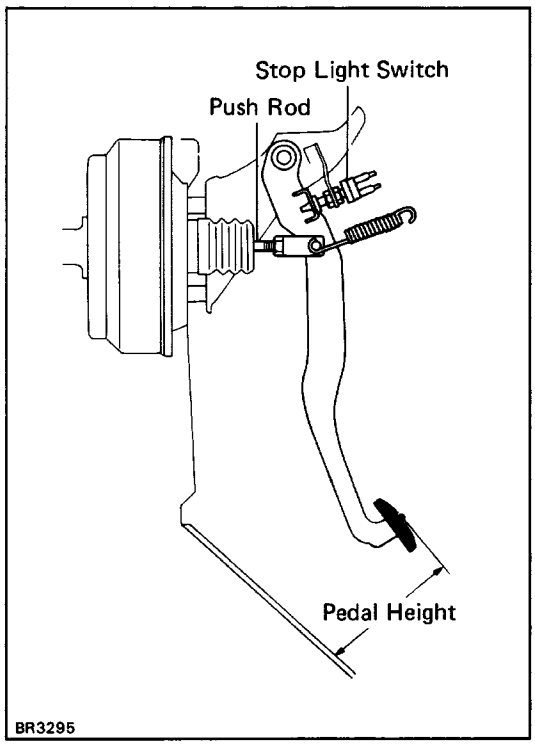
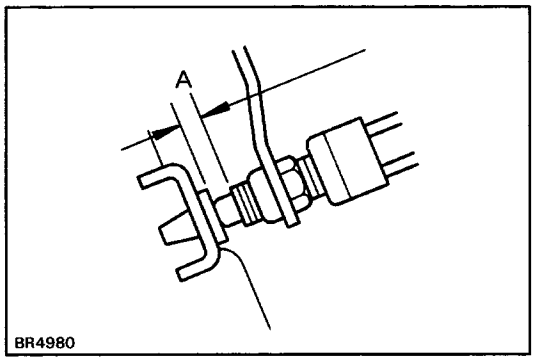
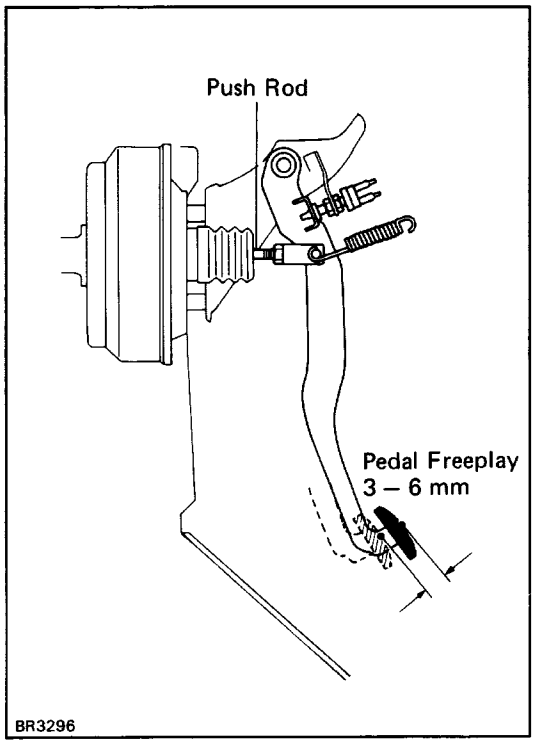






CHECKS AND ADJUSTMENTS

CHECK AND ADJUSTMENT OF BRAKE PEDAL

1. CHECK THAT PEDAL HEIGHT IS CORRECT, AS SHOWN

PEDAL HEIGHT FROM ASPHALT SHEET:
2WD 148 MM (5.83 IN.)
4WD 145 MM (5.71 IN.)

2. IF NECESSARY, ADJUST PEDAL HEIGHT

(a) Disconnect the connector from the stop light switch.

(b) Loosen the stop light switch lock nut and remove the stop light switch.

(c) Loosen the push rod lock nut.

(d) Adjust the pedal height by turning the pedal push rod.

(e) Tighten the push rod lock nut.

Torque: 25 N–m (260 kgf–cm, 19 ft–lbf)

(f) Install the stop light switch and turn it until it lightly contacts the pedal stopper.

(g) Return the stop light switch one turn.

(f) Check the clearance

(A) between stop light switch and pedal.

Clearance: 0.5 – 2.4mm (0.02 – 0.09 in.)

(i) Tighten the stop light switch lock nut.

(j) Check that the stop light come on when the brake pedal is depressed, and go off when the brake pedal is released.

(k) After adjusting the pedal height, check the pedal free play.

HINT: If clearance

(A) between the stop light switch and the pedal stopper has been adjusted correctly, the pedal freeplay will meet the specifications.

3. CHECK THAT PEDAL FREEPLAY IS CORRECT, AS SHOWN

(a) Stop the engine and depress the brake pedal several times until there is no more vacuum left in the booster.

(b) (Single booster)

Push in the pedal until the beginning of resistance is felt. Measure the distance, as shown.

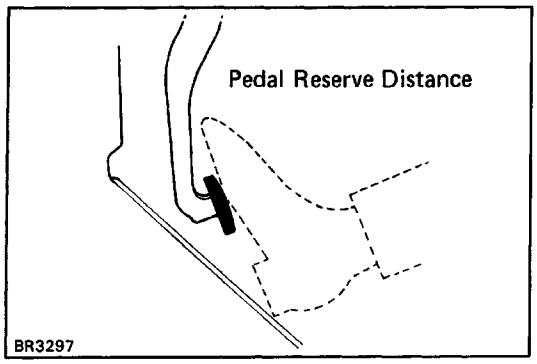
(Tandem booster)

Push in the pedal by hand until the beginning of the second resistance is felt, measure the distance, as shown.

Pedal freeplay: 3 – 6mm (0.12 – 0.24 in.)

(Tandem booster)

HINT: The freeplay to the first resistance is due to the play between the clevis and pin. And it is 1 – 3mm (0.04 – 0.12 in.) on the pedal.



4. CHECK THAT PEDAL RESERVE DISTANCE IS CORRECT, AS SHOWN

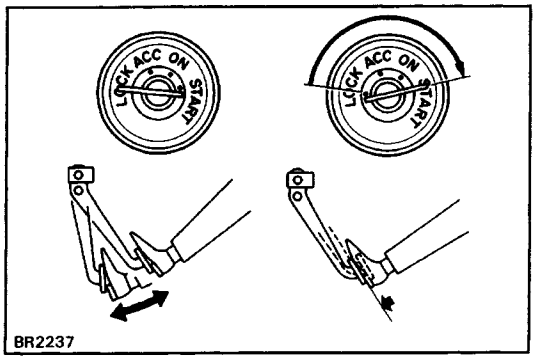
Release the parking brake.

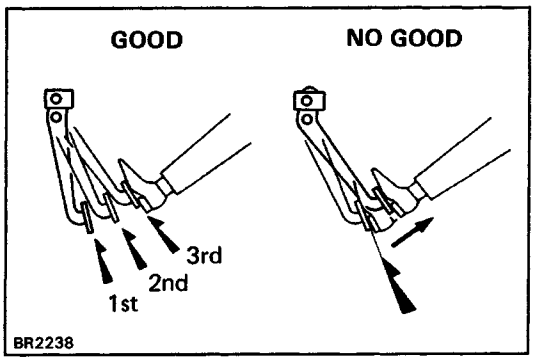
With engine running, depress the pedal and measure the pedal reserve distance, as shown.

Pedal reserve distance from asphalt sheet at 490 N (50 kgf, 110.2 lbf):

(2WD)	
22R–E Engine	**More than 70 mm (2.76 in.)**
3VZ–E Engine	
1 ton	**More than 75 mm (2.95 in.)**
1/2 ton	**More than 65 mm (2.56 in.)**
C&C	
SRW	**More than 75 mm (2.95 in.)**
DRW	**More than 55 mm (2.17 in.)**
(4WD)	**More than 65 mm (2.56 in.)**

If incorrect, troubleshoot the brake system.





OPERATIONAL TEST OF BRAKE BOOSTER

HINT: If available, use a brake booster tester to check the booster operating condition.

1. OPERATING CHECK

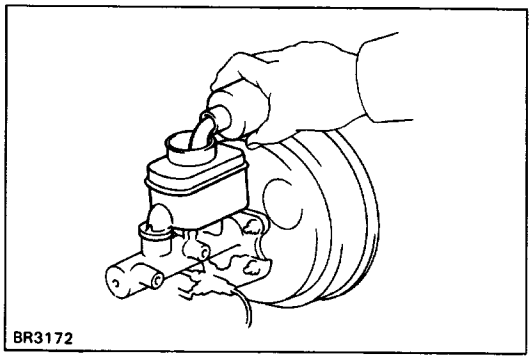
(a) Depress the brake pedal several times with the engine off, and check that there is no change in the pedal reserve distance.

(b) Depress the brake pedal and start engine. If the pedal goes down slightly, operation is normal.

2. AIR TIGHTNESS CHECK

(a) Start the engine and stop it after one or two minutes. Depress the brake pedal several times slowly. If the pedal goes down deepest the first time, but gradually rises after the second or third time, the booster is air tight.

(b) Depress the brake pedal while the engine is running, and stop it with the pedal depressed . If there is no change in pedal reserve travel after holding' the pedal for thirty seconds, the booster is air tight.



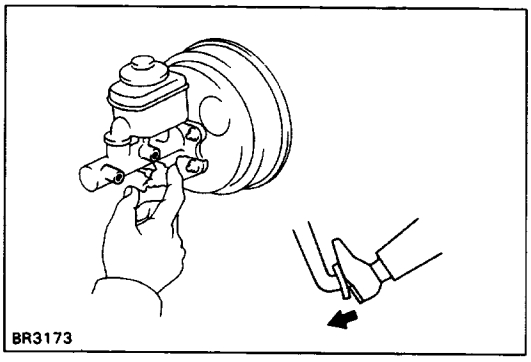
BLEEDING OF BRAKE SYSTEM

HINT: If any work is done on the brake system or if air is suspected in the brake lines, bleed the system of air.

NOTICE: Do not let brake fluid remain on a painted surface. Wash it off immediately.

1. FILL BRAKE RESERVOIR WITH BRAKE FLUID

Check the fluid level in the reservoir after bleeding each wheel. Add fluid, if necessary.

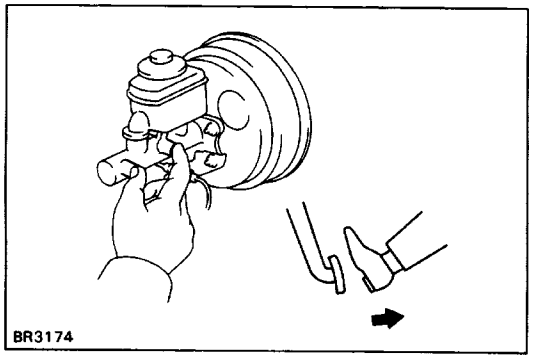


2. BLEED MASTER CYLINDER

HINT: If the master cylinder was disassembled or if the reservoir tank becomes empty, bleed the air from the master cylinder.

(a) Disconnect the brake tubes from the master cylinder.

(b) Slowly depress the brake pedal and hold it.

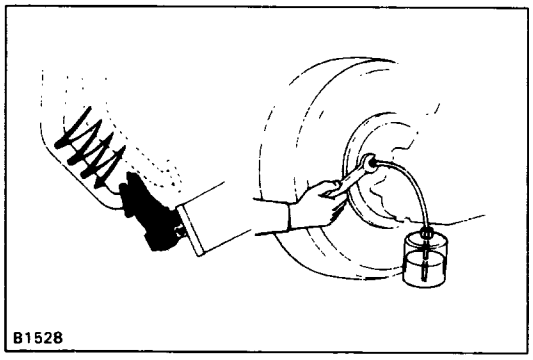


(c) Block off the outlet plug with your finger, and release the brake pedal.

(d) Repeat

(b) and

(c) three or four times.



3. CONNECT VINYL TUBE TO WHEEL CYLINDER BLEEDER PLUG

Insert other end of the tube in a half–full container of brake fluid.

HINT: Begin air bleeding from the wheel cylinder with the longest hydraulic line.

4. BLEED BRAKE LINE

(a) Slowly depress the brake pedal several times.

(b) While an assistant depresses the pedal, loosen the bleeder plug until fluid starts to run out. Then close the bleeder plug.

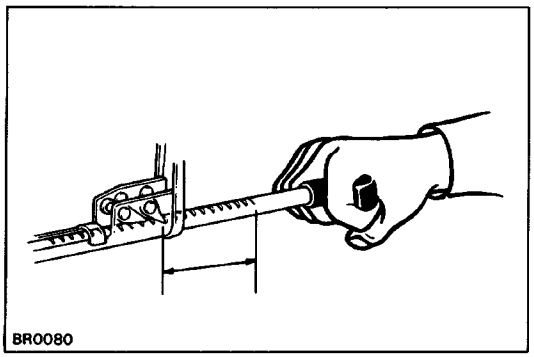
(c) Repeat this procedure until there are no more air bubbles in the fluid.

Bleeder plug tightening torque:

11 N–m (110 kgf–cm, 8 ft–lbf)

5. REPEAT PROCEDURE FOR EACH WHEEL

6. BLEED LSP & BV



CHECK AND ADJUSTMENT OF PARKING BRAKE

1. CHECK THAT PARKING BRAKE LEVER TRAVEL IS CORRECT

Pull the parking brake lever all the way up, and count the number of clicks.

Parking brake lever travel at 196 N (20 kgf, 44.1 lbf)

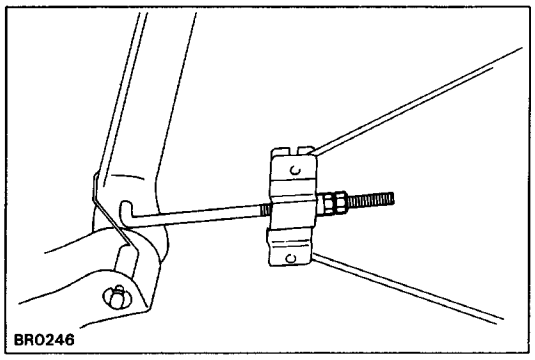
2WD 1/2 ton 12 – 18 clicks

1 ton 11 – 17 clicks

4WD 11 – 17 clicks

2. IF NECESSARY, ADJUST PARKING BRAKE

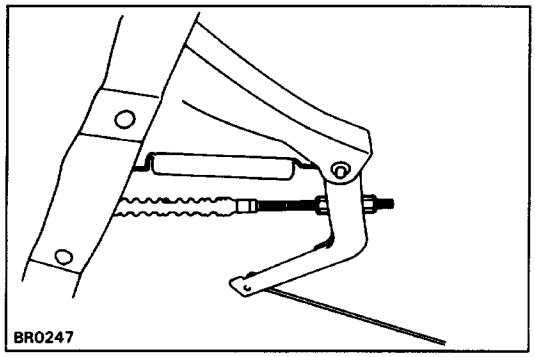
HINT: Before adjusting the parking brake, make sure that the rear brake shoe clearance has been adjusted.



(2WD)

(a) Tighten the adjusting nut until the travel is correct. Then tighten the lock nut.

(b) After adjusting the parking brake, confirm that the rear brakes are not dragging.



(4WD)

(a) Tighten one of the adjusting nuts of the intermediate lever while loosening the other one until the travel is correct. Tighten the two adjusting nuts.

(b) After adjusting the parking brake, confirm that the bellcrank stopper screw comes in contact with the backing plate.