PARTS • ACCESSORIES • PRODUCT

SERVICE Counselor

PACKARD MOTOR CAR COMPANY

VOL. 24, NO. 5 MAY, 1950

Ultramatic Drive Servicing

Ultramatic Drive service is important to Packard, the Dealer and the car owner. It must be efficient, prompt, and thorough. Parts must be available, special tools and equipment must be on hand and the "know how" must be based on study, training and experience.

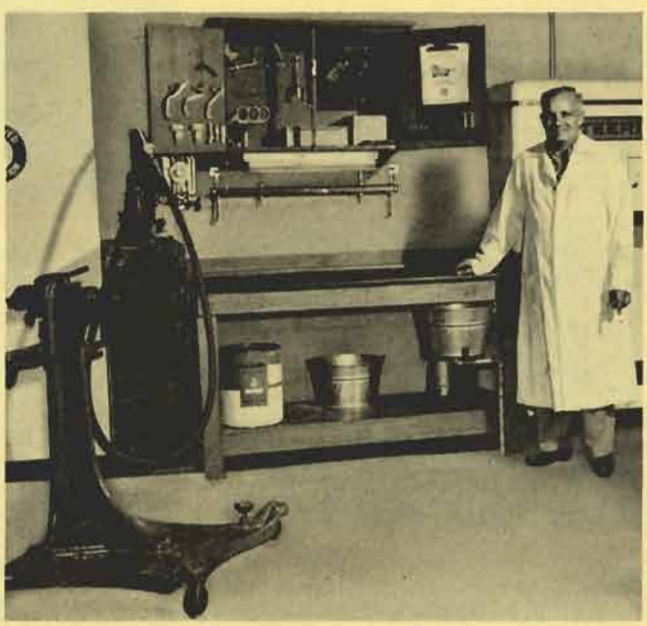
It's one thing to have complete Ultramatic Drive service available. The next step is to convince your customers of this. And more cars will be sold with Ultramatic Drive when customers are convinced you are in a position to service them.

J. Earl Waters, Dealer in St. Petersburg, has done an outstanding job on this showmanship of Ultramatic Service and in a very practical way. Here are two pictures of his Ultramatic Drive department with Bob Gott who operated it. Notice the draining, cleaning and refilling facilities. A complete set of special tools is kept in a clean, safe, handy locker. The lighted bench is masonite covered for protection of parts.

Note, too, the convenient location of all training material and bulletins pertaining to the Ultramatic Drive. It's important to keep this information up to date and to have it handy for quick reference.

The Ultramatic Drive department is located next to the lubrication department in a well lighted section. This set-up should be duplicated by other dealers—it will pay dividends.

H. N. Johnson, Zone Parts and Service Manager, says this dealer is doing a particularly good job on Ultramatic Drive servicing and his unusually fine facilities are certainly a big help.



Cleaning Ultramatic Drive Governors

Erratic or improper operation of Ultramatic Drive units quite often may be traced to sticking governor valves.

Cleaning a governor is more than just a matter of disassembling the unit, washing the parts, and reassembling them because the valves may again stick in a short time if they are not properly cleaned up. It is important that care be exercised when working on a governor unit and that any burrs, nicks, or feather-edges are removed so that the valves can operate freely.

Burred, rough, or feathered edges of the valve grooves should be cleaned up with a fine, hard stone. If a fine stone is not available, aluminum oxide cloth (usually called emery cloth) with a very fine grit may be used. A suitable type of cloth is Minnesota Mining and Manufacturing Company's Aluminum Oxide Cloth—500 grit. If a cloth with a coarser grit is used, the cloth first should be rubbed against some hard object such as a vise to wear down the grit so that it will not scratch the part being cleaned up.

When disassembling a governor, remove the vent valve flyweight retaining ring carefully using long-nosed pliers having jaws with narrow tips to avoid burring or mutilating the ring groove when knocking out the ring. Square jawed pliers should not be used.

See "Governor Flyweight Ring Tool," this issue.

Remove the flyweight and then closely inspect the ring groove, indicated in figure 1, for burrs.

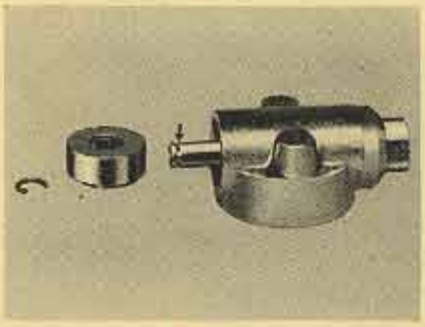


Fig. 1

Sometimes these are hard to see or to feel even though they project above the surface. Before disassembling the unit further, a fine stone or emery cloth should be run over the groove to make sure that it is not burred otherwise the bore of the valve support might be scored when the end of the valve passes through the support. Next, remove the vent valve support retaining ring and then remove the valve support, valves, and springs.

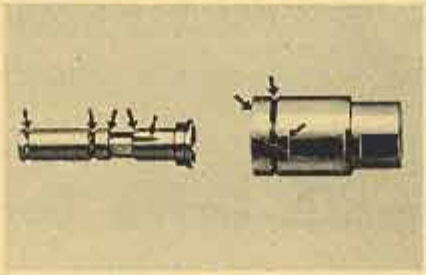


Fig. 2

A fine stone or a piece of finely gritted emery cloth should be run over the grooves and edges indicated in figure 2. When performing this operation, the edges of the grooves should not be "broken" or chamfered. A good way to use emery cloth is to hold the cloth on a flat surface and then rotate the valve on the cloth as shown in figure 3.

Fig. 3

Figure 4 shows the valve support. This support does not move in the governor housing and should be only snugly fitted. In other words, it should not bind when being installed nor should it be excessively loose. The outside diameter of the support should not be reduced otherwise excessive oil will leak past it and upset the operation of the governor.

Before reassembling the unit, the friction surfaces of the valves should be polished with crocus cloth or a worn or nearly smooth piece of emery cloth. All the parts then should be *thoroughly* washed in kerosene or cleaning solvent.

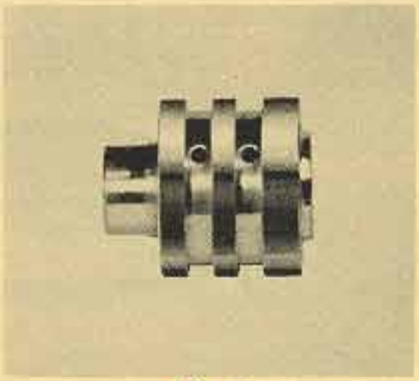


Fig. 4

After cleaning, check the governor valve for moving freely in the housing and the vent valve for moving freely in the valve support. After the unit is assembled again check the movement of the valves. The governor housing to drive shaft retaining screws should be tightened to a torque of six foot pounds.

Governor Flyweight Ring Tool

A simple tool to take the place of long-nosed pliers when removing a flyweight retaining ring can be made up in a short time. This tool will not burr the groove when removing the ring.

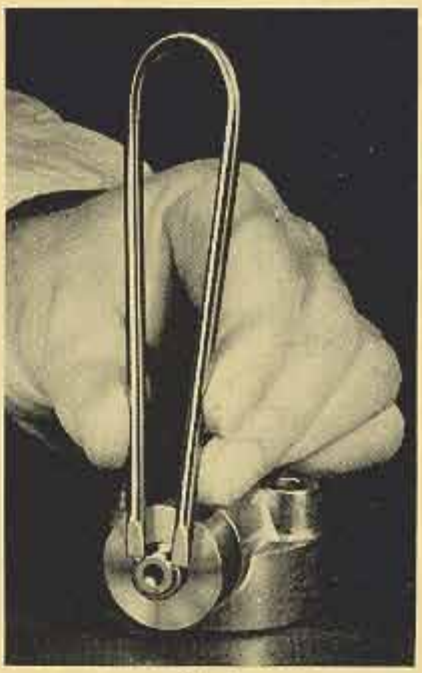


Fig. 1

To remove the ring, pull the vent valve outward so that the ring is out of the recess in the flyweight. Place the ends of the tool on the ends of the ring, as shown in figure 1, and then strike the top of the tool.

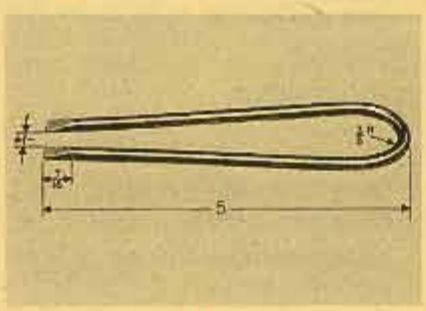


Fig. 2

Figure 2 shows the simplicity of the tool which is made up as follows:

Use steel wire and bend as shown. The wire used in the tool illustrated is $\frac{3}{16}$ inch in diameter.

Grind down the ends of the wire to shape them like screw driver blades $\frac{1}{16}$-inch thick at their tips.

Square off the ends of the tool and remove the burrs.

Control Timing Valve Spring Seat

Ultramatic Drive

When cleaning the control timing valve with air, care should be used not to blow out the spring seat. The body is now drilled through and the seat is held in position by a pin. It is easy to lose the seat and without the seat there will be no low range pressure.

Additional Information on Throttle Valve Lever Adjustment

Ultramatic Drive

Service Counselor, Vol. 24, No. 4, April, 1950, describes the procedure for adjusting the throttle valve lever using the adjusting gauge—PU 334.

Ultramatic units having a number above 115749 for the Eight and above 7987 for the Super Eight and Custom Eight incorporate the latest design control assembly in which the throttle valve spring acts as a stop for the valve shaft when the outer lever is rotated counterclockwise.

The throttle valve lever, on these later units, is adjusted as outlined in the April Service Counselor except that the operation described on page 15, second column, second-last paragraph changes to:

"Next, rotate the lever in the opposite direction (counterclockwise) until the valve shaft contacts the spring, but does not compress it, and then slowly continue to turn the lever on the shaft to a position which will permit the gauge to be installed as shown in figure 3. The clamp screw then should be tightened to a torque of 80 inch pounds."

It is suggested that a reference note such as "See May Service Counselor be written at the bottom of page 15 to tie in the two articles on throttle valve lever adjustment.

Sticking Throttle Linkage

Ultramatic Drive

Sticking throttle control linkage has been reported on several Ultramatic Drive equipped vehicles.

The sticking was traced to corrosion which caused the relay lever or bell crank, located on the right side of the transmission bell housing, to bind on its pivot shaft.

In the event this condition is encountered, the bell crank should be removed and the bore of the crank and the shaft thoroughly cleaned and lubricated with Lubriplate.

After the bell crank has been reinstalled, it is advisable to thoroughly pack the joint with Lubriplate so that it will act as a seal against the admission of dust and water.

Corrections

Please make the following corrections in Service Counselor Vol. 24, No. 3, March, 1950.

In the article "Late Type Super Eight Engines," the camshaft bearing listed under Code No. 5.0101, part number 410838 should be No. 5 instead of No. 2.

In the article "Raising Steering Wheel," the information given applies to 22nd Series Eights and Super Eights; however, on 23rd Series models, it applies only to the Eight.

The tool number shown under the illustration in the upper right corner of page 15 of Service Counselor, Vol. 24, No. 4, April 1950, should be PU-334 instead of PU-344. The tool number as it appears in the text is correct.

Ultramatic Torque Specifications

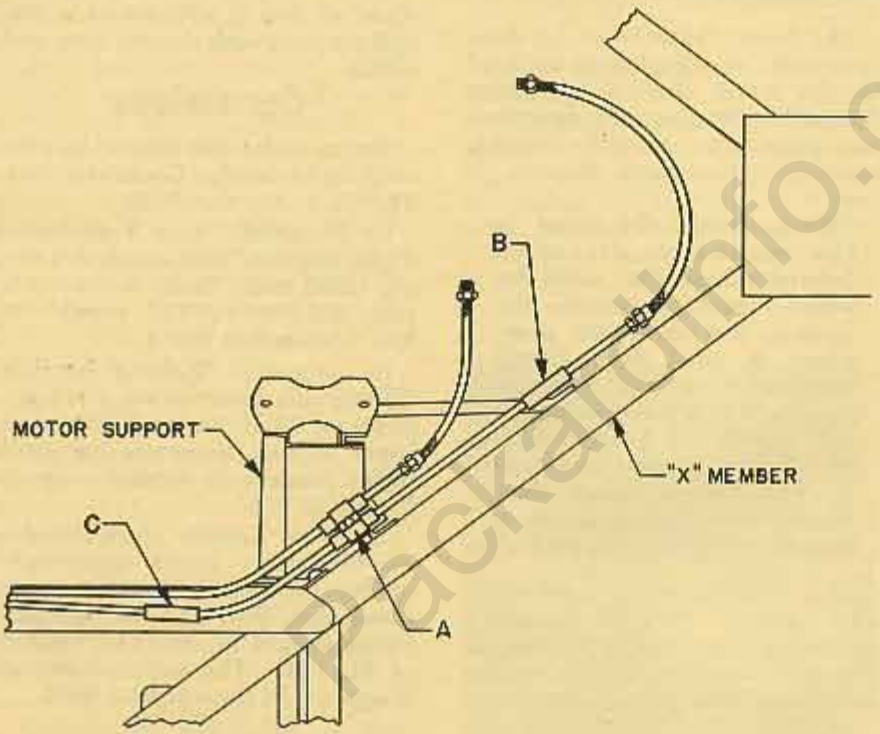
	Torque Ft. Lbs.
Bell Housing Attaching Screws	55–60
Brake Band Adjustment Screw..Tighten to 20 ft. lbs.–Then back off 1¾ turns	
Control Valve Body (upper to lower) Screws	5– 6
Control Valve Body (upper) to Case Screws	9
Control Valve Body Separator Screw	5– 6
Converter Clutch Housing to Flywheel Screws	25–30
Converter First Turbine Attaching Cap Screws	15–18
Converter Second Turbine Attaching Cap Screws	7½–8½
Converter Pump Attaching Cap Screws	20–24
Converter Outlet Valve Assembly	50
Converter Pump Shaft Attaching Screws	15–18
Converter Reactor Shaft Attaching Screws	15–18
Flywheel Housing Lower Cover Screws	25–30
Front Oil Pump Assembly Screws	7½–8½
Governor Adaptor Screws	7½–8½
Governor Housing to Drive Shaft Flange Screws	6–7½
Oil Cooler Hose Assembly	30
Oil Strainer Screws	15–18
Oil Pan Screws	10–12
Planetary Cage Bolts	15–18
Reaction Clutch Housing to Bell Housing Screws	15–18
Rear Oil Pump Assembly Screws	15–18
Rear Housing Assembly Attaching Screws	15–18

Hydraulic Disturbance in Ultramatic Drive Units

A hum or whine, noticeable below approximately 15 MPH on deceleration only, occasionally may be encountered in Ultramatic Drive equipped vehicles.

This condition, when it exists, is a hydraulic disturbance which is created inside the transmission unit and then transmitted to the oil cooler lines where it is amplified.

Cars produced after April 13, 1950 are equipped with additional rubber insulators at the transmission end of the cooler lines to dampen out the disturbance should it develop. The locations of the insulators are shown in the accompanying illustration.



An insulator kit, part number 410885, is available to correct this hydraulic disturbance when it exists in vehicles in service.

To install the insulators, first remove and discard the original clips at points "A" and "B".

Place insulators around the oil lines at point "A" positioning them so that the split in the insulator is horizontal or, in other words, along the side of the lines.

Anchor the lines to the motor support using the new clip, screw, nut, and washer supplied in the kit. These parts are installed by placing the clip over the insulators, inserting the screw through the clip and motor support from the top, and then adding the washer and nut. Placing the nut in a socket with an extension bar will facilitate starting the nut.

Add insulators at points "B" and "C". No clips are used at these points. It is important that the lines do not contact the "X" member, the frame sub-channel, or the body floor pan at these points.

The detail parts which make up the kit are listed below.

410885 Transmission Oil Cooler Tube Assembly Insulator Kit.

This kit includes

426753 Tube Assembly Clip (1)

426752 Tube Assembly Clip Insulator Hose (4)

G 100001 Screw (1)

G 117047 Nut (1)

G 103339 Washer Plain (1)

Liberal Reward!

Every Packard Blue Coral Treatment sold results in a profit reward for you and adds up to plus business for your Service Department.

Now is the time to promote this money making service and here's the "sales tools" that will make your job easier:

1 Large, colorful Packard Blue Coral Canvas Banner

1 Book of Packard Blue Coral advertising gummed stickers

1 Newspaper mat for use in local advertising and

A sizeable quantity of Packard Blue Coral envelope stuffers.

ALL THIS FOR FREE!

Simply by ordering one or more cases of Packard Blue Coral and its equivalent in Packard Blue Coral Sealer from your Zone warehouse.

Don't delay, get an order in today!

Watch Parts Change Notes

Both Zone and Dealer Parts Men should make full use of all "Service Part Release and Change Notices."

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 delays.

Starter Safety Switch

Ultramatic Drive

Two types of control valve starter safety switches are in use on Ultramatic Drive units in service and these switches are not interchangeable.

Replacement switches should be ordered under the following part numbers.

421319 Control Valve Starter Safety Switch. Used prior to transmission numbers 5361 and 102664.

423104 Control Valve Starter Safety Switch. Used after transmission numbers 5360 and 102663.

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