



VOL. 3 No. 21

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## Cold Weather and the Seventh Series Cars

R. M. WILLIAMS—Service Engineer

THE Seventh Series cars should present the least trouble in cold weather of any model we have ever built; because of the improvements that have been made in the motor construction, the electrical system and the carburetion to overcome the difficulties that have always accompanied cold weather starting.

The new cast iron main bearing caps and steel backed main bearings will greatly reduce the contraction of the main bearings on the crankshaft that takes place at low temperatures and will therefore make the motor much easier to turn over. An improvement of approximately thirty percent has also been made in the cranking efficiency and speed of the starter motor, which, together with the new battery-charge regulator on the generator and a condenser of greater capacity in the distributor, gives a very decided advantage from an electrical standpoint. The Seventh Series carburetor should also be better for cold weather operation, due to the fact that the motor can be started on a closed throttle and warms up to an efficient operating temperature quickly, with very little use of the choke.

The advent of cold weather will, however, bring a certain number of hard-starting complaints to the Service Department, because a great many owners have not been properly informed with regard to the correct method of starting an extremely cold motor, or the precautions that should be taken to see that the cars are in the best condition for cold weather operation. Therefore, at the risk of becoming tiresome, we feel that the whole subject should again be reviewed and the Service Department should be in a position to properly impress each owner with the necessary details of how to prevent trouble from hard starting in cold weather.

The condition of the battery is, of course, the first and most important factor, as the car should enter the winter with the battery fully charged and the generator output adjusted to meet the demands on the battery by winter driving conditions.

The generator charging rate should never be adjusted except when the battery is fully charged, otherwise, too

high a voltage is liable to result which is detrimental to the breaker points and lamp bulbs. This refers particularly to cars that are not equipped with the automatic regulator for the generator charging rate. This regulator can be installed on all of the fuse type generators at very reasonable cost by the Owen-Dyneto service stations and this device makes it unnecessary to change the charging rate at different seasons for the year and protects the battery from under-charging or over-charging by automatically increasing or decreasing the charging rate according to the demands imposed on the battery by different driving conditions. In our opinion, there are very few owners who would not willingly pay the price asked for this regulator, providing they thoroughly understood its advantages.

The condition of the distributor breaker points and the spark plugs is also a factor that may prevent a motor from starting easily. Many times the owner is not following the best procedure to obtain an easy start and is therefore running down the battery by excessive cranking.

The method of starting the Seventh Series cars differs from the previous models in that the throttle should be kept closed during the starting period, for when the choke is pulled all the way out the throttle is automatically opened the correct amount for starting.

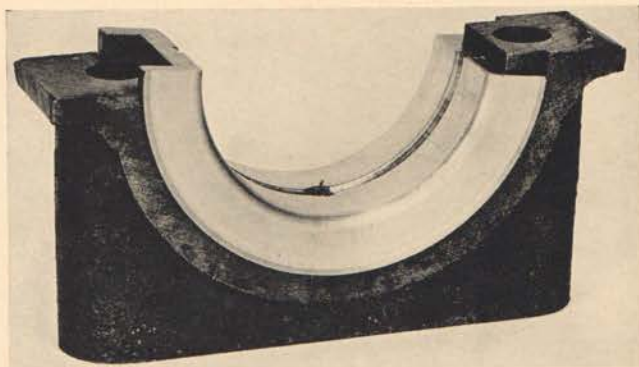
The proper procedure for starting the Seventh Series car is as follows:

1. See that the throttle is closed.
2. Turn on the ignition switch.
3. Pull the choke all the way out.
4. After pulling out the choke, depress the accelerator pedal fully two or three times. This operates the pump on the carburetor, which injects a fine stream of gasoline into the manifold, making a more combustible mixture for starting.
5. Release the clutch.
6. Step on the starter button.

**"Your Willingness Should Outrun Your Obligation"**



## No. 7 Bearing Construction



This is a view of No. 7 main bearing. The bearing you may have noticed is offset in the cap and is doweled in place.

The upper half of the bearing on one side and of the cap on the other matches the lower half construction so as to form a more rigid construction to take up the thrust from the crankshaft. The locked bearing assures a uniform surface on the outer edge. In no cases in refitting this bearing should you attempt to line up the bearing with the cap but remove the bearing and smooth off the cap faces and the ends of the bearing. Check with persian blue and replace the bearing.

## Minneapolis Service



Lee Stipe, Mechanical Supervisor, reports service in Minneapolis as "up to standard." Mr. A. H. Libby, service manager, is doing a good job and he isn't a bit afraid of the big sign. We add a couple of OK's to Stipe's report—one for the clean white coats, and one for the standard service sign. We add Art Libby and his gang to the honor roll.

## The Smaller Parts Room

We have been talking quite a bit about parts room records, equipment and layout. You may have felt that these articles were not of any interest to you because of the comparatively small size of your parts department.

The large parts department was not always large nor did it become efficient simply because it grew in size. The neatness and the system started when there was only one bin and grew as more bins were added to take care of the large inventory required as a result of increased business.



*The Kenilworth Branch in Milwaukee operates this small but highly efficient parts room*

The picture shows a parts department that has a floor area of 96 square feet. The inventory at present is about \$600.00, and there is room for expansion.

The desk is in orderly condition; there is a place for each form required. The record cards are kept in good equipment and orders are sent in typewritten. Gaskets are conveniently located; tools are in specially built boxes; and the stock is kept in two steel bins. Everything is kept in order and clean. If this stock room increases its inventory from \$600.00 to \$600,000.00, the same neatness and arrangement would prevail.

There is no parts room too small to be properly arranged and to be kept clean. Parts in the bin represent dollars on your books. They should be carefully handled and the sooner you start the better the results will be. Carelessness in the parts room means loss from obsolete parts and over ordering. Most of this can be saved by insisting upon a clean, orderly, efficient parts department. *Begin now.*

## Know Your Spark Plugs

In dealing with the service problem during the winter months the item of spark plugs should not be overlooked.

We equip our cars with the latest Champion No. 3 because exhaustive tests have shown that it gives the best all around service. You may, however, encounter an occasional extra hard driver who can use No. 2 Champion to better advantage, but you should warn him that this is a colder type and must be guarded against fouling.

As cars come in for winter service, we suggest that you check two plug items which we feel sure will aid in giving more satisfactory operation:

1. See that spark plug gaps are set .025.
2. If plugs have been in use 10,000 miles or more, suggest a new set, especially emphasizing better get-away and acceleration.

In general, we suggest replacing only with the particular type of Champion spark plugs which have been proven correct in our tests.



## Cold Weather Poster



The Winter Service Poster is ready for shipment. It will tie up with your winter letter to owners. It is not too early to be calling the importance of this work to the attention of owners.

It is important that you be prepared to handle cold weather protection work. Make sure you are all set on anti-freeze, chains, and heaters. Standardize on the necessary operations to check over the entire car. See that your tools and equipment for this work are in good order and in their proper places. Then go after your full share of winter preparation work and prove to your satisfaction that this is not a dull season for the Service Station.

This is one of a monthly series of Posters. Others are shown in recent issues of the Service Letter. They add to the appearance of your station and build good will. Indirectly they increase your profits. The price is right—50c apiece and the frame is \$1.50 each. One frame and the set of 12 posters for the entire year costs you just \$7.50. Order the set and one will be shipped each month and billed as shipped. Dealers will please confirm their orders with distributors to facilitate billing through the distributors account.

## Door Clearance

The specified clearance between the top of the door and roof rail is  $\frac{1}{8}$ ". It may appear greater due to the

radii on the outer edge of the door and the roof rail which tends to make it appear larger. This matter has often been called to our attention regarding the excessive amount of door opening and in no case have we ever found a greater opening than is specified which is  $\frac{1}{8}$ " plus or minus  $\frac{1}{32}$ ".

We would, therefore, suggest that when the owner claims that the opening is excessive that you insert a  $\frac{1}{8}$ " feeler gauge in the opening and in this way you may avoid some extra work. However, if the owner insists on closing up the opening, we would suggest that the best and quickest method is to secure a piece of strip steel about  $\frac{1}{2}$ " wide and whatever thickness necessary which may be nailed and soldered to the outer top surface of the door. This, of course, will have to be filed and finished smoothly. It will also necessitate relacquering after the strip is installed.

Do not try to fit another door due to the fact that all doors are made over the same identical form, and the clearance would in most cases be exactly the same.

## Winter Letter

Mr. Packard Owner

Satisfactory operation of your car during the winter season is a matter of importance to you. The proper preparation of your car for the cold weather will assure you satisfactory operation.

Those items which our experience leads us to recommend are as follows:

Flushing out the entire cooling system and filling with anti-freeze. We suggest glycerine or Prestone.

Change to a suitable grade of motor oil.

Thinning of the lubricant in the transmission, differential and steering gear housings.

Testing the battery.

Draining and cleaning complete gasoline system.

Cleaning and adjusting spark plugs and distributor points.

Check tires and tire chains.

Inspecting and installing heater. We carry a complete line of Packard approved heaters.

Many of our customers depend upon us to look after this matter of winter preparation for them.

We shall be glad to do so for you, the charge for the items except that of attaching heaters is \$.....

Service Department.

## Winter Accessories

The Accessory Division has available this year the most efficient and satisfactory line of heaters yet offered.

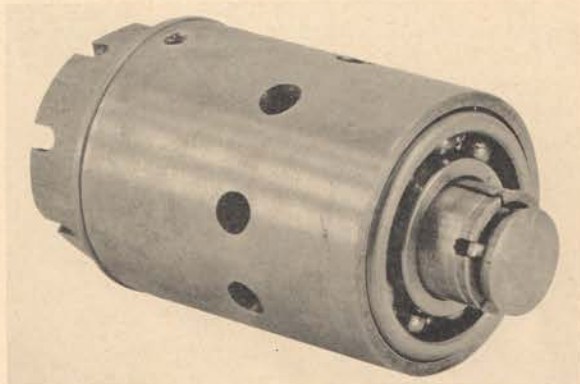
The Kelch—the Francisco and the Tropic-Aire are ready for shipment. Each has been improved and represents the latest and best that can be obtained. A variety of combinations can be worked out for heating the front and rear compartments which should make this a very active item.

Mr. Wilson, Manager of the Accessory Division, urges you to start your winter selling campaign now. He is confident of a very successful season and is prepared to handle your orders.



## Special Tool Suggestions

The past few issues have not contained any suggestions for special tools. Lately, however, a few have been received, these have been carefully tested and reviewed by the Special Tool Department. They have awarded a prize to Mr. Frank Ptack of the Sherman Avenue Branch of New York for a puller for the clutch pilot bearing. A cut of this is shown and blue prints of this will be furnished upon request so that you can make them up in your own shop.



Mr. Ptack also sent in a suggestion for a shock absorber link and arm puller.

Another winner is a suggestion for a cranking device consisting of two wires to be connected with the starter motor button and in turn with the battery and starter motor. It is to be used for turning the motor over during the operation of adjusting valves, setting ignition and several other operations. This suggestion was sent in by Mr. Fred W. Voigt of the Eugene, Oregon dealer.

Additional suggestions were received as follows:

Mr. H. G. Blumberg—Gene Meador, Inc., San Antonio, Texas—Ratchet Wrench for tightening Anchor Bolt Nuts.

Mr. H. C. Sightler—Martin Bridges, Greenville, S. C.—An oil pump synchronizer for aligning oil pump shaft with oil pump driving gear.

Mr. Vernie J. Zahm—Jas. W. Oakes & Co., Grand Haven, Michigan—A piece of pipe to fit in place of the wheel stud when attaching wheels.

Mr. Albert Ritinger of Cook, Samuels, Gorrell, Inc., South Bend, Indiana, suggested a radiator lifting fixture for 626-640 cars.

Mr. Loyd Amacher—Joy Bros. Motor Company, Saint Paul, Minnesota—Wrench for loosening and tightening valve cover plate screws.

Mr. C. Rothwell—Packard, Newark—An idea for threading the handle in our cylinder chamfering tool so that longer attachments can be put on if necessary. Mr. Rothwell also suggested a puller for the steering post worm.

Mr. Herman Treptow—Packard Motor Sales Corporation, New Brunswick, N. J.—Wrench for tightening the clutch plate hub bolts on the 526-443 cars.

We appreciate your having sent in the suggestions and ideas for special tools. We feel that with the experience which you men in the field have along these lines that we should be able to build up an invaluable set of tools for the use of Packard service stations.

We want you to feel free to send in any suggestions at any time and to correspond with the Special Tool Department concerning any suggestions which you may have for the betterment of tools which are supplied on the standard ST numbers.

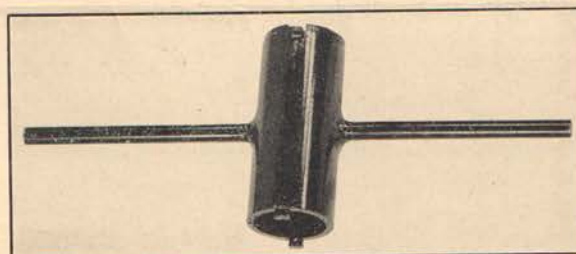
Any information concerning the tools listed may be obtained by addressing a letter to the Special Tool Department.

### ST-757 Horn Button Wrench, models 726-733-740-745



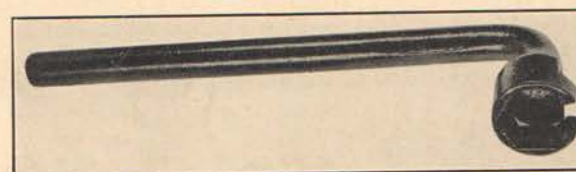
A tool designed to remove horn button on steering wheel by sliding the wrench under the horn button and holding stud which horn button is screwed on to. This makes it unnecessary to remove the light controls and button off steering post. Price \$0.50 net.

### ST-749 Rear Axle Bearing Adjusting Nut and Radiator Packing Nut Wrench, Models 726-733



One end of this wrench is designed for taking up on the axle shaft bearings and the other end for removing radiator packing nut. Price \$2.50 net.

### ST-747 Headlight Nut Wrench, Models 726-733-740-745



This heavy duty wrench is used for removing headlight and also for adjusting lights without removing cable from lamp. Price \$2.00 net.

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

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