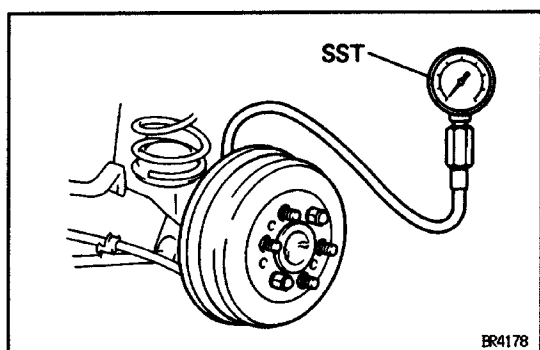
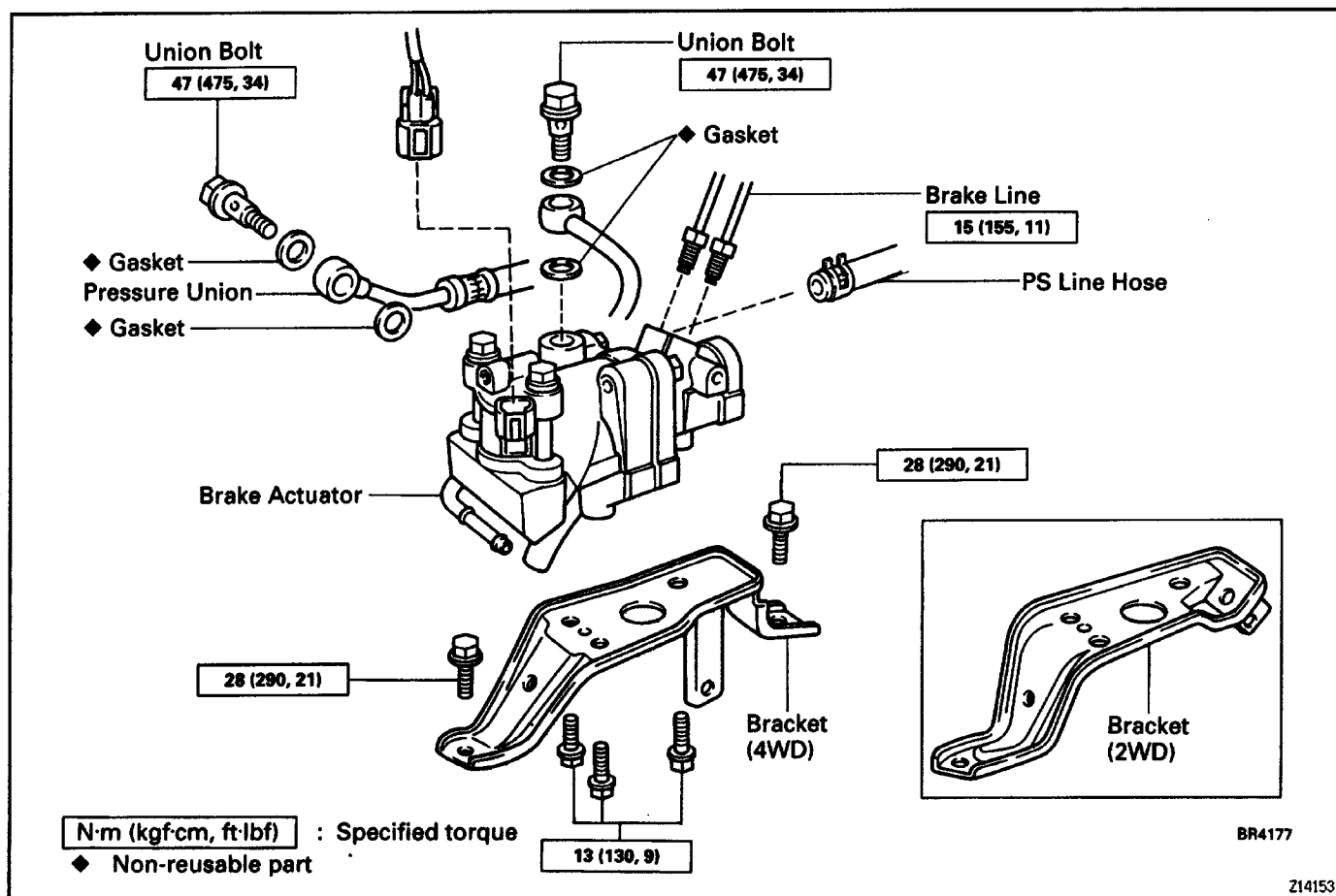


ABS ACTUATOR COMPONENTS



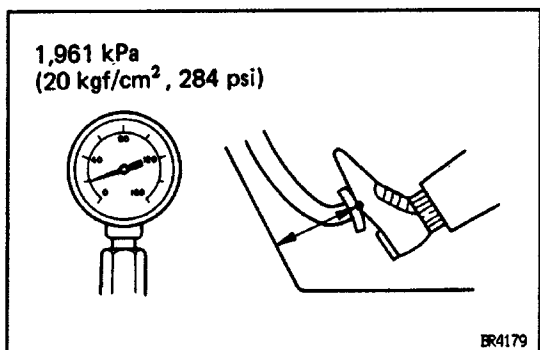
ABS ACTUATOR INSPECTION

1. CHECK BRAKE FLUID PRESSURE

- (a) Remove the bleeder plug from the rear wheel cylinder and connect SST.

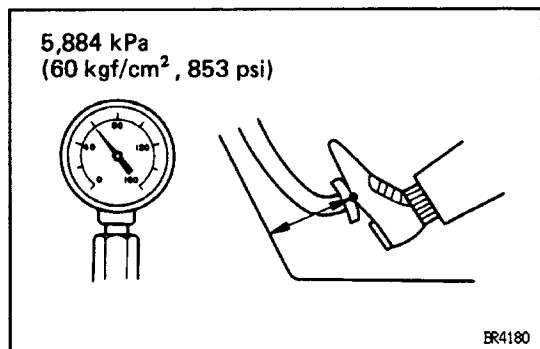
SST 09709-29017

- (b) Bleed the air from SST.

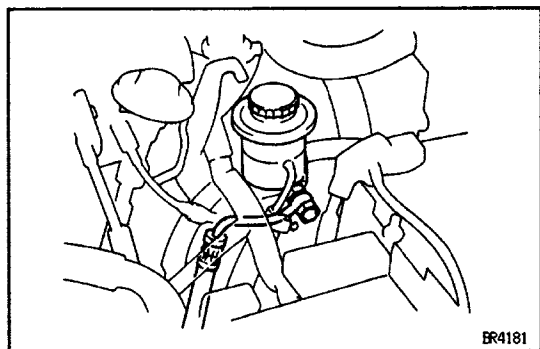


- (c) With the engine OFF, hold the brake pedal depressed for about 10 seconds with the pressure at 1,961 kPa (20 kgf/cm², 284 psi), and check that there is no change in the pedal reserve distance.

If there is a change in the brake pedal reserve distance, check the brake line, master cylinder and wheel cylinder for leaks.

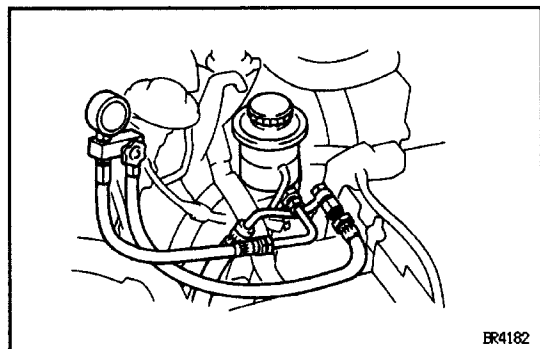


- (d) With the engine running, hold the brake pedal depressed for about 10 seconds with the pressure at 5,844 kPa (60 kgf/cm², 853 psi), and check that there is no change in the pedal reserve distance. If there is a change in the brake pedal reserve distance, inspect the brake actuator.

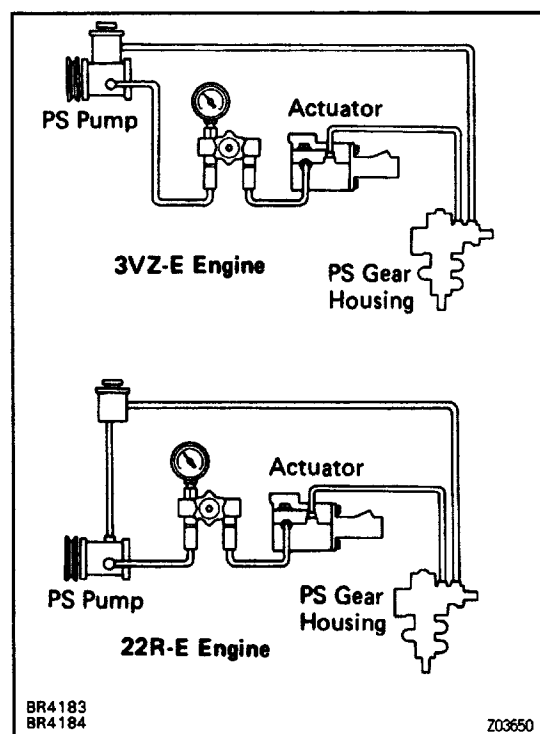


2. CHECK POWER STEERING FLUID PRESSURE

- (a) 4WD w/ 22R-E Engine:
Using SST, disconnect the power steering pressure line from the power steering pump.
SST 09631- 22020
- (b) Except. 4WD w/ 22R-E Engine:
Remove the union bolt and disconnect the power steering pressure line from the power steering pump.



- (c) Connect the power steering pressure gauge between the power steering pump and hose with the gauge valve on the actuator side.
- (d) Bleed the system and check that the fluid level is correct.
(See page [BR-64](#))



- (e) Start the engine and run it at idle.
- (f) Close the pressure gauge valve and observe the reading on the gauge.

Maximum pressure:

7,355 kPa (75kgf/cm², 1,067 psi)

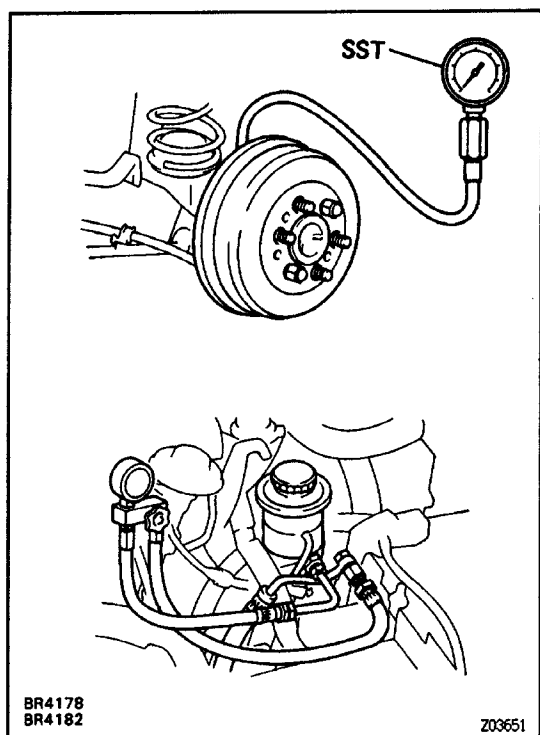
HINT:

- Do not keep the valve closed for more than 10 seconds.
- Check that the fluid temperature is at least 80° C (176° F).
If pressure is low, repair or replace the power steering pump.

3. CHECK RELATION BETWEEN BRAKE FLUID AND POWER STEERING FLUID PRESSURE

HINT:

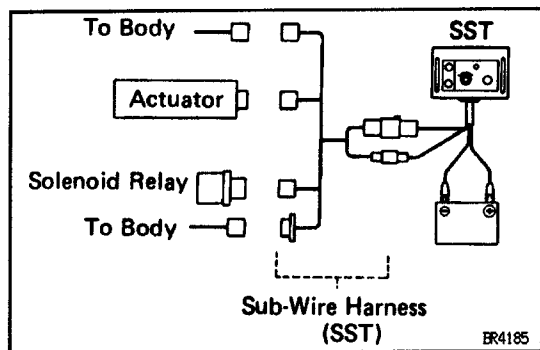
- Be sure the tires are pointing straight-ahead.
Be sure the power steering pressure gauge valve is fully open.
- Check that the power steering fluid temperature is at least 80° C (176° F).



With the engine running, the brake and power steering fluid pressure should conform to the following table.

Brake Fluid Pressure kPa (kgf/cm ² , psi)	PS Fluid Pressure kPa (kgf/cm ² , psi)
2,941 (30, 427)	1,596–2,550 (16–26, 228–370)
9,807 (100, 1,422)	3,236–4,609 (33–47, 469–668)

If not within specification, check the actuator.



4. CHECK ACTUATOR OPERATION

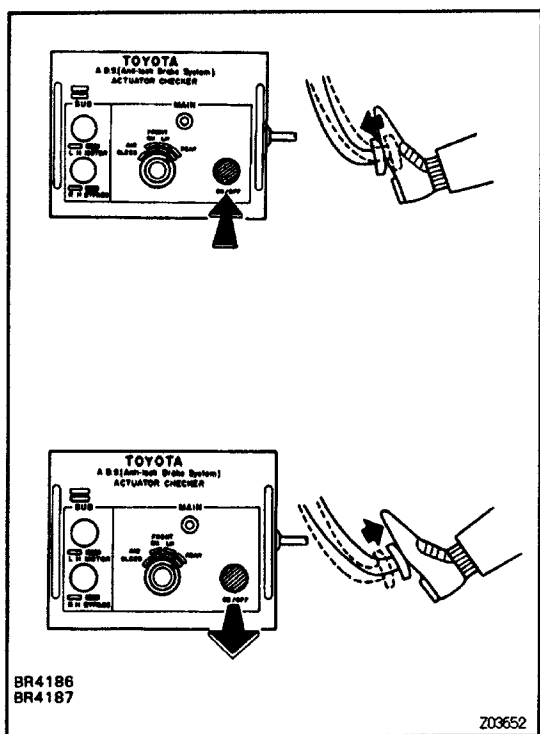
- Disconnect the connector from the actuator.
- Disconnect the connector from the solenoid relay.
- Connect the actuator checker (SST) to the actuator, solenoid relay and body side wire harness through the sub-wire harness (SST), as shown.
SST 09990-00150 and 09990-00205
- Connect the red cable of the checker to the battery positive (+) terminal and black to the negative (–) terminal.
- Start the engine, and run it at idle.
- Turn the selector switch of actuator checker to "REAR" position.
- Strongly depress the brake pedal and hold it.
- Push the ON/OFF switch, and check that the brake pedal sinks a little and that it returns to the original position when the switch is released.

NOTICE:

- To avoid damaging the master cylinder piston cup, do not push SST switch 'ON' before depressing the brake pedal and do not release your foot from the brake pedal while SST switch is pushed 'ON'.
- Do not keep pushing the ON/OFF switch for more than 10 seconds.

If operation is not as specified, replace the actuator.

- Release the switch, then release the brake pedal.



5. REMOVE ACTUATOR CHECKER (SST)

Remove SST, then connect the connectors of the actuator and solenoid relay.

SST 09990-00150 and 09990-00205

6. REMOVE SST FROM WHEEL CYLINDER

SST 09709-29017

7. REMOVE PRESSURE GAUGE FROM PS PUMP

Remove the pressure gauge from the PS line, then bleed the power steering system.

8. BLEED SYSTEM

(a) Fill brake reservoir with brake fluid.

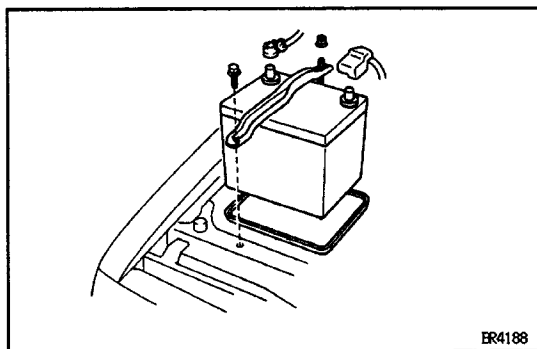
(b) Fill PS reservoir with fluid.

Fluid type:

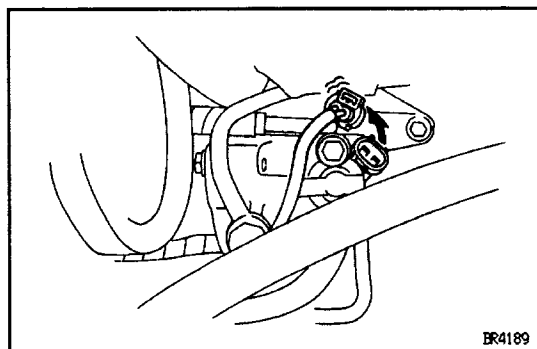
ATF DEXRON® II

(c) Bleed the system.

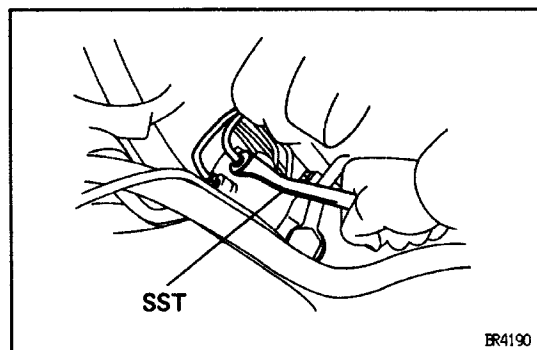
(See page [BR-64](#))

**ABS ACTUATOR REMOVAL****1. REMOVE BATTERY**

Disconnect the wire harnesses from the terminals and remove the battery and tray.

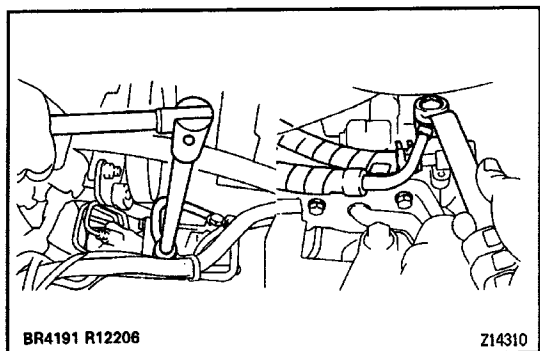
**2. DISCONNECT CONNECTOR**

Disconnect the connector from the actuator.

**3. DISCONNECT BRAKE LINES**

Using SST, disconnect the 2 brake lines.

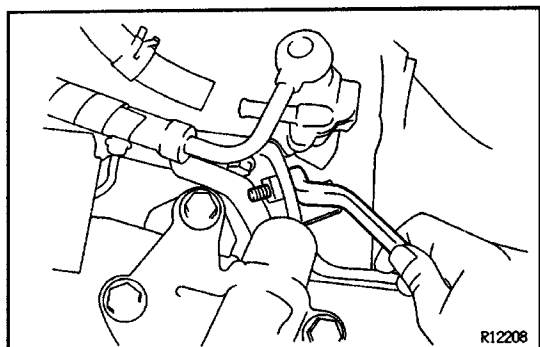
SST 09751- 36011



4. DISCONNECT POWER STEERING HOSES FROM ACTUATOR

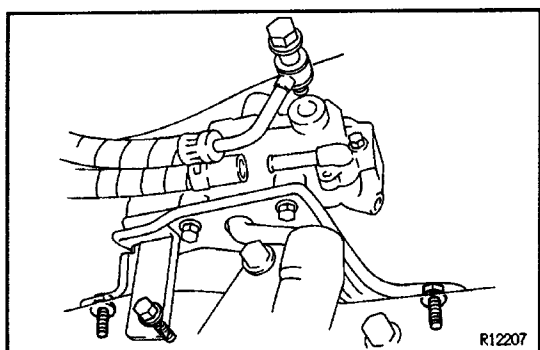
HINT: Turn the steering wheel clockwise until it locks before disconnecting the PS hoses. If you cannot work from the upper side, work from the wheel house.

- (a) Remove the 2 union bolts and disconnect the 2 power steering pressure hoses.
- (b) 22R-E Engine:
Disconnect the power steering hose.
- (c) 3VZ-E Engine:
Disconnect the 2 power steering hoses.



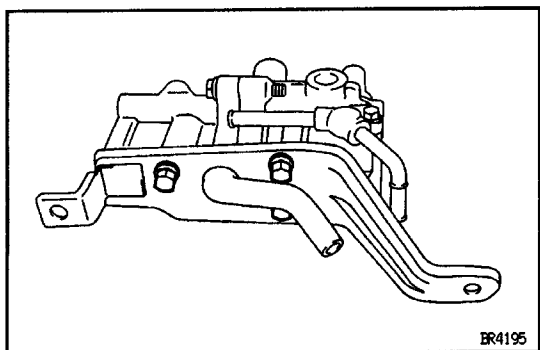
5. REMOVE PS HOSE CLAMP INSTALLATION BOLT

Remove the installation bolt of the power steering hose clamp.



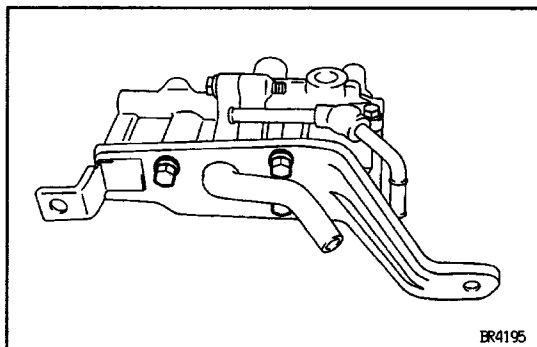
6. REMOVE ACTUATOR

Remove the 3 bolts, and remove the actuator from the wheel house.



7. REMOVE BRACKET FROM ACTUATOR

Remove the 3 bolts, and separate the actuator and bracket.

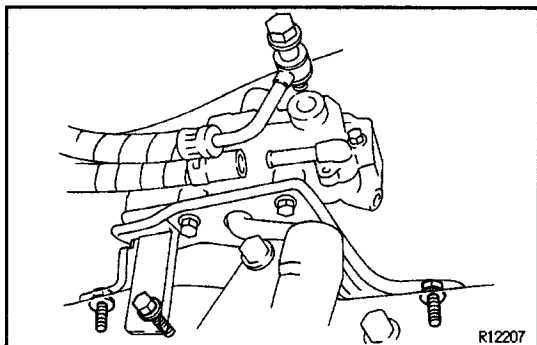


ABS ACTUATOR INSTALLATION

1. INSTALL BRACKET TO ACTUATOR

Install the bracket to the actuator with the 3 bolts.

Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)



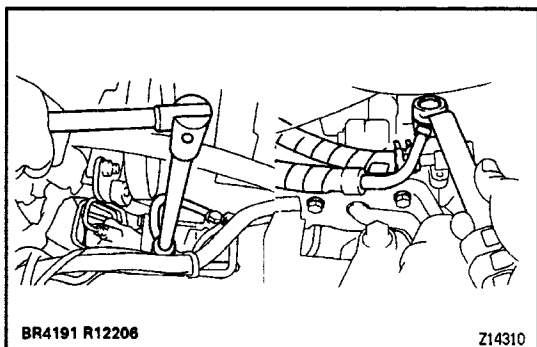
2. INSTALL ACTUATOR

Install the actuator in place and tighten the 3 bolts.

Torque: 28 N·m (290 kgf·cm, 21 ft·lbf)

HINT: Install the bolts in the following order:

- (1) Front side bolt
- (2) Wheel house side bolt of rear bolts
- (3) Upper side bolt on frame of rear bolts

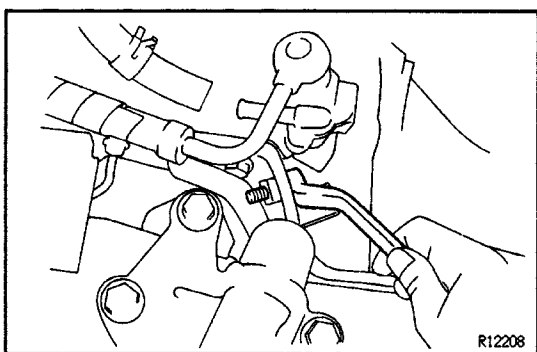


3. CONNECT POWER STEERING LINES

- (a) Set the pressure union and new gaskets in place, then install the union bolt.

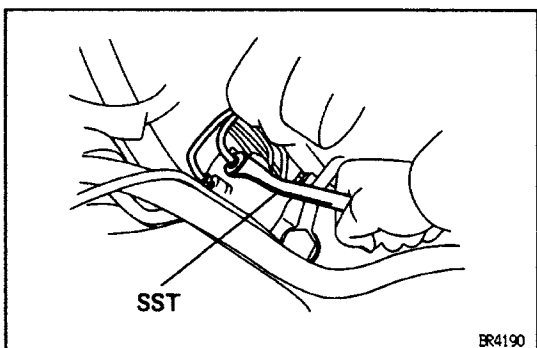
Torque: 47 N·m (475 kgf·cm, 34 ft·lbf)

- (b) Similarly connect the other pressure hose.
- (c) Connect the PS hose to the actuator, then fix it with the hose clamp.
- (d) 3VZ-E Engine:
Similarly connect the other PS line hose.



4. INSTALL PS TUBE CLAMP

Install the PS pressure hose clamp in place and tighten the bolt.



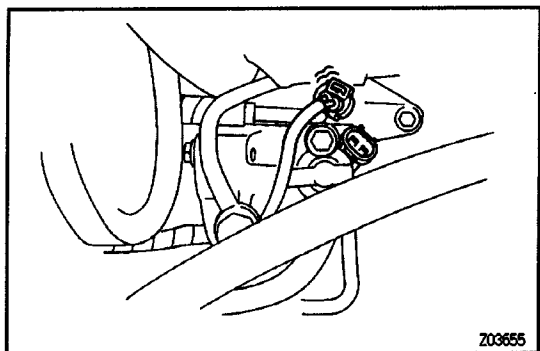
5. CONNECT BRAKE LINES

Using SST, connect the 2 brake lines to the actuator.

SST 09751 – 36011

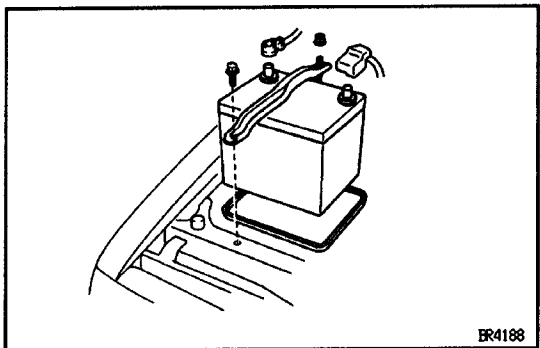
Torque: 15 N·m (155 kgf·cm, 11 ft·lbf)

HINT: Connect the painted brake line to the painted hole of the actuator, then connect the 2nd brake line.



6. CONNECT CONNECTOR

Connect the connector to the actuator.



7. INSTALL BATTERY

Install the tray and battery in place, then connect the wire harnesses to the terminals.

8. BLEED SYSTEM

- (a) Fill brake reservoir with brake fluid.
- (b) Fill PS reservoir with fluid.

Fluid type:

ATF DEXRON® II

- (c) Bleed the system
(See page [BR-64](#))

REAR-WHEEL ANTI-LOCK BRAKE SYSTEM BLEEDING

HINT: Whenever PS hoses or PS pressure tube are disconnected or actuator is removed from the vehicle, the Rear-Wheel Anti-Lock Brake System should be bled in the following procedure.

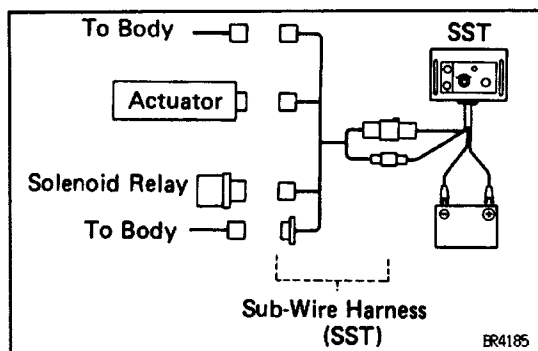
At the other times, use the conventional procedure.

1. BLEED POWER STEERING SYSTEM

(See page [SR-31](#))

2. BLEED BRAKE SYSTEM

- (a) Bleed the system with the engine running.
- (b) Bleed the system with the engine OFF.



3. BLEED POWER STEERING SYSTEM AGAIN

- (a) Disconnect the connector from the actuator.
- (b) Disconnect the connector from the solenoid relay.
- (c) Connect the actuator checker (SST) to the actuator, solenoid relay and body side wire harness through the sub-wire harness (SST), as shown.
SST 09990-00150 and 09990-00205
- (d) Connect the red cable of the checker to the battery positive (+) terminal and black to the negative (-) terminal.
- (e) Start the engine, and run it at idle.
- (f) Turn the selector switch of actuator checker to "AIR BLEED" position.
- (g) Strongly depress the brake pedal and hold it.
- (h) Push on and release the ON/OFF switch 5 times during 3 seconds.

NOTICE:

- To avoid damaging the master cylinder piston cup, do not push 33T switch 'ON' before depressing the brake pedal and do not release your foot from the brake pedal while SST switch: pushed on.
 - Do not keep pushing the ON/OFF switch for more than 10 seconds.
- (i) Release the switch, then release the brake pedal.
 - (j) Check the PS and brake fluid level, add fluid if necessary.
 - (k) Remove SST, then connect the connectors of the actuator and solenoid relay.
SST 09990-00150 and 09990-00205

