

BRAKES

Operation	8- 1
Trouble Shooting	8- 5
Specifications	8- 8
Brake Pedal	8- 9
Single Master Cylinder	8-10
Tandem Master Cylinder	8-12
Brake Booster	8-15
Brake Line	8-19
Front Brake	8-20
Front Brake (Disc Brake)	8-24
Rear Brake	8-28
Parking Brake	8-34

OPERATION

PORTLESS MASTER CYLINDER

1. When Under Pressure

Depressing the brake pedal causes the piston to move ahead, resulting in the inlet valve being closed by the conical spring and creating a rise in hydraulic pressure. The brake fluid under pressure passes through the outlet check valve and subjects pressure on the wheel cylinders.

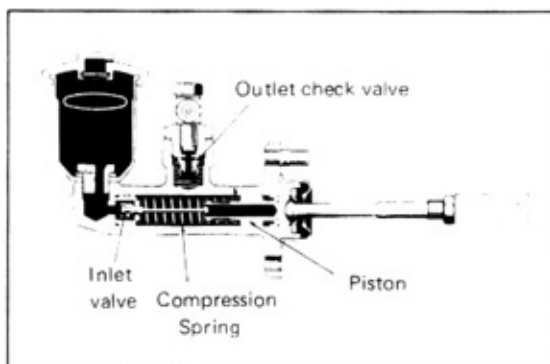


Fig. 8-1 Operation of Portless Master Cylinder

2. When Released

On releasing the brake pedal, the compression spring tension pushes back the piston, resulting in the outlet check valve opening and allowing the brake fluid to return. At the same time, the inlet check valve opens to restore former condition.

3. When Under Continued Pressure

The outlet check valve is provided with a small hole. When the brake pedal is depressed successively (repeatedly), this hole serves to minimize the timely difference in pressures at the master cylinder and wheel cylinders and offer better braking feeling.

TANDEM MASTER CYLINDER

1. Under Normal State

When the brake pedal is depressed, piston No. 1 moves and as soon as it closes the return port, the hydraulic pressure starts to build up in the rear wheel cylinders. At the same time, the pressure also acts on the No. 2 piston. This hydraulic pressure together with the No. 1 piston return spring causes the No. 2 piston to shift. When the No. 2 piston moves ahead, the inlet valve at the front end closes, so that hydraulic pressure builds up in the front cylinder and this acts on the front wheel cylinders.

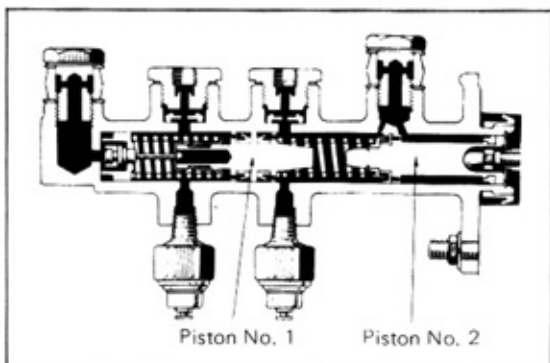


Fig. 8-2 Operation of Tandem Cylinder

2. When Leakage Develops in Rear Brake System

If leakage occurs in the rear brake system, hydraulic pressure will not build up in the rear brake system so that No. 1 piston merely moves ahead and strikes against the rear end of No. 2 piston. From this point on, pressure will build up in the front side to actuate the front brakes.

3. When Leakage Develops in Front Brake System

Since hydraulic pressure will not build up in the front brake system, No. 2 piston will be moved up to the end of its stroke by the small pressure from the No. 1 piston. From this point on, pressure will build up in the rear brake cylinders to actuate the rear brakes.

4. The brake warning lamp is interlocked with the tandem master cylinder. Any trouble in the brake line will cause the parking brake indicator lamp to light (this lamp will be off when the parking brake is released).

PARKING BRAKE (AUTOMATIC ADJUSTER)**1. When Lever is Pulled**

Pulling the parking brake lever causes part (1) to turn part (2). If the shoe clearance is larger than 0.3–0.4 mm (0.012"–0.016"), part (2) will ride over more than one tooth on part (3) before coming to a rest.

2. When Lever is Returned

When the parking lever is returned, parts (1) and (2) will be returned to their former positions by spring force, but at this time, part (2) will turn part (3) by one tooth. This will reduce the shoe clearance by about 0.3 mm (0.012").

Since part (2) moves in tangential direction to part (3), it can advance part (3) only by one tooth each time it operates, no matter how large the shoe clearance may be. Thus, in case the shoe clearance should be very large, it will require repeated pulling and releasing of the brake lever to obtain proper adjustment.

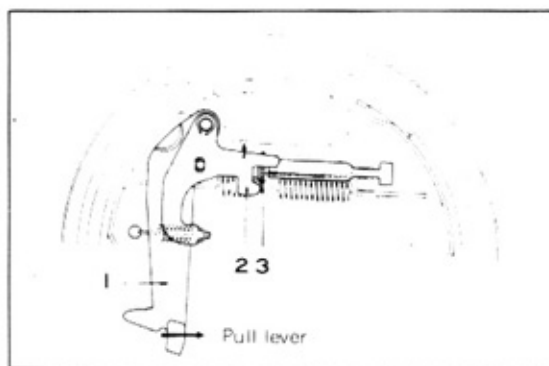


Fig. 8-3 Rear Brake Automatic Adjuster Action (1)

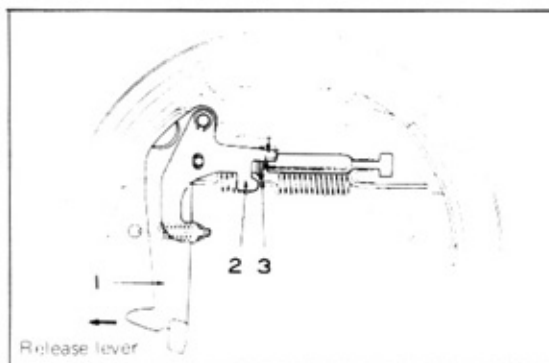


Fig. 8-4 Rear Brake Automatic Adjuster Action (2)

PROPORTIONING VALVE (P VALVE)**1. When Brake Pedal is Depressed**

- (1) If (A) is less than 30 kg/cm² (427 psi), part (1) is pushed to right by part (2) so that (a) flows through part (3) to become (b). (Fig. 1)
- (2) When (A) rises to 30 kg/cm², (2) is balanced with (C) and when (A) rises above 30 kg/cm², (C) overcomes (2) and causes (1) to shift to left. (1) then comes in contact with (3) to isolate (a) from (b). (Fig. 2).
- (3) When (A) rises still further, (A) + (2) overcomes (C) + (B) so that (1) shifts to right, creating the same condition as in par. (1) above. After that the same actions described in par. (1) and (2) are repeated.

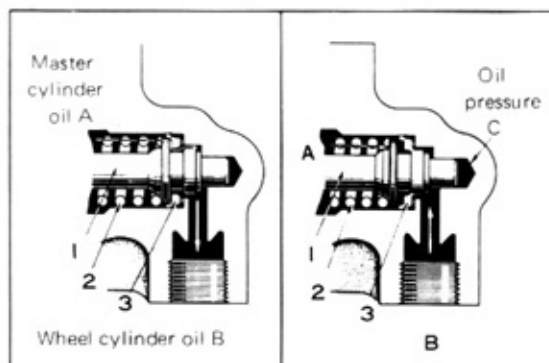


Fig. 8-5 P Valve Action (1)

2. When Brake Pedal is Released

- (1) When (A) drops, (B) and (C) causes (1) and (3) to move together to left by the amount (S). (B) then drops by the amount of volume increase. (Fig. -3)
- (2) (b) passes around the outside of (3) to become (a). (Fig. -4)
- (3) When (B) drops, (2) overcomes (C) + (B) so that (1) shifts to right, to restore conditions to that before the brake pedal was depressed.

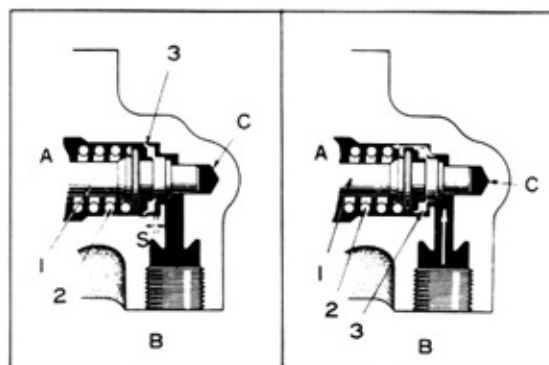


Fig. 8-6 P Valve Action (2)

BRAKE BOOSTER

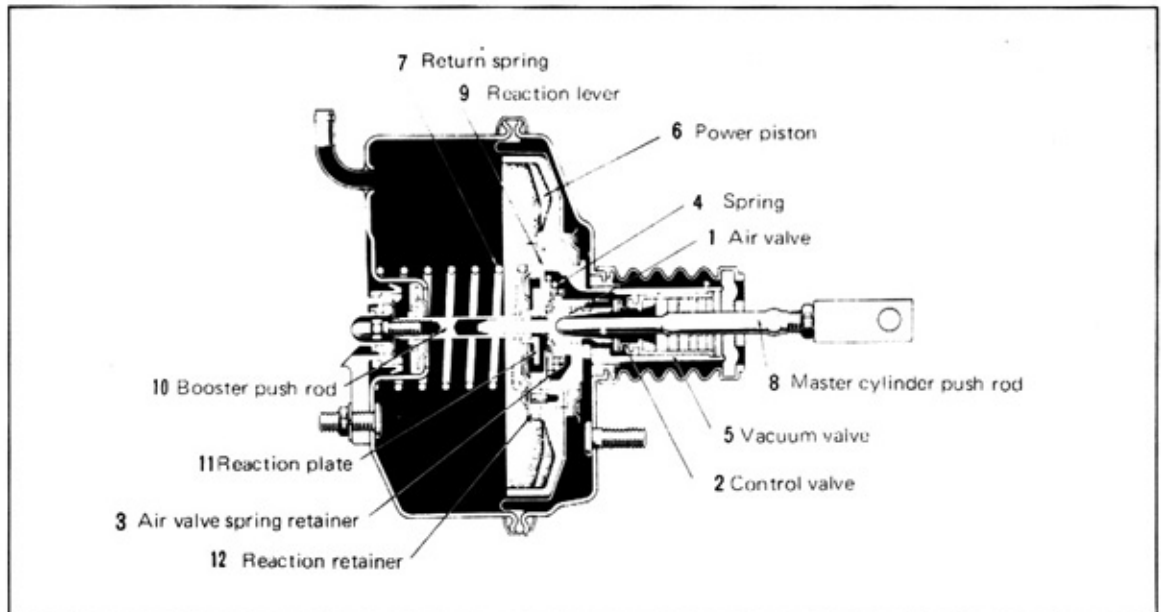


Fig. 8-7 Sectional View of Brake Booster

1. Non-Operating State

(1) is contacting against (2). The air under atmospheric pressure passing through the air cleaner element is stopped by (2) so that it cannot enter into booster interior. (1) is pushed by (4) until (3) strikes against (6) so that (5) and (2) are separated and passages (A) and (B) are both conductive. Therefore, (C) and (D) also become conductive, and since there is no pressure difference at the windows on both sides of (6), (6) is pushed to the right by the force of (7).

2. Operating State

When the brake pedal is depressed, (8) pushes (1) and (2) contacts (5) to break the continuity of passages (A) and (B), resulting in breaking the continuity of (C) and (D). As (1) advances further to the left, (1) becomes separated from (2), allowing air to pass through (B) and enter into (D). This creates pressure difference between (D) and (C) so that (6) starts to move to the left. The force created in (6) by this pressure difference is transmitted to the ends of levers, through the pivot points provided in (6). The force subjected on (8) is transmitted to the other ends of the levers (9) through (1) acting as pivot point. The sum of the forces acting on both of these pivot points is transmitted to the outer periphery of (11), and then transmitted to the master cylinder piston through (10).

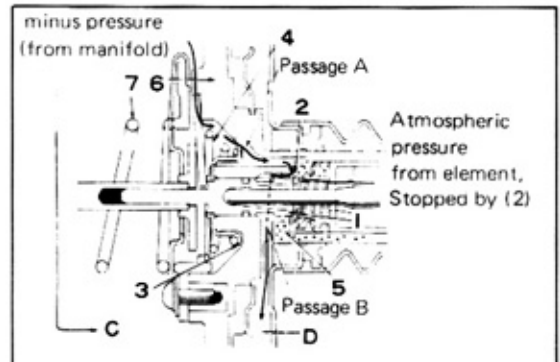


Fig. 8-8 Non-Operating State

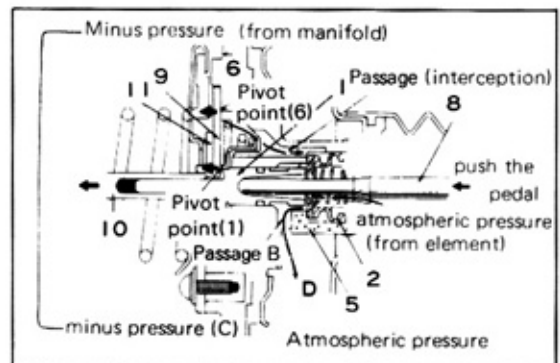


Fig. 8-9 Operating State

3. Holding State

If the force acting on (1) due to brake pedal pressure on (8) and the force acting on (6) due to pressure difference are in balance with each other at the outside edge of (11), (2) will be in contact with (1) and (5).

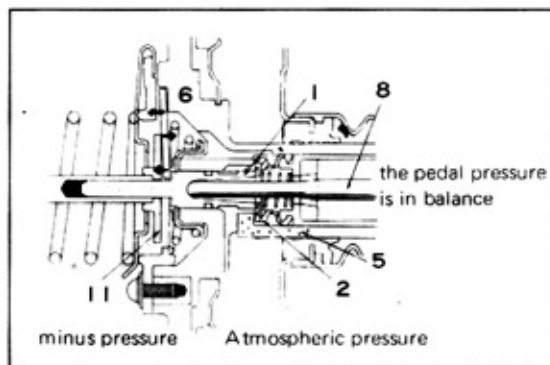


Fig. 8-10 Holding State

4. Maximum Boosting State

As the pedal pressure is increased, (D) will finally become completely atmospheric and (1) and (2) fully separated. If the pedal pressure is increased still further from this state, there will no longer be any balancing effect at (9) and the increased pedal pressure will be acting on (10).

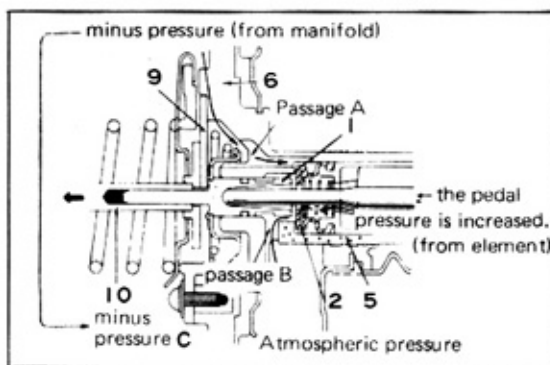


Fig. 8-11 Maximum Boosting State

5. Released State

When pedal pressure is decreased, the balance at (9) breaks down causing (1) to be pushed back to the right. (1) contacts (2) to cut off the pressure change chamber from the atmosphere and at the same time pushes up (2) to open (5). (A) then becomes continuous with (B), allowing the air in (D) to flow in (C). As there is no longer any pressure difference between these two chambers, (6) is pushed back by (7) to the non-operating position.

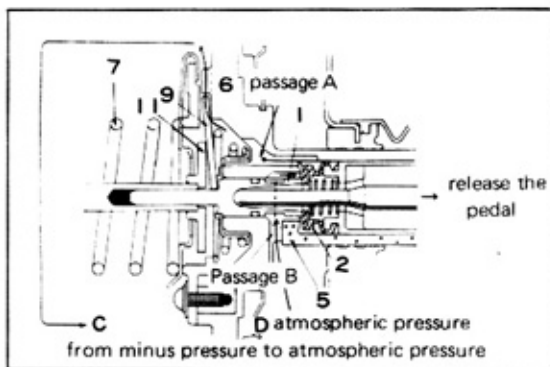


Fig. 8-12 Released State

6. Vacuumless State (Engine Not Running)

In this case, both (C) and (D) are in atmospheric state. Depressing the brake pedal causes (8) to push (1) and advance to the left. (9) pushes (11) and in turn, (11) pushes (10) to push the master cylinder. At this time, (11) also pushes (12) attached to (6), and overcomes the tension of (7) to push (6) to the left.

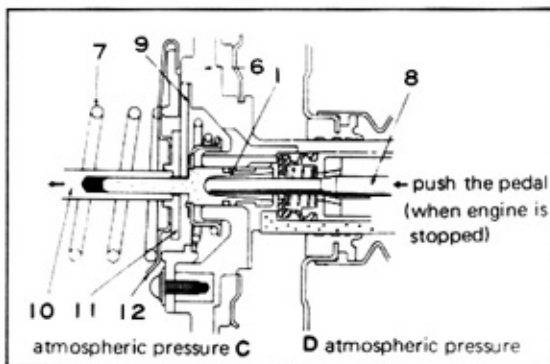


Fig. 8-13 Under Vacuumless State

TROUBLE SHOOTING (1) (TA10, 12, & 20 Series)

Symptoms and Possible Causes	Remedies
<p>Insufficient Braking Force</p> <ol style="list-style-type: none"> 1. Fluid leakage in brake system 2. Brake shoe clearance out of adjustment 3. Brake overheated 4. Improper contact between brake drum and lining 5. Foreign matter on lining surface 	<p>Repair Adjust Check brake parts Adjust contact Repair</p>
<p>Noisy Braking Action</p> <ol style="list-style-type: none"> 1. Lining surface glazed or dirty 2. Backing plate distorted or bolts loose 3. Bearings (front wheel) loose 4. Shoes distorted or improperly installed 5. Linings worn 	<p>Repair or replace Repair or replace Repair Repair or replace Replace</p>
<p>More Braking Action on One Side</p> <ol style="list-style-type: none"> 1. Foreign matter on lining surface 2. Brake shoe clearance out of adjustment 3. Brake drum eccentric 4. Tire inflation improper 5. Faulty wheel brake cylinder operation 6. Tension spring (brake shoe) defective 7. Front wheel alignment, left and right wheelbase improper 	<p>Repair or replace Adjust Repair or replace Adjust Repair or replace Replace Repair</p>
<p>Excessive Pedal Reserve</p> <ol style="list-style-type: none"> 1. Brake shoe clearance out of adjustment 2. Air in brake system 3. Pedal out of adjustment 4. Fluid leakage in brake system 5. Insufficient brake fluid 6. Brake drum worn excessively 7. Brake shoe distorted or not contacting properly 8. Cylinder cup in master cylinder defective 9. Flexible hose deteriorated 	<p>Adjust Bleed system Adjust Repair Add fluid and bleed system Replace Repair or replace Replace Replace</p>
<p>Dragging Brakes</p> <ol style="list-style-type: none"> 1. Pedal out of adjustment 2. Master cylinder reservoir hole clogged 3. Faulty sliding action between brake shoes and backing plate 4. Tension spring (brake shoe) defective 5. Faulty wheel brake cylinder operation 6. Faulty sliding action in parking brake cables or linkage 	<p>Adjust Repair Repair Replace Repair or replace Repair or replace</p>
<p>Pedal Throbs When Braking</p> <ol style="list-style-type: none"> 1. Brake drum eccentric or damaged 2. Bearings (front wheel) damaged or loose 3. Steering knuckle or rear axle shaft bent. 	<p>Repair or replace Repair or replace Replace</p>

TROUBLE SHOOTING (2) (TA10 & 12 Series with N or S, TA22 Series)

(F signifies Front, R signifies Rear)

Symptoms and Possible Causes	Remedies
Insufficient Braking Force 1. Fluid leakage in hydraulic system (F & R) 2. Excessive pad wear (F) 3. Oil or water on pad contacting surface (F) 4. Lining worn (R) 5. Oil or water on lining contacting surface (R) 6. Pressure control valve defective	Repair or replace Replace pad Clean disc and pad Replace lining Clean or replace lining Replace
Brakes Squeak 1. Carbon adhering on pad surface (F) 2. Pad tilted (F) 3. Bearing (wheel) loose (F) 4. Lining surface glazed (R) 5. Abnormal wear in lining (R) 6. Loose bolts (backing plate) (R) 7. Brake drum dirty (R) 8. Shoes improperly installed (R) 9. Brake drum loose (R)	Correct surface by filing or sanding Repair fit between pad and spindle Adjust Correct surface by filing or sanding Replace Retighten bolts Clean drum Repair or replace shoes Retighten
One-Sided Braking Action (Car Pulls to One Side When Braked) 1. Oil or water on pad contacting surface (F) 2. Tires improperly inflated (F & R) 3. Front alignment faulty (F) 4. Loose bolts (backing plate) (R) 5. Bearings (wheel) loose (F) 6. Brake drum eccentric (R) 7. Water or oil on lining contacting surface (R)	Clean disc and pad Adjust inflation Adjust front alignment Retighten bolts Adjust Repair or replace Clean or replace lining
Excessive Rear Brake Action Pressure control valve defective	Replace
Pedal Kickback 1. Hydraulic cylinder cup defective (At piston end) 2. Hydraulic valve defective	Replace Replace

TROUBLE SHOOTING (3)

BRAKE BOOSTER

Symptoms and Possible Causes	Remedies
<p>Poor Braking Action or Pedal Too Heavy</p> <ol style="list-style-type: none"> 1. Loose fittings 2. Vacuum hose clogged, loose, or torn 3. Vacuum check valve not functioning properly 4. Defective sealing parts 5. Diaphragm damaged 6. Control valve not functioning properly 7. Air valve stem binding inside booster push rod 8. Air cleaner clogged 	<p>Repair Replace Replace Replace Replace Replace Repair or replace Clean or replace</p>
<p>Brakes Drag or Slow to Retract</p> <ol style="list-style-type: none"> 1. Air valve stem and booster push rod dirty 2. Booster push rod out of adjustment 3. Master cylinder push rod out of adjustment 	<p>Replace Adjust Adjust</p>
<p>Brakes Act but with Insufficient Force or Sluggishly</p> <ol style="list-style-type: none"> 1. Vacuum check valve not functioning properly 2. Vacuum hose clogged, loose, or torn 3. Air cleaner clogged 	<p>Replace Replace Clean or replace</p>
<p>Pedal Sticks and Causes Noises</p> <ol style="list-style-type: none"> 1. Air valve stem binding inside booster push rod 2. Booster push rod screw out of adjustment (excessive clearance) 3. Excessive clearance between booster push rod screw and master cylinder piston 4. Excessive clearance between master cylinder push rod and air valve 	<p>Replace Adjust Adjust Adjust</p>

SPECIFICATIONS

Table 1. Brake Specifications

		TA10, 12, & 20 Series	TA10 & 12 Series with N or S, TA22 Series
Main Brakes			
Wheel brakes	Type	Hydraulic internal expanding system	
	Front Rear	Two-leading shoe Leading-trailing shoe	Disc (with auto adjuster)
Brake drum inside diameter	Front	228.6 mm (9.00")	—
	Rear	228 mm (8.98")	—
Lining or pad dimensions Width x thickness x length	Front	45 x 5 x 219 mm (1.77" x 0.20" x 8.62")	46 x 9 x 97 mm (1.81" x 0.35" x 3.82")
	Rear	40 x 5 x 219 mm (1.57" x 0.20" x 8.62")	—
Lining or pad area	Front	98 sq. cm. (15.2 sq. in.)	39.2 sq. cm. (6.06 sq. in.)
	Rear	87 sq. cm. (13.5 sq. in.)	—
Lining material	Front	DON242 resin molded	S21
	Rear	DON242 resin molded	DON242 resin molded
Wheel cylinder bore	Front	23.8 mm (0.938")	47.6 mm (1.874")
	Rear	17.4 mm (0.685")	19.0 mm (0.748")
Master cylinder	Type	Single	Tandem
	Bore	17.46 mm (0.6874")	20.64 mm (0.8126")
Brake Booster			
Type	—		Vacuum Servo
Vacuum cylinder bore	—		163.6 mm (6.441")
Diaphragm effective dia.	—		155 mm (6.10")
Stroke	—		40 mm (1.57")
Parking Brake			
Type	Mech. wheel brake		—
Wheels braked	Rear two wheels		—
Lining	Size	40 x 5 x 219 mm (1.57" x 0.20" x 8.62")	—
	Area	87 sq. cm. (13.5 sq. in.)	—

BRAKE PEDAL

REMOVAL

1. Disconnect the back-up lamp switch connector.
2. Remove the parts (3), (8), (9), and (10).
3. Take out the part (2).

INSPECTION

Inspect the parts on the following points and repair or replace any found defective.

1. Pedal bushing for wear, deformation, or damage.
2. Collar for wear or damage.
3. Pedal for twisting or bending, and collar bore for wear.
4. Cushion (rubber) for damage or wear.

INSTALLATION

Install by following the removal procedures in reverse order.

Note : Before assembling the bushings, coat parts (5), (6), and (7) with MP grease. (See Fig. 8-15).

Pedal mounting bolt torque 480–680 kg-cm (35–49 ft-lb)

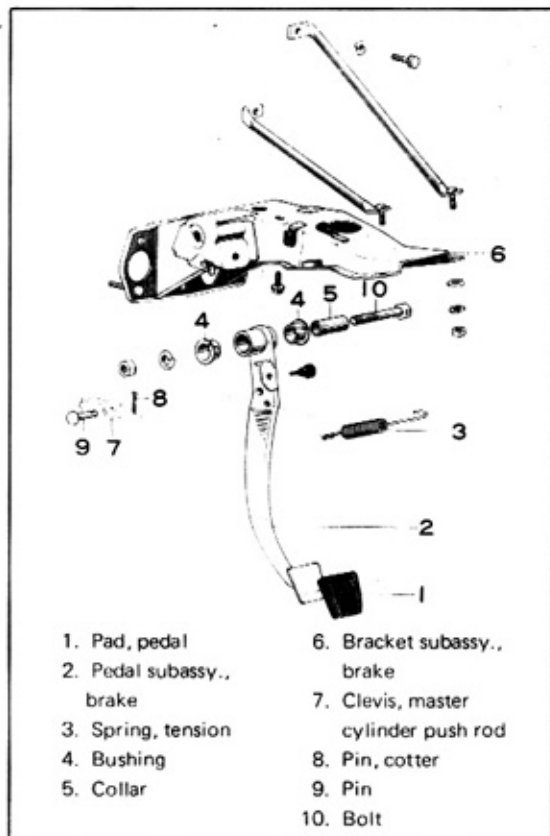


Fig. 8-14 Brake Pedal Component Parts

BRAKE PEDAL ADJUSTMENTS

1. Brake pedal height adjustment
Loosen part (1) and turn part (2) of stop switch until the distance from pedal pad top surface to the floor carpet is adjusted to the specified height.
Specified height 161 mm (6-3/8")
2. Brake pedal play adjustment
Loosen part (3) of push rod clevis and turn part (4) and adjust until the brake pedal pad when lightly pressed by hand will have the play corresponding to the clearance between master cylinder push rod and master cylinder piston.
(Play that can be felt on the pedal by slight knocking at start of depression).
Reference value 1–5 mm (0.04"–0.20")

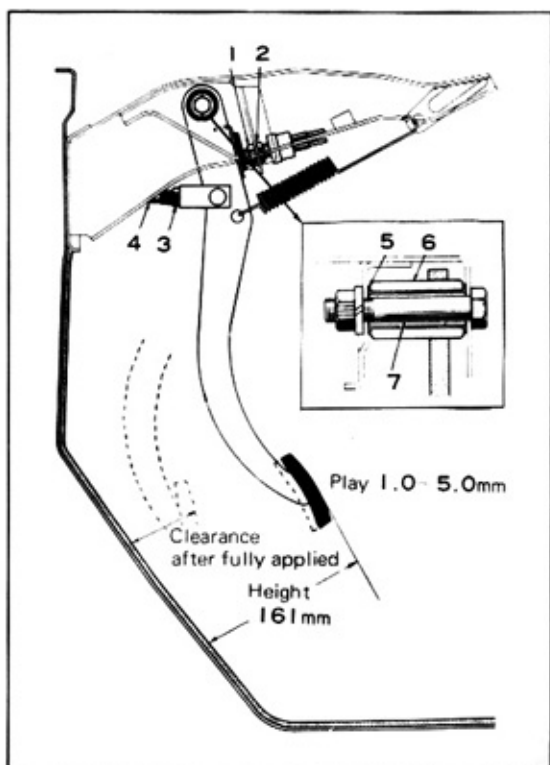


Fig. 8-15 Brake Pedal Adjustments

SINGLE MASTER CYLINDER

COMPONENT PARTS

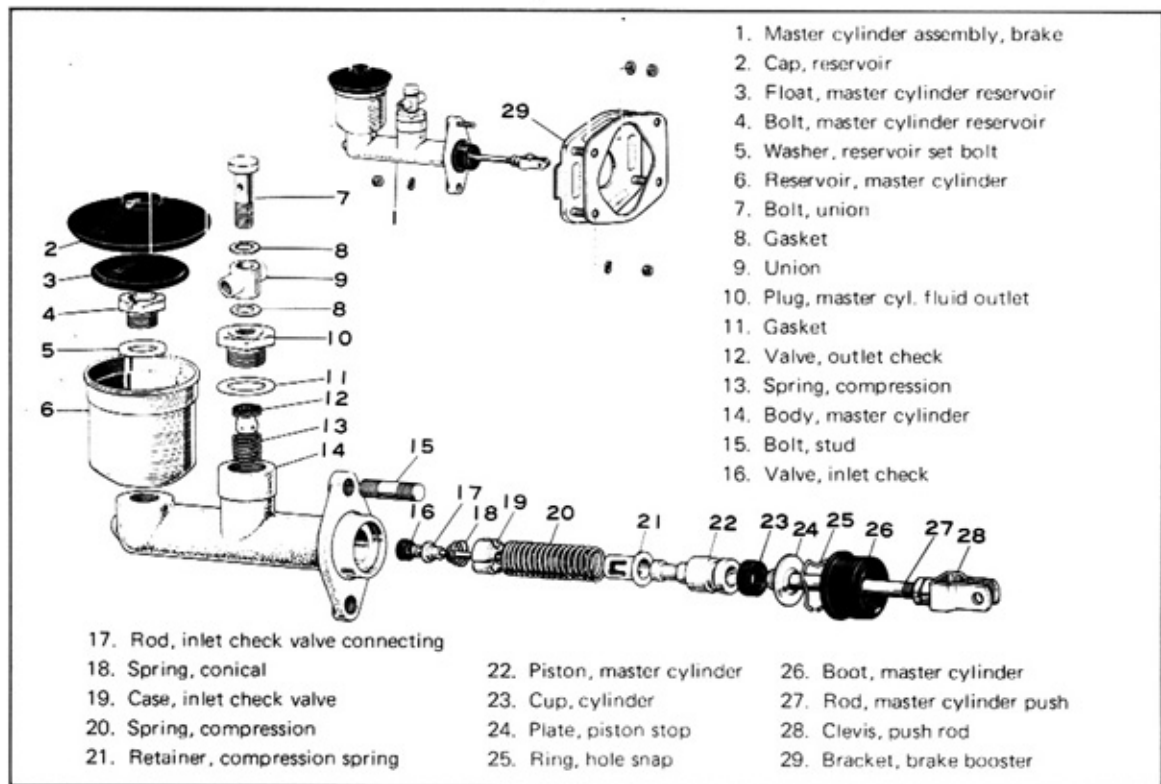


Fig. 8-16 Master Cylinder Component Parts

REMOVAL

Note: When working on the master cylinder, take care not to get brake fluid on any of the painted parts.

1. Disconnect the brake tube.
2. Remove the tension spring and push rod clevis pin, and remove the master cylinder together with the bracket from the dash panel.

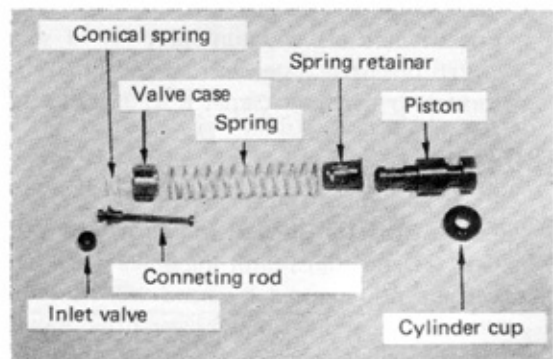


Fig. 8-17 Piston Disassembly

DISASSEMBLY

Note: Perform the disassembly by holding the master cylinder in a vise, using care not to damage the reservoir mounting surface. Care must also be taken not to damage any of the disassembled parts.

1. Remove the reservoir.
2. Disengage the snap ring and take out the piston assembly.
3. Remove the outlet plug.
4. Disassemble the piston assembly.
 - (1) Pry up the spring retainer lips and remove the piston.
 - (2) Disconnect the connecting rod from the retainer, and remove the inlet valve.
 - (3) Remove the piston cup from the piston.

INSPECTION

Inspect the disassembled parts on the following points, and replace any part found defective.

1. Master cylinder bore and piston outside surface for eccentric wear or damage.
Note : Replace if the clearance between the cylinder and piston exceeds the specified limit.
Clearance limit 0,15 mm (0.590")

2. Cylinder cup, inlet valve, and outlet check valve for damage, deformation, or wear.
Note : Defects in these parts are difficult to detect and moreover, their rubber components tend to deteriorate so that these parts should be replaced at disassembly.
3. Cylinder reservoir for damage and for deformation in mounting surface.

REASSEMBLY

Note : All parts should be washed with clean brake fluid before being assembled.

1. Install the inlet valve.
Caution : Be sure it is installed in the correct direction.
2. Bend down the spring retainer lips.
3. Assemble the compression spring and retainer on the connecting rod.
4. Install the piston retainer and the cylinder cup.
5. Insert the piston assembly into the cylinder body and install the push rod.
6. Install the reservoir.

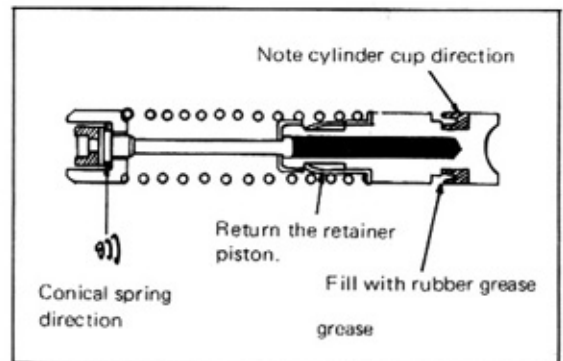


Fig. 8-18 Reassembly of Piston

INSTALLATION

Perform the removal procedures in reverse order.

Notes :

1. When tightening the union bolt, have the brake pedal depressed so that there will be no air at this part.
2. Bleed the brake tube lines.

BLEEDING

Procedures for bleeding the wheel brake cylinders are the same for both front and rear brakes. Start bleeding from the wheel cylinder furthest away from the master cylinder.

1. Attach a vinyl tube on the wheel cylinder bleeder plug and provide means to catch the brake fluid flowing out.
2. Depress the brake pedal several times in succession and stop with the pedal in depressed state.
3. Loosen the wheel cylinder bleeder plug and close it as soon as the brake fluid starts to flow out.
4. Repeat the above operations a few times until the brake fluid flowing out contains no air bubbles.

TANDEM MASTER CYLINDER

COMPONENT PARTS

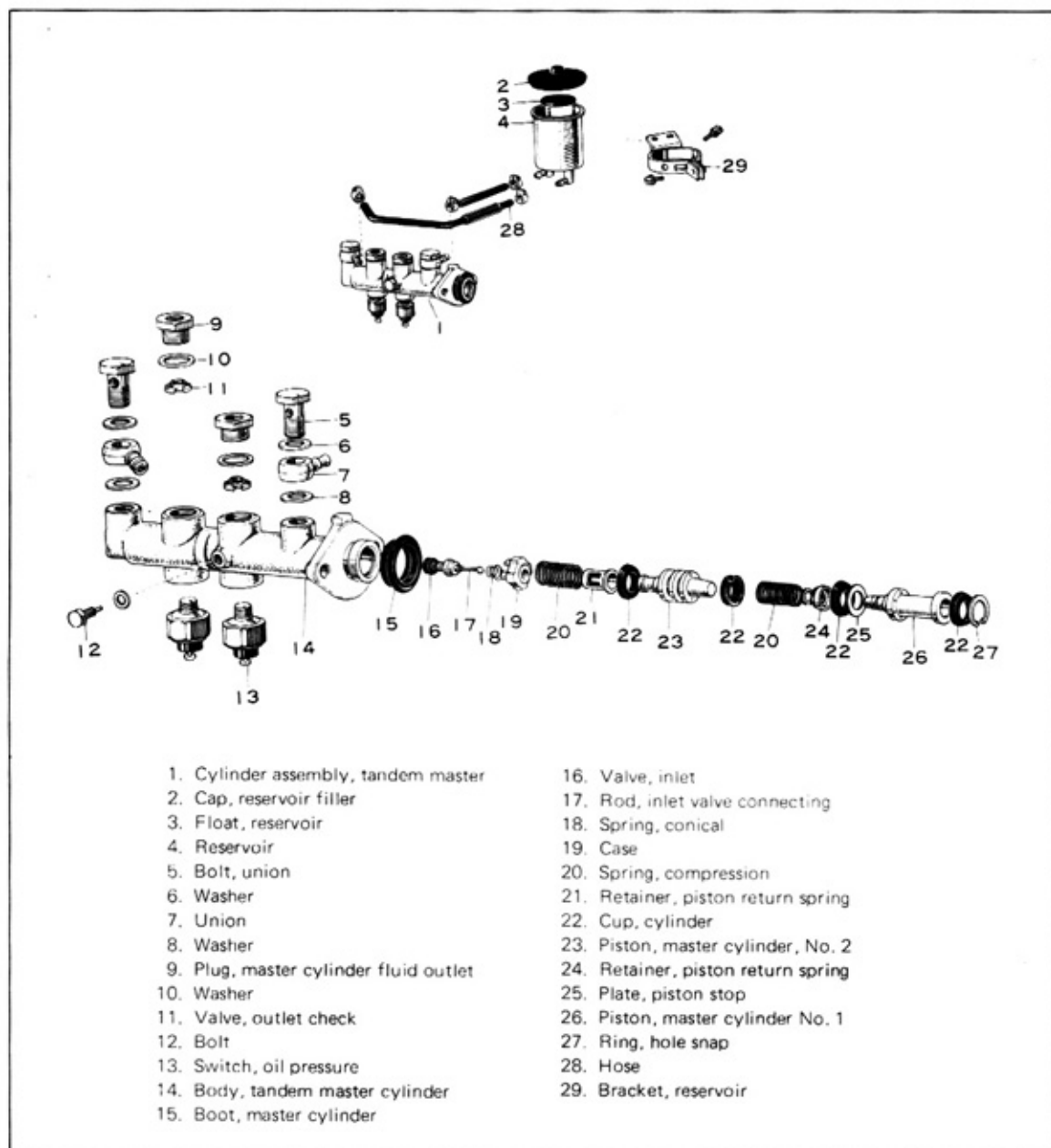


Fig. 8-19 Tandem Master Cylinder Component Parts

REMOVAL

Note: When working on the master cylinder, take care not to get the brake fluid on any of the painted surfaces of the car.

1. Disconnect the brake tubes from the cylinder.
2. Disconnect the oil pressure switch wiring.
3. Loosen the master cylinder reservoir mounting bolt.
4. Remove the master cylinder from the booster body.

DISASSEMBLY

1. Remove the master cylinder reservoir.
2. Remove the oil pressure switches.
3. Disengage the snap ring and take out piston No. 1 and spring
4. Remove the bolt, and take out piston No. 2 assembly and inlet valve seat.
5. Remove the outlet plugs and take out the outlet check valves.
6. Disassemble pistons No. 1 and No. 2.
 - (1) Remove the snap ring from piston No. 1 and disassemble the parts.
 - (2) Compress the piston No. 2 compression spring (1) and pry up the lips of return spring retainer (2), and disassemble the parts.
7. Remove the cylinder cup from the inlet valve seat.

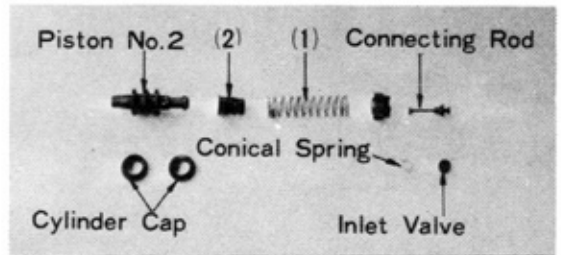
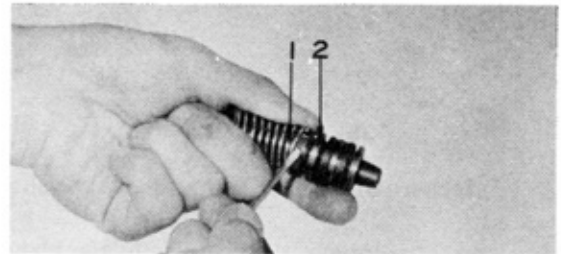
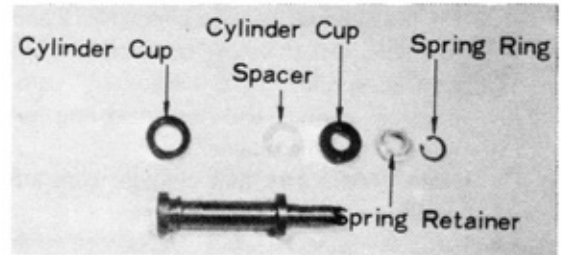


Fig. 8-20 Disassembly of Piston No. 1 and No. 2

INSPECTION

Inspect the disassembled parts on the following points and replace any part found defective.

1. Master cylinder bore and piston outside diameter surfaces for eccentric wear or damage.
2. Cylinder cups, inlet valve, spacer, gaskets, and outlet check valves for damage, deformation, or wear.
3. Reservoir for damage and its mounting surface for deformation.

Note : Defects in these parts are difficult to detect, and the rubber components also tend to deteriorate so that these parts should be replaced at disassembly.

REASSEMBLY

1. Wash all parts to be assembled in clean brake fluid.
2. Assemble the pistons No. 1 and No. 2.

Note : Before assembling the cylinder cups, soak them in clean brake fluid or coat them with rubber grease.

- (1) Assemble cylinder cup, spacer, cylinder cup, and return spring retainer on piston No. 1, and secure with snap ring.
- (2) Assemble the inlet valve on the inlet valve connecting rod.

- (3) Fit the cylinder cups on piston No. 2 and assemble inlet valve connecting rod, conical spring, inlet valve case, compression spring, and return spring retainer. Lock the retainer.

Note : Make sure that cylinder cups are positioned in correct direction.

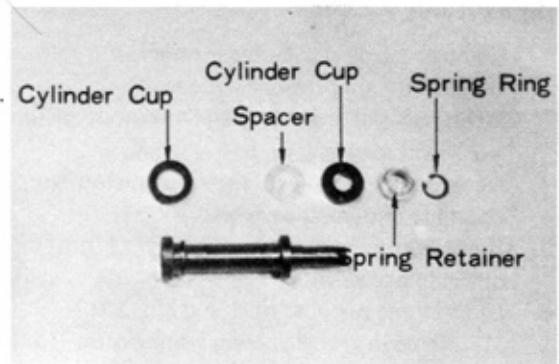


Fig. 8-21 Reassembly of Piston No. 1

3. Assemble the cylinder cup on the inlet valve seat.
4. Insert the outlet check valves into the body and screw on the outlet plugs over gaskets. Tightening torque 1100–1300 kg-cm (80–94 ft-lb)

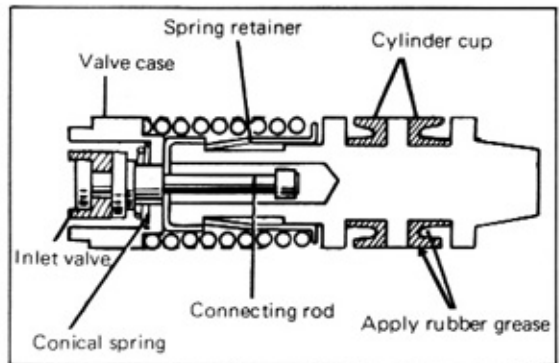


Fig. 8-22 Reassembly of Piston No. 2

5. Install the inlet valve seat, piston No. 2 assembly, and piston No. 1 assembly into the cylinder, and engage the snap ring.
6. Install the oil pressure switches.
7. Install the master cylinder reservoir.

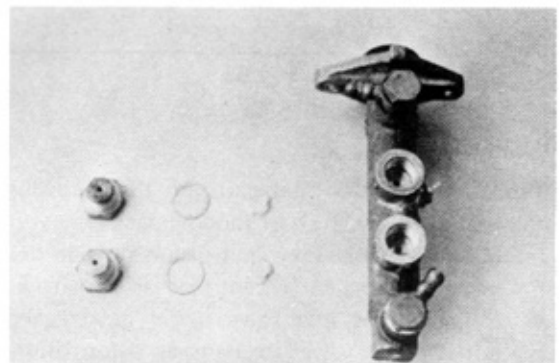


Fig. 8-23 Outlet Check Valve Installation

INSTALLATION

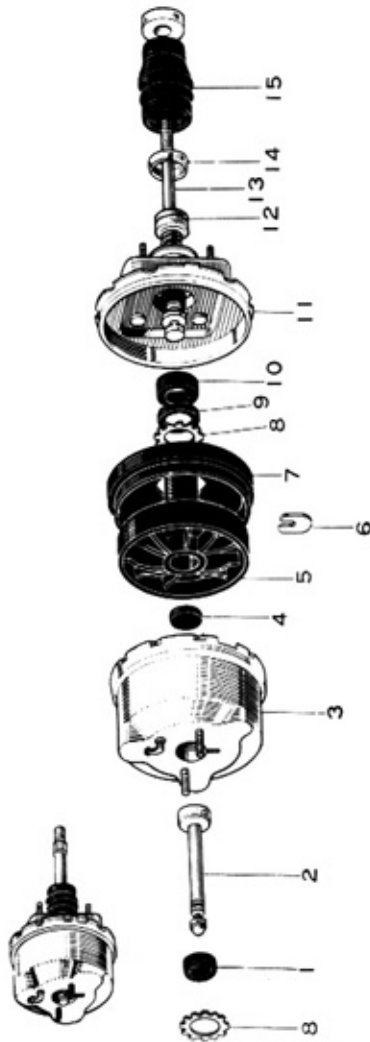
1. Adjust the clearance between booster push rod and piston. See P15-20.
2. Install the master cylinder on the booster body.

Note : Before tightening the nuts, have the brake tubes screwed in a few turns into the master cylinder.

3. Tighten the brake tubes.
4. Connect the oil pressure switch wiring.
5. Adjust the pedal height and play, and bleed the system. (P8-9 & 11)

BRAKE BOOSTER

COMPONENT PARTS



1. Plate and seal assembly
2. Rod, push
3. Shell and stud, front
4. Disc, reaction
5. Plate, valve body and diaphragm
6. Key, valve plunger stop
7. Diaphragm
8. Retainer

9. Bearing
10. Seal
11. Shell and stud, rear
12. Silencer, air
13. Valve rod and plunger assembly
14. Retainer, air silencer
15. Guard, valve body

Fig. 8-24 Brake Booster Component Parts

REMOVAL

1. Disconnect the push rod clevis from the brake pedal.
2. Disconnect the brake tubes, wiring, and vacuum hose.
3. Remove the booster together with the master cylinder.
4. Remove the master cylinder from the booster.

DISASSEMBLY:

1. Place alignment marks on the front and rear shells. Using Rear Shell Remover [09738-22011] and Master Cylinder Bracket Spacer [47277-22020], disassemble the shell and stud assembly by turning the rear shell 17 degrees counterclockwise.
2. Pull out the diaphragm plate from the rear shell, and take out the retainer, bearing, and seal.
3. Remove the diaphragm and silencer retainer from the diaphragm plate. Position the valve plunger stop key hole downward, push the valve operating rod, and take out the key.
4. Remove the push rod, plate and seal assembly from the front shell.

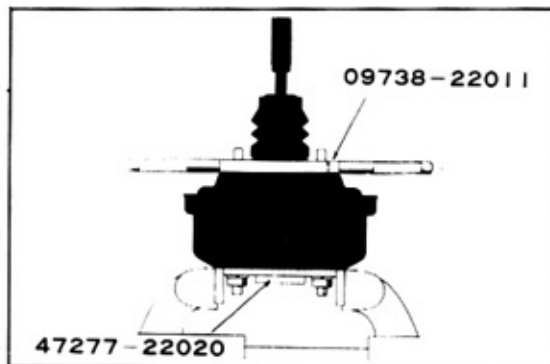


Fig. 8-25 Shell and Stud Disassembly

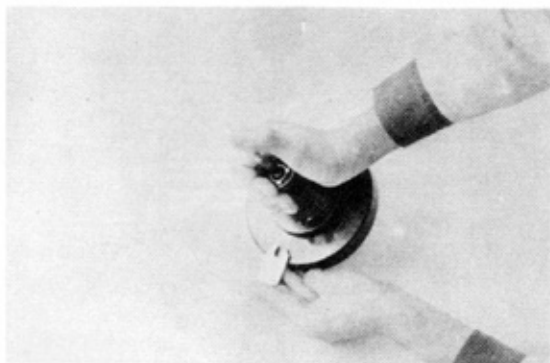


Fig. 8-26 Removing Plunger

INSPECTION

Wash all disassembled parts and dry them. (In case of cups and plastic parts merely wipe dry). Inspect the parts on the following points, and repair or replace any found defective.

1. Diaphragm plate for damage or cracks.
2. Poppet assembly for wear.
3. Seals and bearing for wear or damage.
4. Diaphragm for damage.
5. Push rod for bending or damage.
6. Valve operating rod for bending or damage.
7. Shell and stud for deformation, cracks, or damage.

REASSEMBLY:

1. Insert the seal and bearing in the rear shell, and secure them with retainer.

Notes :

1. Use the silicone grease contained in the repair kit to coat the rubber parts.
2. Apply silicone grease on the seal and bearing before installing.
3. Press in the retainer 6.7-7.0 mm (0.26"-0.28") from the inside surface of rear shell. If pressed in too lightly, air leakage will develop, and if pressed in too strongly, early wear will take place in the seal lip.

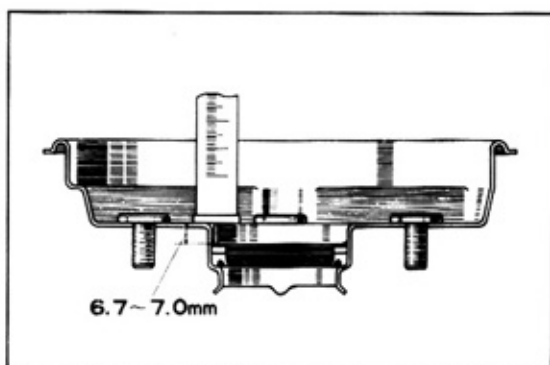


Fig. 8-27 Retainer Pressed In

2. Coat silicone grease on the outer surface of plunger poppet (1) and after assembling it in the diaphragm plate (2), insert the valve plunger stop key (3)
3. Insert the air silencer filter (4), and press air silencer retainer (5) into diaphragm plate (2).
4. Assemble the diaphragm, and after coating silicone grease on the reaction disc, install it on the diaphragm plate.

Notes :

1. Make sure that the diaphragm is installed securely.
2. Apply silicone grease on the diaphragm lip surfaces that contact the front and rear shells.
5. Install the diaphragm plate assembly and valve body guard on the rear shell.
6. Install the plate and seal assembly (7) on the front shell (6).
7. Install the push rod after coating silicone grease on the surface sliding against the diaphragm.
8. Clamp the front shell in a vise. Insert the diaphragm return spring, and after matching the rear and front shell alignment marks, turn the rear shell clockwise.

Note : If the rear shell is too tight to turn, coat silicone grease once more on the diaphragm lip surfaces that contact the front and rear shells.

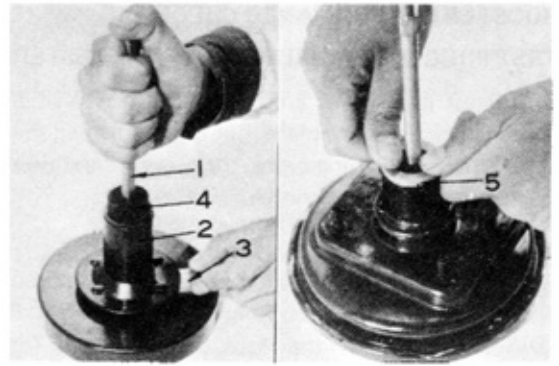


Fig. 8-28 Reassembling Plunger

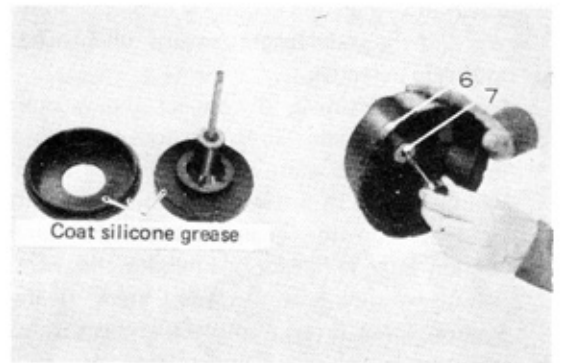


Fig. 8-29 Installing Seal Assembly

9. Using Rear Shell Remover [09738-22011], tighten until the rear shell cutaway part contacts properly against the stopper.

ADJUSTMENT

1. After assembling, use the Brake Push Rod Gauge [09737-22011] and measure the master cylinder as shown in Fig. 15-39. Then reverse the gauge and measure the booster push rod. If the reversed gauge and push rod length are the same, the clearance between push rod and piston will be 0.1–0.5 mm. (0.004"–0.020").
Piston to push rod clearance 0.1–0.5 mm (0.004"–0.020")

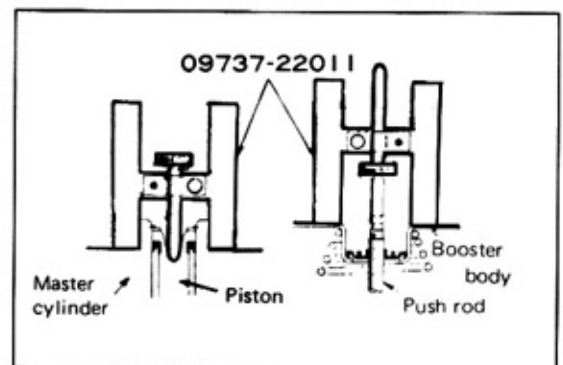


Fig. 8-30 Push Rod Adjustment

BOOSTER PERFORMANCE CHECK**TEST PROCEDURES WITHOUT USING TESTER**

These test procedures are not adequate to enable locating the defective place, but by performing the check in the following order, the general condition of the booster can be known.

Air Tightness Check

Start the engine and then stop it after running it for one or two minutes. Step on the brake pedal several times with the foot pressure used for normal braking. If the pedal depresses fully at the first time but gradually becomes higher when depressed after that, the booster is in proper state. Therefore, if the pedal height remains unchanged, the booster is defective.

Note : If defective, disconnect the vacuum hose at the booster. Press the hose end closed with finger and start the engine. The finger will be sucked in strongly. With the finger still pressed, stop the engine and if the same suction force is felt for one minute, the check valve and piping are in good state. If the suction force drops, replace the check valve and repeat this air tightness test, or use a tester and make an accurate test.

Operational Check

With the engine stopped, step on the brake pedal several times with the same foot pressure to make sure that the pedal height will not change. Then step on the brake pedal and start the engine. If at this time the pedal moves slightly further, the booster is in good condition. If there is no change, the booster is defective.

Note : In such a case, make an accurate check with a tester.

Air Tightness Check Under Load

With the engine running, step on the brake pedal and then stop the engine. Hold the pedal depressed for 30 seconds. If the pedal height does not change, the booster is in good condition. If the pedal rises, the booster is defective.

Note : In such a case, make an accurate check with a tester.

TEST PROCEDURES USING TESTER

Testers used include foot pressure meter, two pressure gauges, brake pipes, vacuum gauge and hose, and 3-way fitting.

Air Tightness Check

1. Turn the engine and stop it when the vacuum

gauge indicates 500 mm Hg (19.7")

If after stopping the engine, the vacuum loss is within 25 mm Hg (1.0") in 15 seconds, the booster is in good state.

2. If faulty, the following are the possible causes so that the booster should be disassembled again and re-inspected.
 - (1) Check valve fails to function properly.
 - (2) Leakage in the piping.
 - (3) Leakage in body bolt welded parts.
 - (4) Air valve not air tight.
 - (5) Leakage through body seal or bearing.
 - (6) Diaphragm torn.

Air Tightness Check under Load

1. Turn the engine and depress the brake pedal at 20 kg (44 lb) foot pressure. Stop the engine when the vacuum gauge indicates 500 mm Hg (19.7"). If after stopping the engine, the vacuum loss is within 25 mm (1.0") in 15 seconds, the booster is in good state.
2. If faulty, refer to par. 2 under Air Tightness Check.

No Boosting Check

Stop the engine and have the vacuum gauge indicate zero. If the relationships between foot pressure and fluid pressure are within the values specified below the booster is in good state.

Above 2 kg/cm² (28 psi) minimum at 10 kg (22 lb) foot pressure

Above 23 kg/cm² (327 psi) minimum at 30 kg (66 lb) foot pressure

Boosting Check

With the engine running and the vacuum gauge indicating 500 mm Hg (19.7"), the booster is in good condition if the following relationships exist between the foot pressure and fluid pressure when the brake pedal is depressed.

10–20 kg/cm² (142–284 psi) at 7 kg (15 lb) foot pressure

30–40 kg/cm² (427–569 psi) at 13 kg (29 lb) foot pressure

42–52 kg/cm² (597–740 psi) at 20 kg (44 lb) foot pressure

Check Valve Tightness

Disconnect the vacuum hose at the booster and plug the hose end with finger.

Start the engine and when the vacuum gauge indicates 500 mm Hg (19.7"), stop the engine. If after 15 seconds, the vacuum loss is less than 10 mm Hg (0.40"), the booster is in good state. If greater, replace the check valve.

BRAKE LINES

COMPONENT PARTS

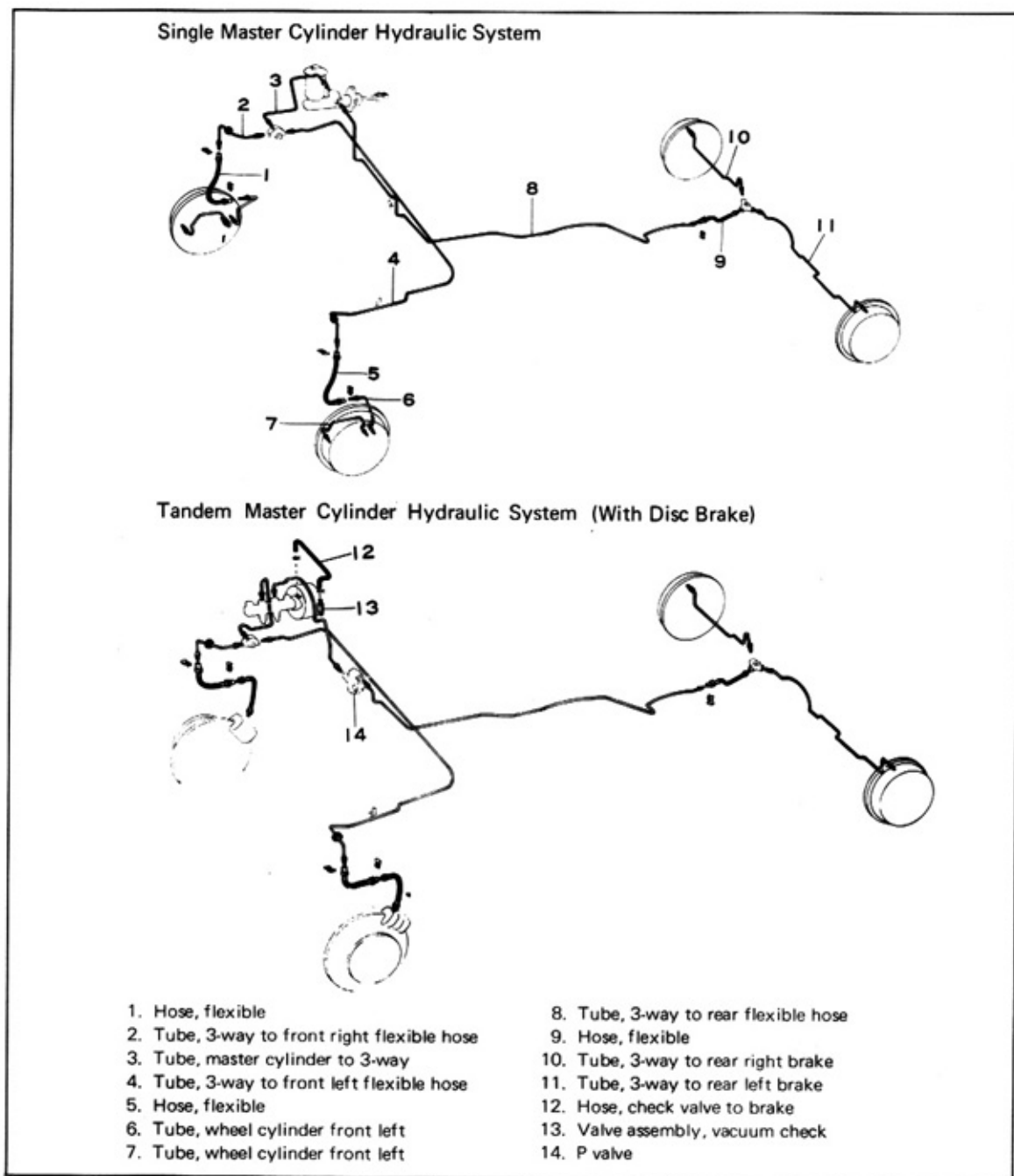


Fig. 8-31 Brake Line Component Parts

ON VEHICLE INSPECTION

Replace all brake tubes or flexible hoses in which damage, corrosion, fluid leakage or seepage can be detected visually.

Notes :

1. When replacing a flexible hose, make sure that the hose is not twisted or contacting other parts.
2. Bleeding must be performed properly, and brake lines checked to see that there is no leakage or seepage.

FRONT BRAKE (TWO LEADING SHOE)

COMPONENT PARTS

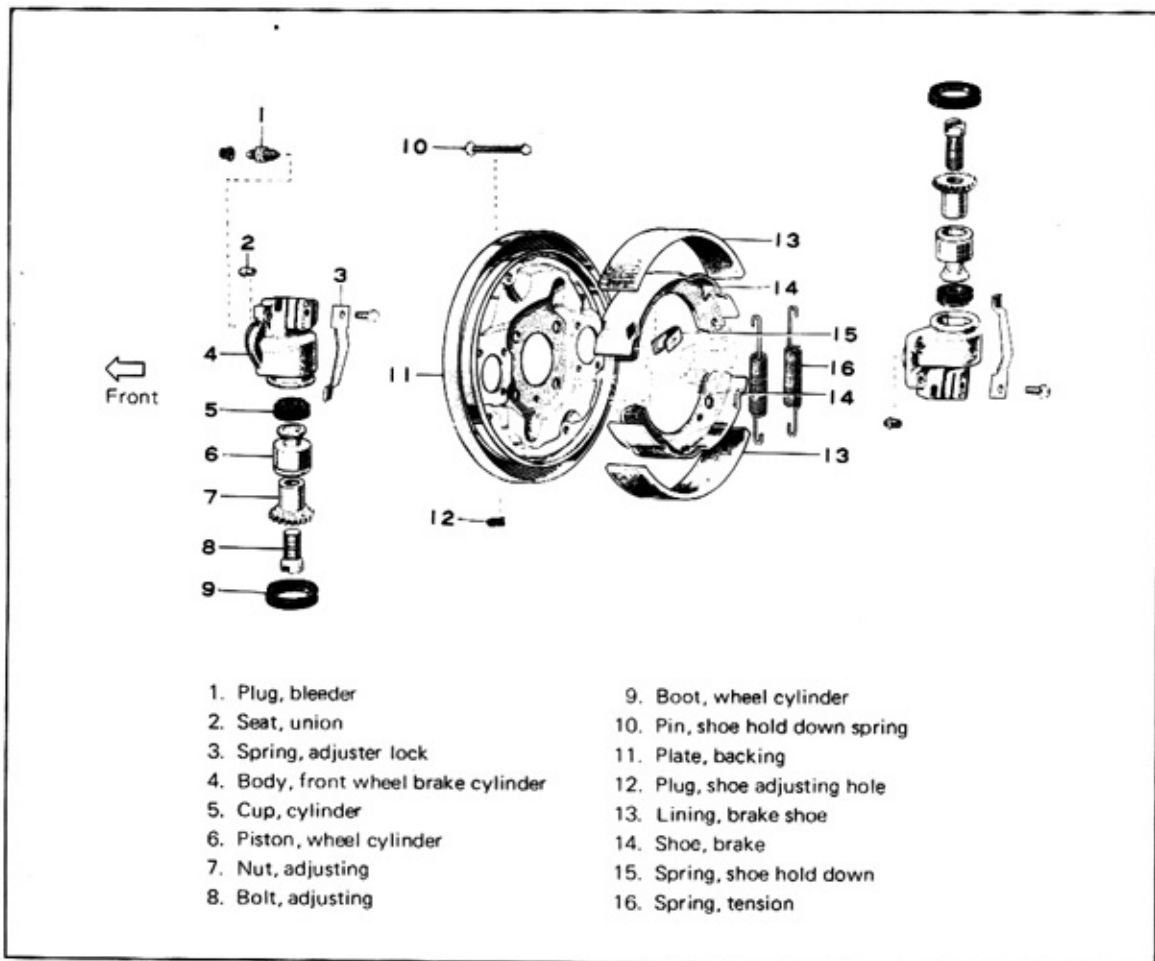


Fig. 8-32 Front Brake Component Parts (LH shown)

BRAKE SHOE

REMOVAL

1. Jack up the vehicle front end and support it on stands at specified points.
2. Remove the front wheel.
3. Remove the brake drum.
 - (1) Remove the grease cap.
 - (2) Remove the hub and drum.
 - (3) Do not allow foreign matter to get in the bearings.
 - (4) Do not allow oil or grease to get on the drum inside surface.
4. Unhook the tension springs.
5. Remove the shoe hold down springs.
6. Remove the brake shoes.

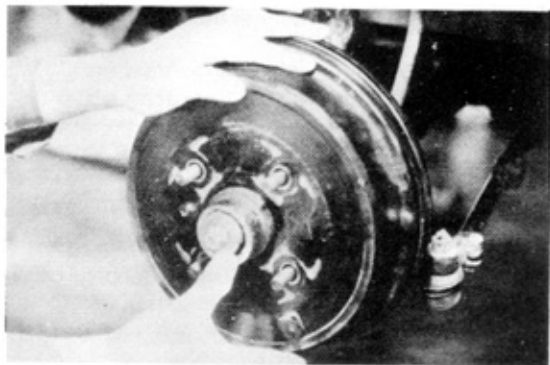


Fig. 8-33 Removing Brake Drum

INSPECTION

Inspect the removed brake parts on the following points and repair or replace any found defective.

1. Brake drum for damage, inside surface wear, scoring, or eccentric wear,
Inside diameter wear limit 230.6 mm (9.079")
Reference diameter 228.5–228.7 mm (8.996"–9.004")

Note: When correcting the drum, the machining must be done with the axle hub attached.

2. Backing plate and brake shoe sliding surfaces for wear and anchor pins for wear.
3. Brake shoe and lining
 - (1) Shoe for damage or deformation
 - (2) Lining for wear
Thickness wear limit 1.5 mm (0.59")
Replace lining if worn over the limit.
4. Tension springs for weakening or deformation

INSTALLATION

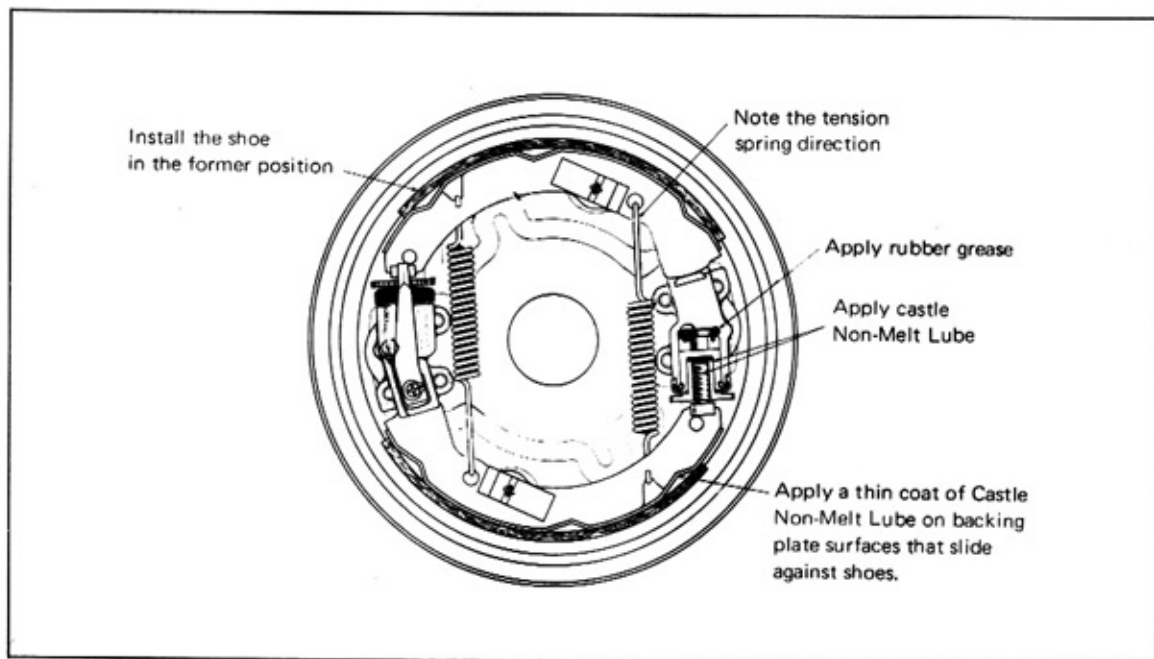


Fig. 8-34 Front Brake Installation (RH shown)

1. Install the brake shoes.
 - (1) Apply a thin coat of Castle Non-Melt Lube on backing plate surfaces that slide against shoes and on contacting surfaces between shoe and wheel cylinder.
 - (2) Install hold down springs on the shoes.
 - (3) Hook on the tension springs, using pliers.
Note: Make sure that the springs are hooked on in proper directions.
2. Install the brake drum.
 - (1) Clean off any oil or grease adhering on lining or drum inside surface.
 - (2) Apply MP grease on the oil seal lip part of hub, and install the drum.
 - (3) Install the castle nut and adjust the bearing preload.
See P6-15 for procedures on bearing preload adjustment.
 - (4) Install the hub grease cap.
3. Adjust the brake shoe clearance.
See P8-23 for procedures on brake shoe clearance adjustment.

FRONT WHEEL BRAKE CYLINDER

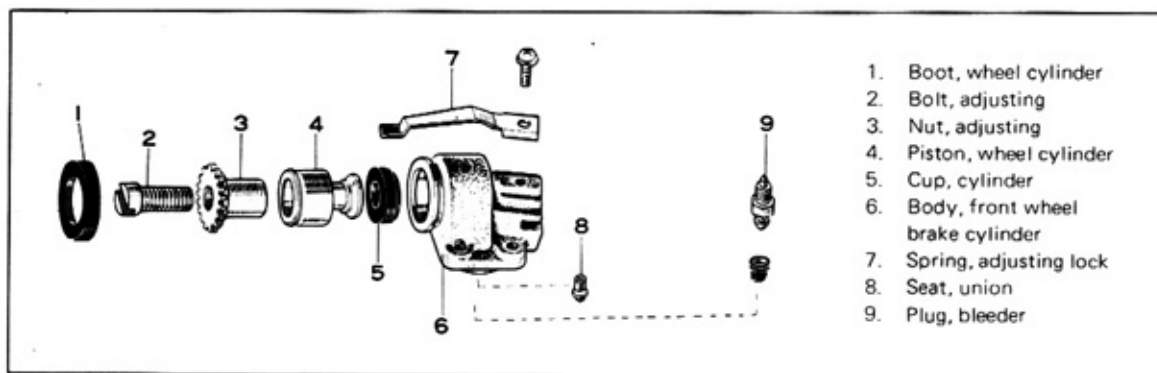


Fig. 8-35 Front Wheel Brake Cylinder Component Parts

PISTON AND CUP

REMOVAL

1. Remove the brake shoes.
For removal procedures, refer to P8-20.
2. Remove the adjuster lock spring.
3. Remove the adjusting nut.
4. Remove the wheel cylinder boot.
5. Remove the piston.
6. Remove the piston cup from the piston.

Note : Wheel brake cylinder cup replacement or inspection can be done without removing the wheel cylinder body from the backing plate, but in the case the cylinder is removed, inspect the union seat at the brake tube connection part to see if damaged, and replace if found necessary to do so.

INSPECTION

Inspect the disassembled parts on the following points and replace any found defective.

1. Clearance between cylinder and piston.
Clearance limit 0.15 mm (0.006")
2. Cylinder cup for damage, deterioration, etc.
3. Wheel cylinder boot for cracks or damage.
4. Wheel cylinder body bore and piston for damage, rusting, or eccentric wear.

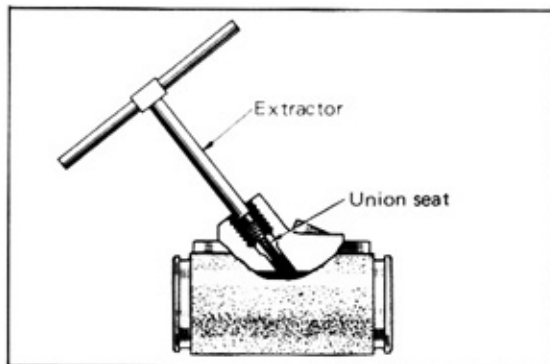


Fig. 8-36 Union Seat Replacement

REPLACEMENT

1. Wheel cylinder
 - (1) Disconnect the brake tube at the rear side of backing plate from the wheel cylinder.
 - (2) Remove the cylinder from the backing plate.
 - (3) Install by following the removal procedures in reverse order.
2. Union seat
 - (1) Using screw extractor (tip diameter about 2.5 mm [0.1"] and having reverse screw), remove the extractor by method shown in Fig. 8-45.
 - (2) Drive in the new union seat, using a bar about 8 mm (5/16") in diameter.

INSTALLATION

Install by following the removal procedures in reverse order.

Notes :

1. Before assembling the piston cup, soak it in clean brake fluid or coat it with rubber grease.
2. Two different kinds of adjusting bolts and nuts are used, those with left hand threads and those with right hand threads.

Left wheel	Left-hand threads
Right wheel	Right-hand threads

3. Coat Castle Non-Melt Lube on the adjusting bolt threads and adjusting nut cylinder body contacting part for prevention of corrosion and for smoother action.
4. Bleed the system.
5. Adjust the brake shoe clearance.
For adjustment procedures, see the following article.

FRONT BRAKE SHOE CLEARANCE ADJUSTMENT

1. Jack up the front end of vehicle and rest it on stands at specified points.
2. Remove the shoe adjusting hole plugs.
3. Check the wheel to see that it turns lightly.
Note : If the brake is dragging, contract the shoes until the wheel turns lightly.
4. Insert the Brake Adjusting Tool [09704-10010] in the hole from which the plug was removed, and turn the wheel cylinder adjusting nut by moving the tool tip from the wheel center toward the outside so as to expand the shoes.

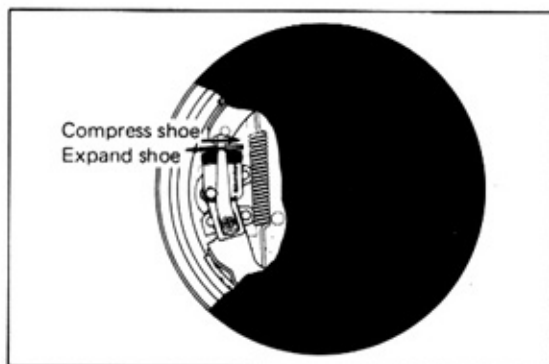


Fig. 8-37 Shoe Clearance Adjustment (1)

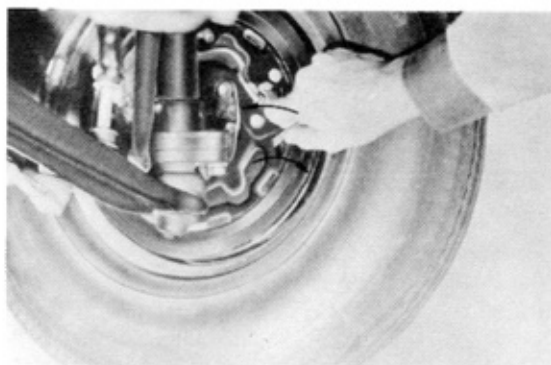


Fig. 8-38 Shoe Clearance Adjustment (2)

5. Continue the above operation 4 until the shoes are expanded and the tool becomes heavy to operate. Then depress the brake pedal and make sure that the shoes are in intimate contact with the drum, by trying to expand the shoes still further with the tool.
6. Turn the shoe adjusting nut by carefully moving the tool tip from the wheel outside circumference toward the center until the shoes contract and the wheel starts to turn lightly.

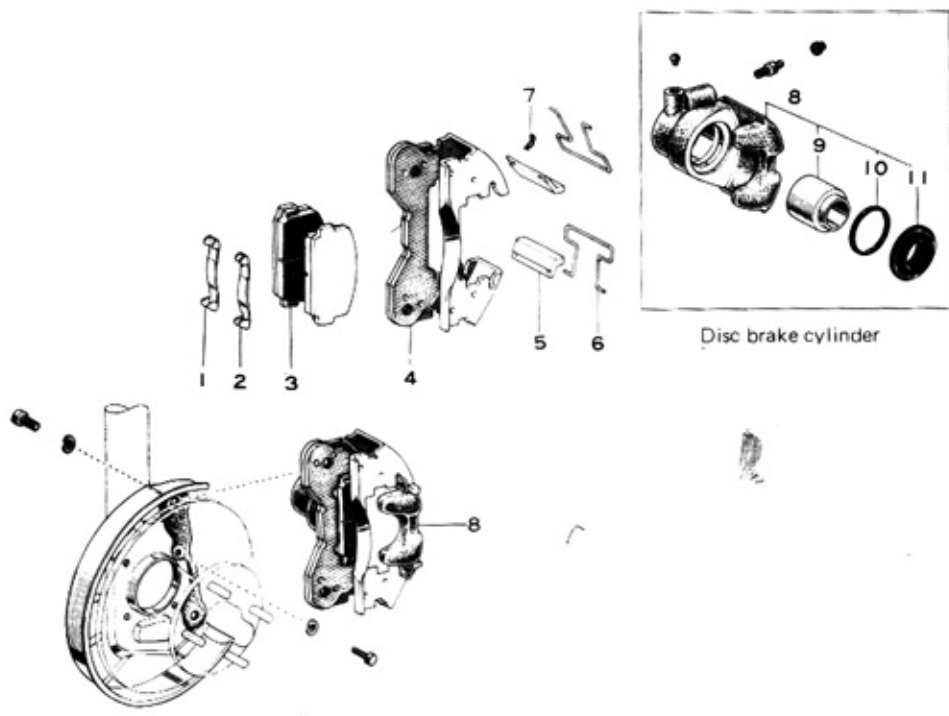
Reference number of notches to be returned 12-15.

Notes :

1. The number of notches can be determined by the adjusting lock spring clicks heard or felt on tool.
2. While contracting the shoes, step on the brake pedal from time to time to allow the shoes to settle into position.

FRONT BRAKE (DISC BRAKE)

COMPONENT PARTS



1. Plate, pad support, No. 1
2. Plate, pad support, No. 2
3. Pad, disc brake
4. Mounting, disc brake cylinder
5. Guide, disc brake
6. Spring, cylinder support
7. Clip
8. Cylinder assembly ; disc brake
9. Piston
10. Ring
11. Boot, cylinder

Fig. 8-39 Disc Brake Component Parts

Pad Thickness Checking Method

Replace the pads when the lining is worn down to 1 mm (0.04") at the thinnest part. To check amount of pad wear, measure the pad backing metal position in relation to mounting support. It can be assumed that the pads should be replaced if this distance becomes 5.5 mm (0.22").

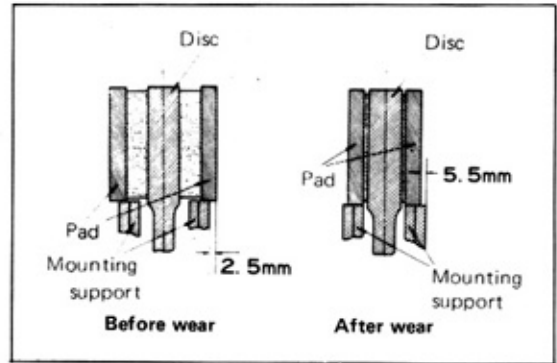


Fig. 8-40 Pad Thickness Checking Method

PAD REPLACEMENT

REMOVAL

1. Jack up the vehicle front end and support it on stands at specified points.
2. Remove the front tire.
3. Remove the four clips and take out the cylinder guides.
4. Remove the disc brake cylinder assembly.
5. Remove the pads.

INSPECTION

Inspect the parts on the following points and repair or replace any part found defective or exceeding the specified limit.

1. Pads for thickness and eccentric wear.
 - Thickness limit 6.0 mm (0.24") [Lining part 1 mm (0.04")]
 - Reference thickness 14.0 mm (0.55") [Lining part 9 mm (0.35")]
 - Note :** Pad must be replaced when the grooves are worn out from the pad.
2. Disc deflection (run out)
 - Deflection limit 0.15 mm (0.006")
3. Cylinder guide for wear or deformation, and clips for weakening or deformation.

INSTALLATION

1. After cleaning the piston exposed parts, insert the piston carefully to its former position.

Notes :

1. As there is chance of the piston at the other side jumping out, pad replacement should always be done on one side at a time.

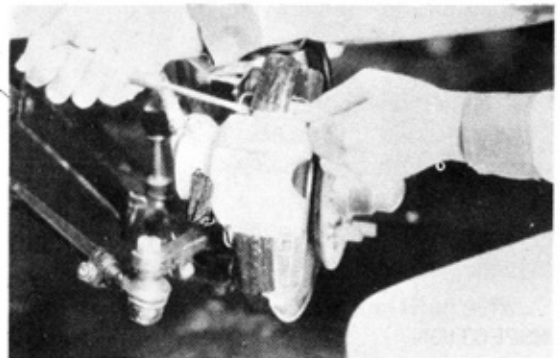


Fig. 8-41 Removing Cylinder Guide

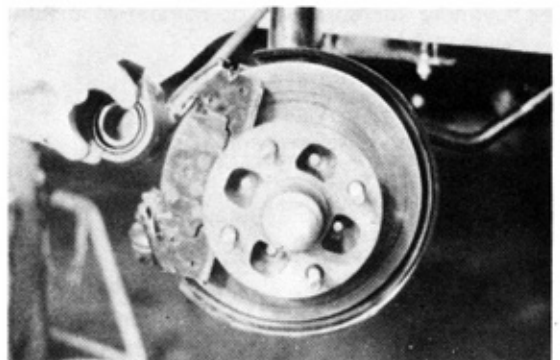


Fig. 8-42 Removing Cylinder

2. Loosen the bleeder plug if the piston cannot be pushed in easily.
2. Insert the pads and install the cylinder assembly.
3. Install the cylinder guides and clips.
4. In case the bleeder plug had been opened, bleed the line.

DISC BRAKE CYLINDER**REMOVAL**

1. Disconnect the flexible hose from the disc brake cylinder.
Note : Before disconnecting, have the master cylinder closed so as to prevent the brake fluid from flowing out.
2. Remove the four clips and take out the cylinder guides.
3. Remove the disc wheel cylinder.

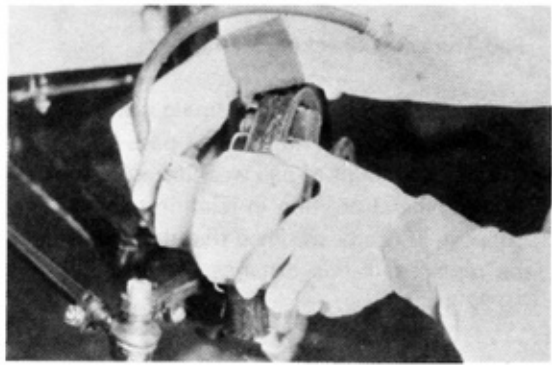


Fig. 8-43 Removing Cylinder

DISASSEMBLY

1. Remove the cylinder boot, taking care not to damage it while removing.
2. Blow air through the cylinder hose connection hole, and push out the piston.

Notes :

1. Be careful not to damage the piston.
2. Perform this operation with caution as the piston may fly out with considerable force.
3. Remove the ring from the cylinder.

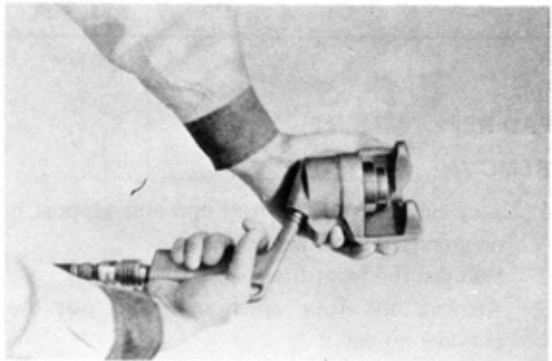


Fig. 8-44 Forcing Out Piston

INSPECTION

Inspect the disassembled parts on the following points and replace any part found defective.

1. Cylinder for corrosion or damage at piston sliding surface.
2. Piston for corrosion or damage.
3. Ring for weakening, damage, or wear.
4. Cylinder boot for weakening or damage.

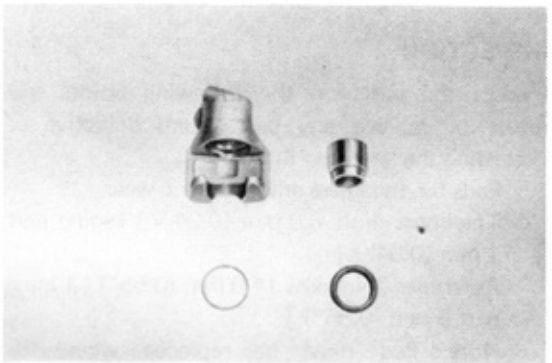


Fig. 8-45 Inspection

REASSEMBLY

1. Wash all parts to be assembled in clean brake fluid.
2. Install the ring and piston into the cylinder.

Notes :

1. Coat rubber grease on the cylinder and ring before assembling.
2. Press the piston in carefully by hand so as not to damage the ring.
3. Install the cylinder boot.

INSTALLATION

1. Install the cylinder assembly.
2. Insert the cylinder guides in between the mounting and cylinder, and secure them with four clips.
3. Connect the flexible hose.

Note : It is recommended that a new union gasket be used each time. If the gasket is to be reused, check carefully for fluid leakage.

4. Bleed the line by loosening the bleeder plug.

FRONT DISC**REMOVAL**

1. Remove the disc brake cylinder
2. Remove the disc pads.
3. Loosen the bolts installing the disc brake cylinder mounting, and remove the mounting together with the cylinder support springs and support plates attaches.

4. Check the disc deflection (run out).
Note : Record the value for reference during inspection.
5. Remove the hub grease cap, cotter pin, and castle nut. Then remove the axle hub together with the disc attached.

INSPECTION

Inspect the parts on the following points, and repair or replace any part found defective or exceeding the specified limits.

1. Cylinder mounting for cracks or wear.
2. Support springs for deformation and pad support plates for damage.
3. Disc for thickness or eccentric wear.
Thickness limit 9.0 mm (0.354")
Reference thickness 10.0 mm (0.394")
Deflection limit 0.15 mm (0.006") maximum

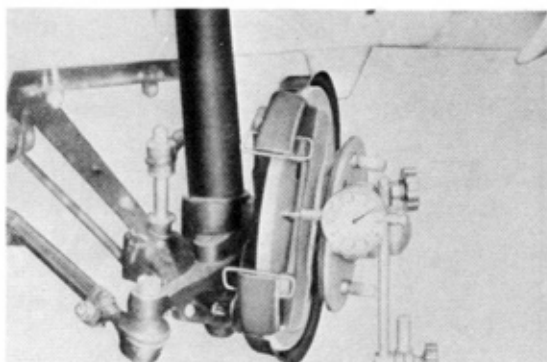


Fig. 8-46 Checking Disc Deflection (Run out)

INSTALLATION

1. Install the hub and disc, and adjust the bearing preload.
Note : Coat MP grease on the hub oil seal lip.
2. Measure the disc deflection.
Note : Improper tightening of the hub bearing castle nut will have a large effect on the disc deflection.
3. Install the disc brake mounting (with the cylinder support springs attached) on the dust cover.
Note : Take care not to distort the support springs while installing.
Tightening torque 400–550 kg-cm (29–40 ft-lb)
4. Install the pad support plates No. 1 and No. 2 on the mounting, and insert the pads.

Notes :

1. Pad support plate No. 2 is a directional part.

2. Install the pads in the positions they were before disassembly, and make sure that they are securely in the mounting grooves.
5. Install the cylinder.
6. Install the disc brake guides.
7. Install the clips.
8. Connect the flexible hose.
9. Bleed the line.
For bleeding procedures, refer to P8-11.

INSPECTION AFTER INSTALLATION

Measure the front wheel rotational resistance.

After road test, stop with parking brake, jack up and measure the rotational resistance.

Rotational frictional torque 25 kg-cm (22 in-lb)

REAR BRAKE

COMPONENT PARTS

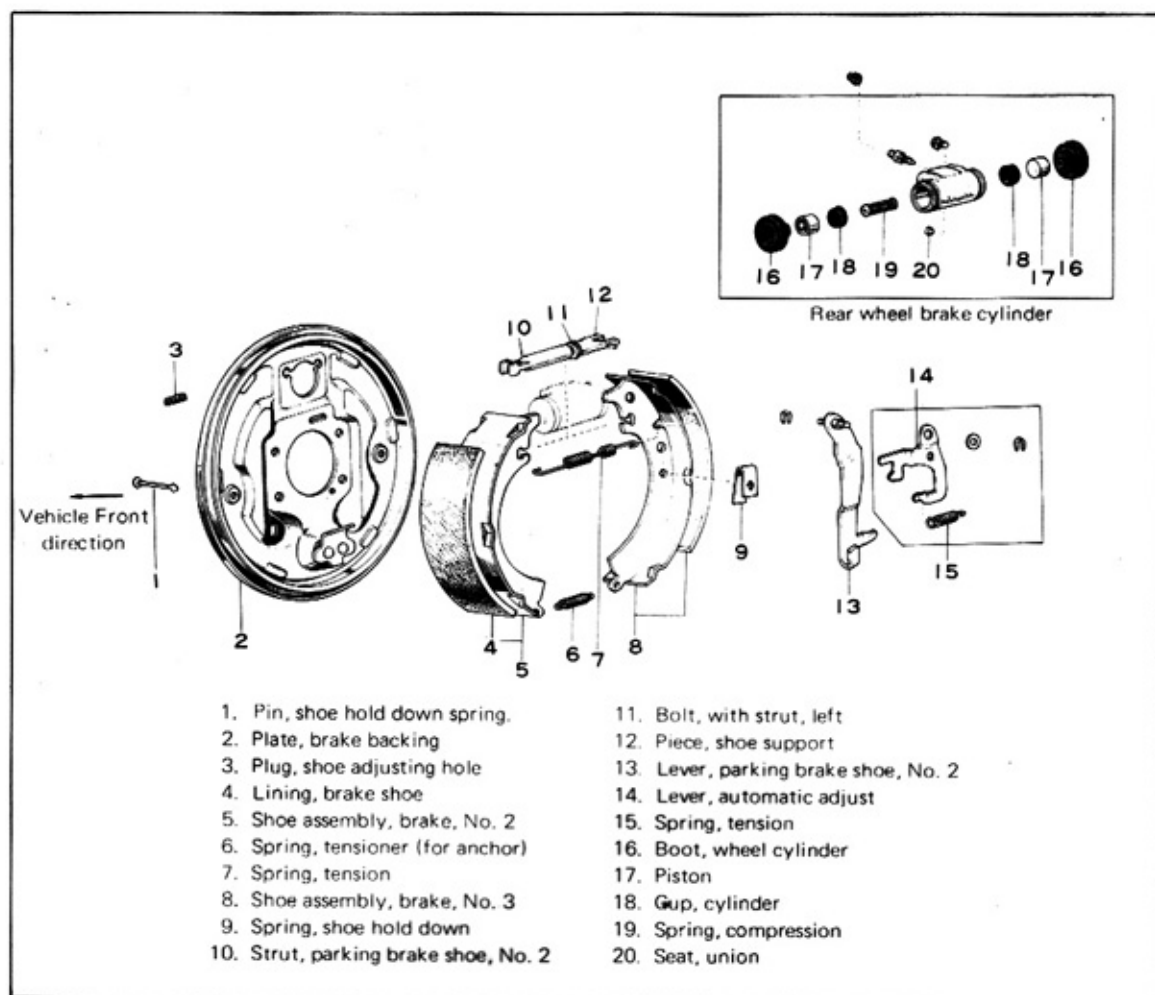


Fig. 8-47 Rear Brake Component Parts (LH shown)

REAR BRAKE SHOE

REMOVAL

1. Jack up the rear end of vehicle and support it on stands.
2. Remove the rear wheel.
3. Remove the brake drum.
Note : Parking brake must be released.
4. Remove the brake shoes.
 - (1) Using Brake Shoe Return Spring Tool [09703-30010], unhook and remove the tension spring.
 - (2) Remove the shoe hold down springs.



Fig. 8-48 Unhooking Tension Spring

- (3) Disconnect the parking brake cable No. 2 from the parking brake shoe lever, and remove the rear side shoe together with the shoe lever.
- (4) Remove the C washer, and take off the shoe lever and automatic adjust lever (with automatic adjuster attached).

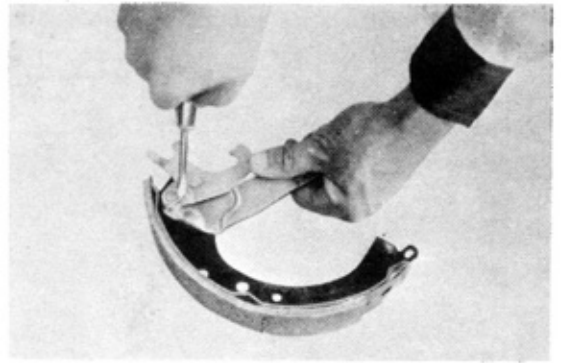


Fig. 8-49 Removing Shoe Lever

INSPECTION

Perform the inspection and repairs of the brake drum, brake shoes, and backing plate by methods corresponding to those for the front brake.

Tension Spring

Inspect the tension spring to see if weakened, distorted, or rusted.

Shoe Adjuster

1. Inspect the shoe adjuster bolt teeth for damages.
2. Check the shoe adjusting bolt to see if it moves properly.

INSTALLATION

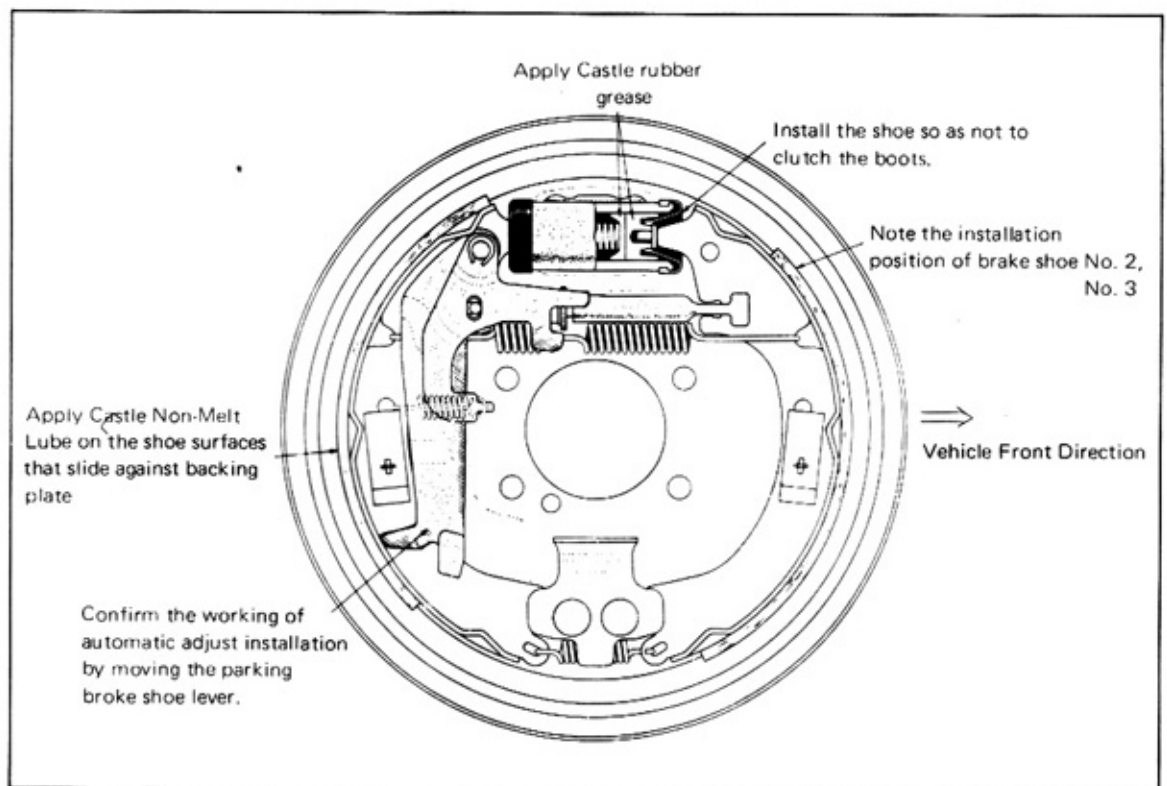


Fig. 8-50 Rear Brake Shoe Installation (RH shown)

1. Install the parking brake shoe lever and automatic adjust lever on the shoe (rear side).

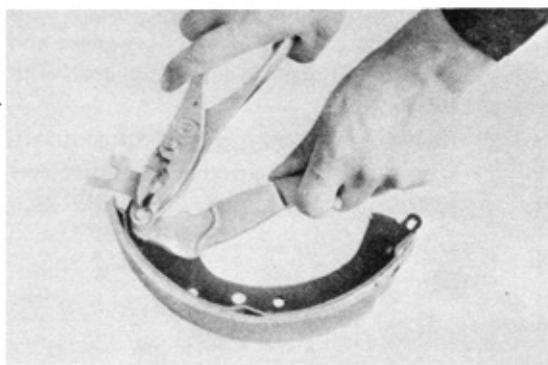


Fig. 8-51 Installing Shoe Lever (1)

2. Connect the cable No. 2 on the shoe lever.
3. Install the shoe adjuster.
Install the tension spring on the automatic adjust lever.

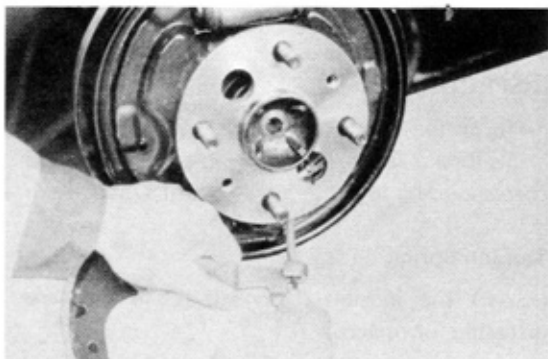


Fig. 8-52 Installing Shoe Lever (2)

4. Install the shoe hold down spring (rear shoe).
5. Install the shoe hold down spring on the front shoe.

Note : Have the tension spring (for shoe anchor) installed beforehand.

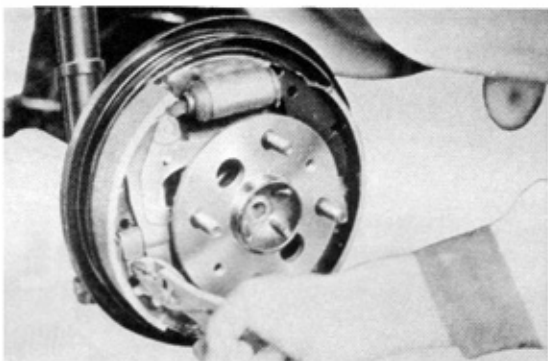


Fig. 8-53 Installing Hold Down Spring

6. Hook one end of tension spring on the rear shoe, and using Brake Shoe Return Spring Tool [09703-30010], hook the other end on the front shoe.

Caution : Make sure that wheel cylinder boots are being pinched in by shoe ends.

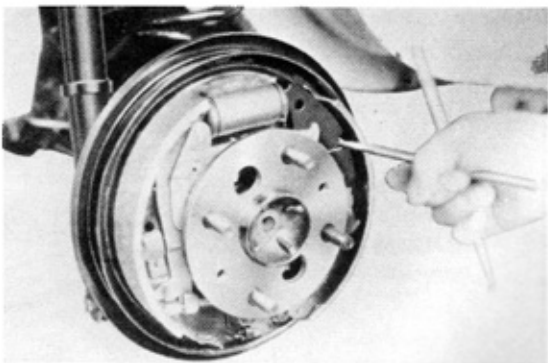


Fig. 8-54 Hooking On Tension Spring

7. Check the operation of the automatic adjuster by moving the parking shoe brake lever.
8. Install the brake drum.
Note : If oil or grease is found adhering to the lining surfaces or drum interior, remove it with sandpaper.
9. Install the wheel.
Hub nut tightening torque 900–1200 kg-cm (6–87 ft-lb)

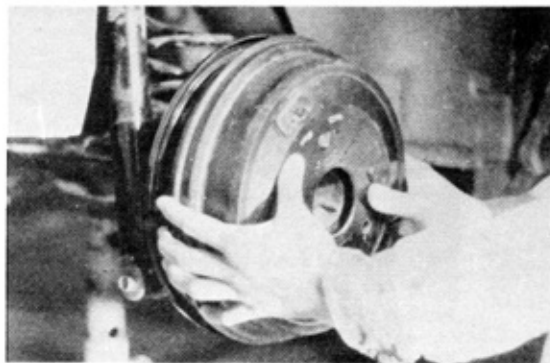


Fig. 8-55 Installing Brake Drum

REAR WHEEL CYLINDER

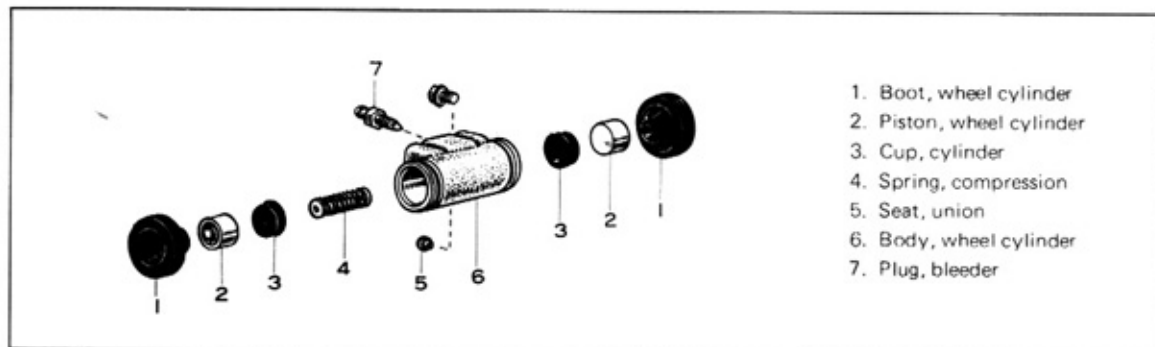


Fig. 8-56 Rear Wheel Cylinder Component Parts

PISTON AND CUP

REMOVAL

1. Remove the brake shoes.
Refer to P8-28 for removal procedures.
2. Remove the boots from both ends of cylinder body, and take out the pistons.
3. Take out the piston cups and compression spring from the cylinder.

Note :

Wheel brake cylinder cup replacement or inspection can be done without removing the wheel cylinder body, but in case the cylinder is removed, replace the union seat at the brake tube connection part if required. For replacement procedures, refer to P8-22.

INSPECTION

1. Inspect the cylinder body bore to see if damaged or worn.
2. Inspect the cylinder tapped hole for brake tube connection to see if damaged.
3. Inspect the pistons to see if damaged, worn, or rusted.
Piston clearance limit 0.15 mm (0.006")

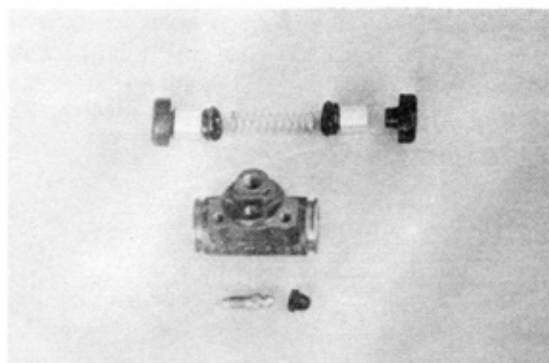


Fig. 8-57 Wheel Cylinder Inspection

REPLACEMENT

1. Wheel cylinder

- (1) Disconnect the brake tube (at the rear side of backing plate) from the wheel cylinder.
- (2) Remove the cylinder from the backing plate.
- (3) To reinstall, follow the removal procedures in reverse order.

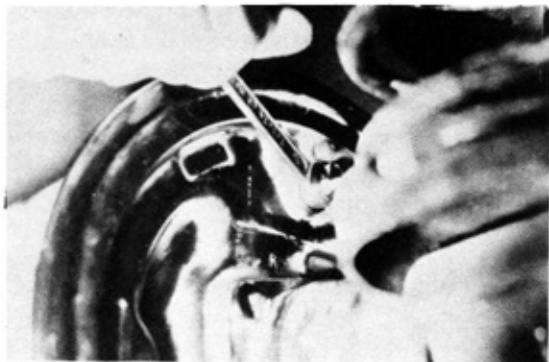


Fig. 8-58 Removing Wheel Cylinder

2. Backing plate

- (1) Using Puller Clamp [09911-00010], Slide Hammer [09912-00010], and Attachment [09914-00011], remove the axle shaft with backing plate attached.

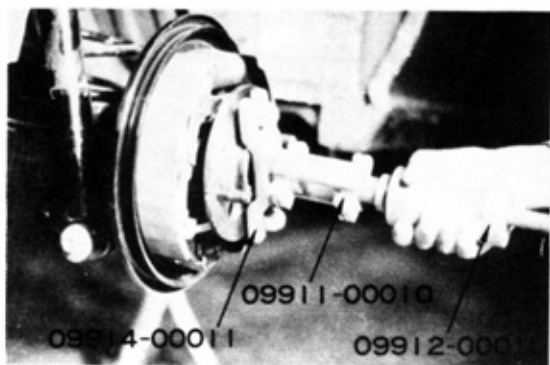


Fig. 8-59 Removing Axle Shaft

- (2) Disconnect parking brake cable No. 2 from the backing plate.

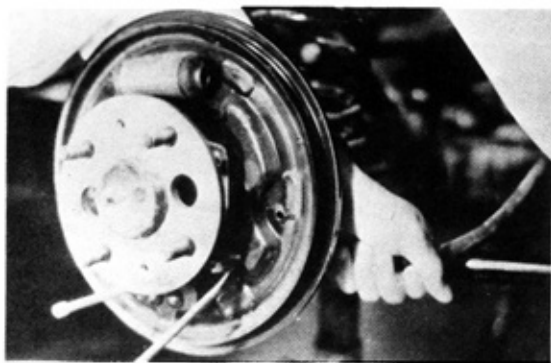


Fig. 8-60 Removing Cable No. 2

- (3) Utilizing the working holes in the rear axle, flange, remove the four backing plate nuts.
- (4) To reinstall, follow the removal procedures in reverse order.

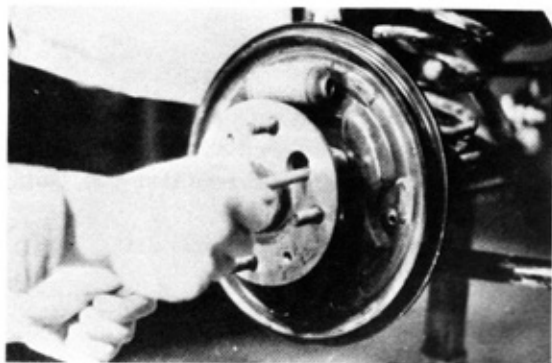


Fig. 8-61 Removing Backing Plate

INSTALLATION

Install by following the removal procedures in reverse order.

Notes :

1. Before installing the cylinder cups, soak them in clean brake fluid, or coat them with rubber grease.
2. Bleed the line.
For bleeding procedures, refer to P8-11.

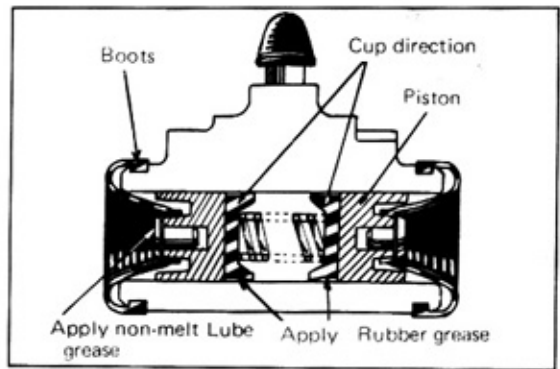


Fig. 8-62 Wheel Cylinder Installation

ADJUSTMENT (Rear Brake Shoe Clearance)

1. With automatic adjuster
 - (1) Check the brake pedal reserve travel.
 - (2) Operate the parking brake lever while pressing down on the lever knob.
 - (3) Check the brake pedal to see if it now has sufficient travel reserve.
 - (4) Check the wheels to see that they turn lightly.

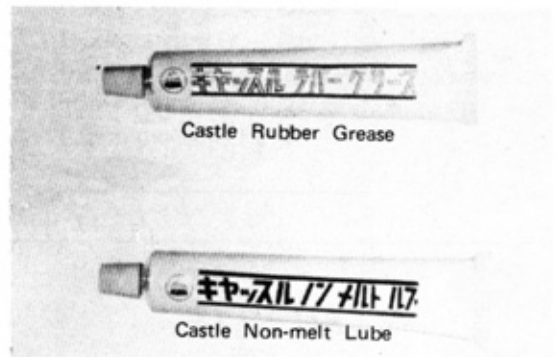


Fig. 8-63 Brake Assembly Lubricants

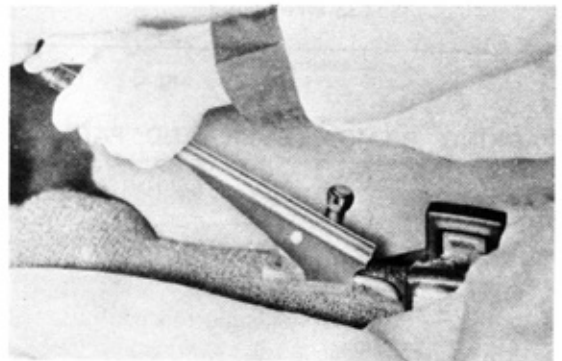


Fig. 8-64 Adjusting Shoe Clearance (1)

2. Without automatic adjuster
 - (1) Jack up the vehicle rear end and support it on stands.
 - (2) Release the parking brake lever and check if the wheels turn lightly.
 - (3) Remove the shoe adjusting hole plug at upper part of backing plate, and using the shoe adjusting tool, adjust the shoe clearance in the same manner prescribed for the front brakes.
Reference number of notches to be returned—About 8.
 - (4) Check the brake pedal to see if it now has sufficient travel reserve.



Fig. 8-65 Adjusting Shoe Clearance (2)

PARKING BRAKE

COMPONENT PARTS

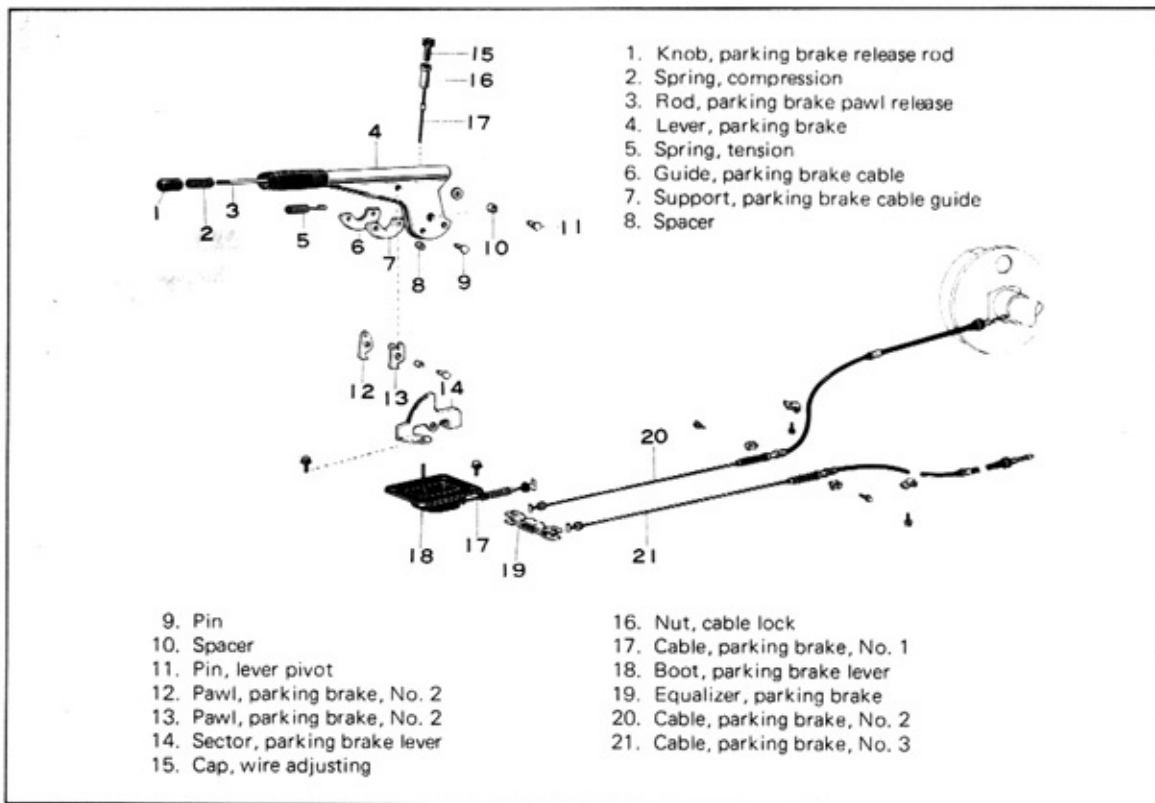


Fig. 8-66 Parking Brake Component Parts

PARKING BRAKE LEVER AND PARKING BRAKE CABLE No. 1

REMOVAL

1. Jack up the vehicle rear end and support it on stands at specified points.
2. Remove the wire adjusting cap and nut, and fully loosen cable No. 1.
3. Loosen the bolts mounting the parking lever assembly.

Note: The parking lamp switch will also come loose at the same time.

4. Remove the cable No. 1 from the equalizer, and remove the parking lever assembly together with the cable No. 1.
5. Remove the cable No. 1 from the parking lever assembly.

INSPECTION

Inspect the removed parts on the following points, and replace any part found defective.

1. Cable No. 1 to see if damaged, worn, or rusted.
2. Parking lever to see if it operates or pulls properly, and the release knob to see if it operates properly.

INSTALLATION

1. Attach the cable No. 1 on parking brake lever assembly.
2. Attach the cable No. 1 on the equalizer.
3. Install the parking brake assembly on the floor.

Bolt torque 100-160 kg-cm (7.2-11.6 ft-lb or 87-139 in-lb)

4. Adjust the parking brake.

For adjustment procedures, refer to P8-9.

PARKING BRAKE CABLE NO. 2**REMOVAL**

1. Remove the wire adjusting cap and nut, and fully loosen cable No. 1.
2. Remove the cable guide grommet at rear part of equalizer from the bracket.
3. Disconnect the cable No. 2 front end from the parking brake equalizer.
4. Remove the clamps holding the cable No. 2 at two places.
5. Remove the rear wheel, and pull cable No. 2 out from backing plate.

Note : For procedures on disconnecting the cable from the brake shoe, refer to P8-34.

INSPECTION

Inspect the removed parts on the following points and replace any found defective.

1. Inspect cable No. 2 to see if damaged, worn, or rusted.
2. Inspect the inner and outer wires of cable No. 2 to see if they are sliding properly.

INSTALLATION

1. Attach cable No. 2 on the equalizer.
2. Install the cable guide grommet on the bracket.
3. Install cable No. 2 on the backing plate, and attach its end on the brake shoe.
4. Clamp the cable No. 2.

PARKING BRAKE ADJUSTMENT**Note**

After completing adjustment of the brake shoes, adjust the parking brake reserve pull. The following procedures should strictly be observed when making adjustments on rear brakes equipped with automatic adjuster.

1. After pulling the parking brake lever all the way, count the number of notches on the parking brake sector.
Reference pull reserve 3–7 notches
2. If the pull reserve is less than that specified, adjust by loosening the wire adjusting cap (located at lower side of lever) and turning the nut.

Notes :

1. The rear wheels should rotate lightly when the lever is returned.
2. After completing adjustment, tighten the adjusting cap with fingers.

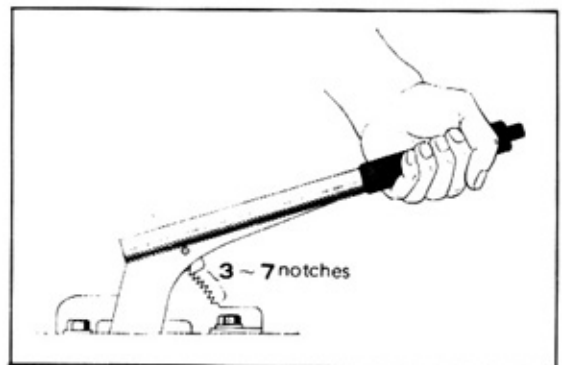


Fig. 8-67 Parking Brake Reserve Pull

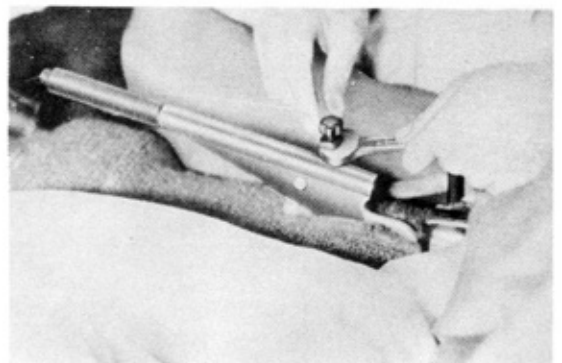


Fig. 8-68 Adjusting Parking Brake