321DA–01

OVERHAUL

NOTICE:

- **When installing, coat the parts indicated by arrows with lithium soap base glycol grease (see page 32–9).**
- **As high pressure is applied to the brake actuator tube No.1, never deform it.**
- **Until the work is over, do not turn the ignition switch to the ON position.**
- **Before starting the work, make sure that the ignition switch is off and depress the brake pedal more than 20 times.**

HINT:

When pressure in the power supply system is released, reaction force becomes light and stroke becomes longer.

1. DRAIN BRAKE FLUID

NOTICE:

Wash off brake fluid immediately if it comes into contact with a painted surface.

2. REMOVE FRONT DOOR SCUFF PLATE LH (LHD STEERING POSITION TYPE) (SEE PUB. No. RM990E, PAGE 76–58)

3. REMOVE FRONT DOOR SCUFF PLATE RH (RHD STEERING POSITION TYPE)

HINT:

Perform the same procedure as for the LH.

4. REMOVE COWL SIDE TRIM BOARD LH (LHD STEERING POSITION TYPE) (SEE PUB. No. RM990E, PAGE 76–58)

5. REMOVE COWL SIDE TRIM BOARD RH (RHD STEERING POSITION TYPE)

HINT:

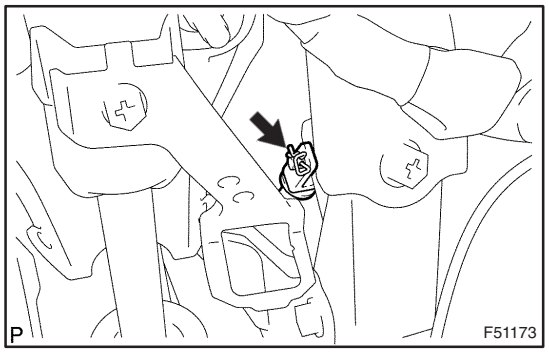
Perform the same procedure as for the LH.

6. REMOVE INSTRUMENT CLUSTER FINISH PANEL ORNAMENT (SEE PUB. No. RM990E, PAGE 71–12)

7. REMOVE INSTRUMENT PANEL FINISH PLATE (SEE PUB. No. RM990E, PAGE 71–12)

8. REMOVE INSTRUMENT PANEL FINISH LOWER PANEL RH (SEE PUB. No. RM990E, PAGE 71–12)

9. REMOVE STEERING COLUMN HOLE COVER (LHD STEERING POSITION TYPE) (SEE PUB. No. RM990E, PAGE 50–6)



10. REMOVE PUSH ROD PIN

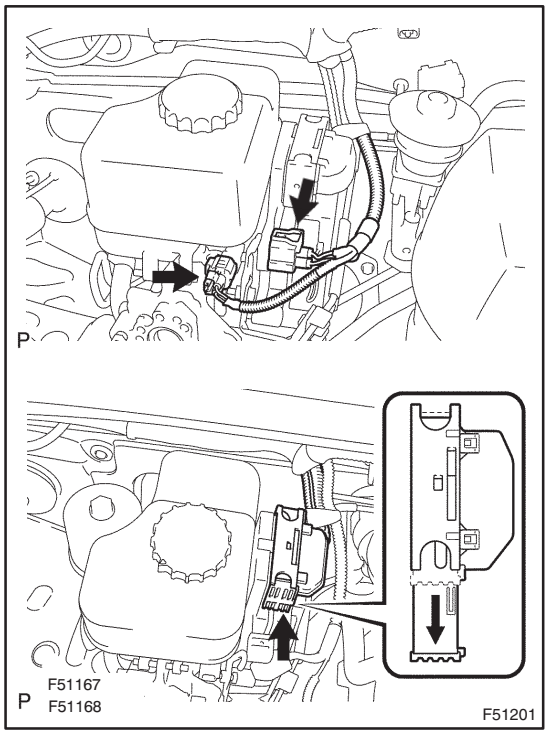
(a) Remove the clip and push rod pin from the clevis.

11. REMOVE INTAKE AIR CONNECTOR (RHD(1KD–FTV) STEERING POSITION TYPE) (SEE PAGE 14–204)

12. REMOVE AIR CLEANER ASSY (RHD(1KD–FTV) STEERING POSITION TYPE) (SEE PAGE 14–204)

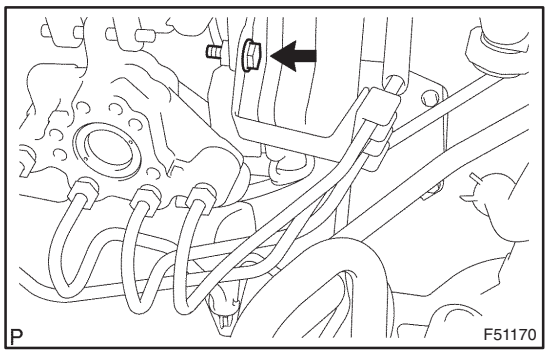
13. **DISCONNECT VENTILATION HOSE NO.2 (RHD(1GR–FE) STEERING POSITION TYPE)** **(SEE PAGE 14–116)**

14. **REMOVE AIR CLEANER ASSY (RHD(1GR–FE) STEERING POSITION TYPE)** **(SEE PAGE 14–116)**

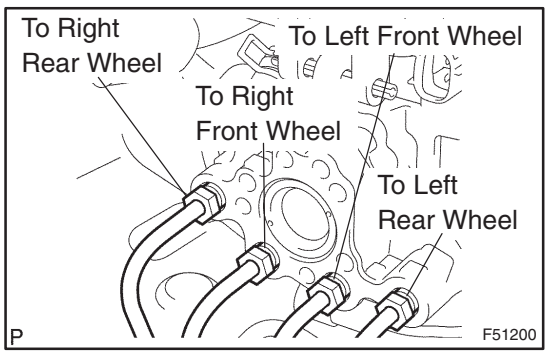


15. **REMOVE BRAKE MASTER CYLINDER**

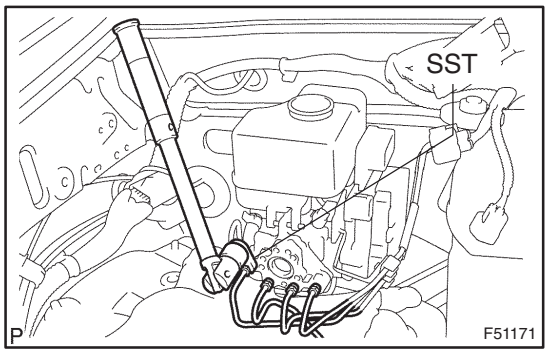
(a) Disconnect the 3 connectors from the brake master cylinder assy.



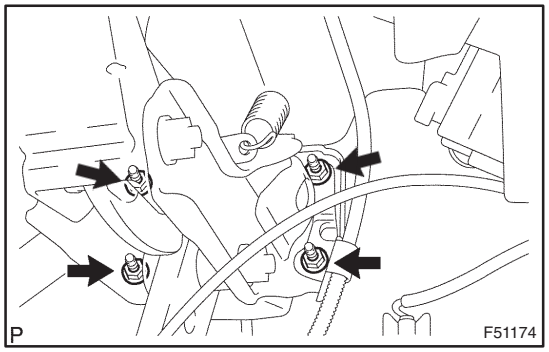
(b) RHD:
Remove the bolt and separate the clamp from the brake actuator bracket No.1.



(c) Use tags or make a memo to identify the place to reconnect.



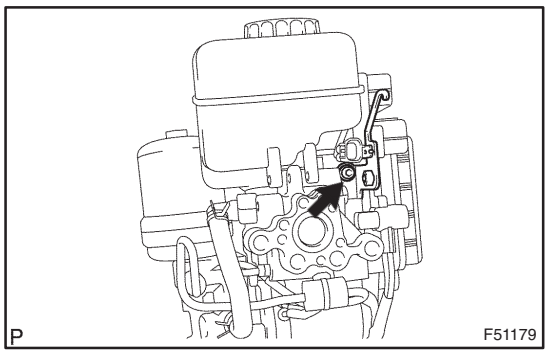
(d) Using SST, disconnect the 4 brake lines from the brake master cylinder assy.
SST 09023–00101



(e) Remove the 4 nuts and pull out the brake master cylinder assy.

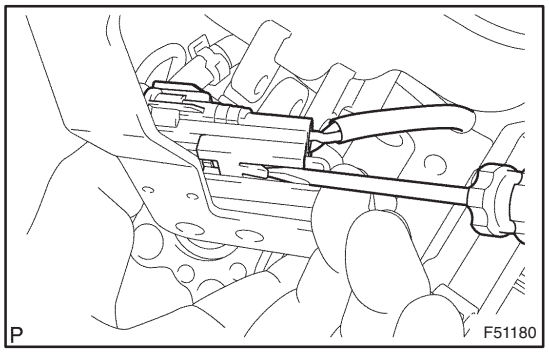
16. REMOVE BRAKE BOOSTER GASKET

(a) Remove the brake booster gasket from the brake master cylinder assy.

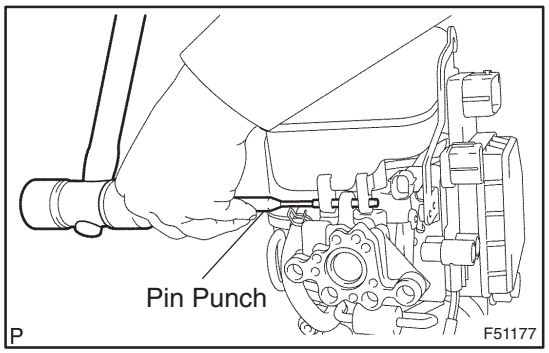


17. REMOVE BRAKE ACTUATOR BRACKET NO.1

(a) Using a hexagon wrench (5 mm), remove the bolt and brake actuator bracket No.1 from the brake master cylinder assy.

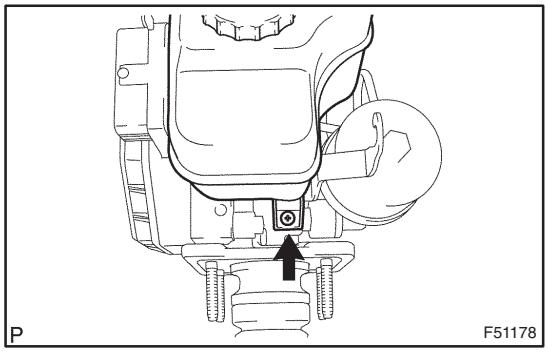


(b) Using a screwdriver, remove the brake fluid level warning switch connector from the brake actuator bracket No.1.



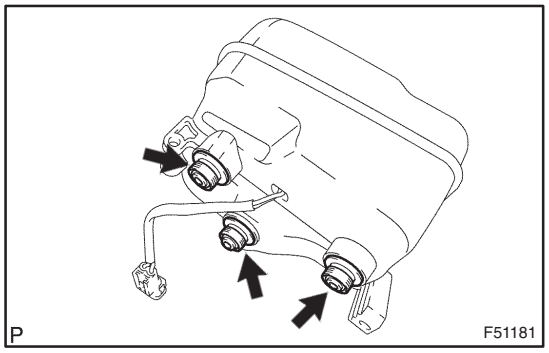
18. REMOVE BRAKE MASTER CYLINDER RESERVOIR SUB–ASSY

(a) Using a pin punch and hammer, remove the pin from the brake master cylinder reservoir sub–assy.



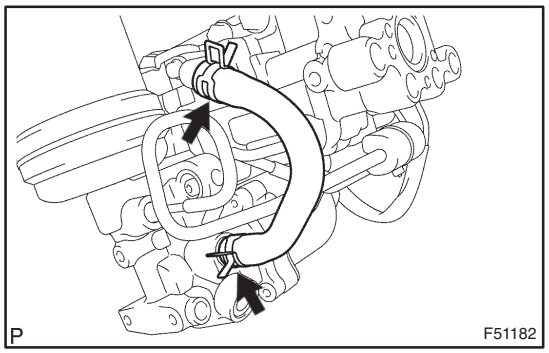
(b) Remove the screw and pull out the brake master cylinder reservoir sub–assy.

(c) Remove the master cylinder reservoir filler cap.



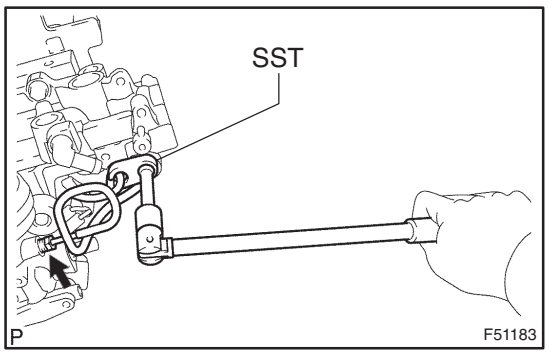
19. REMOVE MASTER CYLINDER RESERVOIR GROMMET

(a) Remove the 3 reservoir grommets from the master cylinder reservoir sub–assy.



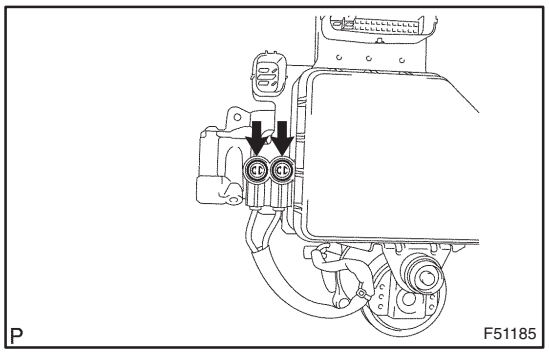
20. REMOVE BRAKE ACTUATOR HOSE

(a) Using needle nose pliers, slide the 2 clips and remove the brake actuator hose and 2 clips.



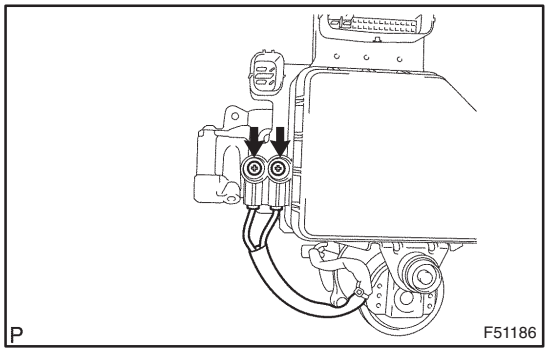
21. REMOVE BRAKE ACTUATOR TUBE NO.1

(a) Using SST, remove the brake actuator tube No.1 from the brake master cylinder assy.
SST 09023–00101

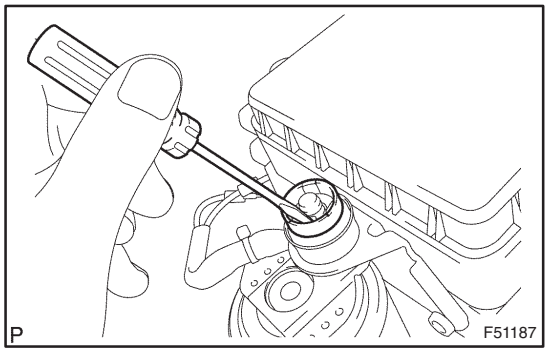


22. REMOVE BRAKE BOOSTER W/ACCUMULATOR PUMP ASSY

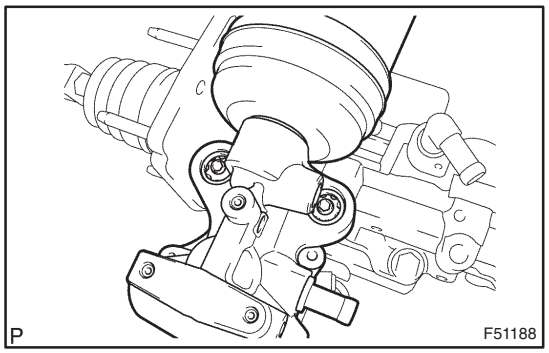
(a) Using a screwdriver, remove the 2 plugs.



(b) Remove the 2 screws and disconnect the wire harnesses from the master cylinder sorenoid.

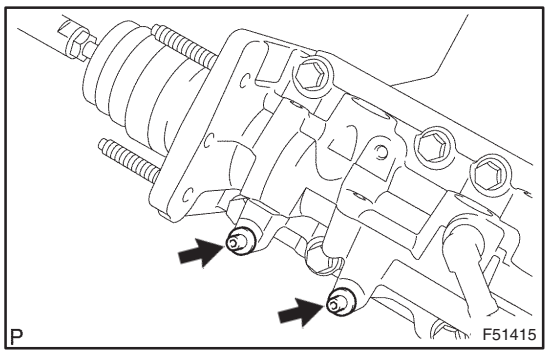


(c) Using a screwdriver, remove the clip.

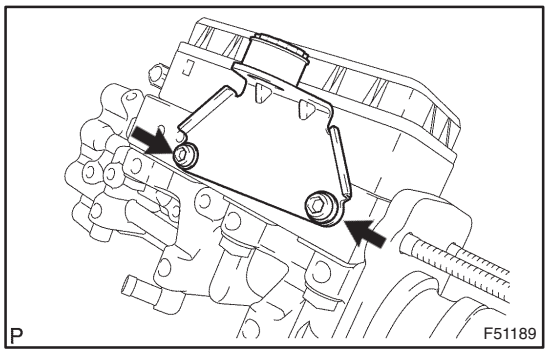


(d) Remove the brake booster w/ accumulator pump assy from the brake master cylinder.

(e) Remove the 2 brake booster pump collars and the 2 brake booster pump bushes from the brake booster w/ accumulator pump assy.



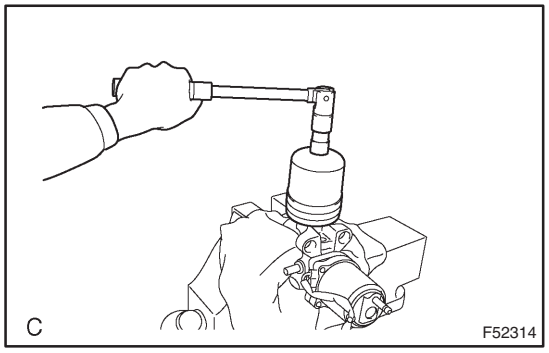
(f) Using a hexagon wrench (4 mm), remove the 2 pins.



23. REMOVE BRAKE BOOSTER PUMP BRACKET NO.2

(a) Using a hexagon wrench (5 mm), remove the 2 bolts and brake booster pump bracket No.2 from the brake master cylinder solenoid.

(b) Remove the brake booster pump bush from the brake booster pump bracket No.2.



24. REMOVE BRAKE BOOSTER ACCUMULATOR ASSY

(a) Secure the brake booster w/ accumulator pump assy in a vise.

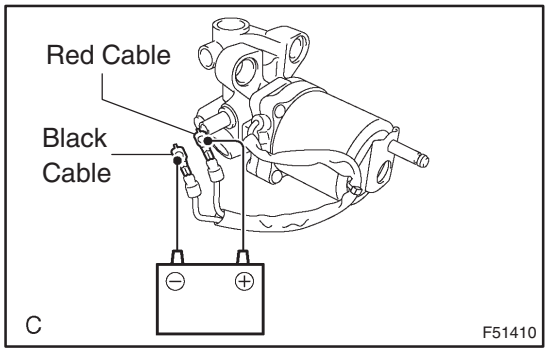
(b) Remove the brake booster accumulator assy.

(c) Remove the O–ring from the brake booster accumulator assy.

NOTICE:

Ensure no foreign matter enters the pump.

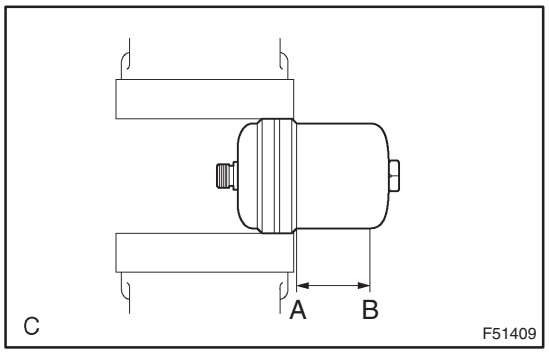
(d) Remove the brake booster accumulator pipe and compression spring.



25. INSPECT BRAKE BOOSTER PUMP ASSY

(a) Connect the positive (+) lead from the battery to the red cable of pump motor, and the negative (–) lead to the black cable.

(b) Check that the brake booster pump motor operation.



26. DISPOSE OF BRAKE BOOSTER ACCUMULATOR ASSY

(a) Place the brake booster accumulator assy in a vise and cover it with cloth.

(b) Using a saw, cut the brake booster accumulator body between A and B as shown in the illustration to discharge the gas inside.

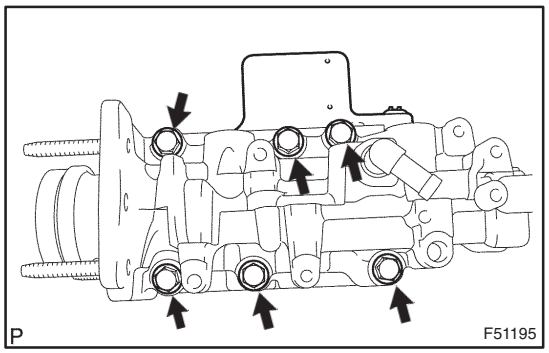
CAUTION:

- **Cover with a piece of cloth when working because gas may blow out.**
- **Carefully, not abruptly, cut the assembly.**
- **Wear protective glasses.**

(c) When the outer body of the brake booster accumulator is cut, gas and liquid discharges.

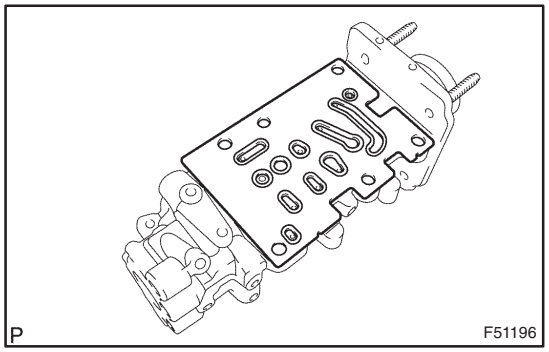
HINT:

The gas is colorless, odoless and non–poisonous.

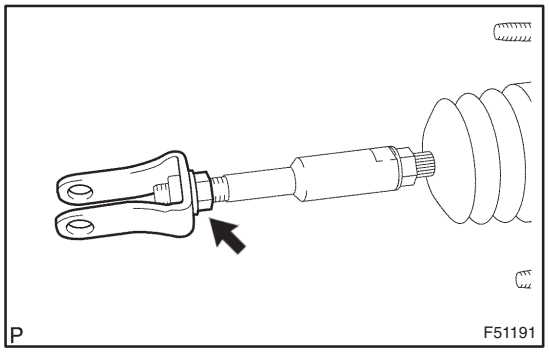


27. REMOVE MASTER CYLINDER SOLENOID

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

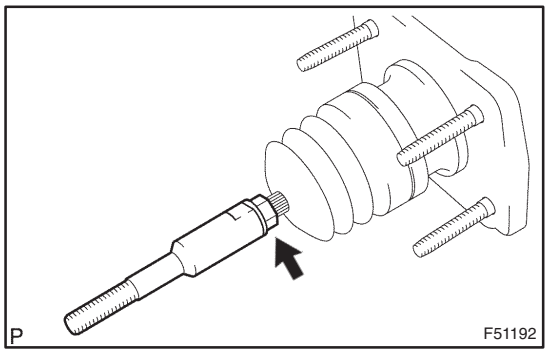


(b) Remove the gasket.



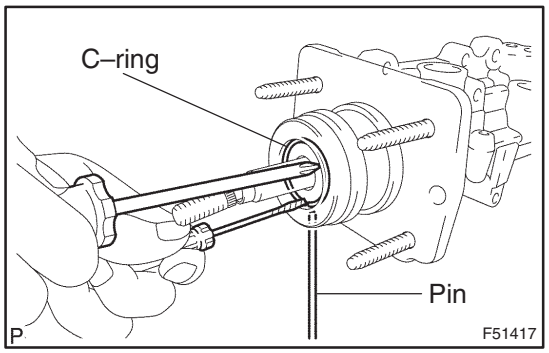
28. REMOVE MASTER CYLINDER PUSH ROD CLEVIS

(a) Loosen the lock nut on the rod operating adapter, and remove the push rod clevis and lock nut.



(b) Loosen the lock nut on the brake master cylinder side, and remove the rod operating adapter and lock nut.

29. REMOVE MASTER CYLINDER BOOT



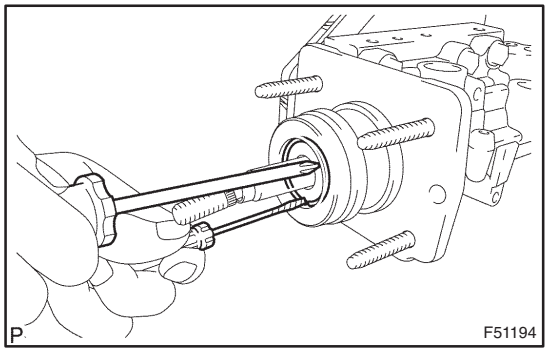
30. REMOVE BRAKE MASTER CYLINDER KIT

(a) Pressing the piston in with a screwdriver, use a pin or equivalent to push the C–ring from the hole in the master cylinder body then remove it with another screwdriver.

(b) Remove the piston, 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.



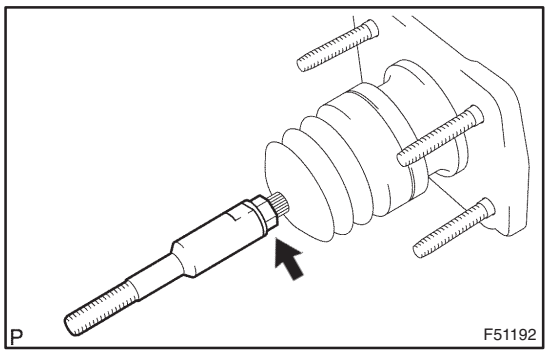
31. INSTALL BRAKE MASTER CYLINDER KIT

(a) Apply lithium soap base glycol grease to the new piston.

(b) Install the piston.

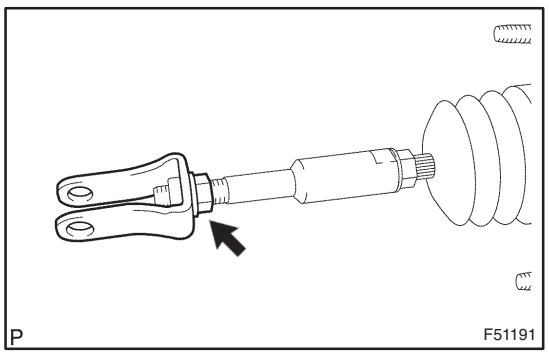
(c) Using 2 screwdrivers, install the new C–ring while pressing on the piston.

32. INSTALL MASTER CYLINDER BOOT

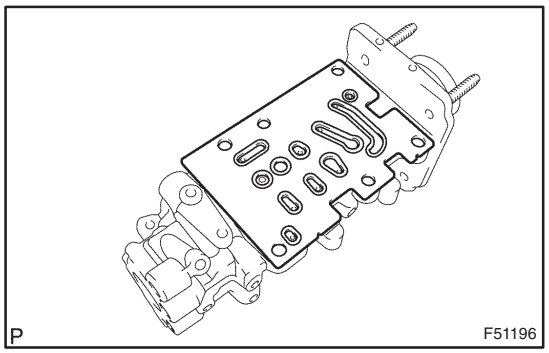


33. INSTALL MASTER CYLINDER PUSH ROD CLEVIS

(a) Install the brake master cylinder side lock nut and rod operating adapter on the brake master cylinder.
Torque: 26 N·m (260 kgf·cm, 19 ft·lbf)



(b) Install the lock nut and master cylinder push rod clevis on the rod operating adapter.
Torque: 26 N·m (260 kgf·cm, 19 ft·lbf)

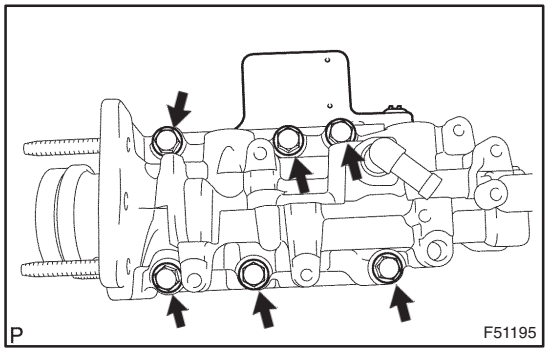


34. INSTALL MASTER CYLINDER SOLENOID

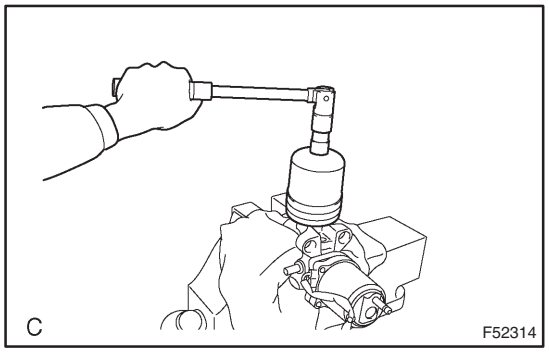
(a) Install the new gasket.

NOTICE:

Keep all surfaces of the master cylinder solenoid, master cylinder and gasket, especially contact surfaces, away from water and dust.



(b) Install the master cylinder solenoid with 6 new bolts.
Torque: 32 N·m (326 kgf·cm, 24 ft·lbf)



35. INSTALL BRAKE BOOSTER ACCUMULATOR ASSY

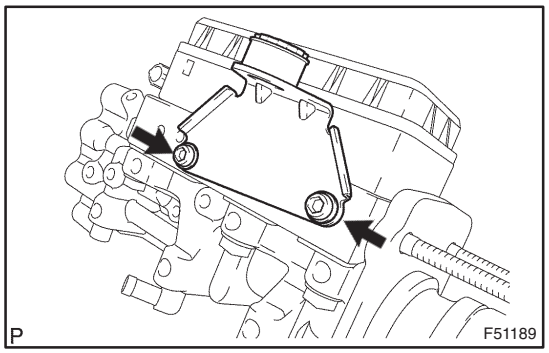
(a) Install the brake booster accumulator pipe and compression spring.

NOTICE:

Ensure that no foreign matter enters the pump.

(b) Install the new O–ring to the brake booster accumulator assy.

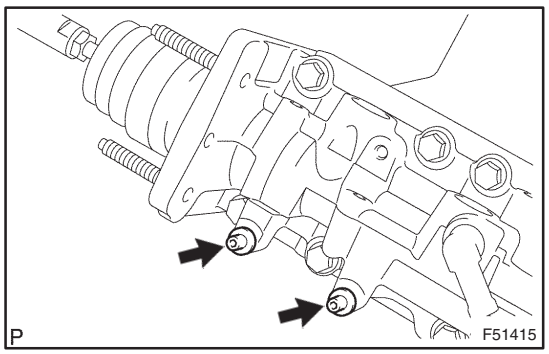
(c) Install the brake booster accumulator assy.
Torque: 57 N·m (585 kgf·cm, 42 ft·lbf)



36. INSTALL BRAKE BOOSTER PUMP BRACKET NO.2

(a) Install the brake booster pump bush to the brake booster pump bracket No.2.

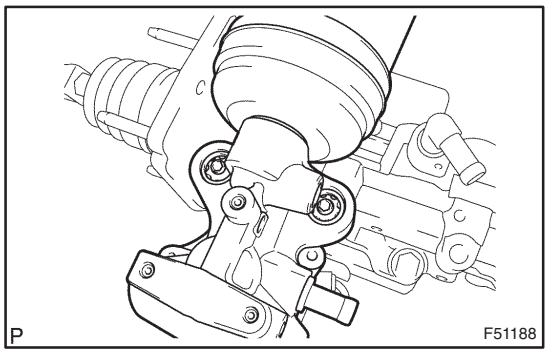
(b) Using a hexagon wrench (5 mm), install the brake booster pump bracket No.2 with the 2 bolts.
Torque: 7.8 N·m (80 kgf·cm, 69 in.·lbf)



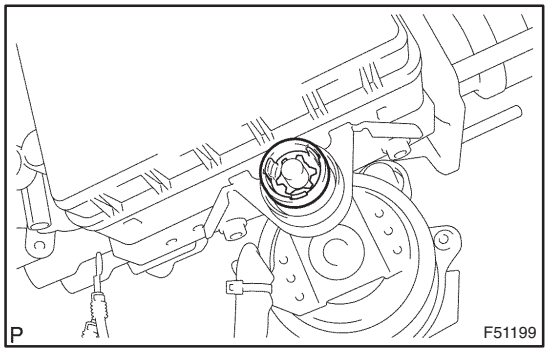
37. INSTALL BRAKE BOOSTER W/ACCUMULATOR PUMP ASSY

(a) Using a hexagon wrench (4 mm), install the 2 pins to the brake master cylinder.
Torque: 7.8 N·m (80 kgf·cm, 69 in.·lbf)

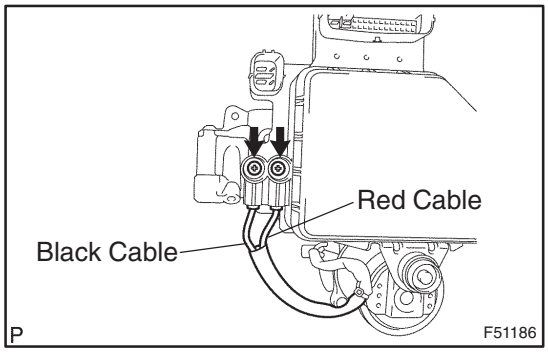
(b) Install the 2 brake booster pump collars and 2 brake booster pump bushes to the brake booster w/ accumulator pump assy.



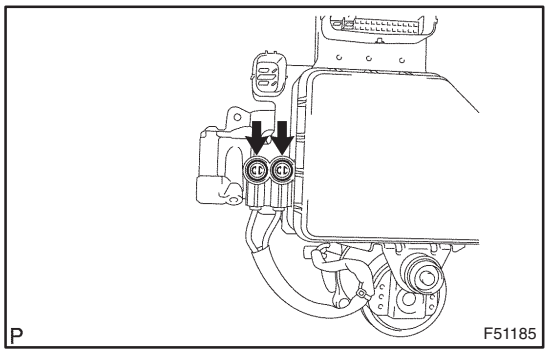
(c) Install the brake booster w/ accumulator pump assy to the brake master cylinder.



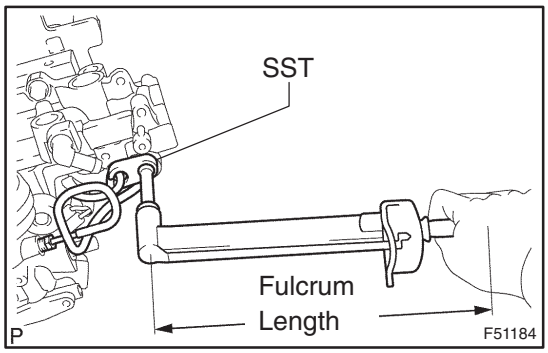
(d) Install the new clip.



(e) Install the wire harnesses with the 2 screws.
Torque: 2.9 N·m (30 kgf·cm, 26 in.·lbf)



(f) Install the 2 new plugs.



38. INSTALL BRAKE ACTUATOR TUBE NO.1

(a) Using SST, install the brake actuator tube No.1 to the brake master cylinder assy.

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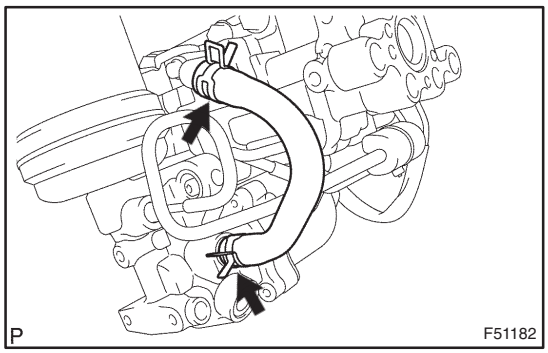
Torque: 14 N·m (143 kgf·cm, 10 ft·lbf)

NOTICE:

Use a torque wrench with a fulcrum length of 250 mm (9.84 in.).

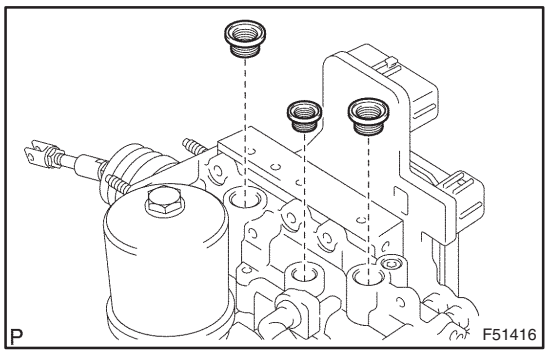
HINT:

This torque value is effective when the SST is parallel to the torque wrench.



39. INSTALL BRAKE ACTUATOR HOSE

(a) Using needle nose pliers, install the brake actuator hose and 2 clips.



40. INSTALL MASTER CYLINDER RESERVOIR GROMMET

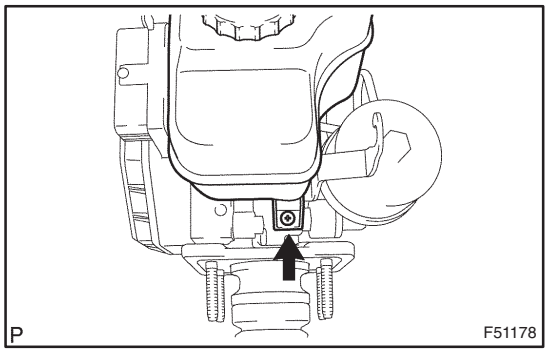
(a) Apply lithium soap base glycol grease to 3 new reservoir grommets.

(b) Install the 3 reservoir grommets to the brake master cylinder.

HINT:

Be careful of the size of each grommet.

(c) Install the master cylinder reservoir sub–assy to the brake master cylinder.

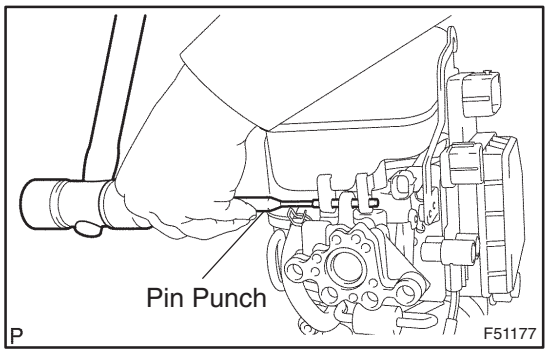


41. INSTALL BRAKE MASTER CYLINDER RESERVOIR SUB–ASSY

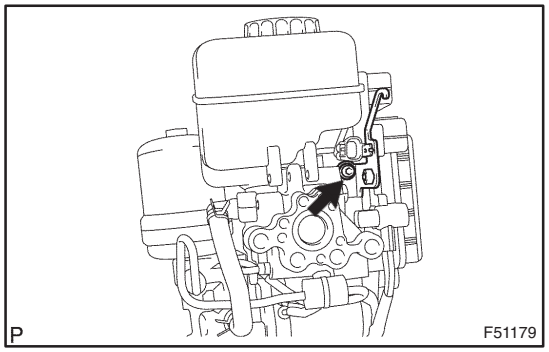
(a) Install the brake master cylinder reservoir sub–assy with the screw.

Torque: 1.7 N·m (17 kgf·cm, 15 in.·lbf)

(b) Install the master cylinder reservoir filler cap.



(c) Using a pin punch and hammer, install the new pin to the brake master cylinder reservoir sub–assy.



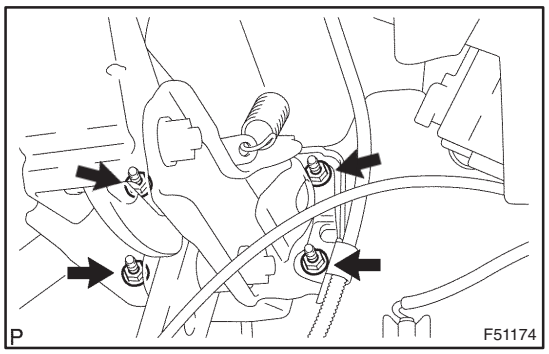
42. INSTALL BRAKE ACTUATOR BRACKET NO.1

(a) Install the brake fluid level warning switch connector to the brake actuator bracket No.1.

(b) Using a hexagon wrench (5 mm), install the brake actuator bracket No.1 to the brake master cylinder with the bolt.
Torque: 7.8 N·m (80 kgf·cm, 69 in.·lbf)

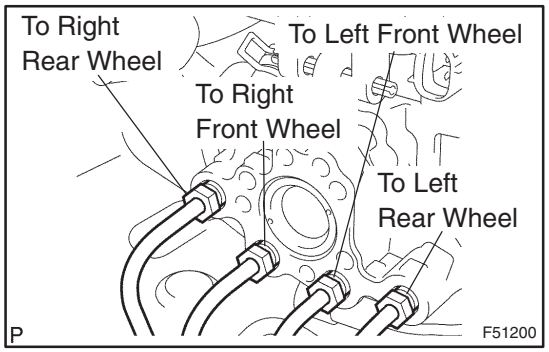
43. INSTALL BRAKE BOOSTER GASKET

(a) Install a new brake booster gasket on the master cylinder.

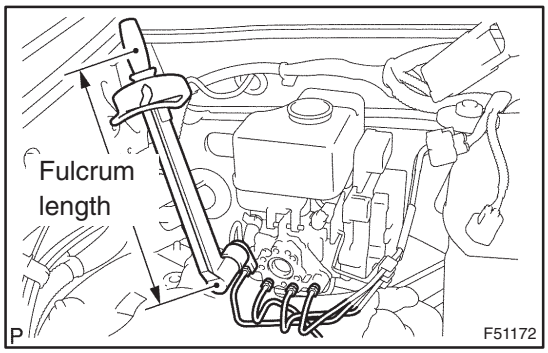


44. INSTALL BRAKE MASTER CYLINDER

(a) Install the brake master cylinder with the 4 nuts.
Torque: 14 N·m (145 kgf·cm, 10 ft·lbf)

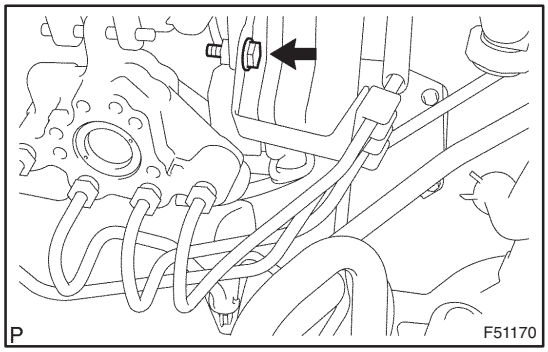


(b) Connect the 4 brake lines to the correct positions of the brake master cylinder as shown in the illustration.

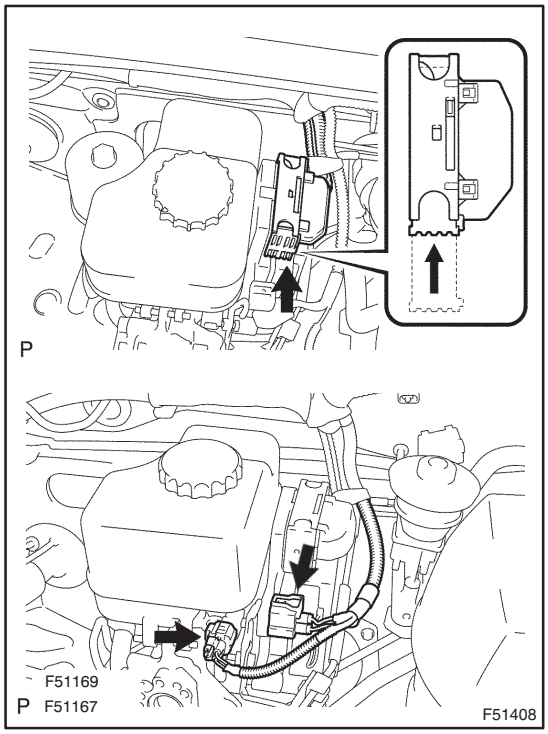


(c) Using SST, torque the 4 brake lines.
SST 09023–00101
Torque: 14 N·m (146 kgf·cm, 11 ft·lbf)

NOTICE:
Use a torque wrench with a fulcrum length of 250 mm (9.84 in.).
HINT:
This torque value is effective when the SST is parallel to the torque wrench.

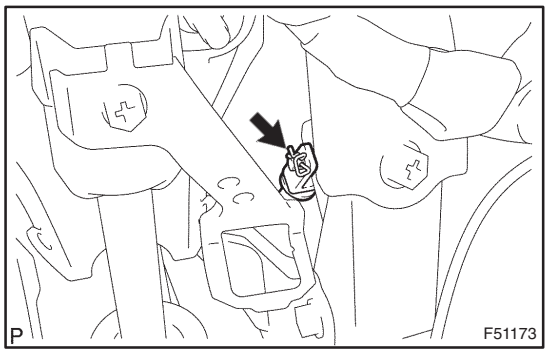


(d) RHD:
Install the clamp to the brake actuator bracket No.1 with the bolt.
Torque: 8.0 N·m (82 kgf·cm, 71 in.·lbf)



(e) Connect the 3 connectors to the brake master cylinder.

45. **INSTALL AIR CLEANER ASSY (RHD(1KD–FTV) STEERING POSITION TYPE) (SEE PAGE 14–204)**
46. **INSTALL INTAKE AIR CONNECTOR (RHD(1KD–FTV) STEERING POSITION TYPE) (SEE PAGE 14–204)**
47. **INSTALL AIR CLEANER ASSY (RHD(1GR–FE) STEERING POSITION TYPE) (SEE PAGE 14–116)**
48. **CONNECT VENTILATION HOSE NO.2 (RHD(1GR–FE) STEERING POSITION TYPE) (SEE PAGE 14–116)**



49. INSTALL PUSH ROD PIN

(a) Install the clip and push rod pin to the clevis.

50. INSTALL STEERING COLUMN HOLE COVER (LHD STEERING POSITION TYPE)
51. INSTALL INSTRUMENT PANEL FINISH LOWER PANEL RH
52. INSTALL INSTRUMENT PANEL FINISH PLATE
53. INSTALL INSTRUMENT CLUSTER FINISH PANEL ORNAMENT
54. INSTALL COWL SIDE TRIM BOARD LH (LHD STEERING POSITION TYPE)
55. INSTALL COWL SIDE TRIM BOARD RH (RHD STEERING POSITION TYPE)
56. INSTALL FRONT DOOR SCUFF PLATE LH (LHD STEERING POSITION TYPE)
57. INSTALL FRONT DOOR SCUFF PLATE RH (RHD STEERING POSITION TYPE)
58. BLEED BRAKE BOOSTER W/ACCUMULATOR PUMP ASSY (SEE PAGE 32–1)
59. BLEED BRAKE LINE (SEE PAGE 32–1)
60. BLEED MASTER CYLINDER SOLENOID (SEE PAGE 32–1)
61. INSPECT BRAKE PEDAL HEIGHT (SEE PUB. No. RM990E, PAGE 32–10)
62. CHECK PEDAL FREE PLAY (SEE PUB. No. RM990E, PAGE 32–10)
63. CHECK PEDAL RESERVE DISTANCE (SEE PUB. No. RM990E, PAGE 32–10)
64. CHECK FLUID LEVEL IN RESERVOIR (SEE PAGE 32–3)
65. CHECK FOR BRAKE FLUID LEAKAGE
66. CHECK BRAKE MASTER CYLINDER OPERATION (SEE PAGE 32–3)