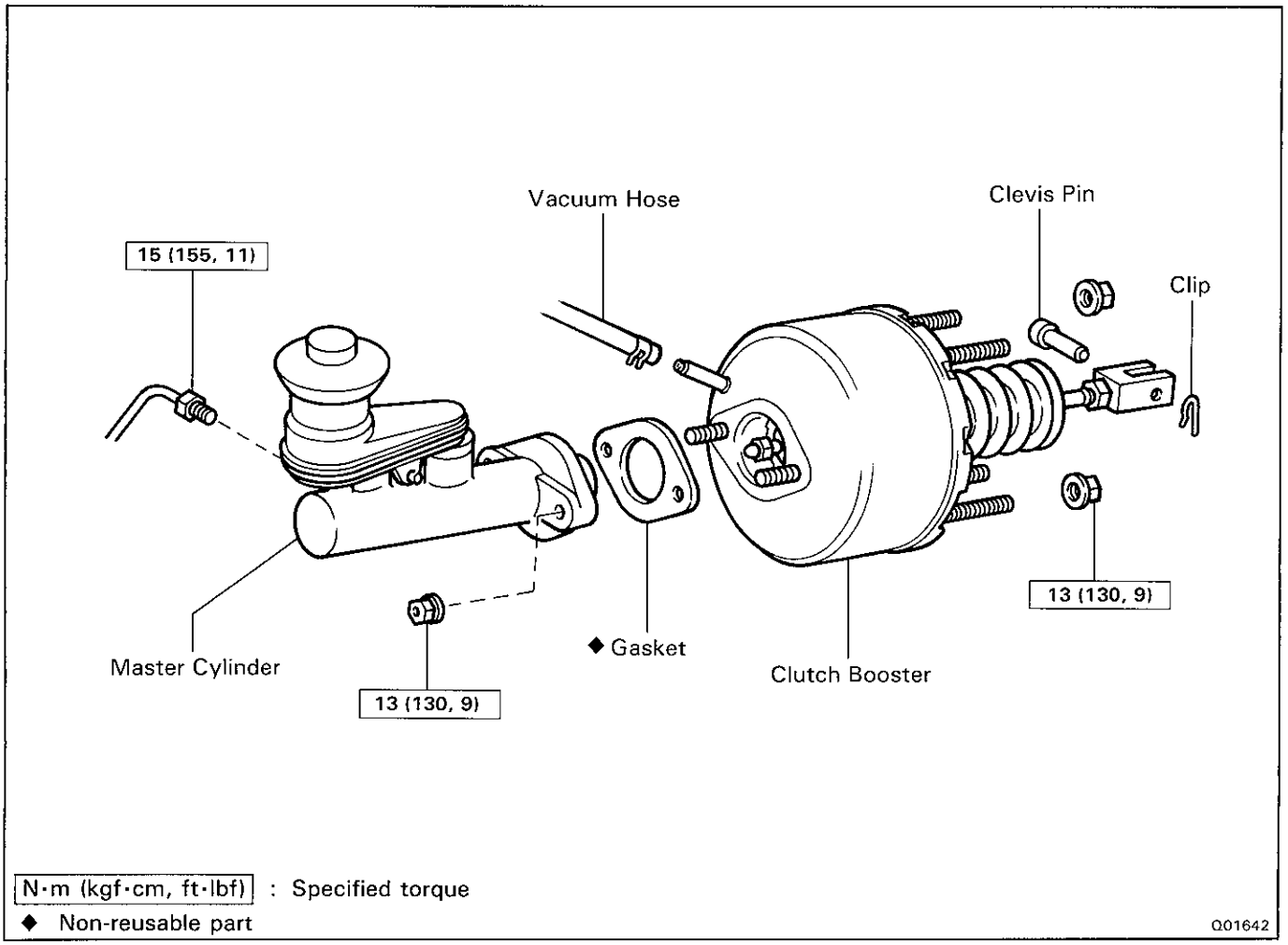
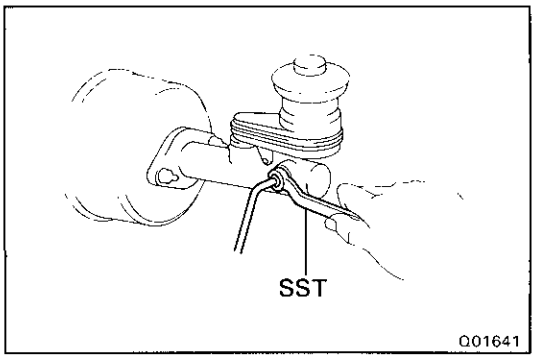
CLUTCH BOOSTER

REMOVAL OF CLUTCH BOOSTER

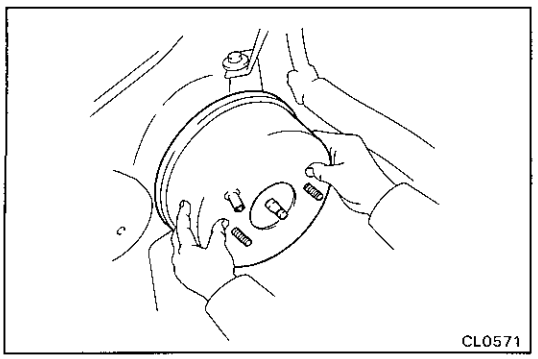




1. **REMOVE MASTER CYLINDER**
   (See page CL-34)

2. **DISCONNECT VACUUM HOSE FROM CLUTCH BOOSTER**

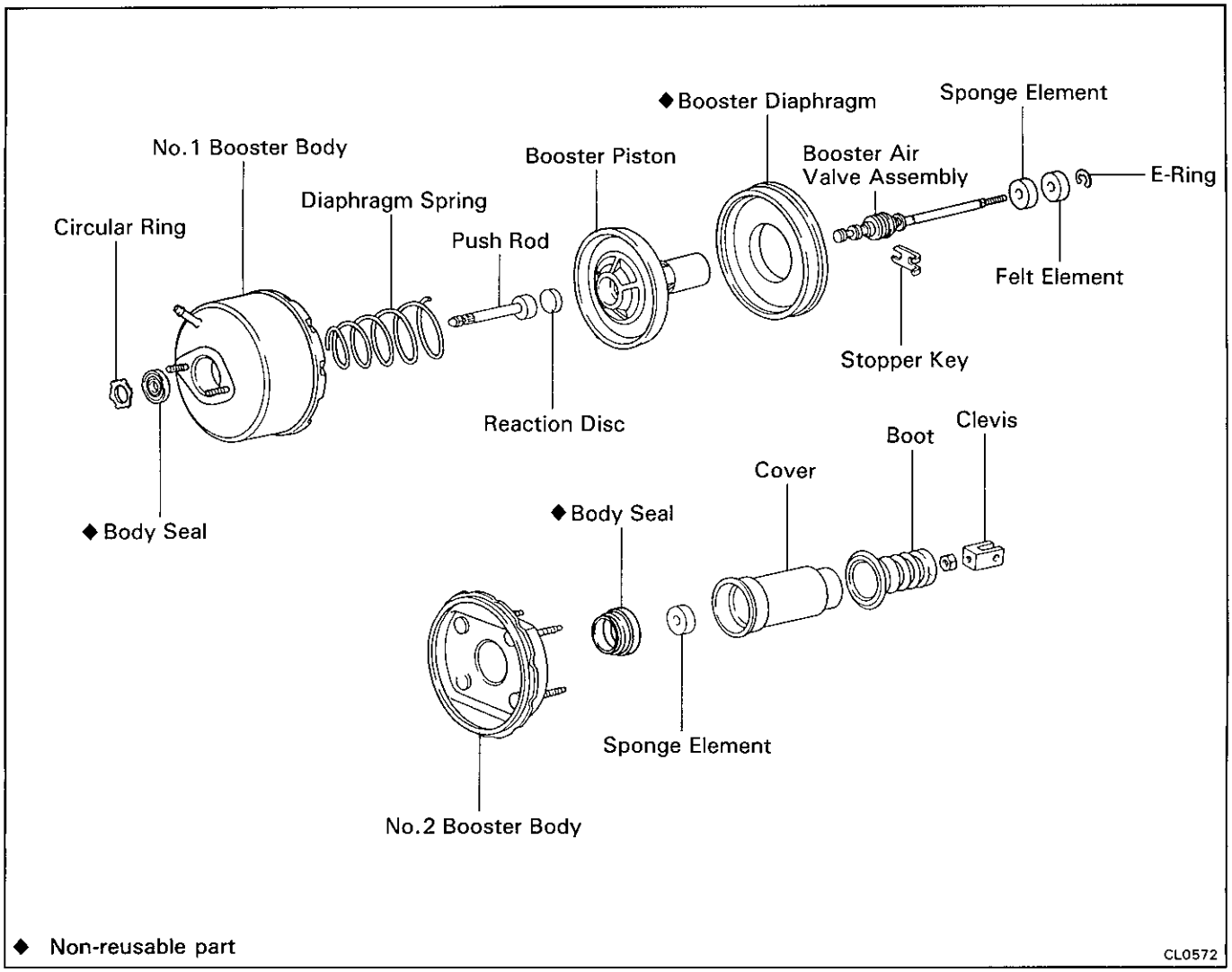
3. **REMOVE CLUTCH PIPE AND VACUUM PIPE CLAMP BOLTS**



4. **DISCONNECT CLEVIS FROM CLUTCH PEDAL**
   Remove the clip and clevis pin.

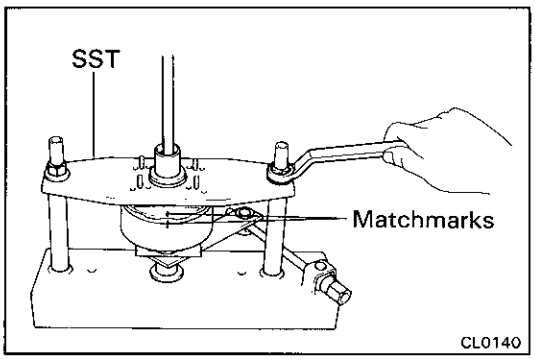
5. **REMOVE CLUTCH BOOSTER**
   (a) Remove four nuts from the room side.
   (b) Pull out the clutch booster from engine room side.

COMPONENTS

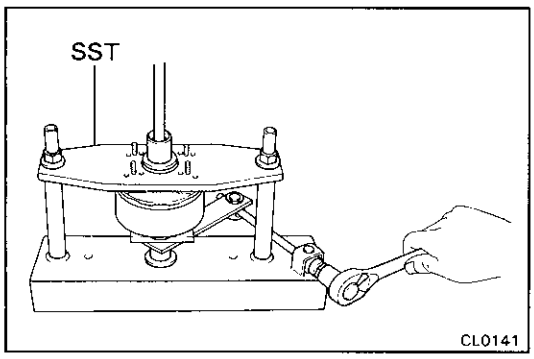


◆ Non-reusable part

CL0572



CL0140



CL0141

DISASSEMBLY OF CLUTCH BOOSTER

1. REMOVE CLEVIS

2. REMOVE PISTON COVER AND BOOT

(a) Remove the piston cover and boot.

(b) Remove the sponge element from the boot.

3. REMOVE SPONGE AND FELT ELEMENT

Using screwdriver, remove the E-ring and sponge and felt element.

4. SEPARATE NO.1 AND NO.2 BOOSTER BODIES

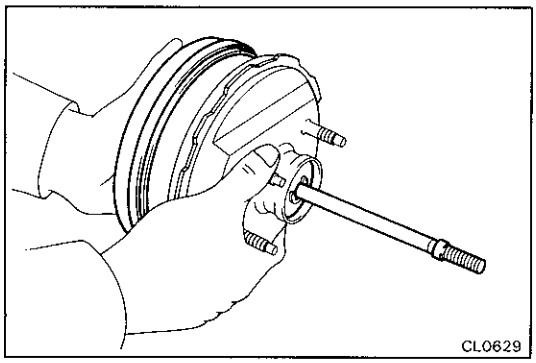
(a) Put matchmarks on the No.1 and No.2 booster bodies.

(b) Set the booster in SST.

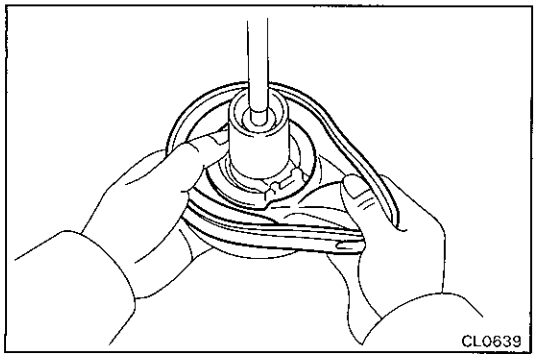
SST 09753-00013

NOTICE: Be careful not to tighten the two nuts of the SST too tightly.

(c) Turn the No.1 booster body clockwise, until the No.1 and No.2 booster bodies separate.

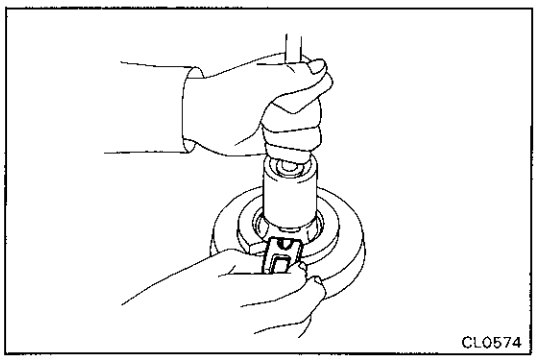


5. **REMOVE BOOSTER PISTON ASSEMBLY FROM NO.2 BOOSTER BODY**



6. **REMOVE BOOSTER DIAPHRAGM FROM BOOSTER PISTON**

Pull off the diaphragm.

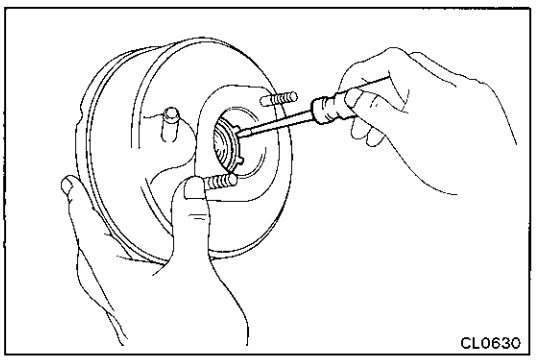


7. **REMOVE BOOSTER AIR VALVE ASSEMBLY FROM BOOSTER PISTON**

(a) Push down the booster air valve in the booster piston and remove the stopper key.

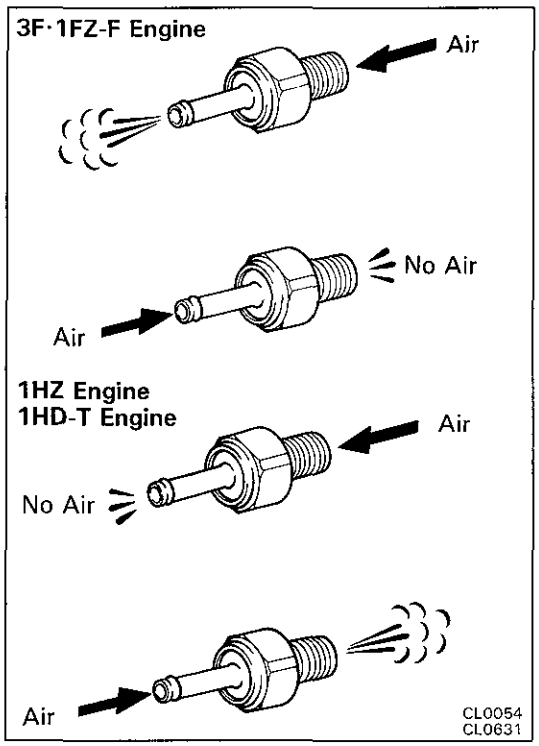
(b) Pull off the booster air valve assembly.

8. **REMOVE REACTION DISC FROM BOOSTER PISTON**



9. **REMOVE BODY SEAL FROM NO.1 BOOSTER BODY**

Using a screwdriver, pry out the circular ring and remove the body seal.

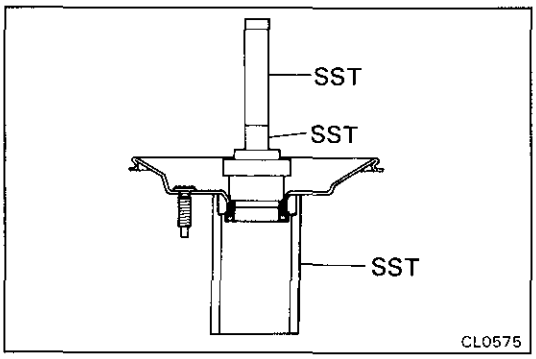


INSPECTION AND REPLACEMENT OF CLUTCH BOOSTER

1. INSPECT CHECK VALVE OPERATION

(a) Check that air flows from the vacuum tank side to the vacuum hose side.

(b) Check that air does not flow the vacuum hose side to the vacuum tank side.

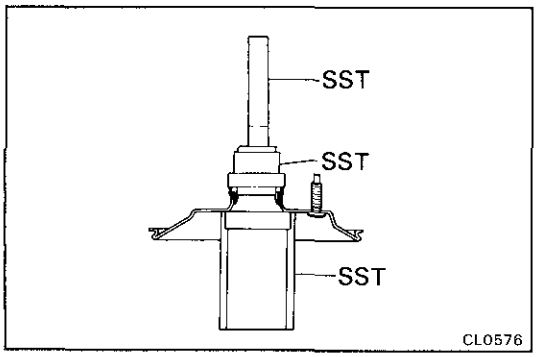


2. IF NECESSARY, REPLACE BODY SEAL FOR NO.2 BOOSTER BODY

(a) Using SST, remove the body sealer.

SST 09630-00012 (09631-00060), 09753-30020 and 09612-30012

HINT: Support the No.2 booster body using SST cylinder base only.



(b) Using SST, drive in the body sealer.

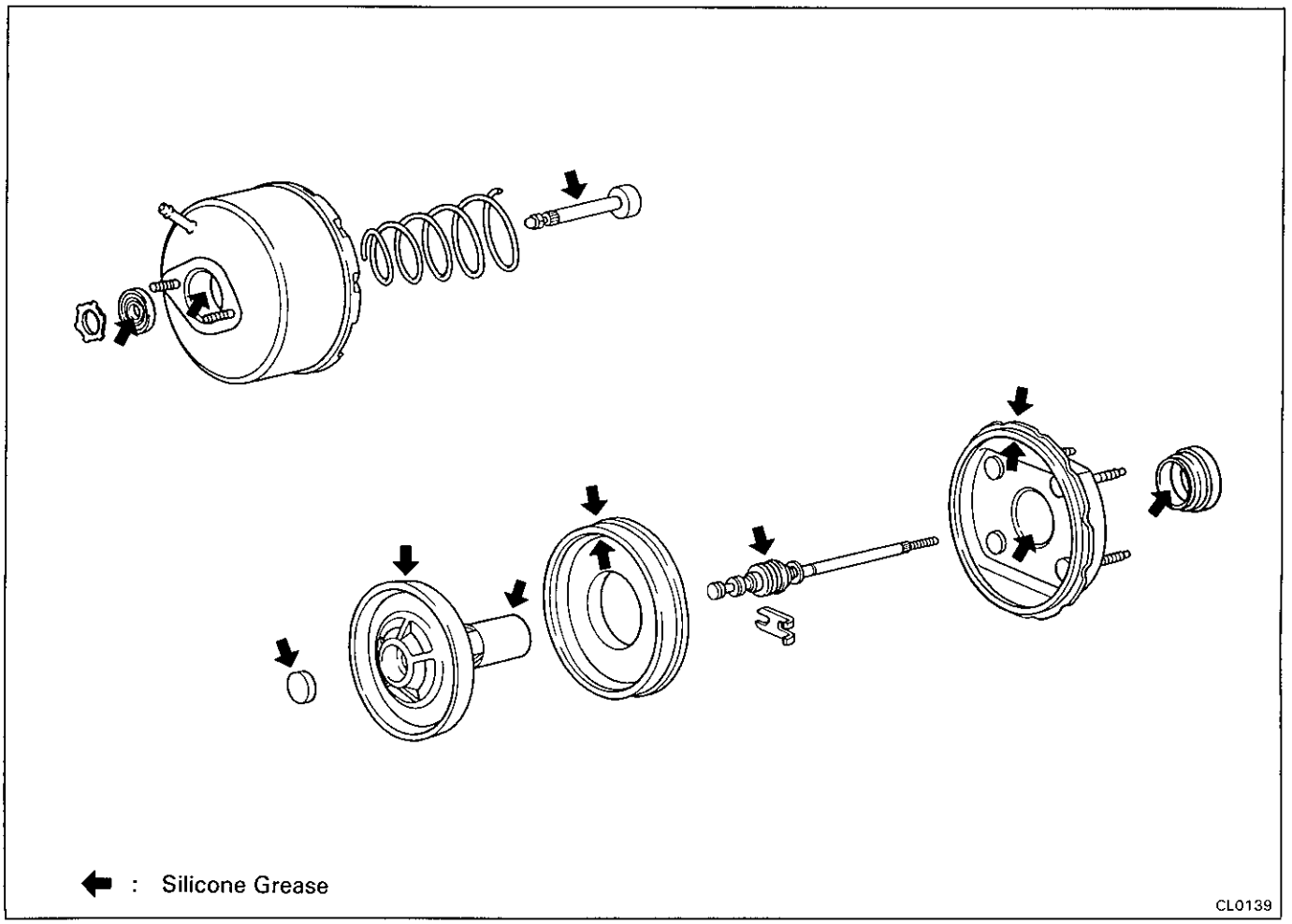
SST 09630-00012 (09631-00060), 09753-30020 and 09612-30012

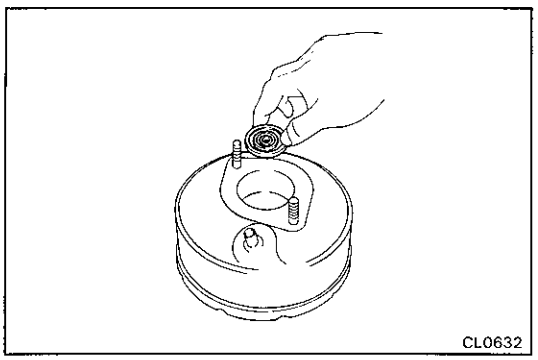
HINT: Support the No.2 booster body using SST cylinder base only.

ASSEMBLY OF CLUTCH BOOSTER

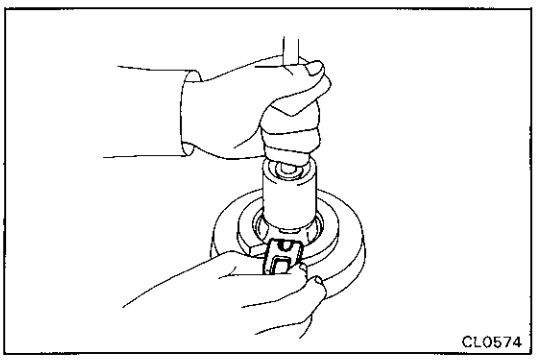
(See page CL-36)

1. APPLY SILICONE GREASE TO PARTS SHOWN BELOW

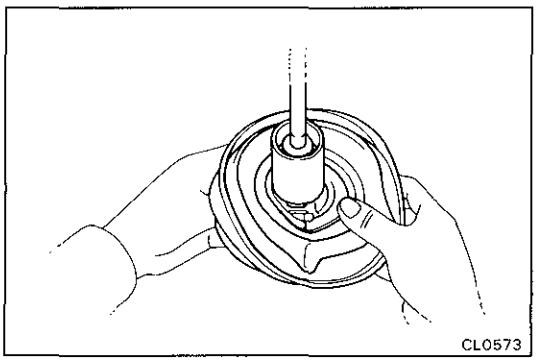




2. INSTALL BODY SEAL TO NO.1 BOOSTER BODY
   (a) Place the body seal in position.
   (b) Secure the body seal with the circular ring.

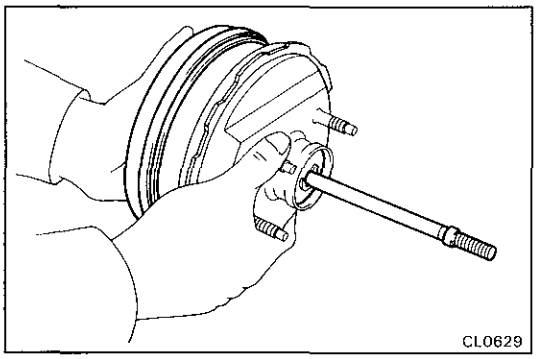


3. INSTALL BOOSTER AIR VALVE ASSEMBLY TO BOOSTER PISTON
   (a) Insert the booster air valve in the booster piston.
   (b) Push the booster air valve in the booster piston and install the stopper key.



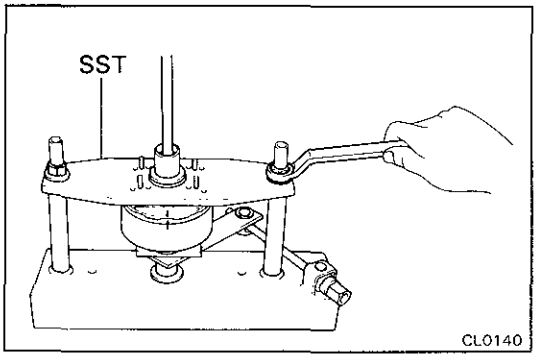
4. **INSTALL DIAPHRAGM TO BOOSTER PISTON**

Push in the head of the diaphragm.



5. **INSTALL BOOSTER PISTON ASSEMBLY TO NO.2 BOOSTER BODY**

6. **INSTALL REACTION DISC TO BOOSTER PISTON**



7. **ASSEMBLY NO.1 AND NO.2 BOOSTER BODIES**

(a) Place the No.1 booster on SST.

SST 09753-00013

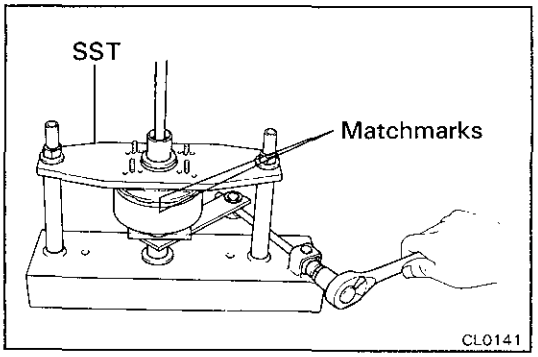
(b) Place the push rod, diaphragm spring and No.2 booster body in the No.1 booster body.

(c) Compress the diaphragm spring between the No.1 and No.2 booster bodies.

NOTICE: Be careful not to tighten the two nuts of the SST too tightly.

(d) Turn the No.1 booster body counterclockwise, until the matchmarks match.

HINT: If the No.1 booster body is too tight to be turned, apply more silicone grease on the diaphragm edge that contacts the No.1 and No.2 booster bodies.



8. **INSTALL SPONGE AND FELT ELEMENT**

(a) Install the sponge and felt element into the booster.

(b) Install E-ring onto booster air valve assembly.

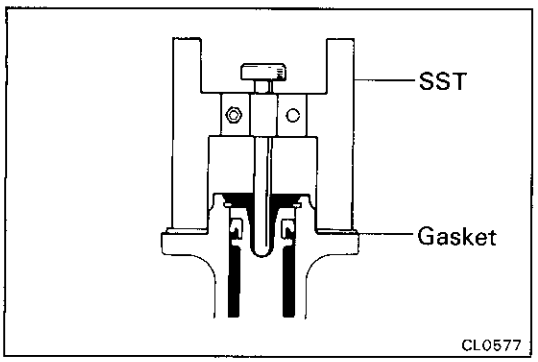
9. **INSTALL PISTON COVER WITH BOOT**

(a) Install the sponge element into the boot.

(b) Install the boot to the piston cover.

(c) Install a new gasket onto the booster and the piston cover with the boot.

10. **INSTALL CLEVIS**



INSTALLATION OF CLUTCH BOOSTER

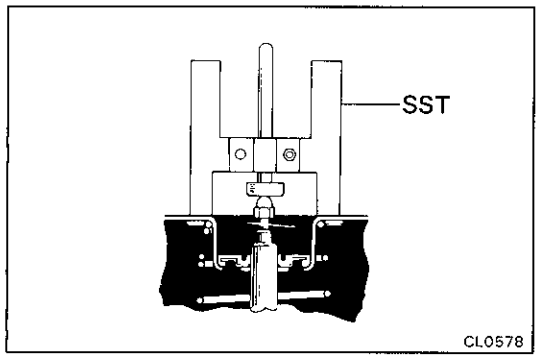
(See page CL-37)

1. ADJUST LENGTH OF BOOSTER PUSH ROD

(a) Install the gasket on the master cylinder.

(b) Set the SST on the gasket, and lower the pin until its tip slightly touches the piston.

SST 09737-00010

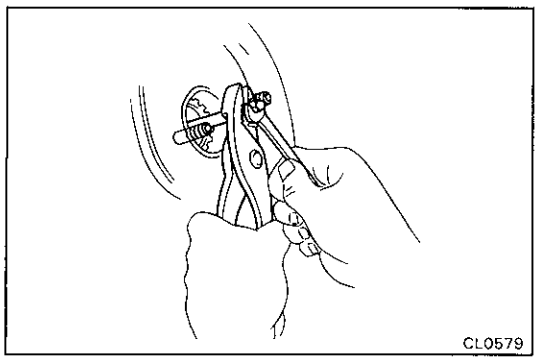


(c) Turn the SST upside down, and set it on the booster.

SST 09737-00010

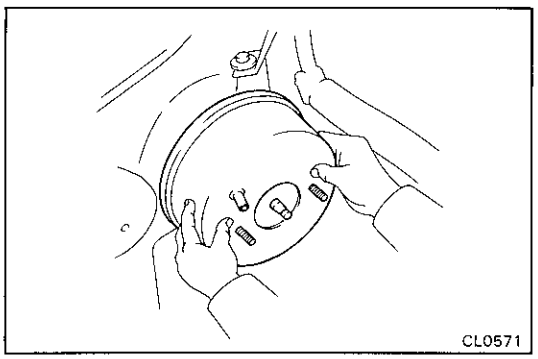
(d) Measure the clearance between the booster push rod and pin head (SST).

Clearance: 0 mm (0 in.)



(e) Adjust the booster push rod length until the push rod lightly touches the pin head.

HINT: When adjusting the push rod, depress the brade pedal enough so that the push rod sticks out.



2. INSTALL CLUTCH BOOSTER

Install four nuts and the clutch booster.

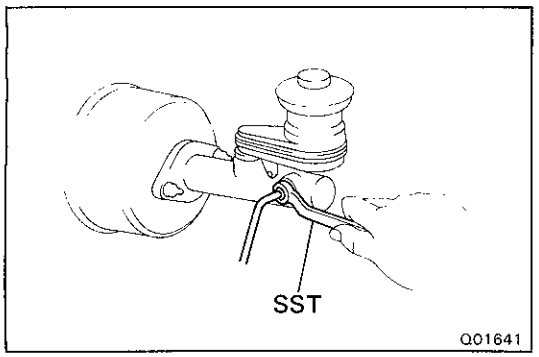
3. CONNECT CLEVIS TO CLUTCH PEDAL

Connect the clevis to the clutch pedal with the clevis pin and clip.

4. INSTALL MASTER CYLINDER TO CLUTCH BOOSTER

(See page CL-34)

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)



5. CONNECT CLUTCH LINE UNION

Using SST, connect the union.

SST 09751-36011

6. CONNECT VACUUM HOSE TO CLUTCH BOOSTER

7. ADJUST CLUTCH PEDAL AND BLEED SYSTEM

(See page CL-31)