

# SERVICE Counselor

PACKARD MOTOR CAR COMPANY



VOL. 27, NO. 8

AUGUST, 1953

## Ultramatic Serial Numbers

### 26th Series

Please cancel the article "Ultramatic Serial Number 26th Series," in your April, 1953 Service Counselor, Vol. 27, No. 4.

Four blocks of Ultramatic transmission serial numbers are used in production for the 26th Series cars and are described in the following transmission serial number chart which is issued for your ready reference.

In using the chart it will be necessary to check the rear axle gear ratio (stamped at 11 o'clock location on carrier flange) with the car model to determine the number of clutch plates, speedometer pinion teeth, governor flyweight, etc.

You will note that two transmissions are listed as standard for the 2611 Model, one is for early production and has a universal joint flange for the  $2\frac{3}{4}$ " diameter propeller shaft and the other is for the  $2\frac{1}{2}$ " diameter propeller shaft.

## Ultramatic Transmission Chart

### 26th Series

#### Serial No. 214961 and Up

Model	Rear Axle Gear Ratio	Universal Joint Flange	Speedo Pinion	Governor	Hi-Range Clutch
2601	3.9 Optional	423246	22-Teeth	434516 Pinion 423221 Flyweight	10-Plate
2601	4.1 Optional	423246	23-Teeth	434516 Pinion 423222 Flyweight	10-Plate
2601	3.54 Standard	423246	20-Teeth	434516 Pinion 421063 Flyweight	10-Plate

#### Serial No. 75685 and Up

2611-31 -02-06	3.9 Optional	423255	22-Teeth	434516 Pinion 423221 Flyweight	12-Plate
2611-31 -02-06	4.1 Optional	423255	23-Teeth	434516 Pinion 423222 Flyweight	12-Plate
2602-06 -31	3.54 Standard	423255	20-Teeth	434516 Pinion 421063 Flyweight	12-Plate
2611	3.54 Optional	423255	20-Teeth	434516 Pinion 421063 Flyweight	12-Plate
2613	4.36 Standard	443194	23-Teeth	434516 Pinion 423222 Flyweight	12-Plate

#### Serial No. 20001 and Up

2601	3.23 Optional	423246	18-Teeth	434514 Pinion 421063 Flyweight	10-Plate
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Model	Rear Axle Gear Ratio	Universal Joint Flange	Speedo Pinion	Governor	Hi-Range Clutch
2631	3.23 Optional	423255	18-Teeth	434514 Pinion 421063 Flyweight	12-Plate
2611	3.23 Standard	423255 2 $\frac{3}{4}$ " Dia. Shaft	18-Teeth	434514 Pinion 421063 Flyweight	12-Plate
2626	3.9 Standard	443194	21-Teeth	434516 Pinion 423221 Flyweight	12-Plate
2633	4.1 Standard	423255	24-Teeth	434516 Pinion 423222 Flyweight	10-Plate
Serial No. 10001 and Up					
2611	3.23 Standard	423246 2 $\frac{1}{2}$ " Dia. Shaft	18-Teeth	434514 Pinion 421063 Flyweight	12-Plate
2611	3.54 Optional	423246	20-Teeth	434516 Pinion 421063 Flyweight	12-Plate
2611	3.9 Optional	423246	22-Teeth	434516 Pinion 423221 Flyweight	12-Plate
2611	4.1 Optional	423246	23-Teeth	434516 Pinion 423222 Flyweight	12-Plate

## Universal Joint Flange Holding Tool

### 26th Series

Illustrated is the new universal joint flange holding tool PK-21 that is required to hold the flange while tightening the flange nut to properly collapse the pinion bearing sleeve and to obtain the proper pinion bearing preload. This tool is adaptable to any type flange used on the 26th Series cars as well as most previous models.



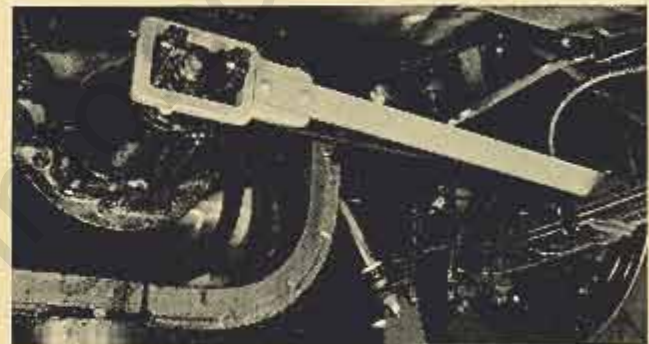
Due to the increased size and stiffness of the pinion bearing collapsible sleeve used in the 26th Series differential, it is very difficult to collapse the sleeve and to also tighten the flange nut tight enough to obtain the proper pinion bearing preload without this holding tool.

It may be necessary to use a piece of pipe on the handle of the holding tool so it will rest on the floor while the sleeve is being collapsed, or install the differential case in the holding fixture so that the holding tool handle will rest against the bench while tightening the flange nut to collapse the sleeve and setting the pinion bearing preload.

An alternate method of using the rear axle case and car as a holding fixture is offered as a service tip and may be accomplished by following the procedure outlined.

1. Install the pinion shaft, bearings, sleeve, oil seal, universal joint flange and nut in the housing.
2. Install this assembly in the rear axle case and secure with a few flange nuts.
3. Place the holding tool over the flange back of the

flange "ears" so that they will not be bent or damaged. Allow the holding tool handle to rest against the frame or spring.



4. Using a 1 7/16" thin wall socket tool No. J-5512 and a long handled wrench, tighten the flange nut until the proper pinion bearing preload has been obtained as described in Service Counselor Vol. 27, No. 3, March, 1953.

5. After the proper pinion bearing preload has been obtained, the assembly can be removed from the rear axle case to install the differential case assembly, set the gear lash and side bearing pedestal spread.

Tool orders should be sent direct to K. R. Wilson, 215 Main Street, Buffalo, New York. Price \$7.25

## Windshield Trim Moulding Tool

### 26th Series

Illustrated is the new tool J-5511 that is required to properly install the windshield outside upper and both end trim mouldings used on all 26th Series models.



The tool application is illustrated in Service Counselor Vol. 27, No. 5, May, 1953, "Windshield Replacement".

The tool application of the Weatherstrip Insert Seal Replacer Tools J-4734-1 (right) and J-4734-2 (left) is illustrated in the same Service Counselor article. They are also used to install the insert seals, when replacing a rear window as described in Service Counselor, Vol. 27, No. 6, June, 1953.

An illustration of the Weatherstrip Insert Seal Replacer Tools is shown in Service Counselor, Vol. 25, No. 5, May, 1951.

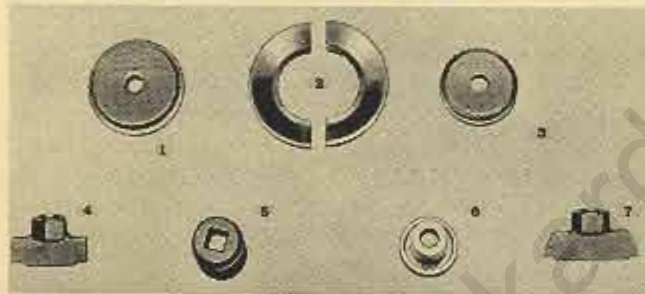
Tool orders should be sent direct to Kent-Moore Organization, Inc., 3044 W. Grand Blvd., Detroit 2, Michigan.

## New Differential Tools

### 26th Series

Illustrated are the new essential tools required to properly service all 1953, 26th Series, differential assemblies.

These tools or details are used in conjunction with previously released differential tools and their applications are illustrated in Service Counselor, Vol. 27, No. 3, March, 1953, "Servicing the Differential".



The tools are numbered in the illustration and are also described as to their use for your ready reference.

1. J-3230-A Rear Pinion Bearing Cup Installer
2. J-5508 Pinion Bearing Remover Plate
3. J-5506 Front Pinion Bearing Cup Installer
4. J-3235-A Front and Rear Pinion Bearing Cup Remover
5. J-5512 Universal Joint Flange Nut Socket
6. J-5507 Differential Side Bearing Installer
7. J-5521 Rear Pinion Bearing Cup Remover

Tool numbers J-5506, J-5507, J-5508, J-5512 and J-5521 are used only when servicing a 26th Series unit, while J-3235-A and J-3230-A are used for 26th Series units and also earlier model units as follows:

#### J-3235-A Front and Rear Pinion Bearing Cup Remover

This tool is used with Driver Handle J-872-5 to remove the front pinion bearing cup in all 1953, 26th Series differentials including the commercial vehicles.

It also removes the rear pinion bearing cup in all differentials from 1942 through 1952 with the following exceptions:

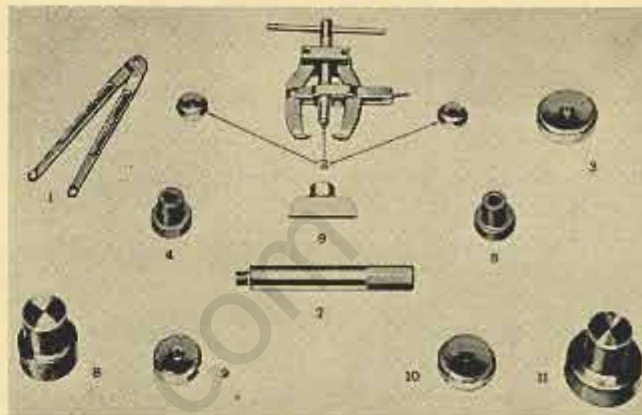
Super Eight 1942-1947; Custom Eight 1948-1950; Commercial Cars 1948-1952. In these differentials, this tool is used to remove the front pinion bearing cup.

#### J-3230-A Rear Pinion Bearing Cup Installer

This tool is used with Driver Handle J-872-5 to install and seat the rear pinion bearing cup in all 1953, 26th Series differentials including the Commercial vehicles.

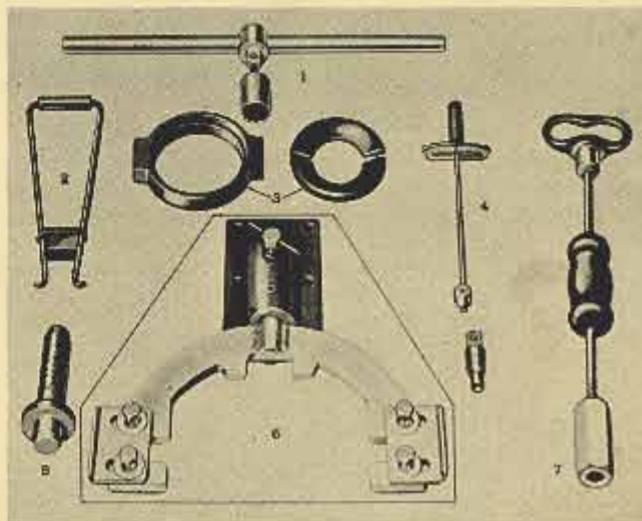
It also is used to install the rear pinion bearing cup in differentials in the Super Eight 1942-1947; Custom Eight 1948-1950; Commercial Cars 1948-1952.

### PREVIOUSLY RELEASED PACKARD REAR AXLE SERVICE TOOLS



Illustrated are previously released essential rear axle tools which are numbered in the illustrations and are also described as to their use for your ready reference.

1. J-3232 Differential Side Bearing Adjuster
2. J-3250 Differential Side Bearing Puller
3. J-3234 Rear & Front Pinion Bearing Cup Installer
4. J-3248 Differential Side Bearing Installer
5. J-3231 Rear Pinion Bearing Cup Remover
6. J-3246 Differential Side Bearing Installer
7. J-872-5 Driver Handle
8. J-3244 Pinion Oil Seal Installer
9. J-2644 Front Pinion Bearing Cup Remover
10. J-3243 Front Pinion Bearing Cup Installer
11. J-3245 Pinion Oil Seal Installer



1. J-2571-A Universal Joint Flange Nut Socket Wrench & Handle
2. J-943-B Axle Shaft Oil Seal Remover
3. J-2574 Pinion Bearing Removing Plate and Holder

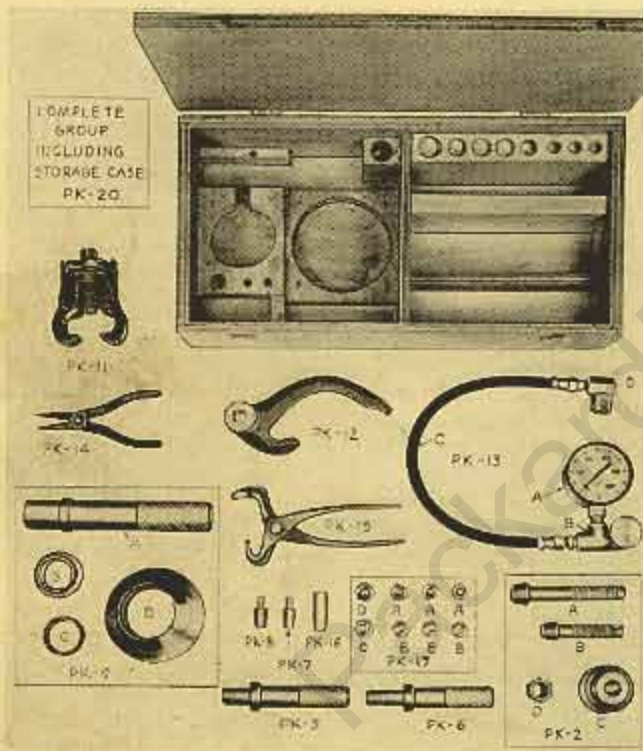
- 4. J-2571-B Differential Pinion Bearing Preload Indicating Wrench & Adapter
- 5. J-2554 Axle Shaft Oil Seal Driver
- 6. J-3289 Differential Carrier Holder
- 7. J-2552 Axle Shaft Puller

Tool orders should be sent direct to Kent-Moore Organization, Inc., 3044 W. Grand Blvd., Detroit 2, Michigan.

## Power Steering Tools

Illustrated are the new essential tools required to properly service the Power Steering used on the 26th Series cars.

These tools are necessary to recondition the Power Steering and were used in the service training schools to teach the field personnel how to service the Power Steering Units. The use of each tool is illustrated in the Serviceman's Training Booklet "Packard Power Steering".



The tools are numbered in the illustration and are also described as to their use for your ready reference.

- PK 2 Group Remover Group. Pump Drive Shaft Seal, Power Cylinder Piston Rod Oil and Dust Seals
- PK 5 Replacer. Pump Drive Shaft Seal
- PK 6 Replacer. Power Cylinder Piston Rod Oil and Dust Seals.
- PK 7 Replacer. (Thimble) Control Valve Spool Seal (.500")
- PK 8 Replacer. (Thimble) Control Valve Spool Seal (.561")
- PK 9 Group Group Kit for removing and replacing Gear Case Shaft, Bearing and Sleeve. Replacer for Gear Case Shaft Seal.
- PK 11 Remover for large and small Ball Stud Members
- PK 12 Pump Belt Adjusting Tool
- PK 13 Group Pressure Gauge, Valve, Hose and Fitting Kit
- PK 14 Pliers, Power Pump Relief Valve Retaining Ring
- PK 15 Compressor, Power Pump Relief Valve Spring

- PK 16 Guide, Piston Rod
- PK 17 Group Plug and Cap Set

Part No. PK-20 covers the complete set of tools including the special box.

Tool orders should be sent direct to K. R. Wilson, 215 Main Street, Buffalo, New York.

## Accelerator Pump Relief Valve 4-Barrel Carburetor

Please make the following part number change in Service Technical Bulletin 53T-6, Dealer 5, Dated February 13, 1953—

Item 9, "Flat spot or hesitation on acceleration"

The part number of the plug that replaces the spring type relief valve has been changed from No. 436687 to No. 410757. Please change your copy accordingly.

## Service Front Fenders

### Correction

Please refer to your Service Counselor Vol. 27, No. 2, February, 1953, on the above subject.

The second and third paragraphs under Item 4, page 12, should be deleted as service front fenders are not furnished with the side splashers attached.

## Direct Drive Clutch Plates

### Ultramatic 11 $\frac{1}{4}$ "—9" Diameter

A torsional disturbance has been reported on Ultramatic Drive equipped cars which already have the new type planetary with the dampers and springs.

This roar or torsional disturbance occurs just after the direct drive clutch engages on light acceleration.

New type direct drive clutch plates have been released for service to correct this condition. The new plates have the torque spring opening enlarged on the drive side by .020" in every other spring opening which gives an improved cushioning effect through a wider range of operation.

The new type clutch plates are available at the parts warehouse and may be ordered as follows:

Part Number 436411, Clutch driven plate and damper assembly (11 $\frac{1}{4}$ " diameter).

Part Number 423667, Clutch driven plate and damper assembly (9" diameter).

## Ball Stud Retaining Nut Torque

### 26th Series

The steering linkage ball joint stud nut torque (Power Steering) has been increased from 45-50 ft. lbs. to 50-55 ft. lbs. This also includes the ball joints at each end of the power cylinder.

If a ball joint becomes loose in the linkage, it will probably be due to an uneven or rough seat where the nut contacts. In these cases it will be necessary to smooth off the seats with a mill file and then torque tighten the nuts 50 to 55 ft. lbs.