PARTS • ACCESSORIES • PRODUCT

SERVICE Counselor

PACKARD MOTOR CAR COMPANY

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MAY IS

NATIONAL CAR *Safety-Check* MONTH

Join with the National Safety Council and the Inter-Industry Highway Safety Committee in the annual drive to improve the mechanical condition of cars and trucks on our highways. These two national safety organizations and other groups interested in highway safety, the automobile and tire manufacturers and N. A. D. A. will conduct vigorous campaigns to impress upon every motorist the need to maintain his car in safe operating condition at all times. Because of the mounting toll of traffic deaths and injuries, the objective of this safety drive is to have every car safety-checked.

Take an active part in this National Safety Drive—because you . . . the automobile dealer . . . are the vital link in National Car Safety-Check Month. The intensive promotion to be waged by the automobile and allied industries, N. A. D. A. and safety organizations, will be aired coast to coast via radio . . . television . . . magazines . . . billboards . . . direct mail!

- It will generate an unusual amount of service business for you!
- Don't miss this opportunity—identify your dealership with the official display materials.

By using the official window trim and seals on your showroom windows . . . by spotting the official banners and pennants throughout your service area . . . you will identify your dealership with this national effort and help yourself to a large share of this "bonus" service business. In addition, you will be performing a real civic service by helping to make America's streets and highways a safer place for all, and you will enhance you position as a leader in the civic affairs of your community.

Your Zone Office has full information. When you sell safety . . . you sell *SERVICE.*

Urge your customers to have their cars "Serviced for Safety" during May.

New Chrome Plated Piston Rings

Chrome plated piston rings in both the top and bottom grooves of Packard pistons provide greater protection to the cylinder walls and to the rings themselves because they furnish chrome bearing surfaces throughout the entire ring travel.

What is there about chrome plated rings, especially those plated with solid chrome, that makes them better than non-plated rings? Well, very definitely chromed rings *do* have qualities that make them superior to non-chromed rings because:

1. Chrome has high resistance to abrasive wear;

2. Chrome has high resistance to scuffing;

3. Chrome has a favorable coefficient of friction.

Abrasive Wear—

The new Packard 2-in-1 replacement sets have in the top piston groove chrome plated rings which break up abrasives into smaller, less harmful particles when they get into the engine through the air intake. And, they also have oil rings with solid chrome plated surfaces in the bottom groove to protect against abrasives that get into the oil. Consequently, these *double chrome* ring sets reduce abrasive wear to the barest minimum.

Scuffing—

Scuffing usually starts with the top ring, but it may start at the oil ring under certain operating conditions. With *both* danger areas protected by chrome, there is much less possibility of scuffing.

Friction—

Regarding Point 3, when we say that chrome has a favorable coefficient of friction, it is just another way of saying a chrome surfaced ring will slide on a cylinder wall surface with much less friction than will either a cast iron or steel ring. When there is less friction, there is less effort required for movement. More usable engine power is available. Also, when there is less heat generated as the ring slides up and down the cylinder wall, there is less possibility of surface welding or scuffing.

Do chrome plated rings have other advantages over non-chrome rings? Yes, they do. In addition to minimizing the danger of scuffing and greatly increasing the life of both the rings and cylinders, the new Packard chrome 2-in-1 sets effect sustained high performance and economy over a greatly increased period of time.

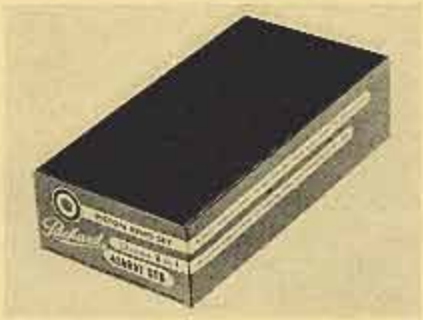


Fig. 1

Chrome 200 ring and New Chrome Oil Stopper 2-in-1 box

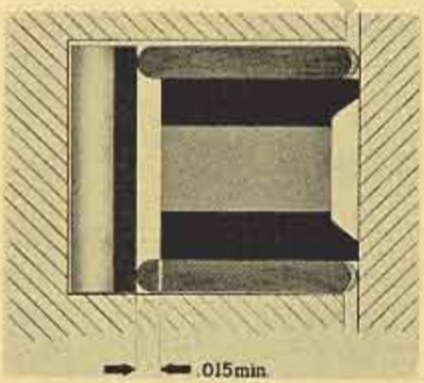


Fig. 2

The type of hard chrome finish that is applied to the PC 200 chrome compression ring used in Packard engines and replacement ring sets.

Fig. 3

This hard chrome finish on the steel rails of the new PC Oil Stopper ring.

Fig. 4

A smooth finish that has been plated with porous chrome.

You can readily see the surface difference between solid (or hard) chrome and porous chrome plating. A file test is sometimes used to demonstrate the difference in hardness of the two types of plating. While it is difficult to effect the hard chrome surface, a porous chrome surface can be filed easily.

Fig. 5—Chrome Type 200 Ring

Plated with solid chrome, this ring has the compression sealing and oil control features of the 200 compression ring. The chrome 200 ring has greater resistance to scuffing under extreme loads and high speeds and it has a lower rate of ring and cylinder wear.

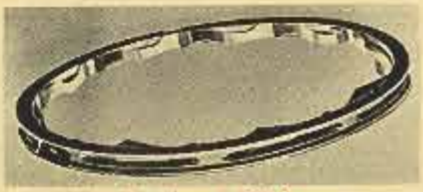


Fig. 6—Chrome Oil Stopper

This new oil ring is comprised of steel rails plated with solid chrome separated by an improved cast iron spacer with extremely wide ventilation slots. Chrome Oil Stopper oil rings are packaged with two expanders per ring, each expander designed to cover a specific pressure range and thereby accomplishing *full range oil control.* The expander spring with the plain end gives correct, economical oil control in rebored cylinders and in cylinders with only normal wear. The notched-end spring is installed instead of the plain spring, when more drastic oil control is required. In either case, the Chrome Oil Stopper assures effective oil control without scuffing and with minimum ring and cylinder wear.

Fig. 7—Plain End—Notched End

High Compression Cylinder Head

Models 220 2301

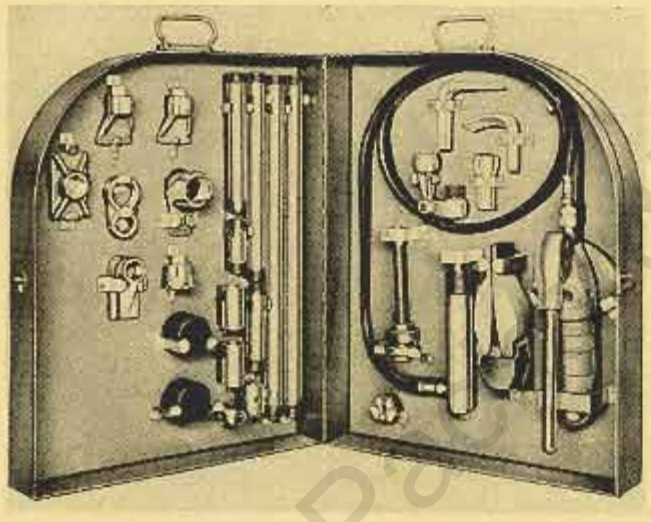
Raising the compression ratio in 22nd and 23rd Series engines is covered in Service Counselor, Vol. 24, No. 7, July, 1950.

At that time, high compression heads were not available for the Eight (288 cu. in) engines; however, they are available now. These heads have a compression ratio of 7.5 to 1 and may be ordered under part number 436142.

Body Straightening Tools

Illustrated is the Porter Ferguson Hydro Midget Set for body straightening work. Its uses will be shown in the body section of the shop manual.

This handy and profit producing equipment is now available. Dealers may order direct from K. R. Wilson, 215 Main Street, Buffalo 3, New York, No. 1-V KRW, Porter Ferguson Hydro Midget Set, Dealer Price $103.75.



Installing Flywheel Housing Support Kit

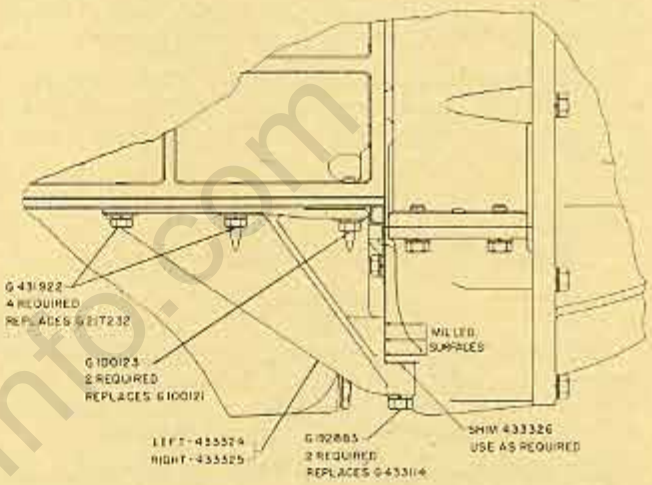
Model 200

A motor cylinder to flywheel housing support kit, part number 436059, was made available a few months ago to correct high speed motor vibration which may be encountered occasionally in the early "200" Models equipped with Ultramatic Drive.

The disturbance, when it exists, is particularly noticeable between 80 and 90 miles per hour. In some instances, a disturbance also may be noticeable to a lesser degree at speeds below 80 miles per hour.

When the brackets are installed, the vertical milled face of each bracket should be in full contact with the vertical milled face of the bolt hole bosses on the flywheel lower housing. The milled faces referred to are indicated by the arrows in the illustration. Sometimes it may be necessary to elongate the four holes in each bracket in order to obtain full contact between these faces.

Shims 433326 may, or may not, be required when installing the brackets. The brackets should be held in position with the milled faces in full contact and then the brackets should be tightened to the crankcase. A slight springing action should take place when the support to housing bolts G192883 are tightened. It may be necessary to use and, in some instances, to file one or more shims so that this slight, but not excessive, springing action can be obtained. The shim or shims should pass freely between the bracket and the housing before the bolts are tightened.



A Note On Lubrication

Lubricating a car means more than just applying lubricant to the points shown on a lubrication chart. There are also other points which require lubrication. These points are not shown on charts for two reasons: (1) the lines, circles and arrows required to indicate these points would probably make the chart look like a complicated road map; (2) it long has been taken for granted that a lubrication man with customer satisfaction in mind would oil or grease these points automatically.

A dab of lubriplate or a few drops of oil at various linkage friction points will reduce wear and also prevent binding and sticking. A few of these points are: accelerator linkage, brake pedal to master cylinder rod pivot, gear shift levers and linkage, hand brake rods and toggle assembly and the bonnet and trunk lid linkage. There are still other points which will be spotted immediately after the bonnet or the car is raised if the lubrication man is "on his toes."

The lubrication man should note the condition of various parts of the car while performing the lubrication service. The owner seldom sees the under parts of the car and, therefore, is not acquainted with conditions that might need service care. A real service can be performed for the owner by the lubrication man making observations and recommendations for needed services.

Cylinder Repairs

In the formation of a casting such as a cylinder block, it is possible to develop sand holes or shrinkage cracks.

In most cases, these conditions are discovered in the machining and inspection processes, but in some instances, the fault will not develop until the car has gone into service. Fortunately, the condition is not hard to correct.

There are on the market a number of compounds for this purpose which are added to the water system. As long as the compound is in the system, it remains in solution and does not affect the water circulation. When the contents of the system start to seep through a crack or sand hole, the water evaporates and the compound is deposited in the crack, finally filling the opening. This is a simple and permanent remedy.

We suggest that you use Wonder Weld, which is sold under Packard part number 98739—one pint. Our experience with this material has been very satisfactory.

Rear Door Lock Assemblies

Models 2220-22

The 22nd Series long-wheelbase Taxicab and the 7-passenger Sedan and Limousine are equipped with rear door lock assemblies having a metal strap or link which locks and unlocks the mechanism.

The right front door lock assembly for these cars is identical to the right rear lock assembly except that a round locking rod is used in place of the strap or link. The same applies to the left door lock assemblies.

When the supply of rear lock assemblies is exhausted, the Factory Parts Warehouse will ship only the front lock assemblies.

When installing a front lock assembly in a rear door, it will be necessary to first remove the locking rod from the new front assembly and replace it with the strap or link from the rear assembly which was removed.

Steering Gear Oil Level

24th Series

The Factory specification on the amount of oil to be used in the steering gear housing recently was changed from eleven ounces to nine ounces to reduce the possibility of oil seepage through the steering tube opening in the housing.

Filling the gear housing with nine ounces of oil provides adequate gear lubrication and establishes an oil level approximately one inch below the filler plug opening. At this level, the oil does not completely cover the worm. If additional oil is to be added, add only enough to cover the worm. Do not fill the gear housing to its full capacity; otherwise, the oil may seep past the seal at the top.

Steering Column Alignment

24th Series

Misalignment of the steering column has been reported on a few 24th Series cars. This resulted in a stiff steering and, in three or four instances, a rattle in the steering column.

To check for proper column alignment, detach the column from the instrument panel. If the column springs to the left, as has been reported on these cars, make up and install shims between the frame and the rear of steering gear housing so that the column lines up with holes in the instrument panel. The thickness of the shim or the number of thin shims to use should be governed by the amount of misalignment.

Corrosion Preventive In Replacement Converters

The Factory Parts Warehouse now is shipping service replacement converter assemblies in which a package of silica gel has been placed inside the reactor shaft.

The silica gel will absorb and hold the moisture normally present in the converter as now packaged and shipped.

Do not overlook removing this corrosion preventive material from the reactor shaft, and we also recommend that the converter be left packaged if it is to be placed in stock.

Checking Ultramatic Piston Ring Gap

It is important that the piston rings be in full contact with their respective bores when checking the gap of the direct drive and the high range clutch piston rings.

The small rings usually exert enough outward pressure so that they will be in full contact with their bores when the gaps are checked. The larger rings, however, might not fully contact their bores and it may be necessary to hold them in full contact when checking the gaps. It also may be necessary to file the ends of the rings to obtain the specified gaps.

Ring gap specifications are:	
High range clutch piston ring—inner	.007" to .015"
High range clutch piston ring—outer	.010" to .020"
Direct drive clutch piston rings—inner and outer	.002" to .016" (.012" or less preferred)

Carburetor Choke Setting Changed

24th Series

The choke setting on both the 748S and the 767S model carburetors has been changed from three points rich to one point rich. This new setting shortens the period during which the engine runs at fast idle and also reduces the tendency of an engine to "roll" due to overchoking or loading during the warm-up period.

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