

# PACKARD MOTOR CAR COMPANY

## DETROIT MICHIGAN

April 10, 1924

To Packard Distributors:

Subject, Brake Adjustment.

TO BE NOTED AND INITIALED BY	

Gentlemen:

These instructions cover foot and hand brake adjustment on all 226-233 Packard Six models and all 136-143 Packard Eight models after Vehicle Number 202,000. This number denotes change of rear brakes from original design of internal expanding type to external contracting type.

### FOOT BRAKE ADJUSTMENT—PACKARD SIX AND PACKARD EIGHT

With the foot brake pedal fully released and back against the toe board the pedal operating lever "T" should stand about 31 degrees back of the vertical. This angle can be accurately checked by removing the screw holding the pull rod to the lever and inserting the lever angle indicator (S. T. 140) in its place. The 31 degree point of the indicator should line up with the center of the upper cap screw of the reduction gear housing as shown at "A" in the illustration. It is necessary to remove the lever in order to change its position.

This condition does not alter in service and hence, should not require attention except on overhaul, etc.

Disconnect the hand brake lever pull rod "B" to avoid possible interference in adjusting the foot brake linkage.

With the pedal back against the toe board, adjust rod "C" so that center of rear clevis pin "D" stands 9-16" back of cross member.

Check position of rear equalizer bar to see that the clevis pin center "E" is  $2\frac{1}{8}$ " back of rear intermediate cross member, bending the fingers "F" which bear against cross member if necessary to secure this position when they touch.

With rear equalizer bar in top holes and fingers "F" against cross member, adjust stop screw "G" to take slack out of linkage, so that stops "F" and "G" will strike simultaneously when the brake pedal is released. The front equalizer bar should be in the top holes for standard adjustment.

With rear equalizer lever fingers "F" against cross member, and rear equalizer bar parallel with cross member, adjust foot brake pull rods "H" so that the inboard brake operating lever pin lines up with hole in gauge as shown at "J." Use rear brake lever gauge (S. T. 138) for Packard Eight and (S. T. 139) for Packard Six.

With the gauge in place the center of the brake band lever clevis pin should stand approximately  $1\frac{5}{8}$ " from nearest point on brake drum and will be in this position if inboard brake operating lever is properly mounted on serrated shaft.

Jack up both front and rear axles. Adjust front brake cables so that the front camshaft operating lever clevis pins stand  $\frac{1}{8}$ " ahead of camshaft center. Use front brake lever gauge (S. T. 136) to check this adjustment, as shown at "K."

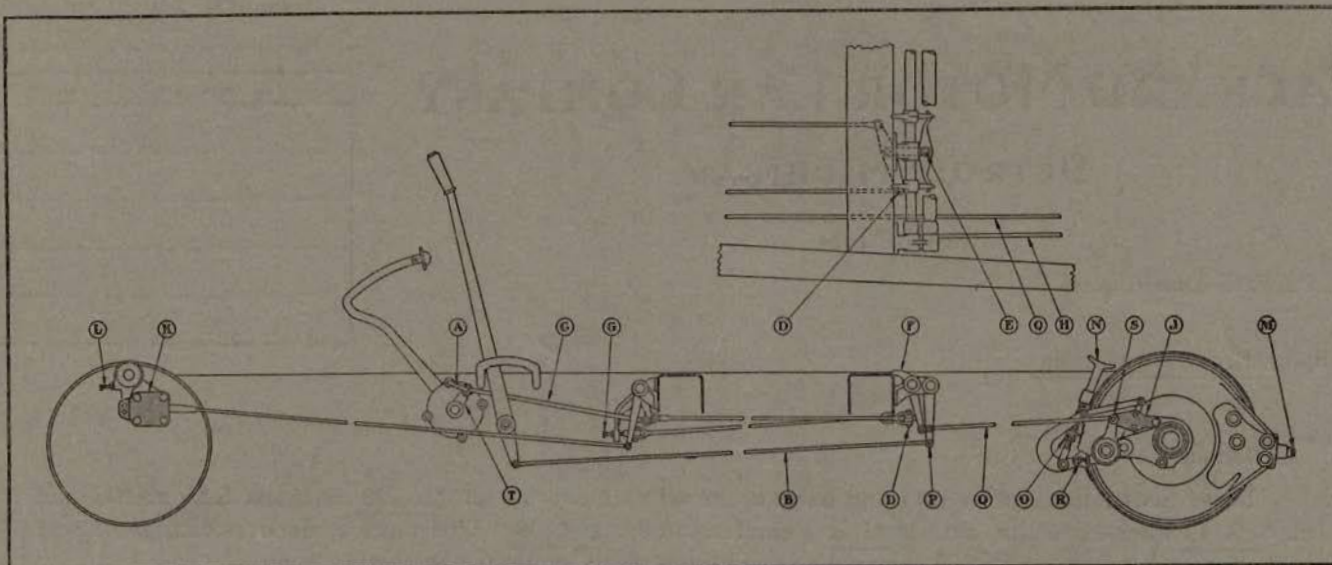
The entire foot brake linkage has now been checked and no further adjustments should be made on these parts. The adjustment of the brake compensate for wear or new lining should be made as follows:

Tighten front camshaft adjusting screws "L" until the front wheels can just be turned by hand and so that the front equalizer bar is parallel with cross member.

Adjust foot brake band guide blocks at "M" to provide clearance between brake lining and drum. Check movement to make certain that band is free on block.

Adjust brake bands by means of adjusting handle "N" and nuts "O" on clevis to provide clearance all around the drum.





With all above adjustments made, the foot brake should start to hold after about 2" of pedal travel and the rear wheels should slide on dry pavement when the pedal pad is about 1" from toe board.

#### HAND BRAKE ADJUSTMENT—(PACKARD EIGHT)

With hand brake lever in forward position, adjust front hand brake pull rod "B" so that the center line of the rear intermediate lever "P" stands not more than  $\frac{3}{8}$ " ahead of center.

Adjust both rear hand brake pull rods "Q" so that hand brake camshaft lever clevis pins stand  $\frac{5}{8}$ " back of camshaft centers. Use rear brake lever gauge (S. T. 138), as shown at "J."

Tighten rear camshaft adjusting screws "R" until both rear wheels can just be turned by hand.

Loosen rear camshaft screws EQUALLY until both rear wheels are just free.

#### HAND BRAKE ADJUSTMENT—(PACKARD SIX) 226-233

With hand brake lever in forward position, adjust front pull rod "B" so that the center line of the rear intermediate lever "P" stands not more than  $\frac{3}{8}$ " ahead of center.

Check rear camshaft operating levers "S" by operating with a wrench to see that they are so located on the splined shaft as to be approximately vertical when the brake is hard on. Change on serrations to obtain this result if necessary. Use brake lever gauge (S. T. 139) as shown at "J". Gauge checks lever in hard on position.

Adjust rear pull rods "Q" so wheels will just turn freely.

Tighten hand brake lever a notch at a time to check equalization of rear wheels and correct if necessary by loosening the tight side at the rear connecting rods.

S. T.-136	Front Brake Gauge	\$ .70 Net
S. T.-138	Rear Brake Gauge—Packard Eight (after first 2000 cars)	.55 Net
S. T.-139	Rear Brake Lever Gauge—Packard Six	.55 Net
S. T.-140	Operating Lever Angle Indicator—Packard Six, Packard Eight	1.35 Net

Yours very truly,

PACKARD MOTOR CAR COMPANY,

*H. N. Davock*

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Technical Service Department.