Vacuum Power Brakes (Continued)

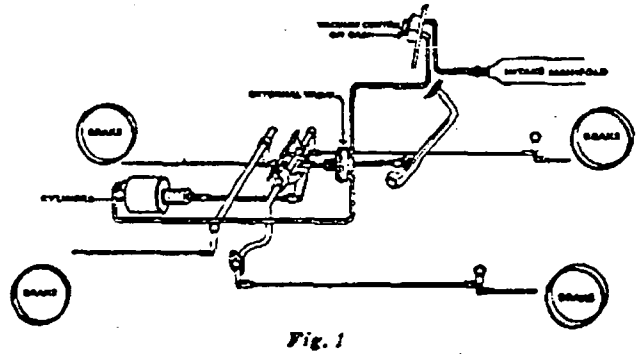


Fig. 1

Fig. 1 shows the three units of a standard B-K booster system and the relationship each unit bears to the other. This system is the one used on the majority of truck installations and on heavy passenger cars up to 1933. Similar installations without the valve control on the dash are equally as common as the three unit system shown.

The power unit should be lubricated twice a year through ports in end of cylinder with two ounces of Bendix vacuum cylinder oil. Dust covers should be removed and the curled hair in the air cleaner washed and thoroughly cleaned in high test gasoline.

It is important that the rubber piston rod guard be in good condition and properly fitted in its recesses at each end.

The vacuum suspended, internal valve type of booster system commonly found on passenger cars is shown in Fig. 2. The arrangement shown is that used on 1933 Studebaker with Power Brakes. The important point to observe is the method of connecting the power unit to the brake linkage so as to provide "feel" at the brake pedal. This gives a slight play or sloppiness to the system not found in conventional linkage.

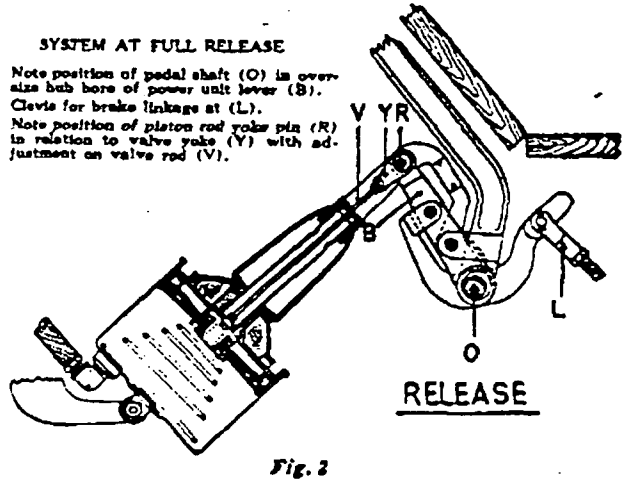
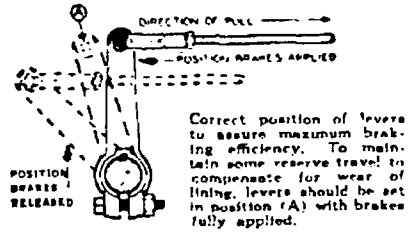


Fig. 2

MECHANICAL LEVERAGE SYSTEMS AND EQUALIZERS

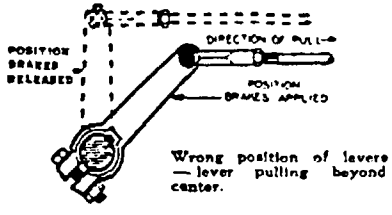
THERE are such a vast variety and combination of mechanical leverage hookups on cars that without going into detail for each car, only generalities will be discussed.

To assure maximum braking efficiency all brake levers should be so adjusted that the greatest mechanical advantage is obtained (see Fig. 1) which means that all levers with brake pull applied will be on dead center. Fig. 1 also shows that a reserve travel to compensate for wear of lining should be made in any setup. Figs. 2 and 3 show the wrong position of levers to give greatest efficiency. In the case of Fig. 2 the lever is pulled beyond the center, thus decreasing efficiency at the time when it is needed most, that is, at the greatest pedal pressure, or when making an emergency stop. *Fig. 3 shows the leverage too far forward. A lever set in this* position would require unusually severe pressure even to start the brake mechanism moving.



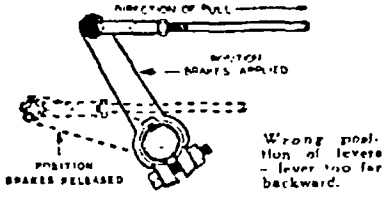
CORRECT

Fig. 1



WRONG

Fig. 2



WRONG

Fig. 3

A twisted, bent or weak cross shaft will not deliver full pedal power to the brake which results in hard pedal and unequal brakes. Worn clevis pins should be replaced as they cause lost motion. Cotter pins should be in good condition *and none missing*.

The following diagrams illustrate some of the most common types of leverage hookups. Oftentimes a combination of two or even three of the types is found on a single car. The same general principles, however, apply to combinations of types as would apply if only a single type were used.