

Lockheed Hydraulic Brake Adjustments (Continued)

As anchor bolts are case hardened, it is necessary to grind off hardened surface of threaded end so that it may be slotted.

Whenever possible replace shoes, anchors, etc., from same place as originally removed. This avoids considerable unnecessary labor in making adjustments.

If new fluid in Hydraulic system is necessary, use only new, clean Hydraulic fluid.

Bleeding of Hydraulic brake systems is recommended by following the procedure as outlined below. (See Pages 44-46 for more information on Hydraulic systems.)

Use two men, one man at the brake mechanism and one man in the car. Keep the supply tank filled at all times (master cylinders with the supply tank cast in the same unit require filling after four strokes). An automatic refilling tool for the brake master cylinder as illustrated in Fig. 1 will prevent it from running dry during the bleeding operations. The man in the car should pump up pressure with the pedal, holding that pressure with his foot. The man at the brake unlocks the

bleeding system $\frac{1}{4}$ turn. The man in the car pushes on the pedal, and before it strikes the floor he should instruct the man at the brake to lock the system. This operation should be repeated four or five times on each wheel in the following order:

1. Right rear.
2. Right front.
3. Left rear.
4. Left front.

This method of bleeding assures removal of all air in the front line and avoids the possibility of spongy pedal and poor performance.

There are two arrangements of the step-bore cylinders found on 1935 cars. In one class the larger cylinder operates the reverse acting shoe, giving more uniform wear of the brake linings. This arrangement is

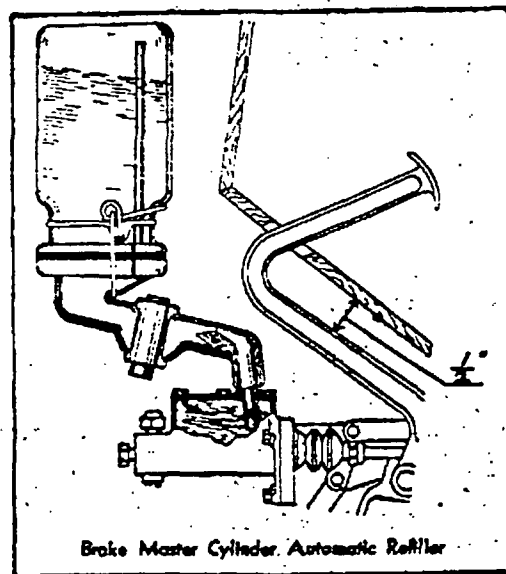
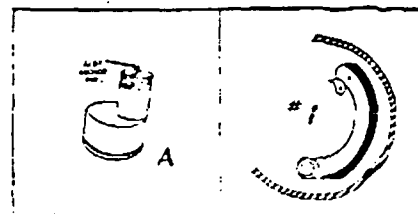


Fig. 1

found on cars in the Chrysler group. In the other class the larger bore cylinder operates the forward acting shoe, giving a very effective brake. This arrangement is found on 1935 Studebakers.

Cars in the last named class have experienced excessive forward acting shoe lining wear. It has been found that the wheel cylinders can be interchanged right front with left front, right rear with left rear, giving a system where the larger bore cylinder acts as the reverse acting shoe. As only three studs are used to hold the brake cylinder to the backing plate, it is necessary in making this change to drill one new hole in the backing plate.

Oftentimes a ring gauge or dummy drum is not available for adjusting Hydraulic brake systems. The following is a method of adjusting Hydraulic brakes without the use of either of these useful appliances.



Adjusting Hydraulic Brakes Without a Ring Gauge

The adjustment of Hydraulic brakes with a ring gauge is very simple, but when no ring gauge is available and there are no peep holes in the drum, a correct adjustment is often quite difficult to make.

The method of "feeling in" the shoes as given in detail below has proved very satisfactory and can be easily mastered after a few trials.

1. If eccentric anchor bolts are not slotted for a screw driver remove them from the backing plate, grind off the case-hardened surface and slot the end with two hacksaw blades placed side by side in the same handle. Slot all anchors in a like location so that the slot is at right angles to the high and low sides of the eccentric anchor (see Fig. A).
2. Replace anchors and shoes in brake mechanism and turn eccentric anchors by means of screw driver inward and toward the axle so that the shoe is thrown as far away from drum as possible. Also turn cams inward and toward the axle. All shoes will then be in a position as shown in Fig. 1.
3. Adjust one shoe at a time. Turn cam out and away from axle until brake just drags. (See Fig. 2.)
4. Turn eccentric anchor inward and toward the axle by means of screw driver until drum turns freely (Fig. 3). Note that the movement of the anchor lowers the shoe so that lining at toe of shoe no longer drags.
5. Again turn cam outward and away from axle until toe of shoe just drags on drum (Fig. 4).
6. Then turn eccentric anchor in same direction as in (4) until drum turns freely.
7. Repeat (5) and (6) until further turning of anchor will not free the drum from the drag obtained by setting out cam. When this condition is reached, shoe will be in a position as indicated in Fig. 5.
8. Then back off both anchor and cam very slightly until drum turns freely.
9. Repeat the above procedure on all shoes, and a brake adjustment very close to the tolerances of .005" clearance at heel and .010" clearance at toe will be obtained. (See Fig. 6.)

