BRAKES

Brake Adjustments

Ford V-8 and Mercury

The brake adjustment procedure for the 1939 Ford V-8 models may be divided into minor and major adjustments. A minor adjustment is made to take up lining wear only. A major adjustment is necessary when the brake shoes have been removed for relining or when the drums have been trued up or replaced.

Minor Brake Adjustment

Before making a minor brake adjustment, the brake lining and drums should be inspected. If they are in suitable condition for further service, a minor adjustment may be made as directed in the following operations. All brake adjustments should be made with the drums at room temperature. If they are made with the drums hot, the brakes may drag after the drums have cooled off.

1) Place the car on jacks or blocks with all four wheels clear of the floor.

2) Examine the wheel bearings, spring shackle studs and radius rod mountings for looseness and adjust to take up all play.

3) Release the hand brake and make sure that the rear wheels turn freely.

4) Turn the adjusting cam A, Fig. 37, for the forward brake shoe, in the direction indicated by the arrow until the shoe is tight against the drum, then back off on the cam until the wheel just turns freely. The slightest amount of clearance which will permit the wheel to turn freely is desirable. All rotations shown tighten the shoe

5) Turn the cam B for the rear shoe on the same brake in the direction indicated by the arrow until the shoe is tight against the drum, then back the cam off slightly until the wheel just turns freely.

6) Repeat operations 4 and 5 on each of the other three wheels.

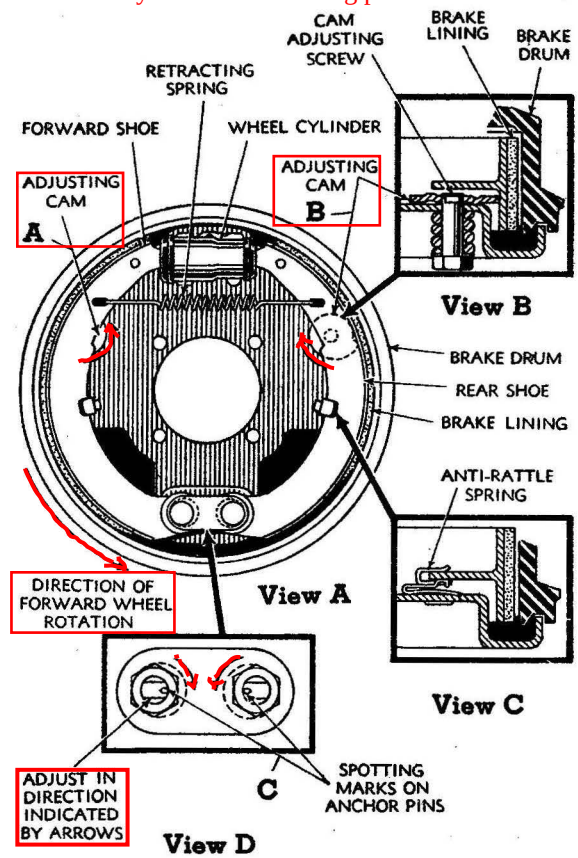
7) Refill the supply reservoir on the master cylinder to the proper level, (¼" from top of chamber), with hydraulic brake fluid.

8) Measure the free play of the brake pedal. The pedal should have ¼" to ½" free movement before the resistance of the master cylinder piston is felt.

To adjust the free play of the pedal, loosen the lock nut on the pedal rod and turn the portion of the rod which enters the master cylinder to obtain the proper amount of play.

9) Adjust the hand brake.

Xray view from backing plate side



Tightens

Fig. 37

VIEW A: *Front wheel brake assembly.* VIEW B: *Cross section view to show cam adjusting screw.* VIEW C: *Cross section view to show brake shoe anti-rattle spring.* VIEW D: *Diagrammatic view of anchor pins to show spotting marks.*

Major Adjustment

A major brake adjustment is necessary, after the brake shoes have been relined or replaced with new parts or if upon examination it is found that a minor adjustment will not give a satisfactory brake.

1) Turn the adjusting cams A and B, Fig. 37 in to allow the shoes to go in at the top end as far as possible, then turn the anchor pins at the bottom ends of the shoes so that the marks on the ends of the pins at C, View D, Fig. 37, are toward each other and install the brake drum and wheel. Repeat this operation for each of the other three wheels.

CAUTION: One of the chief causes of brake failure is grease on the brake lining. The inside of the brake drum is sealed against grease leaks by the grease seal. These grease seals are in-

expensive; therefore, it is good insurance against brake failure to replace the grease seals in both front and rear wheels each time they are removed for brake repairs. See installation recommendations under the heading "Grease Seals".

2) With a brake pedal jack, apply 25 to 35 lbs. pressure to the brake pedal and maintain this pressure during the anchor pin adjustment.

3) With the pressure applied to the pedal, apply a wrench about 3" long to the flattened portion of the anchor pin and turn the mark on the end of the pin down gently until you feel the shoe contact the drum. Hold the anchor pin in this position and tighten the lock nut.

4) Remove the pressure from the brake pedal and rotate the wheel to see that the shoe does not drag. If the shoe does drag, turn the anchor pin back to the position shown at C, Fig. 37, and repeat the operation, being more careful with the anchor pin adjustment.

5) Repeat operations 3 and 4 for each of the remaining brake shoes.

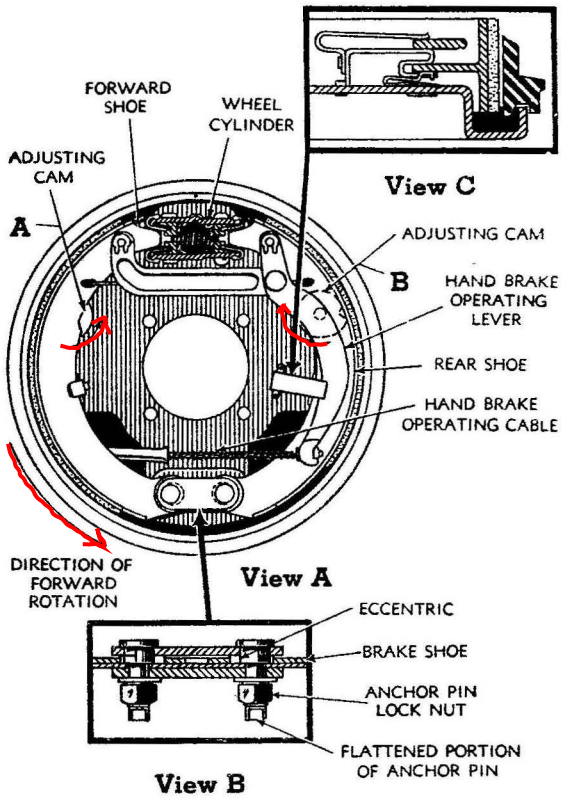


Fig. 38

VIEW A: *Rear wheel brake assembly.* VIEW B: *Cross section view of anchor pins.* VIEW C: *Cross section view to show brake shoe anti-rattle spring.*

6) Turn the adjusting cam A for the forward brake shoe in the direction indicated by the arrow until the shoe is tight against the drum, then back off on the cam a very slight amount, just enough to allow the wheel to turn freely.

7) Turn the cam B for the rear shoe on the same brake in the direction indicated by the arrow until the shoe is tight against the drum, then back the cam off slightly until the wheel turns freely.

8) Repeat operations 6 and 7 on each of the other three wheels.

9) Adjust the hand brake by the instructions given for hand brake adjustment.

10) Adjust the free play of the brake pedal to within the limits of ¼" to ½" before the resistance of the brake system is felt. To adjust the pedal free play, loosen the lock nut on the pedal rod and turn the rear portion of the rod. Tighten the lock nut.

Hand Brakes

Ford V-8 and Mercury

The hand brake used on all passenger cars, ¾ and one-ton truck models is operated by means of cables and controls the service brake shoes in the two rear wheels only. See Fig. 38.

The hand brake used on 1939 1½ ton truck models is equipped with independent brake shoes in each of the rear wheels and is operated by rods leading from a cross shaft which is actuated by the hand brake lever.

The hand brake used in the 1940 1½ ton truck is mounted at the rear of the transmission and operates on a drum which is mounted on the drive line.

Hand Brake Adjustments

All Passenger Cars and 1939 ¾ and 1 Ton Trucks: The hand brake adjustment is accomplished by shortening or lengthening the brake cables and should be done by the following procedure:

1) Move the hand brake lever all the way forward, then pull it back until the pawl is in the first notch.

2) With a brake pedal jack, apply 25 to 35 lbs. pressure to the brake pedal and maintain this pressure while making the cable adjustment.

3) Adjust the length of the cable conduit to take all slack out of the brake cables.

4) Remove the pressure from the brake pedal, release the hand brake lever from the first notch