

## LOAD SENSING PROPORTIONING AND BY-PASS VALVE (LSP & BV) ON-VEHICLE INSPECTION

BR09R-13

### 1. SET REAR AXLE LOAD

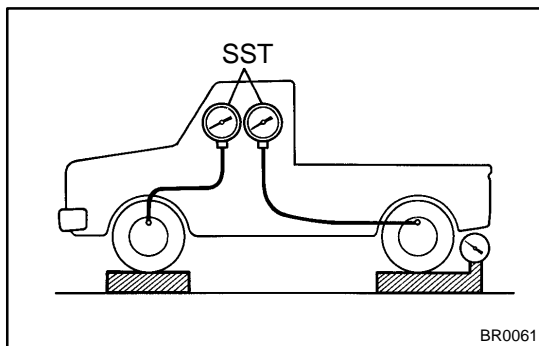
Rear axle load (includes vehicle weight):

Standard cab: 950 kg (2,094 lb)

Access cab:

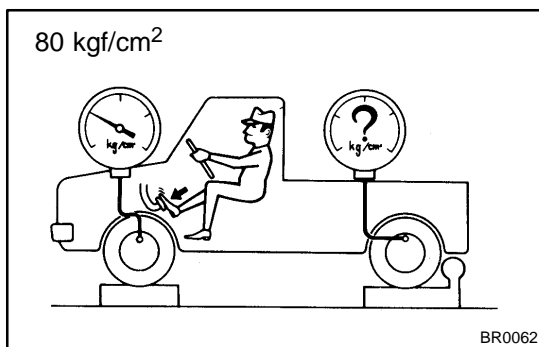
1GR-FT engine: 1,000 kg (2,205 lb)

2UZ-FE engine: 1,050 kg (2,315 lb)



### 2. INSTALL LSPV GAUGE (SST) AND BLEED AIR

SST 09709-29018



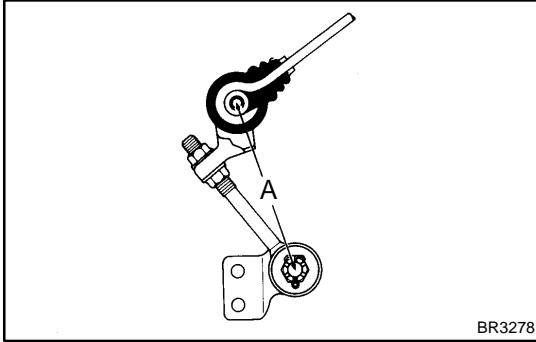
### 3. RAISE FRONT BRAKE PRESSURE TO 7,845 kPa (80 kgf/cm², 1,138 psi) AND CHECK REAR BRAKE PRESSURE

Rear brake pressure:

$5,110 \pm 490$  kPa ( $52.1 \pm 5$  kgf/cm²,  $741 \pm 71$  psi)

#### HINT:

The brake pedal should not be depressed twice and/or returned while setting to the specified pressure. Read the value of rear brake pressure after holding the specified fluid pressure for 2 seconds. If the brake pressure is incorrect, adjust the fluid pressure.



#### 4. IF NECESSARY, ADJUST FLUID PRESSURE

- Loosen the lock nut.
- Adjust the length of shackle No. 2.

Low pressure: Lengthen A

High pressure: Shorten A

**Initial set: 120 mm (4.72 in.)**

**Adjustment range: 112 to 128 mm (4.41 to 5.04 in.)**

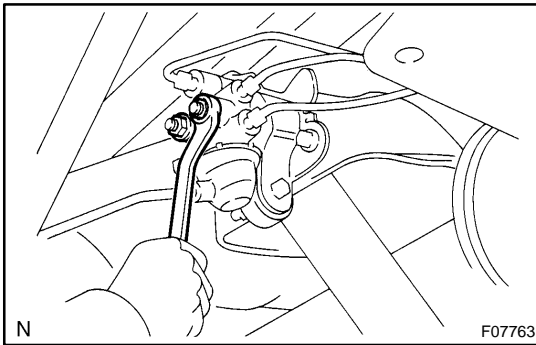
HINT:

One turn of the nut changes the fluid pressure as shown in the following specification.

**7.4 kPa (0.76 kgf/cm<sup>2</sup> 11 psi)**

- Torque the lock nut.

**Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)**



- If the pressure cannot be adjusted by shackle No. 2, raise or lower the valve body.

Low pressure: Lower the body

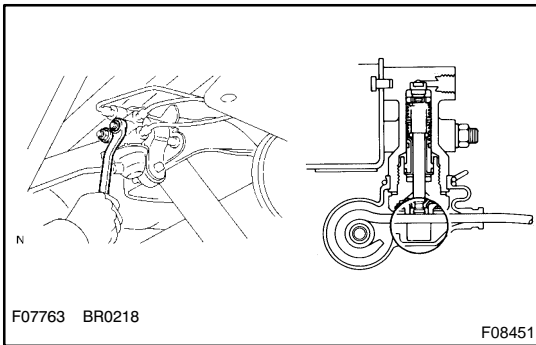
High pressure: Raise the body

- Torque the nuts.

**Torque: 13 N·m (130 kgf·cm, 9 ft·lbf)**

- Adjust the length of shackle No. 2 again.

If it cannot be adjusted, inspect the valve body.

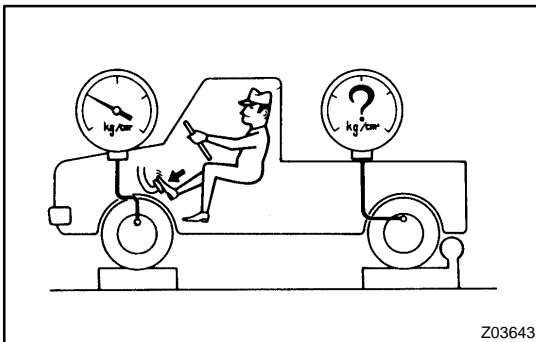


#### 5. IF NECESSARY, CHECK VALVE BODY

- Assemble the valve body in the uppermost position.

HINT:

When the brakes are applied, the piston will move down about 0.8 mm (0.03 in.). In this situation, do not move the piston or make it come into contact with the load sensing spring.



- In this position, check the rear brake pressure.

Front brake pressure kPa (kgf/cm <sup>2</sup> , psi)	Rear brake pressure kPa (kgf/cm <sup>2</sup> , psi)
1,470 (15, 213)	1,470 (15, 213)
3,922 (40, 569)	2,210 ± 390 (22.5 ± 4, 320 ± 57)
13,720 (140, 1,990)	5,150 ± 590 (52.5 ± 6, 767 ± 85)

If the measured value is not within the standard, replace the valve body.