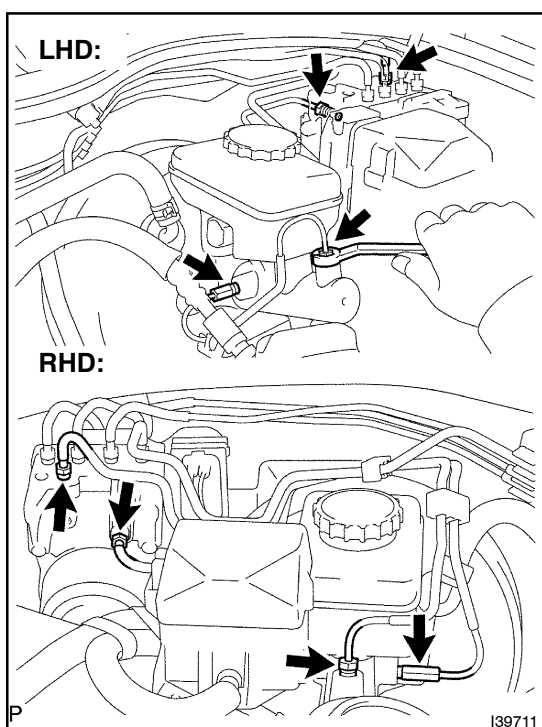


- (e) Using SST, adjust the booster push rod length until the push rod lightly touches the pin head.
SST 09737-00020



13. INSTALL BRAKE MASTER CYLINDER SUB-ASSY

- (a) Install the brake master cylinder sub-assy and vacuum check valve bracket with 2 nuts.
Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)
(b) Connect the brake fluid level warning switch connector to the master cylinder reservoir.



- (c) Using SST, install the brake tube to the brake master cylinder sub-assy and ABS & TRACTION actuator assy.
SST 09751-36011
Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)
(d) LHD:
Install the clamp.
(e) RHD:
Install the 2 clamps.

14. **FILL RESERVOIR WITH BRAKE FLUID**
15. **BLEED MASTER CYLINDER (SEE PAGE 32-4)**
16. **BLEED BRAKE LINE (SEE PAGE 32-4)**
17. **CHECK FLUID LEVEL IN RESERVOIR**
18. **CHECK FOR BRAKE FLUID LEAKAGE**
If fluid leaks, tighten or replace the leaking part.
19. **INSTALL ENGINE ROOM NO.3 R/B**
 - (a) Install the engine room No.3 R/B with a bolt.
20. **INSTALL ENGINE ROOM SIDE COVER**