

SERVICE Counselor

PARTS • ACCESSORIES • PRODUCT

PACKARD MOTOR CAR COMPANY



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Gum In Gasoline

Gum is the common name given to the resinous, varnish like substance left after gasoline has been evaporated. This gum may vary widely both in physical and chemical properties, such as solubility, hardness, composition and color (from light to dark, usually brown).

In the manufacture of gasoline, especially in cracked stocks, there are formed certain different unsaturated (unsatisfied or unstable) compounds. On exposure to oxygen (supplied usually by the air) these compounds are partially oxidized. As gasoline evaporates these partially oxidized compounds are further oxidized and joined together to form new and more complicated compounds. It is these polymerized (joined together) compounds which are the gums. The longer the gum is exposed to the oxygen the further the reactions proceed and the harder and more insoluble the gum becomes.

All commercial gasolines now contain cracked stocks. All reputable producers of gasoline add inhibitors to slow down the oxidization process.

There may be dissolved gum in gasoline, which, when further oxidized deposits gum. The gasoline containing potential gum forming compounds is harmless unless it remains in the fuel system a sufficient time to form on the fuel system parts and engine valves.

Various conditions control the amount of gum formed from a particular sample of gasoline. Among these conditions are temperature, rate of evaporation, presence of copper or brass and zinc chloride soldering fluxes. While zinc chloride fluxes are probably the worst, copper and copper alloys also accelerate the formation.

Some solvents will dissolve some gums and others are required for other gums. No one solvent will

dissolve all forms of gum, especially after oxidation has occurred, joining the compounds together. One of the best mixtures for dissolving the already deposited gum is one-third Methyl (wood) alcohol, one-third Benzene (Benzol), and one-third Acetone. The addition of a solvent to the gas tank is of no benefit to the carburetor where the gum has clogged long narrow passages.

The best remedy for gum formation is its prevention. This may be accomplished by using fresh gasoline and completely draining the fuel system before storing of the car. When refilling after storage, be sure to use only fresh gasoline.

Motor Distributor Breaker Plate

DELCO

Numerous orders have been received from dealers requesting Delco Distributor Breaker Plate Assemblies complete with points and condenser.

These complete assemblies are now available at the parts warehouse and may be ordered as follows:

Part No.	Description	Req.
458119	Motor Distributor Breaker Plate Assembly (Delco) Models: 2201-02-11-22-32— 2301-02	1
458120	Motor Distributor Breaker Plate Assembly (Delco) Models: 2401-02-13—2501-02- 13-31—2601-02-11-13- 31-33	1

NOTE: The Auto-Lite Distributor Breaker Plate Assemblies listed in the Parts Book include the points and condenser.

Noisy Hydraulic Tappets

Hydraulic tappet noise is generally caused by one or more of the following conditions such as gum, dirt, loss of oil supply to the tappets or oil leakage past the tappet plungers.

The most common cause for noisy tappets is gum and dirt. We have found that by adding High Detergent Concentrate to the crankcase oil, most all hydraulic tappet noise complaints can be corrected.

Occasionally noisy hydraulic tappets may be encountered that is not caused by gum or dirt. In such cases a pressure test of the oil supply to the tappets should be made. This test can be made by removing the oil passage connecting tube assembly part No. 371855 between the oil sending unit tee and the crankcase. Connect a one lb. graduated pressure gauge between the two connections where the tube was removed and start the engine to make a pressure test. The pressure should not be lower than 5 lbs. at idle (10 M.P.H.) and should increase with engine speed.

If the pressure is low, the trouble may be caused by foreign material lodged in the metered passage in the tee connection that attaches the sending unit to the crankcase.

In some cases hydraulic tappet noise has been caused by loose tube nuts on the oil intake tube which leads from the oil float screen to the crankcase in back of the oil pump. Loose tube nuts will not always show a pressure drop on the gauge even though the oil pump is sucking some air along with the oil. In most cases where the tube nuts were found loose, enough oil was supplied to prevent engine bearing failure.

Armité Anti-Seize Compound

A metallic lead lubricant and sealer known as "Armité" has been used in production for some time. Because of its many uses, as well as saving time and materials, it is being released to the field as a service item.

Armité will not harden, evaporate, oxidize or corrode. It maintains its suspension permanently under regular working or storage conditions. It will withstand temperatures of -100°F. to 2987°F. and working pressures as high as 6000 PSI. It is also impervious to air, water, steam, oils, ammonia and hydrocarbons.

Armité has proven successful in eliminating squeaks and clicks in the transmission universal joint flange splines, also the rear axle shaft tapers. Other recommended uses are: coating cylinder head gaskets, stud threads, water pipe fittings and gaskets, hose connections, hand brake cables, etc.

Armité is available in one lb. cans at the parts warehouse and may be ordered under Part No. 458064.

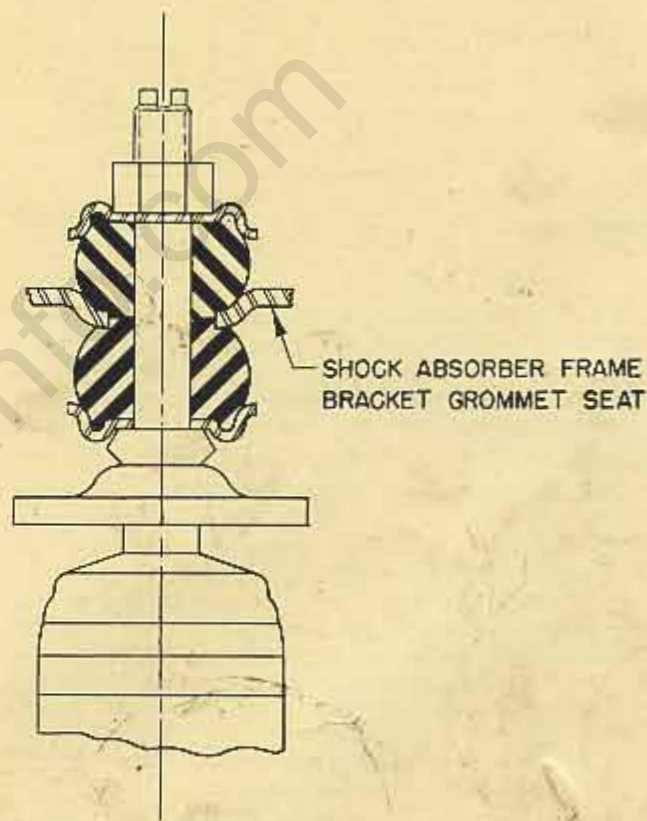
Shock Absorber Grommets

25th-26th Series

A few reports have been received of shock absorber rattles which were caused by worn or mutilated grommets.

Inspection of shock absorber grommets returned on R.F.A.'s from the field indicates that the grommets were not properly centered in their seats in the frame.

When replacing shock absorber grommets, it is very important that they be centered in their seats as shown on the illustration. This can best be accomplished by following the procedure outlined:—



1. Attach the upper end of the shock absorber to the frame with the retainers, grommets and retaining nut.

Tighten the retaining nut just enough to force a light tension of the grommets on the seat. Rotate the shock absorber and grommets several turns so that the shoulder on the grommets will be in place and properly centered.

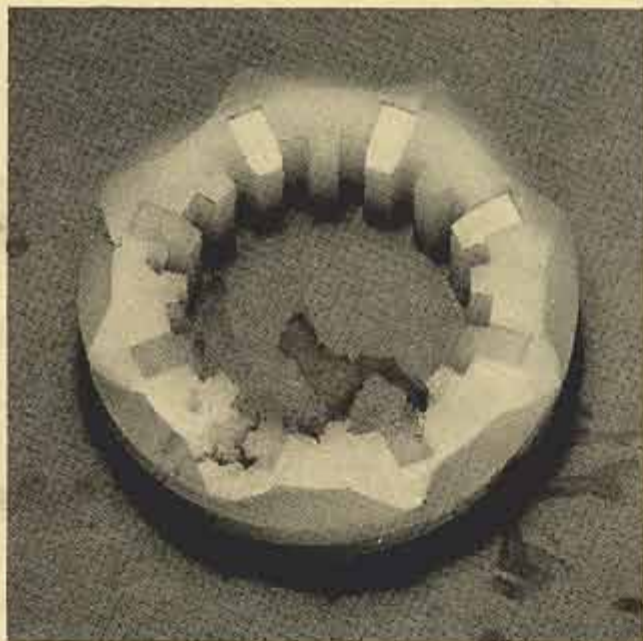
After the grommets are properly centered in the frame seat, tighten the retaining nut until the threads bottom.

2. The grommets at the lower end of the shock absorber are easy to see; therefore, they can be properly centered by sight. After the grommets are centered, tighten the retaining nuts until the threads bottom.

Ultramatic Breather Oil Leaks

A few reports have been received of oil being thrown out of the Ultramatic Transmission breather at speeds of 30 MPH and above.

The speedometer driving gear has radial grooves machined on the rear side. "See illustration." The purpose of the grooves is to direct a spray of oil on the parking gear bushing in the rear housing.



If the speedometer driving gear is installed with the grooves toward the front, the spray of oil will be directed to the breather causing a severe oil leak.

When a leak is encountered at the breather, the speedometer driving gear should be checked for proper installation. This can be accomplished by removing the transmission rear housing and output shaft assembly, parking gear and speedometer driving gear spacer.

The speedometer driving gear can then be pulled off of the planetary cage shaft and reinstalled with the grooves toward the rear.

Motor Vibration Damper Assembly—Kit

19th Thru 23rd Series

Part Number 341130 motor vibration damper assembly and Part Number 304268 motor vibration damper hub and fan pulley have been cancelled for service replacement. This cancellation affects the following models: 1900-01-01A—1951—2000-01-10-11—2100-01-11-30, (2200-11 prior to eng. No. 212172) 2202-22-32—2302-22-32, (2220-40 prior to eng. No. 1994).

Whenever replacement of either the vibration damper assembly or damper hub and pulley is re-

quired on any of the above models, it will be necessary to install a motor vibration damper assembly kit Part Number 436865.

When using kit No. 436865 on models 2201-11 (prior to engine No. 212172) 2202-22-32—2302-22-32, it will be necessary to cut off $\frac{3}{8}$ of an inch from each of the blades of the old fan, or install a new fan Part No. 403666 which has the proper length blades to use with the new damper.

The motor vibration damper assembly kit is available at the Central Warehouse under Part No. 436865. The kit consists of the following parts:

419711	Motor vibration damper assembly	1
412010	Motor vibration damper assembly screw	1
403670	Motor gear cover timing indicator	1

Door Handle Push Buttons

24th-25th-26th Series

Excessively hard operating door lock push buttons are generally caused by an outward door pressure on the door lock. This condition can be aggravated by the striker being set in too far or door hinges adjusted so that there is a bind on the weatherstrip.

If the door lock plunger operates normally with the door open but binds with the door closed, then the striker or the hinges are improperly adjusted.

NOTE: Production purposely adjusts the strikers and hinges in the tight position so as to seat the weatherstrip against the door opening and to reduce water leaks while the weatherstrips are seating.

Other important factors for easy lock plunger operations are:

1. Be sure the lock assembly is well lubricated and no excessive bind exists.
2. The lock plunger through the handle does not bind and is in correct alignment with the lock assembly.
3. Be sure the small collar around the plunger shaft is adjusted so as to obtain full plunger travel. (See Service Manual, Body Section, Page 15.)
4. Door alignment, hinge alignment and door striker adjustments are covered in the Service Manual, Body Section, Page 15.

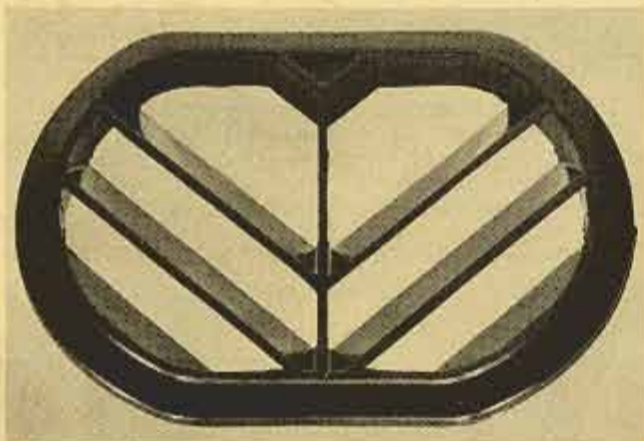
No attempt should be made to change the geometry of any of the lock levers or a weaker plunger spring as the safety of the door lock will be greatly reduced.

In most cases where this complaint exists, the owner should be advised of the advantages obtained by having tight fitting doors while the car is new, and that after the locks are used for a while and the weatherstrip becomes seated, some further adjustment may be necessary but the locks will then operate normally free.

Fresh Air Grilles

24th-25th-26th Series

A more direct flow of fresh air on the passenger and driver's knees can be obtained by removing the two upper blades from the fresh air grille.



By using a hack saw blade, the two upper grille blades can be cut off as shown in the illustration without removing the grille from the dash panel.

Reverse Brake Piston Seal Retainer and Brake Band Adjusting Screw

Ultramatic

A few reports have been received stating that when the high range clutch is burned out, it has been found in some instances that the reverse piston seal is on the wrong side of the retainer which resulted in a loss of oil pressure to the high range clutch.

It is possible for the seal to be forced through the retainer if the reverse brake band is adjusted too loose. If the band is adjusted too loose, the reverse piston travels so far that the inner edge of the seal catches in the radius of the piston and then the high reverse oil pressure forces the seal through the retainer. Upon close examination the inner part of the retainer will be found pushed outward.

In a few cases, reverse band adjustment could not be obtained because the adjusting screw would bottom in the transmission case before the band was properly adjusted. This condition gives a correct torque reading but a false band adjustment.

A recent alteration, now effective in production, increased the thickness of the seal retainer from .022" to .0315". The length of the adjusting screw extension (ground section) was increased from $\frac{3}{4}$ " to 1" by decreasing the length of the threaded section by $\frac{1}{4}$ inch.

The part numbers for the seal retainer No. 423084, and the adjusting screw No. 421716 were not changed therefore, to identify the new parts, use the measurements listed above.

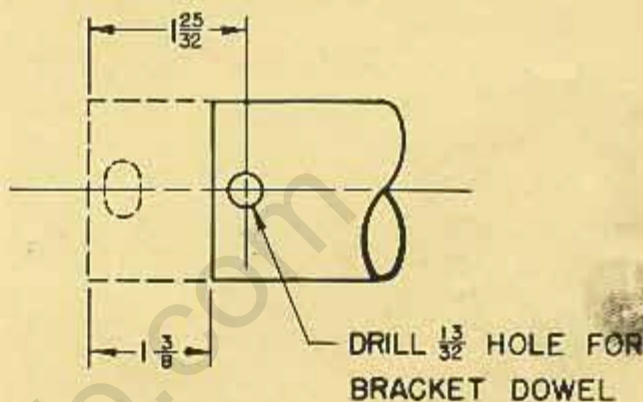
In the event this condition is encountered, it is advisable to install the new seal retainer and adjusting screw.

Muffler Outlet Tube

2003-06, 2103-06, 2206-33

Part number 373868 muffler outlet tube will be cancelled for service replacement when present stock is exhausted. This cancellation affects the following models: 2003-06, 2103-06, 2206-33.

Part number 403419 muffler outlet tube which is used on models 2201-11-02-32 will be shipped in place of No. 373868. It will be necessary to rework the forward end of outlet tube No. 403419 before it can be used on models: 2003-06, 2103-06, 2206-33.



1. Measure $1 \frac{25}{32}$ " from the forward end of the tube to locate a new dowel hole. Drill a $\frac{13}{32}$ " hole in the tube at this location directly in line with the forward dowel hole.
2. Using a hack saw, cut off $1 \frac{3}{8}$ " of the forward end of the tube and remove all burrs with a file.

Carpet Screws

Additional screws and ferrules are now being furnished with each new car for holding the corners and sides of the front carpet in place.

The screws and ferrules are to be used when the carpets are installed on pre-delivery inspection.

In some instances it may be necessary to install similar type screws and ferrules in the rear carpet to obtain a satisfactory fit.

Illustration shows location and attachment of the screws and ferrules.

