

1. ADJUSTMENTS

Brake adjustments are divided into three classifications, minor adjustment, major adjustment, and brake pedal adjustment. The minor brake adjustment merely reestablishes the brake lining to drum clearance and compensates for normal brake lining wear. The minor brake adjustment procedure is given in "a. Minor Adjustment." A major brake adjustment is recommended when new shoes are installed, when brakes are relined, or when the minor adjustment does not give satisfactory brake operation. This adjustment procedure is outlined in "b. Major Adjustment." A brake pedal adjustment is necessary if the pedal free travel is less than $\frac{1}{4}$ inch or more than $\frac{7}{16}$ inch. To correct pedal free travel, follow the procedure given in "c. Brake Pedal Adjustment."

a. Minor Adjustment.

The brakes should be adjusted when the linings have been worn so that the pedal reserve is less than one-half the total travel to the floor board.

The brake drums should be at normal room temperature when making adjustments. If the brakes are adjusted when the drums are hot and expanded, the shoes may drag when the drums cool and contract. Before making a minor brake adjustment remove one front wheel and check for the following conditions:

- (1) Brake drum scored, out-of-round, or bell mouthed.
 - (2) Brake lining coated with brake fluid or grease.
 - (3) Brake lining worn to less than $\frac{1}{32}$ inch from the top of the rivet heads.
 - (4) Brake lining not making full contact with drum.
- If any of these conditions exist a minor brake adjustment will not give satisfactory braking performance, and the need for a major brake adjustment is indicated.
- NOTE:** *It may be assumed that the condition of the linings and drums at the other three wheels is approximately the same as found at the wheel removed.*

A minor brake adjustment may be accomplished as follows:

Add sufficient brake fluid to the master cylinder to bring the level within $\frac{1}{2}$ inch of the top of the filler neck.

NOTE: *Use heavy duty brake fluid (1A-19542-A or B) only.*

Jack up all four wheels. Be sure the parking brake lever is in the fully released position. Check the cables to the rear brakes to make certain the cables have not been adjusted so that the shoes have been moved off their anchor pin seat (partially applied).

Check the anchor pin nut with a 16 inch wrench. If the anchor pin nut is found to be loose, a major adjustment is necessary.

Remove the adjusting hole cover. Expand the brake shoes by turning the adjusting screws (fig. 2) with a

screwdriver or adjusting tool, toward the axle until the brake drum can just be turned by hand. Then back off the adjusting screw (moving the handle of the tool or screwdriver away from the axle) until the wheel turns freely without drag. Make this adjustment at all four wheels.

If a drag is still noticed on the drum, reset the anchor pin.

Apply the brakes and measure the distance from the pedal pad to the floor board. If this distance is less than one-half the total travel, too much clearance exists between the shoes and the drums and further adjustment is necessary. Road test the car. If the pedal travel is still too great, a major adjustment is required.

b. Major Adjustment.

Before making a major brake adjustment, the following operations must be performed:

- (1) Remove all four brake drums and clean the brake assemblies.
- (2) Perform all of the inspections included under "a. Minor Adjustment."
- (3) Inspect all brake pipes and hoses for leakage, kinks, or deterioration.
- (4) Lubricate the surfaces of the backing plate contacted by the shoes and the adjusting screw with Lubriplate.

A major brake adjustment includes the adjustment of the brake shoes and the anchor pins, and is performed as follows:

If the lining is still serviceable, reinstall the brake drums. Adjust the brake pedal free play. Add sufficient heavy duty brake fluid to the master cylinder to bring the level within $\frac{1}{2}$ inch of the top of the filler neck.

Insert a 0.010 inch feeler gauge through the adjusting slot in the drum while the slot is opposite the lower end of the secondary or rear shoe. Move the feeler gauge upward along the secondary shoe, until the shoe assembly is wedged forward as far as possible.

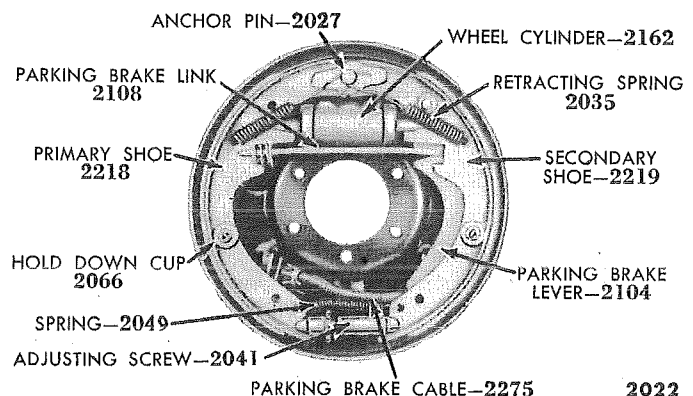


Fig. 2—Single Anchor Self-Energizing Brake

Expand the shoes by turning the adjusting screw until the primary shoe contacts the drum securely and the secondary shoe is snug against the feeler. Back off the adjusting screw enough to establish a clearance of 0.010 inch, 1½ inches from each end of the primary and secondary shoes. This adjustment provides correct operation clearance for both the primary and secondary shoes.

If the 0.010 inch clearance cannot be obtained at *both* ends of the secondary shoe, by rotating the adjusting screw, the anchor pin must be adjusted. Loosen the anchor pin nut just enough to allow the pin to move up or down, then tap the nut with a soft hammer until the pin is properly positioned. Do not back the nut off too much or the shoes may move out of position when the nut is tightened. To reduce the clearance between the lining and the drum at the anchor end of the secondary shoe, move the anchor pin away from the center of the axle or spindle. To reduce the clearance at the adjusting screw end, move the anchor pin toward the center of the axle or spindle. After the proper clearance is obtained, tighten the anchor pin nut to 65-85 foot-pounds torque. Recheck the shoe clearance after tightening the nut to insure having the 0.010 inch operating clearance.

After the brake shoes and anchor pins have been adjusted, adjust the parking brake cable slack at the equalizer lever pull rod.

Check the brake pedal free play and adjust if necessary.

Bleed the hydraulic system if existing conditions warrant the performance of this operation.

c. Brake Pedal Adjustment.

When the brake pedal free play is less than ¼ inch or more than ⅞ inch (fig. 3) the need for brake pedal adjustment is indicated. The pedal free play may be checked by hand pressure on the brake pedal pad and is considered to be the movement of the pedal before the push rod touches the master cylinder piston.

Brake pedal free play adjustment is accomplished by rotating the eccentric bolt which attaches the brake pedal assembly to the master cylinder push rod assembly (fig. 3). Loosen the lock nut, then rotate the eccentric bolt until the pedal free play is within limits. Hold the eccentric bolt, and tighten the lock nut to 25-30 foot-pounds torque. Recheck the brake pedal free play to make sure the adjustment did not change when the nut was tightened.