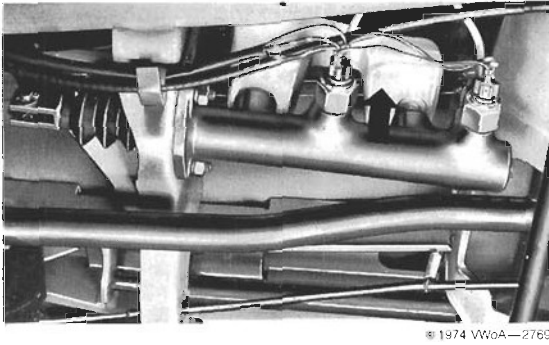


During installation, attach the line to the refill reservoir, making sure that all parts fit tightly and are correctly positioned. Then mount the refill reservoir on the vehicle body.

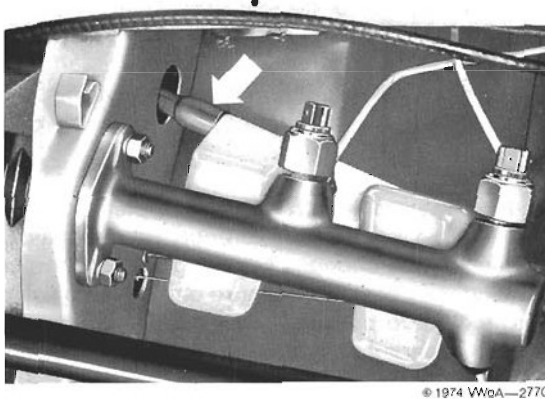
**To remove twin-chamber reservoir:**

1. Working under the vehicle, remove the cover plate that is beneath the pedal cluster.
2. After removing as much fluid as possible from the refill reservoir, there will still be fluid in the twin-chamber reservoir. So place a container or absorbent cloth under the master cylinder to catch escaping fluid.
3. Press the twin-chamber reservoir out of the rear sealing plug as indicated in Fig. 3-2. Then press the reservoir out of the front sealing plug.



**Fig. 3-2.** Twin-chamber reservoir removal. First press the reservoir out of the rear sealing plug as indicated by the arrow.

4. Pull the reservoir slightly to the rear, and then disconnect the refill line at the point indicated in Fig. 3-3.



**Fig. 3-3.** Point (arrow) where refill line should be disconnected from the twin-chamber reservoir.

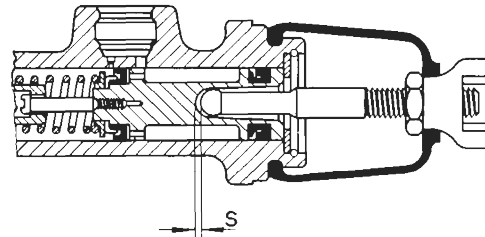
Installation is the reverse of removal. On 1969 and later models, a plastic hose replaces the metal tube used as a refill line on 1968 models. Push the rubber seal onto the wider part of the plastic refill line. Then push the line and seal onto the reservoir connection. Following installation, bleed the brakes as described in **9. Bleeding Brakes**.

**4. MASTER CYLINDER**

The master cylinder has two pistons, one behind the other. One piston supplies hydraulic pressure to the front brakes; the other piston supplies hydraulic pressure to the rear brakes.

**4.1 Pushrod Adjustment**

On 1968 through 1970 vehicles, the master cylinder pistons are moved by a pushrod connected to the brake pedal. On 1971 and later models, which are equipped with front disc brakes, the pushrod for the master cylinder is part of the vacuum powered brake servo. It is very important that the correct clearance exist between the pushrod and the master cylinder piston (Fig. 4-1).



**Fig. 4-1.** Required clearance **S** between the end of the pushrod and the master cylinder piston. It should be 1 mm (.040 in.).

Notice that in Fig. 4-1 there is a small compensating port just ahead of the piston, as well as a larger port behind it. The compensating port can admit brake fluid to, or receive fluid from, the working side of the piston only when the piston is in its rest position. A similar pair of ports are positioned adjacent to the other piston in the master cylinder.

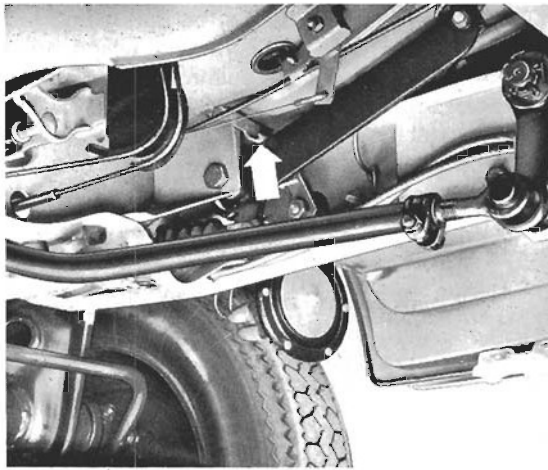
The compensating ports are, in many ways, the most important parts of the master cylinder. Their job is to permit surplus brake fluid to return to the reservoirs or to allow the reservoirs to refill the master cylinder. If the pistons block the compensating ports when the brake pedal is fully released, neither of the functions can be fulfilled. It is therefore necessary to maintain the clearance indicated in Fig. 4-1.



## 6 BRAKES AND WHEELS

Dragging brakes, an abnormally high pedal, and brakes that lock up while driving and fail to release are symptoms of blocked compensating ports. Pushrod clearance should be checked and, if necessary, adjusted. If it is already correct, the master cylinder probably needs to be rebuilt or replaced or, on vehicles with front disc brakes, there is trouble in the vacuum powered brake servo. The clearance must also be checked after servicing the master cylinder, the brake servo, or removing and installing the brake pedal.

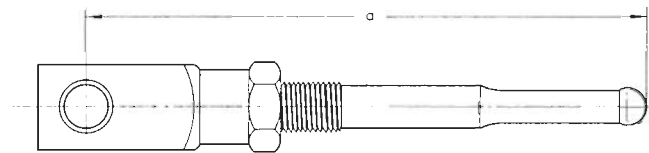
On 1968 through 1970 models, the pushrod clearance can be measured directly. Working under the vehicle, remove the cover plate that is beneath the pedal cluster. Operate the pedal lever by hand and see whether the pushrod travels into the master cylinder the prescribed 1-mm (.040 in.) distance before encountering resistance. If not, adjust the clearance by moving the brake pedal stop indicated in Fig. 4-2.



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**Fig. 4-2.** Brake pedal stop for 1968 through 1970 vehicles (arrow).

If the proper clearance cannot be obtained by moving the brake pedal stop on 1968 through 1970 models, remove the pushrod and check dimension **a** given in Fig. 4-3. It must be 106 mm (4.173 in.). If not, adjust and install the pushrod. Then adjust the pushrod clearance by moving the pedal stop.

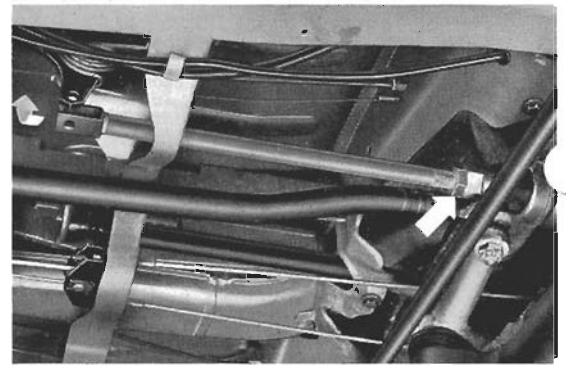


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**Fig. 4-3.** Correct pushrod length. Dimension **a** must be 106 mm (4.173 in.).

### To adjust clearance on vehicle with brake servo:

1. Working under the vehicle, remove the cover plate that is beneath the pedal cluster.
2. Check to see that the pedal lever is being held against the brake pedal stop by the brake pedal return spring.
3. If the pedal lever is against the stop, check the clearance between the connecting rod and the brake servo. The connecting rod should not exert pressure on the servo valve housing when the pedal is all the way up.
4. If necessary, remove the cotter pin from the clevis pin. Remove the clevis pin, and disconnect the connecting rod clevis from the pedal lever.
5. Adjust the connecting rod by screwing it in or out of the threaded part of the servo (Fig. 4-4).
6. If necessary, loosen the locknut and make fine adjustments by turning the connecting rod connection until the clevis pin can easily be inserted as you install the connecting rod on the pedal lever.



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**Fig. 4-4.** Connecting rod length adjustment. Turn rod as indicated by the curved arrow (left) near the clevis. Make fine adjustments by turning the flat-sided connecting rod connection indicated by the right arrow.

7. Install a new cotter pin in the clevis pin. Tighten the locknut for the connection on the servo.

Because the length of the one-piece pushrod in the brake servo is fixed, its clearance with the master cylinder piston cannot change. Adjusting the connecting rod so that it does not exert pressure on the servo valve ensures that the servo pushrod is fully retracted to maintain the proper clearance. Because close tolerances are maintained during manufacture, the master cylinder or the servo can be replaced without upsetting the clearance between the servo pushrod and the master cylinder piston.

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