

SERVICE COUNSELOR

PARTS • ACCESSORIES • PRODUCT

PACKARD MOTOR CAR COMPANY



Counselor

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Striking A New High in Service Campaigns for Packard Dealers!

The new 1950 Packard Service Development Direct Mail Program is Packard conceived and Packard administered. It will do a fast stepping service selling job for you and is outstanding in quality.

The campaign is based on monthly service promotions that *everybody can get behind and push*—it offers a golden opportunity to *step-up service department profits in 1950*. It promotes the Packard dealer, his service department and everything he has to offer.

You'll agree that it's good looking and it sells. Your zone office has all the details.

Watch for you new 1950 Packard Service Development Program and get in on the profit parade.



Pushing or Towing Ultramatic Drive Equipped Cars

Occasionally Ultramatic Drive equipped vehicles are pushed to start the engine or, if disabled as the result of a collision, are towed into the Dealer's service station.

If it is necessary to push the car to start the engine, which sometimes is done if the battery is weak, the selector lever should be placed in the neutral position, "N," and the ignition switch turned on. When the car reaches a speed of 25 miles per hour, the selector lever should be moved to the high range position, "H," at which time the engine will turn over.

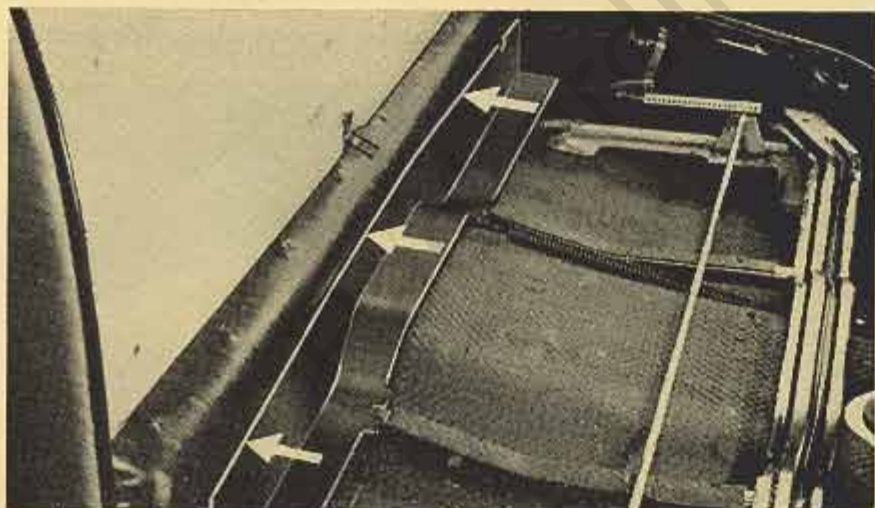
A disabled vehicle may be towed on the rear wheels if the Ultramatic Drive unit is not damaged and no oil has been lost; however, the selector lever *must* be placed in the neutral, "N," position. If the selector lever is in any other position, unnecessary damage may result. Towing speed should be

limited to 30 miles per hour and long distance towing (over approximately 300 miles) is not recommended.

Sometimes a collision may damage the shift linkage to the extent that the selector lever cannot be shifted to the neutral, "N," position. In this event, the driveshaft should be disconnected at the rear or differential end and suspended from the frame using wire or rope. The wire or rope should be attached in a manner that will not permit the driveshaft to move rearward otherwise the front universal joint flange may slide out of the transmission rear housing and allow the front end of the shaft to drop if it moves to the rear far enough.

This procedure also should be followed if the transmission is damaged, the transmission oil pan distorted, or when oil is lost.

Installing Front Seat Cushion Covers



When installing front seat cushion covers, it is a good idea to inspect the flange shown in the accompanying illustration. Sometimes this flange presents a rough, distorted edge of metal to the seat cover material which, after re-

peated rubbing, will wear through

After inspecting the flange, flatten out any high spots with a hammer and, if necessary, remove the burr with a hand grinder, a file or a piece of coarse emery cloth.

**THERE IS A NEW DEAL COMING ON
PACKARD BRAKE FLUID
WATCH FOR IT ABOUT APRIL 1—
YOU WILL LIKE IT**

Reactor Shaft End Play

The reactor shaft end play in Ultramatic Drive units has been changed to provide more running clearance for the direct drive clutch driven plate. The direct drive clutch is less susceptible to "hang-on" with this additional driven plate clearance.

The original setting was .018 to .022 inch as specified on page 2 of the booklet "Servicing the Ultramatic Drive."

The new setting is .010 to .015 and whenever a converter assembly is disassembled for any reason the reactor shaft end play should be set to the new specification. The specifications in the booklet also should be changed accordingly.

To provide a means for more positive control of the shaft end play, thrust washers now are available in graduating thicknesses of .005 inch and range from .070 to .115 inch. Formerly, the washer ranged in thickness from .060 to .090 inch in .010 inch graduations.

The new thrust washers are available under the following part numbers:

Part No.	Thickness
423190	.070
423191	.075
423192	.080
423193	.085
423194	.090
423195	.095
423196	.100
423197	.105
423198	.110
423199	.115

Raising Steering Wheel

22nd and 23rd Series
Eight and Super Eight

Some owners find it more comfortable to drive with a higher steering wheel than is standard.

This change can be accomplished on the 22nd and 23rd Series Eight and Super Eight by installing the Custom Eight steering column to dash bracket. This bracket is shorter than those used on the Eight and Super Eight and raises the steering wheel approximately one inch.

When this bracket is changed, the steering gear to frame bolts should be loosened before attach-

ing the bracket cap to be sure that the alignment of the gear is correct.

If any strain on the column is evident the bolt holes in the gear should be slotted just enough to permit free entry of the bolt.

The Custom Eight column cannot be raised but in some cases the front seat track to floor shims can be removed which will give added clearance between the seat and the steering wheel.

The Custom Eight steering column to instrument board bracket may be ordered under part number 395041.

New Fuel Tank Filler Tube and Cap

The design of the gasoline tank inlet tube was recently changed. Before this design change, the locking flange which is engaged by the filler cap was on the inside of the neck, and venting was taken care of through the filler cap.

The locking flange on the new design has been turned outward and this, of course, called for a new design of the filler cap. The new cap is not vented. Instead, a small depression has been stamped across the filler neck flange (see illustration) so that when the filler cap is tightened down this depression prevents an airtight seal.



When spraying undercoating, it is possible for this material to load up under the filler cap, so after undercoating has been applied it is well to inspect both the filler cap and the venting depression. Scrape them clean if any material has adhered to them which would affect venting of the fuel tank.

Ultramatic Control Valve Lever and Link

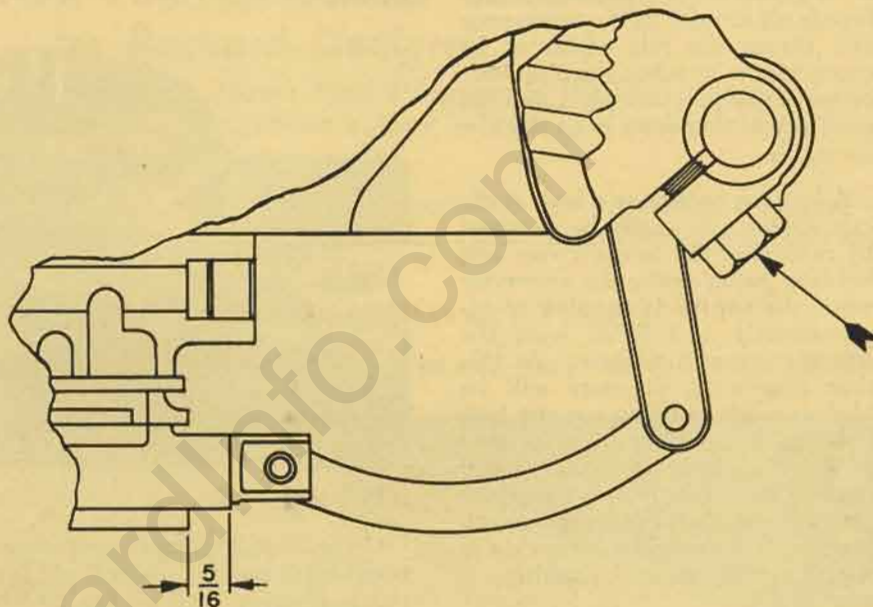
A new type control valve lever and link assembly now is being used in Ultramatic Drive units in production.

The early or first design assembly incorporates a two-piece, adjustable link which is adjusted so that the rear end of the control valve is $\frac{3}{4}$ inch out of the control valve lower body.

The new type valve lever and link assembly, shown in the accompanying illustration, incorporates a solid link in place of the two-piece link. To adjust the new type linkage, loosen the detent lever

cap screw indicated by the arrow. Set the detent lever in the reverse position. Set the control valve to the $\frac{5}{16}$ inch dimension shown and tighten the cap screw to 50 ft. lbs. torque.

The control lever shaft should have approximately .045 inch end play and this also is governed by the position of the detent lever. It may be necessary to again loosen the cap screw and move the detent lever on the shaft to obtain this end play. When this is done, the $\frac{5}{16}$ inch dimension should not be disturbed.



Late Type Super Eight Engines

Super Eight engines for models 2302-22-32 now being built in production are equipped with hydraulic tappets. These engines are identified by the suffix letter "F" after the engine serial number.

Parts which are not interchangeable with the conventional tappet type Super Eight engine may be ordered under the following part numbers.

Code No.	Part No.	Name	No. Req.
5.0100	419432	Camshaft.....	1
5.0101	410837	Camshaft Bearing—No. 1.....	1
	410838	Camshaft Bearing—No. 2.....	1
5.0500	410842	Cylinder & Piston Assembly.....	1
	410833	Cylinder & Piston Assembly (Used with U. D.)..	1
	412460	Oil Gallery Plug.....	1
5.0513	403105	Oil Passage Connecting Tube Assembly Sending Unit Tee.....	1
5.1015	419373	Oil Filter Inlet Tube Assembly.....	1
5.1016	412461	Oil Filter Outlet Tube Assembly.....	1
5.1711	419600	Valve Tappet Assembly—Standard Hydraulic....	16
	410843	Valve Tappet Assembly—.001 Oversize.....	16
	410844	Valve Tappet Assembly—.002 Oversize.....	16
5.1715	410845	Tappet Plunger Assembly.....	16

Ultramatic Drive Converter Oil Leak

We have heard of a few instances where an excessive amount of oil was dripping out of the drain hole in the flywheel housing lower cover. An inspection indicated that the oil was not leaking past the bell housing oil seal but past the converter pump gasket. However, replacing the gasket did not correct the leak.

In these particular instances, the oil was not being thrown out past the gasket in a manner which would indicate a defective or crimped gasket; instead, the oil was finding its way past an inner section of the gasket to the cap screws and emerging from under the heads of the screws. This condition can exist if the gasket is not compressed uniformly all around its circumference and across the full width of its contact faces or when the clearance between the pressure plate and the shoulder of the pump is on the low limit side.

A leaking gasket or a leak at the cap screws can easily be detected by removing the lower cover and holding paper under the converter while the engine is running at approximately 800 RPM with the selector lever in reverse. At this time the pump pressure will be high enough to bring out the leak if it exists at either of these two points. A leak at either point necessitates removing the converter pump, inspecting the clutch housing, checking the clearance at the pump flange, and installing a new gasket.

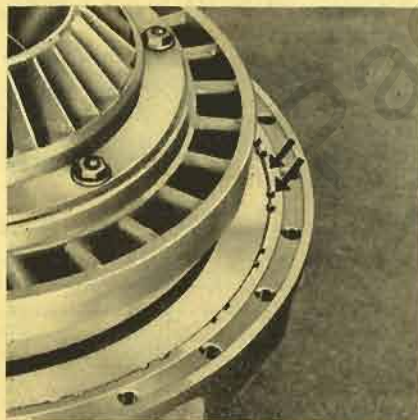


Fig. 1

After the pump has been removed, inspect the inner edge of the clutch housing flange and the spline ends indicated in figure 1. These should

be chamfered and there is a remote possibility that the chamfering operation may have been omitted. If the sharp edges are not chamfered, they may shave particles of metal off the outside of the shoulder of the pump when it is assembled and these metal particles may hold the inner part of the pump flange away from the gasket and cause a leak.

The first turbine and the reactor and shaft assembly can be lifted out of the clutch housing as an assembly and the parts remaining in the housing should be taken out if it is necessary to file and chamfer the sharp edges. The housing then should be thoroughly cleaned to remove all filings.

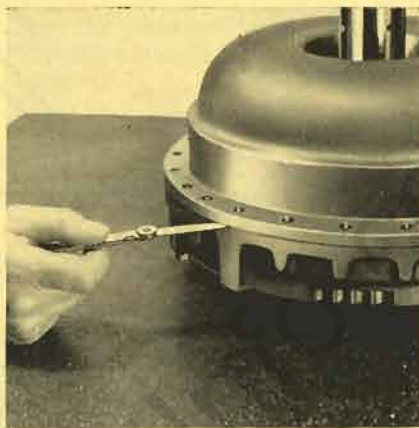


Fig. 2

On reassembly, the desired clearance between the flange of the pump and the face of the clutch housing, when measured without a gasket, is .007 inch or less. This clearance also should be consistent within .002 inch all around the pump flange. Figure 2 shows the clearance being checked.

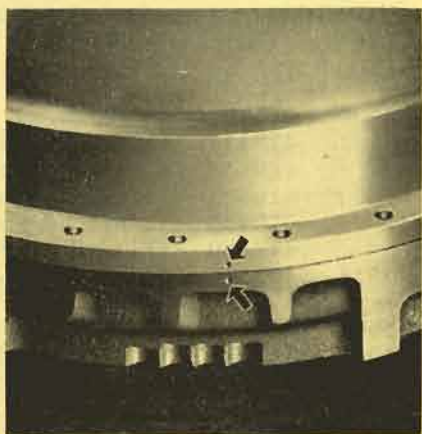


Fig. 3

If the clearance varies more than .002 inch, rotate the pump approximately $\frac{1}{4}$ -turn at a time and each time check the clearance to obtain a pump position where the variation in clearance is the lowest. Sometimes, repositioning the pump in this manner will bring the variation within .002 inch. After finding this lowest variation position, the next step is to mark both the pump and the clutch housing with a prick-punch. See figure 3.

CAUTION

The marks *must* be made with a prick-punch and *only* between the bolt hole bosses. A chisel definitely must not be used and the bolt hole bosses never should be marred in any way.

Paint should be used if a prick-punch is not available.

To reduce the clearance where it is on the high side, carefully dress down the offending section of the shoulder of the pump (figure 4) with a mill file and then recheck the clearance after lining up the punch marks.

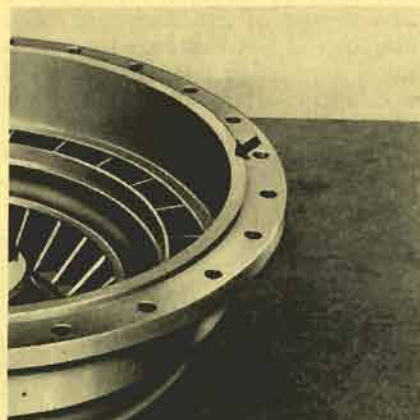


Fig. 4

If the clearance exceeds .007 inch after a variation of .002 inch or less is reached, the shoulder should be dressed down all around its circumference. This should be done carefully so that the clearance variation will not be disturbed.

Complete the reassembly of the converter by installing a new gasket, lining up the punch marks on the pump and clutch housing, and then tightening the cap screws to a torque of 15-18 ft. lbs. It is suggested that the screws be tightened to the high limit of 18 ft. lbs.