

PACKARD

Service Counselor

PARTS * ACCESSORIES * PRODUCT * PROFITS

INSTITUTIONAL



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Service That Pleases

Good Service is a matter of pleasing the customer. From start to finish, service must please or it fails in its purpose. There are a lot of details that go into making service good, but there are just two basic factors that sell the Owner and bring him back. He must—

- (1) feel a genuine interest on your part in his car and the service it gives.
- (2) see and feel the result of thoroughness of workmanship and the careful handling of his car.

Number 1 requires a quick and cordial greeting, a welcome with a smile, tactful handling and delivery, as promised, or plenty of advance notice.

Number 2 requires a careful diagnosis, an accurate order calling for work which will fix what the customer was worrying about and a follow-through in the shop.

A customer will never be pleased with a broken delivery promise. If humanly possible, this must be prevented. This is the number one confidence destroyer.

A customer will never be pleased if his car upon delivery doesn't look or feel as well or better than when he left it. The customer who detects carelessness in handling his car is prepared to believe the work done was also handled carelessly. He generally starts to look for trouble.

The work must, of course, have accomplished what the customer expected and it must stand up. There must be no new squeaks or rattles and no new dirt or grease. No matter how good you may think your service is, if the customer can't see or feel it, it won't please him. If it doesn't please him, it won't satisfy him and he won't be back.

Can your customers see and feel your interest in them?

Can your customers see and feel the results of the type of workmanship you sell?



Gear Shifter Shaft Anti-Rattle Spring

22nd Series

Recent Product Reports indicate that since introduction of the new type steering column shroud, gear shifter shaft rattles have become more numerous. When the rubber grommet was used a certain amount of tension was exerted against the shaft which prevented the rattle.

The anti-rattle spring and shaft plug used on the Clipper models has been reinstated and will be installed in production as soon as stock is available. These parts may be installed in any 22nd Series car in which a rattle develops.

To install, remove the steering wheel and install the plug in the end of the shifter shaft. Place the center of the spring in the groove around the plug and snap the ends of the spring in against the reinforcing wall of the steering column wheel web cup.

These parts are carried in service stock under the following part numbers:

377870—Spring—Shaft Anti-Rattle
338043—Plug—Shaft Anti-Rattle Spring

Steam on Windshields and Windows

22nd Series

When steam emerges from the heater or defroster outlets in a 22nd Series heater equipped vehicle, the trouble usually may be traced to a leaking heater core or to an accumulation of water in the bottom of the blower housing.

Either condition may cause the inside of the windshield and the windows to steam up when the engine reaches normal operating temperature even though the heater blower is turned off. When the car is in motion and hot coolant is circulating through the heater core, water or coolant emerging from or contacting the core will turn into steam which will be forced out of the heater or defroster outlets by the normal air blast through the air duct. When the blower is turned on, the inside of the car will steam up considerably faster.

Water entering the blower housing is most likely to occur when the

car is being washed or in a heavy rainfall when water may be forced under the bonnet in the vicinity of the large flexible hose between the blower and the air duct adapter. If this water finds its way into the hose at the top, it will travel downward and become trapped in the blower housing.



Core leaks, in most cases, can be eliminated by closing the hole with solder. In the event that water has accumulated in the blower housing, the blower assembly should be removed and two $\frac{1}{8}$ -in holes drilled at the lowest point of the housing and the inlet duct as shown in the accompanying illustration. This will provide an escape for any water which may find its way into the housing.

NOTE

These holes should be drilled and not punched. Punching the holes will upset the metal on the inside, thereby forming a dam around the hole.

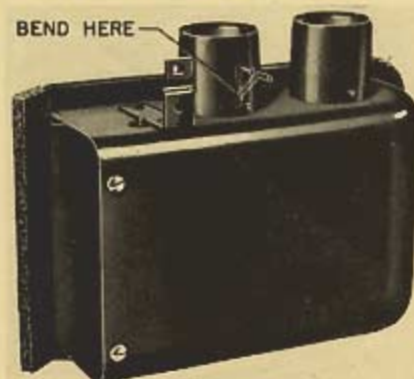
When the blower assembly is reinstalled, the hose clamps should be tightened securely.

Defroster Operation

22nd Series

In some cases, when the defroster knob is turned to the full on position, there is an excessive amount of heat escaping through the plenum chamber and a lack of heat from the defrosters caused by improper operation of the distributing valves. The defroster valves are not wide open and the valve to the plenum chamber is not fully closed.

To correct this condition, remove the operating wire from the defroster lever and bend the lever as shown in the illustration. Bend



the lever just enough to line it up with the loop in the control wire with the defroster knob in full on position, and the defroster valves wide open. The defroster valves must open to their full open position in order for the controls to fully close the valve door to the plenum chamber.

When this adjustment has been properly made, the full effect of the defrosters will be applied to the windshield.

Adjustments may be made without removing the distributing chamber from the dash.

CAUTION: Use two pairs of pliers when bending the lever, one pair to hold the shaft from breaking loose at the defroster valve, while making the bend.

When the "defrost" knob is turned full to the left, all of the air should come out of the defroster outlets, and when it is turned full to the right, all of the air should be coming out of the heater below.

Changes in Torque Specifications

Please make the following changes in the "1948 Torque Specifications" published in the Service Counselor, Volume 22, No. 4, March 15, 1948.

Connecting rod bolt nut $\frac{7}{16}$ -28
60 to 65 ft. lbs.
(was 55 to 58 ft. lbs.)

Crankshaft bearing cap screw $\frac{1}{2}$ -13
90 to 95 ft. lbs.
(was 82 to 85 ft. lbs.)

Engine Replacement

Packard-Henney

The 288 engine, piece number 410345, may be installed in older model Henney - Packard Cars equipped with 120 engines, using the same kits and instructions that are supplied for our early model one twenties.

In these kits, a driveshaft is not furnished to accommodate the movement of the engine $\frac{3}{4}$ of an inch toward the rear of the car.

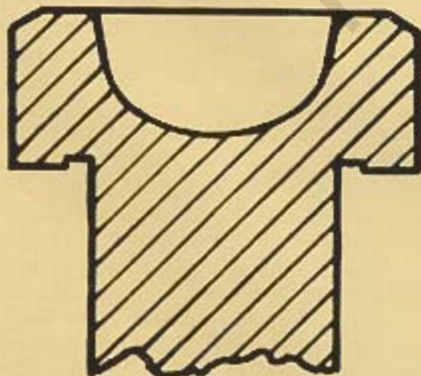
You may now secure from the Henney Motor Company, a front universal joint shaft, $\frac{3}{4}$ of an inch shorter than the standard shaft, to be used with this engine replacement. When this shaft is used the position of the midship bearing remains unchanged.

This shaft is carried in stock by the Henney Motor Company, Freeport, Illinois, under piece number 410595 and will fit models 1701-A, 1801-A, 1901-A and 2001-A not equipped with overdrive.

Main Bearing Cap Screws

22nd Series

Two types of main bearing cap screws are used in 22nd Series engines. Early engines are equipped with conventional type cap screws held in their tightened position by lock plates. Later engines, and engines now being produced, are equipped with self-locking cap screws which do not require lock plates.



The accompanying illustration shows a cross section through the head of the self-locking type screw. You will note that the center of the head is cup-shaped and that a circular recess extends around the inner portion of the seating face.

When the screw is tightened to its specified torque of 90 to 95 ft. lbs., a stretching action takes place in the head of the screw. The pressure exerted by this stretching or springing action in the head securely locks the screw in place.

Only the self-locking type screws, part number 403517, are being shipped from the Factory. When these screws are used to replace the early type screws, the screw lock plates should be discarded.

Noise in Steering Column Shroud

22nd Series

When investigating the cause for a clicking or creaking noise in the steering column shroud, check the spot welds along the seam on the underside of the shroud.

While the car is being driven, a certain amount of flexing takes place in the shroud. If a weld is broken, movement or flexing in the vicinity of the break may cause the rough, broken surfaces of the metal to rub together resulting in a sharp clicking sound.

This condition may be corrected by drilling a No. 17 drill size hole close to the broken weld and then installing a No. 10 self-tapping screw having a threaded shank $\frac{3}{8}$ inch long. A $\frac{1}{16}$ inch drill may be used if a No. 17 drill is not available. If the broken weld is located between the steering column bracket and the bell-shaped upper portion of the shroud, the hole should be drilled through both the shroud and the steering column and in line with the center line of the column.

Door Window Cylinder Hose

Models 2259-79

The Factory recently adopted a change in the door window cylinder hoses in Convertibles. These new type hoses are longer than those formerly used and are connected directly to the window cylinders by means of a sealed fitting in the end of each hose. Prior to this change, metal tubing

was used between a short hose and the hydraulic cylinder.

These new type hoses are being shipped as service replacements for the shorter, early type hoses. When an early type hose requires replacement, both the connector in the cylinder and the metal tube also should be removed.

When connecting the hose to the cylinder, it is necessary to overcome the tension of the rubber seal around the fitting while turning the fitting. The hose should be held stationary while the fitting is being turned into the cylinder.

The later type hoses are carried under part number 411044 — Window Cylinder Hose Assembly as listed in the 22nd Series Parts List. A Factory alteration reduced the length of the hose to 47 inches instead of 56 inches as noted in the Parts List.

Axle Ratio Substitution

22nd Series

It has been necessary in order to maintain production to substitute rear axle ratio 4.1 for 3.9 in a number of non-overdrive cars.

This substitution is not noted on the sales order but the ratio used is stamped on the carrier flange. When ordering parts for differentials, it is always advisable to determine gear ratio from the carrier or the chart may be used after counting the pinion and gear teeth.

Differential and Speedometer Gear Chart

MODEL	RATIO	NUMBER OF TEETH		
		Pinion	Driving Gear	Speedo-Pinion
2201-02 11-32	3.9	10	39	17
	4.1	10	41	17
	4.3	10	43	18
2206-33	3.92	12	47	16
	4.09	11	45	17
2213	4.54	11	50	18
	4.7	10	47	19
2222-26	4.09	11	45	17
	4.36	11	48	18
2220	4.54	11	50	19
2240	4.3	10	43	18
	4.55	9	41	19

Packard Vehicle Reference

YEAR	MODELS	BODY TYPE	MOTOR NUMBER
1931	840-845 826-833	470's 491 1879-1881- 460's 3000 Series	188001 to 191345 320001 to 332111
1932	903-904 901-902 905-906 900	510's 530's 4000 Series 2000 Series 500's 520's 543 570's 580's 4000 Series 2000 Series 550's	193001 to 194708 340001 to 347720 900001 to 900584 360001 to 366794
1933	1001-1002 1003-1004 1006	600's 610's 620's 650's 660's 630's 640's 634 636 758 759 3000 Series 3100 Series	370001 to 373010 750001 to 751327 901000 to 901548
1934	1100-1-2 1103-4-5 1106-7-8	703 710's 720's 750's 760's 773 4000 Series 858, 280, 859 730's 740's 275 280 4000 Series 858, 859	374001 to 379148 752001 to 753946 901601 to 902587
1935	120 1200-1-2 1203-4-5 1207-8	890's 800's 810's 863 194 195 840's 850's 883 194 195 820's 830's 873	X1501 to X26701 385501 to 390301 755101 to 756540 903101 to 903857
1936	120B 1400-1-2 1403-4-5 1407-8	990's 900's 910's 963 294-5 940's 950's 983 294-5 920's 930's 973 294-5	X27501 to X82637 390501 to 394505 757001 to 758360 904001 to 904719
1937	115-C 120-C-120-CD 138-CD 1500-1-2 1506-7-8	1080's 1090's CD1091, CD-1090 1000's 1010's 1063 L395 1023 1027 1030's 1073 L395	T1501 to T67104 X100001 to X150269 X100001 to X150269 395501 to 401336 905501 to 906841
1938	1600 1601-1601D-1602 1603-4-5 1607-8	1180's 1190's 1172 1103 1110's 1107 1143 1127 1130's 1153	A1501 to A31660 A300001 to A 322751 A500001 to A 502527 A600001 to A 600621
1939	1700 1701-2 1707-8 1703-5	1280's 1290's 594 595 1227 1230 1253 4086 4087 1270's	B1501 to B 27541 B300001 to B319537 B600001 to B602497 B500001 to B506023
1940	1800 1801 1803-4-5 1806-7-8	1380's 1390's 700 1362 1370's 1332 1342 1356 1350 1351 700 710 720 695	C 1501 to C 64111 C300001 to C328320 C500001 to C507697 CC500001 to CC507697
1941	1900 1900DE 1901 1951 1903-4-5 1906-7-8	1463 1480's Also De Suffix 1473 1490's 1401 Clipper 1470's 1477DE 1479DE 1462 1420 1421 1422 1429 1432 1442 1450 1451 1452 794 795	D 1501 to D 36327 D300001 to D317238 D400001 to D416680 CD500001 to CD504550 CD500001 to CD504550
1942	2000-10-20-30 2001-2011-2021 2003-4-5 2023-2055 2006-7-8	1580's 1502 1505 1590's 1512 1515 1562 1570's 1590 1591 894 895 1550 1551 1520's 1532 1542	E 1501 to E 12906 E300001 to E319359 E500001 to E503371 CE500001 to CE503371
1946	2100-2130 2101-2111 2103-6-26	1682 1684 1685 1686 1612 1615 1692 1622 1625 1650 1651 1672 1675	F 1501 to F 14690 F300001 to F318023 F500001 to F504694
1947	2100-2130 2111 2103-6-26	2182 2184 2185 2186 2112 2115 2122 2125 2150 2151 2172 2175	F15001 to F42646 F320001 to F332010 F506001 to F521551
1948	2220-2240 2201-2211 2202-2222-2232 2206-2226-2233	2280 2282 2286 2262 2265 2290's 2270's 2213 2250's	G 1501 G 200001 G 400001 G 600001

Station Sedan Refinishing Materials

Station Sedan varnish is carried in stock under SM-5781. This is the same varnish as used by Murray Furniture for the wood and is known as Brooklyn No. 72 Wood Varnish. This is made by the Brooklyn Varnish Manufacturing Company Incorporated, 50 Jay Street, Brooklyn 1, New York.

The above varnish may be used alone to refinish old or weathered varnish. Before using it over bare wood, however, we recommend the use of a toxic wood sealer. This sealer contains a fungicide which prevents fungus decay and helps hold out subsequently applied varnish. The sealer we now use is Brooklyn's No. C-160 Toxic Sealer, which also can be obtained from the Brooklyn Varnish Company.

Part No. 401803 is Presstite's No. 427 Sealer, which is made by Presstite Engineering Company, 3900 Chouteau Avenue, St. Louis. This is a surface hardening type sealer which is used at all points where the wood of the station sedan is in contact with metal.

For filling and repairing cracks in the wood or wood joints we use a thiokol synthetic rubber cement. This cement sets up hard, but flexible when used with its accelerator. This two-part cement is 3-m Exp. 5554 made by Minnesota Mining and Manufacturing Company, 411 Piquette Avenue, Detroit, Michigan.

We know of no good way of refinishing the dark inner metal panels. This simulated wood grain is made by rolling graining ink onto a colored enamel ground coat, then coating the two with clear high bake synthetic enamel. If this graining is extensively damaged, replacement of the panel is the only alternative. Small scratches and gouges in the graining can be repaired by brushing various colors of brown air dry enamel to approximate the appearance of the grain. Should the repair of these grained panels become a major problem, it is possible that a Di-Noc grain or similar decal system could be worked out to match the rolled grain.

If it is desired merely to refinish the surface of the grained panel for appearance, any good clear air dry synthetic enamel or varnish could be used and applied by spraying.