

PACKARD

# Service Counselor

PARTS \* ACCESSORIES \* PRODUCT \* PROFITS

INSTITUTIONAL



PROMOTIONAL

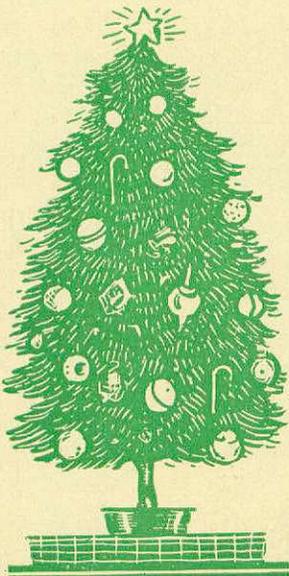
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## To all Packard Servicemen:

Many difficulties have been encountered this past year but much progress has been made in improving Packard Service Facilities. We compliment you on your efforts along this line and appreciate your cooperation. Individual Christmas cards are just out of the question so, in this way, we wish you all

A  
Merry Christmas  
and a  
Happy New Year



From All

THE FACTORY PARTS AND SERVICEMEN

## TRANSMISSION AND DIFFERENTIAL FLANGE NUTS ALL MODELS

To eliminate the possibility of nuts backing off at either the differential transmission, or overdrive driving shaft flanges, a new type self-locking nut is now being used in production and is also available for Service.

When the old type (Marsden) nut was used, it was necessary to stake the nut to lock it in position. This usually mutilated the threads of both the nut and the shaft on which it was installed and sometimes made removal of the nut a difficult job in addition to necessitating the cleaning up of damaged threads.

The new type nut, known as the "Hug-lock" nut, does not require staking, and it is advisable to install them whenever a nut of the old type has been removed.

Order these nuts under No. 395372.

## RUST PREVENTIVE IN NEW CARS

Many new cars are being delivered to customers without the addition of Packard Rust Preventive to their cooling systems, a recent survey of Dealers reveals. It has long been the practice for Packard Dealers to install rust preventive in all new cars before delivery and this practice should be continued.

The Dealer who delivers a new car without adding rust preventive to the cooling system needlessly injures himself in two ways:

1. He loses the profit on the sale of the rust preventive.
2. He leaves himself "wide open" to customer complaints of water pump noises and clogged cooling systems.

Any non-treated water in combination with air will cause rust on the surface of iron and steel and similar oxides to form on the surface of other metals.

Any non-treated water is corrosive to some degree. High alkali waters are the worst and can "eat up" a cooling system in a short time by corroding the metal around the water passages in the cylinder block and clogging the system. "Soft" water, low in alkali and mineral content, is less corrosive but will cause trouble in time.

If the cooling system is to function with a minimum of trouble, each car should have rust preventive added to the collant before delivery

to the customer. If trouble-free operation of the system is to continue, the rust preventive should be renewed whenever the cooling system is drained and refilled.

Permanent (ethylene-glycol) anti-freeze and some of the alcohol compound anti-freeze solutions contain anti-corrosive agents. If an anti-freeze is used that does not contain an anti-corrosive, rust preventive should be added with the anti-freeze.

Permanent anti-freeze should not be used a second season. Air leaking into the solution at the water pump, and exhaust gases entering the cooling liquid past the cylinder head gasket, may cause corrosive acids to form which will attack the metal parts of the cooling system. Anti-freeze solutions containing calcium chloride or petroleum products never should be used.

To minimize leakage of exhaust gases and air into the anti-freeze solution, cylinder head and water pump nuts, and all hose connections should be tightened before anti-freeze is put in.

Packard Rust Preventive in 1/2-pint cans is available from your Zone Warehouse under number 98737.

## FAILURE OF CLUTCH PEDALS TO RETURN

2100-2101-11

Failure of clutch pedals to return properly on some of the early cars has been traced to improper assembly methods. When installing the clutch pedal booster spring, the spring, in some cases, was stretched to a point where it took a permanent "set". These "set" springs then have insufficient tension to return the pedal properly and should be replaced.

The present assembly method eliminates over-stretching the spring and no further trouble should be experienced.

If you find it necessary to replace a faulty spring the following method is suggested and recommended:

Working from under the car, remove the two 3/8-inch bolts which hold the clutch relay pivot bracket to the top of the frame channel. Allow the assembly to slide forward and remove the old spring. Hook the round end of a new spring into the hole in the frame and the wide end of the spring into the booster spring link. Pry the bracket back just far enough to align the holes in the bracket with those in the frame and install the bolts.

## WHAT IS A CUSTOMER?

*A customer is the most important person ever in this place—in person, by phone or by mail.*

*A customer is not dependent on us. We are dependent on him.*

*A customer is not an interruption of our work—he is the purpose of it. We are not doing him a favor by serving him—he is doing us a favor by giving us an opportunity to serve him.*

*A customer is not an outsider to our business—he is a part of it.*

*A customer is not a cold statistic—he is a human being with feelings and emotions, with biases and prejudices.*

*A customer is not someone to argue or match wits with. Nobody ever won an argument with a customer.*

*A customer is a person who brings us his wants. It's our job to handle him profitably, to him and to ourselves.*

Revised from Zone Bulletin by M. C. Berner

## CLUB SEDAN REAR SEAT CUSHIONS—21st SERIES

Have you had trouble installing the rear seat cushion in a 21st Series Club Sedan?

If so, the next time you find it necessary to remove a rear seat cushion, check the position of the pilot openings in the two metal straps or strainers attached to the front and rear rails of the seat frame.

Some cushions have the pilot openings parallel with the floor, when the cushion is in its normal position, while other cushions have the openings at an angle of approximately 30 degrees with the floor. The cushions in which the pilot openings are at an angle usually are difficult to install, and this can most easily be corrected by bending the metal strainers until the pilot openings are parallel with the floor.

The metal strainers can be bent by inserting a long screw driver into the pilot opening and prying against the lower edge of the seat frame until the opening is at a 90-degree angle with the front face of the cushion.

## "QUIZ TEST"

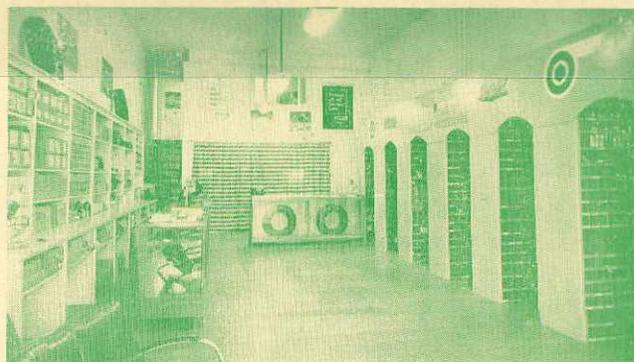
HOW MANY DO YOU KNOW—  
without looking at the answers?



1. A manifold heat control valve, which is stuck in the open position during the winter months, may cause:  
(a) loss of power.  (b) increased fuel consumption.   
(c) a flat spot during acceleration.  (d) loss of top speed.
2. A condition in which the overdrive is engaged at all times may be caused by:  
(a) the governor "AD" contacts stuck together.   
(b) a ground through the kickdown switch.  (c) a ground through the lockout switch.   
(d) a ground in the lead from lockout switch to overdrive relay.   
(e) the actuating relay lower contacts stuck together.   
(f) engaging pawl is off the solenoid plunger ball end.
3. When installing a new pivot shaft or bushings on the inner end of a Clipper lower support arm assembly, it is necessary to:  
(a) disconnect the outer end of the support arm.  (b) disconnect shock absorber arm.   
(c) use a support arm spreader.   
(d) equalize distance between the pivot shaft holes and the support arm, on front and rear arms.
4. The Car-Starter switch, incorporated in carburetors used on all Clipper models, is adjusted by:  
(a) shims between the bakelite guide and contact spring.   
(b) shims between terminal cap and carburetor body.   
(c) an adjusting screw on throttle lever.  (d) adjusting the throttle linkage.

For Answers, See Back Page.

## IMPROVED PARTS FACILITIES



Parts facilities are improving in both appearance and efficiency throughout the country. Here are two exceptional examples. On the right is the new Parts and Accessory store of White Oak Motor Sales, Mt. Hope, W. Va. and on the left in a beautiful modern design is the store of Coyne and Evans in Pittsburgh, Pa. The expense of building departments of this type are fully justified in returns due to increased volume and decreased operating expense.

### QUIZ QUESTION ANSWERS

1. ANSWER: (a), (b), (c), and (d). A manifold heat control valve which is stuck in the open position causes a slow warm-up, and the engine does not reach an efficient operating temperature. During the warm-up period, the choke remains partially closed, resulting in an over-rich mixture with a consequent loss of power, and increased fuel consumption. Generally a flat spot or hesitation is noticeable during acceleration, and a definite loss of top speed results from inefficient engine operation. See Service Counselor November 1945.

2. ANSWER: (a), (b), (c), (d), (e), (f). Any of the conditions named can cause the overdrive to be engaged at all times. However, if the governor or the kickdown switch is at fault, the overdrive can be locked out with the lock out control.

The governor, kickdown switch and lock-out switch are in series with each other and control the operation of the actuating relay, which in turn operates the solenoid. A ground at any one of these switches or in the connecting leads would cause the overdrive to engage. Actuating relay contacts that are stuck together will keep the overdrive engaged at all times.

When the engaging pawl is broken or damaged to the extent that it comes off the solenoid plunger ball end, it is a mechanical difficulty and the overdrive electrical circuit will have no control over the engagement. A pawl that is off the solenoid plunger ball end will be engaged in the sun gear hub at all times.

3. ANSWER: (c) and (d). It is necessary to use a J-1052 spreader and spread the inner ends of the support assembly to  $11\frac{5}{8}$  inches when tightening bushing into working position. When the spreader is removed, the distance between front and rear arms at inner end should measure  $11\frac{1}{2}$  inches.

The distance between pivot shaft hole and the support arm should be equal on both the front and rear arms. See Service Letter 11-15-41.

4. ANSWER: (a). Brass shims between the bakelite guide and contact spring are provided to adjust or determine the point at which switch contact is made. Shims are added to make contact sooner, and are removed to delay the contact. Switch contact should be made when the throttle is opened between  $30^\circ$  and  $45^\circ$ . Car-Starter Gauge J-2573-7 (Carter T109-155S) is used to measure throttle shaft rotation.