PACKARD SERVICE LETTER

VOL. 10 No. 19 OCTOBER 1, 1936

"ANY CAR THAT BEARS THE NAME PACKARD MUST BE THE TOP-QUALITY CAR IN ITS PRICE CLASS."

—ALVAN MACAULEY

What a challenge!

A challenge to engineers, factory, *and service men.*

There will never be the "perfect" car. In spite of all the engineering knowledge and care in manufacturing, mechanical troubles may develop somewhere in such a complex mechanism as the complete automobile. It's distinctly the responsibility of the service men to correct these troubles and satisfy the owners.

And, what a responsibility!

No one "knows it all" when it comes to fixing the sometimes new or unusual condition.

Service men, to be proficient, must study the car as the doctor studies the human body.

The helpful mechanical information furnished by the Factory in Service Letters, Films, Shop Manuals, and Charts, should be carefully read, and intelligently used for all it's worth. But nothing is a substitute for real experience. Therefore, if you don't know how to fix a trouble or make the correct adjustment, call on someone with more experience or telephone the Factory. The cost of a long distance call is cheap compared to the cost of a mistake or a dissatisfied owner.

Of course, there's a limit to what the Factory men can do without the car in their hands—but helpful suggestions will usually be possible.

Service Men! The challenge Mr. Macauley has made puts it up to you! If the car isn't right, make it right regardless of whose fault it is, or what it costs—it never costs as much to fix a car as it does to lose a customer.

The Factory Service Department stands ready to lend you every possible assistance to win and hold "Top-Quality" against all competitors.

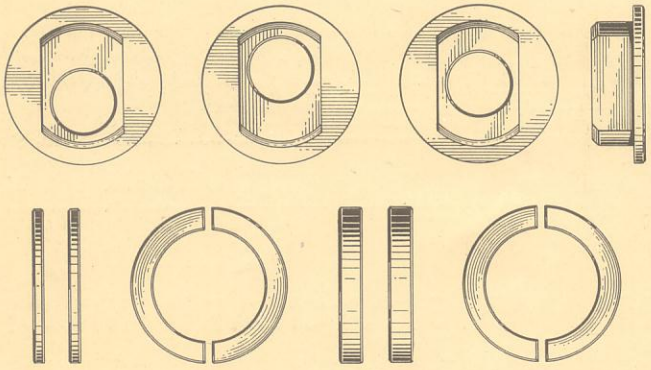
J. K. Page

GENERAL SERVICE MANAGER

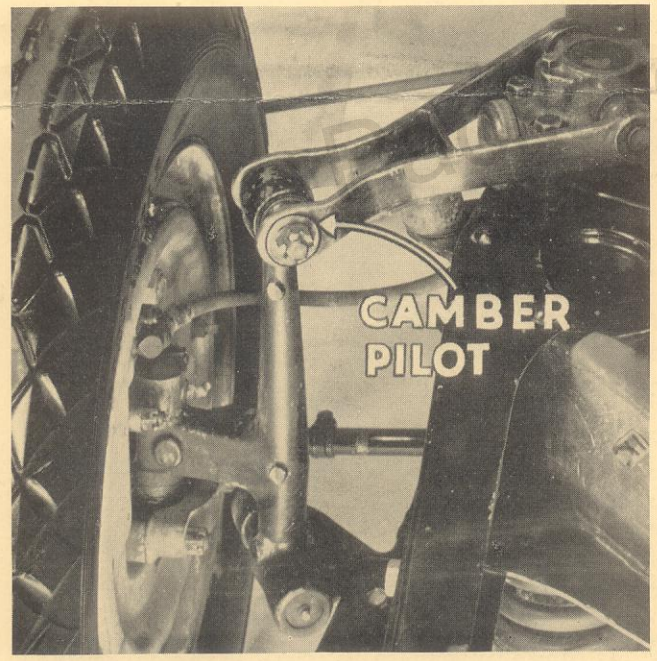
FRONT WHEEL CAMBER

On all cars fitted with Safe-T-fleX front suspension, camber adjustment is accomplished by swinging the wheel support arm in or out at the top as required.

On all models of the One Twenty, the Packard Six and Fifteenth Series Super Eight, the upper wheel support arm is located in the shock absorber arms by two offset pilots, the amount of offset controlling the degree of camber. (Illustration) The pilots are



reversible and should be marked when disassembling to make sure they are not reassembled in the reverse position which would change the camber angle.



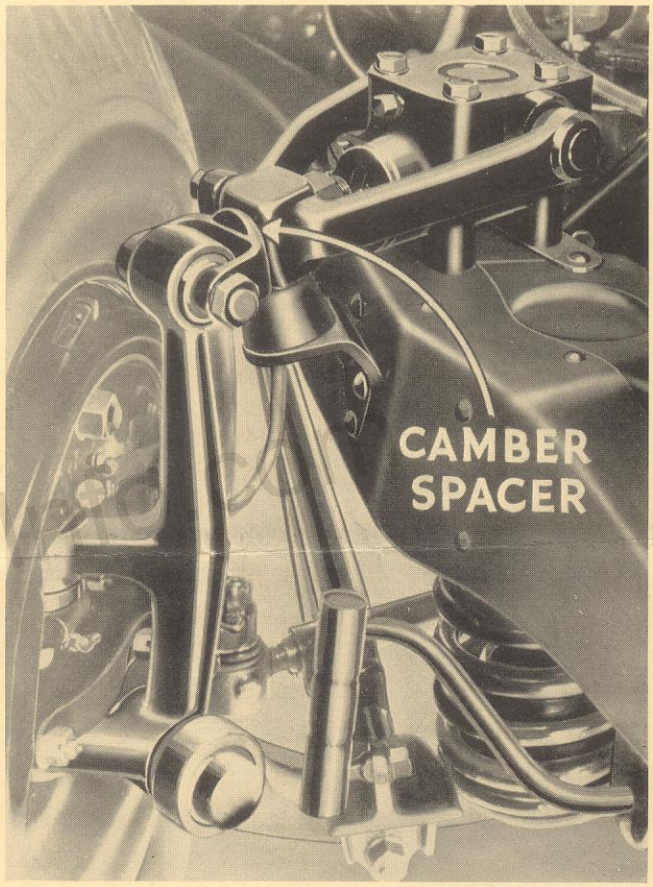
Four pilots with varying amounts of offset—0″-1/16″-2/16″-3/16″—are supplied to provide a means of adjustment. A change of 1/16″ changes the camber angle approximately 1/3°. The pilots being reversible, a total variation of 1° either side of the center position is possible. This range of adjustment is ample and should more correction be necessary it is an indication that one or more of the suspension members are bent and should be replaced.

Wheel (front) Support Bushing Upper Pilots

Piece Number	Inches Offset
303075	0″
303076	1/16″
303077	2/16″
303078	3/16″

On the Fifteenth Series Packard Twelve the front wheel support arm upper bushing is attached through a clevis bolted to the shock absorber arm.

Camber adjustment is secured by means of spacing washers placed between the clevis and the arm. A change of 1/16″ in the spacer causes a change of approximately 1/3° in camber.



Spacer washers are provided in 2/16″-3/16″-4/16″ and 5/16″ thickness.

Wheel Support Bushing Upper Clevis Spacer

Piece Number	Thickness
237065	2/16″
237066	3/16″
237067	4/16″
237068	5/16″

The correct camber setting for the various models using Safe-T-fleX is as follows:

CAMBER SETTING

Model	0° Camber	Plus or Minus
120	1°	1/4°
Packard Six	1°	1/4°
Super Eight	1°	1/4°
Twelve	1°	1/4°

BRAKE SQUEAKS

A slight high pitched brake squeak occasionally is heard just before coming to a full stop.

This squeak can be cured by installing brake drum damper springs around the outside of the brake drums. The springs dampen the vibration of the drum and thus prevent the squeak. The spring must be tight on the drum to accomplish the result. A simple tool for installing the springs which can be easily made in your own shop is described in Vol. 8, No. 4, of the Service Letter under date of February 15, 1934.

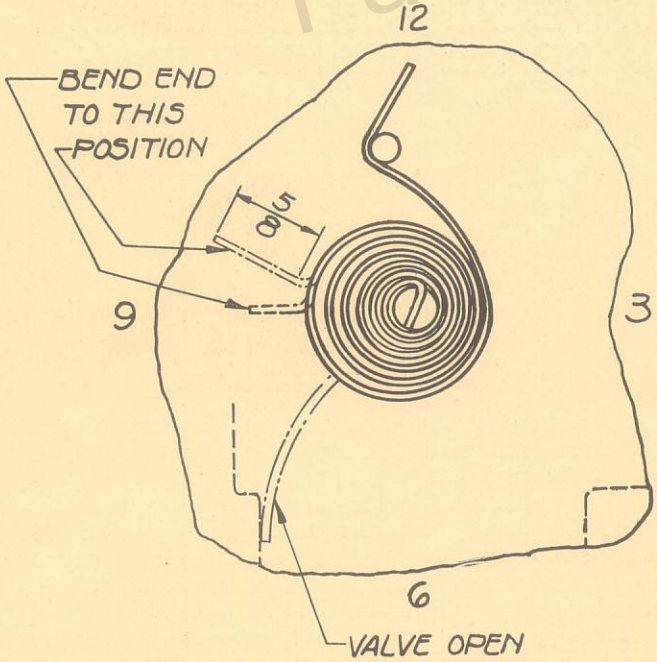
Brake drum damper springs, previously available for the Twelfth Series drums only are now being furnished from Service Stock for all models under the following piece numbers.

Piece No.	Free Length	Drum Dia.	Model
320012	28½″	11″	Packard Six
234839	31″	12″	120- 120-B 120-C 1500 1501-2
216558	36″	14″	1400-1-2-3-4-5 1506-7-8 1200-1-2-3-4-5
216559	39″		1407-8 1207-8

HEAT CONTROL VALVE SPRING

If you encounter any cases of slow warming up in the Packard Six or the 120C, the heat control valve spring is the first thing to inspect.

In the early cars of the present model we have found a number of cases where the springs have become disconnected. This will give the equivalent of a very slow warming up and the motor will not develop to normal power until it has been driven hard.

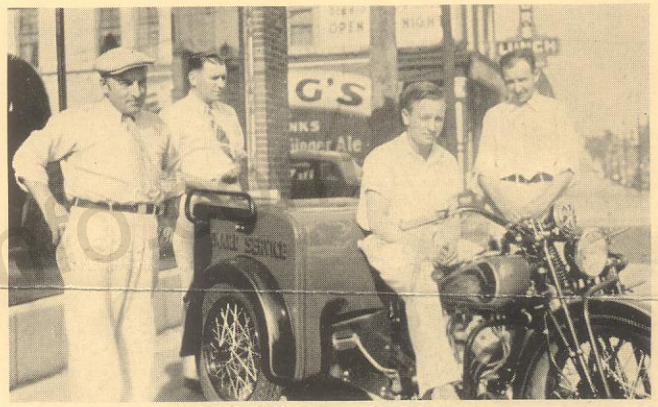


As you know, the outer end of the spring is bent outward at right angles and this free end is hooked around the stationary pin. The free end must be long enough so that when the spring contracts the end will not clear the pin. In order to obtain this result ⅛″ additional length should be obtained by straightening the spring and bending over a longer portion. This should be done whenever a spring which has become disconnected is replaced.

In attaching the spring a considerable windup is required to keep the valve closed during the warming period. If the valve is held in the open position and the inner end of the spring slipped into the notch in the shaft it will be found that the free end is at approximately 9 o'clock. It should be tightened by turning anti-clockwise ¾ of a turn to the 12 o'clock position to engage the stationary pin. It is necessary that this be checked with the spring at the room temperature of about 60 degrees to 70 degrees because higher or lower temperatures will expand or contract the spring correspondingly.

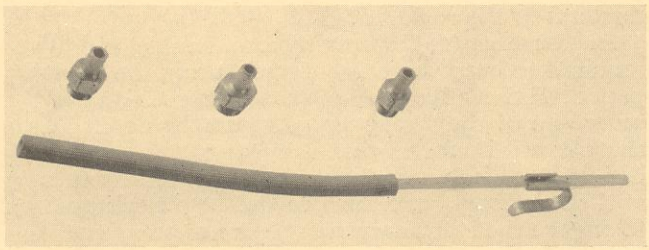
When a spring is installed an additional safety precaution can be observed by pinching the slotted end of the shaft together after the inner end of the spring has been inserted. This will prevent the inner end from coming loose.

MOTORCYCLE SERVICE



Packard Louisville has added a new piece of equipment to their service department. We have been supplied with pictures of their new motorcycle, which they report has aided materially in getting customers to avail themselves of Packard service. D. T. Potter, Sales Manager, has forwarded these pictures, and in the group at the left we find Louisville's very efficient service manager, Al Mooser.

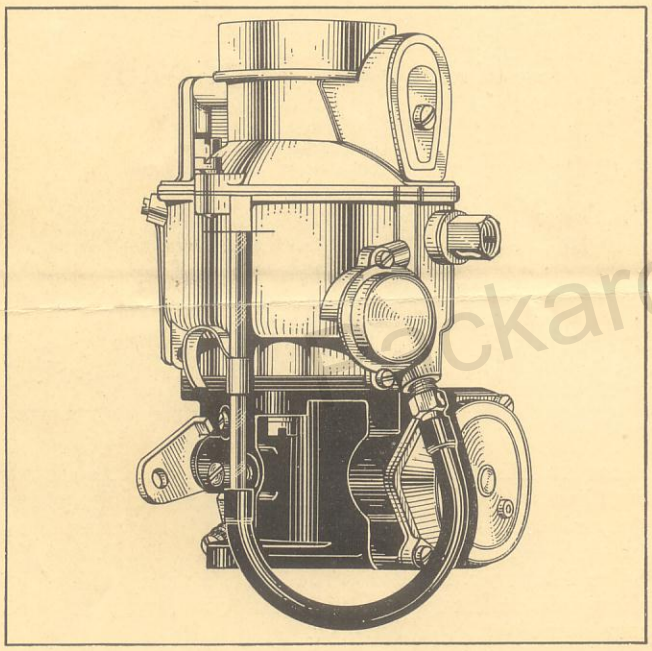
CARBURETOR FLOAT LEVEL GAUGE



Tool No. ST-978—Price $1.00

The gasoline level can be checked on the car without dismantling the carburetor. This float level gauge permits the checking of the gasoline level while the motor is running.

This gauge is attached to the carburetor by removing the jet plug as illustrated. With the car perfectly level the fuel level in the carburetor is duplicated in the glass tube of the float level gauge.



To check the float level, proceed as follows:

1. Remove the jet plug, select the proper adapter, and fasten with gasket.
2. Mark the outside of the carburetor housing, from the top of the float housing below the gasket—$\frac{15}{32}$" on the One Twenty, $\frac{1}{2}$" on the Six, and $\frac{5}{8}$" on the 1200 to 1500 Series car. See illustration.
   Hold the gasoline level to a plus or minus $\frac{1}{32}$" of an inch.
3. Hold the glass tube even with the top of the float housing.
4. Start motor, let motor idle. The gasoline level should now check with above dimensions. If not, reset float, bend lip of the float level. A slight bending is sufficient to change float level. The gauge must be in a vertical position to get the correct level reading.

TRANSMISSION INTERCHANGEABLE CORRECTION

In Service Letter, Vol. 10, No. 18, of September 15 in the article under this heading, we supplied you with information on handling the transmission.

Will you please note the following change? The parts required with 317503 transmission now reads:

Models 120, 120-B, 120-A, 120-BA—use piece 317503 with: 1—315777—Throwout bearing.
1—315879—Throwout bearing sleeve.
1—315804—Throwout lever.

Please change this to read:

Models 120, 120-B, 120-A, 120-BA—use piece 317503 with:

1—315889—Throwout bearing and sleeve assembly.

The old lever can be used, consequently it is not necessary to furnish a new one.

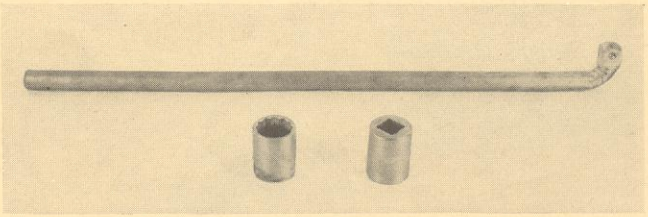
STEERING CROSS TUBE—1507-8

You may in some cases find a Fifteenth Series Twelve on which the outer steering cross tube adjusting clamps bolt strikes on the torque arm when the wheels are turned to the extreme position.

In these cases you will find that if the clamp bolts on the steering cross tubes are placed in a vertical position either in front or rear of the tube, this interference will be eliminated.

You will find that the toe-in adjustment can be held within the allowable limits without the necessity of placing the clamps off the vertical.

UNIVERSAL JOINT AND TRANSMISSION FLANGE NUT WRENCH



Models—120-C and Six

Tool No. ST-5084—Price $3.50

Special socket wrenches for tightening the universal joint and transmission flange nut for preloading the pinion bearing.

The handle is 24 inches long, with leverage to pull 16,000 lbs., and the pinion bearing collapsible sleeve must be accurately adjusted with this socket wrench to get the correct reading, as explained under Pinion Bearing Tension Scale—tool No. ST-5087.

The $1\frac{3}{16}$ special thin wall socket wrench is used for removing and replacing transmission flange nut on Packard Six model.

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