

PACKARD

Service Counselor

PARTS * ACCESSORIES * PRODUCT * PROFITS

INSTITUTIONAL



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Servicing Windshield Wiper Assemblies

To insure proper operation of the windshield wiper assemblies in the 22nd Series cars, it is suggested that the wiper assemblies be checked and the tension adjusted if necessary before making new car delivery and again at the 3000 mile inspection.

Tension on the cables is maintained by two spring loaded tensioner assemblies which are attached to the dash under the instrument panel at each side.

To adjust cable tension on the right-hand assembly, loosen the tensioner lock nut until the pressure is removed from the lock-washer. See illustration. The tension exerted by the spring will then move the pulleys outward and tighten the cables. If loosening the tensioner lock nut does not permit the spring to take up the slack in the cables, it may be necessary to tap the stud slightly to unseat the washer.

CAUTION

Do not remove the nut entirely from the stud.

After the nut has been loosened and the cables retensioned, tighten the nut to hold the pulleys in their new position.

To tension the left-hand cables, loosen the tensioner lock nut to allow the tensioner spring to take up all the slack. Then hold the tensioner bracket firmly with your hand to prevent the tensioner bracket from turning on the pivot pin when tightening the tensioner

lock nut. It is necessary that the left-hand tensioner bracket be held when tightening the lock nut because turning the lock nut to the right to tighten would tend to wind up the spring and thereby reduce tension.

The above method for adjusting the left-hand assembly may also be necessary on the right side or when heavier cables have been installed and the tensioner spring does not hold the cables taut.

CAUTION

Do not use a screwdriver or any other pry tool to force the tensioner bracket outward while retensioning cables. Using a screwdriver may damage the pulleys or cause "over-tension" of the cables resulting in "cable fatigue."

When making windshield wiper mechanism inspection, it is suggested that the tensioner assemblies be checked to see if they are tightened firmly to the dash panel. If they are not attached firmly to the dash panel, loose screws may throw the entire assembly out of alignment. When the tensioner assembly is out of alignment, the cables may scuff while running in the pulleys. Therefore, it is necessary that the pulleys run parallel at all times to prevent undue wear of the cables and pulleys.

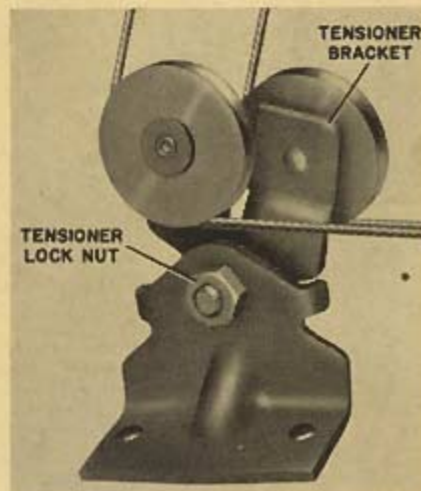
When the windshield wipers are inoperative, check the cables to see that they are not crossed and run-

ning on the wrong pulleys. If they are found crossed, loosen the tensioner lock nut and pull the bracket inward to relieve the tension on the cables. Tighten the lock nut to hold the tensioner bracket in this position while relocating cables on their proper pulleys. Then readjust tension as previously described.

Inspect the cables to see that they are free from dirt or any foreign substance which might interfere with their proper running in the pulleys.

When lubrication is necessary, a light oil may be used for the pulley bearings and a light grease for the cables.

If, after readjustment of the cables, the windshield wiper arms



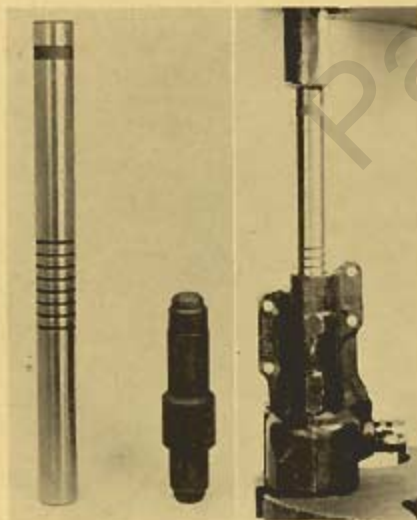
are out of position, they may be properly positioned by using the following method: Start the engine and turn the wipers on to observe the blade travel on the windshield glass. The clearance between the outer end of the blade and the upper outside corner of the windshield weatherstrip should be equal to the clearance between the blade and the weatherstrip at the bottom of the windshield.

In the parked position the blades are pulled down further than the lowest position of their travel to prevent flutter of the blades. This adjustment will make the blade snap against the windshield weatherstrip when the control knob is turned to the parked position.

If the blades strike the weatherstrip at either end of their stroke, remove the blade arm from the pivot shaft by tilting the arm away from the windshield. Then move the blade arm one or more serrations in the direction needed and reinstall.

It is suggested that when making tensioner or cable changes, the battery be disconnected to prevent possible contact with "hot" wires. If the tensioner cables are brought in contact with "hot" wires, they may be badly damaged.

Cross Shaft Bushing Replacement Tool Set



J-2551

The bushing driver is designed for easy removal of the bushings, using the long end of the driver. The bushings are installed with the short end of the driver, which is

so designed that the bushings are pressed into place to the proper depth, providing correct cross shaft clearance. The burnisher compresses the bushings into place, insuring correct alignment and making the holes to size without reaming.

The cross shaft bushings are of a split thin wall type and may be properly secured in place and brought to size with only a burnishing tool.

You may order the CROSS SHAFT BUSHING REPLACEMENT TOOL SET direct from the Kent-Moore Organization, Inc., General Motors Building, Detroit 2, Michigan. Tool No. J-2551. Price \$24.50.

Liner Type Rear Springs

A new liner type rear spring has been furnished on a number of cars and soon will be used as standard equipment on all cars.

To control the ride the liner type spring makes use of a wax impregnated liner between the spring leaves in place of inserts which were formerly used.

When spring replacement is necessary, the liner type spring may be used on either side in place of the insert type. It is not necessary that they be replaced in pairs since the interchanging will in no way affect the ride.

For servicing liner type springs, end sections of the liners, as shown in the accompanying illustration, can be installed between the spring leaves at each end of the rear springs.

Under normal operating conditions, the two upper liners will wear first since they are subjected to more friction than are the lower liners.

When the liner tips wear thin, allowing the spring leaves to touch and cause inter-leaf friction, the worn portion of the liner may be

cut off and replaced with new liner inserts.

To prevent possible damage to the spring liner when installing rear spring liner inserts, the use of a hardwood wedge with the following dimensions is suggested: 1½ inches wide, 5 inches long and tapered from 1/8 inch to 3/4 inch in a 2-inch length.

Proceed as follows:

1. Remove the spring clips.
2. Raise the rear of the car until there is no load on the springs.
3. Mark off the length of the liner tip on the top spring leaf allowing the end to extend ½ inch beyond the end of the second leaf.
4. Spread the ends of the springs and place a piece of sheet metal over the liner for protection of the liner, pry the leaves apart where replacement part is needed, and insert wedge under liner just beyond the point where the old liner is to be cut off.
5. Grind a 4-inch section of a hacksaw blade until it is approximately ¼ inch in width and saw off worn section of liner previously marked.
6. Place the new liner insert with the tongue upward between the spring leaves with the metal tipped end extending beyond the end of the lower leaf approximately ½ inch. Be sure that the tongue and rubber button on the insert fit into the groove in the upper leaf. Then remove the wedge very carefully in order that the new liner tip will remain in position.
7. Repeat this operation at each end of the rear springs where liner replacement is necessary.

Rear spring liner inserts are available under part number 410458.

Never spray the springs when lubricating the car because if oil gets on the fiber or rubber inserts between the long leaves it will deteriorate them.



Checking Valve Seats

To reduce the possibility of excessive valve guide wear due to a lack of concentricity between the valve guide bore and the valve seat, a dial indicator should be used to check for concentricity after the block has been resealed.

When the vertical center line of the valve guide bore runs through the center of the valve seat circle the guide and the valve seat are concentric.

However, if the center of the valve seat circle is not in direct alignment with the center line of the guide, the valve seat then may be termed as being off center and the seat and guide not concentric.

When a valve and seat are "blued-in", the pattern of the blue will indicate either a full or partial seating of the valve. However, the pattern of the blue will not indicate whether the valve stem is centralized in the guide.

In other words, the seat may be ground off center enough to permit the valve stem to contact the guide at the top and bottom on opposite sides even though the seat is in perfect contact with the valve.

For example, with a valve stem clearance of .004 inch the seat could be out of concentricity by 0.04 inch. When this condition exists the stem is not operating freely in the valve guide but is actually cocked each time the valve closes.

This uneven wear will finally result in valve noise and loss of compression.

The use of a dial indicator will show the actual relationship which exists between the valve guide bore and the valve seat circle.

The dial indicator pilot locates in the valve guide and it is essential that it fit snugly to obtain an accurate reading. When using the indicator make certain the maximum run-out does not exceed .001 inch. If not within this limit, the seat should be trued up with the reseating stone and again checked with the indicator.

Your Service Staff

This is another in a series published to acquaint members of the Packard Field Organization with individual members of the Factory Service Department



J. R. Kemp (Jerry) started with Packard in 1942 as a mechanic in the Marine Engine Division and soon found himself on special assignment directing illustration work for sound slidefilms and training booklets in connection with Packard's wartime PT Boat Program. By 1943 he was setting up and directing Marine Engine exploded views for technical publications and parts books.

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Balanced Drive Shafts

As a result of reports received by the Factory of vibration caused by unbalanced universal joint propeller shaft assemblies, these assemblies are now being more accurately balanced.

Such balanced shafts have been available in Service Stock for the last 30 days and we have found that their use eliminates objectionable drive shaft disturbances. Before replacing a drive shaft for unbalance, all four wheels should be carefully balanced. In a number of instances drive shafts have been changed only to find that the condition was caused by an unbalanced wheel and tire.

Many of these new drive shafts will have washers spot welded on the outside of the tube. These should, under no circumstances, be removed since they are installed to correct balance.

Replacement shafts may be ordered under the regular part numbers.

In 1945 he transferred to the Service Technical Section where he directs illustration work for shop manuals, parts lists, Service Counselor and other technical publications.

His hobbies include fishing and, due to frequent deaths of distant relatives, he maintains a very active interest in the National and American Leagues.

Robe Rail Equipment (Body Type 2292)

For owners of 1948 Sedans desiring robe rail equipment, part No. 407155 may be used. Suggested installation time is 1.5 hours and the procedure is as follows:

1. Remove front seat cushion and seat back.
2. Cut the trim at holes in metal seat back diagonally from corner to corner.
3. Install escutcheon, spacer, and nut at both sides, folding the trim back at hole in seat back.
4. Slip the robe rail cord through the opening in the escutcheon plate, install the spring and sleeve, insert the pin through the slot in the sleeve to secure the cord. Repeat the operation on the opposite side.

NOTE: If the length of the robe rail cord will not permit the use of a spring at each end, omit one spring.

Speedometer Shaft Kits

22nd Series

We have had several reports in regard to part No. 378085 Instrument Board Speedometer Shaft Cable Kit, stating that the shaft is too short to be used on the 22nd Series cars.

A new kit has been made up under part No. 410302 in which the shaft is correct. Shipments can be made immediately.

Rear Spring No. 367726

(Wrong Listing)

Our records on part No. 367726 show this to be a *Rear Spring*. However, in the Master Parts Book 1937-1941, Code 14.000 shows this listed in the *Front Spring* group. This has caused considerable trouble.

Please remove this part number from the Front Spring group and add to the Rear Spring group.

This Puller provides a safe, easy, and quick method of removing the Hydraulic Damper, which is standard equipment on Taxicab and Standard Eight Engines.

This Puller eliminates the danger of damage by denting or bending of the Damper Housing when

Battery Care

Investigation has revealed that in some instances, batteries are left in new cars in display rooms without any precautions taken to keep them charged nor are they charged when the vehicles are delivered to customers. This has resulted in early battery failures.

If necessary precautions are not taken, the batteries will be ruined in a very short time. It is important to remember that batteries are PERISHABLE and must have periodic attention. A battery is not a mechanical part — it is electrochemical, and is working ALL the time, regardless of whether the vehicle is standing idle, or is in use. The elements in it are undergoing constant change. They suffer from thirst, starvation, overwork and overfeeding, even as a person does under similar circumstances.

Lack of attention causes plates to become hard and sulphated. In hot weather, a sulphated battery subjected to high generator charging rates may be ruined from overcharging. In cold weather, a discharged battery will freeze quickly, frequently damaging the battery beyond repair.

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Vibration Damper Puller

attempts are made to pry the unit off the crankshaft. Damage to the outer housing of the Damper may destroy the efficiency of the assembly.

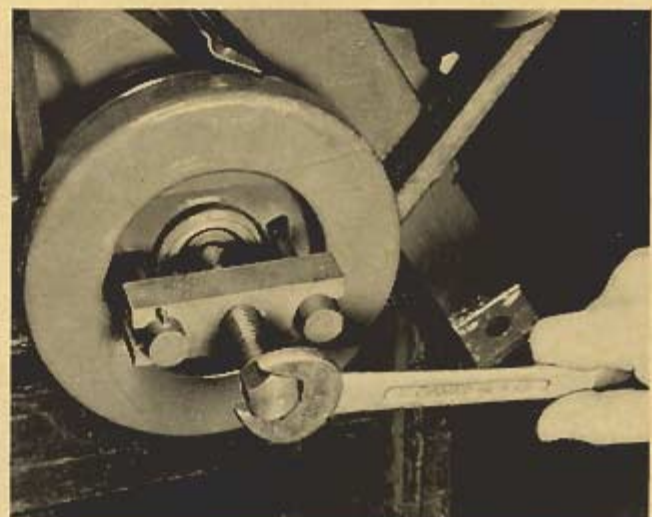
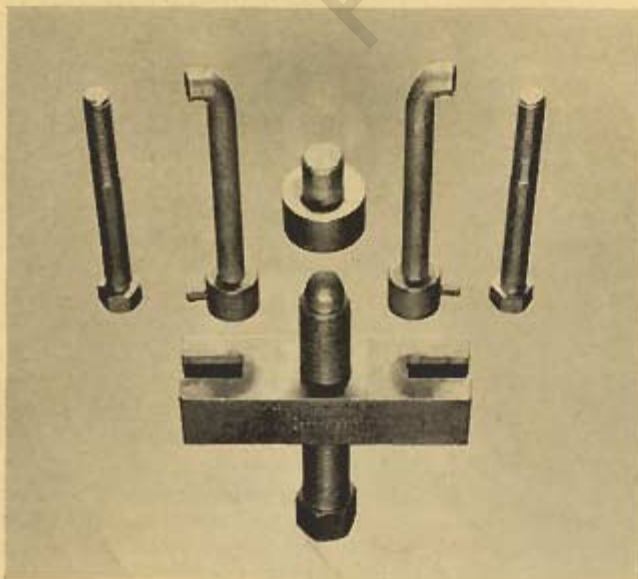
The Damper Flange is provided with slotted or tapped holes for removal, and this Puller will safely

1. Be sure you are using an accurate Battery Hydrometer, and a good Battery Charger.
2. Check the gravity of EVERY battery when a new car is received. Recharge the battery at *once* if the reading is at or below 1.250 specific gravity.
3. Re-check batteries in ALL new vehicles every 30 days in cool weather. Every 2 weeks in warm weather.
4. Always check the battery in a new vehicle before delivery to a customer. A MINIMUM gravity reading of at least 1.260 per cell is necessary.
5. Make certain the charging rate (voltage regulator setting) is proper for your customer's driving habits.
6. Check frequently to make sure these instructions are being followed.

Following the 6 points suggested above will eliminate many difficulties for your customer, yourself, the car manufacturer and the battery manufacturer. It will build customer confidence in your Service Department and result in more sales.

remove either type of damper.

The Vibration Damper Puller may be ordered directly from the Kent-Moore Organization Incorporated, General Motors Building, Detroit 2, Michigan. The Tool No. J-2636, price \$10.75.



J-2636