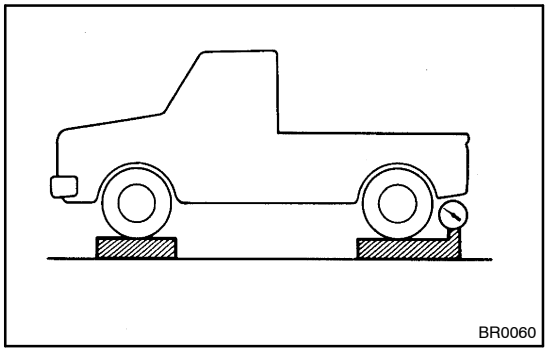

BR0060

# LOAD SENSING PROPORTIONING VALVE (LSPV)

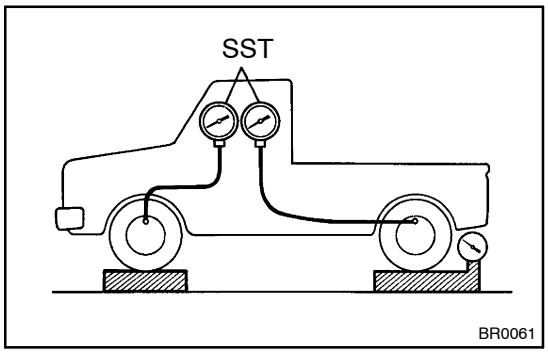
BR1RI–01

## ON–VEHICLE INSPECTION

**1. SET REAR AXLE LOAD**

**Rear axle load (including vehicle weight):**

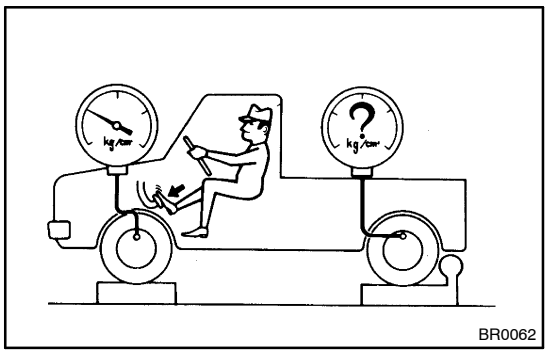
| Model | Rear brake | Rear axle load |
|---|---|---|
| FZJ71<br>FZJ74<br>HZJ71<br>HZJ74 | Drum | 1,250 kg (2,756 lb) |
| | Disc | 1,100 kg (2,425 lb) |
| FZJ78<br>FZJ79<br>HZJ78<br>HZJ79 | Drum<br>Disc | 1,500 kg (3,307 lb) |



BR0061

**2. INSTALL LSP & BV GAUGE (SST) AND BLEED AIR**

SST 09709–29018


BR0062

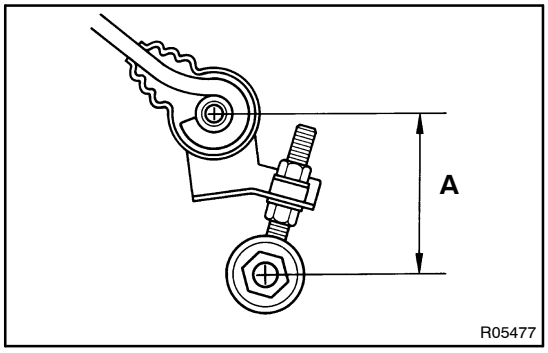
**3. RAISE FRONT BRAKE PRESSURE TO 9,000 kPa (92 kgf/cm$^2$, 1,305 psi) AND CHECK REAR BRAKE PRESSURE**

**Rear brake pressure:**

| | |
|---|---|
| Rear drum brake | 5,082 – 6,258 kPa (51.8 – 63.8 kgf/cm$^2$, 737 – 907 psi) |
| Rear disc brake | 7,502 – 8,678 kPa (76.5 – 88.5 kgf/cm$^2$, 1,088 – 1,259 psi) |

HINT:

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




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

(a) Adjust the length of the No. 2 shackle.
Low pressure – Lengthen A
High pressure – Shorten A

**Initial set length:**

| | |
|---|---|
| VENEZUELA | 120 mm (4.72 in.) |
| OTHER | 78 mm (3.07 in.) |

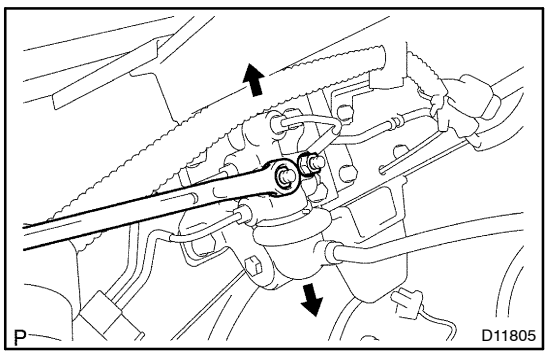
**Adjustment range:**

| | |
|---|---|
| VENEZUELA | 114 – 126 mm (4.49 – 4.96 in.) |
| OTHER | 72 – 84 mm (2.83 – 3.31 in.) |

HINT:
One turn of the nut changes the fluid pressure as shown in the following table.

**Rear brake pressure:**

| | |
|---|---|
| Rear disc brake (VENEZUELA) | 10.8 kPa ( 0.11 kgf/cm$^2$, 1.56 psi) |
| Rear drum brake (OTHER) | 186.5 kPa (1.90 kgf/cm$^2$, 27.0 psi) |
| Rear disc brake | 238.7 kPa ( 2.43 kgf/cm$^2$, 34.6 psi) |

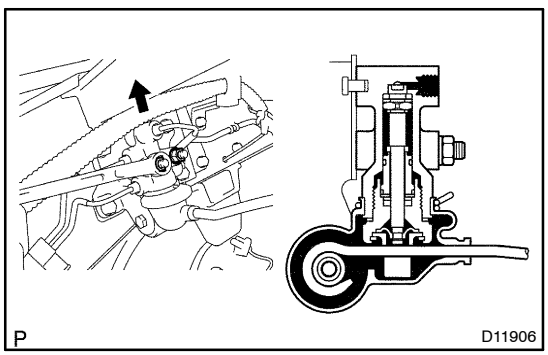



(b) If the pressure cannot be adjusted by the No. 2 shackle, raise or lower the valve body.
Low pressure – Lower body
High pressure – Raise body

(c) Torque the nuts.
**Torque: 12.5 N·m (130 kgf·cm, 9 ft·lbf)**

(d) Adjust the length of the No. 1 shackle again.

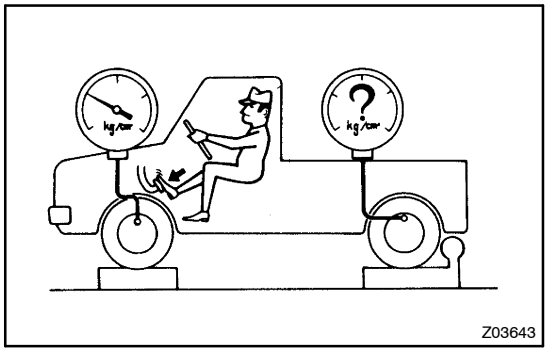
If it cannot be adjusted, inspect the valve housing.




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

(a) Assemble the valve body in the uppermost position.

HINT:
When the brakes are applied, the position will move down by about 0.8 mm (0.03 in.). Even at this time, the piston should not make contact with or move the load sensing spring.




(b) In this position, check the rear brake pressure.

**Rear drum brake (VENEZUELA):**

| Front brake pressure kPa (kgf/cm$^2$, psi) | Rear brake pressure kPa (kgf/cm$^2$, psi) |
|---|---|
| 981 (10, 142) | 981 (10, 142) |
| 4,903 (50, 711) | 2,500 – 3,283 (25,5 – 33.5, 362 – 476) |
| 9,807 (100, 1,422) | 3,626 – 4,606 (37 – 47, 525 – 667) |

**Rear drum brake:**

| Front brake pressure kPa (kgf/cm$^2$, psi) | Rear brake pressure kPa (kgf/cm$^2$, psi) |
|---|---|
| 981 (10, 142) | 981 (10, 142) |
| 4,903 (50, 711) | 1,569 – 2,353 (16 – 24, 228 – 341) |
| 9,807 (100, 1,422) | 2,697 – 3,677 (27.5 – 37.5, 391 – 533) |

**Rear disc brake:**

| Front brake pressure kPa (kgf/cm$^2$, psi) | Rear brake pressure kPa (kgf/cm$^2$, psi) |
|---|---|
| 1,961 (20, 284) | 1,961 (20, 284) |
| 4,903 (50, 711) | 2,451 – 3,236 (25 – 33, 356 – 469) |
| 9,807 (100, 1,422) | 3,825 – 4,805 (39 – 49, 555 – 697) |

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