SERVICE MANAGERS' PERSONAL COPY

PACKARD SERVICE LETTER

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HOW GOOD?

It has been said many times, that in order to sell service successfully, you should first have good service to offer.

Several articles have appeared in the Service Letter regarding the improvement that could be brought about in handling service. They are often dismissed lightly by the reader who believes that they are intended for some other station. The chances are, that a part, if not all, applies definitely to you!

We become hardened to complaints, and take it for granted that when none comes to our attention, that things are going along smoothly. We assume that some miraculous improvement has taken place without our knowing it. We forget that every instance of poor service does not result in a complaint. The average customer stands for a lot, and many do not say a word until they are safely away from the building. However, whether or not an issue is made of it, this type of service invariably reacts against you. It may account for a low new car sales volume, and it most certainly can be held responsible for a small service volume. Often times, poor service is coming from just one thing upon which it is difficult to put your finger.

Are you mechanics always as careful as possible? Are you always thorough in your work? When in doubt as to exactly how a certain job should be performed, do you take chances? Are you honestly trying to find out all you can about servicing the present series? It is possible that your lack of knowledge, or the fact that you do not carefully finish each job, is responsible for the fact that your service station is building up a poor name.

Mr. Service Salesman: Are your orders written as carefully as they might be? Do you follow them through and give the mechanic the information he should have? Are you guessing, or depending too much upon the owner's story, or do you thoroughly diagnose? Are you allowing the mechanic time enough to do the job properly, or do you let the customer set the delivery time? Is the car going back to the customer in as good, or better, condition than you received it? Did you deliver a car today with a dirty windshield? Are you sure all your cars went out with a clean steering wheel? Are you doing your part to obtain a proper service volume?

How about dented fenders, burned out headlight bulbs, worn tires and spark plugs that require replacement? In other words, do you run your job, or is the customer running you? How many accessories did you sell today? How many purolator cartridges did you check for mileage?

On the other hand, is it possible that ***your*** work may be causing your service station to acquire a bad name? Did you keep any customers waiting too long on the phone today? Did you make sure every customer was greeted as he drove in. As a matter of courtesy did you check the inflation in his tires, or did he have to go to the corner gas station?

Mr. Service Manager: What are you doing about all this? How long since you have checked a number of cars ready for delivery, that is, checked them carefully from the owner's viewpoint? Get in two or three and drive each one around the block. If ***you*** were just calling for the car, would it satisfy you? Isn't it really a part of your job to check a few cars every day? After all, the

way the cars go out, as much as anything else, makes or breaks your reputation.

After reading this article if you are somewhat disappointed in what you find out about your own service station, don't jump to the conclusion that you need all new men. Should you reach this decision, fire yourself first. If you haven't correctly trained your men, better start right now! The best service salesmen and mechanics are built from material right in your own organization. This is not entirely the individual's job—it is one reason you carry your title as manager.

WIND NOISE—120

We have found that the doors on a few of the 120 cars have projected outward beyond the adjacent body surfaces, and when this is true a noticeable wind noise will develop.

This noise can be controlled by moving the lock strikers and rubber bumpers inward, permitting the doors to move inward far enough so that the projecting surface is that of the body and not of the door itself.

Incidentally this method of moving the door inward is probably the easiest way to secure a tight fit between the door and the windlace, in those cases where the windlace does not make a tight contact. Such a contact is necessary to prevent the entrance of dust.

SPARK ADVANCE—120

The spark advance on the 120 has been increased from 5 to 7 degrees, and we suggest that this change be made in all cases of motor tune-up.

Gasoline mileage is directly affected by the spark advance, and in any cases in which excessive fuel consumption is reported the advance should be checked.

The new spark timing started with motor No. 14440.

GENERATOR WIRE—120
IMPORTANT

The generator wire on the 120 runs to the left side of the frame and joins the lighting wires which are carried back on the frame ledge and enter the conduit leading to the instrument board.

On the early 120 cars the group of wires is clipped above the brake oil line in order that they may be held in position at a point forward of the conduit. In the later cars these wires pass under the brake line, and the line itself holds them in position.

It is not advisable to run the generator wire under the oil line. The movement of the motor will set up a continual movement in the generator wire and may cause it to chafe against the sharp corner on the fender side pan. If the chafing continues a serious short circuit will result.

We suggest that in all cases where the generator wire passes under the brake line it be disconnected and carried directly to the generator. The extra length in the wire will be sufficient to allow for any movement of the motor without ill results.

DO YOU RECOMMEND GRAPHITED OILS?

We receive many requests regarding the advantage or disadvantage in the use of oils containing graphite.

It has been our practice to advise against graphited lubricants because: Viscosity is the most important property of crankcase oil. In an engine operating under normal conditions, friction is determined by the viscosity at operating temperature, speed and load. The lower the viscosity, the lower the friction under these conditions. However, if the viscosity is lowered too much, the result will be inadequate lubrication.

We have no evidence that graphite by itself will lower friction. In most cases it is added to a mineral oil in the form of a preparation of low viscosity. In such cases, after mixing with the oil in the crankcase, its viscosity is lower than that of the original oil. This lowering naturally results in lower bearing friction. However, this effect is independent of the presence of the graphite. The same effect could be produced by adding mineral oil of lower viscosity.

The effect of graphite on the friction between piston rings and cylinders is very uncertain. It is known that it tends to fill up the pores found in cast iron surfaces which might result in lowering the friction to a minor extent. This would also be dependent upon lowering the viscosity.

Many of these graphited lubricants encounter difficulty in preventing the graphite from settling out. This is particularly difficult in the case of crankcase oil, since during its use certain acids are produced, and in many cases their presence tends to cause the graphite to separate. There have been instances where due to impurities graphited lubricants were actually abrasive. Even where these impurities are not present, it seems probable that some lapping action takes place.

The manufacturers of these preparations make various claims for increased performance, and in some instances increased power. Any increase in power or speed, as a result of their use, in an engine in good mechanical condition is extremely small, and is well within the variation found in mineral oils. Increase in power or speed, apparently due to the presence of graphited oil, is actually a result of the change in viscosity.

Graphited lubricants vary greatly. We have no actual facts regarding improvement gained from their use, and without more definite results than our tests have shown, they can hardly be approved, either from an engineering or economical standpoint. A test made on the dynamometer in our laboratory, with one of the better known graphited lubricants, showed no increase in power, and upon disassembling the motor, indicators showed no improvement in the smoothness of the bores, the piston rings were in no better shape, and the connecting rod bearings showed no change over those used with standard lubricants.

We are unable to see any advantages through the use of these materials. The market is crowded with various oils with many claims made for them. We have not been able to substantiate any of these claims. These products present a sales appeal, making them comparatively easy to dispose of, because it is difficult to show any good or bad effects. In brief—graphited oils have no advantages to offset the cost of the material. Therefore, money spent in this direction is actually wasted.

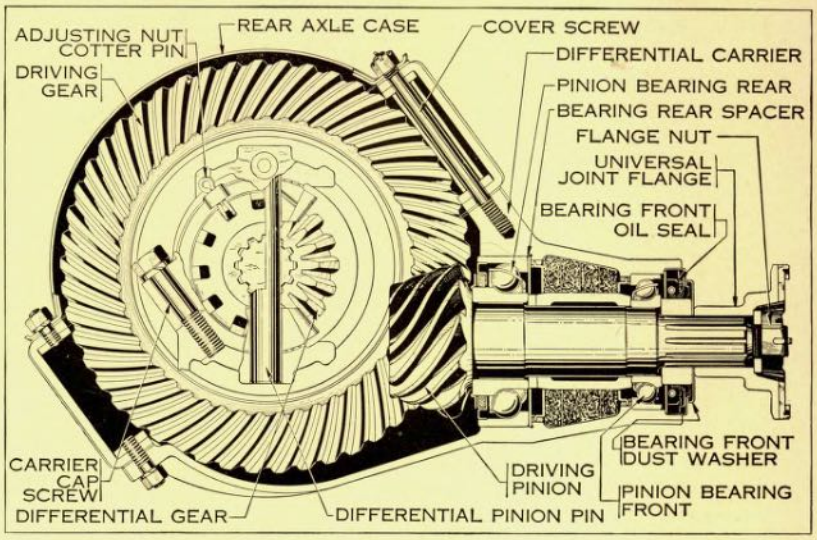
DIFFERENTIAL GEAR AND PINION ADJUSTMENT—120

In the adjustment of the ring gear and pinion our factory fitting represents as close an adjustment as can safely be made in a new unit.

After the car goes into service the seating of the side bearings in their cups will cause the clearance to increase, and the increase in clearance may develop a noticeable tendency toward backlash.

A readjustment can easily be made because the increase in backlash is approximately equal to one notch on the adjusting nuts which locate the ring gear.

In making the readjustment the nut on the thrust side should be taken up two notches after backing off one notch on the opposite side. This will reduce the ring gear and pinion clearance about .004 inch, and the additional tightening of one notch will take up the end float in the differential casing.



After the adjustment has been made it should, of course, be checked by revolving the ring gear a complete revolution and making sure that there are no high spots on the ring gear which eliminate the necessary clearance at those points. There should be a perceptible clearance around the entire circumference of the gear.

Note: When the adjustment is a little too tight there is apt to be a slight noise on the driving side, but in a new car especially, this noise will work out as the clearance increases.

FRONT COMPARTMENT HEAT PROTECTION—120

There has been some complaint of heat in the front compartment in the 120 in places where the weather has been warm.

It is comparatively simple to take care of the condition in a very satisfactory manner if a man is put on the job *who is thorough in his work*. The job cannot be hurried, and must be done well, or the desired results will not be obtained.

It is a problem of sealing all holes and openings in the dash, inclined toe board and floor board. It is also necessary to seal, for its entire length, the joint where the dash is spot welded to the cowl.

The best material to use for this job is dum dum and cotton. The small holes can be sealed with dum dum alone, but in taking care of the larger openings cotton batting should be kneaded into the dum dum as this will provide the dum dum with additional "body".

First, seal the openings in the dash. These can be handled from the forward side. Be sure that the entire length of the spot welded joint, between the dash and cowl, is filled with dum dum, and use dum dum to take care of the small holes. The mixture of dum dum and cotton should be used for the larger openings, such as the joint around the steering column, and the opening for the speedometer cable and the wire loom. Do not neglect even such small holes as are used for the snap fasteners which hold the dash trim board in place, these should be packed with dum dum.

The remaining openings will be reached from the inside of the front seat compartment, and the floor mat and cowl side trim panels should first be removed. The gap between the outer cowl panel and the reinforcing inner panel should first be packed with a heavy wadding, forcing it down so that it seals the joint below the triangular opening in the inner panel. The wadding should also be used to pack the vertical passage at the rear of the cowl which is formed by the pillar post.

The trim panels can then be replaced, and the holes in the inclined braces which receive the snaps for these panels covered with dum dum from the forward side.

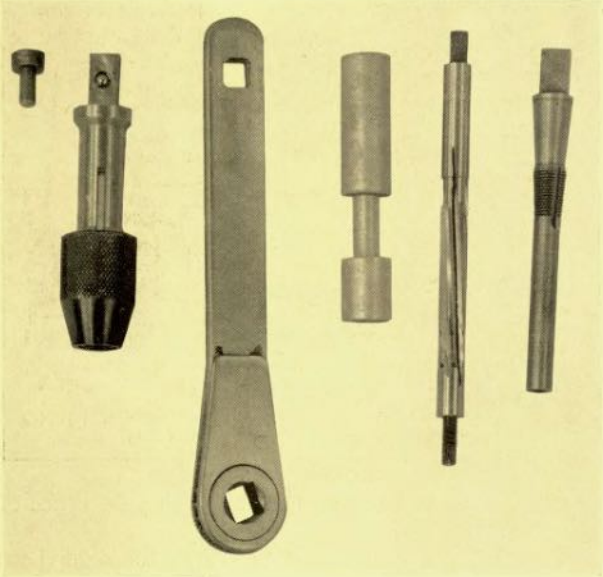
The opening where the accelerator rod passes through the inclined toe board should next be sealed by surrounding it with a 2-inch piece of fibre or leather which will be free to move with the rod and slide underneath the mat.

The opening in the level floor board through which the transmission shift lever dome passes should then be filled as well as possible. The movement of the transmission prevents an absolute seal, but a satisfactory result can be obtained if the joint is thoroughly packed with the dum dum and cotton combination. The openings at the rear corners of the level floor board should also be filled in the same manner.

The work outlined above will do an excellent job if carefully performed. Naturally, the cars we are now shipping are much better than our early production, and we believe that where this work is necessary, it will be in the earlier shipments.

DOOR HINGE PIN REAMER AND REMOVING TOOL

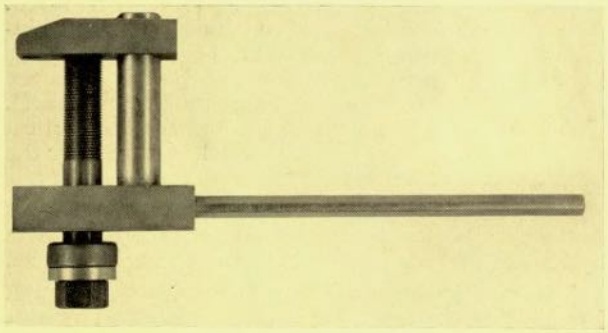
All models, except Twelfth Series.



ST-5067—Hinge Pin Reamer Set—Price $5.20

Here is a practical hinge pin reaming set for reaming door hinges when installing oversize hinge pins.

The set consists of: ST-10018 Expansion Reamer, ST-10019 Reamer Holder, ST-10020 Extractor, ST-10021 Ratchet Wrench, and ST-10022 Replacer for piloting new bushings into place. It can be operated either in a vise or with a "C" clamp.



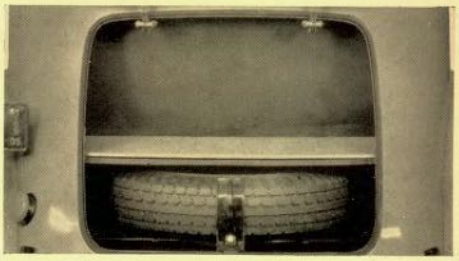
ST-5068—Hinge Pin Removing Tool—Price $6.00

This tool has been designed for removing rusted or frozen hinge pins. It is a small compact press, operated with a wrench.

It will exert enough pressure to break loose any rusted or frozen hinge pin, and press it out of the hinge about 1". This will give you enough space to get a chisel underneath the hinge pin head, so that you can drive it the rest of the way.

The tool can be used on lower rear door hinge, where there is very little room above the fender. Turn the tool so the screw points straight up, and place the lower jaw in position under the protruding end of the hinge pin. Insert the small pin in counterbored lower jaw, when pressure is applied by turning down on the puller screw the hinge pin head is forced up into the hole of top jaw.

LUGGAGE COMPARTMENT RUG



This rug adds that custom touch to the luggage compartment and protects suitcases and other articles. It is made of a carpet that does not require binding and remains in place without any fasteners. We are confident that every 120 owner will appreciate the finished appearance this rug gives the compartment of the Five Passenger Sedan—price is surprisingly low.

ODOMETER SETTING—120

In resetting the trip odometer on the 120 the following procedure should be followed.

First, push in the reset stem and rotate counter-clockwise until four nines appear. Then rotate clockwise until the four ciphers appear as shown, and push in the reset stem. Stickers are now being placed on speedometers and if you wish to put some on the cars you have on hand write the Editor of the Service Letter.

If the odometer is set in this way it will work properly, otherwise the numerals will run out of line or the wheels will not pick up properly.

CAMSHAFT REMOVE—120

1. Remove radiator and fenders as one assembly. (Use ST-5057 Radiator Lifter)
2. Remove vibration damper. (Use ST-5002 Puller)
   Note: Place hand jack under front end of the motor to act as a support.
3. Remove timing chain and sprocket.
4. Remove right front wheel and side splasher.
5. Remove valve cover plate and oil pump.
6. Remove fuel pump and distributor.
   Note: It is not necessary to remove cylinder head, valves, and springs. (Use a set of ST-5019 Push Rod and Valve Holders.) They will hold the push rod away from camshaft, allowing the removal and replacement.
7. Remove camshaft.
8. Reverse this operation in assembling, but it is necessary to retime front end gears.
   Note: Place No. 1 piston on top dead center with exhaust valve just closing, and use ST-5025 Timing Sprocket Setting Gauge. This gauge was designed to accurately line up the crankshaft and camshaft sprocket marks when installing chain.
9. While installing front timing chain cover—use ST-5026 Cover Centering Gauge. This installation of the cover insures a perfect oil seal.
10. Retime ignition and check tappet clearance.

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