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## A Suggestion for a 1932 Program

WE HAVE received a suggestion from Mr. Macauley, which seems particularly timely. It covers only one phase of our service activities for this year, yet it seems to us that it should be made the basis upon which our entire plan is laid. It is a very definite suggestion and calls for some very definite action from all of us in the service department.

We are sure that you will agree with us that there is no line of action which we can adopt for this year that would be more productive of real results. A portion of Mr. Macauley's comments on the subject are as follows:

"My impression is, that we are fighting a defensive battle almost exclusively. It is natural we should, because times like these precipitate many new problems that are difficult to handle and which are more than sufficient to engage our working hours. We are endeavoring to hold what we have without much thought to making new gains. We are trying, and very properly, to handle day by day the issues that come to us as a result of the economic readjustment the country is experiencing. Values are changing. Buyers are coy and critical.

"Now the offensive is very much more interesting and as we know is often the best defensive. It is more constructive and gainful and I think it is time to inject the offensive into our sales and service problems. My specific suggestion at the moment is that we start a campaign in service work. It might be called 'EVERY OWNER A SALESMAN.' Whether the owner is a salesman depends upon how he is received and is treated when he comes in for service attention. If he is met pleasantly, officially, and cooperatively, if his job is well done and ready for him at the time promised, a good-will is in process of being built up that will be invaluable and will go far to make the owner a salesman for Packard. It will make

him less critical and cautious and less anxious to get the last dollar when later a trade-in is involved.

"All of this is old stuff and well known too, and yet in business we have frequently to revert to fundamentals—to brush them up and to make new use of them.

"Automobiles are becoming standardized and the tendency will always be that way and in that direction. The public today regards all automobiles as good and that is one reason competition is so fierce and will become fiercer. The public feels that it does not have to buy a particular make of car in order to get a good car.

"So more than ever before sales will depend upon service handling, not merely that the work be well done and promptly and efficiently done, but that it be agreeably done. It must not be done primarily for the purpose of making profit but primarily for the purpose of curing a trouble with the car for which the owner rarely thinks he is, in the last analysis, responsible. The training of service personnel, and especially anyone that contacts with the public, is therefore infinite and of increasing importance. A campaign to make 'EVERY OWNER A SALESMAN' would strike the keynote.

"Doubtless this idea of a campaign based upon 'EVERY OWNER A SALESMAN' can be expanded if it appeals to you. I don't claim novelty for the idea, but I do believe it's good and I am impressed with the idea that it is time for us to take an active offensive rather than confine ourselves to defensive efforts."

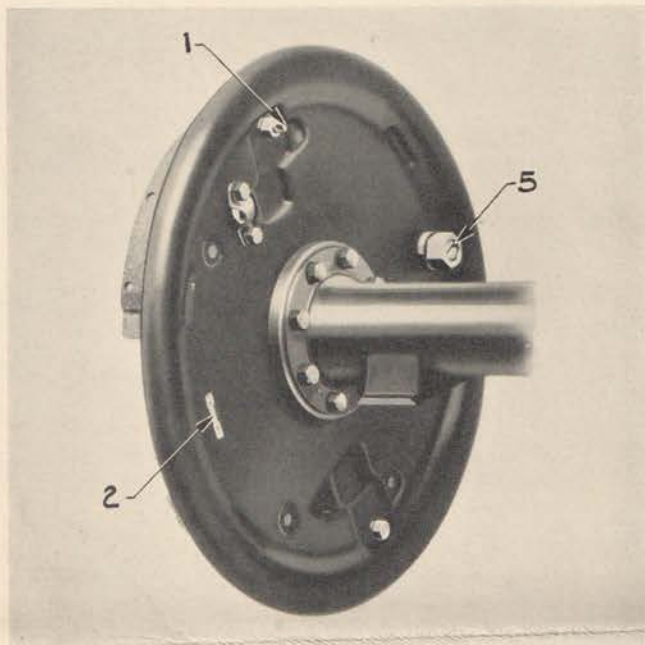
We are working out a rather definite program of action along these lines. We want simply at this time to introduce the idea and to get everybody thinking along this same line. We want to adopt the slogan as suggested and do everything that we can to assist you in bringing about the condition which the slogan implies.



# ADJUSTMENT INSTRUCTIONS

## Light Eight Sr. 900

The first and most important matter connected with a brake adjustment is to make sure the brake control system is functioning properly. It should operate freely, permitting the brake pedal to come back just clear of the toeboard and each brake cable to return to its released position.



(Fig. 1) LEFT FRONT BRAKE

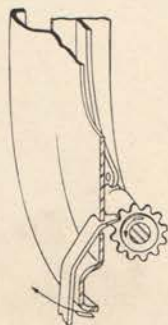
- |                         |                               |
|-------------------------|-------------------------------|
| 1. Eccentric Adjustment | 2. Adjusting Screw Hole Cover |
|                         | 5. Anchor Pin Nut             |

Do not make any changes in the brake control system to compensate for brake lining wear. The only adjustments provided for this purpose are at the brakes proper and are as follows:

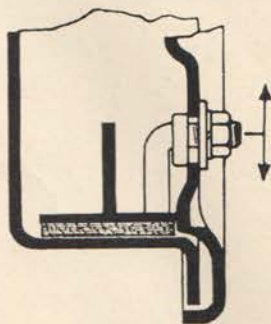
**The Eccentric Adjustment (Fig. 1).** This adjustment centralizes the brake shoes in the brake drum.

**The Adjusting Screw (Fig. 2).** This adjustment regulates the clearance between the brake lining surface and brake drum to compensate for lining wear.

**Brake Shoe Stop (Fig. 3).** This adjustment prevents the brake shoes from rattling.



(Fig. 2)

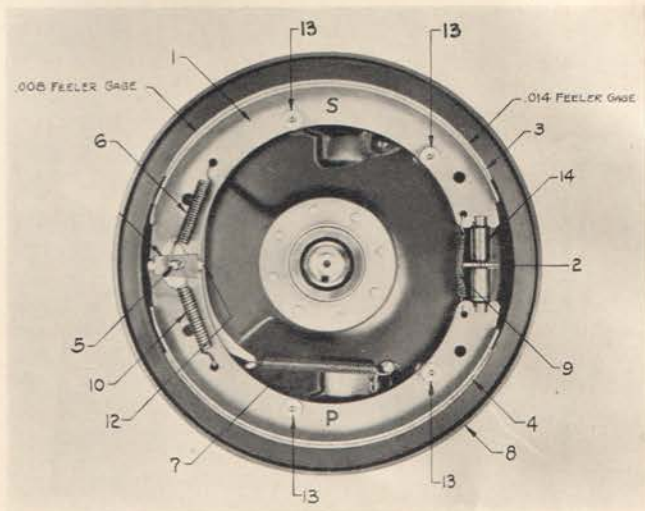


(Fig. 3)

## Adjustment for Wear Only

1. Jack up all four wheels. Inspect position of cross shaft to be certain that same is in a fully released position.

2. Inspect the brake cables. If loose or unequal make adjustments of all four cables as outlined in operations 8 and 9 under complete brake adjustment.



(Fig. 4) LEFT FRONT BRAKE

- |                            |                                       |
|----------------------------|---------------------------------------|
| 1. Secondary Brake Shoe.   | 8. Backing Plate.                     |
| 2. Adjusting Screw.        | 9. Adjusting Screw Spring.            |
| 3. Secondary Brake Lining. | 10. Bottom Shoe Return Spring (blue). |
| 4. Primary Brake Lining.   | 11. Operating Lever.                  |
| 5. Anchor Pin.             | 12. Brake Shoe Hold Down Spring.      |
| 6. Top Shoe Return Spring  | 13. Adjusting Screw Pivot Nut.        |
| 7. Cable Return Spring.    |                                       |

3. Loosen nut on brake shoe stop and move stop upward in its elongated hole in the backing plate as far as it will go and tighten nut to hold it in this position on each brake.

4. Remove inspection hole cover from brake drum. Loosen eccentric lock nut on eccentric adjustment and insert .014 inch feeler gauge between the brake drum and lining as indicated in (Fig. 4) at about 1½ inches from the adjusting screw end of the top shoe lining. Turn the eccentric adjustment in the direction the wheel revolves when the car is moving forward until .014 inch feeler is snug. Tighten the lock nut.

5. Try an .008 inch feeler at a point 1½ inches from the anchor pin end of the top shoe lining or in position indicated. (Fig. 4) ".008 inch feeler gauge."

The clearance at this point should not vary more than .003 of an inch. Should the variation be greater than .003 of an inch it will be necessary to relocate anchor pin as outlined in operations 5 and 6 of complete brake adjustment. **DO NOT READJUST THE ANCHOR PIN, HOWEVER, UNLESS THIS INSPECTION SHOWS IT NECESSARY.**

Expand brake shoes one notch at a time with the adjusting tool (Fig. 2) until lining comes in contact with the brake drum. Release the adjusting screw at each of the four wheels from 8 to 12 notches, using care to see that the same number of notches is released at each of the four wheels.

6. Depress the pedal with pedal jack until wheel with the least brake drag can just be turned over by hand. Then back off the adjusting screw on the tight brakes until the



brake drag is alike at all four wheels. Figure 2 shows adjusting screw being tightened.

7. Remove pedal jack and check all wheels for freeness. Loosen nuts on brake shoe stops and allow stops to drop down in contact with brake bands and tighten nuts.

8. Lower car and make final check on brake testing machine or road.

**ALWAYS LOOSEN ADJUSTING SCREW ON TIGHT BRAKES RATHER THAN TIGHTEN ADJUSTING SCREW ON LOOSE BRAKES.** This is a safeguard against a car going into service with some one brake too tight.

9. "Replace drum inspection hole covers and adjusting screw hole covers."

## Complete Brake Adjustment

*NOTE: This complete brake adjustment is to be followed in cases where an inspection as in paragraph 5 shows that shoe adjustment only will be inadequate or where new shoes have been installed.*

1. Jack up all four wheels.

2. Disconnect all four cables at their respective cross shaft levers by removing clevis pins from clevises.

3. Inspect the position of the pedal shaft and cross shaft to see that these parts of the control system are returning freely to a fully released position.

The position of the brake pedal with respect to the toe-board should be checked to make sure that it is just clear of the board and any adjustment that is required to put the pedal in the proper position is accomplished by either shortening or lengthening the hand brake cable. The hand brake lever should be in the fully released position and all four brake cables disconnected.

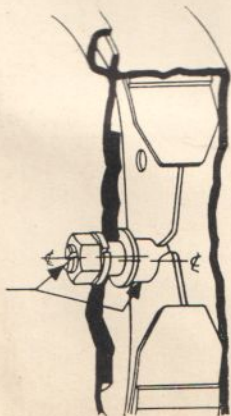
4. Remove adjusting hole covers (2) (Fig. 1) and inspection hole covers on the brake drums. Loosen eccentric lock nut on the eccentric adjustment and insert .014 inch feeler gauge between the lining and the brake drum as indicated in (Fig. 4) at about  $1\frac{1}{2}$  inches from the adjusting screw end of the top shoe lining. Turn the eccentric in the direction the wheel revolves when the car is moving forward until the feeler is snug.

5. Loosen the anchor pin nut (Fig. 5) and rotate the anchor pin in the same direction wheel revolves when the car is going forward and adjust the eccentric to give the specified clearance of .014 of an inch at the adjusting screw end and .008 of an inch at the anchor pin end of the top shoe lining.

6. **TIGHTEN THE ANCHOR PIN NUT AS TIGHT AS POSSIBLE WITH A SIXTEEN INCH WRENCH.**

7. Perform the above operations on all four brakes.

The outer end of the anchor pin is shown with an indication that the higher side of the screw driver slot corresponds to the high side of the eccentric section of the pin. By turning the anchor pin in either direction the lining will be brought in contact with the brake drum. However, it is desirable that when making an anchor pin adjustment that all four anchor pins be revolved in the same direction the wheel revolves when the car is going



(Fig. 5)

forward in obtaining the required shoe clearances.

8. Using adjusting tool expand brake shoes at the adjusting screw (Fig. 2) until each wheel can just be turned by hand.

9. If necessary readjust all four brake cable lengths as follows:—

(a) Back off each clevis lock nut and remove clevis pins.

(b) Lubricate clevis pins with graphite grease.

(c) Adjust clevis until pin can be easily entered through clevis and cross shaft lever holes, meanwhile pulling slightly on the cable to remove slack and back lash at the shoe actuating lever (12) (Fig. 4).

(d) Install clevis pin and lock with cotter key.

(e) Tighten clevis lock nuts.

10. Release the adjusting screw at each of the four wheels from 8 to 12 notches, using care to see that the same number of notches is released at each of the four wheels.

11. Follow operations 6, 7, 8 and 9 under Adjustment for Wear Only.

## General Information

Illustrated in (Fig. 4) is a wheel side view of a left front brake with drum removed. In performing the re-assembly of brake shoes (3) and (4) into their proper location on the backing plate (8) where *two different types of brake lining* are used in the same brake, it is necessary that the linings and their respective shoes be assembled in a definite location. The brake shoes shown in (Fig. 3) are marked by the letters "S" and "P" abbreviating the words secondary and primary. Irrespective of the position in which the brake assembly is mounted to the axle the primary brake shoe is always the one that comes in contact with the brake drum first during a forward braking application to transfer servo movement to the secondary shoe.

Indicated at (6) and (10) are the brake shoe to anchor pin return springs. The *heavier* spring should always be connected with the *top* shoe. This is necessary to provide satisfactory braking action in a forward as well as a reverse direction.

In re-assembling adjusting screw (2) it is necessary that pivot nut (14) which does not have a groove around the outside be assembled to the right of the adjusting screw notched wheel and must engage with the shoe to the mechanic's right as he faces the brake from the adjusting screw side.

To remove hold down springs (13) press the outer cupped washer in toward the brake shoe and revolve 90 degrees.

## Lubrication

The brake cables and conduits should be lubricated with No. 213 $\frac{1}{2}$  Gredag Graphite Grease whenever they are disconnected for relining brakes or any other reason. This can be done by unfastening the conduit support brackets on the backing plate and frame. The exposed part of the cable should then be cleaned and the conduit slipped over the cleaned portion so that the portion of the cable ordinarily covered by the conduit is exposed. This section of cable should then be liberally coated with Graphite Grease and the conduit slipped back into place.



## Brake Adjusting Tools Used On "900"

*Net Price*

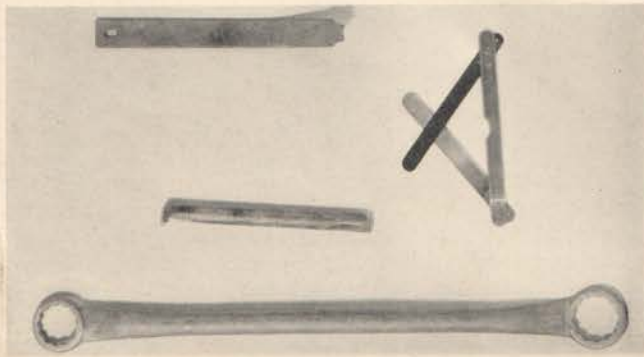
ST-847	Brake Anchor Bolt Wrench—16 inch	\$2.25
ST-846	Feeler Gauge—.008 and .014 inch	.30
ST-845	Brake Adjusting Screw Wrench	.25
ST-784	Brake Anchor Pin Adjusting Tool	1.25

The ST-847 is a 16 inch wrench for tightening brake anchor bolts. You need a wrench of this length to properly tighten anchor bolts.

ST-846 is a feeler gauge .008 and .014 inch to measure the proper clearance between the lining and the drum.

ST-845 is a wrench used for turning the Adjusting Screw to get the proper clearance between the brake shoes and drum. You will find it much quicker than a screw driver.

ST-784 is an offset screw driver for holding the anchor bolt while tightening the anchor bolt nut.

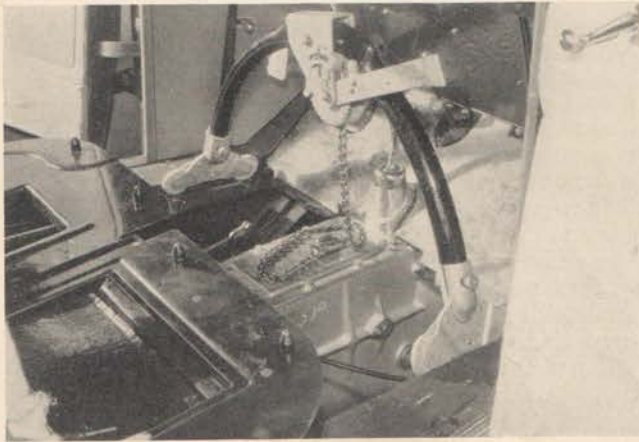


This is an especially designed clamp to facilitate handling of batteries, on the Light Eight, which are located under the front seat. The clamps are made of spring steel and the handles are made of wood to insure insulation. The extended handle makes it possible for



ST841—Net Price \$0.75

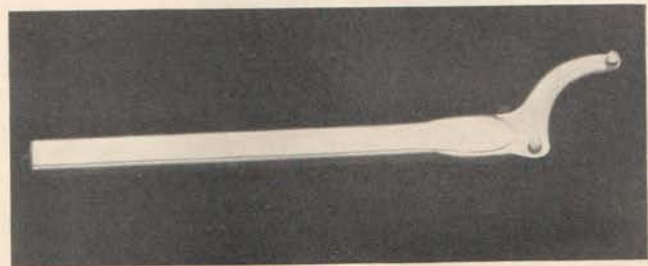
## New Light Eight Tools



ST844—Net Price \$13.80

This hoist will be found particularly valuable for handling the transmission assembly on Ninth Series and Light Eight cars. This device will save considerable time where you are installing automatic clutch control and three-speed transmissions in cars not designed with this equipment. It enables one man to remove, or install a transmission. You will find it a real time saver.

one man to remove or replace a battery. The clamp is placed in position as shown and a bar is slipped through the lower handle while the battery connections are removed and the plate on the under side of the battery is removed. The bar is then removed and the battery lowered by means of the top handle.



ST848—Differential Side Bearing Spanner Wrench  
Net Price \$1.50

This wrench is used to turn the differential carrier bearing adjusting nut in order to get the proper bearing adjustment. It has two pins that slide into the slots in the adjusting nut to prevent slipping.

*We Welcome Suggestions and Inquiries from Packard Service Men. Address All Communications Care Editor, Packard Service Letter.*