

REMOVAL

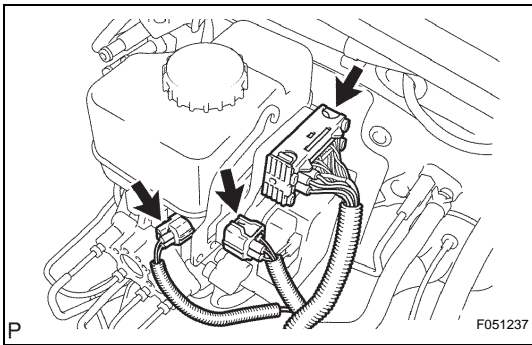
NOTICE:

- Before starting the work, make sure that the ignition switch is OFF and depress the brake pedal more than 20 times.
- As high pressure is applied to the brake actuator tube No. 1, never deform it.
- Do not turn the ignition switch to ON until the work is completed.

HINT:

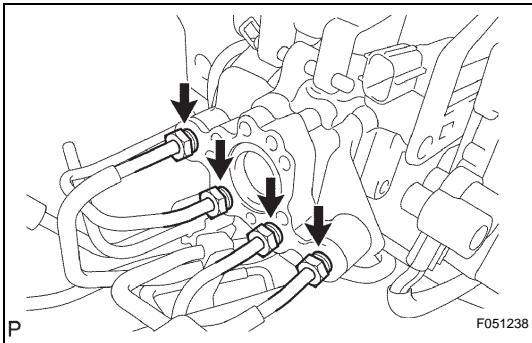
When pressure in the accumulator is released, reaction force becomes lighter and stroke becomes longer.

1. **DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL**
2. **DRAIN BRAKE FLUID**
NOTICE:
Immediately wash off any brake fluid off immediately that comes into contact with a painted surface.
3. **REMOVE FRONT FLOOR FOOTREST (See page [IR-1](#))**
4. **REMOVE FRONT DOOR SCUFF PLATE (for Regular Cab) (See page [IR-40](#))**
5. **REMOVE FRONT DOOR SCUFF PLATE (for Access Cab) (See page [IR-61](#))**
6. **REMOVE FRONT DOOR SCUFF PLATE (for Double Cab) (See page [IR-12](#))**
7. **REMOVE COWL SIDE TRIM BOARD (for Regular Cab) (See page [IR-40](#))**
8. **REMOVE COWL SIDE TRIM BOARD (for Access Cab) (See page [IR-61](#))**
9. **REMOVE COWL SIDE TRIM BOARD (for Double Cab) (See page [IR-12](#))**
10. **REMOVE INSTRUMENT PANEL UNDER TRAY (for Automatic Transmission) (See page [IP-9](#))**
11. **REMOVE INSTRUMENT PANEL HOLE COVER (for Manual Transmission) (See page [IP-9](#))**
12. **REMOVE INSTRUMENT PANEL FINISH PANEL LOWER NO. 1 (See page [IP-12](#))**
13. **SEPARATE DRIVER SIDE JUNCTION BLOCK**
14. **SEPARATE MASTER CYLINDER PUSH ROD CLEVIS (See page [BR-15](#))**



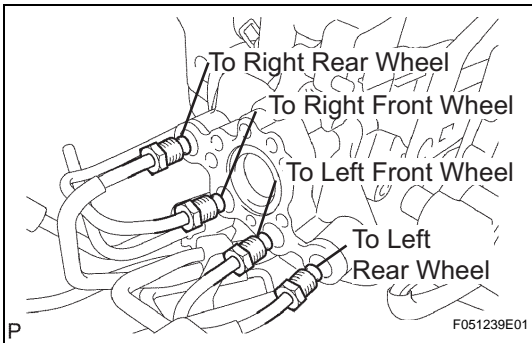
15. REMOVE HYDRAULIC BRAKE BOOSTER

- (a) Disconnect the 3 connectors from the hydraulic brake booster.

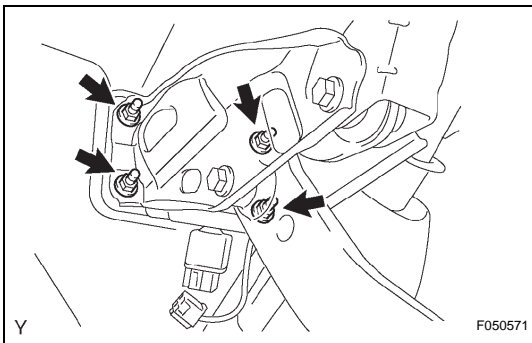


- (b) Using SST, disconnect the 4 brake lines from the hydraulic brake booster.

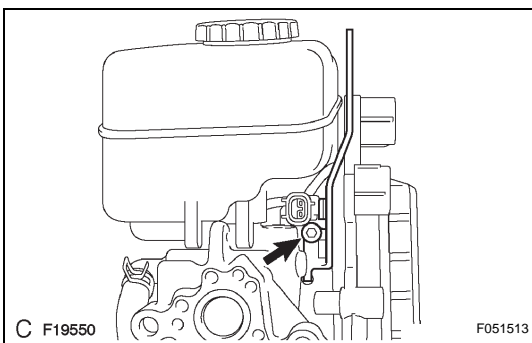
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- (c) Use tags or labels to identify the place to reconnect each line.



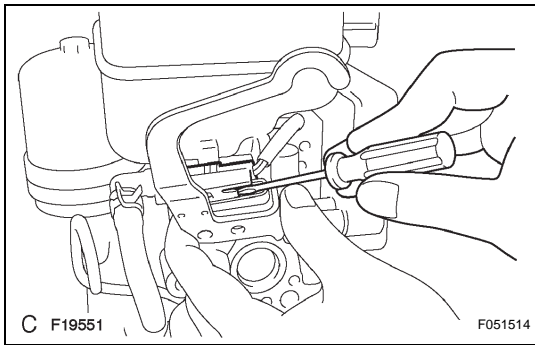
- (d) Remove the 4 nuts and pull out the hydraulic brake booster.
(e) Remove the brake booster gasket.



DISASSEMBLY

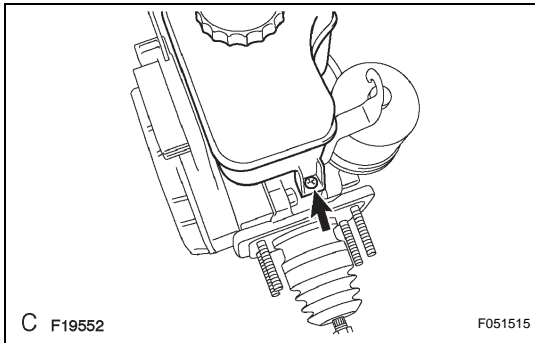
1. REMOVE BRAKE ACTUATOR BRACKET NO. 1

- (a) Using a hexagon wrench (5 mm), remove the screw and brake actuator bracket No. 1.

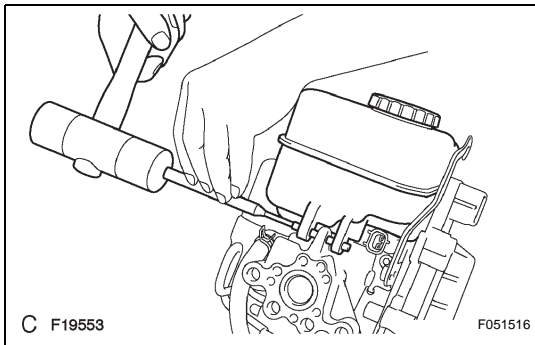


- (b) Using a screwdriver, remove the fluid level warning switch connector.

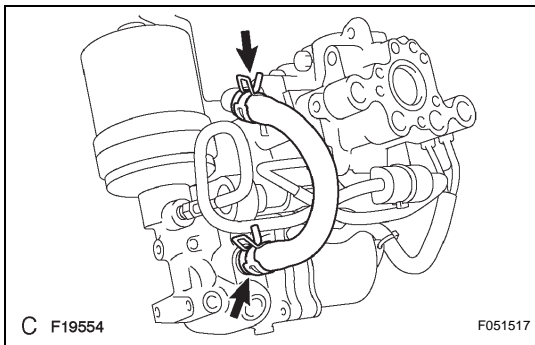
2. REMOVE BRAKE MASTER CYLINDER RESERVOIR SUB-ASSEMBLY



- (a) Remove the screw from the master cylinder reservoir.

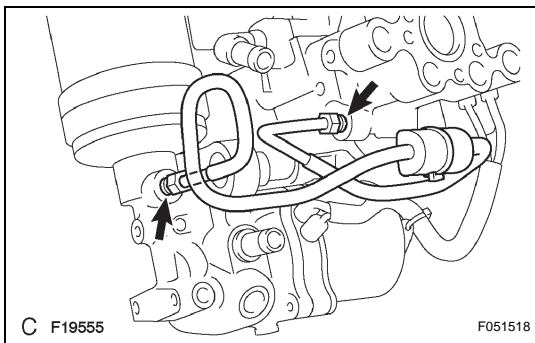


- (b) Using a pin punch and hammer, remove the pin from the master cylinder reservoir.
- (c) Pull out the master cylinder reservoir.
- (d) Remove the 3 grommets.
- (e) Remove the cap.



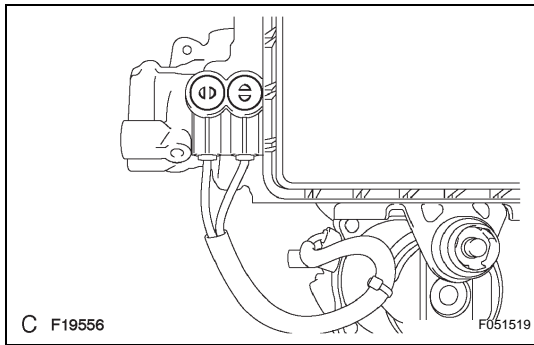
3. REMOVE BRAKE ACTUATOR HOSE

- (a) Using needle-nose pliers, slide the 2 clips.
- (b) Remove the brake actuator hose.



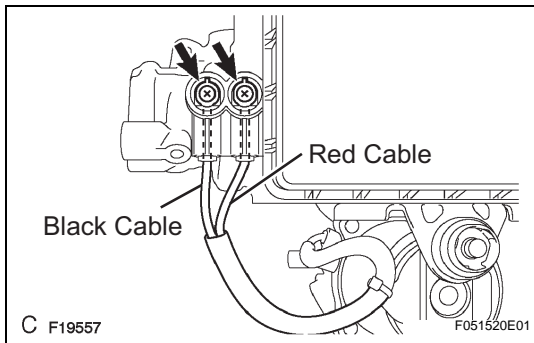
4. REMOVE BRAKE ACTUATOR TUBE NO. 1

- (a) Using SST, remove the brake actuator tube No. 1.
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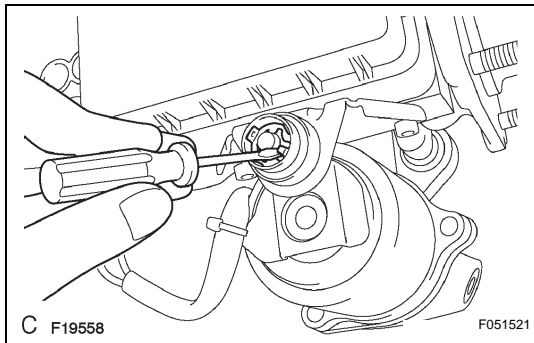


5. REMOVE BRAKE BOOSTER WITH ACCUMULATOR PUMP ASSEMBLY

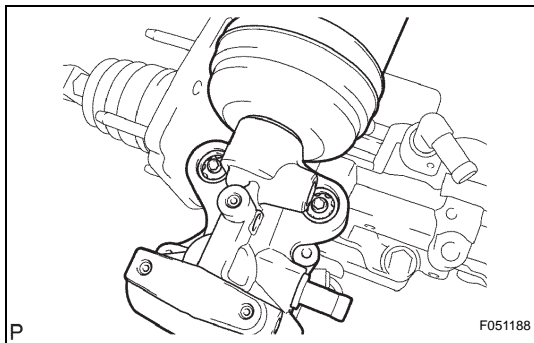
(a) Using a screwdriver, remove the 2 plugs.



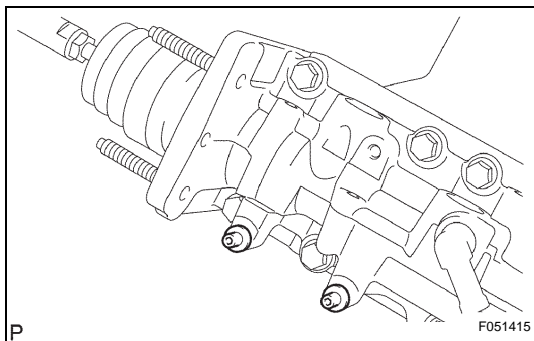
(b) Remove the 2 screws and pull the wire harness.



(c) Using a screwdriver, remove the clip.

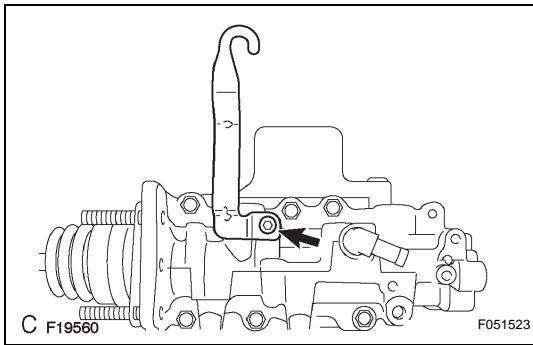


(d) Remove the brake booster w/ accumulator pump assembly.



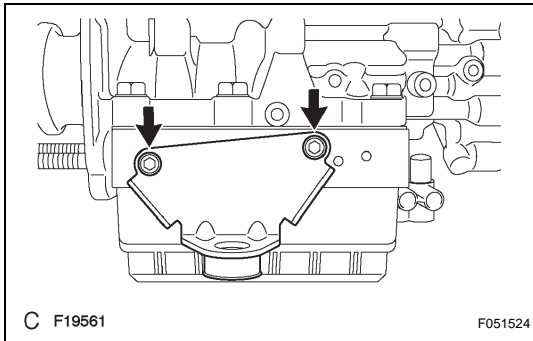
(e) Using a hexagon wrench (4 mm), remove the 2 pins.

(f) Remove the 2 bushes and 2 collars from the brake booster with accumulator pump assembly.



6. REMOVE BRAKE ACTUATOR BRACKET

- (a) Using a hexagon wrench (5 mm), remove the screw and brake actuator bracket.



7. REMOVE BRAKE BOOSTER PUMP BRACKET

- (a) Using a hexagon wrench (5 mm), remove the 2 screws and brake booster pump bracket.
- (b) Remove the bush from the brake booster pump bracket.

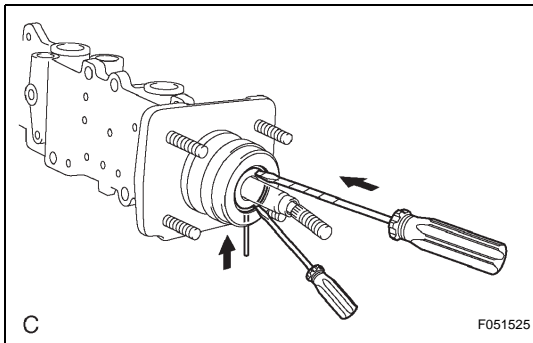
8. REMOVE MASTER CYLINDER PUSH ROD CLEVIS

- (a) Loosen the lock nut on the brake master cylinder side, and then remove the rod operating adapter and lock nut.
- (b) Loosen the lock nut on the rod operating adapter, and then remove the push rod clevis and lock nut.

9. REMOVE MASTER CYLINDER BOOT

10. REMOVE PISTON

- (a) Which pressing in the piston with a screwdriver, use a pin or equivalent to push the C-ring from the hole in the master cylinder body. Then remove the snap ring with another screwdriver.
- (b) Remove the piston by pulling it straight out, not at an angle.

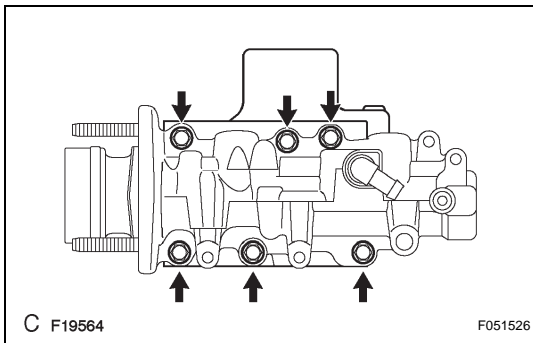


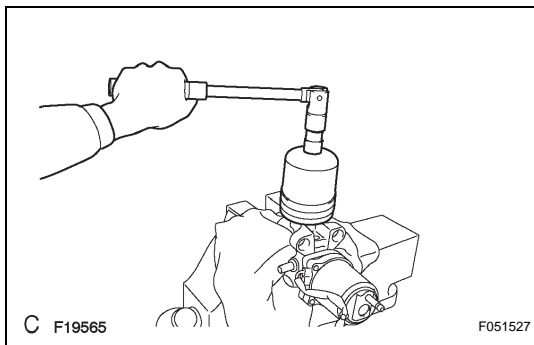
NOTICE:

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

11. REMOVE MASTER CYLINDER SOLENOID

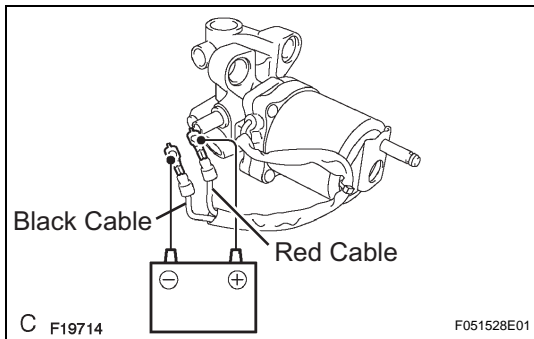
- (a) Remove the 6 bolts.
- (b) Remove the master cylinder solenoid and the gasket.





12. REMOVE BRAKE BOOSTER ACCUMULATOR ASSEMBLY

- Place the brake booster with accumulator pump assembly in a vise with a cloth.
- Using a socket wrench (17 mm), remove the brake booster accumulator.
- Remove the brake booster accumulator pipe, compression spring and O-ring.



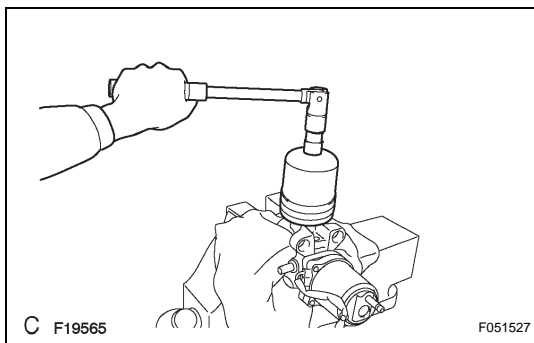
INSPECTION

1. INSPECT BRAKE BOOSTER PUMP ASSEMBLY

- Connect the positive (+) lead from the battery to the red cable of the pump, and the negative (-) lead to the black cable.
- Check the brake booster pump operation.

OK:

Operation sound is heard.



REASSEMBLY

1. INSTALL BRAKE BOOSTER ACCUMULATOR ASSEMBLY

- Place the brake booster pump in a vise with a cloth.
- Install the brake booster accumulator pipe, compression spring and a new O-ring.

NOTICE:

Ensure that no foreign matter enters the pump.

- Using a socket wrench (17 mm), install the brake booster accumulator onto the brake booster pump.
Torque: 57.4 N*m (585 kgf*cm, 42 ft.*lbf)

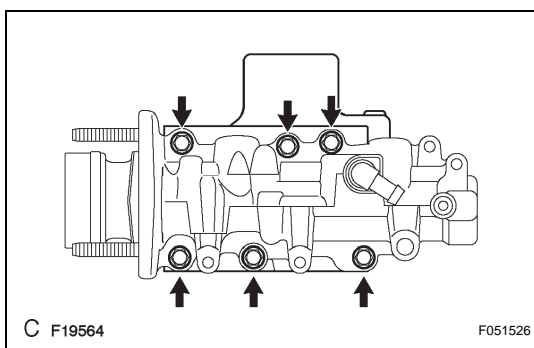
2. INSTALL MASTER CYLINDER SOLENOID

- Place a new gasket on the master cylinder solenoid and install them onto the master cylinder body with 6 new bolts.

Torque: 31.9 N*m (325 kgf*cm, 24 ft.*lbf)

NOTICE:

Do not let water, dust, and/or other objects attach to the surface and/or attaching surface of the master cylinder solenoid, master cylinder and body gasket.



3. INSTALL PISTON

- Apply lithium soap base glycol grease to the new piston.
- Install the piston onto the master cylinder body.