

VOL. 21, NO. 21

NOVEMBER 15, 1947

SERVICE PRODUCT REPORTS

Field Reports Enable Factory to Reduce Service Problems

During the last model year response from the field in the form of Service Product Reports sent in to the Factory has been the best in history. It could, however, be better both as to quantity and quality.

The Service Product Reports are reports of trouble, presenting all known facts which might help the Factory in recognizing the trouble, determining the cause, and devising the cure. They are a direct means of improving the quality of Packard cars.

Every question on the Service Product Report form is important and has been asked for a definite purpose.

Zone-Dealer-City-State

This information identifies the area from which the trouble is reported. Some troubles are general and are reported from all Zones, while others are confined to certain locations. The geographical location may be important in determining the cause of the trouble and specifying a correction.

Model-Vehicle No.-Engine No.

This information identifies the car in which the trouble occurs and makes it possible to determine the day on which the part involved was

FORM VIAME			
PRINTED IN U. S. A.	PACKA		COPY
	TECHNICAL :		
	PRODUCT R	REPORT	
	EALENS MAIL PROMPTLY		
		PACTORY CODE	
ZONE		DATE	
ZONE			
DEALER		REPORT NO	
CITY		STATE	
MODEL NO	VEHICLE NO	ENGINE No.	
DELIVERY DATE		PRESENT MILEAGE	
OWNER			_
DESCRIBE NATUR	E OF TROUBLE		
			Fall Land
DID YOU PERSON	ALLY INSPECT THIS C	CART YES	NO
	ALLY INSPECT THIS CORRECTED? YES		NO.
WAS TROUBLE CO	PRRECTED) YES_	NO	NO.
WAS TROUBLE CO		NO	NO.
WAS TROUBLE CO	PRRECTED) YES_	NO	NO.
WAS TROUBLE CO	PRRECTED) YES_	NO	NO
WAS TROUBLE CO	PRRECTED) YES_	NO	NO.
WAS TROUBLE CO	PRRECTED) YES_	NO	NO.
WAS TROUBLE CO	PRRECTED) YES_	NO	NO.
WAS TROUBLE CO	PRRECTED) YES_	NO.	NO
WAS TROUBLE CO	ORRECTED) YES	NO.	NO.
WAS TROUBLE CO	ORRECTED) YES	NO.	NO.
WAS TROUBLE CO	ORRECTED) YES	NO.	NO
WAS TROUBLE CO	ORRECTED) YES	NO.	NO.
WAS TROUBLE CO	ORRECTED) YES	NO.	NO.
WAS TROUBLE CO	PRINCIPLE YES	NO.	NO

made. Sometimes it is possible to identify the man doing the work and point out to him his error.

When corrective changes are made, the date upon which the change became effective is always recorded. The engine and vehicle numbers make it possible to determine whether the unit reported was made before or after the change.

Delivery Date—Present Mileage

Comparing the "delivery date" with the Service Product Report date indicates how long it takes for

the trouble to develop. Both time and mileage are important. Some troubles develop with time, some with mileage. The miles driven per month can also be obtained from these figures.

Owner

The owner's name is of interest only for identifying the car in correspondence.

Describe Nature of Trouble

This means describe the symtoms of the trouble. Give complete descriptive information. How did the car act? What sort of noise did it make? When and under what conditions? This information must be complete.

Did You Personally Inspect Car?

This is important for it indicates whether the story shown on the report is first hand information or was reported to you.

Was Trouble Corrected?

This shows how correct your diagnosis is and also shows how effective your repair is. It also shows whether the trouble can be corrected in the field with the material and knowledge available or if it will be necessary for the Factory to make new material and instructions available.

Was trouble entirely corrected or what improvement was obtained?

What Was Cause of Trouble?

Give your idea of the cause of the trouble. Be specific. To avoid possible misunderstanding, refer to parts by both name and part number.

What Was Done to Correct Trouble?

The report on your corrective efforts is important for it proves your diagnosis and indicates a corrective procedure to the Factory,

NOTE

The importance of any trouble is in direct proportion to its frequency. In considering a possible correction of any trouble, the number of reports received is of first importance.

Don't cover more than one trouble on a report. At the Factory, Service Product Reports are filed by troubles and not by car number, Dealer, or Zone. If you have more than one trouble on the same car, make one report for each different trouble. If you have the same trouble on a number of cars, you need make but one report but list the engine and vehicle numbers of all cars in which the trouble is found.

While it is not possible to acknowledge each separate report, they are all carefully studied and considered. The reports are then grouped according to units involved and a summary of the reports is sent regularly to all department heads. Each department head studies the summary and, on those items which fall within the province of his department, sees that corrective action is taken.

Corrections are reported to the field when service procedures or instructions for field correction are needed. This is done through Service Technical Bulletins or articles in the Service Counselor. You will notice that most of the troubles you report gradually decrease in frequency and finally disappear.

These corrections are a direct result of your reports. For continued improvement, make comprehensive reports of troubles and keep it up. They result in better Packard cars.

The forms, V-482, may be obtained at no charge from zones.

Care of the Cooling System

For smooth, efficient operation, engines require strict attention to the entire cooling system. The cooling system includes not only the radiator core, but the hoses, water pump, thermostat and all water passages. These must be kept free of scale, rust and other foreign matter to secure correct engine operation. For this reason the entire system should be periodically flushed and Packard Rust Preventive added when the system is refilled with water.

If the entire system is not clean, the cooling liquid cannot circulate freely. Therefore a temporary rise in heat cannot be carried off quickly and heat will result.

The gauge registers the temperature of the cooling liquid in the system, but it does not register the rise in temperature at "hot spots" in the system caused by the formation of scale and rust in small areas until the condition becomes severe. In other words, the temperature gauge may show a normal reading but the actual temperature at points like those around the cylinders and the valve ports may be much higher than normal due to a flow restriction at these points. Although the temperatures at these "hot spots" are much higher than normal, they do not raise the temperature of the liquid in the entire system enough to register on the temperature gauge. These "hot spots", in some cases, result in severe detonation.

Since the cooling characteristics of a radiator depend upon the volume of air that passes through the core, it is important that the passages between the fins be kept clear. Insects or anything that cuts down the flow of air will reduce the efficiency of the entire system.

A thermostat is installed in the cooling system to maintain temperatures under which an engine will operate most efficiently. If the thermostat is defective or inoperative it should be replaced with a new unit.

Frequent inspection of the radiator hoses is advisable. Age, heat and oil affect rubber; and, in time, the hose will become soft and mushy and the inside of the hose will disintegrate. When this happens, small particles of rubber may be carried into the radiator core which will restrict the flow and cause the engine to overheat.

Before installing anti-freeze solution, the cooling system should be flushed thoroughly to remove all loose scale and rust and all fittings and hose connections should be checked for leaks.

After the anti-freeze solution has been installed, the entire system should be checked for leaks regularly.

When installing anti-freeze solutions, the quantity should be determined by the anti-freeze manufacturer's recommendation based on the capacity of the cooling system. If the car is equipped with a heater the capacity is increased approximately three quarts.

Don't Fill Drive Shafts With Grease

It has come to the attention of the Factory that some shops have been filling drive shafts with grease to deaden transmission jazz and other transmission noises.

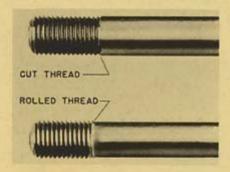
This method of repair should be stopped immediately since it will not correct the condition. It is dangerous, and will only result in dissatisfied customers.

The addition of 15 pounds of weight to the drive shaft will cause early failure of universal joints and transmission rear bearings. These parts are not designed to carry this increase in weight.

When a portion of this grease leaks out of the shaft a very serious condition of unbalance exists. This condition will cause further damage to universal joints, transmission, and differential. In some cases this unbalanced condition may be so serious as to make the operation of the car at high speeds extremely hazardous.

Cylinder Head Studs, New Type

To reduce the possibility of water leaks around the cylinder head stud, a new stud with rolled threads is now being used in production.



These studs are not interchangeable with the older cut thread type and may be used only in engines having the new design installed at the Factory.

Some 21st Series engines were built using this new stud and some 22nd Series engines were built using the older cut thread type.

The stud type may be determined by the shape of the first thread as shown in the illustration. The threads of the rolled type are larger in diameter than the shank of the stud. In the cut thread design the thread diameter is the same or less than the diameter of the shank of the stud.

The new studs are carried under piece number 403255.

Watch Parts Change Notes

Both Zone and Dealer Parts Men should make full use of all Parts Stock Change Records and Parts Supersession Records furnished them.

When parts orders contain obsolete part numbers, they must be pulled out of regular channels and delayed until current numbers are substituted for the obsolete ones. Use correct parts numbers on your orders and avoid unnecessary delays.

Top Boots and Bags

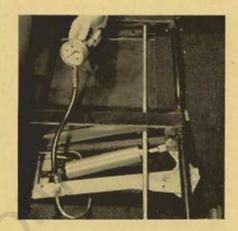
Every 22nd Series Convertible Victoria Owner is a first class prospect for the new Top Boot and Bag now available.

Tailored to fit the compartment back of the rear seat, these top boots are made of high quality water repellent fabric of high luster finish. They are available in sun tan or black to match the top and add distinction and beauty to the convertible when the top is lowered.

Order Top Boot and Bag, Sun Tan, under part number 407016; Black, part number 407017. Prices are listed in Parts and Accessories Bulletin, Dealer 47P-28.

Hydraulic Pressure Gauge

The illustration shows a gauge for checking the fluid pressure in the lines on the 1948 Convertibles.



Consult the Service Manual, Section 1, The Hydraulic System of the 1948 Convertible, for details and pressure. The gauge may be installed in the lines at any accessible point.

Cantion: Care must be exercised to prevent fluid from damaging trim or finish.

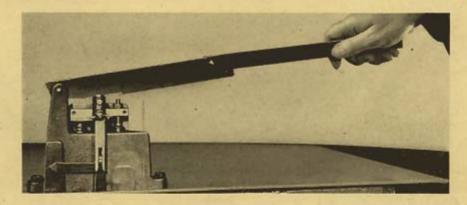
The pressure gauge and attaching parts are obtainable from the Kent-Moore Organization Inc., General Motors Building, Detroit 2, Michigan.

Hydraulic Pressure Gauge KMO-687 \$12.50

Hydraulic Valve Lifter Tester

The purpose of this tool is to check the leak-down rate of hydraulic valve lifter assemblies. All hydraulic lifters should be checked when removed for faulty operation. Fill reservoir with No. 1 grade kerosene. Release the ball check on the master unit and pump the unit until all air is removed and the unit is filled completely.

Insert the master unit in the left socket of the tool and place the unit to be tested in the right socket. Rest the handle of the tool on the beam pilot and set the indicator pointer to zero. Press down several times on handle and note movement of pointer. If pointer goes down, the leak-down rate of the lifter being tested is greater than



the master unit and should be discarded. If the pointer stays at zero or goes up, the lifter is satisfactory.

The Hydraulic Valve Lifter Tester, tool number J-1297-B, may be ordered directly from the Kent-Moore Organization Inc., General Motors Building, Detroit 2, Michigan. The price of the tester is \$34.45.

PPCP INSTALLATIONS AND SERVICEMEN'S TRAINING SCHOOLS SELL OWNER ON PACKARD CARS—AND KEEP HIM SOLD

Neat PPCP Installations
Build Owner's Confidence
In His Packard Dealership

Packard Tune-Up Schools
Train Expert Servicemen
To Keep Owner Satisfied



Packard Cleveland Features Customer Comfort



St. Louis, Mo.-Wallace Gardham Teaches Engine Diagnosis



Packard Columbus Is Neat, Modern, Spacious



Minneapolis, Minn.—Ray Stevens Covers the Distributor



Packard Tampa Displays Accessories Like Gems



Charlotte, N. C.—Earl Hanes Has 100% Attendance & Attention