

# SERVICE Counselor

PACKARD MOTOR CAR COMPANY



# Counselor

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SEPTEMBER, 1953

## Automobile Air Conditioning School

During the latter part of June and the early part of July, a new type of school was held in Detroit on the subject of Air Conditioning. From each zone one service representative was invited to attend. For three days these men were instructed in a subject that was entirely new to them. These men, in turn, will take this knowledge back to their respective zones to set up their own zone conducted schools.

Under the able direction of Alec Elkins of the factory, these men were taught the fundamentals, construction and operation, servicing and trouble shooting of the Packard air conditioning system.



The service representatives were very enthusiastic about this subject and all were eager to get home and try some experiments on their own home refrigerators.

## Transmission Throttle Valve and Timing Valve Kit

Ultramatic

Occasionally an owner will complain of engine runaway when shifting his Ultramatic transmission from low to high range. While it is not recommended that the transmission be used in this manner, some owners prefer the additional acceleration they obtain by starting in low and then shifting to high range.

A kit consisting of a redesigned throttle valve and spring, timing valve and timing pin and a stronger governor inlet valve spring is available for service which will reduce engine runaway satisfactory on low to high shifts.

The redesigned throttle valve increases throttle pressure faster after initial carburetor throttle opening, thereby increasing modulated pressure to the high range clutch.

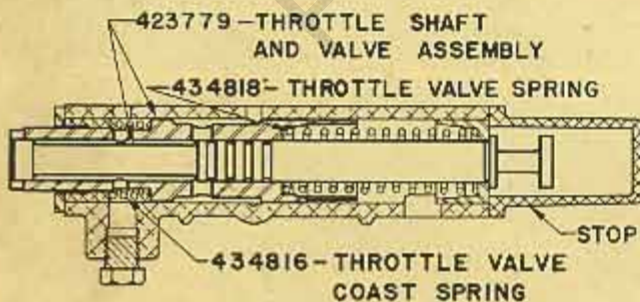
The redesigned timing valve and timing pin slows up the release of the low range brake piston, therefore, the engine does not runaway excessively before the high range clutch engages.

Due to the increase in throttle pressure it is necessary to have higher governor pressure to obtain proper direct drive clutch engagement. This is accomplished with the stronger governor inlet valve spring.

It is important that all of the parts in the kit be used when making this change so as to obtain the proper oil pressures to all parts involved.

The kit can be installed by following the procedure outlined:

1. Drain the Ultramatic oil and remove the transmission oil pan. It is not necessary to drain the converter.
2. Remove the lower half of the valve body assembly. Remove the two screws from the throttle valve stop and remove stop. Remove all of the throttle valve parts.

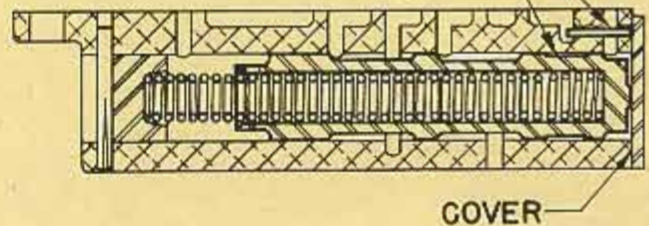


SECTION THRU THROTTLE VALVE

3. Assemble and install the new throttle valve parts as shown in the illustration using the old throttle shaft bushing No. 421858 and throttle valve spring seat No. 423013. Be sure that the new coast spring is in place, and the valve and throttle shaft are free in their bores. Install the stop and tighten the two screws securely.

G 137474 - TIMING VALVE  
TIMING PIN

434758 - TIMING VALVE



SECTION THRU TIMING VALVE

4. Remove the two screws from the timing valve cover and remove the cover and timing valve. Install the valve timing pin in the small hole just above the timing valve bore. See illustration.

Install the new timing valve with the old spring No. 421992 as shown in the illustration. Be sure the valve is free in its bore. Install the timing valve cover and tighten the two screws securely.

5. Reinstall the valve body assembly, oil pan and bring the oil up to level.
6. Remove the governor cover and governor housing assembly. Disassemble the governor housing and install the new governor inlet valve spring. Be sure the governor valves work freely. Reinstall the governor housing assembly and cover.
7. Adjust the throttle valve as described in Service Counselor, Vol. 27, No. 2, February, 1953. The throttle valve kit is available for the 24th, 25th, 26th Series Ultramatic transmission at the parts warehouse under Part No. 436859.

The kit consists of the following:

Part No.	Description	No. Req'd
423779	Transmission control throttle shaft and valve assembly	1
434818	Transmission control throttle valve spring	1
434816	Transmission control throttle valve coast spring	1
434758	Transmission control timing valve	1
G 137474	Transmission control timing valve timing pin	1
434817	Transmission governor inlet valve spring	1

## Chrome Wire Wheel Balance Weights

A few reports have been received of the balancing weights coming off the chrome plated wire wheels while driving over rough roads.

This is due to the increased thickness of the wheel rim which causes a standard balancing weight retaining clip to spread so far that it does not grip the rim flange. They also have more of a tendency to come off because of the hard, slick surface of the chrome plating.

A new type weight is now being used in production on the chrome wire wheels and will also be used on the painted disc type wheels.

We are making this new type weight available as a service part until such time as vendors make a satisfactory weight which will be available through your local jobbers.

The new weight will only be carried in the 2 oz. size; therefore, if less weight is needed, the ends of the weight can be cut off to obtain the desired weight.

The new type weight is available at the parts warehouse and may be ordered under Part Number 455455.

## Hydraulic Tappet to Valve Stem Clearance

Several reports have been received of hydraulic tappet to valve stem clearance exceeding the .070" limits.

While it is *very* important that the clearance is not less than .030", it is permissible to allow up to .096" clearance as the hydraulic tappets will take up this additional clearance and operate quietly.

## Ultramatic Transmission Assembly Lifting Bracket

The two holes in the transmission housing formerly used for attaching the transmission lifting bracket PU-320 have been eliminated in production which made it necessary to design a new tool.

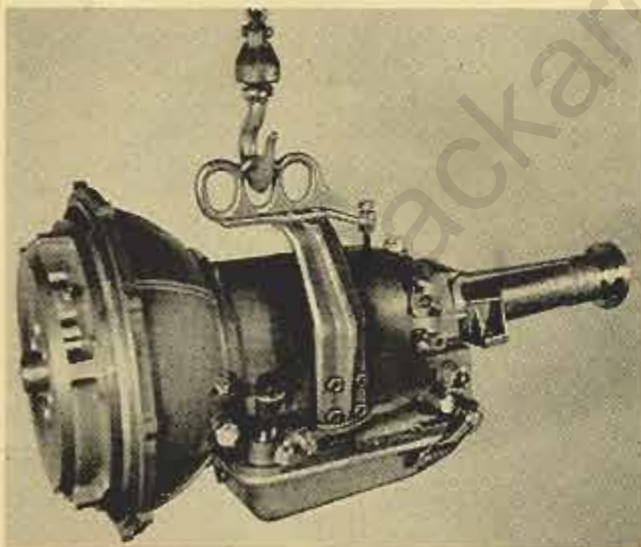
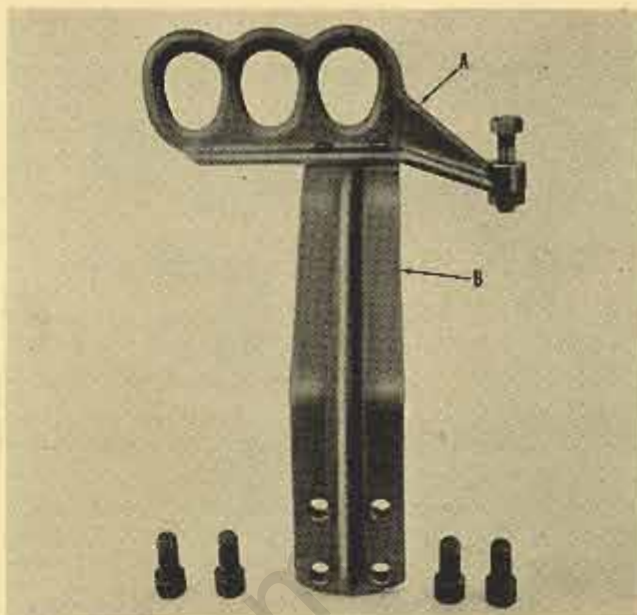


Fig. 1 illustrates the new lifting tool PU-320-A attached to a transmission which will permit the transmission to be assembled to an engine stand by using the opposite attaching boss.

If you previously purchased PU-320 Lifting Bracket it will not be necessary to purchase the new tool in its entirety. You can bring the old tool up to date by purchasing only the Bracket Arm, Part No. PU-320-B ("B" Fig. 2) which is furnished complete with the cap screws. Remove the old lifting "eye" "A" Fig. 2 from the old yoke with the two arms and substitute the new



Bracket Arm PU-320-B and your Lifting Bracket is just like the new one.

The new Lifting Bracket is listed as follows:

PU-320-A Transmission Assembly Lifting Bracket Assembly—Price \$11.50.

PU-320-B Transmission Assembly Lifting Bracket Arm—Price \$6.25.

These tools should be ordered directly from K. R. Wilson, 215 Main Street, Buffalo 3, New York.

## Nylon Speedometer and Governor Driving Gears

### Ultramatic

All 26th Series Ultramatic transmissions beginning with transmission serial numbers 226040, 91778, 31640, 10001, have a speedometer and governor driving gear of nylon material instead of steel or brass. The governor pinion and speedometer pinions are also made from a nylon material.

When a steel governor pinion or a steel speedometer pinion is mated with a nylon driving gear, there is danger of the steel gears cutting and damaging the nylon gear; therefore, when replacing a governor assembly, governor adapter assembly, governor pinion or speedometer pinion on an Ultramatic transmission having a nylon driving gear, the governor and speedometer pinion must be of nylon material.

The nylon driving gear, nylon governor pinions and nylon speedometer pinion are listed in your parts book; it is suggested that a few of these be stocked so as to take care of any replacement combinations that might occur.

## Replacement Generators

2206-26—2306

Part Number 412375 generator assembly (35 Amp.), Auto-Lite Number GDZ-4801-V, has been canceled for service replacement. It has been superseded by Part Number 416181 generator assembly (40 Amp.), Auto-Lite Number GGW-6001-E, for models 2206-26-2306.

When installing the 40 Amp. generator assembly on the above models, it may be desirable to install a 40 Amp. current and voltage regulator, so as to obtain the full 40 Amp. output.

The 40 Amp. current and voltage regulator is available at the parts warehouse under Part Number 416183 (Auto-Lite VRP-4402-C.)

## Service Replacement Engine

2003-06, 2103-06-26

2206-13-26-33, 2313

### SUPPLEMENT

Please refer to Service Counselor, Volume 27, Number 7, July, 1953, on the above subject.

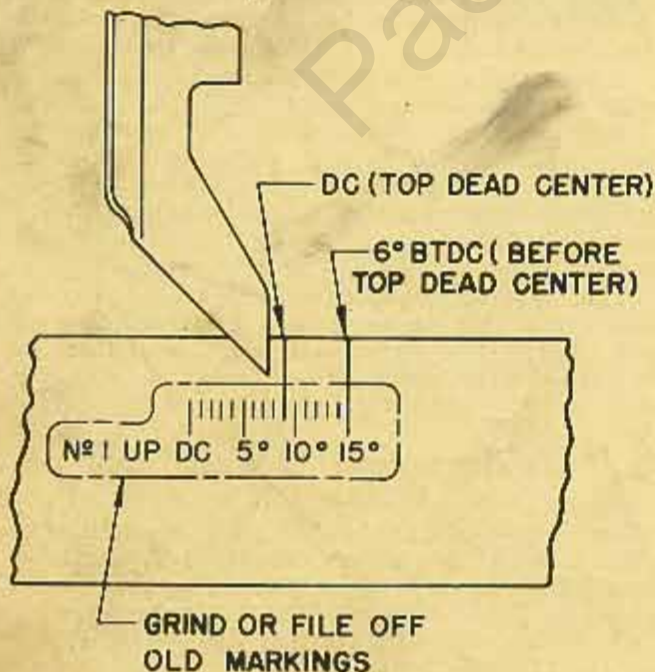
A fan blade spacer, part number 436873, and longer fan blade attaching screws, part number G182689, are now furnished in the attaching parts kit, part number 436818.

This spacer relocates the fan blades and eliminates the need of cutting  $\frac{1}{4}$ " off the blades to clear the vibration damper.

The vibration damper assembly can now be used from the old engine; therefore, part numbers 304791, motor vibration damper (less hub and pulley), part number 302594, damper springs (6), and part number 304309, damper spring plugs (6), are no longer furnished in the attaching parts kit.

A new timing indicator, part number 403670, is included in the kit, however, it will be necessary to change the timing marks on the old vibration damper along with using the timing indicator furnished in the kit.

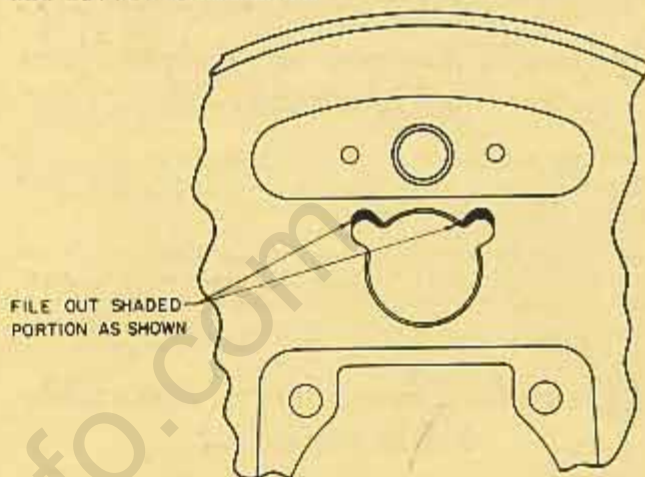
Before installing the old vibration damper on the new engine, using a chisel, extend the  $9^\circ$  mark across the damper flange for the "DC" marking. Extend the  $15^\circ$  mark across the damper flange for the  $6^\circ$  "BTDC" which is used for ignition timing "See Illustration."



After the new timing marks "DC" and  $6^\circ$  "BTDC" are put on the damper flange, the old marks should be ground or filed off.

## Front Brake Support Plates

Front brake support plates, part number 237711, (right) and part number 237710 (left) will be superseded by part numbers 418773 (right) and 418772 (left) for the following models, 1500-1-2, 1603-4-5, 1701A-3A, 1801A-3A, 1901A-3A, 2001A-3A, 2226-2213, when present stock of part numbers 237711 and 237710 is exhausted.



When installing the new support plate on some of the above models, it will be necessary to file out the support plate to accommodate the wheel cylinder. File out shaded portion as shown in illustration.

## High Range Clutch Assembly

### Ultramatic

A new improved transmission clutch assembly (high range clutch), Part Number 423767, has 12 plates, lubrication holes added to the outer section of the hub and has the vent springs and holes removed.

This clutch assembly will be shipped by the Parts Warehouse for service replacement for all 23rd, 24th, 25th, and 26th Series cars.

Part Numbers 423085, 423768 (10 plates) and Part Number 421893 (12 plates) transmission clutch assemblies have been discontinued for service. Detailed parts for the 10 plate clutch will still be furnished.

## Servicing the Differential

### 26th Series

#### ADDITIONAL INSTRUCTIONS

Please add the following instructions to paragraph 7 from the end of the article "Servicing the Differential" in Service Counselor, Vol. 27, No. 3, March, 1953.

After setting the pedestal spread to  $.010$ " as described in the paragraph, rotate the ring gear several revolutions, then recheck the pedestal spread to see if there is any loss of spread, due to seating the bearing rollers in the cups. If any spread has been lost, it will require resetting the side bearing adjusting nuts again to obtain the  $.010$ " spread.