PACKARD

DATA BOOK

1941

PACKARD
DATA BOOK
1941

PACKARD

One-Ten Special
One-Ten Deluxe
One-Twenty
Super-8 One-Sixty
Custom Super-8 One-Eighty

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The Packard Motor Car Company reserves the right to change any of this information or of these specifications without incurring any obligations.

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PACKARD MOTOR CAR COMPANY
DETROIT, MICHIGAN

Institutional
Packard 110 & 120
Packard One-Sixty
Packard One-Eighty
Body Construction
Chassis
Engines

INTRODUCTION

THE PRIMARY PURPOSE of this Data Book is to give you in one compact volume complete information, both descriptive and technical, covering the complete line of Packard cars for 1941—One-Ten Special, One-Ten DeLuxe, One-Twenty, Super-8 One Sixty and Custom Super-8 One-Eighty.

The information—not only descriptive material but mechanical data as well—is full and complete and engineering facts and principles have been translated into simple, easily understood language which is readily usable in talking to the prospect. Illustrations are used freely and all specifications and measurements are grouped in one complete section, and are thus made available for those buyers who are mechanically minded.

To give you all the information about each feature of all the new Packard cars for 1941 in full detail and yet keep the book in a practical size, the material is specially arranged. You will first find, under the correct tab, a full description of the exterior and interior of each model. Next, comes a description of body construction which pertains to all models. The engine story covering all Packard engines is in one section and the chassis in the next. Of course, all differences between models of engines and chassis are clearly shown and fully described. Mechanical specifications and body dimensions are all grouped in a separate division following the chassis section. Custom cars, Service and Accessories sections are also found, and this year for the convenience of the salesman a complete set of paint chips has been added.

We urge that you read this book from cover to cover—become familiar with every selling feature, use your information in every sales presentation and—always carry your Data Book for ready reference.

GENERAL INDEX

	Packard 110-120	Packard Super-8 160	Packard Super-8 180	Misc.
Chassis Lubrication	164	164	164	Specif. 171
Choke—Automatic	105	105	105	Specif. 178
Circuit Breaker	121	121	121	Specif. 176
Clutch	122	122	122	Specif. 173
Coupe Rear Seat	24	—	—	
Coil—Ignition	121	121	121	Specif. 176
Color Schemes	20	42	—	
Connecting Rods	93	93	93	Specif. 170
Connecting Rod Bearings	93	93	93	Specif. 170
Convertible Coupe Power Top	33	48	—	
Cooling System	108	108	108	Specif. 177
Cooling Tunnels—Fan-Blast	112	112	112	
Cowl Construction	65	65	65	
Crankcase	87	87	87	Specif. 167
Crankcase Ventilator	103	103	103	Specif. 171
Crankshaft	89	89	89	Specif. 171
Crankshaft Bearings	90	90	90	Specif. 167
Custom Cars	—	—	200	Custr. 200
Cylinder Block	87	87	87	
Cylinder Cooling	113	113	113	
Cylinder Head	89	89	89	Specif. 167
Defroster	—	—	—	Acc. 228
Dimensions Body	184	189	194	
Distributor	117	117	117	Specif. 175
Doors	67	67	67	
Door Locks	17	41	—	
Deluxe Models	35	44	—	
Electrical System	115	115	115	Specif. 175
Electric Clock	29	48	58	
Electric Windshield Wipers	118	118	118	
Electromatic Clutch	123	123	123	
Engine Mountings	87	87	87	Specif. 167
Exhaust Muffler	108	108	108	Specif. 169
Fan	111	111	111	Specif. 177
Fan-Blast Cooling Tunnels	112	112	112	
Fast Idle—Automatic	106	106	106	
Fenders	13	38	52	
Fender Mounting	109	109	109	
Fender Well Equipment	162	162	162	
Fifth Shock Absorber	148	148	148	Specif. 179

	Packard 110-120	Packard Super-8 160	Packard Super-8 180	Misc.
Firsts—Packard	4	4	4	
Floating Oil Screen	102	102	102	Specif. 171
Foam Rubber Cushions	25	43	56	
Frame	135	135	135	Specif. 173
Front Seat Adjustment	25	—	—	
Front Seat	25	—	—	
Front Cross Member	137	137	137	
Front Springs	141	141	141	Specif. 179
Front Suspension	137	137	137	Specif. 174
Front Wheel Alignment	139	139	139	Specif. 174
Fuel Compensator	117	117	117	
Fuel Lines	104	104	104	
Fuel Pump	104	104	104	Specif. 177
Fuses	121	121	121	Specif. 176
Gasoline Tank	104	104	104	Specif. 177
Generator	116	116	116	Specif. 175
Grilles—Radiator (End Section)	110	110	110	
Glass—Safety	73	73	73	
Gravel Deflector	18	41	54	
Handbrake	161	161	161	Specif. 180
Handishift	126	126	126	Specif. 173
Headlighting System	118	118	118	Specif. 176
Heat Control	107	107	107	Specif. 177
Heaters	—	—	—	Acc. 227
Horns	120	120	120	
Hotchkiss Drive	158	158	158	
Hydraulic Brakes	159	159	159	Specif. 180
Hydraulic Valve Tappets	—	99	99	
Hypoid Gears	156	156	156	Specif. 178
Ignition Coil	121	121	121	Specif. 176
Improvements for 1941	8	8	8	
Instrument Panel	27	47	57	
Insulation	68	68	68	
Light Bulbs	120	120	120	
List of 1941 Improvements	8	8	8	
Locks	17	41	—	
Lubrication—Chassis	164	164	164	Specif. 171
Lubrication—Motor	100	100	100	Specif. 171
Lubrication Plans	—	—	—	Serv. 225
Luggage Space	19	41	54	

	Packard 110-120	Packard Super-8 160	Packard Super-8 180	Misc.
Main Bearings	90	90	90	Specif. 167
Manifold Heat Control	107	107	107	Specif. 177
Mechanical Specifications	—	—	—	Specif. 167
Models and Body Types	183	188	193	
Motor	83-84	85	—	Specif. 167
Motor Lubrication	100	100	100	Specif. 171
Motor Mountings	87	87	87	Specif. 167
Motor Specifications	—	—	—	Specif. 167
Motor Ventilation	103	103	103	Specif. 171
Muffler	108	108	108	Specif. 169
Multi-tone Options	181	181	181	
Oil Filter	—	101	101	Specif. 171
Oil Pan	103	103	103	
Oil Pump	102	102	102	Specif. 171
Oil Screen—Floating Type	102	102	102	
Over-all Length	133	133	133	
Overlapping Bearings	91	91	91	
Packard "Firsts"	4	4	4	
Packard Warranty	—	—	—	Serv. 221
Painting	74	74	74	
Piston	94	94	94	Specif. 169
Piston Rings	95	95	95	Specif. 170
Power Top—Coupe	33	48	—	
Precision Type Bearings	91	91	91	Specif. 170
Pressure Lubrication System	100	100	100	Specif. 171
Propeller Shaft	158	158	158	
Proving Ground	3	3	3	
Radiator	108	108	108	Specif. 177
Radiator Grille (Cooling System)	110	110	110	
Radiator Mountings	109	109	109	
Radiator Ornament	13	38	52	
Radiator Shutters	—	111	111	Specif. 177
Radiator Thermostat	110	110	110	Specif. 177
Radio	—	—	—	Acc. 224
Rear Axle	155	155	155	Specif. 178
Rear Axle Gear Ratios	157	157	157	Specif. 178
Rear Wheel Bearings	157	157	157	Specif. 178
Removable Precision Type Bearings	91	91	91	

	Packard 110-120	Packard Super-8 160	Packard Super-8 180	Misc.
Rifle-Drilled Connecting Rods	93	93	93	Specif. 170
Roll Control Bar	149	149	149	Specif. 179
Roof	63	63	63	
Roominess	30	42	54	
Rubber Bearings	164	164	164	
Running Boards	15	40	53	
Rustproofing	73	73	73	
Safe-T-fleX—Complete Advantages	151	151	151	
Safe-T-fleX Front Suspension	137	137	137	Specif. 174
Safe-T-fleX Rear Suspension	142	142	142	
Safety Glass	73	73	73	
Sealed-Beam Headlights	118	118	118	Specif. 176
Sealed Cooling System	108	108	108	Specif. 177
Seat Dimensions	31	42	54	
Service	—	—	—	Serv. 221
Service Policy	—	—	—	Serv. 221
Servo-Hydraulic Brakes	159	159	159	Specif. 180
Shackles	145	145	145	Specif. 179
Shock Absorber—Fifth	148	148	148	Specif. 179
Shock Absorbers—Front	140	140	140	Specif. 179
Shock Absorbers—Rear	145	145	145	Specif. 179
Sound-proofing	68	68	68	
Spark Plugs	—	—	—	Specif. 175
Specifications—Mechanical	—	—	—	Specif. 167
Specifications—Body	—	—	—	Specif. 183
Speedometer	28	47	58	
Spring Bracket	144	144	144	
Springs—Front	141	141	141	Specif. 179
Springs—Rear	142	142	142	Specif. 179
Spring Inserts	143	143	143	
Spring Shackles	145	145	145	Specif. 179
Starter Motor	116	116	116	Specif. 175
Steering	153	153	153	Specif. 174
Steering Gear	154	154	154	Specif. 174
Steering Wheels	30	48	58	
Thermo-Strut Piston	94	94	94	Specif. 169
Thermostat	110	110	110	Specif. 177
Timing Chain	97	97	97	Specif. 169
Tires	163	163	163	Specif. 180
Torque Arm	138	138	138	

DATA BOOK

	Packard 110-120	Packard Super-8 160	Packard Super-8 180	Misc.
Transmission	125	125	125	Specif. 173
Triple Rubber Insulation	72	72	72	
Tru-Course Steering	153	153	153	
Trunk	19	41	54	
Trunk Light	—	42	54	
Universal Joints	159	159	159	Specif. 178
Upholstery and Trim Chart	181	181	181	
Vacuum Pump	—	105	105	Specif. 177
Vacuum Spark Control	117	117	117	Specif. 175
Valves	97	97	97	Specif. 168
Valve Cooling Tube	114	114	114	
Valve Tappets	98	99	99	Specif. 168
Vapor Lock	104	104	104	
Ventilation System	34	49	58	
Vibration Damper	92	92	92	Specif. 171
Voltage Control	116	116	116	Specif. 175
Warranty	—	—	—	Serv. 221
Water Distributing Tube	114	114	114	
Water Jackets	113	113	113	
Water Temperature Control	110	110	110	Specif. 177
Water Pump	112	112	112	Specif. 177
Weights	183	188	193	
Wheel Bearings—Rear	157	157	157	Specif. 178
Wheels	162	162	162	Specif. 180
Wheelbase	133	133	133	
Window-Automatic Controls	—	—	59	
Window Glass Area	17	40	53	
Windshield	13	39	—	
Windshield Wipers	118	105	105	

PACKARD CUSTOM CARS

Features PAGE

PACKARD CUSTOM CARS

With the introduction of the new 1941 models, Packard also announces seven new Custom body types available on the Custom Super-8 One-Eighty chassis.

For the very discriminating clientele, Packard offers a 7-passenger Touring Sedan, a 7-passenger Touring Limousine and a Sport Brougham by LeBaron and an All-Weather Cabriolet and an All-Weather Town Car by Rollson.

For those who desire the utmost in smartness and distinction in their motor cars, a 5-passenger Sport Sedan and a 5-passenger Convertible Victoria by Darrin are offered.

All of the enclosed custom body types are equipped with hydraulically operated windows in all doors and in the partition, in the case of the LeBaron Limousine, Rollson All-Weather Cabriolet and All-Weather Town Car. These are operated by controls located within easy reach of normal sitting position.

All Custom cars are offered with white sidewall tires at no extra cost. Five-wheel equipment is standard on the Darrin Sport Sedan and Darrin Convertible Victoria, also on the LeBaron Sport Brougham. Six-wheel equipment is standard on the LeBaron 7-passenger Sedan and Limousine and on the Rollson All-Weather Cabriolet and All-Weather Town Car. All 5-wheel equipped cars are supplied without running boards as standard. However, running boards may be specified without extra charge if desired.

The Rollson All-Weather Cabriolet has ample room in the rear compartment for 5 passengers. It is equipped with two opera type auxiliary seats, one side facing and one rear facing, which are concealed in the partition when not in use. By raising the front windows and attaching the canopy which is easily installed, occupants of the front compartment are protected in case of inclement weather.

The Rollson All-Weather Town Car fills the demand for a larger and more spacious conservative type of town car. This

car has two forward facing auxiliary seats which are concealed in the partition when not in use. As in the case of the All-Weather Cabriolet, the windows in the front doors can be raised and the canopy quickly installed over the front compartment when desired.

The LeBaron Sport Brougham, 7-passenger Sedan and 7-passenger Limousine are decidedly new and are offered for those demanding the finest to be obtained in these body styles. All provide the luxury, comfort and distinction expected by that clientele accustomed to the very best.

The Convertible Victoria and Sport Sedan by Darrin present the long and low appearance so desirable and popular in sport cars today. These cars, while offered as standard with 5-wheel equipment, may be had with 6 wheels and tires at an extra charge if desired. However, we believe fenderwell equipment will detract from their smart appearance. The top of the Convertible Victoria is of simple construction and is easily and quickly raised and lowered.

Special Designs

While these Custom models will generally meet the requirements for either the conservative or more modern style of cars, we realize that there is a limited clientele who desire something entirely different. Special bodies ordered one at a time naturally cost more than those offered in our Custom line due to the fact that we order them in limited quantities. However, if you will inform us of your customer's desires we will have some of the leading Custom body builders prepare sketches which can be submitted to your customer for approval.

DARRIN SPORT SEDAN

Style No. 1422

Available only on the 1907 Packard Custom Super-8 One-Eighty with a wheelbase of 138 inches.

STANDARD EQUIPMENT

Slanting chrome Vee type windshield with stationary glass.
Laidlaw DeLuxe broadcloth with best grade domestic top grain leather trim and piping.
Hydraulically operated door windows.
Five steel wheels.
One spare tire.
Safety glass throughout.
Complete insulation on body and panels.
Carpet in front and rear compartments.
Spacious luggage compartment.
Chrome stone guards on rear fenders.
Rear seat center folding arm rest.

OPTIONAL EQUIPMENT

Any color scheme on body, bonnet, chassis and wheels.
White sidewall tires.
Running boards.

SPECIAL EQUIPMENT AT EXTRA CHARGE

Special imported leather, if available, or domestic leather or special upholstery for front or rear compartments.

DARRIN CONVERTIBLE VICTORIA

Style No. 1429

Available only on the 1906 Packard Custom Super-8 One-Eighty with a wheelbase of 127 inches.

STANDARD EQUIPMENT

Slanting chrome Vee type windshield with stationary glass.
Upholstered in best grade domestic top grain leather.
Top is Jonartz Taupe with 54 backing bound in leatherette to match upholstery.
Five steel wheels.

One spare tire.
Safety glass throughout.
Complete insulation on body and panels.
Carpet in front and rear compartments.
Spacious luggage compartment.
Chrome stone guards on rear fenders.
Rear seat center folding arm rest.

OPTIONAL EQUIPMENT

Any color scheme on body, bonnet, chassis and wheels.
White sidewall tires.
Running boards.

SPECIAL EQUIPMENT AT EXTRA CHARGE

Special imported leather, if available, or special upholstery for front or rear compartments.
Special top material.

LEBARON 7-PASSENGER LIMOUSINE

Style No. 1420

Available only on the 1908 Packard Custom Super-8 One-Eighty with a wheelbase of 148 inches.

STANDARD EQUIPMENT

Hydraulically operated windows in all doors and in partition.
Forward facing auxiliary seats (concealed when not in use).
Chromium plated scuff plates.
Two foot hassocks covered with carpet material.
Foam rubber pads in front and rear seat construction.
Window moldings and wainscot panels genuine walnut with pewter inlays.

Electric clock in wainscot panel on back of partition.
Spacious trunk compartment.
Corner reading lights in rear compartment.
Fenderwell equipment.
Six steel wheels.
Two spare tires and metal covers.
Laidlaw DeLuxe broadcloth for rear compartment.
Best grade domestic black leather for front compartment.
Curtain on back window and concealed curtains on quarter windows.
Heavy flexible robe cord anchored to brackets with integral assist handles.

OPTIONAL EQUIPMENT

Any color scheme on body, bonnet, chassis and wheels.
White sidewall tires.

LEBARON 7-PASSENGER SEDAN

Style No. 1421

Available only on the 1908 Packard Custom Super-8 One-Eighty with a wheelbase of 148 inches.

STANDARD EQUIPMENT

Hydraulically operated windows in all doors.
Forward facing auxiliary seats (concealed when not in use).
Chromium plated scuff plates.
Two foot hassocks covered with carpet material.
Foam rubber pads in front and rear seat construction.
Window moldings and wainscot panels genuine walnut with pewter inlays.

Electric clock in wainscot panel on back of front seat.
Spacious trunk compartment.
Corner reading lights in rear compartment.
Fenderwell equipment.
Six steel wheels.
Two spare tires and metal covers.
Laidlaw DeLuxe broadcloth for front and rear compartments.
Curtain on back window and concealed curtains on quarter windows.
Heavy flexible robe cord anchored to brackets with integral assist handles.

OPTIONAL EQUIPMENT

Any color scheme on body, bonnet, chassis and wheels.
White sidewall tires.

LEBARON SPORT BROUGHAM

Style No. 1452

Available only on the 1907 Packard Custom Super-8 One-Eighty with a wheelbase of 138 inches.

STANDARD EQUIPMENT

Front and rear doors equipped with wing type ventilating windows.
Hydraulically operated windows in all doors.
Corner reading lights in rear compartment.
Slanting Vee type windshield fitted with a chromium plated frame covering entire windshield pillars and extending approximately 1½ inches above and below windshield opening.
Spacious trunk compartment.

Concealed hinges on rear doors.
Window moldings and wainscot panels genuine walnut with pewter inlays.
Foam rubber pads in front and rear seat construction.
Laidlaw DeLuxe broadcloth.
Chromium plated scuff plates.
Five steel wheels.
One spare tire.

OPTIONAL EQUIPMENT

Any color scheme on body, bonnet, chassis and wheels.
White sidewall tires.
Running boards.

ROLLSON ALL WEATHER CABRIOLET
Style No. 794

Available only on the 1907 Packard Custom Super-8 One-Eighty with a wheelbase of 138 inches.

STANDARD EQUIPMENT

Slanting windshield with stationary glass.
Painted stanchions with chromium frame around windshield glass.
Black turtle grain leather on roof and rear quarters.
Laidlaw broadcloth 175 brown and tan combination for rear compartment.
Black leather for front compartment.
Opera type auxiliary seats, one side-facing and one rear-facing (concealed when not in use).
Glass in partition lowers.
Two carpet-covered hassocks in rear compartment.
Folding center arm rest in rear seat back.

Safety glass throughout.
Fenderwell equipment.
Six steel wheels.
Two spare tires and metal covers.
Entire car painted black.
Hydraulically operated windows in doors and partition.

OPTIONAL EQUIPMENT

Any color scheme on body, bonnet, chassis and wheels.
Any Packard Super-8 One-Eighty upholstery cloth.
White sidewall tires.

ROLLSON ALL WEATHER TOWN CAR
Style No. 795

Available only on the 1908 Packard Custom Super-8 One-Eighty with a wheelbase of 148 inches.

STANDARD EQUIPMENT

Slanting windshield with stationary glass.
Painted stanchions with chromium frame around windshield glass.
Black turtle grain leather on roof and rear quarters.
Laidlaw broadcloth 175 brown and tan combination for rear compartment.
Black leather for front compartment.
Forward facing auxiliary seats.
Glass in partition lowers.
Carpet covered foot rest in rear compartment.
Folding center arm rest in rear seat back.
Rear quarter windows of the ventilating type.
Safety glass throughout.

Fenderwell equipment.
Six steel wheels.
Two spare tires and metal covers.
Entire car painted black.
Hydraulically operated windows in doors and partition.

OPTIONAL EQUIPMENT

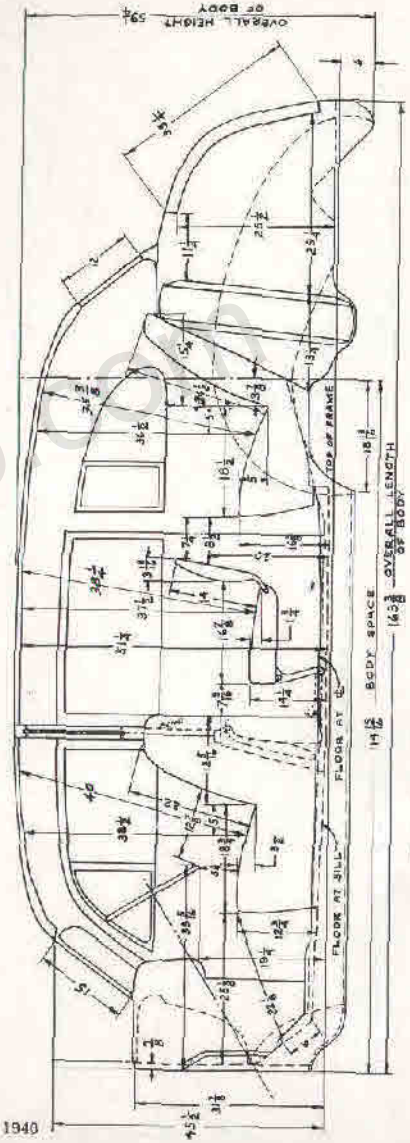
Any color scheme on body, bonnet, chassis and wheels.
Any Packard Super-8 One-Eighty upholstery cloth.
White sidewall tires.

STATION WAGONS

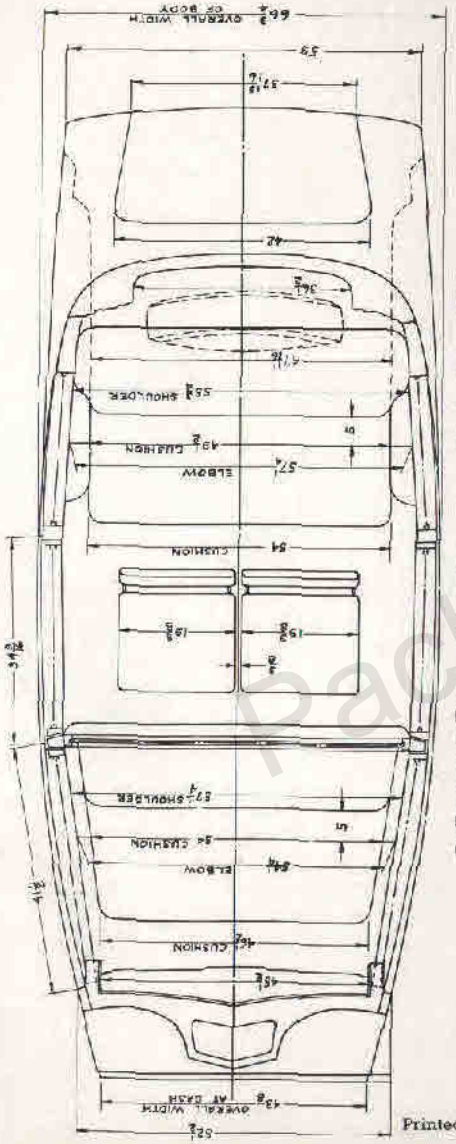
For the 19th Series, Packard offers a new line of standard and DeLuxe Station Wagons for the One-Ten and One-Twenty chassis.

Both the standard and DeLuxe bodies incorporate many new features such as more sweep to the sides of the body, painted roofs to match bonnet and cowl, wider and more comfortable seats, new location for spare tire, tool compartment located under center seat, easier installation and removal of center and rear seats, metal skirt on bottom edge of front seat and many other desirable features which will appeal to those who are interested in a quality Station Wagon.

For those who desire the last word in cars of this type, we are offering the DeLuxe Station Wagon which will be upholstered with genuine leather on the seat cushions and backs, foam rubber pad for the driver's seat cushion, carpet floor covering for the front and center compartments and chrome seat frames throughout.



LeBaron 7-Passenger Limousine—Style No. 1420



LeBaron 7-Passenger Limousine—Style No. 1420

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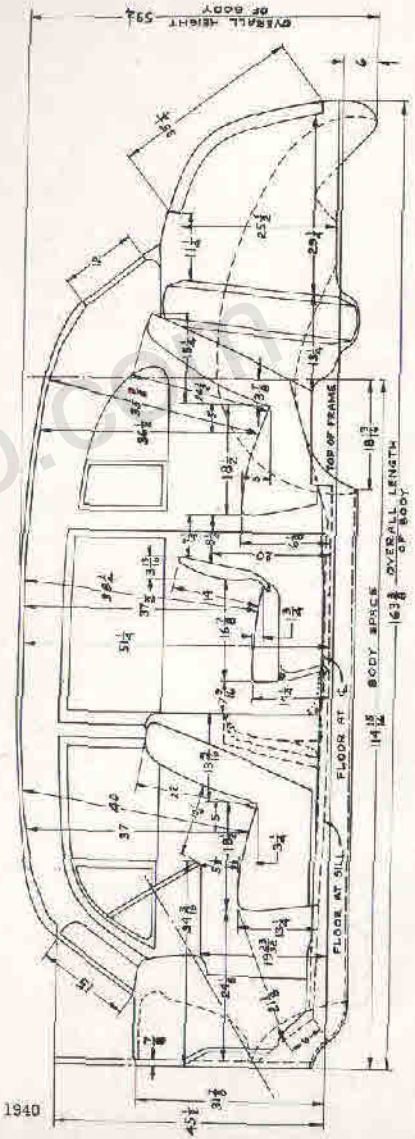
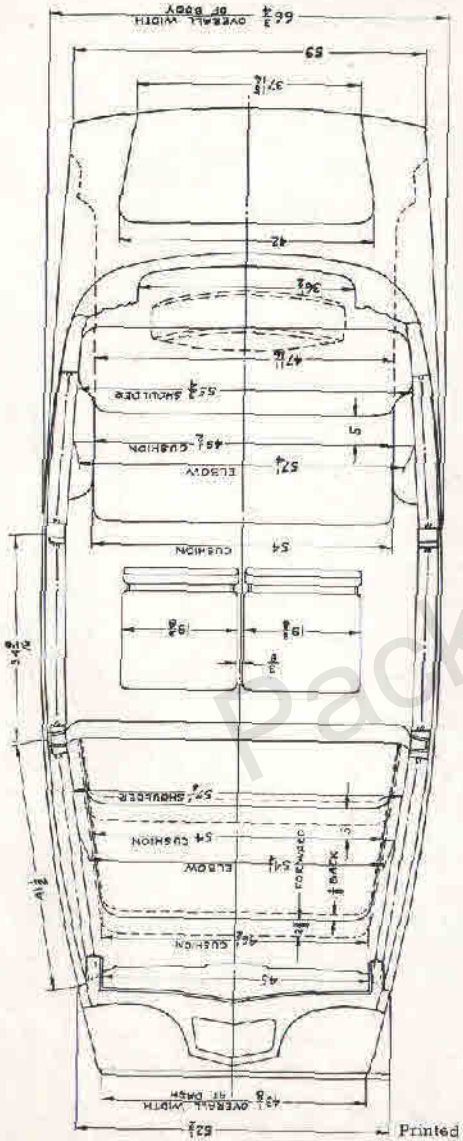


LeBaron 7-Passenger Sedan—Style No. 1421



LeBaron 7-Passenger Sedan—Style No. 1421

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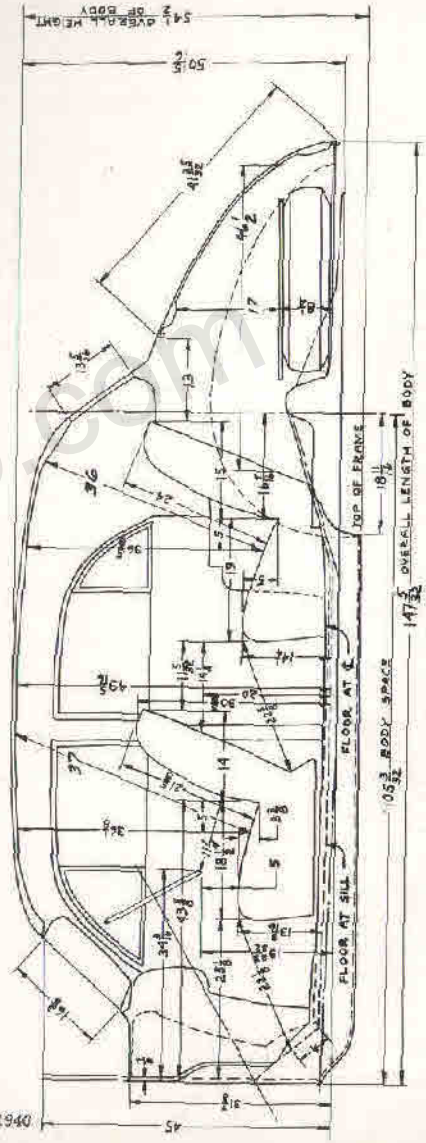
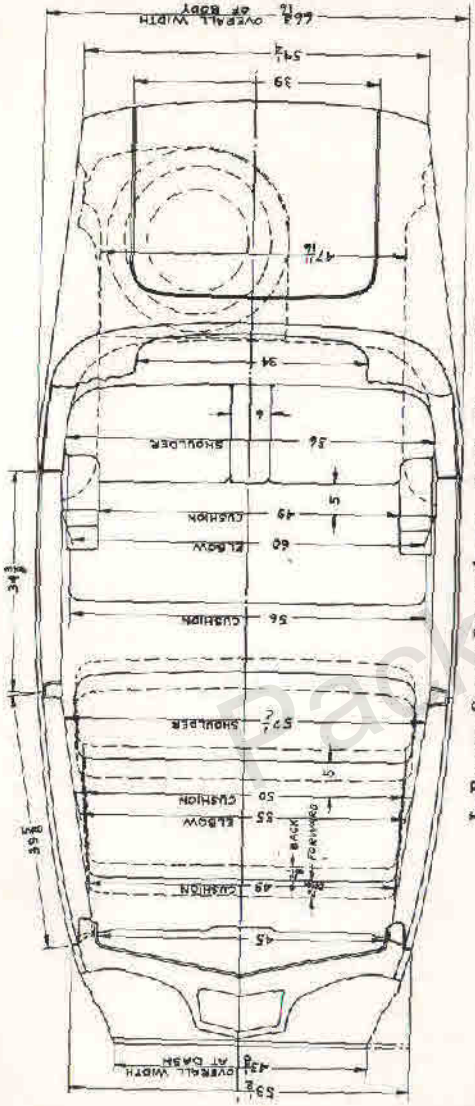


LeBaron Sport Brougham—Style No. 1452



LeBaron Sport Brougham—Style No. 1452

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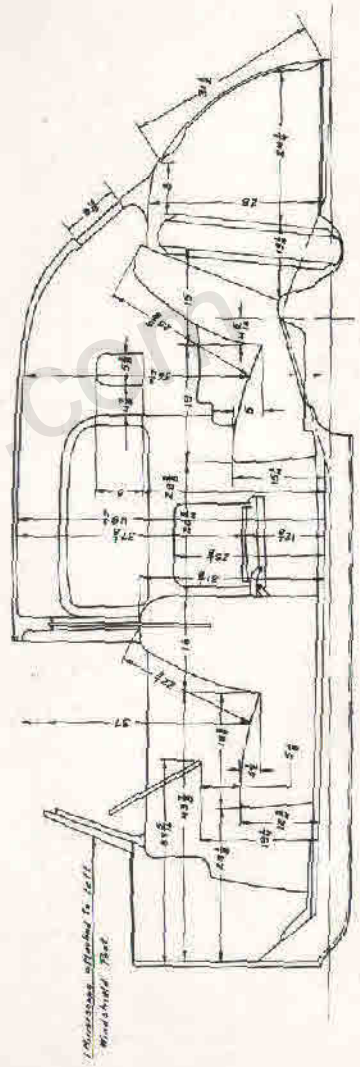
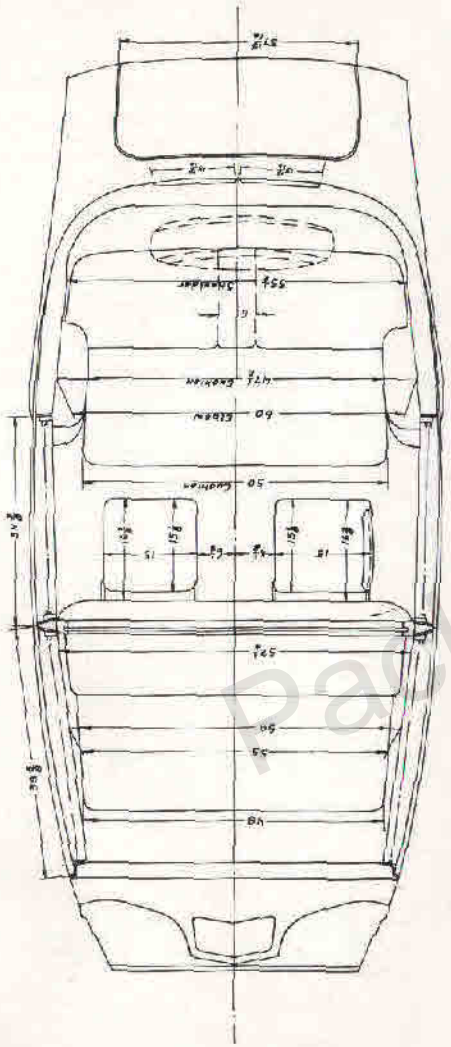
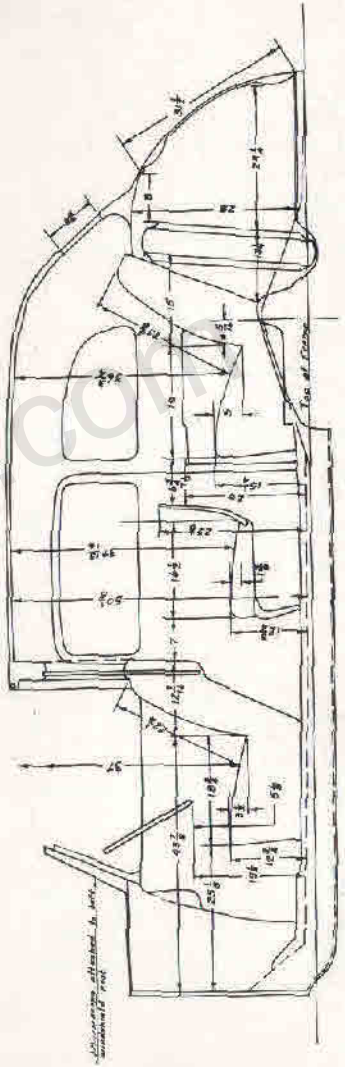


Rollson All-Weather Cabriolet—Style No. 794

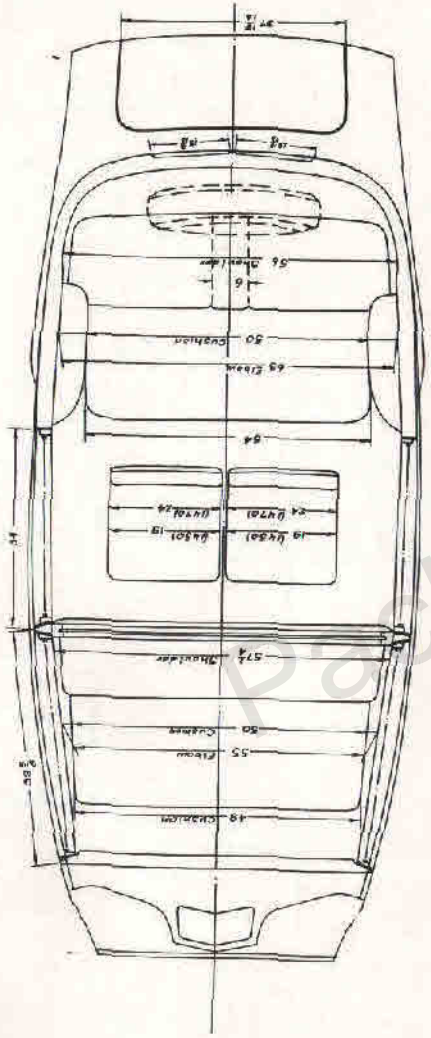


Rollson All-Weather Cabriolet—Style No. 794

Printed in U.S.A.



Rollson All-Weather Town Car—Style No. 795



Rollson All-Weather Town Car—Style No. 795

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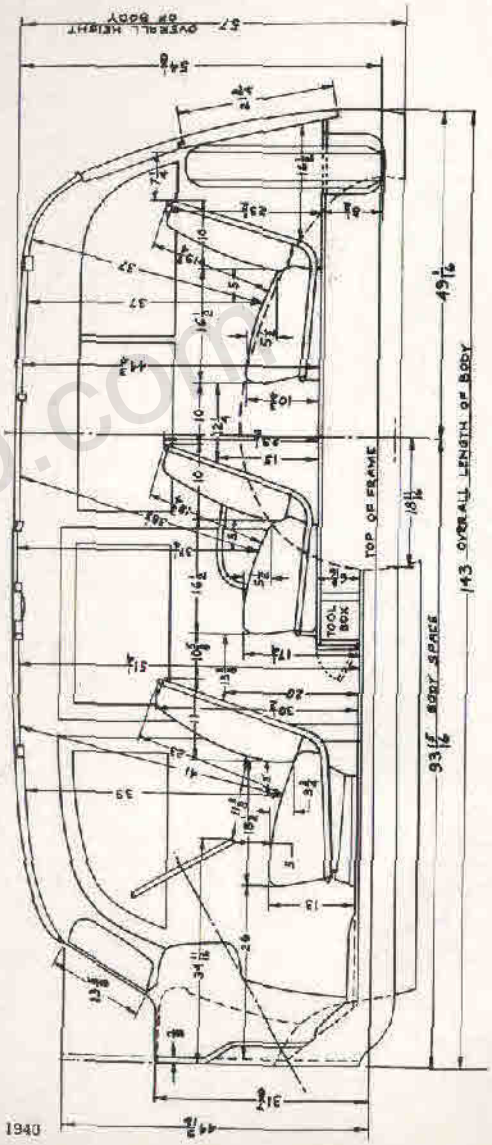
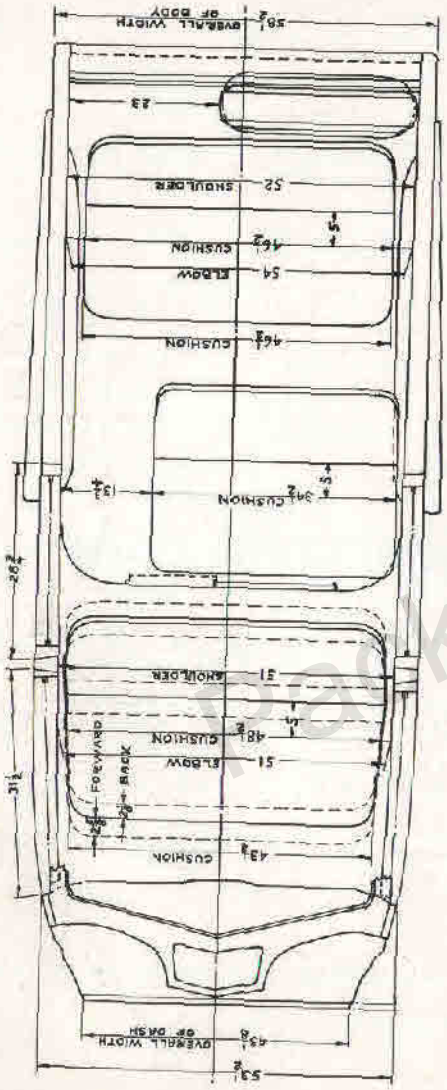


Station Wagon



Station Wagon

Printed in U.S.A.

PACKARD WARRANTY

PACKARD MOTOR CAR COMPANY has warranted that for a period of ninety days from the date of original delivery to the purchaser of each new Packard car or before such car has been driven 4,000 miles; whichever event shall first occur, it will replace, free of charge, any part or parts thereof, including all equipment or trade accessories, except tires, supplied by it as standard equipment, claimed within that period to be defective and found by the Company upon examination to be so, provided such part or parts are returned to the Company within that period for credit or replacement. Such free replacement does not include transportation charges to or from the Packard factory.

PACKARD SERVICE POLICY BY DISTRIBUTERS AND DEALERS

The original purchaser of a new Packard car will be entitled to the following:

1. **Parts and Labor**—For 90 days after the original delivery of such motor car to the owner, provided the car has not been driven to exceed 4,000 miles, any parts, including all standard equipment, except tires, that may be adjudged by Packard Motor Car Company to be defective under its warranty will be replaced or repaired by any Packard dealer or distributer in the United States and Canada without charge to the owner for material or labor.

2. **Adjustment**—The owner is entitled during this period to receive inspections and adjustments of his new car (by the selling Packard dealer or distributer) as indicated on the coupons attached to the Owner's Service Card, provided such adjustments are not made necessary by accident, neglect or misuse.

3. **Inspections**—Throughout the life of the car the owner is entitled to have it tested and inspected without charge every 30 days or 1,000 miles by an authorized Packard Service Station, provided such inspection requires no removal or dismantling of parts or units.

4. **Owner's Service Card**—At the time of delivery the owner is provided with an Owner's Service Card which will introduce him to any authorized Packard Service Station and entitle him to receive service in accordance with this policy. The owner should carry the card with him at all times so he can present it when necessary.

5. **Tourist Privileges**—When touring, the owner is entitled, upon presentation of the Owner's Service Card, to all of the benefits of this policy during the warranty period at any authorized Packard Service Station in the United States and Canada, provided the date of delivery and name of the dealer from whom the car was purchased are stamped on the plate provided for that purpose on the dash.

6. **Change of Residence**—In case the owner changes his residence from one location to another before the warranty period has expired, the Packard Service Station serving the locality into which the owner moves will, upon presentation of the Owner's Service Card, render any no-charge service to which the owner may be entitled.

7. **Service Charges**—Every authorized Packard Service Station is provided with a manual containing the correct charges for service work. In order that maintenance costs may be kept as low as possible, these rates are based on careful studies of the shortest time for doing the service operations consistent with proper workmanship. Guaranteed Packard Parts can be obtained from any authorized Packard Service Station and should be used for replacement purposes.

LUBRICATION-INSPECTION PLANS

Plan No. 1—**The Green Book**—At a suggested price to the owner of $3.90 the following Lubrication-Inspection Service is rendered: Six complete chassis lubrications with correct factory specified oil and greases required at 1,000-mile intervals—one free motor check up. Six complete inspection services which keep both the owner and our service department familiar with the condition of the car. This tends to prevent unexpected and expensive repair work and is a preventive service. This book may be included in the delivered price of the car and should be given to the owner at the time of delivery. The green book may be accepted at full face value in exchange for Plan No. 3 or Plan No. 4.

Plan No. 2—**The Blue Book**—This Lubrication-Inspection Service is the same as Plan No. 1 except that ten lubrications and inspections are included, thus making the plan cover an average year's driving. The suggested price to the owner is $6.50.

Plan No. 3—**The Buff Book**—This Lubrication-Inspection Service includes all operations of Plan No. 2 and in addition includes the lubricants for motor oil changes at 2,000 miles for a 10,000-mile period. Lubricant is also supplied for front wheel bearing lubrication and for changes in the transmission, rear axle and steering at the proper season. Local prices for Plan No. 3: One-Ten $.....; One-Twenty $.....; One-Eighty $.....

Plan No. 4—**The Red Book**—This Lubrication-Inspection Service includes all the operations of Plan No. 3, and in addition includes extra motor oil changes so that the oil is changed each 1,000 miles. It is a service that is desirable for hard drivers and those preferring the 1,000-mile oil changes. Local prices for Plan No. 4: One-Ten $.....; One-Twenty $.....; One-Eighty $.....

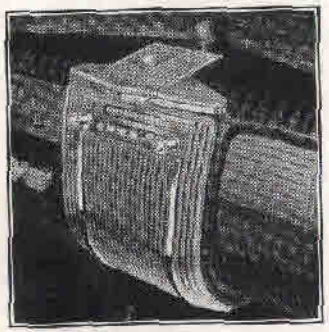
PACKARD ACCESSORIES

Packard cars are complete units of transportation when they drive off the assembly line. Each is ready to deliver comfortable and reliable transportation, yet each new owner may wish to add some personal item for his pleasure and comfort. For this reason, a complete line of accessories is designed and approved by the Packard engineers for the personal selection of Packard car owners. Greater comfort, safety and additional beauty of appearance is provided by their use. Sell your car owners Packard Approved Accessories.

Radio—Custom—Sales Features:

1. Five button, automatic radio
2. Color-Tone reception
3. Radio mounted in instrument panel
4. Eight working tubes, superheterodyne circuit
5. New "Tune-O-Matic" selection for automatic button adjustment.

Any one of five predetermined stations can be selected at will by the lightest touch of a control button. An electric magnet does all the work. Additional stations may be tuned in by depressing and rotating the right-hand control knob.



The Color-Tone illumination of the radio is new.

Color-Tone — New, different and typically Packard is the synchronized "Color-Tone" lighting of the radio control dial. Blue, amber or red lights flood the radio dial, each blending into the other in a rainbow range of color as the

tone control of the radio is changed to accentuate the perfect tone qualities of the broadcast. The bass notes, low and responsive are accompanied by an inspiring Blue light which floods the radio dial with a harmonious coloring. A brilliant, sparkling Amber light amplifies the clear tones of inspiring dance music. Vivid notes of the trumpet, violin and the spoken word are each more expressive and lingering when accompanied by a light changed from pink to rose or brilliant Red, as the music dictates.

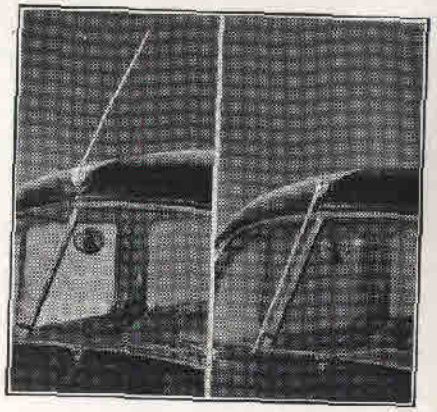
The new centerline mounting of the radio in the instrument panel improves the tone of the large 8" speaker and permits rear seat passengers to hear better. It also permits the construction of the radio in a single case.

Eight working tubes in a superheterodyne circuit provide the performance of a ten-tube set. Improved selectivity with low circuit noise and long reception distance are characteristics. The sensitivity is better and the automatic adjustments finer. A three-gang, coil condenser is used for better tuning.

The automatic adjustment for any button can be changed at any time. Depress the control button and rotate the "Tune-O-Matic" wheel in the button until the desired station is secured. Any station may be located to any button, regardless of its position on the dial.

Antenna — Rotary Windshield — The antenna is raised and extended, as well as lowered, by rotating a convenient hand knob which is located on the header board inside the car. Turn the knob to the right (clockwise) to raise the antenna. Turning the knob to the left (counter clockwise) lowers the antenna against a fixed stop in line with the windshield divider strip.

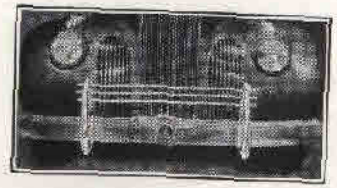
To extend the center telescope section of the antenna, to improve reception from a distant station, rotate the hand control knob to the right five full turns. To lower the extension rotate the hand control knob to the left. The extension will retract itself before the antenna folds down.



The antenna will seat itself against an insulated support when in a retracted position. The antenna is very inconspicuous when in this position.

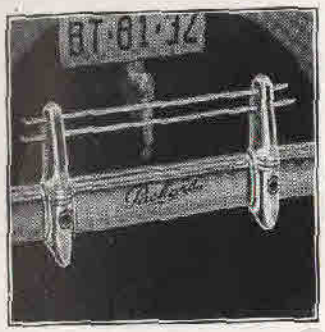
A new feature in the design of this antenna permits it to fold either backward or forward if it strikes an overhead obstruction like the garage door frame. The antenna is built on a spring hinge that is strong enough to hold the antenna upright at any car speed, but will permit it to fold when submitted to excessive pressure.

The 1941 Packard Custom Radio is so perfectly matched to this antenna that local reception is possible with the antenna down. The antenna can be rotated to any upright position for general use and fully extended to overcome great distances or local reception difficulties.



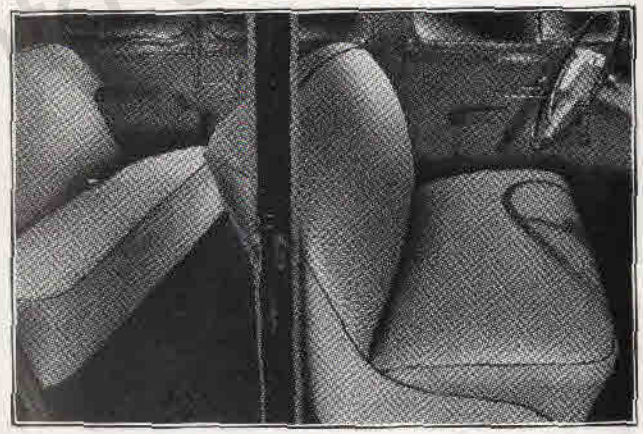
Auxiliary Front Bumper—This three-bar auxiliary bumper, of a new design to harmonize with the new front end appearance of the cars, will protect the radiator and grille from damage.

Dual Trunk Lid Guard—Newly designed to protect the trunk door from damage when the front bumpers of other cars strike and over-ride the rear bumper of your car.



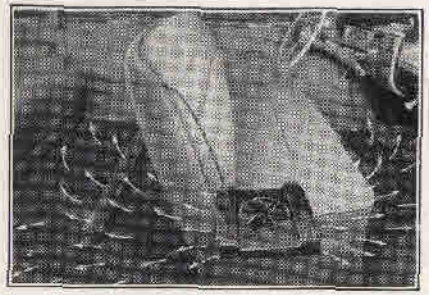
This strong chrome-plated guard is bolted to the rear bumper and folds down when you wish to open the trunk door.

San-Tex Seat Covers—San-Tex seat covers are very desirable in warm weather because of their coolness, neat appearance and cleanliness. They are also very much appreciated in winter because heavy clothing does not adhere to them and one is enabled to slide across the seats. These covers entirely cover the seats and seat backs and



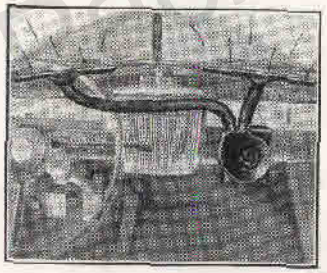
have a tailored appearance because of their snug fit. They can be cleaned easily, without removing them from the car, by using a damp cloth. Do not dry-clean.

Dual Stream Heater—This new heater delivers a continuous stream of warm air to both the front and rear com-



partments of the car, insuring cozy comfort for all passengers, regardless of weather. The silent motor and big heating cores with an 8-inch fan are placed under the front seat leaving the front compartment free. All drafts and direct blasts of heat are overcome by this design. A handy switch controls the volume of warm air from the heater as desired. A separate windshield defroster is mounted to provide a clear windshield in all weather. A foot warmer blows warm air to the driver's side of the front compartment.

Defroster—This defroster is new in design. It is a two-purpose unit. The defroster blows warm air against both sections of the windshield glass, clearing it of fog, snow and frost. By opening a small door in the left side of the defroster unit, the stream of warm air is diverted from the windshield to the driver's side of the front compartment. The warm air flows just above the floor boards, keeping the driver's feet warm. Used in this way, the defroster acts as an auxiliary to the Dual Stream Heater, providing additional heat for severe weather.

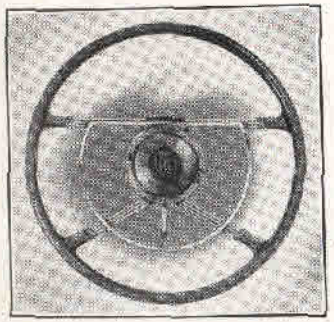


DeLuxe Heater—This new DeLuxe heater is designed to provide an abundance of direct heat to quickly warm the interior of the car and its occupants, and indirect heat for

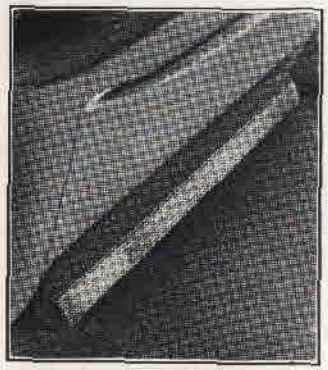
continuous driving. This dual design insures plenty of warm air throughout the car at all driving speeds. Thorough and proper distribution of heat is assured as the reversible motor has two speeds and the three doors are hinged, permitting the waves of direct heat to be deflected as desired.

Defroster attachments are built in, with outlets to both sides of the windshield, directly in front of both driver and passenger, insuring a clear, unobstructed view of the road in all kinds of weather.

DeLuxe Steering Wheel—This new, exclusive, four-spoke wheel, with its convenient horn ring will appeal to many. The comfort of driving with the new hand grip moulded into the ring, and the distinctive design add to the luxurious front compartment appointments in any car. The new design gives an unobstructed view of the instrument panel. The plastic rim and horn button emblem harmonize with the other car accessories.



Foot Rest Trim Moulding—The sparkling reflections from this foot rest trim moulding brighten the entire rear



compartment of a car. Its neat, trim appearance lends distinction to the floor covering as well as protection for the foot rest. The corrugated ridges do not show scratches, while the curved ends embed themselves in the carpet nap, leaving no sharp edges exposed to scratch one's shoes or slippers.

ACCESSORY PRICE LIST

Item	Suggested List Price Attached
DeLuxe Emblem	$ 6.75
Cormorant Emblem	10.00
Foot Rest Trim Moulding	1.95
Radiator *Grille* Guard	2.25
Auxiliary Front Bumper Equipment	7.95
Auxiliary Read Bumper Equipment	7.95
Fender Guard (pair)	5.50
Dual Stream Heater and Defroster Equipment	29.95
DeLuxe Heater and Defroster Equipment	23.50
License Plate Frames	2.50
Fog and Driving Light (pair)	10.50
Backing Light	4.95
Mirror—For Front Door	1.75
Mirror—*For Cowl—Left*	3.95
NoRol Equipment—1800-1—1900-1	12.00
Packard Oil Filter Equipment—1900-1901	6.50
Radiator Cover—Fabric	2.95
Radio—Automatic Tuning	63.50
Seat Covers—San-Tex Material—4-Door Jobs	12.75
DeLuxe Steering Wheel Equipment	9.90
Wheel Discs—Chrome (set of 5)	10.75
Rear Wheel Shields (pair)	24.75

PACKARD PAINT SCHEMES

THE FOLLOWING color chips cover all paint schemes in the Packard line. In total there are twenty-one.

All paint schemes are standard with the exceptions of H-Q-Z-Y and T which are announcement colors and will be available for a limited time only.

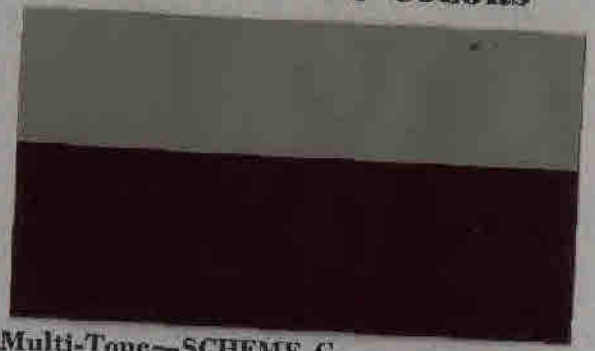
To conserve space in some cases, three color combinations are combined in one panel. For example Scheme C covers a Multi-Tone color made up of the two schemes S and A and either of the last mentioned schemes are also available in one tone paints. On the other hand Multi-Tone Scheme H consists of two colors, Moth Gray and Blue Gray but these last two colors are not available in single tone paints as indicated by the absence of Scheme letters.

PACKARD BODY COLORS

SCHEME B
Entire Car Packard Blue

Multi-Tone—SCHEME C
Above SCHEME S—Silver French Gray Metallic
Below SCHEME A—Puritan Gray Metallic

Multi-Tone—SCHEME P
Above SCHEME J—Chicory Green Metallic
Below SCHEME D—Grove Green Metallic



Multi-Tone—SCHEME G
Above SCHEME S—Silver French Gray Metallic
Below SCHEME E—Packard Maroon Metallic

Multi-Tone—SCHEME F
Above SCHEME S—Silver French Gray Metallic
Below SCHEME L—Barola Blue Metallic

Multi-Tone—SCHEME M
Above SCHEME K—Andes Tan Metallic
Below SCHEME W—Wilshire Brown Metallic

Multi-Tone—SCHEME U
Above SCHEME S—Silver French Gray Metallic
Below SCHEME X—Black

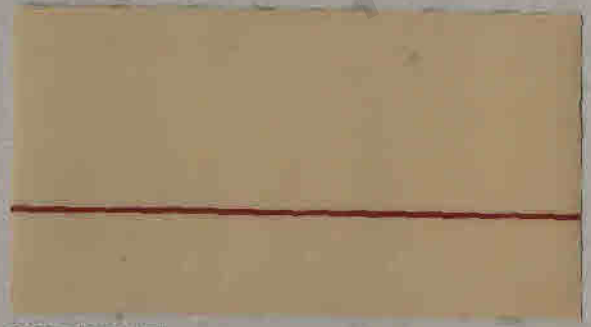
Multi-Tone—SCHEME H
Above—Moth Gray
Below—Blue Gray

SCHEME Q
Entire Car Royal Red

PACKARD BODY COLORS

SCHEME Z
Entire Car Crescent Blue Metallic

SCHEME Y
Entire Car Sun Bronze Metallic



SCHEME T
Entire Car Saratoga Beige Metallic
Wheels Cinnabar Red Light

COLORS

INSTITUTIONAL

HIGHLIGHTS OF PACKARD

FOR NEWCOMERS WHO DON'T KNOW AND OLD-TIMERS WHO HAVE FORGOTTEN

A Challenge—The Packard Motor Car Company was literally born of a challenge. It all happened this way. In 1898 J. W. Packard a wealthy electrical equipment manufacturer of Warren, Ohio, purchased a new horseless carriage from Alexander Winton, of Cleveland, Ohio. After several weeks' experience with his new machine Packard, a precise engineer and thorough mechanic, discovered several ways in which the machine could be improved. He returned to Cleveland and laid his suggestions before Mr. Winton who evidently not relishing the constructive criticism said to Mr. Packard, "If you think you are so smart, why don't you build a better machine yourself?" Mr. Packard accepted this challenge by stating he believed he would do just that.

The Result—On November 6, 1899 the first Packard car, model A-1, was completed, the first of a long line of Packard automobiles. This same car is now enshrined in the engineering rotunda at Lehigh University, a gift of Mr. J. W. Packard to his Alma Mater.

Noting the success of the first machine, friends of the two brothers, J. W. and W. D. Packard insisted on duplicates with the result that six more were built in 1900. So successfully did these machines perform that the Packard brothers began building motor cars on a much larger scale.

In the meantime, a small group of enterprising young Detroit men saw the possibilities of the "horseless carriage," particularly the Packard, and were led to invest their money with the Packard brothers. A new company was formed, called the Packard Motor Car Company and in 1903 the plant operations were moved to Detroit. It is interesting and an indication of company stability that two family names forming the first directorate of the company are still found among the present directors, those of Newberry and McMillan.

Stability—In an industry beset with many hazards Packard has come down the years with not one financial upheaval, reorganization or disturbing change in its personnel. This fact is the more impressive when one realizes that since the inception of the motor car industry, 908 American cars have made an appearance, but of this number only 22 remain. Packard is one of them, having "remained" since 1899. Packard occupies an excellent financial position with a strong cash and working capital position and has no bank loans, no bonded indebtedness, no preferred stock. An indication of the conservatism in accounting practices is found in the valuation placed on good will (rights, privileges, franchises, inventions) of only one dollar. This contrasts greatly with the statements of some other companies.

Plant Facilities—With the completion of a four year program of plant rearrangement Packard has one of the most modern motor car plants in the industry. In the mile long factory covering 89 acres of working floor space are many diversified activities. Clanking hammers in the forge shops point out tough forgings. In the great foundry molten metal is poured to form flawless castings. Huge presses in the stamping mills stamp out body panels, roofs and fenders. Space forbids more than naming the equally important plants devoted to heat treating, gear cutting, plating, painting, upholstering, laboratories and the myriad machine shops. It is these facilities which enable Packard to provide its own engines, transmissions, rear axles, front suspension systems, steering gears, bodies and many other parts—at one profit.

Proving Ground—Costing more than a million dollars and extending over 500 acres, the Packard Proving Ground is devoted solely to the improving of but one make of motor car—the Packard. Here, under greatly aggravated driving

conditions engineering theory and manufacturing practice must meet the acid test. On the fastest 2½ mile concrete oval track in America, cars are driven day after day to prove endurance and speed. A sand pit "Death Valley" provides the severest test that can be devised for proving stamina of engine, clutch, transmission and rear axle. A twelve-mile system of dirt roads presents in exaggerated form every conceivable test for proving hill-climbing ability, steering ease and riding comfort. Whenever racking tests reveal a flaw or falter, designs are altered and improvements made. The new Packards for 1941 have met and passed all tests with flying colors.

Accomplishments—Nearly all motor cars made today are in some way or other, beneficiaries of Packard pioneering in engineering and manufacturing. Following are but a few of the contributions made by Packard to the motor car world in the past forty years.

* * * * * * * *

FIRST to develop thermostatic control of water circulation in a motor car.

* * * * * * * *

FIRST to locate the hand-brake lever at driver's left.

* * * * * * * *

FIRST to use the selective gear shift with the "H" movement.

* * * * * * * *

FIRST to use a steering wheel instead of a tiller handle.

* * * * * * * *

FIRST to hook up accelerator pedal and hand throttle, now common to all cars.

* * * * * * * *

FIRST to patent automobile wheels interchangeable at hub.

* * * * * * * *

FIRST to offer a ribbed jacket water cooled cylinder. Packard cars built in 1900 had sheet metal jacket around single cylinder.

Printed in U.S.A.

FIRST to obtain patent on radiator with top and bottom reservoirs with tubes—the universally used radiator of today.

* * * * * * * *

FIRST to obtain a patent on the baggage rack used at rear of car.

* * * * * * * *

FIRST to use machines for boring both ends of connecting rods with diamonds.

* * * * * * * *

FIRST to rifle bore an oil passage in connecting rods for piston pin lubrication.

* * * * * * * *

FIRST American company to offer a straight-eight L-head engine.

* * * * * * * *

FIRST American company to offer a V-type, twelve cylinder engine.

* * * * * * * *

FIRST American automobile company to build a 24 cylinder engine.

* * * * * * * *

FIRST company to build a 1000 horse power aircraft engine.

* * * * * * * *

FIRST to build an engine in form of an "X."

* * * * * * * *

FIRST to develop and fly a Diesel aircraft engine.

* * * * * * * *

FIRST to offer an eight cylinder automobile engine with nine main bearings.

* * * * * * * *

FIRST American production car to provide four-wheel brakes as standard equipment.

FIRST automobile company to use spiral bevel gears in rear axle. Included the designing of the complicated machinery for cutting the gear teeth.

* * * * * * * *

FIRST to offer hypoid gears in rear axle, (1926).

* * * * * * * *

FIRST to use the central automatic chassis lubricator system.

* * * * * * * *

FIRST to introduce in America the "trunnion-block" which in its day added to driving safety by eliminating wheel "shimmy."

* * * * * * * *

FIRST to offer "ride control" in motor cars—a mechanism for controlling shock absorber activity.

* * * * * * * *

FIRST to pioneer the use of and largely responsible for the development of steel backed bearings.

* * * * * * * *

FIRST to make use of the double door latch—now universally used.

* * * * * * * *

FIRST automobile company to use Light Ray Machine (which calibrates down to one-millionth of an inch) for checking precision tools.

* * * * * * * *

FIRST automobile company to use radio amplification for inspecting ball and roller bearings.

* * * * * * * *

FIRST to patent and use a striping instrument which greatly simplified and improved the accuracy of striping bodies.

* * * * * * * *

FIRST to provide a package compartment in instrument board.

FIRST to provide sun visors.

* * * * * * * *

FIRST automobile company to standardize labor and material service charges.

* * * * * * * *

FIRST to use iron and steel jig for body assembly.

* * * * * * * *

FIRST American car to introduce crankshaft vibration damper.

* * * * * * * *

FIRST to use aluminum pistons.

* * * * * * * *

FIRST to employ weights in ends of front bumper for stabilizing movement of heavy weight cars.

* * * * * * * *

FIRST to use metal spring covers.

* * * * * * * *

FIRST to use constant action windshield wipers by employing a vacuum pump.

* * * * * * * *

FIRST to use lateral stabilizer.

* * * * * * * *

FIRST to use built-in under fender cooling tunnels.

* * * * * * * *

FIRST to use both rubber and metal inserts in rear springs.

* * * * * * * *

FIRST to introduce complete weather-conditioning in production cars.

* * * * * * * *

FIRST to use a Fifth Shock Absorber for control of lateral vibration.

FIRST to use electrically controlled overdrive.

* * * * * * * *

FIRST to use automatic radiator shutters as standard equipment.

* * * * * * * *

FIRST to use water temperature indicator as standard equipment.

* * * * * * * *

FIRST to include front and rear bumpers as standard equipment.

* * * * * * * *

FIRST to equip cars with balloon tires as standard equipment.

PACKARD IMPROVEMENTS FOR 1941

THIS IMPRESSIVE LIST of the more important improvements embodied in the new Packards for 1941, gives a quick summary of the changes for this year. It may be used conveniently for quick reference and a reminder, but the full descriptions and illustrations given on the following pages should be carefully studied.

New longer over-all car lengths
New lower over-all car heights
New heavier car weights
New bodies with or without running boards
New bumpers and bumper guards
New front fenders
New Sealed-Beam headlamps inset in fenders
New streamlined chrome parking lights
New larger auxiliary radiator grilles
New radiator ornaments
New longer bonnet lines
New decorative hood lock
New heavier chrome belt moldings
New trim bars on fenders—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty

New chrome wheel trim rings—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty
New chrome side window reveals—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty
New chrome windshield frame—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty
New chrome rear window frame—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty
New window vision—162 square inches greater area
New curved one piece, heat treated glass, rear window
New coupe type trunks
New vertical spare tire mounting in sedans
New rear fenders
New gas filler door in rear fender
New tail lights
New stone guard between rear bumper and trunk
New outside locks on both front doors—One-Twenty, One-Sixty, One-Eighty
New Multi-tone paint combinations
New script model names on bonnet and trunk lid—One-Twenty, One-Sixty, One-Eighty
New single and Multi-tone interiors
New instrument panel and gauges
New oblong shaped speedometer and clock
New radio grille in instrument panel
New two-speed electric windshield wipers—One-Ten Special, One-Ten Deluxe, One-Twenty
New leather piped upholsterics—One-Ten Deluxe, One-Twenty
New deeper and lower front seat
New front seat adjustment latch
New design clear vision steering wheels
New two-tone steering wheels with horn rings—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty
New enclosed steering column
New leather covered front arm rests
New front compartment carpet—One-Ten Deluxe, One-Twenty
New lace welt around window garnish moldings—One-Ten Deluxe, One-Twenty, One-Sixty, One-Eighty
New rear seat center arm rest—One-Ten Deluxe, One-Twenty

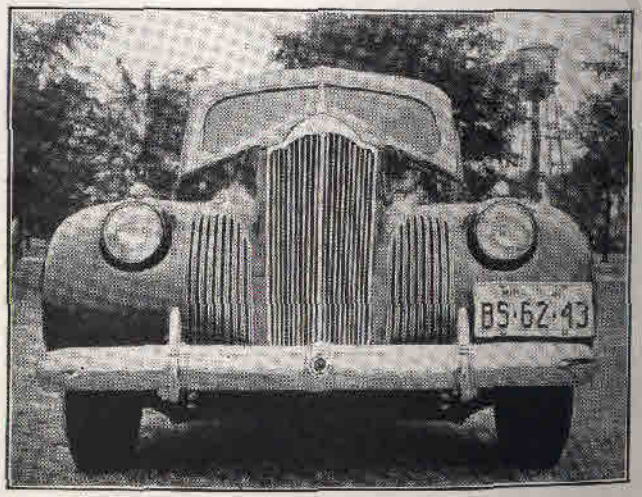
New comfort-type rear seat arm rests
New rear seat in coupes
New longer rear leg room in coupes
New built-in parcel compartment in front seat back—One-Eighty 5-Sedan
New flush fit folding seats—One-Eighty 7-Pass. models
New inlaid wood garnish moldings—One-Eighty
New power operated windows—One-Eighty
New smoking sets and ash trays—One-Sixty, One-Eighty
New triple-tone horns—One-Sixty, One-Eighty
New pressure sealed cooling system
New non-corrosive valve stems
New streamlined cooling of exhaust valves
New precision type connecting rod bearings
New vacuum spark advance—One-Ten, One-Twenty
New improved carburetion
New Electromatic clutch—special equipment
New longer frames
New opposed piston type front shock absorbers—One-Ten Special, One-Ten Deluxe, One-Twenty
New direct-acting rear shock absorbers—One-Sixty, One-Eighty
New rubber insulated steering gear housing
New rubber insulated steering gear drop arm
New needle bearings in steering knuckles—One-Ten Special, One-Ten Deluxe, One-Twenty
New larger tires—One-Ten Special, One-Ten Deluxe, One-Twenty
New improved Handishift mechanism

PACKARD ONE-TEN SPECIAL, ONE-TEN DELUXE, ONE-TWENTY

THE PACKARD ONE-TEN AND ONE-TWENTY

SMART DISTINCTION characterizes each modern line and plane of the new Packard One-Ten Special, One-Ten Deluxe, and One-Twenty for 1941. A pleasing, blending of popular streamline styling with the distinguished beauty of Packard traditional lines assures not only an enthusiastic acceptance for these sparkling new cars but a continuance of good will among Packard owners.

The new Packards for 1941 are new cars from bumper to bumper—new lines—new features—new luxury. From the front, the narrow radiator and flanking auxiliary grilles are distinctively modern and immediately identify the car. The side grilles are larger this year and feature an unusual combination of bright chrome and body color. Below, massive new bumpers and bumper guards—the style differs in the

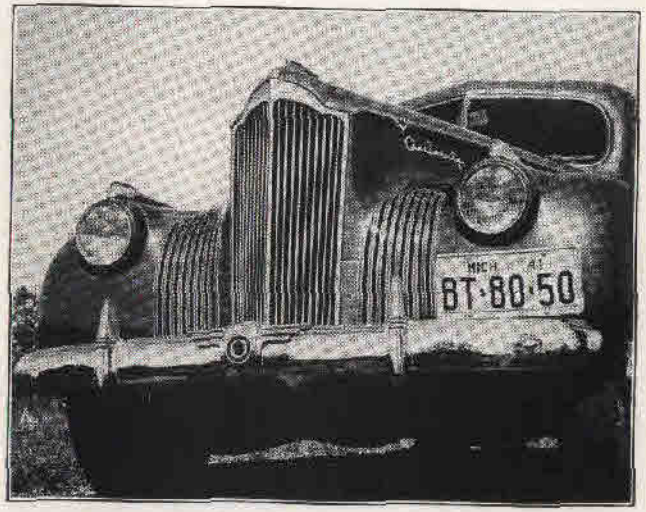


Packard One-Ten Special—the most distinctive front end on the highway.

One-Ten and One-Twenty —protect the new smoothly moulded fenders with their wide-spaced, inserted headlights. A new radiator ornament blends into the chrome bonnet moulding which rounds gracefully downward from the hood line to join the gleaming chrome frame of the radiator grille. On either side, crowning the fenders, long, streamline parking lights give a dashing decorative note, as well as serving their own useful purpose.

A new radiator ornament sets off the front end.

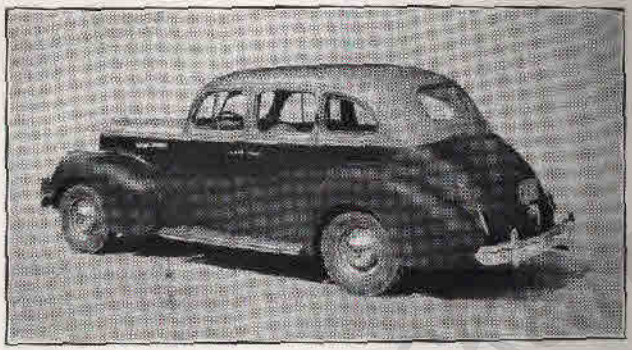
The sloping windshields of the new Packard One-Ten and One-Twenty are large, affording full vision ahead, and the



The new Packard One-Twenty—Frontal view.

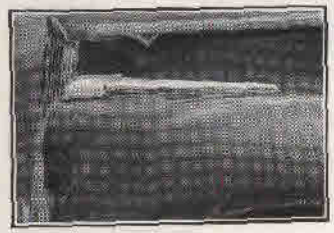
divider strip is chrome plated to give a touch of sparkle at this location. In the One-Twenty, One-Ten Deluxe and all convertibles the whole windshield and rear window are framed in chrome. Twin electric windshield wipers are mounted in ornamental chrome brackets. The cleaning area of these windshield wipers reaches high on the windshield and the area itself is unusually large—333 square inches.

Side View—The side views of the new Packard One-Ten and One-Twenty are both more impressive than ever before.



The new Packard One-Ten Special — 122-inch Wheelbase.

The new greater over-all length and lower over-all height combine to make the car look even larger than it actually is. Two and one-half inches have been added to the length of the hood of each model, and the resulting improvement in appearance is at once apparent. The new front fenders are pleasingly contoured, dipping down deeply in front and extending in streamlined curves rearward almost to the front door. As already mentioned the long parking lights add a flash of chrome, and tend to lengthen the fender lines. Headlamps are inserted, effectively clearing the cat-walk between fenders and hood of any wind resistance. Narrow parallel stainless steel bars on the aprons of the fenders give a touch

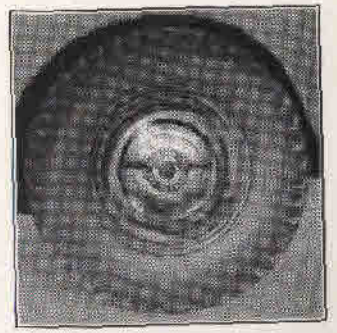


Long parking lights of chrome lend sparkle to front end appearance.

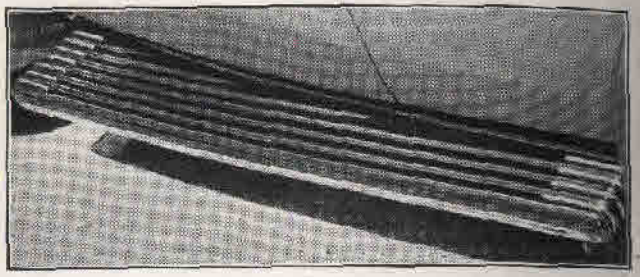
of smart distinction to the new One-Twenty and One-Ten Deluxe.

Louvers, no longer necessary to efficient cooling, have been eliminated from the bonnet sides, and a new chrome, flush-type hood lock breaks the plainness of the side panel. The model number of the One-Ten is inset in an enamel medallion at the forward end of the hood lock while a Packard crest in full color enamel decorates the One-Twenty lock. In addition, the One-Twenty is identified by a special name plate in chrome on the bonnet panel just below the well-known Packard spearhead. The bonnet top is hinged at the center and either side of the bonnet top may be raised for servicing. The bonnet sides are stationary in position.

Hub caps are unchanged, and not only show the Packard name and model number but further identify the car with the traditional Packard red hexagon. Wheels of the new Packard One-Twenty and One-Ten Deluxe are decorated with chrome wheel trim rings at the circumference. Convertible models are also equipped with special tires with white side walls on one side. Running boards are separated from the fenders at both ends and corrugations in the rubber covering run lengthwise. These two features prevent accumulation of dirt, etc., in the

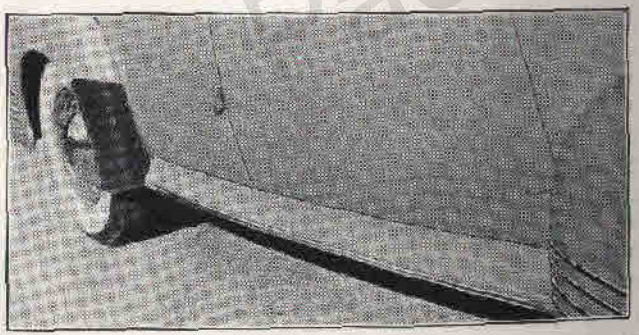


Hub caps 10" in diameter carry forward Packard identity.



Running boards are optional at no extra cost—
Packard One-Twenty illustrated.

inside rear corner of the body and rear fenders, and at the same time greatly facilitate cleaning. The One-Ten Deluxe and One-Twenty running boards are decorated at each end with chrome strips set in the corrugations of the rubber. All Packard cars this year may be ordered with or without running boards as desired without extra cost. Where running boards are omitted, a chrome trimmed panel extends below the doors from fender to fender. The rear fenders of cars without running boards have steel reinforced rubber stone guards at the lower front. In convertibles these stone guards are chrome plated steel.



When running boards are omitted a chrome trimmed dust shield extends from fender to fender.

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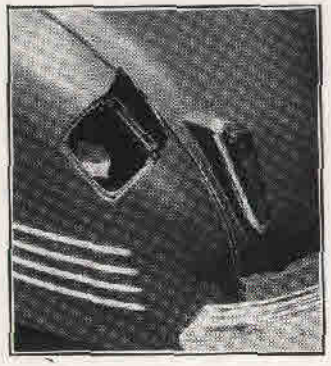
Cars in the field without running boards may be equipped with running boards, if the customer so orders, at very small extra cost. Only two hours' time is required to make the change. Vice versa, cars with running boards may be changed over just as quickly and easily. Thus it is possible to give the customer exactly what he wishes without delay, and at trifling cost.

Another very important contributing factor to the impression of greater size and length is the new heavy belt moulding extending along the belt offset from spearhead to rear panels on all One-Ten Special closed body models in one color. On all One-Ten Special closed body models in Multi-tone paint schemes and all one-tone or Multi-tone schemes on One-Ten Deluxe and One-Twenty closed bodies the moulding carries all the way around the back. Door windows and rear quarter window openings are larger. Window openings are ¾ of an inch lower and all window corner curves have been materially sharpened. As a result, the window area has been increased 162 square inches over 1940 models. In the new Packard One-Twenty and One-Ten Deluxe sparkling chrome window reveals frame the glass of all windows giving an additional touch of brightness to the side view.

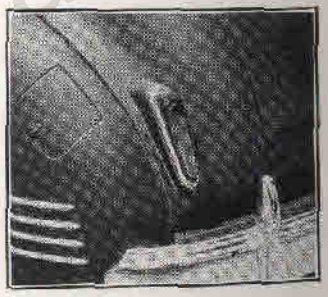
Exterior hardware of the Packard One-Ten is of the same attractive design as used in the preceding model, while that of the One-Twenty has been changed to the type used on the One-Sixty. Both front doors of the new One-Twenty may be locked with a key from the outside, thus making it practical for the driver to leave the car from either side. In this new body, the special Packard design of the front door as featured in previous models has been retained. The front of the door, instead of dropping perpendicularly from the belt as other car doors do, slopes forward so that at the bottom three inches or more of extra foot room for entering and leaving the car is gained. This special front door design is only possible because of the unusual concealed upper door hinge used in Packard cars which allows the upper and narrower part of the door at the belt to swing away from the body when opened.



The gas filler cap in the rear left fender is concealed by a neat door.

Rear View—The totally new rear end styling of the body has pronounced windstream lines and contributes to the pleasing, sweeping proportions of the whole car. The roof line at the rear is restyled so as to flow more gracefully into the rear panel, while the trunk is of the smart new *coupe type*. Rear fenders are contoured to blend with the new trunk lines. A small door in the left rear fender may be raised, disclosing the gas filler cap. Parallel stainless steel bars, matching those on the front, trim the One-Twenty and One-Ten Deluxe fenders. New chrome trimmed tail and stop lights of modern design are inset flush in the body.

The driver in the car behind gets a most impressive view of Packard styling. The effect is that of a well-proportioned and exceptionally wide body. Larger tires accent the impression of a bigger car. Newly designed rear bumpers and bumper guards match the front and the Packard name embossed in black on the center of the rear bumper identifies the car. Between the bumper and the body, a neat and effective stone guard or gravel deflector has been added. It fits flush with the top of the bumper



Parking lights are new in design and inset in the body panel.

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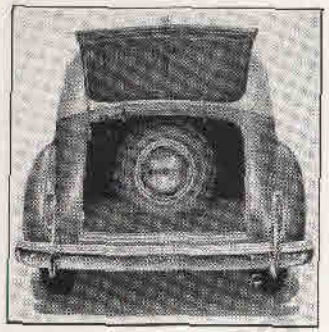
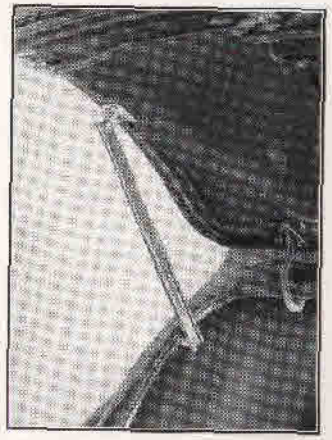


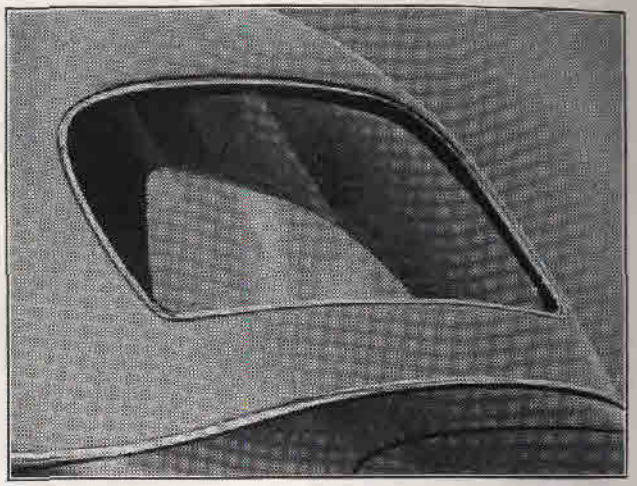
The tire is carried upright in the new trunk leaving 17.8 cubic feet of space for luggage.

and extends below the body line. All models are equipped with a combination trunk door lock, and license plate light, and just above, the One-Twenty carries a model insignia in chrome.

The trunk lid is squared at the bottom and when opened discloses a large trunk 17.8 cubic feet in capacity with the spare tire mounted vertical against the front wall. A neat plate covers the center or hub of the spare wheel preventing damage to the luggage. The top and walls of the trunk are covered with suede-like rayon flock, while the floor has a covering of attractive and long wearing leatherette material. The trunk lid raises on concealed hinges giving a smooth, neat exterior appearance, and the lid is held in the open position by a new and very efficient type of support. All coupes have an even greater space under the rear deck. Here the spare wheel and tire are carried horizontally, leaving ample accommodation for luggage or salesman's sample cases. In the business coupes a large space is also available for luggage behind the front seat.



A new trunk lid support is more easily operated.



The new curved glass rear window is over 21 square inches larger.

Above the trunk an important improvement has been designed into the rear window. The center divider strip has been eliminated and a new heat treated, curved sheet of safety glass substituted. This eliminates any blind spot, and clear, full rear vision is afforded. Twenty-one and a half square inches of actual glass area are added. In the One-Twenty and One-Ten Deluxe this window is framed with chrome.

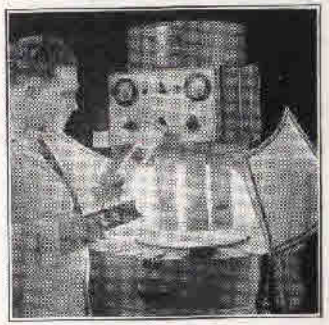
Color Schemes—All Packard One-Ten Special, One-Ten Deluxe and One-Twenty body models, with the exception of convertibles, are available in two-tone paint combinations at small extra cost, as well as in a large selection of standard one color paint options.

INTERIOR BODY FEATURES

PACKARD ONE-TEN SPECIAL

THE NEW 1941 Packard One-Ten Special offers interiors that are cheerful and sparkling in their beauty. Luxurious upholstery fabrics are skillfully combined in colors and weaves and smartly emphasized with chrome beads. Rich graining and harmonizing plastics are set off by the bright chrome fittings to enhance the beauty of the whole picture.

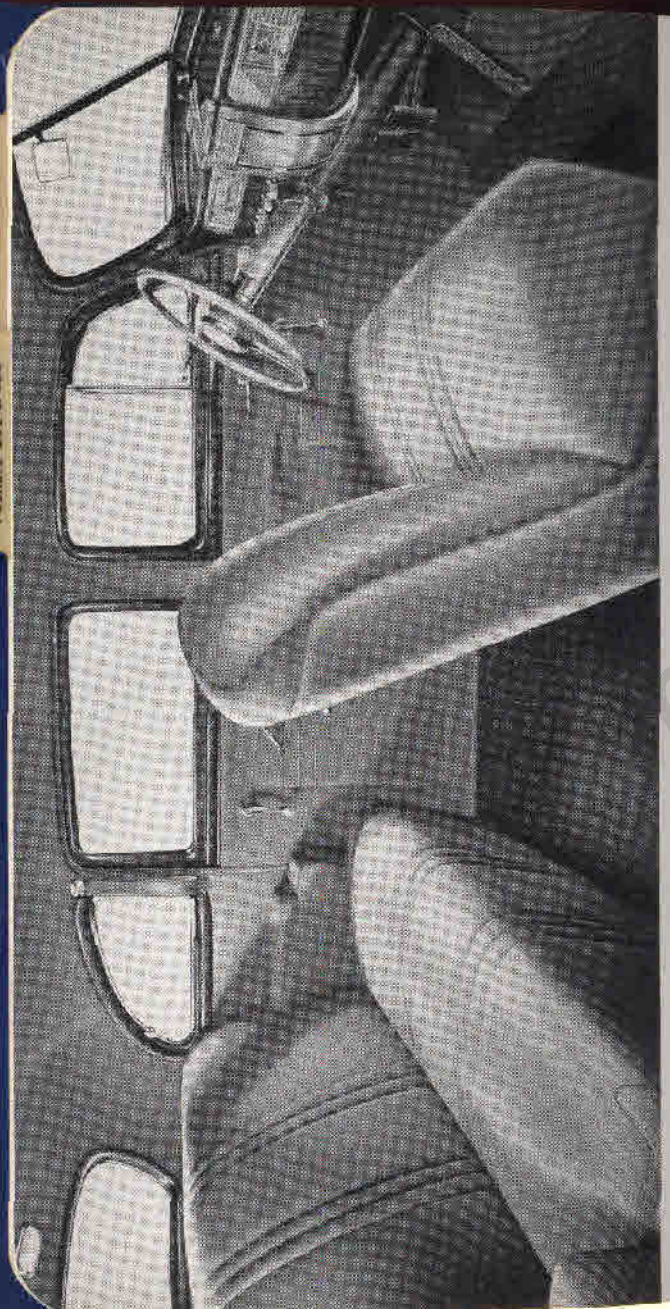
In the Packard One-Ten Special there are two upholstery selections—both broadcloths—a tan stripe and a blue-gray stripe. A very attractive effect is produced by combining either of these lightly figured upholstery materials with plain colored blending fabrics in the trim and headlining. Seat cushions and backs are smoothly upholstered and neatly decorated with two sets of narrow parallel pleating — very trim and tailored in appearance.



Upholstery and leather samples are exposed to the rays of the powerful sunlight of the Fadeometer to determine their resistance to fading. Temperature and humidity are regulated to simulate actual weather conditions.

The One-Ten Deluxe Trim Styles—The One-Ten Deluxe features the same upholstery options in the same style of trim except that the cushion welts, seat back tops, arm rests, etc., are finished in either red or blue leather to set off the upholstery cloth. The effect of this colored leather trim or "pick-up," as it is called, is very smart and attractive. In addition to these two options of upholstery, the One-Ten Deluxe may also be ordered (at moderate extra cost) in striking new Multi-tone upholstery combinations.

In these new upholstery designs, the trim style is changed to horizontal pleats which divide the seat back and cushion



Interior of the New Packard One-Ten Special.

into horizontal panels. The upper panel of the seat back and the front panel of the cushion are upholstered in a darker, stronger color while the lower panel of the back and the rear panel of the cushion are in a lighter, harmonizing shade. Multi-tone trim is available in the following color combinations: blue and gray, brown and tan, dark green and light green. The darker colored fabrics are Bedford cords and the lighter shades are broadcloths.

Packard One-Twenty Trim Styles—The new Packard One-Twenty offers a selection of two beautiful broadcloths and a Bedford cord—a tan shadow stripe with a faint stripe of blue to accent the pattern—a gray background with alternate wide and narrow stripes of soft blue and a gray Bedford cord with patterned stripes of faint blue. These fine quality materials are trimly tailored in an attractive design. One set of medium wide pleats runs from the top of the seat backs down to and across the cushions. Welts, seat back tops and arm rests, are finished in leather in a tone to contrast with the fabric.

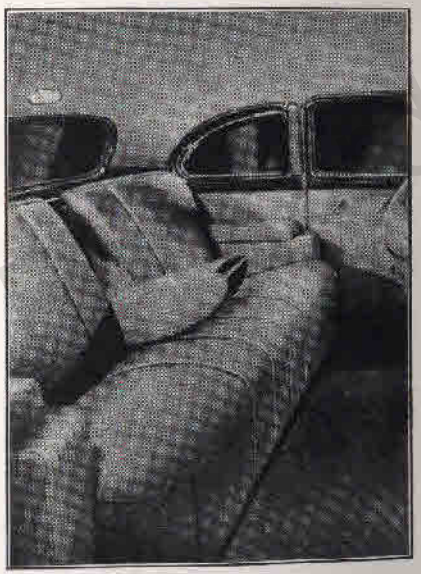
Multi-tone trim and upholstery—blue and gray, brown and tan, dark green and light green—are also available in the new One-Twenty at nominal extra cost and in the same fabrics and style as used in the One-Ten Deluxe.

1940 Packard Convertibles—The Packard One-Ten Special, One-Ten Deluxe and One-Twenty convertible coupes, and the One-Twenty convertible sedan, are upholstered in styles similar to the closed cars, and the cushions and seat backs are covered with genuine leather in a wide choice of colors—green, tan, red, gray, blue and black. A tan or khaki top covering is standard but, for a small additional outlay, the top material may be had in black, blue, dark brown, or dark green.

The One-Ten Special, One-Ten Deluxe and One-Twenty convertible coupes, and the One-Twenty convertible sedan, are also offered in special two-tone leather and cloth upholstery at small extra cost. The tailoring is similar in style to that of the Multi-tone closed cars, but the materials feature a combination of leather and cloth. There are two options both of which are supplied at extra cost—first, red leather and tan cloth, with the cloth in the lower panel of the seat back and rear panel of the cushions, and second, blue leather and gray cloth in the same arrangement.

Seats and Seat Trim—All Packard coupe bodies—both closed and convertible—have been designed to provide greater head room and leg room in the rear for extra passengers. A straight-across rear seat with side arm rests provides comfortable accommodation for passengers even on long trips.

The rear seat cushion risers of all models have been redesigned and now extend all the way to the floor, giving a more finished appearance. In the front of the One-Ten Deluxe and One-Twenty, seat side extensions trimmed with upholstery fabric or leather reach practically to the floor and effectively close the space between the bottom of the seat and the carpet. A newly designed mechanism provides fore and aft movement of the front seat for driver comfort.



One-Ten Deluxe and One-Twenty have a folding arm rest in the rear compartment.

Both front and rear seat cushions have been redesigned at the front, to improve appearance, to lower the cushion, and provide greater passenger comfort. Cushions are now 18½ inches deep from front to rear and the rear rows of semi-luxury springs in the front cushion have been lowered between the seat rails. This gives greater length and resiliency to these springs (they're more than an inch longer) and so provides a more comfortable seat. Foam rubber cushion pads are available in the One-Ten Special, One-Ten Deluxe and the One-Twenty, at small extra cost. A one-half inch shim may be easily removed from under the front seat track to provide even more room between the steering wheel and front seat cushion when desired.

Interior Trim and Appointments—Windlacings around the inside edges of the One-Ten Special, One-Ten Deluxe and One-Twenty, are of laced fabric over a soft sponge rubber filler. This windlacing together with the outside door seal—also of sponge rubber—provide a wind and moisture-proof door seal.

Garnish mouldings around the windows are made much more attractive this year by the addition of a wainscot at the bottom. Those of the One-Ten are very beautiful in a combination of crotch and straight mahogany graining to match the instrument panel. The rich beauty of burled and straight walnut graining in the garnish mouldings and wainscots of the new One-Twenty enhances the impression of luxury so evident in the whole interior. In the One-Ten Deluxe and One-Twenty, a special decorative cord lace adds a refined finishing touch around the window garnish mouldings.

The rear compartment ash receiver, of generous, practical size, is conveniently located in the back of the front seat of

both the One-Ten and One-Twenty within easy reach of the rear seat passengers and is finished in chrome trimmed walnut or mahogany graining to match the garnish mouldings and instrument panel.

Both front and rear compartments have softly padded arm rests. Those in the front are top-covered with leather to prevent wear and soiling. The rear arm rest is redesigned to suit the new rear cushion and is exceptionally long. A new rear seat folding center arm rest has been designed in the rear seat back of the One-Twenty and One-Ten Deluxe. It is particularly restful for two passengers and disappears and becomes part of the rear seat back when three rear seat passengers are carried. Strap type toggle grips contribute to passenger comfort and are convenient when entering or leaving the car.

Doors and Door Locks—The doors of the Packard One-Ten are exceptionally attractive. Besides the rich wainscot and mouldings of inlaid pattern mahogany graining, the trim fabric is tailored in a narrow cross panel at the top and a wide vertical panel down the center. Three parallel bars of lustrous stainless steel beading crossing this center panel add a note of sparkle to each compartment. Gracefully modeled interior door fittings of polished chrome are set off by handles and escutcheons of plastic in colors to harmonize with the upholstery and trim.

One-Twenty doors have a cross panel beneath the walnut grained wainscot which carries the door and window controls. Below, a bright stainless steel beading divides this panel from four vertical panels in the lower half of the doors and across the lower section, a band of carpet not only sets off the fabric and tailoring above but also prevents soil and scuffing of the lower section of the door trim. Door handles and window controls are of chrome in the same design as the One-Ten and are set off by harmonizing handles and escutcheons of plastic.

Again, the very practical and convenient system of door locks is used—but with improvements. Rear door locks are

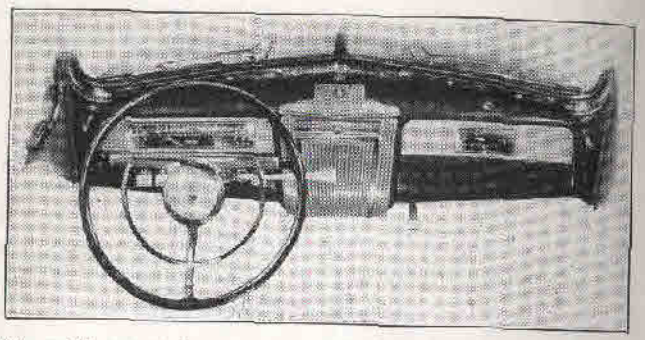
operated from the inside by small rubber plungers which project through the window garnish mouldings. For owners with small children in the family, a safety rear door catch is available at a trifling extra cost which prevents the rear door of a car in motion from opening even if someone accidentally unlatches the door by turning the inside handle. Rear doors are securely locked so long as the front doors are closed.

Front door locks are of the remote control type, easily and positively operated from the inside. In order to lock the car from the outside, the key must be used, making it impossible for the driver to lock himself out with his keys inside. This year a second outside door lock on the left side of the car has been added to the One-Twenty so that the driver may enter or leave from either front door with the same convenience.

The dome light is located at the rear of the body just above the rear window where it serves admirably as a reading light, as well as illuminating the rear compartment. A wide shelf back of the top of the rear seat and extending from quarter panel to quarter panel is very convenient for stowing small parcels or wraps. It is nicely and durably trimmed.

Floor Coverings—Floor coverings of the One-Ten Special, One-Ten Deluxe, and One-Twenty, are neatly attached to the floors by aluminum scuff plates across the front and rear doorways. No tacks, no snaps, no glue are used. In the One-Ten Special a heavy ribbed rubber mat backed with a thick pad of insulation is used in the front compartment and a thick, insulated, quality carpet covers the rear. Both front and rear floors of the One-Ten Deluxe and One-Twenty are covered with attractive, long-wearing carpet. At the base of the back of the front seat, a wide, carpet covered sloping foot rest is built in at the correct angle to provide the greatest comfort. Just above, a robe cord is mounted in harmoniously colored plastic brackets for carrying steamer rugs and wraps.

Instrument Panel—Probably the first interior appointment to catch the eye as one enters a motor car is the instru-



The striking new instrument panel of the Packard One-Twenty combines burled walnut graining with chrome and plastic.

ment panel. It is, therefore, all-important from an appearance point of view and Packard designers have had this fact very much in mind in creating the panels of the 1940 One-Ten and One-Twenty. The instrument panels of these models are similar in style and arrangement, but differ in graining and color. The One-Ten panel has a background of Cuban mahogany finish while that of the One-Twenty has burled walnut graining.

On the left, clearly visible through the open steering wheel is a harmonizing, fluted panel of colored plastic carrying the new oblong speedometer and gauges. Instead of covering speedometer and gauges with ordinary glass, the new Pack-

The new oblong speedometer indicates car speed by colored light.

ard gauges are enclosed with a moulded box-like panel of crystal clear plastic. The speedometer pointer also is formed of special plastic with light conducting properties. An elec-

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tric bulb at the hub throws light along the plastic pointer causing it to glow. In the traffic range—zero to thirty miles per hour—the pointer glows green—from thirty to fifty miles per hour—normal cruising range—the pointer is amber, and *from fifty to top speed the pointer is red. Thus in night* driving, when more attention on the road is required, a momentary glance at the speedometer will quickly tell the approximate speed. It is also possible, if desired, to extinguish all instrument panel lights and drive with only the speedometer pointer illuminated. Below the instrument grouping, arranged in a neat row, are the control knobs of chrome trimmed plastic—headlights, instrument lights, hand throttle, starter, and cigar lighter. The latter is supplied on all cars at small extra cost. The switch controlling the instrument panel lights gives rheostatic control of the degree of illumination of the gauges and electric clock.

Much of the beauty and distinction of the instrument board may be attributed to the smart new center panel of harmonizing plastic and chrome. This handsome center forms a grille over the speaker of the radio and a chrome strip near the top may be removed for installing the radio controls. Directly above this large control panel and curving over the top toward the windshield is another chrome trimmed plastic section which houses the map light and the front compartment ash receiver. The windshield wiper control, also of matching plastic is located in the V of the windshield just forward of the ash receiver.

The Glove Compartment—The roomy glove com*partment is located in the right hand side of the instrument* board. The bottom of the compartment slopes downward toward the dash to prevent spilling of the contents and the interior is illuminated from the electric clock—furnished on all models at extra cost. The door of the glove compartment carries a fluted plastic panel across the top corresponding to the plastic panel and instruments on the

opposite side. Into this panel an oblong clock of ultra modern design is inset. The door of the glove compartment opens automatically when a button just above the opening is pressed. This button also serves as a lock for the safe-keeping of parcels and is opened by the separate key which also locks the trunk.

The Steering Wheels—The steering wheel of the One-Ten and One-Twenty are both 18 inches in diameter and are formed of hard rubber over a steel core. They are "T" spoke in design leaving a wide opening at the top through which the speedometer and gauges are clearly visible. They are finished in tones to match the plastic trim of the instrument panel and fittings. The wheel of the One-Twenty and One-Ten Deluxe are equipped with a chrome horn ring.

The Handishift gear shift lever below the steering wheel is mounted on top of the steering column where it is well out of the way of the driver's knees in operating the pedals. Both the Handishift shaft and the steering column are now enclosed in a neat, attractive housing extending from the instrument board upward.

The "T" spokes and rim of the steering wheels harmonize with the upholstery and plastic trim.

Comfort For All—Not only are the interiors of the new Packard One-Ten and One-Twenty luxuriously and tastefully trimmed and appointed, but they are just as roomy and comfortable as they are beautiful. So wide are both front and rear seats in hip room, elbow room, and shoulder room that they might well be called six passenger models. The front seat cushion

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measured from edge to edge (not door to door) is full 50 inches wide. Elbow room, which should naturally be much wider than hip room, is 55 inches at the top of the front arm rest, and shoulder room is still greater—56⅜ inches. In the rear compartment, measuring between the arm rests at the cushion, we get 47½ inches of hip room. Elbow room, measured from quarter to quarter at the top of the arm rest is exceptional—59 inches from side to side, and shoulder room is 56 inches. In comparing these generous Packard dimensions with those of other cars, bear in mind that elbow room and shoulder room are very important. Extra inches of hip room are useless unless corresponding roominess is provided at the elbows and shoulders, for everyone knows that the normal human body is several inches wider at the elbows and shoulders than at the hips.

In spite of the fact that the new Packard cars are 1½ inches lower in over-all height, head room has not been reduced—front compartment 36¾ inches, rear 36¾ inches. In fact, in the coupe models rear seat head room is actually increased. Ample leg room for relaxed comfort is provided for rear seat passengers even when the front seat is in the full rear position. The front seat is, of course, adjustable backward and forward and at the same time an upward adjustment is provided automatically as the seat moves forward. The mechanism is controlled by a convenient lever. A choice of nine positions and a total adjustment of 4¾ inches, plus the upward movement of the seat assures full comfort for drivers of all statures.

Entrance Space—Entrance space is exceptionally wide—considerably greater than other cars. In the front the special design of the Packard door at the lower front adds inches to foot room giving a total entrance space with the seat forward of 12¼ inches and with the seat back 17 inches. Compare this, if you will, with any other car on the market. In the rear, 20⅜ inches are provided at the narrowest part—

cushion edge to door post—and this is the measurement that really determines entrance space and decides ease of entrance and exit. Actual door width has really very little meaning.

Ample space to enter and leave is provided at the front door.

The two-door sedans and all coupes of the Packard One-Ten and One-Twenty lines have straight-across front seats with divided backs. These seat backs tilt forward, giving easy access through exceptionally wide doors to the rear compartment.

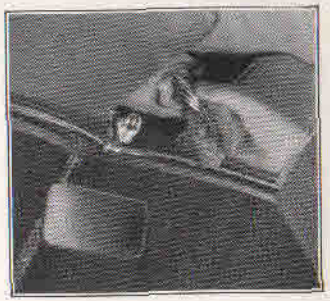
Coupe Rear Seats — The two-four passenger coupes and convertible coupes are equipped with a full width rear seat all complete with comfortable arm rests for the accommodation of extra passengers. In the coupes 3½ inches more leg room for rear seat passengers is provided, and the head room is also increased. Rear seat passengers ride in complete comfort in the new Packard coupes. In the business coupes all the space back of the rear seat is available for luggage, samples, etc.

In the rear, entrance space is very large — compare with other cars.

In spite of the fact that Packard cars are lower than ever this year, and the floors very close to the road, there are still no tunnels in either the front or rear compartments.

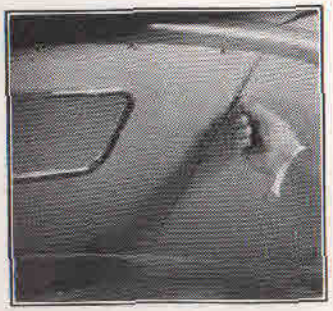
Printed in U.S.A.

Convertibles — Again for 1941 all convertible coupe models of the Packard line — One-Ten, One-Twenty, and One-Sixty — are standard equipped with a power-operated top. Its operation is simple, convenient, and dependable. This year larger cylinders are used in the raising mechanism providing more power for raising and lowering. A single handle located above the divider strip of the windshield operates three locks simultaneously which lock or unlock the top in position. At the touch of a button located just below the instrument panel, the top folds gently back or rises out of its container into the closed position.



One handle in the header operates three locks simultaneously.

The mechanism is simple. Two pistons in two cylinders, one on each side, utilize vacuum from the engine as power to raise or lower the top. Nothing complicated—nothing to get out of order easily—nothing to require frequent attention.



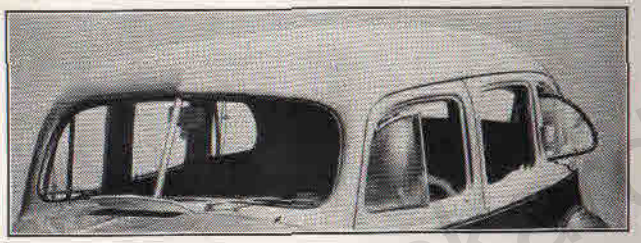
A zipper keeps the rear curtain of convertible coupes tight.

The advantages of the automatic top are as important as they are obvious. It is neat—no mechanism can be seen outside or inside because the actuating cylinders are built into the walls of the body. It is convenient—only a single locking handle to turn and a knob to

push or pull. It is easy—so little effort is required that a woman or even a child can operate it. It is quick—only a fraction of the usual time necessary to put up the top is required.

Ventilation—Comfort in a closed motor car body entails more than roominess and soft cushions. Ventilation is also important. Not only must stale air and tobacco smoke be removed and fresh air introduced, but both must be accomplished gently and without uncomfortable drafts.

In the Packard system of ventilation, the front compartment is ventilated, first, by the large, screened cowl ventila-



Complete draft-free ventilation—cowl ventilator, front pivoting ventilating wings, front door window, rear door window, rear quarter pivoting widow.

tor which may be opened to any degree. Second, the pivoting front windows in the front doors may be opened to any angle desired and will remaain where set, and third, the rear portions of the front door windows may be lowered on hot days when a full breeze of cool air is desired.

In the rear compartment, the rear door windows lower flush with the sill to admit a full rush of cool air. For controlled back seat ventilation, the rear quarter windows pivot like the front ventilating window to provide fresh air and ventilation for each rear seat passenger individually. Here are the outstanding advantages of the Packard individual ventilating system:

(1) Direct drafts on passengers eliminated.
(2) Each passenger regulates ventilation to suit his own requirements.
(3) Removes warm, stale air and smoke and introduces cool, fresh air.
(4) Gives maximum driving comfort in hot and cold weather.
(5) Keeps windshield free of steam in bad weather.
(6) Promotes better health by removing stale air and circulating fresh air without drafts.

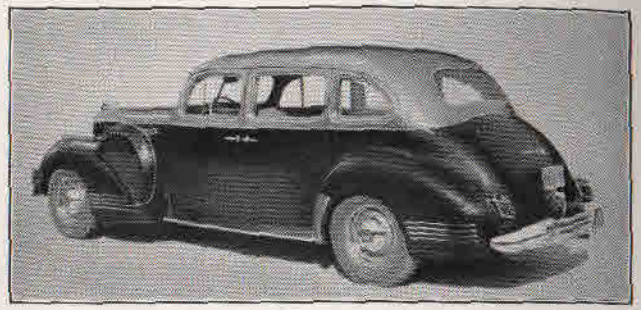
SPECIAL FEATURES OF THE NEW PACKARD ONE-TEN DELUXE

The following list of special features gives at a glance a quick summary of the extra value, convenience and luxury incorporated in the new Packard One-Ten Deluxe. Each of these features is fully described in the One-Ten and One-Twenty section of this Data Book.

—Rear seat center arm rest.
—Cord welt around window garnish mouldings.
—Chrome outside window reveals.
—Chrome frame for windshield and rear window.
—Carpet in front compartment.
—Two tone steering wheel with horn ring.
—Chrome wheel trim rings.
—Stainless steel bars on fenders.
—Leather piped upholstery.
—Special side trim boards at bottom of front seat.
—Chrome belt moulding all around body.
—White side wall tires (one side) on convertibles.
—Multi-tone upholstery (extra cost).
—Foam rubber cushions (extra cost).

PACKARD SUPER-8 ONE-SIXTY

Features PAGE



The Packard Super-8 One-Sixty—harmoniously styled from radiator to streamlined rear end.

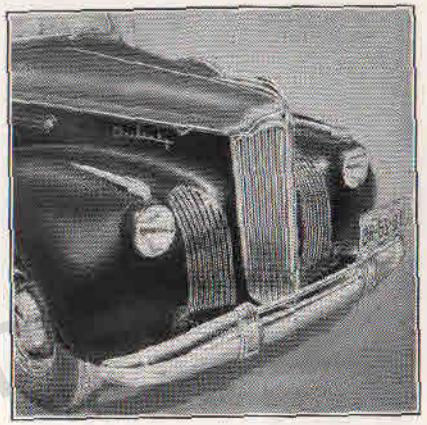
PACKARD SUPER-8 ONE-SIXTY

IN APPEARANCE, the new Packard Super-8 One-Sixty displays a distinctive, yet modern styling—graceful lines, sweeping curves, the gleam of chrome judiciously used, and proportions that are at once pleasing to the eye, and correct from every engineering angle. The modish smartness of this beautiful new car, its grace, symmetry, and poise should appeal to the most discriminating of tastes.

Front Appearance—The long familiar lines of the Packard radiator are instantly identified in the narrow chrome grille of the new Packard Super-8 One-Sixty. Flanked on either side by new larger auxiliary grilles of combined chrome and body color, the whole front assembly is an ultra-modern interpretation of traditional Packard styling. Long, slim radiator shutters, carried in the gracefully modeled chrome frame are automatically operated and eliminate any need for separate winter fronts.

The top lines of the deep radiator shell dip downward to meet the radiator grille giving pleasing curves and contours, and the shell itself is crowned with a beautiful new ornament in gold, chrome, and lucent plastic. The massive

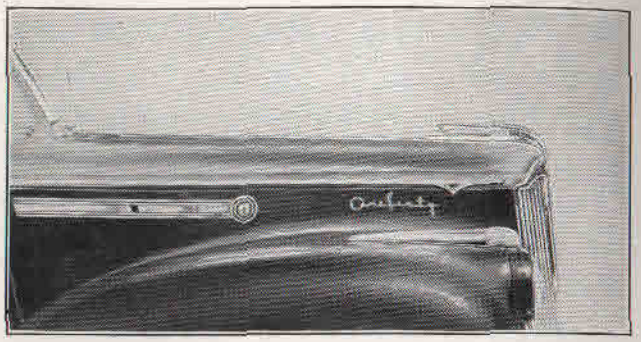
new fenders join the bonnet sides in a flat plane eliminating any so-called cat-walk, and headlights are inset into the front fenders. Immediately above, long tapering wind-stream parking lights in chrome add a touch of sparkle to the front end styling. A newly designed front bumper embodies integral fender guards at each end and a chrome bar joining these fender guards carries the model insignia and serves to protect the grille.



From the front, the Packard Super-8 One-Sixty is imposing.

The long, tapering bonnet is decorated by a center bead of chrome which conceals the hinge and leads back to the wide sloping divided windshield. The windshield opening and center divider bar are finished in chrome, and twin windshield wipers with exceptionally long sweeps are mounted at the cowl in ornamental brackets.

Side View—A broadside view reveals the full beauty of the new wind-stream lines. Impressive over-all length—(practically five inches longer than last year)—is accented by the new fenders, and lowered height of the whole car. The bonnet line is 2½ inches longer, and its length is emphasized first, by the new chrome panel on the side which replaces the conventional hood louver, and carries the flush-type bonnet handle. Second, by the long tapering parking lights on the front fenders. A new and much heavier mould-



Radiator ornament, parking light and bonnet lock accent hood length.

ing of chrome extends from the familiar Packard spearhead all the way along the belt and around the rear of the body. Just below the spearhead, the name One-Sixty appears in chrome script.

Front fenders sweep downward in front below the line of the bumper, and are decorated on the rear apron by four beads of stainless steel. The 16 inch wheels are equipped with big low pressure 7.00 x 16 tires and are smartened by wheel trim rings. Hub caps retain the ever-popular Packard red hexagon and model identification.

The 127 inch and 138 inch wheelbase models may be ordered with or without running boards, while the 7-passenger models—148" wheelbase—are available only with running boards. In cars with running boards, the running boards are separated from the fenders and finished with chrome strips embedded in the rubber covering. When running boards are omitted, a finishing panel is used below the doors and trimmed with a chrome beading.

In the body proper, new larger window openings in all the doors, rear quarter and rear windows add more than 162 square inches of glass and greatly improve visibility. Wide beads of chrome outline all window openings en-

hancing the smart, modern side view of the car. Exterior hardware is graceful in design and an additional front door lock on the left front door is a new convenience for the driver.

The roof line at the rear has been changed to give a more graceful sweep, and a new trunk designed with coupe-type lines. Rear fenders are new and conform harmoniously with the lines of the trunk. Parallel stainless steel bars on the aprons match those on the front fender, and cars without running boards have a rubber stone guard on the forward face of the fender. A neat flush fitting door in the rear of the fender covers the gas filler cap.

Rear View—Viewed from the rear, the new Packard One-Sixty discloses new beauty—new smartness—new modern styling. The lines of the rear quarters, trunk, and fenders all blend together, and are handsomely finished off below by a massive bumper matching the front, and carrying the Packard name in embossed script. A stone deflector is built in between the body and the bumper to protect the trunk lid from flying gravel, and a chrome exhaust pipe extension gives a finishing touch to the rear. Twin combination stop and tail lights of unusual design are framed in chrome, and inset in the body.

The rear window is new and larger this year. There is no divider strip and the heat-treated safety glass is curved to conform with the contour of the body. More than twenty-one extra square inches of glass have been added, any blind spot eliminated, and full, clear rear vision is afforded.

The trunk lid opening has been squared at the lower corners to provide easier access to the interior, and the spare tire is now carried upright against the forward wall of the trunk in all sedans. This new mounting still leaves the tire easily accessible, but adds considerable space for luggage that would otherwise be wasted if the tire were carried horizontally and covered with a shelf. The trunk has a usable capacity of 17.8 cubic feet in five-wheel models, and 22 cubic feet when the spare tires are carried in fender wells. The interior is

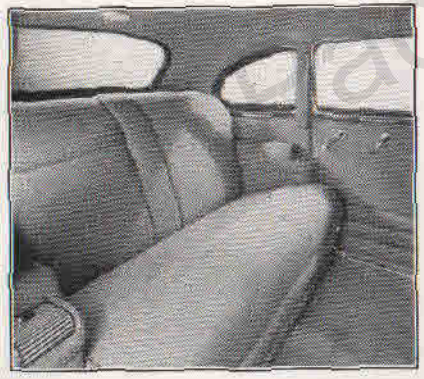
neatly and durably finished with suede-like rayon flock, and a trunk light illuminates the interior when the lid is open.

A new vertical trunk door handle of chrome also houses the light which illuminates the rear license plate, and directly above, the name One-Sixty appears in chrome script lettering. Concealed hinges leave the outside of the trunk free from obstructions, better looking, and easier to keep clean. A new lid support unlatches automatically when the open lid is raised slightly.

Color Schemes—In addition to a large selection of one-tone color schemes, the new Packard Super-8 One-Sixty is also available in a wide variety of two-color combinations.

INTERIOR BODY FEATURES

The luxury, the taste, and the refinement which characterize America's finest homes are immediately evident as one enters the beautiful new Packard Super-8 One-Sixty. Upholstery and trim are of fine quality, and rich in appearance, and the tailored excellence is matched by appointments that are both handsome and convenient.

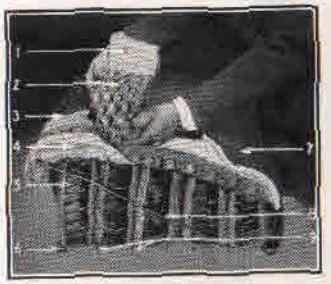


The rear compartment portrays the luxury and refinement of Super-8 interior styling.

Designed for restful comfort, the new body offers generous roominess, and ample seat width for three adults in both front and rear compartments. The front seat is 50 inches wide from seat edge to seat edge, while the rear seat is 47½ inches

wide measuring from the inside of the arm rests. Elbow room and shoulder room are proportionately larger front and rear. In the front, elbow room is 55 inches, and shoulder room is 56⅜ inches. In the rear, there are 59 inches of elbow room, and 56 inches of shoulder room. It is thus evident that the Packard One-Sixty is designed to provide extra inches of body space where the measurements of the human body are greatest. Leg room is abundant for even the tallest to rest in comfort, and head room is provided for those occasions when top hats are worn. Through every body dimension one finds generous provision for relaxation and riding comfort.

In the upholstery and trim, quality and taste are obvious not only in the materials used but also in the artistry of the design and the workmanship of the tailoring. A selection of three different patterns and textures of superfine luster finish broadcloth and a Bedford cord is offered in the closed models—first, a fine olive colored broadcloth with dark blue stripe, second, a beautiful shade of gray with narrow stripes of blue spaced widely apart, third, a dark tan broadcloth of superior quality with an indistinct (chalk line) stripe of lighter tan, and, fourth, a handsome brown Bedford cord with alternate stripes of very faint green, gray and brown. Blending tone headlinings and trim in plain color are used in combination with each upholstery option.



Nine reasons why Packard Super-8 seats are so comfortable: (1) Heavy fabric, (2) Foam rubber, (3) Layers of cotton, (4) Cotton pad, (5) Wrapped coil springs, (6) Frame, (7) Upholstery fabric, (8) Spring braces, (9) Support wires.

Seat Cushions—Packard One-Sixty seat cushions have a foundation of luxury springs and over these is placed a deep pad of soft foam sponge rubber 1⅝ inches thick. The upholstery of the One-Sixty is smartly tailored with one

horizontal pipe extending from side to side toward the front of the cushion and near the top of the back. The seat riser has two such pipings. A folding arm rest is built into the center of the rear seat back for the greater comfort of rear seat passengers when two are riding. It folds neatly into the back when a third passenger is carried.

Multi-Tone Options—Packard One-Sixty, 138" wheelbase, closed body models may also be ordered at no extra cost in three Multi-tone upholstery combinations—blue and gray, brown and tan, and dark green and light green. All are fine broadcloths. These same Multi-tone options are also available on the 127" wheelbase models at small extra cost. Instrument panel, plastic trim and plastic steering wheel are supplied to match the Multi-tone combination selected.

Convertibles—Standard convertible models of the One-Sixty are upholstered in soft leather and may be ordered in any of the following colors: green, tan, red, blue, green, or black. A khaki-covered top is standard, but tops in black, blue or dark brown are also available at small extra cost.

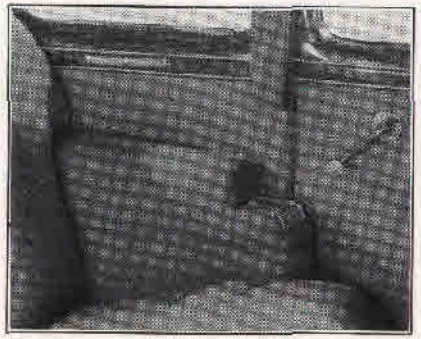
Besides the standard selection of leather options for convertible upholstery, Multi-tone options in combinations of leather and cloth are also available at slight extra cost. Two selections are offered—red leather and tan cloth, or blue leather and gray cloth. In these models, the trim scheme has been specially designed to suit the two colors of materials. A wide panel across the upper part of the seat back is leather covered. Below are three narrow horizontal pleats of Bedford cord. Seat cushions are similar with the leather pleat or panel at the front of the seat. Window mouldings are of chrome with a broad leather panel immediately below. Door kick pads are also of leather. The effect of these color and material combinations is at once striking, very attractive, and very much in keeping with the youthful styling of the whole car.

One-Sixty Deluxe—In addition to the standard convertibles and the Multi-tone convertibles, the Packard One-Sixty is also offered in Deluxe convertible models. These—convertible sedan and coupe—are tops in smartness—the last word in luxury among all convertibles. The interiors of these cars are difficult to describe for the many combinations of color that are offered make each one look different. There are eight selections of upholstery and trim materials:

Gray leather and green Bedford cord.
Tan leather and green Bedford cord.
Light blue leather and darker blue Bedford cord.
Gray leather and blue Bedford cord.
Tan leather and rust color Bedford cord.
Pig grain leather and rust Bedford cord.
Pig grain leather and brown Bedford cord.
Brown leather and brown Bedford cord.

One-Sixty Deluxe upholstering and trim styles are different. An upper panel extends across the seat back and is upholstered in leather. Three lower panels or pleats also extending horizontally across the seat back are separated in the center by a vertical panel in the front seat which corresponds to the rear seat arm rest in the rear. Seat cushions are of the same design as the seat backs except that there is no vertical pleat. Window mouldings and wainscots of real burled walnut are trimmed with inset beadings of stainless steel. At the bottom of the doors two broad beads of chrome add a prominent touch of sparkle to the interior. The instrument panel matching the upholstery color scheme has harmonizing plastic fittings. A two-color plastic steering wheel completes the interior fittings.

Packard One-Sixty Interior Fittings—Comfortable toggle grips on the rear door pillars are provided on all One-Sixty sedans and a laced robe cord is supplied on all four-door models. Ash receivers with roll tops in alternate chrome and color are recessed in the front ends of both rear seat arm rests. In the 127 inch and 138 inch wheelbase models, an automatic electric cigarette lighter is incorporated in the ash receiver on



New rear seat arm rests each have a smart ash receiver with chrome and color roll top.

the right side, while seven-passenger cars have cigarette lighters in both rear ash receivers.

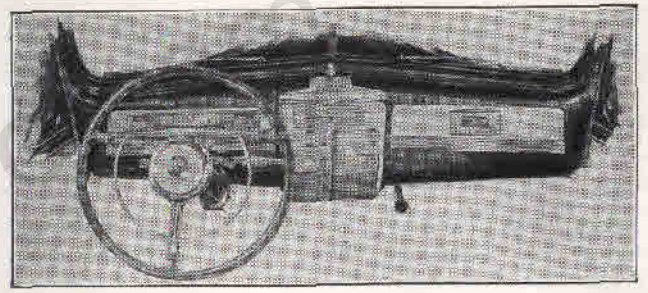
Floor coverings of both compartments of all One-Sixty models are rich mohair carpet backed with a thick pad of sponge rubber. Trim scuff plates of aluminum hold the carpet neatly and permanently in place. Luxuriously soft to step on, these carpets also serve to insulate from sound, heat, and cold. In the 127 inch wheelbase model a sloping, carpet covered foot rest is recessed into the back of the front seat, in the 138 inch wheelbase model a separate folding foot rest is provided, and the 148 inch wheelbase models have two hassocks.

Window garnish mouldings with inlaid panels and beads of decorative colored plastic are handsomely finished in plain and burled walnut graining to match the upholstery color scheme. Matching plastic knobs projecting through the door window garnish mouldings control rear door locks, and when there are small children in the family special safety catches may be installed at trifling cost which prevent rear doors from opening when the car is in motion so long as front doors remain closed. Front door locks are of the remote control type —safe and positive. A new outside door lock on the left front door is an added driver convenience.

Interior hardware is gracefully designed and attractively decorated with colored plastic handles and escutcheons which match the instrument panel and other fittings.

Instrument Panel—Striking new beauty of arrangement and color in the instrument panel brings a refreshing note of newness to the whole interior. There is a pleasing blending of sparkling chrome with the satin smoothness of moulded plastics and the richness of burled walnut graining.

On the left side of the panel inset in a chrome-trimmed plastic panel and enclosed under crystal clear plastic, are the new oblong speedometer with illuminating pointer, and other operating gauges. Immediately below, the plastic knobs of the controls are neatly grouped within easy reach of the driver.



The Packard Super-8 One-Sixty instrument panel is strikingly beautiful and modern in every detail.

In the center, a large new radio grille of plastic with horizontal openings and tastefully trimmed with chrome beads carries a removable panel for the installation of radio controls. The speaker is concealed behind the plastic panel. Just above, another piece of moulded plastic extends over the edge of the instrument panel and this projecting portion houses a map light for illuminating the front compartment. The ash tray is located on the top of this plastic panel. The knob just back of the windshield divider strip controls the multi-speed windshield wipers.

The right hand section of the instrument board—the glove compartment door—carries a matching panel of colored plastic with its decorative fluted band of glittering chrome. An

electric clock of modern oblong design is inset in this panel. A little pressure on a chrome button above the glove compartment opens the door. This button is also a lock served by the same key used on the trunk.

In Multi-tone models the instrument panel is painted to match the lighter color of the upholstery material and plastics match the deeper tones.

Steering Wheels—The standard One-Sixty steering wheel is "T" shape with a large top opening in front of the speedometer and gauges. It is made of tan or gray plastic to match the instrument panel and harmonizes with the interior trim. Chrome trimmings, horn ring, and a handsome plastic hub add richness and brightness to the wheel. The wheels used with the Multi-tone interiors are also of plastic and of the same design as the standard One-Sixty wheel but they are made of two color plastic. The rim is of a lighter shade and the "T" is dark to match the dark color fabric. There are three wheels to match the three Multi-tone options—blue-gray, rust-tan, dark green and light green. Deluxe convertible models are equipped with special plastic two-tone wheels, similar in design to the standard model, but in colors to match the upholstery materials.

The front seat of the One-Sixty model is, of course, adjustable fore and aft, and in moving forward the seat also raises to provide better vision and greater comfort for the driver of shorter stature. Straight-across front seat cushions with divided backs are used in all coupes, and 2-4 passenger club and convertible coupes have a full width rear seat with side arm rests. Every passenger in all Packard coupes rides in comfort even on long trips.

Convertible Coupe Tops—A power actuated top is standard on all Packard Super-8 One-Sixty convertible coupes. In mechanical design the One-Sixty coupe top is similar to

the tops of the One-Ten and One-Twenty as described in the One-Ten and One-Twenty section of this Data Book.

Ventilation—Comfortable, controlled ventilation to suit the individual needs of each passenger is provided by the Packard ventilating system which is fully explained in the One-Ten and One-Twenty section.

PACKARD CUSTOM SUPER-8 ONE-EIGHTY

Features

PACKARD CUSTOM SUPER-8 ONE-EIGHTY

THE NEW 1941 PACKARD Custom Super-8 One-Eighty is without question the most beautiful and luxurious car ever built by Packard. And, it is above all—a Packard, distinctively different from any other car on the boulevards.

Exterior Appearance—The new Packard Custom Super-8 One-Eighty is impressive from every angle. Front, broadside, and rear view all possess the dignity and poise expected of a truly fine car. From the front one sees traditional Packard styling newly interpreted in the flashing chrome radiator grille, with its automatic shutters, and the graceful lines of the bonnet. On either side of the radiator grille, large auxiliary grilles in chrome and body color set into the fronts of the fenders not only smarten the frontal appearance but also contribute materially to cooling efficiency. Headlights, of the Sealed-Beam type, are inset into the fenders and are set wide apart to better outline the car to approaching motorists. Immediately above, new streamlined parking lights add a touch of sparkle to both front and side views. A striking new radiator ornament in chrome, and gold, and crystal plastic tops the radiator shell.

A massive front bumper with integral bumper guards and joining bar, affords effective front end protection and forms a pleasing finishing line across the bottom edges of the fenders.

Side View—A broadside view discloses new lines, new features, and new beauty. The new One-Eighty is more than ever impressive for over-all length has been increased about 5 inches and over-all height reduced 1½ inches. The bonnet is long (2½ inches longer this year) and gracefully tapering. A new and much heavier belt moulding of chrome starts at the familiar spearhead on the bonnet, and continues unbroken along the side and around the back of the body. Louvers have been entirely eliminated and a new flush type hood lock of chrome takes their place. A handsome medallion carrying the Packard crest in color is inset in the forward end of this lock panel. Immediately below the spearhead of the belt moulding, the name One-Eighty appears in chrome script on the bonnet side. Fenders, both front and rear, are decorated with four parallel stainless steel bars, and wheels take on added sparkle with chrome wheel trim rings.

Above the belt, wide chrome reveals outline each side window and inside vision is improved by larger, deeper window openings—over 70 inches more glass area has been added on each side—162 square inches total including the rear window. Super-8 One-Eighty 5-passenger models (127" and 138" wheelbase) may be had with or without running boards. Seven passenger models are all equipped with running boards. If running boards are ordered they are separated from both front and rear fenders, and handsomely decorated with chrome. The running boards are finished with long chrome beads inset into the corrugations of the rubber. If running boards are omitted, a metal shield in body color and trimmed with chrome covers the side rail of the frame from front to rear fender.

Rear View—In the rear, the sweeping lines and contours of the new steel top flow in easy curves down the rear panels and over the new coupe-type trunk. Rear fenders blend harmoniously with the general rear end styling, and carry attractive parallel fender beads of stainless steel. The gas filler pipe is hidden beneath a small door in the left rear fender.

Rear vision has been greatly enlarged and appearance improved by a new rear window glazed with heat-treated bowed glass which follows the curves of the body at this point. The divider strip has been eliminated and more than 21 square inches of glass area added. A chrome frame encloses the glass. The trunk lid carries the One-Eighty name in chrome script and a new bumper to match the front affords

rear protection. A new gravel deflector is built in between the bumper and body.

Trunk walls are trimmed with a decorative printed insulating material, while the floor is neatly and attractively covered with long-wearing carpet. In five-wheel cars the spare tire and wheel are carried in the trunk in an upright position against the forward wall. In six-wheel cars the spare tires and wheels are carried in deep wells in the front fenders. The trunk capacity of five-wheel cars is 17.8 cubic feet, that of six-wheel cars is 22 cubic feet. An automatic trunk light illuminates the interior when the lid is open.

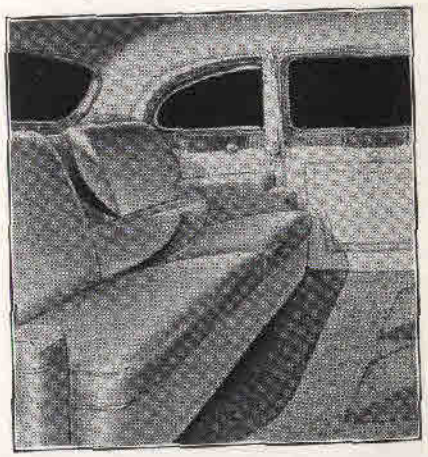
INTERIOR BODY FEATURES

Dimensions throughout both front and rear compartments of the new Packard Super-8 One-Eighty are generous. Hip room in the front seat is ample for three large persons—50 inches from seat edge to seat edge—and elbow room is much wider—55 inches—because the human body is naturally wider at the elbows than the hips. Shoulder room is greater still—57½ inches—so there is no need to sit sidewise or be squeezed when three front seat passengers are riding. Rear seat room is generous too, 47½ inches between the arm rests, and full 59 inches at the elbows. Shoulder room is 56 inches.

Leg room is provided for even the tallest of passengers in either compartment and comfortable, movable foot hassocks are provided. Head room too, is exceptional and on those occasions demanding top hats, they can be worn with comfort. Not many modern cars afford this feature. Doors are wide and unusual entrance space is afforded for easy, dignified entrance and exit.

Upholstery and Trim—Upholstery materials are of the finest available—all wool and superfine in texture. Woven from specially selected fleece, these lustrous fabrics are comparable to those used on the most expensive furniture. And, because their quality is of such high standard they not only look well but are also exceptionally durable. A selection of five different materials is offered—three lustrous broadcloths, and two fine Bedford cords. First, a fine gray broadcloth with a pronounced navy blue stripe is used for seat cushions and backs with a blending gray plain color cloth on side walls and headlining. Second, a medium tone tan broadcloth with uneven pin stripes of brown is used as upholstery, while a lighter tan material makes ceiling and side walls. The third is a beautiful combination of tan and brown broadcloth in plain tones—brown upholstery, tan side walls and ceiling. Fourth, and fifth are Bedford cord upholsteries with broadcloth ceilings and headlinings—one Bedford is gray with gray trim, and the other a rich navy with contrasting gray broadcloth ceiling and side walls.

The upholstery of the Packard Super-8 One-Eighty is finely tailored in a wide pillow design which even to the eye is at once indicative of the luxurious comfort which may be expected. Extreme care is taken in designing the cushions and seat backs, and an extremely accurate method is used. A master template like the body of a man, and made from the composite measurements of 40,000 people is used. Thus seats and back contours are orthopedically correct and the longest trips can be made with almost complete absence of fatigue.



Luxurious cushions of foam rubber with pillows of goose down invite relaxation.

In the rear seat, the comfortable sponge rubber

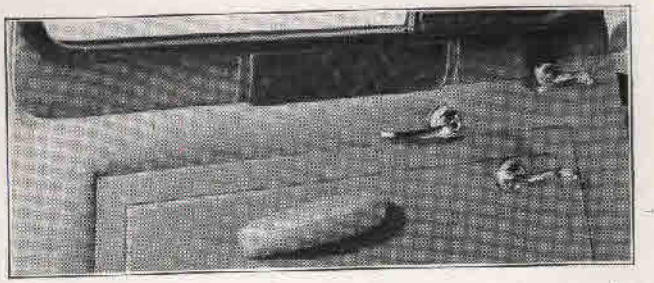
cushioned side arm rests are supplemented by a soft, wide center folding arm rest. In addition, softly padded arm slings afford maximum passenger ease. Other assist cords, to assist in entering the car, are located at each end of the robe cord where it is attached to the front seat.

Packard Custom Super-8 One-Eighty seat cushions and backs have a foundation of Marshall, small diameter coil springs. Each is encased in a separate cloth container to distribute weight evenly, prevent spring noises, and provide utmost comfort. Over this resilient foundation is placed a thick pad of moulded foam sponge rubber, and on top of this, soft cushions of goose down. Because of this fine quality construction, Packard One-Eighty cushions are luxuriously comfortable, yet retain their shape without sagging or stretching through long years of service.

Appointments—Ash receivers are conveniently located, first, in the top of the instrument panel for front seat occupants, and second, in each rear seat side arm rest. In the five passenger models the ash receivers have roll tops in alternate chrome and color, and the receiver on the right hand side is equipped with an automatic cigarette lighter. The seven passenger bodies have ash receiver sets of walnut trimmed with chrome. Each is equipped with an automatic cigarette lighter.

The back of the front seat of five passenger sedans embodies a large compartment with a hinged door for the accommodation of larger parcels, and on either side chrome grilles may be installed for warming the rear compartment from the under seat heater. Auxiliary seats in seven passenger models are comfortably upholstered, provide ample leg room, and fold flush into the front seat back when not in use.

Window garnish mouldings and wainscots are genuine walnut in inlaid patterns of burled and plain grain to match the background panel of the instrument board. Interior hardware is new with metal parts in butler's finish, and handles



Packard Super-8 One-Eighty window garnish mouldings and wainscots are of genuine burled walnut.

and escutcheons of plastic to blend with the walnut trimmings.

Floors in both compartments are richly carpeted with deep pile mohair with a thick sponge rubber backing. It is soft and yielding to step on, and also serves as an additional insulator against sound, heat, and cold. Deep pile crushed mohair carpet may be specified for the rear compartment if desired at no extra cost. It also is backed with rubber and gives a finishing note of beauty and luxury.

Instrument Panel—A new instrument panel of outstanding beauty has been designed for the new Super-8 One-Eighty for 1941. It combines the rich beauty of crotch walnut graining with the luster of chrome trimmings, and the satiny tones of harmonizing plastics.

Curved backward from the divided windshield, the panel with its beautiful crotch walnut graining forms a rich background to set forth the lustrous blending tones of the plastic panels. Defroster vents are inconspicously designed into the windshield moulding on both sides, and the plastic knob of the windshield wiper control is located just behind the divider bar. On the center top of the panel, and projecting slightly over the front, is a moulded panel of plastic trimmed with fluted chrome which contains the front compartment ash receiver and houses a light for map reading and illumi-

nating the front compartment. Immediately below, is a large plastic panel extending from the top of the instrument board to the bottom. A chrome band, with the Packard crest in color enamel set horizontally across the top of this plastic panel may be removed for the installation of radio controls. Below this, a large chrome grille is set into the plastic panel and when a radio is ordered the speaker is mounted behind this grille.

The section of the instrument panel to the left of the radio grille carries a panel of plastic edged at the bottom by a fluted chrome band. Into this a crystal clear panel of plastic is set which covers the new oblong speedometer, and other gauges. The pointer of the speedometer is made of lucent plastic and glows in green, amber, and red through the various speed ranges—green from zero to 30 miles per hour, amber from 30 to 50, and red from 50 miles per hour to top speed. Operating controls, including an automatic cigarette lighter are neatly grouped below the plastic panel containing the gauges.

The section of the instrument board balancing the panel with the speedometer and gauges, forms the door of the large glove compartment. This section carries a matching panel of plastic trimmed with chrome. An electric clock of ultra modern design is set into the plastic. The door of the glove compartment is opened by simply pressing a button on the instrument board. This button also contains a lock which is operated by the same key used to lock the trunk. The inside floor of the glove compartment slopes toward the dash, and the whole interior is attractively finished in suede-like flock.

Steering Wheel—The handsome new steering wheel of the One-Eighty has its spokes arranged like the letter "T." It is made of smooth, lustrous plastic in two tones of tan to match the instrument panel and interior fittings. A horn ring fits perfectly to the design of the wheel.

Ventilation—Comfortable controlled ventilation to suit the individual needs and wishes of each passenger is provided

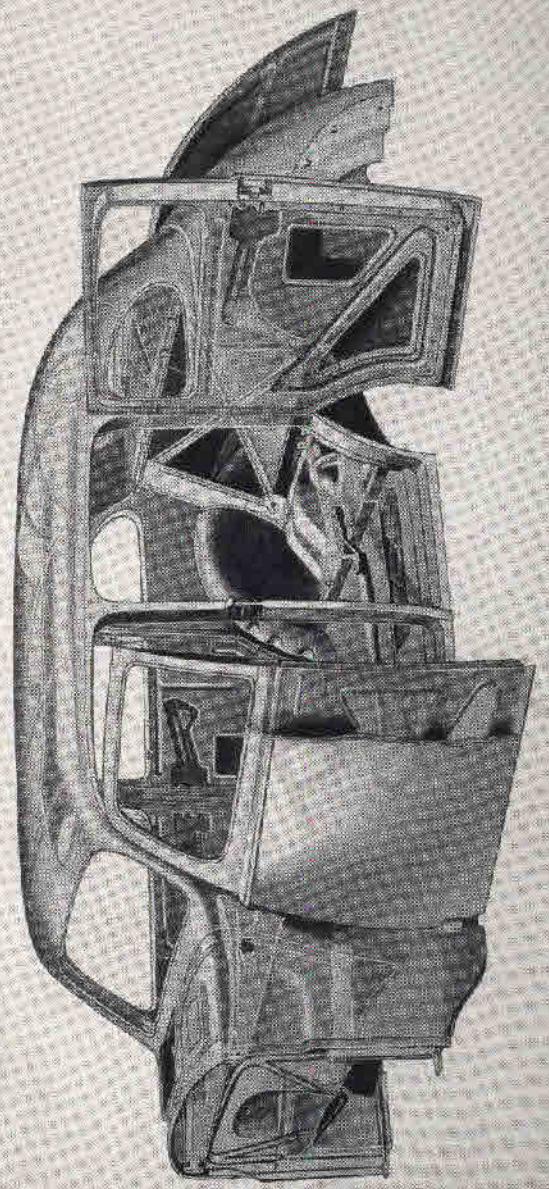
by the Packard ventilating system. In principle and general design the ventilation system used on the Packard Super-8 One-Eighty is the same as that used on the One-Ten and One-Twenty which is described in the One-Ten and One-Twenty section of this Data Book. The differences lie in the method of operating the windows and ventilators.

Automatic Window Controls—A new refinement and luxury note has been added in the Super-8 One-Eighty models in the new automatic window controls. No longer is it necessary to crank windows up and down. Instead an electric motor drives a pump which operates hydraulic lifts which raise and lower any particular window quickly and without effort on the part of the passengers.

On sedans, little plastic controls, one on either side of the front compartment ash receiver, and one on each quarter panel of the rear compartment, control the windows in the rear doors. Two other similar controls on each front door panel operate the front door windows. In limousines there are no controls for the rear windows in the front compartment. To raise a window it is only necessary to press the proper control upward—to lower, it is pressed down. Release of the control stops the window in any desired position.

The pivoting or ventilating windows are, of course, hand operated and in the One-Eighty a convenient plastic handled crank is used both front and rear. Rain guards are located over each front door ventilator to prevent rain drip when the ventilators are open and the car traveling through a rain storm.

PACKARD BODY CONSTRUCTION



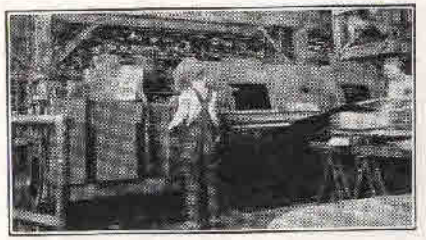
Packard all-steel body—braced and reinforced at every point of stress.

PACKARD ALL-STEEL BODY CONSTRUCTION

Actual body building experience covering a period of more than thirty years has guided Packard engineers in designing the beautiful, sturdy, all-steel bodies for 1941. Moreover, because Packard builds its own bodies by its own long-experienced craftsmen in its own modern body shop, quality through every stage of construction is under one control. Variances from standard, which might otherwise creep in, are avoided.

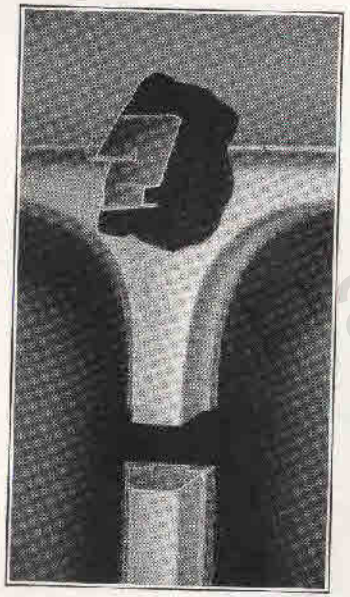
All Packard bodies are new this year—new in line and beauty—new in features and construction. Built of steel from end to end, reinforced and braced at every stress point with heavy welded steel, these new Packard bodies offer in maximum degree, rugged strength and safety.

All-Steel Roof—Formed from a single sheet of rigid steel from windshield to trunk, the roof of the new Packard body affords maximum protection and binds the whole body structure into one rigid unit of steel. Solidly welded at the windshield, side panels, and rear panel, it stiffens the body in the same way a cover stiffens a box. A heavy crossbow at the center pillar further strengthens the roof structure.



All steel for outside panels, roofs, etc., where a super-smooth surface is required for paint, is practically reworked in this machine before it passes on to the giant presses. The bending or reworking of the steel breaks up the surface hardness acquired in standing, and removes internal stresses by rearranging the molecules of the metal.

All-Steel Floor—Consisting of three large, heavy steel stampings solidly welded into one unit, the floor, like the roof, is a model of strength and rigidity. Die formed braces, ribs and flanges at strategic points add greatly to the solidity and stiffness of an already exceptionally rigid floor. Tunnels in either front or rear compartment are absent—just a slight arching of the metal in the rear compartment from door sill to center line to prevent flexing and give greater rigidity. There is no movement when one steps on the floor of a Packard. In the front compartment the toe board and dash are formed intact from one piece of steel. There is no welded joint, as in most cars, between toe board and dash and it is therefore impossible for engine heat and fumes to find entrance to the body at this point. This construction advantage is, of course, in addition to thorough insulation of the body at the dash.



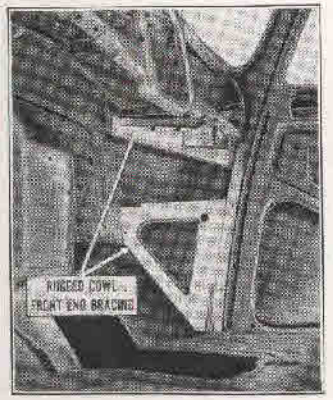
Section view of both top rail and pillar post showing construction.

Body Panels — Body panels are formed of heavy sheet steel over huge dies which give them a satiny smooth surface for painting and finishing. Special steel braces reinforce them at every point of stress or strain, and the latest developments in automatic welding equipment are used to bind them to the steel roof and floor, forming one complete unit.

Pillar Posts—Center pillar posts are box section in design—two pieces of steel formed into correct shape under tons of pressure exerted by huge modern presses, and firmly welded to form a rigid steel pillar of great strength. It is securely welded—top and bottom—to the floor and roof rail. Additional strength is supplied by anchor bolts which pass through the base of each pillar post, body floor, and chassis frame. Full advantage is thus taken of the great rigidity of the Packard frame in reinforcing the body structure by this method of mounting.

Drip Moulding—Starting down at the belt moulding near the windshield, sweeping up and over the doors and rear quarter windows and ending in a graceful curve at the rear, is a deep, built-in drip moulding. As can be seen in the preceding cutaway illustration, it is built in at the top rail in such a way that it serves to stiffen and strengthen the top rail as well as its primary purpose of carrying away water from over the doors.

Windshield and Cowl—The windshield and cowl become one piece with the steel top by welding. All are fused into one sturdy unit to withstand the strains and stresses which occur at this point of the body. Back of the smooth outside panels is a solid bracing of exceptionally heavy steel which forms a complete one-piece frame around the windshield and extends downward to the sills. This front end bracing is really in the form of a large block "A" with a deep reinforcement back of the instrument panel forming the cross bar of the "A." This heavy pressed



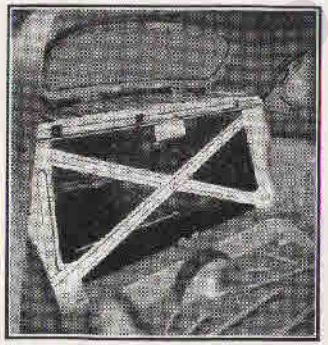
Two heavy longitudinal braces on each side of the cowl provide tremendous strength.

steel cowl reinforcement is in itself unusual as most manufacturers use a simple metal bar at this important point.

The cowl is sturdily reinforced with two heavy longitudinal steel braces on each side. The noticeable freedom from cowl shake, from squeaks and rattles in every Packard is due to this exceptionally strong front end construction.

Rear Panels and Trunk—Firmly welded together and heavily reinforced, the rear panels and trunk form an exceptionally strong and rigid rear body structure. At the rear of the back seat, steel plates down each side are solidly welded to the body side panels and are joined together at the top by a deep cross-member extending backward to the rear body panel. These three plates together with the heavy floor form a frame which stiffens the rear of the body at the trunk. In addition to this steel frame, a steel X-brace is welded into the corners at the top and bottom adding further rigidity at this point, and effectively preventing twisting or weaving of the body. At the top of the back of the rear seat a solid steel plate extending from quarter to quarter further strengthens and adds greater rigidity to the whole rear end of the body.

Most manufacturers form the wheel housings in the rear quarter panels by drawing the metal over dies. As a result of such deep draws, metal in the housing is extremely thin in many spots. Packard avoids these weak spots by forming the wheel house panel in a separate piece and welding it in position. The resulting panel is much stiffer and stronger.



A frame and X-brace of steel reinforce the rear of sedan bodies.

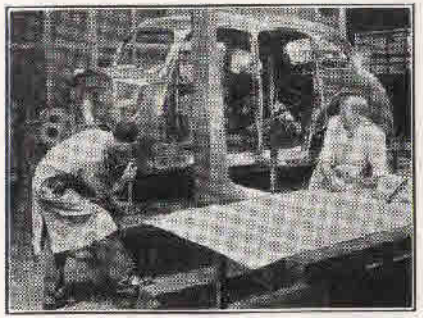
The trunk cover, hinged at the top with concealed hinges is strongly reinforced to retain its shape,

and to stiffen the rear end when closed. A water seal of hollow rubber seals the trunk compartment against the entry of dust and water. This year the trunk floor has been materially strengthened. New pressed-in ribs and reinforcements give much greater rigidity, thus providing a solid floor for luggage and also preventing body noise and rumble.

Doors—Only two pieces of heavy steel are used in the construction of each Packard door. This design is superior to that in which a number of pieces of steel are welded together. In Packard doors the outside panel is formed from one piece of steel and the whole inside panel of the door from another. Heavy diagonal ribs, formed in the steel of the inside panel itself, prevent any sagging of the doors. Other ribs and flanges pressed into the metal of the panel further strengthen and stiffen the doors.

Upper hinges on the front doors differ from the conventional in that they are concealed when the door is closed and when open allow the top of the door at the belt to swing away from the body thus permitting a forward slant to the front of the door and adding several inches of extra foot room at the bottom of the door. This is an exclusive Packard feature and contributes importantly to the ease and convenience of entrance and exit.

All windows are securely sealed against the entry of dust, cold and



Complete bodies "in the white" are taken at random from the line and checked on this huge iron surface plate against body blue prints. Approximately eight hours are required for a check-up and 120 different checks and measurements are made.

moisture by special new dust strips built in behind the panels and completely surrounding the windows.

INSULATION

By taking advantage of every facility and adopting every new advancement in the science of insulation, Packard has developed over a period of years a system of insulation for its all-steel bodies which effectively stifles body noises and affords maximum protection against extremes of heat and cold. Months and years of continuous research have produced just the right material or combination of materials for every part of the body. In all, thirteen different insulating materials are used at strategic points throughout the body.

Roof—The Packard steel roof is effectively insulated by a dense, sound-deadening layer of special material permanently cemented to the under side of the steel. It effectively deadens and absorbs any noise or vibration which might originate in the metal of the roof, and as well, insulates the interior of the car from the heat of the summer sun and vice versa it protects from winter's cold.

A spring steel bow is sprung into place against this insulating material in such a way as to provide tension throughout the central portion of the roof. The pressure of this spring steel roof bow prevents any drumming in the roof in much the same way as the vibrating head of a drum is stilled by placing the hand on the surface at or near the center.

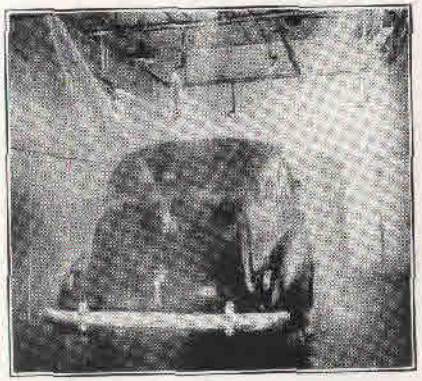
Panels—Rear quarter panels are also insulated with the same insulating material as is used under the roof. The panels over the wheel housings are effectively silenced by a heavily sprayed-on coat of plastic insulating compound.

Doors—The wide semi-flat surface of the door panels is another body location where noise might be expected to occur. Therefore, the insides of the doors are heavily sprayed with a thick vicous asphaltic compound which never hardens or deteriorates.

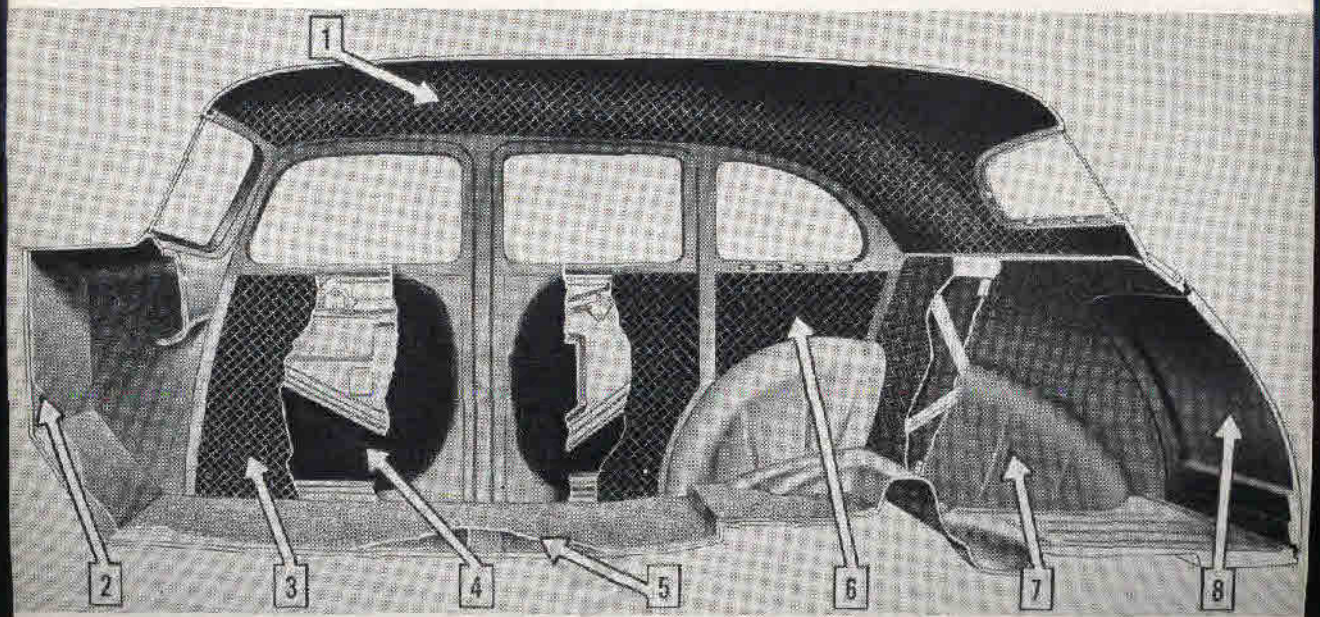
Cowl—The top and sides of the cowl are lined with heavy jute and the dash is insulated from the engine compartment with a full inch of special material before being trimmed with long-wearing, scuff-proof leatherette insulating board. Toe boards are covered with two thick layers of different insulating materials to keep engine noise and heat out of the front compartment.

Floors—The steel floors of the new 1941 models present a large area where noise might originate or through which under-car road noise might enter the passenger compartment. Such a possibility is eliminated and at the same time excess heat and cold are kept out of the interior of the body by double insulation. The floors of both compartments are first covered with sound-deadening asphalt impregnated felt. Then, a heavy layer of jute padding is cemented to the under side of the carpet or rubber mat.

Trunk — The interior of the trunk is heavily insulated, first to absorb sound, second against extremes of temperature, and third against entry of moisture. A thick layer of asphalt impregnated felt is cemented to the trunk lid to deaden any sound effect developing in the metal panel. The side walls and top of the trunk



Every Packard closed body must pass through this rain test and endure a drenching of water much more severe than a heavy cloudburst. The body is subjected to sprays of water under air pressure from twenty-two nozzles. If the slightest leak is discovered, it is corrected and the body must pass again through the rain storm.



COMPREHENSIVE BODY INSULATION

(1) A dense, sound deadening layer of special material permanently cemented against the under side of the steel roof insulates against sound, heat and cold.

(3) The top and sides of the cowl are lined with a thick pad of heavy jute, the dash is insulated with a full inch of special material and the toe board is covered with two layers of different insulating materials to keep out engine sound and heat.

(3) A panel of special insulating board is used beneath the trim material on both the front and rear doors.

(4) The inner surface of the outside panel of all doors is heavily sprayed with a thick viscous asphaltic compound that never hardens or deteriorates.

(5) Noise which might originate in the floor panels is eliminated and excess heat and cold are kept out of the body by a sound-deadening asphalt felt pad plus a heavy layer of jute padding cemented to the under side of the carpet or rubber mat.

(6) Rear quarter panels are insulated with a dense layer of insulating material similar to that used in the roof.

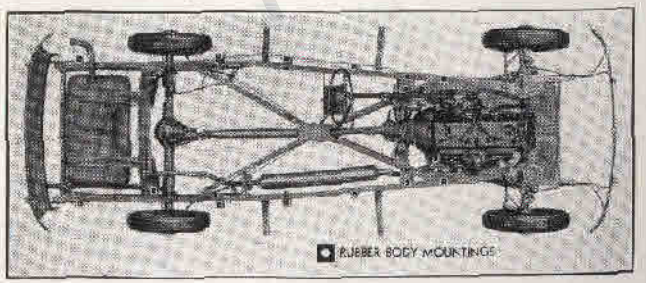
(7) The interior of the trunk is heavily insulated by a heavy coating of special sprayed-on compound.

(8) The under surface of the lid is covered with a thick layer of asphalt impregnated felt and a water seal of hollow rubber effectively seals the trunk compartment against rain and dust.

are also heavily coated with a sprayed-on layer of special compound. The whole interior of the trunk is then sprayed with a liquid foundation binder and while it is still wet and sticky, a dry fibrous finishing material called flock, is sprayed under air pressure on the whole interior surface. Flock is a combination rayon-cotton material and the fibres are about ☆ of an inch long. These fibres have the peculiar property of standing upright when they come in contact with the special liquid cement. Thus a finish is given to the interior of the trunk which closely resembles suede leather and which is very durable. The floor is covered with a long-lasting leatherette-surfaced insulating mat which attractively finishes the interior. A water seal of hollow rubber effectively seals the trunk compartment against rain and dust.

Body Mountings—Packard has accomplished complete insulation of the body from frame noises through the use of twenty special rubber body mountings having very high noise deadening properties.

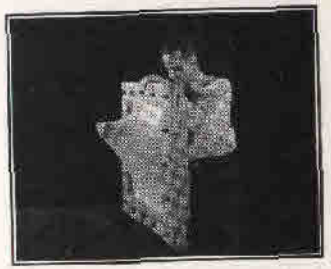
These insulated mountings separate steel from steel throughout the entire length of the body. They give all the insulating qualities of rubber yet are sufficiently solid to insure frame and body being one structural unit and so prevent any vibration between the two. These insulated body mountings form the third line of noise defense between the road and the body. First, the unusually large, low pressure



Twenty body mountings made of rubber impregnated material insulate the body from chassis noises.

tires; second, the rubber bearings of Packard complete Safe-T-fleX front and rear suspension; third, the rubber body mountings. Here is a combination of three sound barriers acting successively and in unison to prevent road noises from reaching the body—a combination found in Packard only of all American-built cars.

Safety Glass — All doors, side windows and windshields of all new Packard models are equipped with Packard high test safety glass while the new curved rear window is made from special heat-treated safety glass. This is no new departure, for Packard was one of the first to use this new type of safety glass.



The plastic used in Packard high test safety glass looks and stretches like rubber. It becomes crystal clear when heat treated.

The safety element of Packard high test safety glass is based on a new plastic placed between two sheets of glass. The new plastic looks like rubber, stretches like rubber and is tough like rubber. Under pressure and heat it becomes clear as the glass itself. At average driving temperatures it has two and a half times the resistance to "break" as older types of laminated safety glass and in cold weather—0° F.—it is four times as resistant to "break."

Safety glass is now compulsory in many states but Packard has used it for many years, affording every Packard owner this additional safety before compulsory by law; and in its high test safety glass, Packard offers the latest development in this important safety measure.

PAINTING AND FINISHING

The first step in the Packard body finishing process—body cleaning—is all important. Upon the thoroughness of this

operation depends not only the smoothness and beauty of the new paint job but its durability as well. Care and thoroughness in the cleansing process assure a permanent bond between paint and metal—a lasting coating over the steel—protection against rust. When the surface is sealed the whole body is protected.

Packard bodies, "in the white" are first thoroughly washed with petroleum solvent to remove oil and grease and produce a clean surface for the other stages of the cleaning process. Next, the body is given a bath in deoxidine solution—a phosphoric acid compound—which removes any traces of rust. It is then rubbed with steel wool and again flushed with deoxidine solurion. After this deoxidine treatment, the body passes through a drier and finally, is given a thorough rub with alcohol. Every square inch—every corner is washed until not a speck of oil or grease or any kind of foreign matter remains.

Painting—After the complete cleaning process, the perfectly clean body receives two coats of prime or surfacer. It is thus heavily coated with a protective film of rust-resistant paint. Next a black inspection coat is applied to bring out and emphasize any imperfections and to provide an opportunity for correcting them before the finishing coats of lacquer are sprayed on. Then the body passes a whole corps of painters where it receives coat after coat of colored lacquer.

After baking, sanding and polishing, the body moves on to the finishers. Here all the exposed edges—doors, trunk lid, etc.,—are given an extra coat of heavy lacquer applied with a paint gun specially developed by Packard for this purpose.

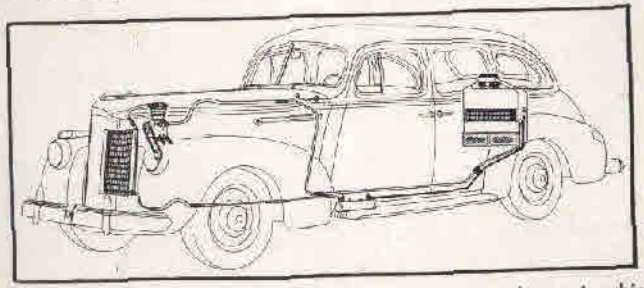
Finally, at the end of the assembly line, when the body has been finished and mounted on the chassis and the car is complete, the paint is given the most searching inspection of all, and the smallest defects or marks are corrected by skilled workmen before the final OK is given.

AIR-CONDITIONING

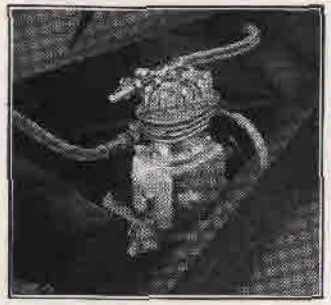
DURING THE 1940 model year Packard introduced another important "First" to American motorists in its new "Air-Conditioning unit." Some manufacturers have called their ventilating systems by various names which strongly suggested air-conditioning but were really little more than ventilators or air filters. Packard Air-Conditioning however, goes far beyond these processes although all are included in the Packard system. Packard Air-Conditioning involves cooling by mechanical refrigeration.

Packard Air-Conditioning operates on the same, simple and efficient principle which has been proved so effective and practical in millions of the finest electric household refrigerators. No mechanical knowledge is needed to operate the Packard Air-Conditioning unit. A handy switch on the instrument panel regulates the speed of the blower which, of course, regulates the volume of cooled and filtered air circulated in the body of the car.

The System In Operation—The diagram shows how the air-conditioning unit is installed in the 1941 Packard. The compressor unit, mounted on the engine block, is driven by a "V" belt from a special pulley on the water pump shaft. Immediately in front of the regular car radiator core a con-



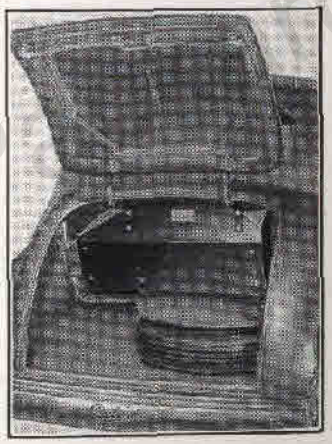
The complete Packard Air-Conditioning system is shown in this phantom illustration.



The large capacity twin compressor is mounted at the front on top of the engine and driven by a belt from the fan pulley.

denser is mounted and connected by pipe lines with the compressor and also with the cooling coils in the trunk. The refrigerant used is the same as generally used in electric household refrigerators which has been proved efficient in widespread kitchen service.

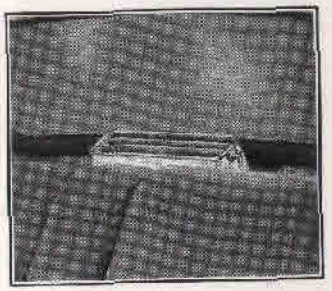
The Cooling Cycle—When the engine is started, the refrigerant is drawn into the compressor pump and compressed under a pressure of 180 pounds per square inch. Under this pressure it enters the condenser unit which is located directly in the current of cooling air drawn in by the engine fan. In the condenser the refrigerant gas loses its heat and becomes a liquid.



The expansion coils where the air is cooled and dehumidified is located in the trunk.

The refrigerant still under pressure and in liquid form is forced from the condenser through a tube toward the rear of the car into a receiving tank which serves as a reservoir for the liquid refrigerant. From here it is forced through a tube of smaller diameter to an expansion valve and then into the cooling coils. Here it expands and becomes a gas. The process of

change from liquid to gas requires heat and this heat is absorbed from the coils which in turn absorb heat from the surrounding air. The refrigerant then returns to the compressor and the cycle starts over again.



The cool air outlet is located just back of the rear seat back.

Cool Air Circulation—The air which has been cooled by passing over the coils of the cooling unit is drawn through a duct and circulated throughout the car by an electrically-driven sirocco-type blower located behind the rear seat. It is in this respect that Packard Air-Conditioning differs from a household refrigerator. Cool air is *forced* to circulate throughout the whole car interior. The cool air follows the contour of the roof toward the front of the car and because cold air is heavier than warm air, it descends toward the floor near the front. It is then pulled back under the rear seat and into the cooling system again by the suction action of the blower. A constant flow of cooling air is thus kept in circulation.

Dehumidification—As the air passes over the cooling coils in the trunk compartment, heat is absorbed from it and moisture held in suspension when the air was warm, is condensed and deposited, thus dehumidifying the air before it is circulated to the body. The cooling unit defrosts automatically. This dehumidifying of the air assures greater passenger comfort on hot, humid days, and prevents steaming of the windshield when all the windows are closed.

Air Filtration—When the air is drawn by the suction of the blower under the rear seat it must pass through a filtering element which cleanses it from dust and dirt, and maintains a low pollen count. Ordinarily, sufficient air leakage

from the outside is introduced for adequate ventilation. If a full load of passengers is carried additional ventilation may be desired, and it is easily accomplished by partially opening one of the front pivoting ventilators just enough to create a fresh air intake.

Cooling Effectiveness—Cooling plants of this type are rated in accordance with the equivalent cooling effect of a quantity of ice used for the same purpose in twenty-four hours. The capacity of Packard Air Conditioning is rated at 2 tons of melting ice in a twenty-four hour period at a car speed of 60 miles per hour. Because the compressor pump is driven from the fan pulley, the capacity of the system increases as engine speed increases. Of course, provision is made by the control switch to regulate car cooling to suit the desires of the driver and passengers.

Insulation—In every Packard equipped with Air Conditioning special insulation is used in the roof, sides, and floor to reduce the amount of heat leakage into the car from sun heat on the roof and side panels, and from exhaust heat of the engine under the car floor. This special insulation aids materially in maintaining desired interior temperatures.

Factory Installation—All Packard Air Conditioning units must be installed at the factory. Each car so equipped requires special handling in production and must be so ordered before the car is actually started through the factory.

Quick Cooling—Because Packard Air Conditioning is operated directly from the engine, it functions immediately when the engine is started, and because of its capacity and efficiency, it is effective even at low car speeds. Therefore, it is useful and enjoyable on short trips as well as long—at low speeds as well as at high.

Proved By Packard Standards—In laboratories, at the famous Packard Proving Ground, and in actual owner service, Packard Air Conditioning has undergone the most

rigorous testing. In design, materials, construction, and operation, it has fully met the quality standards that distinguish all Packard products.

1. Question—Why is a reciprocating (piston and cylinder type) compressor used when most refrigerator manufacturers have adopted the rotary type?

Answer—All domestic refrigerators using rotary type compressors are fractional tonnage machines. No one builds a rotary compressor with a capacity of one ton or more. Reciprocating compressors are used in commercial and air-conditioning equipment where capacity greater than one ton is required.

2. Question—How is it practical to operate the compressor of Packard Air Conditioning at such high speed? How fast do other refrigerating compressors operate?

Answer—Most compressors operate at not more than 360 R.P.M., while the Packard Air Conditioning compressor operates at 70% of crankshaft speed which means as high as 3000 R.P.M. at top car speed. Only a few years ago automobile engines had a top speed of 1250 R.P.M. but through developments and refinements of design the average 1941 engine now runs much faster. Some racing cars run at 8000 to 9000 R.P.M. In Packard Air Conditioning it is desirable to run at high speed, and the compressor has been designed to do so.

3. Question—Is it possible to shut off the blower without disconnecting the compressor and without danger of the evaporator flooding and freezing?

Answer—Such conditions would probably develop in a number of household installations. In Packard Air Conditioning, however, this is forestalled by special design. First, the expansion valve is designed to prevent excessive flooding, automatically. Second, the long line in which all excess refrigerant vaporizes prevents the evaporator from freezing.

4. Question—Would fumes within the car body be dangerous in case of a leak of refrigerant in the pipe lines or cooling coils?

Answer—Freon which is used as a refrigerant in Packard Air Conditioning is odorless and is not injurious if inhaled.

5. Question—Is there any normal loss of refrigerant which would require periodic servicing or cause trouble in the system if neglected?

Answer—There is no normal loss of refrigerant from the system. Therefore, no servicing is necessary unless a leak occurs.

6. Question—Is periodic greasing or other service required of any part of the system?

Answer—No—except that the air filter pads should be renewed each spring and fall—oftener in dusty sections of the country.

7. Question—Does the location of the condenser in front of the radiator core interfere with engine cooling efficiency?

Answer—To insure adequate cooling in the condenser and at the same time maintain full cooling efficiency in the car radiator larger diameter fans are used in both the Packard One-Ten and One-Twenty. The Packard Super-8 One-Sixty and One-Eighty are standard equipped with a large 18½" fan.

8. Question—Why is the cold control in Packard Air Conditioning not automatic like in a refrigerator?

Answer—Because individual tastes differ, and varying degrees of coolness may be desired, a convenient switch is used to control the amount of cool air forced into the car body by Packard Air-Conditioning.

PACKARD MOTORS

PACKARD MOTORS

A BACKGROUND of more than forty years of the broadest experience in designing and building internal combustion engines of every known type and kind, stands back of, and assures the dependability of, each present-day Packard engine. The present line of Packard motors—One-Ten, One-Twenty, and Super-8 One-Sixty—was designed and built by *many of* the same men who were responsible for the development of historic Packard motors which have won renown on land, and sea, and in the air. And, in these outstanding power plants the well-known Packard standards of fine quality and precision workmanship are maintained—plus brilliant performance, flexibility, and economy.

The full power developed by each of these motors is far in excess of normal driving requirements and leaves a big surplus beyond even the most extreme demands of the hardest kind of driving. This excess of power in relation to car weight assures brilliant performance and stamina for prolonged periods of high speed driving, power for steep climbs and heavy roads, and abundant power for flashing acceleration, a real safety factor in some emergencies.

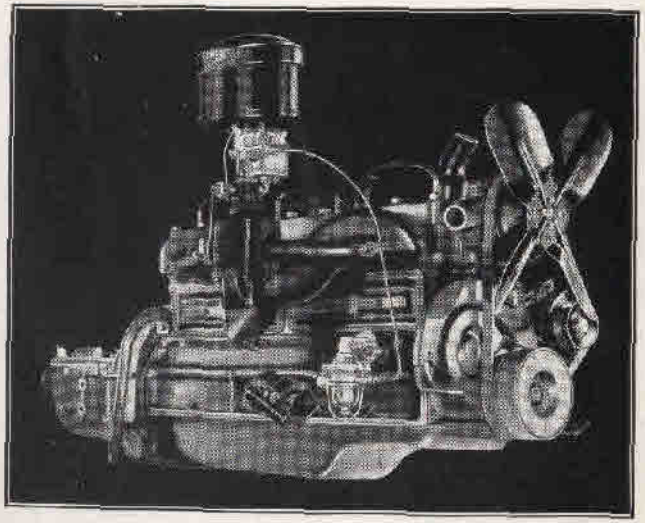
Most delicate of measuring devices — the light ray machine measures in millionths of an inch.

In economy, also, these Packard engines achieve exceptional results. Both fuel and oil economy are unusual, even *when compared with less powerful engines in small cars.* And the records of thousands of owners over millions of miles of travel prove the surprisingly low cost of Packard maintenance and service.

All Packard engines develop their maximum power at medium low engine speeds which means less wear and longer life. In addition, low rear axle gear ratios allow the engine to operate slowly—make fewer revolutions per mile, and normal wear is minimized. New, much longer-lived, removable connecting rod bearings add further to long engine life.

THE PACKARD ONE-TEN ENGINE

With a piston displacement of 245 cubic inches, and a compression ratio of 6.39 to 1, the big, six cylinder One-Ten engine develops its full 100 horse power at only 3600 R.P.M. thus effecting maximum smoothness and economy. A low ratio of car weight per horse power provides thrilling performance—high speed on the open road—flashing acceleration in traffic. The remarkable performance of this smooth *six cylinder motor in the hands of scores of thousands of motorists* scattered throughout the whole country is definite



The Packard One-Ten Engine—100 Horsepower.

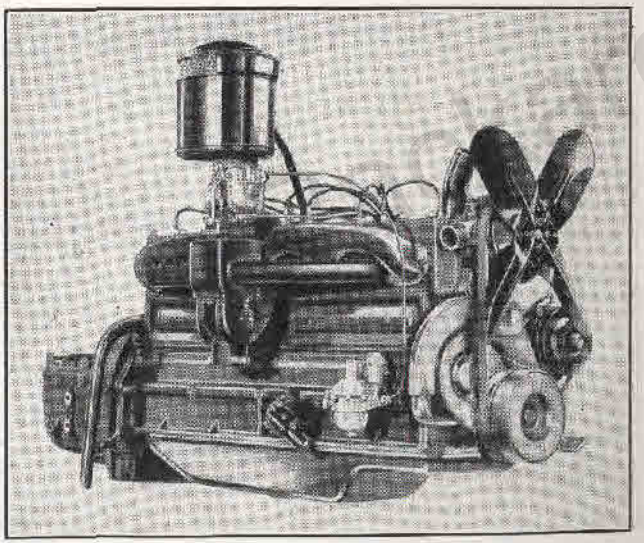
assurance of satisfaction to all prospects. Basically this splendid engine is unchanged for 1941.

Major Specifications:

Bore and Stroke	3 1/8" x 4 1/4"
Displacement	245 Cubic Inches
Type	L-Head, 6 Cylinders
Rated Horse Power	29.4
Brake Horse Power	100 @ 3600 R.P.M.
Compression Ratio (Standard)	6.39 to 1
Compression Ratio (Optional)	6.71 to 1

THE PACKARD ONE-TWENTY ENGINE

With a generous margin of reserve power—exceptionally smooth in performance at any speed—nimble in heavy traffic or on the highway—yet surprisingly economical in day-in-day-out service, the great Packard One-Twenty motor has



The Packard One-Twenty Engine—120 Horsepower.

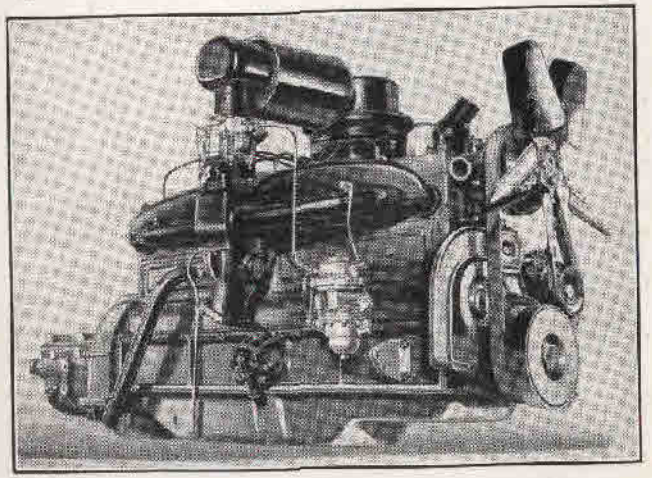
easily satisfied the most exacting demands of tens of thousands of enthusiastic owners. It is a big power plant with a displacement of 282 cubic inches, a standard compression ratio 6.41 to 1, and develops its maximum horse power (120) at only 3600 R.P.M. A low car weight per horse power ratio enables this great engine to provide a type of performance that is truly extraordinary.

Major Specifications:

Bore and Stroke	3 1/4" x 4 1/4"
Displacement	282 Cubic Inches
Type	L-Head, 8 Cylinders
Rated Horse Power	120 @ 3600 R.P.M.
Brake Horse Power	33.8
Compression Ratio (Standard)	6.41 to 1
Compression Ratio (Optional)	6.85 to 1

THE PACKARD SUPER-8 ONE-SIXTY ENGINE

With its 160 developed horse power, the great Packard Super-8 One-Sixty engine is the most powerful eight cylinder



The Packard One-Sixty Engine—160 Horsepower.

motor ever built by Packard. Even the cold specifications below suggest the superb performance which may be expected from this Packard masterpiece, and a short drive will convince the most skeptical driver. This mighty power plant develops an extremely high ratio of horse power to car weight. In the five passenger sedan, 127" wheelbase, it has less than 25 pounds of car weight to each horse power developed. Yet such is its design that operating and maintenance costs are astonishingly low. This engine also powers the luxurious new Packard Custom Super-8 One-Eighty models.

Major Specifications:

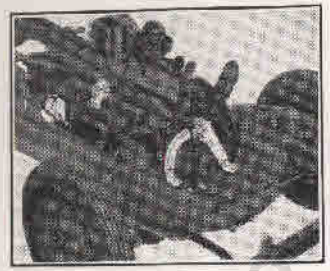
Bore and Stroke	**3⅛" x 4⅝"**
Displacement	**356 Cubic Inches**
Type	**L-Head, 8 Cylinders**
Rated Horse Power	**39.2**
Brake Horse Power	**160 @ 3600 R.P.M.**
Compression Ratio (Standard)	**6.45 to 1**
Compression Ratio (Optional)	**6.85 to 1**

L-Head Design—For years all Packard engines have been L-head in design. This type of engine is free from any complicated valve mechanism and does not require the use of long push rods, extra springs, and rocker arms such as are necessary in a valve-in-head engine. The greater efficiency of the L-head type of engine is evidenced by its use by the great majority of motor manufacturers. Angle-Set valves and L-head design permit the use of high turbulence, high efficiency combustion chambers without necessitating any change in proved piston design.

Advantages:

1. **Higher compression.**
2. **Minimum complications.**
3. **Quiet operation.**

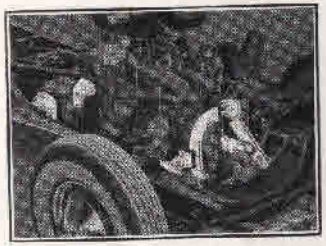
Neutro-Poised Motor Mountings—Although Packard engines are so carefully built and so perfectly balanced that there is only a minimum of natural vibration, any small tremors are effectively absorbed by large blocks of resilient, live rubber in the motor mountings. In the One-Ten and One-Twenty engines these mountings are three in number—a single mounting at the front and two inclined mountings at the rear—one on each side of the transmission. In the Super-8 One-Sixty engine two additional control cushions are used on each side at the front.



Live rubber, cushions the One-Ten and One-Twenty engines at three points.

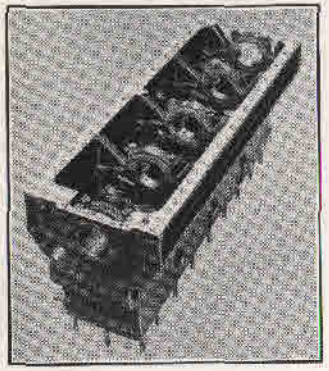
Advantages:

1. **Engine tremors absorbed in cushions of live rubber.**
2. **Correct engine balance by special arrangement of mountings.**



Five rubber mountings absorb tremors in the One-Sixty engine.

Cylinder Block and Crankcase—Packard cylinder blocks for all engines are semi-steel castings, containing a certain definite percentage of nickel. The exceptional hardness of this material makes it unnecessary to resort to the use of steel valve seat inserts. The crankcase is reinforced on both sides with a wide ribbing running the full length of the engine, and main and camshaft bearings are reinforced by multiple ribs. The lower edge of the crankcase extends well below the center line of the crankshaft thus providing increased



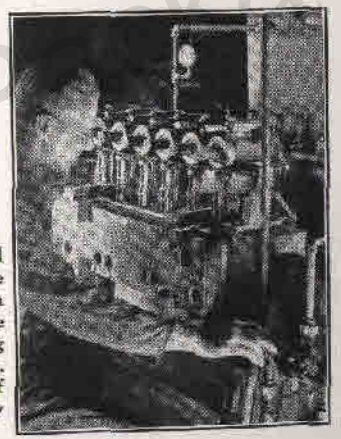
Heavy ribbing reinforces all Packard engine cylinder blocks.

vertical rigidity. This special design and sturdy construction prevents deflection, and assures permanence of bearing alignment and long life.

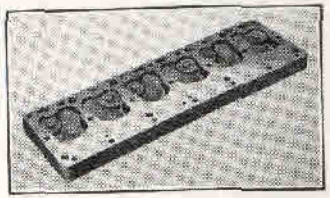
Built-In Manifold— An oil manifold drilled in the metal of the crankcase conducts oil under pressure from the pump, and delivers it through drilled passages to all main bearings.

Precision Honed Cylinders—To insure perfectly smooth movement of the pistons on the cylinder walls, the bores are reamed, honed, and polished to a mirror finish. The most modern of honing equipment produces cylinder bores that are vertically straight and horizontally round within the narrow limits of one-half of one-thousandth of an inch.

An extremely accurate method of fitting pistons to cylinders is used which employs sensitive electric gauges to measure the diameters of both pistons and cylinder bores. The human element is practically eliminated from the fitting of pistons.



The combustion chambers of all Packard cylinder heads are checked for cubic content on this machine. The domes are filled with water and a reading for each is taken in glass tubes. A tolerance of only one-half of a dram is allowed between any two domes.



Packard cylinder heads produce high turbulence of the fuel mixture and assure complete combustion and full power.

Advantages:

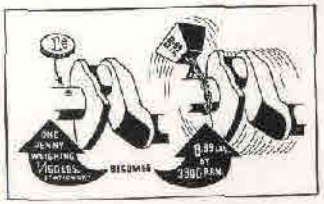
1. **Long wear, heat resisting cylinder block.**
2. **Valve seat inserts an unnecessary complication.**
3. **Main bearings retain correct alignment.**
4. **Correct fit of pistons in cylinders.**

Cylinder Head—The Packard cast iron cylinder heads—result of many years of intensive study and research to provide the most efficient combustion—are designed to secure extreme turbulence, thus obtaining maximum power from every drop of regular (non-premium) gasoline without spark knock or "pinging." The Packard One-Ten has a standard compression ratio of 6.39 to 1, the One-Twenty 6.41 to 1, and the Packard One-Sixty engine 6.45 to 1.

Advantages:

1. **High compression—more power from a given quantity of fuel.**
2. **More power and economy without using premium gasoline.**

Crankshaft—One of the most important factors contributing to the exceptional smoothness of Packard engines is found in their big, heavy crankshafts and large bearings. Each crankshaft is a heavy drop forging of high carbon steel. Counterweights on the One-Ten and One-Twenty shafts

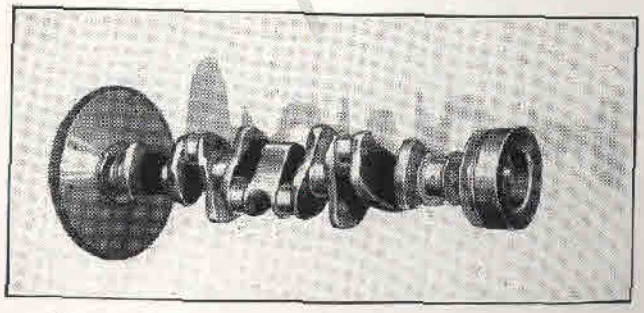


An out-of-balance weight in the *crankshaft of only* 1/160 of a pound would increase to 8.89 pounds at a speed of 3800 R.P.M.

After the crankshaft has been balanced statically and dynamically and the clutch mounted, the whole assembly is again balanced in this machine. Variations to a small fraction of an ounce are corrected.

are forged integral, while those of the Super-8 One-Sixty are attached. All Packard crankshafts are 100% balanced statically (at rest) and dynamically (in rotation). The importance of this *precision* balancing to both engine smoothness and long life can be understood from the fact that an out of balance weight as small as one cent would, at a speed of 3800 R.P.M., increase to 8.89 pounds at the bearings. Such a condition would, of course, cause excessive vibration and severe bearing wear.

The Packard One-Ten crankshaft weighs 81½ pounds stripped of vibration damper and flywheel, and is rigidly supported by four exceptionally large bearings (2⅜" in diameter) with a total bearing area of 45.1 square inches. It has six counterweights. The Packard One-Twenty shaft weighs 95

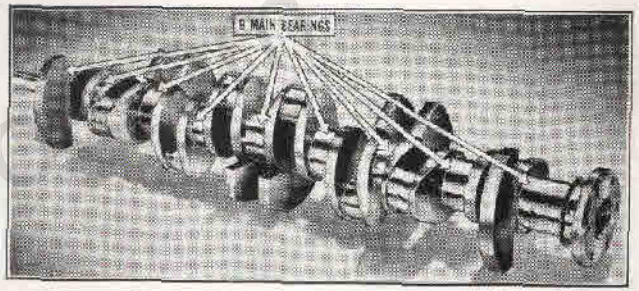


The Packard One-Ten crankshaft—81½ lbs. stripped.

pounds stripped and rotates in five main bearings (2¾" in diameter) having a total area of 56.6 square inches. It has eight counterweights. The Super-8 One-Sixty crankshaft weighs 104 pounds stripped, and turns on nine main bearings, a main bearing on each side of each crank. These bearings are 2¾" in diameter and have a total area of 86.8 square inches. All Packard crankshafts are drilled to conduct oil under pressure from main bearings to connecting rod bearings.

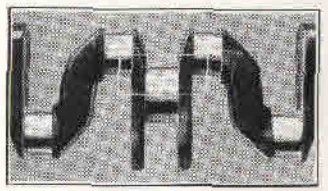
Advantages:

1. **Smooth performance from 100% balancing.**
2. **Prevention of bearing wear.**



The Packard One-Sixty crankshaft—104 lbs. stripped.

Overlapping Bearings—The unusually large diameter of Packard main crankshaft bearings, and the short stroke of the pistons produce a 17/64" overlap of the main and crankpin bearings. This overlap stiffens the crankshaft materially and reduces vibration.



Crankshaft main bearings overlap 17/64 inches.

Advantages:

1. **Stiffer crankshaft reduces vibration and increases engine smoothness.**

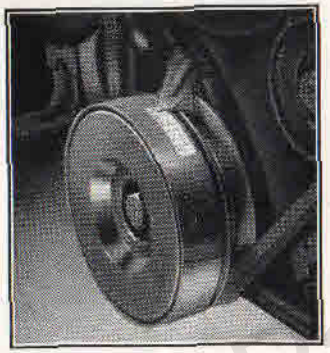
Removable Precision Type Bearings—All crankshaft bearings—both main and connecting rod—in all Packard engines are of the long-lived precision type. These mod-

ern bearings consist of a steel shell lined with special babbitt, bearing metal, and they are manufactured to such close limits that, not only is longer life than usual assured but when necessary they can be replaced without special tools, and at reasonable cost.

Advantages:

1. **Longer bearing life because of precision fit.**
2. **Lower service cost because easily replaced.**

Vibration Damper—But even with the rugged, heavy crankshafts of the Packard engines balanced 100%—even with unusually large diameter overlapping bearings, Packard employs still another anti-vibration device. A vibration damper was designed to counteract what is known as torsional vibration, that is, the slight twisting set up in the crankshaft by the rapid power strokes of the pistons.



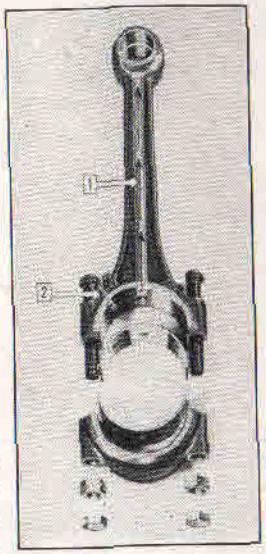
The vibration damper is fully effective at all speeds.

Some other manufacturers use dampers in attempting to control this inherent vibration. Some are designed to function in rubber—some with friction members. Packard, however, employs the combined action of a spring tensioned friction member with the natural damping of rubber when oscillated at high frequencies. The Packard vibration damper is fully effective at all engine speeds and, therefore, adds materially to the smoothness and quietness of the engine.

Advantages:

1. **Smoother operation because torsional vibration is absorbed.**
2. **No adjustments because unit is sealed against water and dirt. Wear is, therefore, negligible.**

Connecting Rods—Drop forged from high quality steel Packard connecting rods are next machined to extremely close limits. Bearings are of the removable precision type. This year a new type of bearing is used in which the bearing metal is thinner, and the steel backing heavier. Because of the differing rates of expansion of the two metals, the thin babbitt lining follows the expansion of the steel better, maintains a more perfect bond between the babbitt and the steel, and prevents flaking of the bearing metal. Therefore, these new bearings are much longer lived.



Rifle-drilled connecting rod.

1. **Oil is forced under pressure from crankpin to piston pin.**
2. **Oil spurted under pressure through this hole to cylinder walls.**

All Packard connecting rods are rifle-drilled from crankpin to piston pin bearings thus insuring a continuous supply of lubricant to the pin bearing under full pressure. An additional oil passage runs diagonally through the crankpin bearing of each rod. It registers with the oil passage in the crankshaft and spurts oil on the cylinder walls as the crankshaft revolves.

Each connecting rod is balanced for total weight, and center of gravity. They are then sorted into groups for assembly so that there is never a variation of more than a fraction of an ounce between any two rods in the same motor.

Advantages:

1. **Longer life because of precision manufacture.**
2. **Smoother operation because of balancing.**
3. **Adequate lubrication of piston pin and cylinder walls assured.**

Thermo-Strut Pistons—Aluminum pistons of special design are used in the Packard One-Ten, One-Twenty, and Super-8 One-Sixty engines. They combine all advantages of conventional aluminum pistons with other advantages equally important. They differ, however, from other types in that the clearance between cylinder wall and piston is thermostatically controlled to insure the same fit at all temperatures. In other words, a more perfect balance of piston fit is attained in the engine when cold and also when warm. Thus, pistons may be fitted closer, piston slap in a cold engine is eliminated, wear in a warmed-up engine is reduced, and greater gasoline economy effected.

Packard Thermo-Strut aluminum alloy piston.

These special characteristics of a Packard Thermo-Strut piston are achieved by a wide strut embedded in the aluminum skirt of the piston, and by a special method of cam grinding the piston diameter. The arrangement of the strut is such that a Packard piston attains roundness by heat alone during the warm-up period. There is no high spot pressure of the piston against the cylinder wall and clearance remains constant.

Aluminum pistons lacking struts attain roundness, during the warm-up period, through pressure of the high sides against the cylinder walls. Expansion forces the low sides out to proper shape. Naturally, this high spot contact tends to produce very high bearing pressure, scuffing, and undue wear. Such expedients as anodizing, electro-treatments, and other means of hardening

the surface have only been partially successful in preventing this wear, and giving longer life.

Tin Plated Pistons—The pistons of all three Packard engines are not only heat treated to remove all internal strains and to harden the metal, but are also tin plated. Thus, they slide up and down the cylinder walls on an oil-covered coating of bearing metal, instead of having a direct aluminum to cast alloy steel contact. Packard pistons are held to very close limits in weight, and are assembled in sets for each motor, with never more than 14/100 of an ounce variation.

Advantages:

1. **Closer fitting pistons are quieter in a cold engine.**
2. **No undue wear at any temperature assures long life.**
3. **Tin plating prevents wall scoring.**
4. **Aluminum alloy pistons reduce bearing loads, give better acceleration, and greater smoothness.**

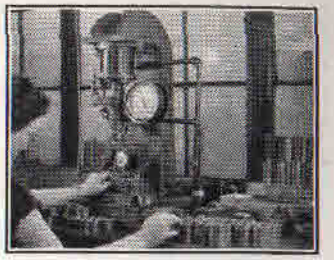
Piston Rings—Two special oil control compression rings and one spring expanded oil control piston ring are used on each piston of all Packard engines. The special expander oil control ring is equipped with an inside spring member which assures a constant contact between piston ring and cylinder wall even at high speeds. Thus it is possible to supply copious quantities of oil to the cylinder walls for lubrication, and with this unusual combination of piston rings to remove all surplus oil at each stroke —insuring long life and exceptionally low oil consumption.

Packard expander-type oil control piston ring.

Advantages:

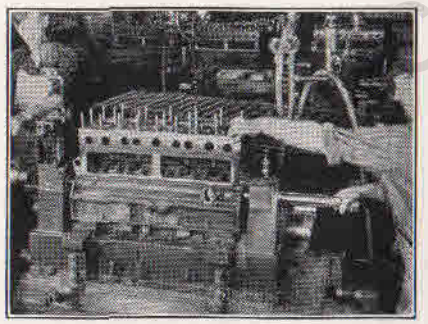
1. **More effective oil control.**
2. **Unusual oil economy.**

Camshaft—Packard camshafts—all engines—are hardened by a special electrical process known as induction hardening. This induction hardening produces a very hard case, approximately ⅛ of an inch thick, on the surface where wear would occur, and leaves the interior tough and ductile. Electric hardening is much more expensive than oil hardening or other hardening processes but produces camshafts that are more satisfactory in service.



Various bearings are checked on this special Packard-developed hydraulic test fixture. Measurements in tenths of a thousandth of an inch are made.

Cams are of the quick-opening type designed for maximum engine power and efficiency.



Instead of depending on the accuracy of camshaft bearings finished before being pressed into the block, Packard installs oversize camshaft bearings and then bores them all in one operation with diamonds.

There are four camshaft bearings on the Packard One-Ten, five on the Packard One-Twenty, and eight on the Super-8 One - Sixty. All camshaft bearings are pressure lubricated and are of the removable precision type.

Advantages:

1. **Extra long life from induction hardening.**
2. **Quiet operation.**
3. **Pressure lubricated bearings for long life.**

Chain-Driven Camshaft—The camshaft drive in all three Packard engines is by short and exceptionally wide silent timing chains. Most manufacturers have adopted the chain type of drive in preference to gears because of the greater area of contact provided. Obviously then, the much wider than usual Packard chain offers proportionately greater contact and is, therefore, superior. Quietness and long chain life are direct owner advantages. The Packard chain is lubricated from the pressure oil system by a continuous oil bath.

Advantages:

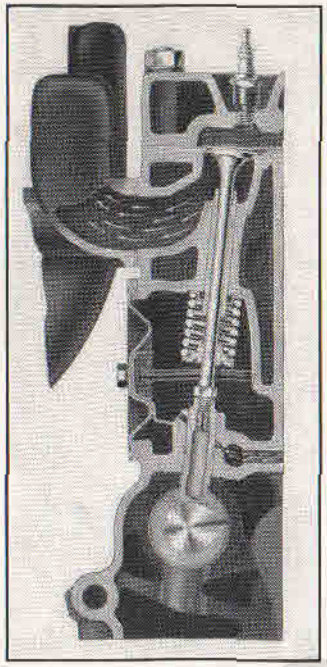
1. **Less wear because of large contact area.**
2. **Quiet operation and long life.**

Angle-Set Valves—Set at an angle which brings the heads of the valves closer to the cylinder bore at the combustion chamber, Packard angle-set valves allow free passage of fuel mixture and burned gases around the whole circumference of the valve and so contribute materially to greater combustion efficiency. Intake valves (they are ⅛" larger for 1941) are made of chrome nickel steel and exhaust valves are made entirely from Austenitic steel. This latter material is used in the head to prevent warping and distortion under the extreme heat of the exhaust gases and so maintain the gas-tight set of the valves and valve seat. The valve stems also are now made from Austenitic steel to prevent corrosion.

Angle-set valve *Ordinary valve*

Angle-set valve design allows a greater flow of fuel mixture all around the valve. Contrast this with conventional design.

Valve stems operate in valve guides that are counterbored, at the top, to shield the stem from hot gases. They are



Packard Angle-set valves—One-Ten and One-Twenty.

burnished on the inside to provide a super-smooth surface and so reduce to the minimum any tendency to sticking. They are positively lubricated by oil mist from the crankcase. In all engines the floor of the exhaust port has been raised to make a streamline passage for the burned exhaust gases and also to provide more and improved cooling around the top of the exhaust valve guide. As a result exhaust valve temperatures are reduced as much as 200°.

Advantages:

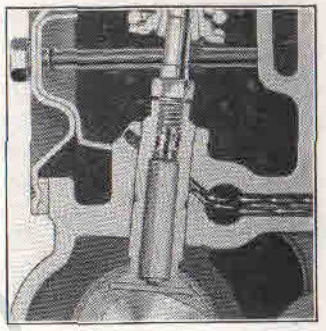
1. **More efficient combustion.**
2. **Rapid movement of gases.**
3. **Valve fit retained longer.**
4. **Valve sticking minimized.**

Valve Tappets—The tappets of both the One-Ten and One-Twenty valve mechanisms are of the wide surface, mushroom type, and are lubricated by oil under full engine pressure. They are literally floated in oil delivered directly through drilled passages leading from the main oil gallery. As a result of this advanced Packard feature, tappets operate quietly and last longer.

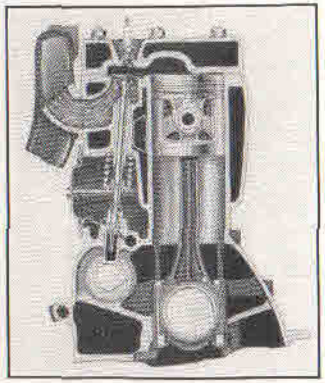
Advantages:

1. **Quiet valve operation.**
2. **Longer tappet life.**

The valve tappets of the Super-8 One-Sixty engine are of the silent hydraulic type. They are manufactured to the finest precision limits. Hydraulic in operation, they use oil under pressure conducted directly from the main oil passage. The diagram on the following page shows their construction and describes their operation. All lost motion is eliminated and the complete valve mechanism operates at zero clearance under all conditions. Thus valves remain permanently quiet in operation and because both intake and exhaust valves are always in accurate adjustment, full engine efficiency is maintained and valve life prolonged. Packard hydraulic valves are automatic in operation and never require adjustment.



One-Ten and One-Twenty valve tappets are lubricated by oil under pressure.

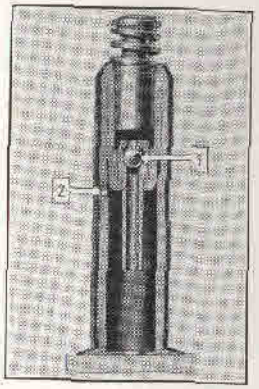


Packard One-Sixty valve mechanism showing hydraulic valve tappet.

Advantages:

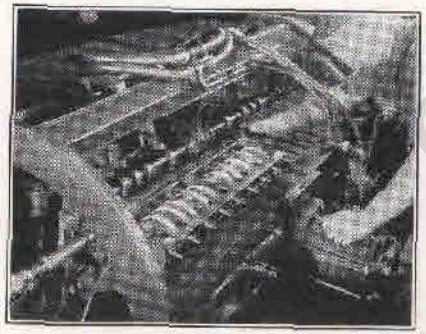
1. **Automatic in operation—never require adjustment.**
2. **Valve seal maintained.**
3. **Zero clearance means quiet operation.**
4. **Valve life prolonged.**

When the engine valve is in the closed position, the pressure lubrication system forces oil through passage (2) in around the ball check valve (1). This oil pressure holds the tappets firmly against the valve stem with zero clearance. When the engine valve opens, the ball check valve (1) seats *itself and prevents oil* from escaping. Because oil cannot be compressed the zero clearance between tappet and valve stem is maintained.

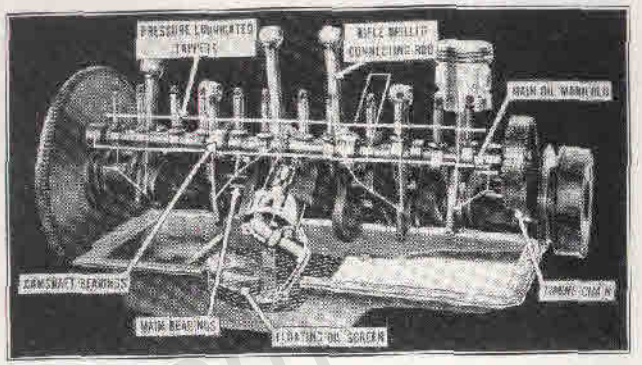


HIGH-PRESSURE LUBRICATION SYSTEM

There is nothing more important to the efficient operation of an automobile engine than a high-pressure lubrication system that is 100% complete. Some manufacturers claim complete pressure lubrication yet depend on oil mist or spray to certain vital parts. Packard engines —all three— are fully equipped. Main bearings, connecting rod and camshaft bearings, even piston pins and tappets are all lubricated by oil under pressure. The front



Each oil passage throughout all Packard engines is tested and thoroughly cleaned in one operation in this exclusive inspection fixture. Very light oil is pumped through the oil galleries and passages at high pressure *and their condition is determined by* the discharge of oil at the various outlets.



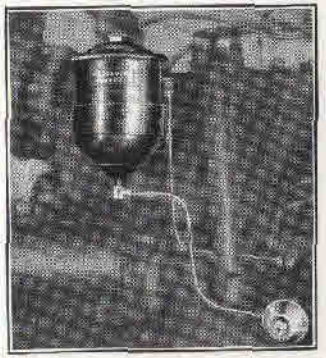
Pressure lubrication in Packard engines is complete — even to *piston* pins and valve tappets.

camshaft thrust bearing throws oil on the timing chain and sprockets. A metered hole in the lower bearing of the connecting rod spurts oil under pressure to cylinder walls, pistons and *distributor drive gear.*

Advantages:

1. **Positive and constant lubrication of all vital parts.**
2. **Less wear of moving parts and longer engine life.**

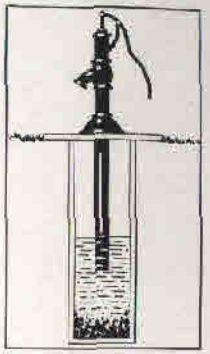
Packard One-Sixty Oil Filter—The big engine which powers the Packard One-Sixty and One-Eighty is standard equipped with an oil filter (also available at extra cost for the One-Ten and One-Twenty) which cleans and filters the oil as it is circulated through the engine. This filter is of the two-stage type and removes fine —*almost microscopic* particles from the oil. On



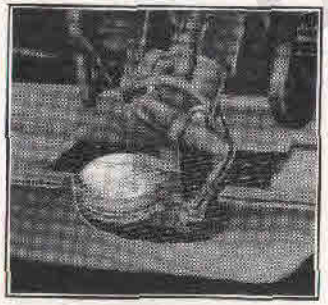
The One-Sixty engine is equipped with a two-stage oil filter.

entering the filter the oil first passes through a cotton filtering element which traps large particles, then through a series of wood or cellulose elements which catches tiny particles and thus restores the oil to very near its original color. Finally the oil passes through a screen and felt pad.

Floating Oil Screen — The oil screen in Packard engines is hinged to the oil pump and floats near the surface of the oil. Therefore, it draws oil only from the top of the supply in the pan. Consequently, only the cleanest oil is used because sediment and impurities sink to the bottom of the pan of their own weight. With the crankcase filled to the proper level, the screen rests against an upper stop and even though the oil level lowers, the screen always floats near the surface of the oil. The intake pipe is, of course, always submerged under all conditions.

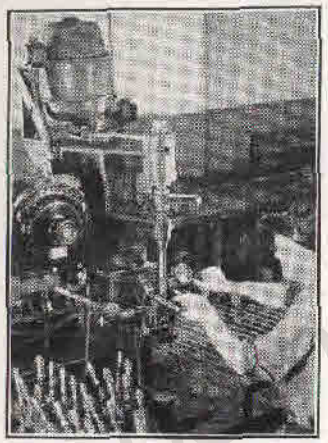


The floating oil screen functions on the same principle as the intake pipe for an ordinary water pump in a well or cistern. It is located well above the bottom of the reservoir to allow dirt of all kinds to settle below the point of intake.



The oil screen floats near the surface of the oil at all times and takes only the cleaner top oil.

The oil pumps of Packard engines all have the same high pumping capacity—7.1 gallons per minute at 2800 R.P.M. and as engine speed increases the rate of oil distribution increases proportionately. The pump is located outside the crankcase and the pressure regulating valve is readily accessible.



Every Packard oil pump is tested for capacity on this special fixture. Very light oil (comparable to kerosene) is used and each pump must develop 45 pounds of pressure at full speed.

Advantages:

1. **Only cleanest oil circulated through the engine.**
2. **Bearings last longer.**
3. **Oil pump and relief valve readily accessible.**

Oil Pan—A system of baffles is arranged in the engine oil pan to control the oil level on steep grades, to prevent splash and to insure an adequate supply of oil around the intake screen under all driving conditions. The pan is also depressed at the center so that oil is circulated through the engine so long as any remains in the pan.

Metered Oil Flow—In order to insure an adequate and proportionate supply of oil to each and every engine bearing at all speeds, the flow is metered through varying sizes of oil passages—each bearing receives the correct amount of oil at all times. Such correct lubrication prolongs bearing life and assures trouble-free service.

Advantages:

1. **Measured lubrication at all speeds.**
2. **Longer engine life.**

Crankcase Ventilator—Some of the motor fuels now on the market contain certain elements which combine with water vapor to form corrosive gases in the crankcase. It is, therefore, imperative that these gases be expelled promptly to prevent injury to bearings and other finely finished surfaces.

The crankcase ventilator with which Packard engines are equipped performs this function very effectively. An out-

let pipe at the rear of the engine exhausts gases and water vapor from crankcase by means of a vacuum produced by the forward movement of the car. Clean air is drawn into the crankcase through a copper mesh air cleaner in the oil filler pipe. The rotating crankshaft acts as a fan to expel the gases. The Packard crankcase ventilator has no moving parts and is silent in operation.

Advantages:

1. **Injurious gases and water removed from the crankcase.**
2. **Bearings, cylinder walls and pistons protected.**
3. **Only clean air introduced into the crankcase.**
4. **Simple, positive and silent in operation.**

FUEL SYSTEM

Fuel Tanks—The fuel tanks of the different Packard models differ only in gallon capacity. (See Specification Section). There is a sump at the bottom to accumulate any dirt or water in the gasoline and so prevent its entry into the pump and carburetor. The tank filler cap is concealed beneath a small trap door in the rear fender.

Fuel Lines—Rolled steel tubing, mounted outside the frame, on the side rail farthest removed from the exhaust muffler, conducts gasoline from gas tank to fuel pump. This new location provides continuous air cooling, and reduces any tendency to vapor lock. Flexible tubing between frame and pump prevents breakage from engine movement.

Fuel Pump—On Packard engines the fuel pump is mounted low down on the engine as far as possible from the hot exhaust manifold and where it is exposed to the cooling wind-stream. In addition, a special shield protects it from engine heat. It has a built-in filter and because it is driven from the camshaft it is in operation as soon as the engine turns over. Fuel is supplied to the carburetor at constant pressure through all speeds.

Advantages:

1. **Pump assures positive supply of fuel to the carburetor.**
2. **Integral filter traps water and sediment.**
3. **Location of pump tends to prevent "vapor lock."**
4. **Location of fuel line reduces danger of "vapor lock."**

Packard Super-8 One-Sixty Vacuum Pump—On the Super-8 One-Sixty engine, a vacuum pump is built integral with the fuel pump to operate the windshield wipers. This pump supplements the vacuum taken from the intake manifold and assures constant windshield wiper speed in spite of varying engine speeds and loads. (See electrical system for a description of the new electric windshield wipers of the Packard One-Ten and One-Twenty.)

Advantages:

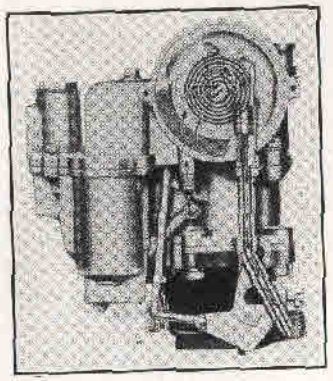
1. **Uniform windshield wiper speed an important safety factor.**

Carburetor—The new Packard One-Ten, One-Twenty, and Super-8 One-Sixty engines are all equipped with downdraft, plain tube carburetors with only one manual adjustment for regulating idling speed. The One-Ten carburetor is single barrel in type while those of the One-Twenty and Super-8 One-Sixty are duplex. All Packard carburetors have a fixed metering device and mechanically operated economizer valve. Detailed improvements in carburetion of all engines assures easy starting and efficient, economical operation. As a further protection against vapor-lock in the big One-Sixty engine, a special shield is built in around the carburetor to divert engine heat.

Advantages:

1. **Easy starting and fast acceleration.**
2. **Equalized distribution of fuel to all cylinders.**
3. **Only one manual adjustment.**

Automatic Choke—The advantages of automatic choke over manual control are important. All the *nuisance, uncer-*



Quick easy starting and more efficient operation are assured by automatic choke.

tainty and consequent loss of engine efficiency are eliminated. The Packard automatic choke, built integral with the carburetor, operates in accordance with manifold temperatures. This year a new heat tube has been designed in the exhaust manifold and, directly connected to the thermostat of the *automatic* choke. It assures instantaneous operation of the choke valve.

The choke valve in the carburetor is closed by manifold vacuum and opened by a bi-metal thermostat in the carburetor. When a rich fuel mixture is required in starting a cold engine, the choke valve is closed cutting off most of the supply of air through the carburetor. As the engine gradually warms up, the thermostat opens the choke valve allowing an ever-increasing amount of air to mix with the gasoline until the engine temperature reaches normal for efficient operation.

Advantages:

1. **Provides correct fuel mixture for all engine operating temperatures.**
2. **Prevents waste *and dilution* of oil from overchoking.**
3. **Eliminates bother and uncertainty of manual choking.**

Automatic Fast Idle—A special mechanism linked with the throttle, and operating in conjunction with the automatic choke, increases the idling speed of the engine during the warm-up period, thus preventing stalling. When the engine reaches its proper operating temperature the valve closes and the engine idles normally.

Advantages:

1. **Prevents stalling.**
2. **Simplifies driving.**

Thermostatic Manifold Heat Control — Rapid warm-up under all weather conditions, summer and winter, is provided in Packard engines by a built-in, automatic, thermostatically operated manifold heat control. This device diverts the hot exhaust gases and causes them to pass around the intake manifold when the engine is cold, thus aiding in vaporizing the fuel before it enters the combustion chambers. As the engine warms up, the thermostat gradually releases its tension and the exhaust passes out directly to the muffler.

Advantages:

1. **Smooth performance from a cold motor.**
2. **Less choking required.**
3. **Possibility of crankcase dilution decreased.**

Air Cleaner — One-Ten and One-Twenty—The combination intake silencer, air cleaner and flame arrester with which the Packard One-Ten and One-Twenty engines are equipped, traps harmful road dust and other foreign matter by passing it through an oil-wetted copper mesh before it reaches the carburetor. It also neutralizes the sound of the inrush of air and serves as a flame arrester in case of backfire. There are no moving parts to wear and no service required other than cleaning at 5000 mile intervals (oftener in dust areas).

Air Cleaner — Super-8 One-Sixty—The Packard Super-8 One-Sixty engine is equipped with a special oil bath type air cleaner, silencer and flame arrester. The incoming air is drawn over a bath of oil and also through a continuously wetted, copper mesh which removes dust and dirt with almost 100% efficiency. As the air rushes to the carburetor, the sound is neutralized and silenced. The device also acts as a flame arrester. Adequate protection is afforded the big One-

Sixty engine by this efficient air cleaner even in parts of the country subject to dust storms.

Advantages:

1. **Prevents entry to engine of harmful dust particles.**
2. **Silencer improves quiet operation of the motor.**

Exhaust Muffler—A long, single unit muffler insulated from the frame by flexible rubber brackets allows free passage of the exhaust gases directly through a single perforated tube which is surrounded by a series of resonators or sound neutralizing chambers. Back pressure is reduced and exhaust is effectively silenced.

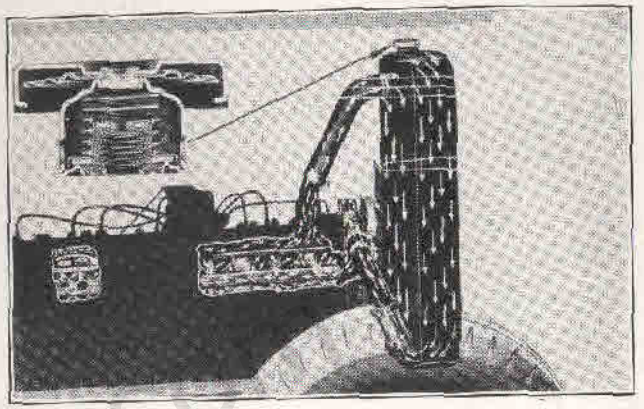
Advantages:

1. **Exhaust noise absorbed.**
2. **Free passage of exhaust gases—back pressure reduced.**
3. **Muffler noise insulated from frame.**

COOLING SYSTEM

The Packard cooling system is simple and effective. Engine heat is dissipated rapidly, the quality of the lubricating oil is maintained in both low and high speed driving and the life of engine parts definitely prolonged. In cold weather the thermostatically controlled recirculation feature of all models quickly brings the engine to normal operating temperature. Large auxiliary grille openings on each side of the radiator provide additional frontal area for the admittance of cooling air to the radiator core.

Sealed Cooling System—This year the complete cooling systems of all Packard models are sealed to raise the boiling point under extreme temperature and driving conditions. There is no vent pipe in the radiator and the radiator filler cap has an air-tight fit. It is equipped with a valve adjusted to release at four and a half pounds pressure on the One-Ten and One-Twenty and at seven pounds on the One-Sixty and



The cooling systems of all models are sealed with pressure caps.

One-Eighty. This pressure raises the boiling point approximately thirteen and twenty-one degrees, respectively—more than enough to prevent boiling and loss of cooling water in the hardest kind of driving over steep grades in hot weather. When Packard Air-Conditioning is installed a special higher pressure filler cap is used.

Advantages:

1. **Boiling point raised about 13° and 21°.**
2. **Adequate cooling under all driving, grade, and temperature conditions.**
3. **Prevents loss of cooling liquid.**

Radiator Core—Each Packard radiator core is of high efficiency design and is manufactured from copper and brass. Connections are oversize to provide a free flow of the cooling water and the drain valve is conveniently located at the forward lower side of the lower tank.

Radiator Mounting—The radiator core and front fenders of all Packards are mounted in a metal cradle independently of the frame. This cradle in turn is mounted on a center point cushioned support on the frame front cross member.

Thus, movement of the frame has no effect on radiator and fenders because frame movement rotates about the center point rubber mounting of the cradle. The cradle is securely anchored to the body at the top by heavy rods so that its position in relation to the body is maintained. Annoying radiator shake and vibration are minimized and the radiator core is relieved of all twisting stresses originating in the front end of the frame which might tend to produce leaks.

Advantages:

1. **Radiator shake and vibration minimized.**
2. **Radiator core protected from strains and stresses.**

Radiator Grille—The radiator grilles of all Packard models are characteristically Packard in design. In the One-Ten and One-Twenty the main grille is fixed with heavy chrome plated bars set in a bright frame. A real advantage of this type of construction lies in the fact that, in case of partial damage to the grille, it is not necessary to replace the whole unit but only those bars which may be damaged. Contrast the expense of this operation with that of die cast grilles which when damaged must be entirely replaced. Auxiliary openings with matching grilles are located in the aprons on each side of the main grille.

Thermostatic Water Temperature Control—Water temperature in both the Packard One-Ten and One-Twenty is thermostatically controlled to maintain balanced operating conditions regardless of the weather and to assist in a quick warm-up in cold weather. Because the efficient engine operating temperature is quickly attained and then constantly maintained, fuel is saved and maximum car heater effectiveness assured.

A thermostatic valve in the water outlet at the cylinder head closes automatically when the engine is cold and prevents circulation of the water to the radiator. A passage in this valve allows recirculation of the water within the engine

itself until the heat generated quickly raises the water temperature to normal. Then the valve gradually opens and permits the water to circulate through the radiator for regular distribution by the water pump.

Advantages:

1. **Balanced engine operating temperatures in spite of weather conditions.**
2. **Quick warm-up in cold weather.**

Radiator Shutters—Super-8 One-Sixty and One-Eighty—Thermostatically controlled radiator shutters are used on the new Packard Super-8 One-Sixty and Custom Super-8 One-Eighty models. Engine temperature controls these shutters by means of a thermostat built into the top of the radiator. They remain closed until the temperature of the water reaches normal for efficient engine operation. Then they are gradually opened by the thermostat to permit just the proper amount of cool air to pass through the core to maintain the correct engine operating temperature. The cold engine warms up quickly because cold air is excluded from the radiator, yet the radiator functions perfectly when the engine is warm because the shutters offer practically no resistance to the free entry of air.

Both the Super-8 One-Sixty and One-Eighty are also equipped with a thermostatic water temperature control in the cylinder head water outlet.

Advantages:

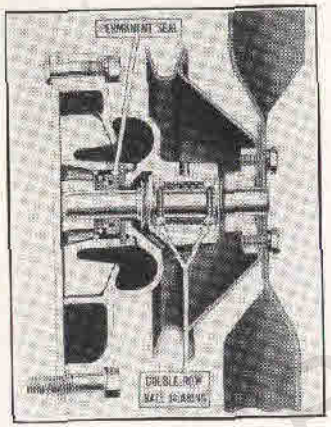
1. **Efficient engine operating temperature provided quickly and automatically.**
2. **Quick warm-up of cold engine.**
3. **Correct cooling at all temperatures.**

Neutro-Tuned Fan—Fans used in the Packard line of engines are the four bladed type, 18 inches in diameter (Super-8 One-Sixty 18½") and are driven by a V-belt from a pulley on the crankshaft. Belt tension is regulated by adjusting the generator on its bracket. Because of their large

size, Packard fans operate at slower speeds yet with full efficiency. Blades are unequally spaced so that fan and engine sounds blend and are neutralized. Larger diameter fans are used in the One-Ten and One-Twenty when Packard Air-Conditioning is installed.

Advantages:

1. **Large fan operating at low speed provides adequate cooling.**
2. **Unequal spacing of fan blades neutralizes fan and motor sounds.**



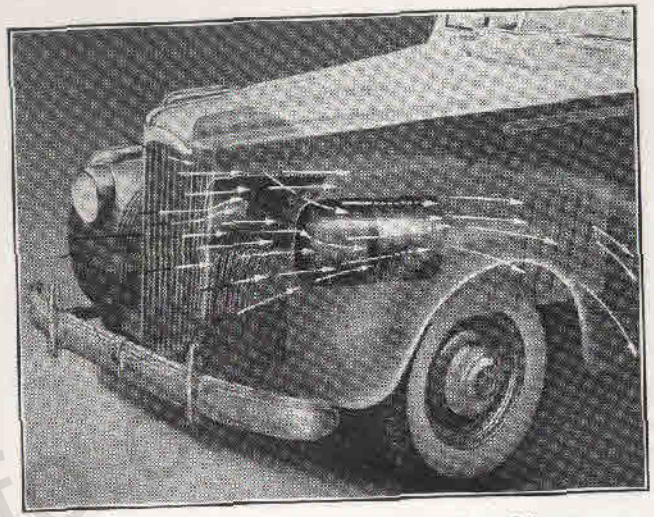
The water pump operates on double-row ball bearings and is permanently packed and greased at the factory.

Water Pump—A water pump of large capacity—36 gallons per minute at 40 miles per hour—is used on all Packard engines. The pump shaft is short and is carried on a double-row ball bearing. The fan is mounted on the front end of the shaft. The pump itself is self-adjusting and requires no attention for packing and the bearing is packed with grease at the factory so that it never requires attention throughout its life.

Advantages:

1. **Ball bearings assure long life.**
2. **No attention required for greasing or packing.**

Fan-Blast Cooling Tunnels—In order to increase the capacity of the fan and so step up the efficiency of the whole cooling system, special Fan-Blast cooling tunnels have been designed into the side walls of the engine compartment under the fenders. These tunnels permit a much more rapid dis-



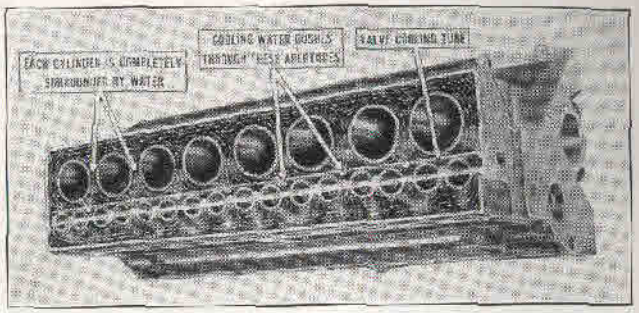
Fan-Blast cooling tunnels increase cooling efficiency.

charge of air from the ends of the fan blades and thus materially increase the ability of the fan to draw air in through the radiator core. They are designed to allow this discharge of aid and at the same time prevent the entry of dust and dirt into the engine compartment.

Advantages:

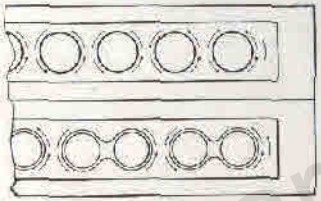
1. **Increased fan capacity.**
2. **Better, more efficient cooling.**

Separate Cylinder Barrels—The cylinder blocks of all Packard engines are cast with separated cylinder barrels—that is, each cylinder is completely surrounded by cooling water. Many manufacturers cast their cylinders in pairs as indicated in the diagram on the following page. Because a portion of the circumference is contacted by cooling water and another portion by solid metal, it is impossible that expansion could be even all around and distortion of the bore is to be expected. Packard cylinders are completely cooled all



Each cylinder in all Packard engines is efficiently cooled.

around and expand evenly at every point in the circumference. This blanket of cooling water around each cylinder extends far down the barrel—well below the piston head at the bottom of its stroke. Therefore, cylinders remain round, pistons retain their perfect fit, and oil is kept at a low temperature.



Cylinders of some competitor's cars (lower illustration) are joined in pairs by solid metal causing uneven cooling and possible distortion. Packard cylinders are separated and cooled evenly all around.

Advantages:

1. **Efficient uniform cooling.**
2. **Less distortion because of even cooling.**
3. **Better cooling of engine oil.**

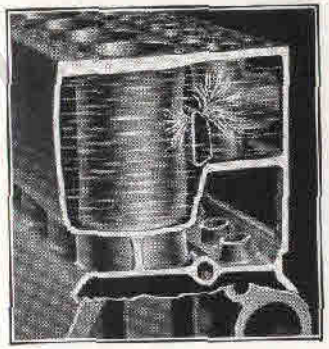
Water Distributing Tube—Positive, uniform cooling of Packard motors is further assured by a special tube built into the cylinder block and extending from the water pump at the front to the extreme rear of the engine. This tube has openings opposite each valve seat and cylinder, and through

All the orange trees watered by an irrigation system flourish while those without benefit of irrigation are more and more withered the farther they are removed from the river. In the same way the water distributing tube carries cool water equally to all cylinders. Rear cylinders and front cylinders are cooled uniformly.

these cooling water direct from the pump is sprayed *constantly*. As a result, all cylinders are cooled uniformly, the rear just as effectively as those nearest the water inlet and each develops full and equal power.

Advantages:

1. **All cylinders cooled uniformly.**
2. **Equal power from all cylinders.**



A built-in water distributing tube carries cooling water to each valve chamber.

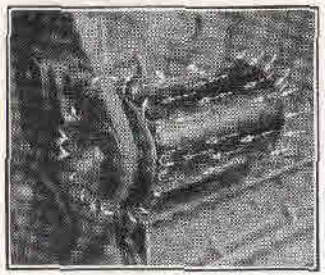
ELECTRICAL SYSTEM

Battery—Big batteries of ample capacity for all modern electrical requirements are provided for the Packard One-Ten, One-Twenty and Super-8 One-Sixty. The One-Ten battery has 15 plates and 95 ampere hour capacity, the One-Twenty and Super-8 One-Sixty batteries,—17 plates and 114 ampere hour capacity. Packard batteries are located under the front seat (which is easily removed) away from engine heat where they are exposed to cooling wind currents and where they are kept safe by locking the car doors.

Advantages:

1. **Ample capacity for all electrical requirements.**
2. **Conveniently and safely located.**

Generator—Packard generators for all three engines are of large power output capacity—plenty for all conditions. Each has a current output of 35 amperes at 8 volts and all are air cooled by means of an inbuilt fan. Because the volume of air varies in accordance with engine speed cooling is always proportionate.



The large generator develops ample power for all electrical requirements.

All Packard generators are shunt wound with externally regulated voltage and amperage control. After starting, when considerable power is used, the generator delivers current at a high rate until the battery is again fully charged. Then the output is reduced automatically. Full voltage is maintained at all times for ignition, lights and a full complement of accessories. Thus, with output controlled in direct relation to current requirements, overcharging of the battery is prevented.

Advantages:

1. **Ample power output for all requirements.**
2. **Air cooling permits a higher charging rate.**
3. **Automatic control of power output.**
4. **Overcharging of battery prevented.**

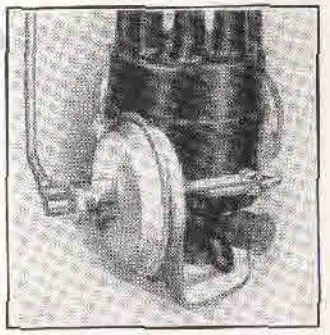
Starter Motor—Each Packard engine is equipped with a big starter motor developing ample power to turn the motor over lively even in the coldest weather and so insuring quick, easy starting. All use the Bendix automatic engagement between starter motor and engine flywheel. The starter button is conveniently located on the instrument panel—no stretching to reach a pedal type starter button is necessary and starting on grades is much simpler.

Advantages:

1. **Quick, dependable starting in any weather.**
2. **Convenient instrument panel button control.**

Distributor—Packard distributors are specially designed with a rigid type of drive which assures accurate timing and reduces any tendency to detonation through "hunting" or fluctuations of the spark.

Automatic spark with vacuum control provides maximum spark advance at all speeds and under all loads. Under normal conditions a mechanical governor increases the spark advance as motor speed increases. Vacuum spark control, on the other hand, is entirely dependent on engine load. During sudden acceleration or on a heavy pull the vacuum in an engine decreases. This decrease in vacuum is used to retard the spark by means of a diaphragm and calibrated spring. When the load on the engine becomes lighter the vacuum in the engine increases and again operates the diaphragm and spring, advancing the spark to the point of greatest efficiency.



Vacuum spark controlled distributor.

Advantages:

1. **Spark knock tendency reduced.**
2. **Greater fuel economy.**

Fuel Compensator—Various grades of gasoline offered on the market have different octane ratings and, therefore, require different settings of the spark. Packard engines are

equipped with fuel compensators to cope with this condition. These devices make it possible to easily advance or retard the spark to suit the fuel and so enable the engine to develop maximum power without knocking.

Advantages:

1. ***Ignition advanced or retarded to suit fuel.***
2. **Full engine power without knocking.**

Windshield Wipers—The new Packard One-Ten and One-Twenty are equipped with new electrically operated two-speed windshield wipers. Power is supplied by an electric motor, which assures constant speed without fluctuations and the linkage is similar to that used on the conventional vacuum wiper. Engine speed or load have no effect on the new Packard electric windshield wipers. The new Packard One-Sixty and Super-8 One-Eighty windshield wipers are vacuum operated by a special vacuum pump which also assures constant wiper speed. See Packard One-Sixty vacuum pump on page 105.

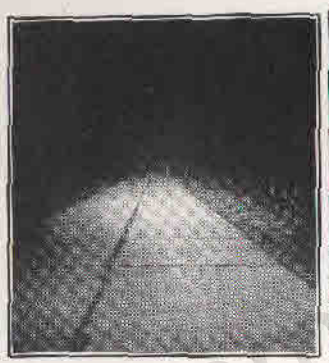
Advantages:

1. **Constant windshield wiper speed.**
2. **Two-speed operation for various conditions.**

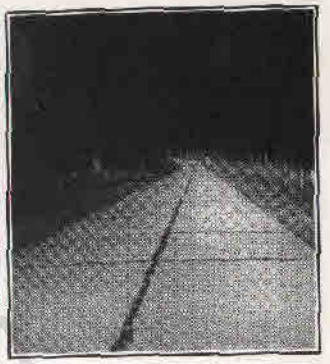
Headlighting—Again for 1941 Packard offers the new Sealed-Beam headlighting system on all models. It is much more efficient than the older types and much simpler for the driver to operate.

In the Sealed-Beam headlight, the reflector, the lens and the filament are all assembled in one unit and securely and permanently sealed. There are no bulbs of the ordinary style. Instead the whole unit is in reality one big bulb. The reflector is made of glass and plated on the inside with vaporized aluminum which produces a surface much brighter even than silver. The upper and passing beam filaments are mounted in this and sealed. Then the lens is put in place, the bulb filled with a special gas and the edges of the glass reflector and lens fused by heat into one unit.

No dust or moisture can get inside the Sealed-Beam head-



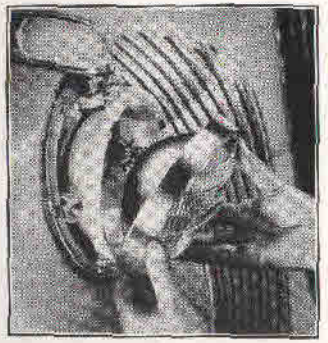
Headlighting with ordinary bulbs, reflectors and lenses.



Sealed-Beam headlighting. Note greater distance illuminated.

lamp, therefore, deterioration of the reflector and fogging of the inside of the lens are both prevented. Thus maximum light efficiency throughout the life of the unit is provided.

When a filament finally burns out or a lens is broken, the entire unit is discarded and a new one installed, thereby assuring maximum lighting efficiency throughout the entire life of the car. The cost of these replacements is surprisingly low and is more than balanced because of the longer filament life possible with Sealed-Beam head lamps.



The complete new Sealed-Beam headlight unit is quickly, easily and economically installed.

The driver has only two positions on his headlight switch. When pulled out to the first notch, the parking lights on the fenders and tail lights are lighted. Pulled out to the second notch, the full power of the brilliant, far-reaching headlights is turned on, parking

lights are off and, of course, tail lights are still lighted. When the light control button on the floor is operated, the beams of both headlights are depressed and moved to the right. Thus a long range, high speed driving beam of 60,000 maximum beam candle power is provided and at the touch of the driver's toe a perfect passing beam, courteous to the approaching motorist and safe for the driver himself, is available. For city driving the passing beam is also used, providing perfect illumination.

A red tell-tail signal in the speedometer dial indicates to the driver that the full driving beam is being used. Speedometer and gauges are illuminated at night by indirect lighting of the dials and the degree of illumination may be controlled. In addition, reading or map lights may be turned on to show the ignition key and illuminate the whole front compartment.

Advantages:

1. **Simple to operate.**
2. **More brilliant and safe headlighting.**
3. **Permanent lighting efficiency.**
4. **Perfect flexibility of headlighting.**
5. **Longer life.**

Light Bulbs—Headlight bulbs are Sealed Beam type rated at 60,000 beam candle power. Tail light and stop light bulbs are double filament of 3 and 21 candle power, respectively. Instrument panel bulbs are 1½ candle power. Parking light bulbs are 1½ candle power and dome light bulbs are 6 candle power.

Horns—Dual-tone horns are included as standard equipment on all the new 1941 Packard One-Ten and One-Twenty models. They have blended tones which make them a pleasing but at the same time an effective signal. They are mounted on top of the engine at the rear. Triple tone horns with three blending notes are used on the One-Sixty and One-Eighty.

Dual Protected Electrical Circuits—Packard provides dual protection from overload for the electrical system of all models. Instead of using fuses to protect the headlight system, Packard cars are equipped with an automatic switch or circuit breaker. Tail lights also are protected by this circuit breaker as they operate in conjunction with the headlights. In case of current overload, the heat generated quickly makes the thermostat operative and opens the circuit. When the temperature returns to normal, the circuit breaker automatically closes and the lights are on again. In cars using fuses in the headlight system when a fuse is blown, all lights are out until a new fuse is installed, while with the Packard system of protection it is possible to have lights and proceed.

However, fuses as well as a circuit breaker are used in Packard electrical system. The tail lights and instrument panel lights are protected by an instantaneous acting fuse. Thus if anything should happen to the tail lights the instrument panel lights also go out immediately and the driver has positive warning. The cigar lighter has a separate fuse.

Advantages:

1. **Automatic protection.**
2. **Greater safety for night driving.**
3. **Dual protection of tail lights.**

Ignition Coil—The ignition coil is located on top of the motor and is connected to the switch on the instrument panel by an armored cable. When the switch is in the "off" position, the circuit is broken through the coils, grounding them, and making it impossible to start the motor by wiring around the switch. The location of the coil on the engine makes a close coupled wiring arrangement possible and assures high efficiency for the ignition system.

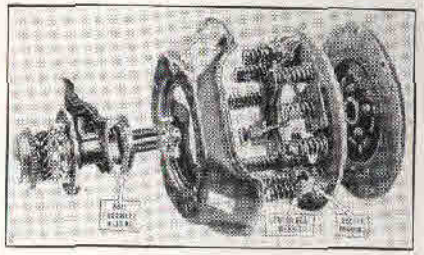
Advantages:

1. **Impossible to start motor by wiring around the ignition switch.**
2. **Close coupled arrangement assures efficient ignition system.**

SEMI-CENTRIFUGAL CLUTCH

The clutch mechanism of all the Packard engines remains unchanged for 1941. They are similar to design though obviously they differ in size to suit the torque development of the three different engines.

All three clutches are of the semi-centrifugal single dry plate disc-type and are well insulated to reduce operating temperature. The semi-centrifugal design utilizes centrifugal force set up by special revolving weights to increase pressure on the friction discs of the clutch as speed increases. Thus lighter springs can be used and these in turn require less pedal pressure to operate. Here is a feature appreciated by all drivers—women especially.



Bearings, pressure springs and centrifugal weights are shown in this clutch assembly.

The Packard One-Ten clutch is 9½ inches in ourside plate diameter and has six pressure springs—the One-Twenty is 10 inches in diameter with 9 springs and the Super-8 One-Sixty is 11 inches with 9 pressure springs. All clutches are carefully balanced before assembly. A mechanical damper in the hub cushions engagement and driving stresses, and insures quiet operation. The ball clutch release bearing is packed with lubricant for life and, therefore, never requires any service attention.

Utmost ease of operation is provided in the Super-8 One-Sixty clutch by the use of three extra roller bearings in the pedal and throwout lever.

Clutch pedals of all models (brake pedals also) are stamped from extra heavy steel instead of being forged. So strong are these pedals that any hazard of breakage is practically eliminated.

Advantages:

1. **Centrifugal force utilized to increase pressure on discs.**
2. **Lighter springs reduce pedal pressure.**
3. **Ventilation contributes to long life.**
4. **Pressure springs cushion clutch engagement.**
5. **Release bearing permanently lubricated.**
6. **Three extra roller bearings in One-Sixty pedal linkage.**
7. **Strong steel clutch pedal.**

ELECTROMATIC CLUTCH

A new driving sensation—a new ease of car operation awaits the buyer of a 1941 Packard equipped with Electromatic clutch. The clutch pedal in such a car is unnecessary, although it is left there so it can be used if so desired at any time. Electromatic clutch is a brand-new vacuum-electric operated automatic clutch, and it is factory installed in any new 1941 model Packard at moderate extra cost.

This new automatic clutch accomplishes every clutch operation performed by the driver with a conventional clutch, even when changing gears. And,—it performs them better. Clutch action is smoother and timed more perfectly than can be accomplished manually by any driver. Consequently, car performance is definitely improved.

The car steps away from a standstill without the hint of a jerk or lurch, and it is practically impossible to stall the motor on a start. The driver goes through the gears just as he has always been used to doing, only without once touching the clutch pedal. All clutching and delutching are accomplished smoothly and quickly and automatically. Even at a stop it isn't necessary to touch the clutch pedal. Just slow down with the brakes, and when you are ready to start, change to first

gear and step on the accelerator. In starting there is no drag and when stopped there is no tendency for the car to creep.

The automatic operation of the new Electromatic clutch is accomplished through the functioning of the following units:

1. A vacuum cylinder connected to the clutch release lever which engages or disengages the clutch when required. This cylinder contains a piston which is actuated by the vacuum from the intake manifold. The release mechanism is so designed that operation of the clutch by the vacuum cylinder does not affect the clutch pedal which can be operated in the usual way at any time independent of the automatic control.

2. A control valve located in the vacuum line makes the system operative or inoperative at the will of the driver. This valve is electrically controlled through the medium of a solenoid operated by a button on the dash.

3. The clutch always disengages when the accelerator pedal is released except when decelerating in high gear during which time the clutch does not disengage until car speed drops to 10 or 12 miles per hour. This eliminates free wheeling in high gear until a low car speed has been reached and is accomplished by:

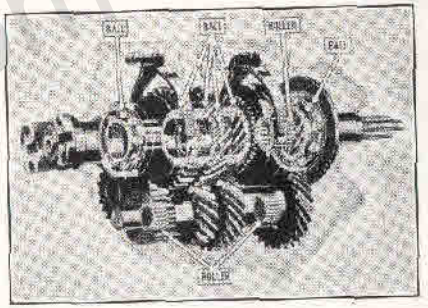
4. An electrical centrifugal governor switch mounted on the rear of transmission or Aero-Drive, which in conjunction with a switch located in the gear shift mechanism keeps the control valve referred to in paragraph number 2 closed until a low car speed has been reached.

5. In order to provide a smooth clutch release and prevent lurching on a quick closing of the throttle, a dashpot control is incorporated in the carburetor which controls the drop in motor speed to the correct timing of the clutch release.

6. Clutch engagement is controlled by a diaphragm valve connected to the vacuum line which regulates the action of the master cylinder for different throttle openings, car speeds and engine loads thus providing a smooth engagement under all conditions.

Unimesh Transmission—The transmissions used on the new 1941 Packard cars (all models) embody a combination of special features that makes them unique in the industry. No expense has been spared to make them smooth and quiet in operation—to give them durability far beyond expectations. All gears are exceptionally wide, providing great capacity and all gears, except the reverse idler, are in constant mesh all the time. The engagement of the three forward speeds is made through separate clutch members. A special synchronizer has been developed for second and high speeds and light, clash-free shifting is the result.

Helical gears are used for all forward speeds and this design provides smooth, quiet operation.



The Unimesh transmission features silent, helical gears in all forward speeds.

All Packard transmission gears are hardened by the carburizing process—a process which imparts an extremely hard, high carbon wearing surface on the outside of the gears while, the interior metal remains strong and tough to withstand shocks and impact loads. Ordinary heat treating processes impart the same degree of hardness all the way through the gear and if properly hardened on the surface would be too hard and brittle on the inside. Therefore, such gears are made softer for necessary strength and long life is sacrificed.

After carburizing, all Packard gears are lapped to precision limits in special machines designed by Packard. They are then matched in sets before passing to the quiet room for inspection.

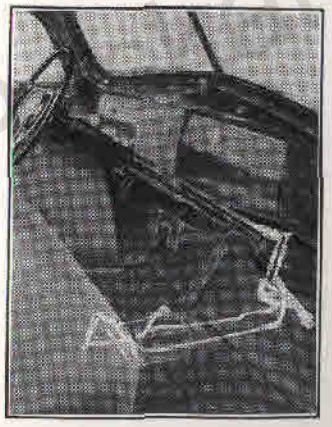
Transmission Bearings—Another important feature contributing to long life and freedom from friction of the Packard Unimesh transmission is the unequalled number of nine ball and roller bearings used. Many manufacturers are content to use five such bearings—others make an important feature from the fact that six are used.

The forward and rear ends of the main shaft are carried on large ball bearings. The second speed gear is mounted on two heavy duty ball bearings and the first speed gear is also mounted on two high capacity ball bearings. Roller bearings are used at both ends of the countershaft and also between the clutch driving shaft and the main driven shaft.

Drivers may shift 1st to 2nd, 2nd to 3rd, or 3rd to 2nd, at any speed because all forward speeds are in constant mesh and the engaging members effectively synchronized. Thus the utmost in safety is provided on steep grades, ice, and snow.

Advantages:

1. **Large gears provide extra capacity.**
2. **Smooth, quiet shifting of all forward gears at any speed.**
3. **All gears carburized for long life.**
4. **Helical gears are quiet and durable.**
5. **Nine ball and roller bearings assure long life.**



Handishift clears the front compartment floor of all levers.

Handishift—This remote control gear shift lever is conveniently located just below the steering wheel on the steering column. It is neatly enclosed from instrument panel upward in a metal housing finished to match the steering wheel. No change in driving habits is required with Handishift and the driver has complete control of the shift at all times.

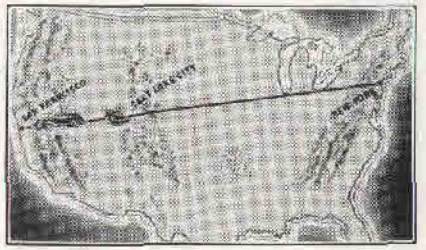
Advantages:

1. **Clears the front compartment of levers and obstructions.**
2. **Driver and passengers can enter and leave the front compartment from either side.**
3. **Greater convenience in gear shifting with lever right at the driver's finger tips.**

AERO-DRIVE

A new standard of operating economy—of smoothness—of cruising comfort and pleasure has been established with the Packard Aero-Drive Transmission. In a single step this modern feature affords a new measure of comfort, long life and economy. It is available on all Packard models at reasonable extra cost.

Mounted at the rear of the standard transmission, the Aero-Drive automatically provides a fourth speed or cruising gear whenever desired—at car speeds over twenty-one miles per hour.



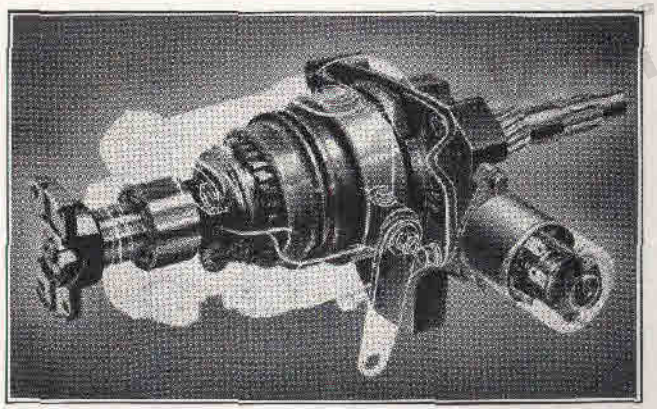
By reducing engine speed 27.8% Aero-Drive saves enough engine revolutions on a trip from New York to San Francisco to leave the engine at Salt Lake City.

With the Aero-Drive transmission in operation there is a new smoothness and quietness. The engine speed is reduced 27.8% with real reductions in fuel and oil consumption and a corresponding increase in engine life. Through its use new standards of motor car comfort and economy are set—there are six important advantages:

1. **Savings up to 20% in gasoline economy when Aero-Drive is being used.**
2. **Material savings in oil consumption at higher driving speeds.**
3. **Longer engine life because R.P.M. reduced 27.8%.**
4. **Better acceleration and hill climbing because Aero-Drive permits the use of higher gear ratio.**
5. **Greater engine smoothness, quietness and comfort for passengers.**
6. **Reduced gear shifting—low speed gear used less frequently—less gear shifting in traffic.**

Automatic In Operation—The Packard Aero-Drive is automatic in its operation, requiring no additional physical effort on the part of the driver other than the regular functions of car operation with which he is familiar.

When the car has been started and gear changes made so that it is running in high gear, it remains in this gear until a speed of approximately twenty-one miles an hour has been



Packard Aero-Drive "Cruising gear" auxiliary transmission.

attained. At this speed, if the driver wishes to cruise in Aero-Drive, releasing the accelerator brings Aero-Drive into operation and immediately engine speed is reduced 27.8% while car speed remains unchanged.

An important feature of the Packard Aero-Drive and one of marked convenience to the driver is a small green signal light located in the instrument panel. When a car speed of twenty-one miles per hour has been reached this signal lights up and remains lit until the change into Aero-Drive gear has been made. Thus the driver is reminded to use Aero-Drive whenever practical and so enjoy the smoothness, quietness and economy it provides.

An added feature of the Packard Aero-Drive is the ability to shift from Aero-Drive back to 3rd speed automatically and instantaneously when extra power for quick acceleration is required for passing cars, climbing hills, etc. This operation is just as simple as when Aero-Drive is engaged. The accelerator pedal is depressed slightly beyond the full throttle position to make this shift. The car is then in conventional drive and extra power and acceleration are available. The full range of accelerator control may be had without returning to Aero-Drive. When Aero-Drive again is desired it is only necessary to fully release the accelerator.

An important advantage of this design is that Aero-Drive is released with automatic return to third gear in slowing down when speeds below 17 M.P.H. are reached. In coasting down with the accelerator released Aero-Drive remains engaged to a speed of approximately 17 M.P.H. If the accelerator is depressed at speeds below 17 M.P.H. the conventional 3rd gear is automatically brought into action. This always insures satisfactory acceleration at these lower driving speeds.

Aero-Drive may be locked in or out of operation by moving a control knob located just below the instrument panel. The knob should be in the "in" position for general driving conditions. This makes Aero-Drive operative when desired.

The only directions necessary for locking Aero-Drive "in" or "out" of operation are as follows:

1. **Push knob in for Aero-Drive operation.**
2. **Pull knob fully out for direct drive operation.**
3. **Depress clutch pedal before operating the lock-*out knob.***

WHAT PACKARD AERO-DRIVE ACCOMPLISHES

Gasoline Economy—*Because the Packard Aero-Drive* Transmission reduces engine revolutions 27.8% whenever it is in operation, the first and most important result is greater fuel economy. Gas economy is increased up to 20% depending upon driving conditions.

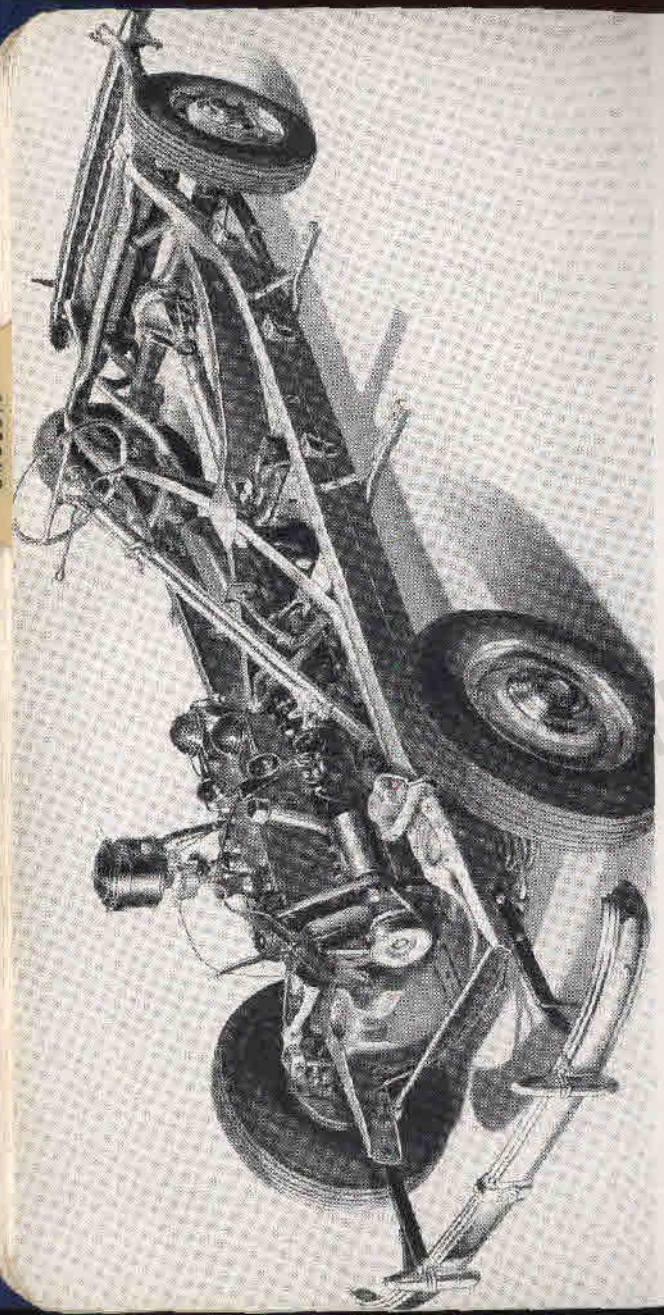
Oil Economy—The 27.8% reduction in engine speed also reduces oil consumption. It is a well-known fact in automobile circles that oil consumption increases very rapidly in any engine as car speed increases. The Aero-Drive transmission by reducing engine revolutions at high car speeds reduces this oil waste as well as carbon deposits.

Engine Life—*Engine speed has a very important bear*ing on engine life. At high speed the wear and stress on engine parts is many times greater than at the lower speeds. For example *doubling the car speed quadruples engine bearing* loads. Naturally then, an engine run at low speeds will last much longer than a similar engine operated at high speed.

Performance—The Packard Aero-Drive automatically provides an additional gear ratio that can be used to advantage for rapid acceleration or hill climbing.

Smoother Operation— There's a new thrill to driving a 1941 Packard car with automatic Aero-Drive transmission. *At all speeds over twenty-one miles an hour there is a new* smoothness—a new quietness. The nervous tension usually associated with high speed driving disappears. Even long *trips at sustained high speed are not fatiguing.*

PACKARD CHASSIS



The Packard One-Ten Chassis—122 inch wheelbase.

THE PACKARD CHASSIS

THE 1941 PACKARD CHASSIS—all models—are increased in over-all length, and lowered closer to the road than ever before, giving unmistakable evidence of big car size and providing sturdy foundations for the new bodies. A long list of modern features are combined in these chassis, each of which plays its part to produce a well balanced result.

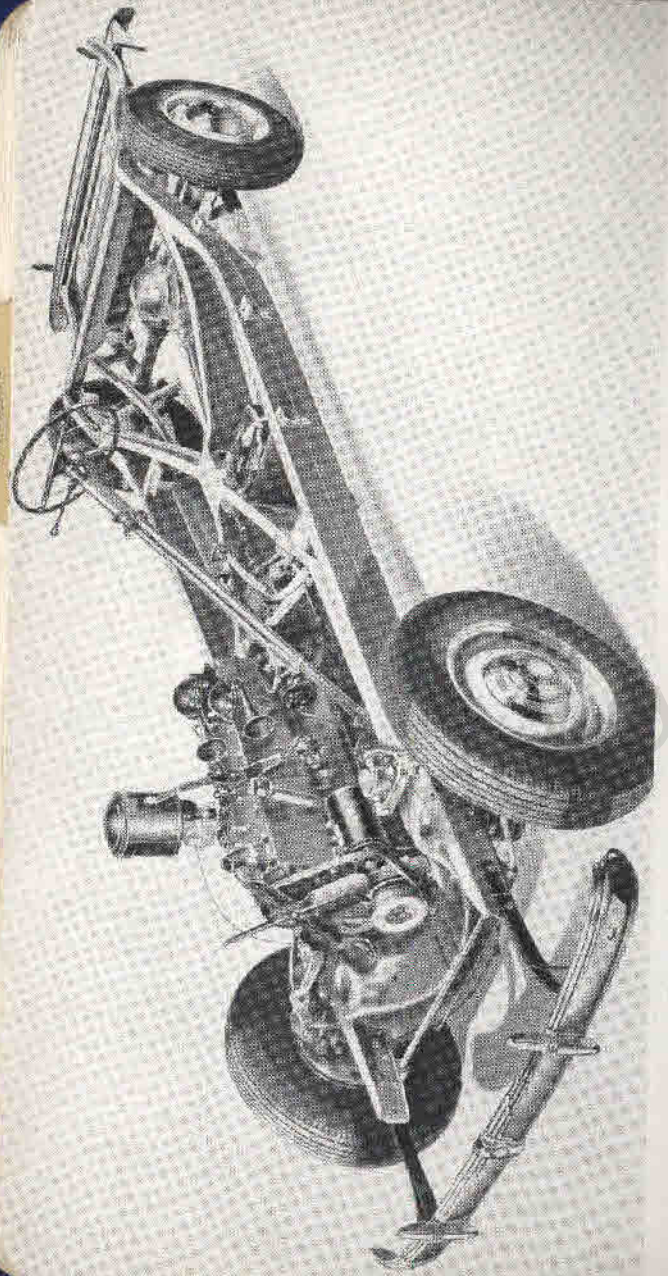
Wheelbase and Over-all Length—The impression of greater length given by Packard cars for 1941 is backed by actual measurements. All models are practically five inches longer from bumper to bumper and this in conjunction with the new lower over-all height, gives more pleasing lines and proportions. The front end has been lowered ½ inch under 1940 models and the rear 1½ inches. The following table gives the wheelbase and over-all length of each model—One-Ten, One-Twenty, Super-8 One-Sixty, and Custom Super-8 One-Eighty.

Model	Number	Wheelbase	Over-All Length
One-Ten	**1900**	**122″**	**201 7/16″**
One-Twenty	**1901**	**127″**	**206 7/16″**
Super-8 One-Sixty	**1903**	**127″**	**206 5/16″**
	1904	**138″**	**217 13/32″**
	1905	**148″**	**227 3/16″**
Super-8 One-Eighty	**1906**	**127″**	**206 3/16″**
	1907	**138″**	**217 3/32″**
	1908	**148″**	**227 5/16″**

Long wheelbase is an important factor in producing the superb riding qualities of the new 1941 Packard cars—making possible balanced weight distribution and the suspension of both front and rear seats between the centers of front and rear wheels.

Advantages:

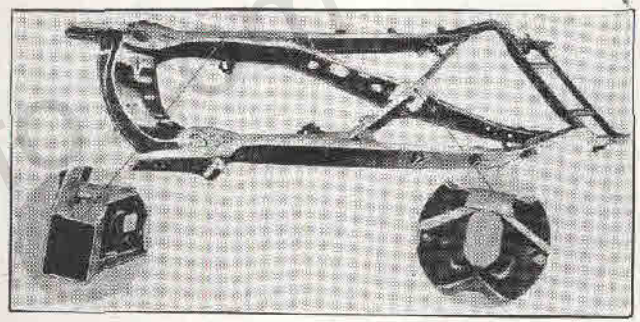
1. Long wheelbase gives superior riding qualities.
2. Longer over-all length improves appearance.



The Packard One-Twenty Chassis—127 inch wheelbase.

Frame—The sturdy frames of all Packard models have been redesigned for 1941 to accommodate the new body design and provide for the increase in over-all length front and rear. The Packard frame is of the rigid bridge type with unusually deep side members (6⅛") and a tapered I-beam X-member.

All Packard frames are both welded and riveted into a rigid unit of great torsional strength providing a stiff foundation for the body. Tapered I-beams 9 inches deep at the center, 6 inches deep at the side rails—are used in place of



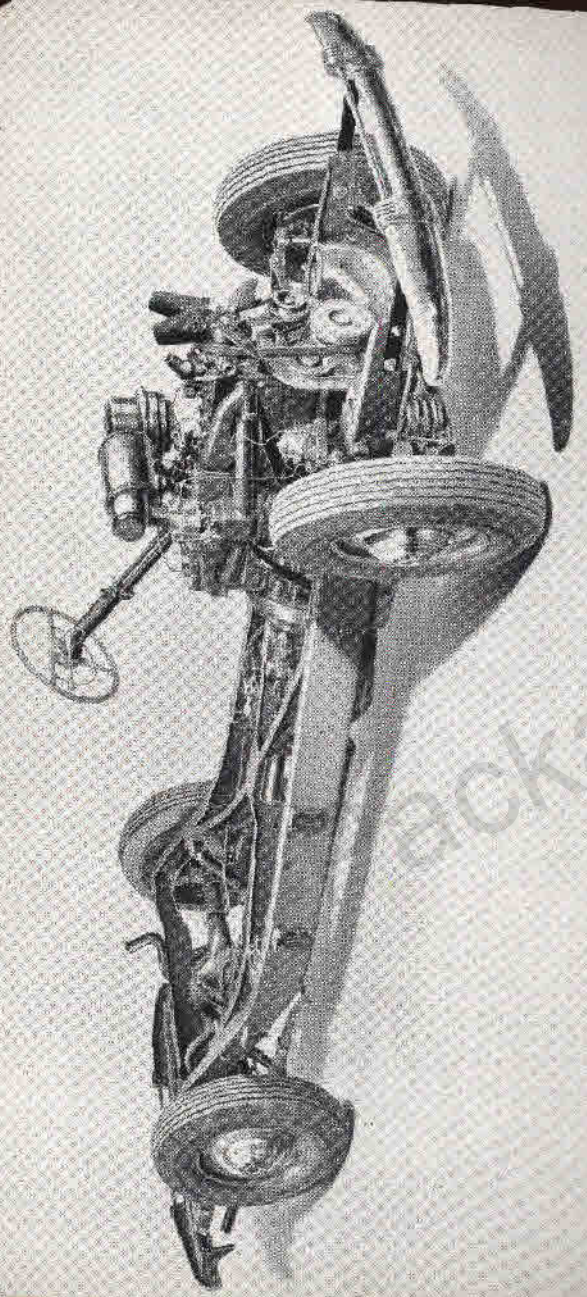
The Packard tapered I-beam X-member frame—inserts, left—front side rail box section, right—I-beam X-member.

conventional channel section steel because engineering tests have definitely proved the much greater rigidity of the Packard I-beam type of construction. Packard was one of the first to use tapered I-beams.

In addition to being stronger and more rigid because the X-member is constructed of tapered I-beam steel, the whole frame is further strengthened because the legs of the X-member extend in practically straight lines and intersect at the point where road shocks are centralized.

Advantages:

1. **Tapered I-beam girders in the X-member give greater strength and rigidity.**



The Packard Super-8 One-Sixty Chassis—127 inch wheelbase.

2. Because the X-member legs are practically straight lines, twisting strains are reduced.

Front Cross Member—A solid foundation both for the front mounting of the motor and for Packard Safe-T-fleX is provided in the massive front cross member of the frame. It is a heavy pressed steel plate 12⅝ inches wide and 3⅝ inches deep.

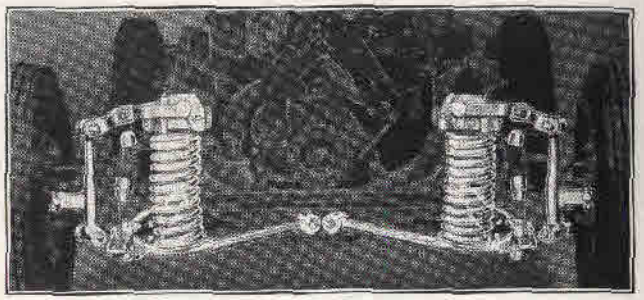
Box-Section Side Members—The forward section of the frame, extending from the front cross member to the forward ends of the X-member, is of box-section side rail construction. This modern type of frame construction provides maximum rigidity at the point of greatest stress—forward of the body.

Angle braces at the top and bottom of both side rails at the rear of the frame, reinforce the joints between the side members and intermediate rear cross member. Additional strength and stiffness are given by four special braces which connect the arms of the X-member with the side rails. Two cross members are used at the rear to stiffen the frame and afford support for the gasoline tank.

PACKARD SAFE-T-FLEX FRONT WHEEL SUSPENSION

The Packard ride is unique, for no other car embodies the same combination of modern wheel suspension features found in these superb-riding new cars. The complete Packard Safe-T-fleX front and rear suspension was first introduced in the Packard 1938 models. Each year has seen improvements incorporated to further improve the exceptionally smooth and level ride afforded. For 1941 still other refinements have been developed in each model.

Safe-T-fleX Front Wheel Suspension—Packard Safe-T-fleX front wheel suspension has for over five years been piling up millions upon millions of miles of highly satisfactory owner service. While Packard Safe-T-fleX is in



Front-view of coil springs, and upper and lower levers of Packard Safe-T-fleX front wheel suspension.

some ways similar to other independent front suspension designs on the market, it is radically different in other ways. And, these differences are vital to riding comfort, to car control, and to safety.

Packard Safe-T-fleX front suspension needs practically no service attention, and adjustments are unnecessary because rubber bushings and anti-friction bearings reduce wear to the minimum.

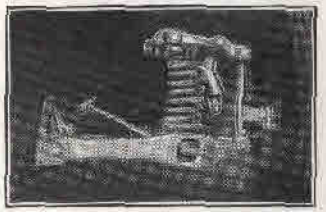
Each side of the Packard Safe-T-fleX front wheel suspension contains five parts or assemblies.

1. **The lower lever and torque arm assembly.**
2. **The upper lever and shock absorber assembly.**
3. **The vertical wheel support.**
4. **The coil spring.**
5. **The rubber insulated bearings.**

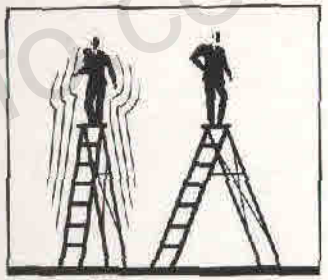
The Lower Lever and Torque Arm—This assembly consists of two parts—the support lever extending from the center of the front frame cross member to the vertical wheel support, and the torque arm which is attached near the outer end of the support lever and extends backward to a rubber mounting on the frame. The support arm is a heavy steel forging with an integral seat to carry the coil spring. At its inner end it is pivoted to the frame cross member in an oilless

rubber bushing. At the opposite end it is yoked to the vertical wheel support by a ball and two roller bearings.

The long steel torque arms of the One-Ten, One-Twenty and 127" wheelbase One-Sixty are formed from heavy "U" section steel and are attached to the frame in cylindrical rubber bushings. In the long wheelbase models (138" and 148") of the Super-8 One-Sixty and One-Eighty, the torque arms are tubular in design and are anchored to the frame in spherical bearings of live rubber. Both types are solidly bolted to the front support lever at practically right angles.



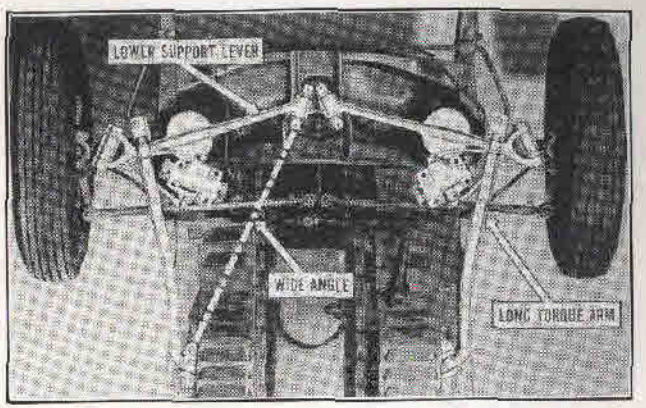
Husky torque arm Packard One-Ten and One-Twenty front Safe-T-fleX.



NARROW ANGLE WIDE ANGLE

The wide angle of support between the lower support lever and torque arm of Packard front Safe-T-fleX holds the front wheels in alignment and absorbs road impacts just as the widely spaced step ladder resists vibration. See page 140.

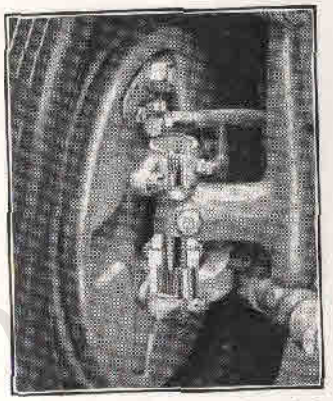
No other independent front wheel suspension in the industry provides torque arms of this design or affords their important advantages. Note particularly, the wide angle formed by the torque arm and lower support lever and the distance which separates the bearing at the end of the torque arm and the center bearing of the support lever. With such wide centers of support, variations in wheel alignment are eliminated, proper caster angle is maintained and greater capacity for extra braking loads on the front wheels is provided.



Packard One-Ten and One-Twenty front Safe-T-fleX.

Front Shock Absorbers—On all new Packard models for 1941 front shock absorbers are of the double-acting, end to end, discharge type. Each is securely attached to the main frame by widely spaced bolts at a point where it is heavily reinforced. They are quiet in operation, and function efficiently under various weather conditions.

Vertical Wheel Support—The vertical wheel support is a rugged steel forging carrying the front wheel spindle and to it are yoked the upper and lower support assemblies. The main portion of the load is carried by the lower support lever, therefore, this assembly is hinged to the vertical wheel support by a horizontal king pin mounted on two roller bearings and a ball thrust bearing. The upper bearing is rubber and effectively absorbs road shock and noise. This year that portion of the vertical wheel support which carries the steering knuckle has been raised so as to lower the front end of the car. In the One-Ten and One-Twenty new needle bearings have been installed at the top and bottom of the steering knuckle king pins and the ball thrust bearing has been replaced by a bearing of special alloy. The longer and heavier Super-8 One-Sixty and One-Eighty are equipped with bushings at the top and bottom of the steering knuckle king pin and retain the ball thrust bearing.



Needle bearings are employed in the steering knuckles of the new Packard One-Ten, and One-Twenty.

Coil Springs and Rubber Bumpers—In comparison with the coil springs used on many other cars, Packard coil springs are exceptionally long and large in diameter. The upper ends of the springs contact rubber pads in the frame cross member and the lower ends rest on the integral pads of the lower support levers. The rubber pads at the upper ends of the springs effectively insulate the frame and body from road noises. A rubber bumper limits vertical wheel movements in both directions under extreme road conditions.

Rubber Bearings—Besides acting as bearings for Packard Safe-T-fleX front wheel suspension, the rubber bearings used in the upper and lower levers provide other important advantages. When a wheel passes over a small bump these rubber bearings offer practically no resistance to movement in the suspension. But when bigger bumps are encountered their resistance to movement builds up very rapidly. In other words, these rubber bearings assist the springs in absorbing road shocks in direct proportion to the severity of the shocks. Therefore, more resilient springs can be used in Packard Safe-T-fleX than in other front suspensions where metal bearings are used.

Advantages of Front Safe-T-fleX:

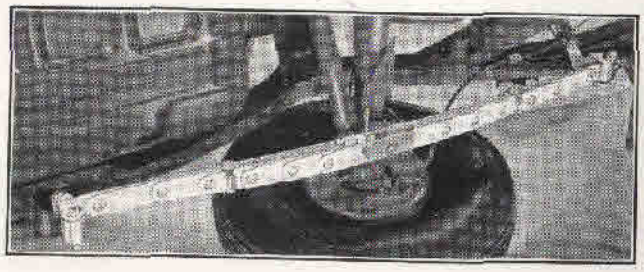
1. **Unexcelled riding comfort.**
2. **Greater safety with long torque arms.**
3. **Longer tire life.**
4. **Better steering—correct wheel alignment.**
5. **Better braking — more brake load on front wheels.**
6. **Rubber bearings last longer—no surface friction.**
7. **Rubber bearings require no lubrication.**
8. **Rubber bearings assist springs in absorbing road shocks.**
9. **Quiet — no metal-to-metal contact in rubber bearings.**

PACKARD SAFE-T-FLEX REAR SUSPENSION

In its 1938 models Packard introduced a new idea in rear suspension design. This new design centered about an important change in the rear springs which brought a new controlled resiliency without any change of fundamental principle or sacrifice of safety.

For 1941 the Safe-T-fleX rear suspensions of all Packard models—One-Ten through the Custom Super-8 One-Eighty are the same in principle and very similar in features. Differences will be clearly stated and described.

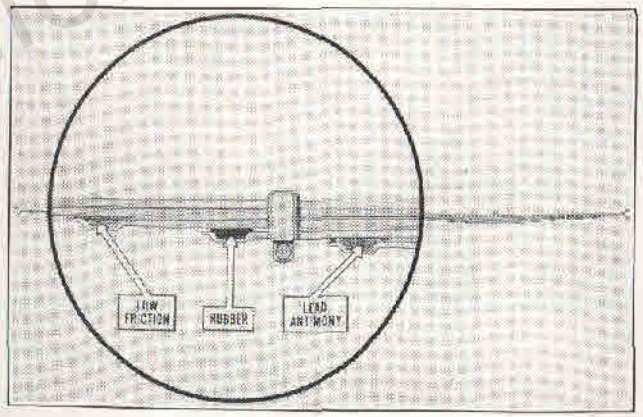
Self-Controlling Rear Springs—Packard self-controlling rear springs are exclusive in design and this unusual de-



Worm's-eye view Packard rear spring showing location of inserts.

sign is essential in producing the gentle Packard ride. Soft, flexible, yet with self-controlled resiliency, these special springs incorporate all the advantages of leaf spring design without any of the disadvantages—all the advantages of coil springs with none of their disadvantages. And equally important, these exclusive Packard rear springs provide just the correct degree of control to give an ideal balance with the coil springs of the Safe-T-fleX front suspension.

For good road conditions, spring friction is eliminated because spring movement takes place in those leaves which are separated at the ends by inserts of live rubber. Thus, all the flexibility and softness of coil spring action are attained. On rough roads the remaining leaves come into action and the ends of these are separated by special inserts, some of special metallic alloy, and some of a low friction composition



Magnified section of Packard rear spring showing various types of inserts used between the tips of the spring leaves.

material. These special inserts provide a predetermined amount of spring friction, depending on body type, which controls resiliency, prevents excessive flexing, and relieves shock absorbers of overwork. Thus one of the outstanding

objections to coil springs is avoided. Another feature of this design is the damping effect of the middle portion of the springs which comes into action on extremely rough roads.

These Packard self-controlled rear springs achieve results unattained by any other type of spring—coil or leaf.

1. **Permanent flexibility—no changes throughout life.**
2. **No temperature effects—no grease to change consistency.**
3. **Controlled ride flatness—controlled resiliency for varying road and load conditions.**
4. **Unaffected by water and dirt—no metal-to-metal contact.**
5. **Safe mounting—the axle is anchored to the frame at four points by the ends of the springs.**
6. **Noise reduction — insulate road noises — no spring squeaks.**

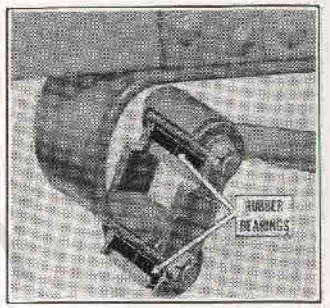
The life of the inserts is indefinite. All tests and actual owner experience prove that each of the three types used will easily last the life of the car. In the case of the rubber inserts there is no rubbing on the surface of the rubber, no friction, only movement of the molecules within the rubber itself. Naturally, this movement keeps the rubber alive and makes it wear longer.

Rear Spring Brackets—The front end of each Packard rear spring is attached to the frame in a bracket with the spring bolt enclosed in a live rubber core in the spring eye. This rubber bearing permits free movement of the spring eye as the spring flexes and at the same time effectively breaks the noise path between the axle and the frame. Of course, lubrication is unnecessary and spring squeaks are prevented.

Advantages:

1. **Perfect freedom of spring movement.**
2. **Road noises insulated from the frame.**
3. **No lubrication—no squeaks—less wear.**

Spring Shackles—In the shackles at the rear ends of the springs, rubber is also used for bearings around the top and bottom shackle bolts. These rubber bearings are so designed that, when the shackles are assembled and the side plates drawn up tight, flanges of rubber prevent metal-to-metal contact. Perfect freedom of movement of spring is provided in the flow of the rubber itself. There is no surface friction, noise is insulated from the frame and greasing is unnecessary.



Gooseneck mounting showing the rubber bearings in the shackles.

Advantages:

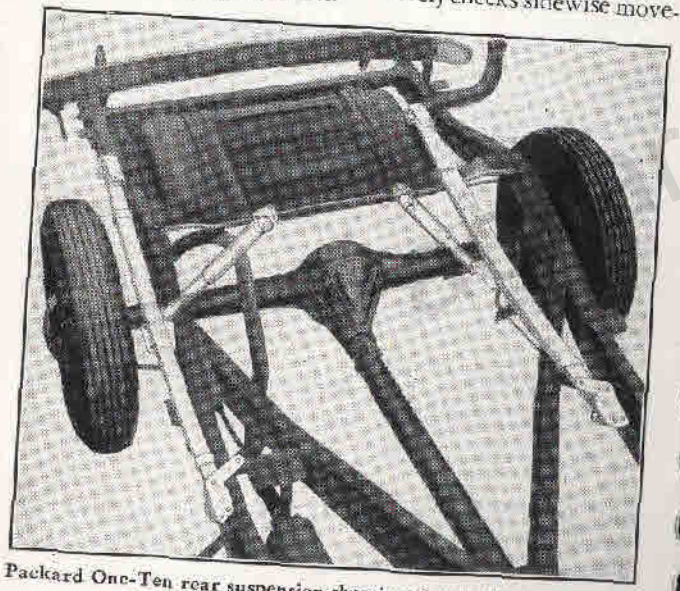
1. **No metal-to-metal contact between springs and frame.**
2. **No friction, reduced wear, no noise.**
3. **No lubrication.**

Direct acting shock absorbers are used in the rear suspensions of all 1941 Packard models.

Rear Shock Absorbers—All Packard cars are equipped with double-acting hydraulic shock absorbers of the direct-acting or "airplane" type. This new type of shock absorber complements the self-controlling rear springs to provide a smooth yet quick and positive control of body movements that is most effective in producing a smooth level ride.

The same type of shock absorber is used to softly *cushion* the giant airliners in landing as is used at the rear of all Packard cars.

Packard One-Ten Shock Absorbers — In the Packard One-Ten these direct-acting shock absorbers are mounted in what is known as an inverted "V." The lower ends are attached to the axle just inside the springs while the upper ends are mounted to the frame near the center of the cross member. This mounting, often referred to as the "sea-leg" mounting, effectively checks sidewise movement of the frame and body as well as controlling vertical movement. Because of this special mounting, no lateral stabilizer or fifth shock absorber is necessary on the shorter wheelbase and lighter One-Ten and the roll control bar is located at the front of the chassis where it is most useful in keeping the car on an even keel.



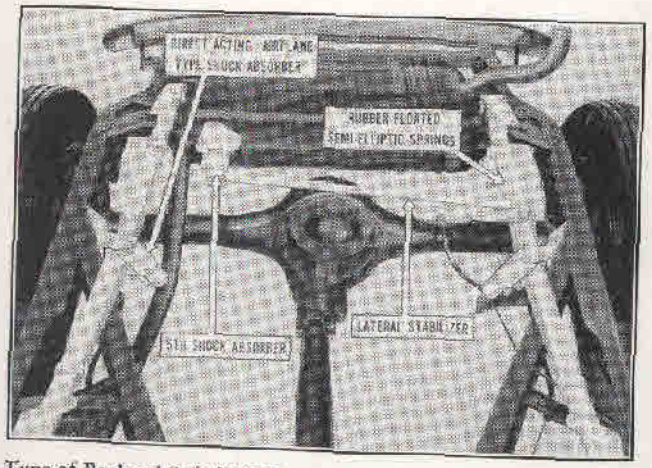
Packard One-Ten rear suspension showing inverted V-type mounting of shock absorbers.

Printed in U.S.A.

Advantages:

1. **Full control of vertical spring movement.**
2. **Sidewise movement of frame and body controlled.**

Packard One-Twenty, One-Sixty and One-Eighty Shock Absorbers — These Packard models are also equipped with direct-acting shock absorbers of the same type as used in the Packard One-Ten but, because of their longer wheelbase and greater weight, a different style of mounting is used. The shock absorbers of these models are mounted parallel with the side members of the frame and slope forward



Type of Packard Safe-T-fleX rear suspension used on One-Twenty, Super-8 One-Sixty and Super-8 One-Eighty models.

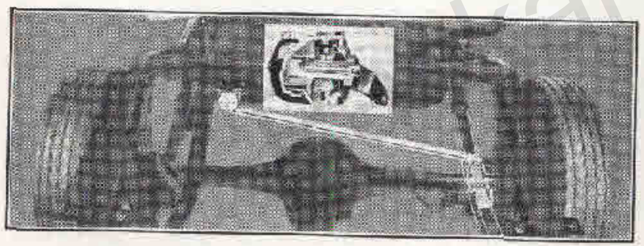
from the rear axle. This mounting provides full control of vertical movement of the axle, and provision for control of frame sidewise movement is made in the lateral stabilizer and fifth shock absorber.

Airplane type, direct-acting shock absorbers contribute importantly to the gentle, level ride of the new 1941 Packard cars by the perfect control they exert on the rubber floated, self-controlling rear springs and rubber shackles. In so doing they also assist in controlling the movement of the front end of the car.

Advantages:

1. **Complete two-way control of rear springs.**
2. **Assist in control of front wheel movements.**

Fifth Shock Absorber—The fifth shock absorber and lateral stabilizer, unnecessary on the Packard One-Ten as already explained, is an important feature of the rear suspension of the larger, heavier One-Twenty, Super-8 One-Sixty and Custom Super-8, One-Eighty models. It is in no way con-



Fifth shock absorber cushions sidewise vibration.

nected with the roll control bars and performs none of their functions. It is used to suppress lateral or crosswise vibration of the frame in relation to the rear axle. It is attached to the rear axle at the spring bracket on one side of the chassis and to a two-way hydraulic shock absorber mounted on the frame cross member on the other side. Therefore, crosswise vibra-

tion of the frame is checked and through the action of the fifth shock absorber any harshness that might result from this checking of sidewise movement is absorbed. The importance of this control of lateral vibration may be realized from the fact that actual engineering records have proved that in any car, there are almost as many sidewise shocks as there are up and down shocks. The Packard fifth shock absorber also improves car handling and steering and gives a new sense of security and stability.

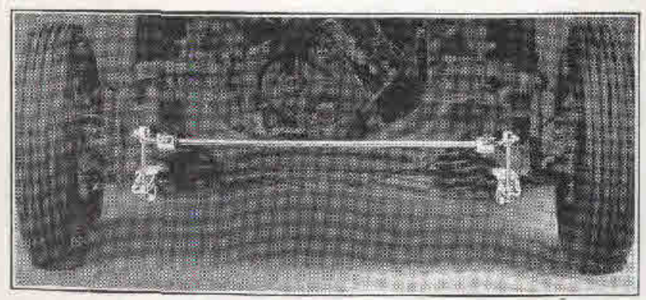
Like giant hands the Packard fifth shock absorber softly controls sidewise shocks and vibrations.

Advantages:

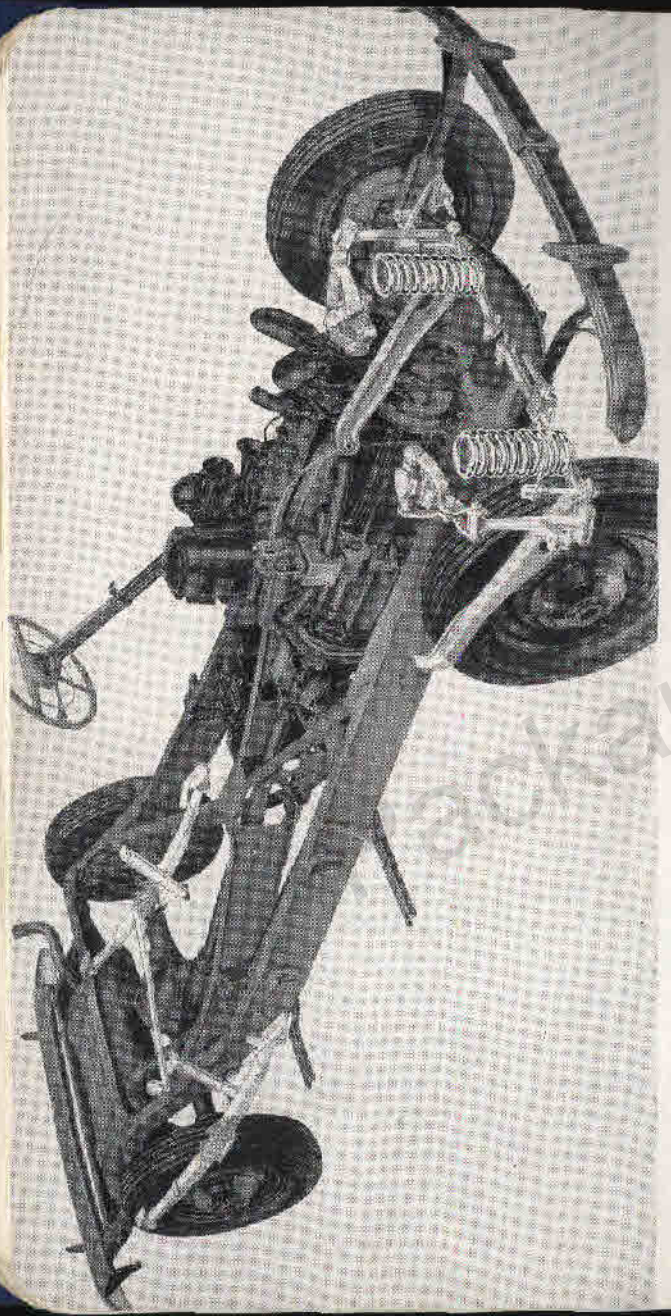
1. **Reduces any tendency to sidewise vibration.**
2. **Improves handling and gives sense of stability.**

Roll Control Bar—There is a tendency in every car, when it changes direction in rounding a curve or turning out of line, to sway or lean in the opposite direction.

Packard prevents this excess sidesway by providing a roll control bar. This is a bar of spring steel located at the front



A front roll control bar is standard on all Packard cars.



Packard complete Safe-T-fleX front and rear wheel suspensions—One-Twenty illustrated.

of all One-Ten, One-Twenty and short wheelbase (127") models of the One-Sixty and One-Eighty. A second, rear roll control bar is used in front of the rear axle on the longer, heavier models of the One-Sixty and One-Eighty.

These bars are fastened near the wheels—front, or front and rear—and are formed so that they pass through rubber cored brackets on the frame. When one side of the car attempts to rise in rounding a curve, a twisting action is set up in the bar which reacts to keep it down to the same level as the opposite side and so maintain the car on an even keel. It is just like trying to twist the ends of a steel bar in opposite directions with the hands.

The twisting action set up in the steel roll control bar is illustrated by these two men twisting this bar in opposite directions.

Advantages:

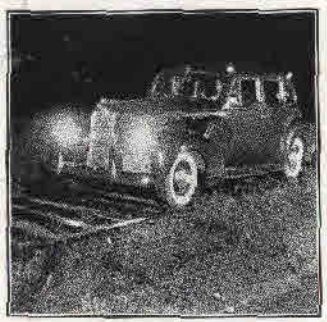
1. Prevents body sway on curves and rough roads.

ADVANTAGES OF COMPLETE SAFE-T-FLEX FRONT AND REAR SUSPENSION

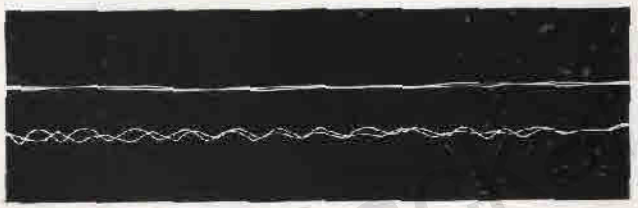
(1) Riding Comfort—The exclusive Packard Safe-T-fleX front and rear suspensions produce a soft, level ride with ample spring control to allow passengers to relax comfortably and so prevent fatigue even on long trips. The rear seat ride equals the front.

(2) Safety—An unusual margin of safety is assured by the long torque arms of the Safe-T-fleX front suspension. Wheel alignment is maintained, greater security and sure-footedness are provided, excessive roll is eliminated and the safety of four point rear axle mounting is given.

(3) Tire Life—*Longer tire life is assured* because wheel bounce is controlled and front wheel alignment maintained.



A Packard One-Ten sedan was equipped with four special lights—on the front pillar post, the rear door post, one on the front wheel hub and on the rear. The car was then driven *over a roadway of railway ties.* A photographer was posted and as the car passed by he opened and held open his lens. The actual, unretouched photograph below was taken. Notice the violent motion of the wheels and *the level ride of the body.*



(4) Better Steering and Handling—*The* inherent stability of complete Safe-T-fleX produces positive, vibrationless steering and easy handling.

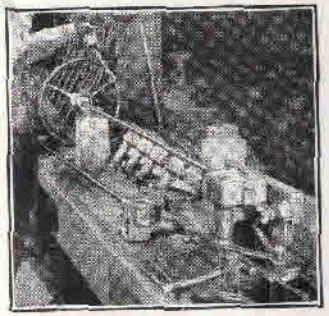
(5) Better Braking—The greater strength of the long Safe-T-fleX torque arms permits a greater proportion of braking effort on the front wheels, thus materially improving car control.

(6) Silencing—No other suspension built today—either front or rear, uses as many rubber bearings or accomplishes so complete a sound insulation from road noises as the 1941 Packard cars.

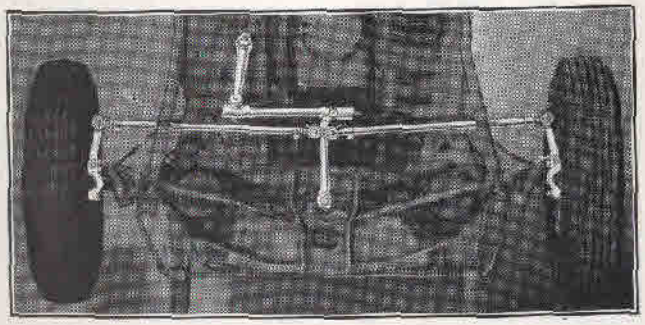
(7) Long Life—The rubber bearings assure exceptionally long life and by cushioning the frame and body protect them from the full severity of road shocks. Moreover this use of rubber bearings practically eliminates the need for lubrication service.

TRU-COURSE STEERING

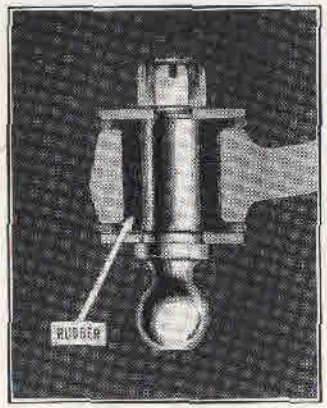
It's easy to steer a Packard. Perfect balance and coordination of every part reduces to a *minimum* the physical effort required. Packard Tru-Course Steering is of the cross-steering



Steering worm and roller gears assembled in the housing are tested 100% for ease of operation. A scale is hooked to the spider of the steering wheel at the rim and the wheel is rotated in both directions. The pull must register 2½ *to 3 pounds.*



In Packard Tru-course steering each front wheel follows road irregularities without transmitting shocks to steering wheel.



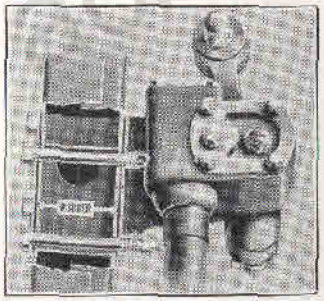
A rubber bearing in the steering drop (Pitman) arm further absorbs tremors and shocks before they reach the steering gear.

type and is engineered to harmonize with Safe-T-fleX front suspension.

Two new improvements in the steering system for 1941, both involving the use of rubber, are designed to reduce to the minimum the transfer of road vibration to the steering wheel. The first is a rubber core or bearing used around the ball joint at the end of the drop arm (often called the Pitman arm). This live rubber bearing absorbs tremors and road shocks before they reach the steering gear. Second, the steering gear housing also is insulated from the frame by a pad of resilient rubber to further absorb any tremor that may have passed the rubber joint at the end of the Pitman arm.

The steering gear itself is of the worm and double tooth roller design. The roller is mounted on double row ball bearings, and the worm is carried on two tapered roller bearings.

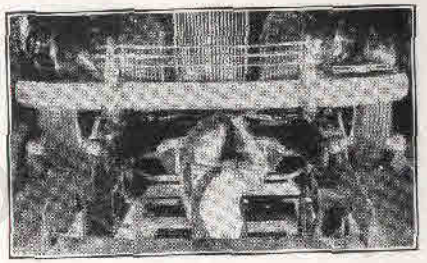
The Pitman arm and center steering lever are joined by a short drag link and two cross tubes or tie rods join the center steering lever and the steering knuckles. Each wheel can follow road irregularities independently.



Rubber pads on each side of the frame where the steering gear is mounted insulate from vibration.

Packard Tru-Course Steering gives excellent straight line control, an unusually short turning radius and *after a turn* the wheels return of their own accord to the straight ahead position.

The steering wheel of the new Packard One-Ten is 18 inches in diameter and the spider is "T" shape in design, giving excellent vision of the speedometer and gauges. A new horn button with the Packard crest in color adds a notable touch of smartness. The steering wheels of all the other models are similar in design and are equipped with horn rings.



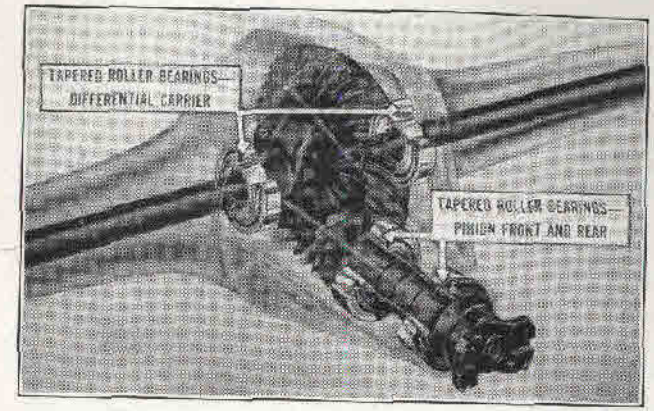
Front wheel alignment is definitely set on this fixture in the final assembly line. Front wheels rest on rollers which revolve and toe-in is checked by rollers which contact both sides of each tire. Variations are indicated on the right and left hand dials.

Advantages:

1. **Packard easy steering lessens driving fatigue.**
2. **Anti-friction bearings make steering easy in either direction.**
3. **Center point steering is safe—positive and requires less effort to operate.**
4. **Front wheels follow road irregularities independently.**
5. **Excellent straight line steering.**
6. ***Front wheels straighten up automatically after a turn.***
7. **Short turning radius—easy parking.**
8. **Large attractive steering wheels.**

HYPOID REAR AXLE

The rear axles of all Packard models are of hypoid design, and have been of this design for years. It is a fact, that Packard introduced hypoid design to the industry fifteen years ago and Packard owners have thus enjoyed the advantages of hy-



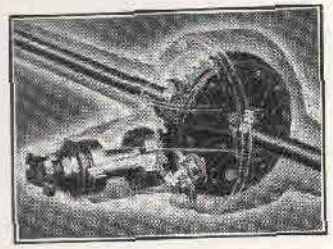
One-Ten and One-Twenty hypoid rear axle, pioneered by Packard.

poid design for ten years before it was offered in other cars. Practically all manufacturers have now fallen in line. During the years Packard has done more research work and developed more improvements in the hypoid type of rear axle than others who have only recently adopted it.

In hypoid design the gear teeth of the ring and pinion are cut on such an angle that the pinion is mounted considerably below the center line of the ring gear. This, of course, lowers the drive shaft and makes possible a low floor without tunnels in either front or rear compartment.

The pinion is considerably longer in hypoid design which means that the teeth are longer and have more tooth contact. Usually the hypoid gear has one more tooth in contact than the spiral bevel type of axle. Hypoid gears are quieter in operation and longer lived than spiral gears—in fact, hypoid gearing tends to improve in quietness with use.

Packard Axle Construction—Packard hypoid rear axles are of the semi-floating type. Naturally, the One-Twenty axle is of a somewhat heavier construction than the One-Ten in order to handle efficiently the greater horse power



Packard Super-8 rear axle. Note extra roller bearing behind the driving pinion.

of the One-Twenty engine and those of the Super-8 One-Sixty and One-Eighty are still heavier because of the greater car weight and horse power involved. Driving shafts are made from chrome molybdenum steel and the housings are rolled steel with specially designed reinforcements. The differential and ring gears are carried on large tapered roller bearings and the driving pinion is also mounted on two extra large tapered roller beaings. On the new Packard Super-8 One-Sixty and Custom Super-8 One-Eighty, a special roller bearing is built in behind the ring gear directly opposite the driving pinion to hold the ring gear in perfect alignment under the driving power of the big One-Sixty engine. Special provision is made to insure continuous lubrication of the gears and other operating parts.

REAR AXLE GEAR RATIOS

Model	Model Number	Standard	Optional	Overdrive
One-Ten	1900	4.3	4.55	4.55
One-Twenty	1901	4.09	4.36-4.54	4.36-4.54
Super-8 One-Sixty	1903	3.92	4.09-4.36	4.36
Super-8 One-Sixty	1904	4.09	4.36	4.36
Super-8 One-Sixty	1905	4.36	4.54	4.54
Super 8 One-Eighty	1906	3.92	4.09-4.36	4.36
Super-8 One-Eighty	1907	4.09	4.36	4.36
Super-8 One-Eighty	1908	4.36	4.54	4.54

Rear Wheel Bearings—Large, tapered roller bearings are used at each rear wheel, and a special double seal—one on each side of the bearing—minimizes the possibility of leakage of lubricant.

All Packard rear axles are machined to such precision limits that the pinion position is permanently fixed, and back

lash of only three to five one-thousandths of an inch between ring gear and pinion assures maximum silence in operation.

Advantages:

1. **Surplus strength provides a wide margin of safety.**
2. **Hypoid gears permit a lower floor without tunnels.**
3. **Hypoid gears have more teeth in contact than spiral gears.**
4. **Hypoid gears are quieter and last longer.**
5. **Special roller bearings in One-Sixty and One-Eighty prevent deflection of the ring gear under power drive of the One-Sixty engine.**

Hotchkiss Drive—All Packard cars use Hotchkiss drive, that is, the driving power is transmitted from the rear wheels and axle through the springs to the frame of the car. This is a logical design and has distinct advantages, for the springs, which are designed to absorb shocks, are used to cushion the inevitable strains of starting and stopping the car. As a result, starting and stopping are smooth and comfortable for all the occupants. Hotchkiss drive reduces unsprung weight and improves roadability by minimizing wheel bounce.

Advantages:

1. **Springs absorb driving strains before they reach the frame.**
2. **Starting and stopping are smooth and comfortable.**
3. **Smooth action of rear axle on rough roads.**
4. **Less unsprung weight.**

Propeller Shaft—Packard propeller shafts—all models—are tubular, with an extra large diameter—3"—for greater stiffness and to insure smoothness at all speeds. They are perfectly balanced both at rest and in motion and universal joints at each end connect the transmission with the driving pinion.

Advantages:

1. **Perfectly balanced to eliminate vibration.**
2. **Large diameter provides stiffness.**

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Universal Joints—Long life and trouble-free service are assured by the needle bearings with which each Packard universal joint is equipped. In addition, an effective seal protects them from dust and dirt and prevents loss of lubricant.

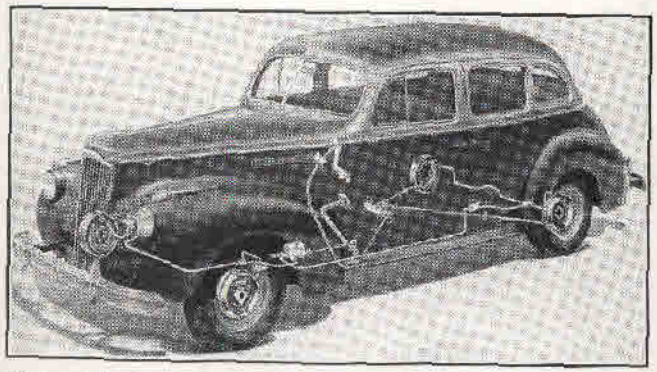
Advantages:

1. **Roller bearings assure longer life.**
2. **Seal protects bearings and prevents loss of lubricant.**

PACKARD SERVO-HYDRAULIC BRAKES

Packard service brakes are, of course, hydraulic. Because pressure applied to an enclosed fluid is transmitted equally and without loss in all directions, therefore, any pressure applied to the master brake cylinder of a Packard car is transmitted without loss to each wheel and all brakes are energized equally when the brake shoes contact the drums. Thus the cause of most skidding and swerving is eliminated.

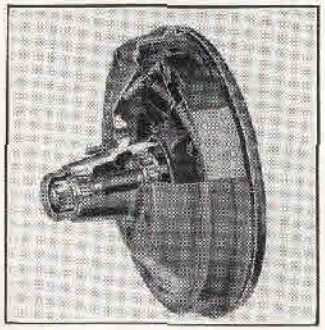
Foot pressure in the brake pedal actuates a piston in the master brake cylinder, forcing the liquid through brake tubing to each wheel. Here it operates smaller pistons in a smaller cylinder to which the brake shoes are attached.



Packard dual braking system—Servo-Hydraulic service brakes—mechanical handbrakes.

The unusual strength and rigidity of the Packard Safe-T-fleX front suspension makes it practical to apply a greater proportion of the total braking effort to the front wheels than to the rear. This makes Packard brakes more effective and stops in shorter distances are possible.

Servo or Self-Energizing Action—There are at least two different kinds of hydraulic brakes. Some cars depend entirely on pedal pressure to apply the brake shoes to the drums and disregard the self-energizing principle. Packard utilizes the self-energizing action and so affords extra advantages.



Packard front brake showing brake lining, hydraulic cylinder and centrifuse brake drum.

In the Packard Servo-Hydraulic brake system, the two brake shoes in each drum are movably mounted and are connected at the bottom by a coupling. When pressure is applied to the pedal and the brake shoes are forced against the drums, the turning of the drum tends to set up a similar turning motion in the brake shoes. This wrapping action of the brake shoes and drum uniformly increases pressure at every point around the braking surface. Thus the movement of the car either forward or backward builds up braking pressure, increases stopping ability, and decreases the amount of effort required of the driver.

Moreover, because braking pressure is distributed equally over the surface of both shoes, brake lining wear on front and rear shoes is more nearly equal and linings last longer.

In cars with brake shoes rigidly mounted at the bottom, this self-energizing action is not utilized and as a result, more

physical effort is required on the brake pedal, lining wear is unequal, more frequent shoe adjustement is required and brake linings wear out more rapidly.

Advantages:

1. **Equalized braking pressure at each wheel.**
2. **Increased braking pressure without increased pedal pressure.**
3. **More equal and longer lining life.**
4. **Fewer brake shoe adjustments.**

Mechanical Hand Brake—Packard cars are also equipped with a mechanical parking or emergency braking system actuating the brake shoes in the rear wheels and operating independently of the hydraulic system. This type of hand brake is considered safer and more dependable than the propeller shaft type—first, because it provides about double the braking area, and second, because the car can be stopped on a hill and a rear wheel jacked up without the necessity of blocking the wheels. Third, it imposes no strain on the propeller shaft and rear axle. A worth while improvement this year is found in the hand brake cable. This is now insulated against water and ice.

Advantages:

1. **Larger braking area—safer, more dependable.**
2. **Rear wheel can be jacked up without blocking.**

Centrifuse Brake Drums—Centrifuse brake drums are used on all Packard 1941 models because these drums combine the lightness of steel with the very desirable qualities of cast iron braking surfaces. Cast iron does not score as easily as steel and maintains its shape better under severe braking loads. Centrifuse brake drums consist of a shell of steel into which an iron braking surface is spun while the iron is molten. The heat fuses it securely to the steel of the shell.

Not only do brake linings wear longer when operated on cast iron but the drums themselves are longer lived and seldom, if ever, need resurfacing. Braking effectiveness on

long grades is retained because of the greater heat absorbing capacity of the heavier centrifuse drums, thus providing *against fade out.*

Advantages:

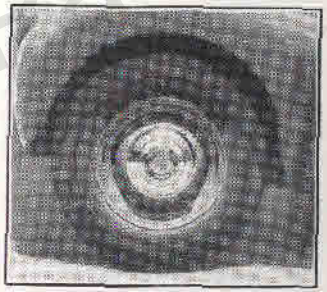
1. **Light weight combined with good braking surface qualities.**
2. **Drums retain their true shape.**
3. **Less tendency to score.**
4. **Brake linings wear longer.**
5. ***Drums seldom need resurfacing.***

Wheels—Large 10 inch chrome hub caps sparkle with concentric flutes and carry, besides the well-known Packard red hexagon, the model identification. On the new Packard One-Ten Deluxe, One-Twenty, One-Sixty and One-Eighty flashing chrome wheel rings add smartness to the side view and One-Twenty and One-Sixty convertibles are still further dressed with chrome wheel discs.

The wheels themselves are demountable discs, 15 inches in diameter on the One-Ten and One-Twenty, 16 inches on the One-Sixty and One-Eighty. They are slotted at the rim for mounting individual tire chains. Rims are drop-center design and each wheel is balanced to prevent vibration.

On five wheel Sedan models, the spare tire is mounted vertically against the wall of the trunk. All Packard One-Twenty, Super-8 One-Sixty and Custom Super-8 One-Eighty models are available, on special order, with six wheels and fender wells.

The Packard One-Ten and One-Ten De-Luxe are not available with six wheels and *fender well equipment.*



Larger tires are standard on the new One-Ten and One-Twenty.

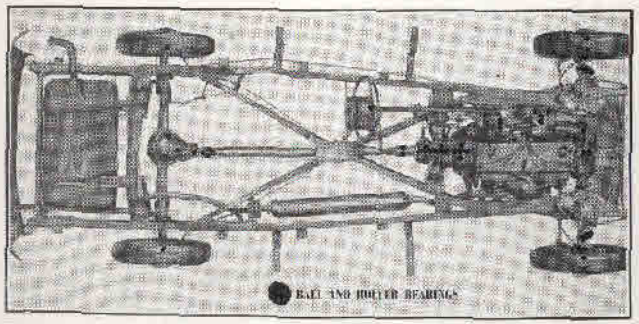
Tires—Big, low pressure tires combine with the other major features to produce the smooth gentle Packard ride. On the new One-Ten 6.50 x 15 four ply tires are used, and the One-Twenty now rolls on 7.00 x 15 four ply tires. The Super-8 One-Sixty in the 127" wheelbase models has 7.00 x 16 four ply tires, while the long wheelbase models—138" and 148"—have 7.00 x 16 six ply tires. The Custom Super-8 One-Eighty has 7.00 x 16 six ply tires on all models except the 127" wheelbase model which has four ply tires.

These large tires are another example of the extra value embodied in these new 1941 Packard cars. Packard uses larger tires per pound of car weight than most competitors and so gives the Packard owner greater safety, longer tire life, and a better ride.

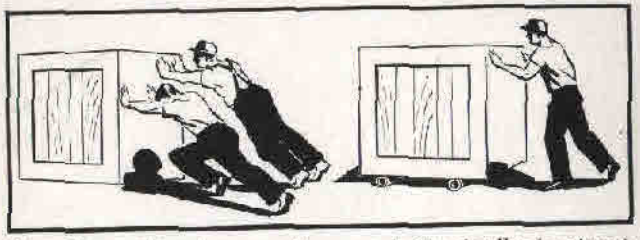
Advantages:

1. **Extra large tires give a smoother, softer ride.**
2. **Extra tire size means greater safety and longer tire life.**

Anti-Friction Bearings—Long life and a minimum of service are just as important in a motor car as good performance, operating economy and fine appearance. This is the reason why Packard uses more ball and roller bearings in its



50 ball and roller bearings on the Packard One-Ten and One-Twenty. 55 used on the Super-8 One-Sixty and One-Eighty.



Like rollers under a heavy packing case, ball and roller bearings in a chassis reduce friction to the minimum.

chassis than any other manufacturer. Even the new Packard One-Ten has more such bearings than the highest-priced cars of any other manufacturer. This year the new One-Ten and One-Twenty each have a total of 50 ball and roller bearings, while the new Super-8 One-Sixty and Custom Super-8 One-Eighty have a total of 55 each. And, neither of these figures includes the oilless rubber bearings used in these cars—25 on the Packard One-Ten, and 27 on the Packard One-Twenty. The 127" wheelbase Super-8 One-Sixty and Custom Super-8 One-Eighty have 29 rubber bearings and the 138" and 148" wheelbase models have 35.

Advantages:

1. **More ball and roller bearings assure less friction, longer life and a minimum of service.**
2. **Rubber bearings are durable, quiet and require no lubrication service.**

Chassis Lubrication—Another important advantage resulting from the unusual number of ball, roller and rubber bearings used in the Packard chassis is the reduction in the total number of lubrication points requiring periodic service attention. There are only 19 points on the One-Ten, 20 points on the One-Twenty and 21 points on the One-Sixty and One-Eighty that ever require lubrication. Four of these points on each chassis—at the lower end of the vertical wheel support in the front Safe-T-fleX suspension—need lubrication only at 10,000 mile intervals—approximately once a

year. The remaining 15 points on the One-Ten, 16 points on the One-Twenty and 17 points on the One-Sixty and One-Eighty should be lubricated every 1000 miles. It is a fact that no lubrication whatever is required at any time in the whole rear suspension except for the rear wheels which should be greased every 30,000 miles.

The crankcase should, of course, be drained and filled every 1000 to 2000 miles depending on driving conditions.

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MECHANICAL SPECIFICATIONS AND ADJUSTMENTS

19th SERIES

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
ENGINE			
Make	Packard	Packard	Packard
Type	L Head-Vertical En bloc	L Head-Vertical En bloc	L Head-Vertical En bloc
A.M.A. Horsepower	29.4	33.8	39.2
Maximum Brake Horsepower	*100*	*120*	*160*
Revolutions per Minute	3600	3600	3600
Suspension	Rubber mounted	Rubber mounted	Rubber mounted
Firing Order	1-5-3-6-2-4	1-6-2-5-8-3-7-4	1-8-2-5-8-3-7-4
Bore	3 1/16"	3 1/4"	3 1/2"
Stroke	4 1/2"	4 1/4"	4 5/8"
Piston Displacement	245 cu. in.	282 cu. in.	356 cu. in.
Cylinders	6 in line	8 in line	8 in line
Compression Ratio—Standard	6.39 to 1	6.41 to 1	6.45 to 1
Compression Ratio—Optional	6.71 to 1	6.85 to 1	6.85 to 1
Weight with Clutch and Transmission	673 lbs. With overdrive—731	781 lbs. With overdrive—839	986 lbs. With overdrive—1036
Cylinder Head Material	*Cast Iron*	*Cast Iron*	*Cast Iron*
Motor R.P.M. per Mile—Std. Ratio	3220	2953	2732-*1907-6* 2851-*1904-7* 3039-*1905-8*
CRANKCASE			
Type	Integral with cylinders	Integral with cylinders	Integral with cylinders
Upper Half Material	Cast Iron	Cast Iron	Cast Iron
Lower Half Material	Steel Stamping	Steel Stamping	Steel Stamping
Oil Capacity	5 qts.	6 qts.	7 qts.
Main Bearing Diameter	2 3/4"	2 3/4"	2 3/4"
Main Bearing Length No. 1	1 9/16"	1 1/2"	1 11/16"
Main Bearing Length No. 2	1 1/2"	1 7/8"	1 5/8"
Main Bearing Length No. 3	1 1/2"	1 13/16"	1 3/4"
Main Bearing Length No. 4	2 1/16"	1 1/2"	1 5/8"

	Packard One-Ten 1900	Packard One-Twenty 1901	Packard One-Sixty and One-Eighty 1903-4-5-6-7-8
CRANKCASE—Continued			
Main Bearing Length No. 5	None	2⅝"	1¹³⁄₁₆"
Main Bearing Length No. 6	None	None	1¹⁵⁄₁₆"
Main Bearing Length No. 7	None	None	1¹⁵⁄₁₆"
Main Bearing Length No. 8	None	None	1¹⁵⁄₁₆"
Main Bearing Length No. 9	None	None	2⅜"
Crankcase Oil Gauge	Dip Stick, Left Side	Dip Stick, Left Side	Dip Stick, Left Side
Total Main Bearing Area	45.1 sq. in.	56.6 sq. in.	85.8 sq. in.
Crankcase Drain Plug	⅜"-18	⅜"-18	⅜"-18
VALVES			
Valve Lift	Ex. .3175 Int. .318	Ex. .3175 Int. .318	.340
Valve Arrangement	L Head	L Head	L Head
Valve Head Diameter—Inlet	1¹³⁄₁₆"	1¹³⁄₁₆"	1.670
Valve Head Diameter—Exhaust	1⅝"	1⅝"	1⅝"
Valve Stem Diameter Inlet	.33975	.33975	.33975
Valve Stem Diameter—Exhaust	.33975	.33975	.33975
Valve Over-All Length	5.619	5.619	6.212
Valve Material—Inlet	Chrome Nickel	Chrome Nickel	Chrome Nickel
Valve Material—Exhaust	Austenitic Steel	Austenitic Steel	Austenitic Steel
Valve End (Type)	Split Cone	Split Cone	Split Cone
Valve Stem Clearance—Inlet	.0025	.0025	.0025
Valve Stem Clearance—Exhaust	.0045	.0045	.0045
Valve Tappet Clearance Inlet—Warm	.007"	.007"	Automatic take up
Valve Tappet Clearance Exhaust—Warm	.010"	.010"	Automatic take up
Inlet Valve Opens	1° BTDC	1° BTDC	4° BTDC
Inlet Valve Closes	39° ALDC	39° ALDC	51° ALDC
Exhaust Valve Closes	5° ATDC	5° ATDC	10° ATDC
Exhaust Valve Opens	45° BLDC	45° BLDC	49° BLDC
Tappet Clearance for Timing Inlet	.0125	.0125	
Tappet Clearance for Timing Exhaust	.015	.015	
Valve Seat Angle—Inlet	30°	30°	30°
Valve Seat Angle—Exhaust	45°	45°	45°
Valve Spring	Single	Single	Single

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VALVES—Continued			
Valve Spring Load Valve Closed	47-52 lbs. (1⅝")	47-52 lbs. (1⅝")	55-61 lbs. (1⅝")
Valve Spring Load Valve Open	114-124 lbs. (1⅝")	114-124 lbs. (1⅝")	130-140 lbs. (1¹³⁄₁₆")
Exhaust Pipe Diameter	2"	2¼"	2½"
Muffler Size—Front	5" x 38½"	5⅜" x 38¾"	6.075 x 41⅝"
FRONT END			
Gear Cover	Steel Stamping	Steel Stamping	Steel Stamping
Camshaft Drive	Silent Chain	Silent Chain	Silent Chain
Make of Chain	Morse 3682-B or Ramsey	Morse 3682-B or Ramsey	Morse 3682-B
Length, Width and Pitch of Chain	58 links 1¼": .375"	58 links 1¼": .375"	62 links 1¼" .375"
No. of Camshaft Bearings	4	5	5
Clearance of Camshaft Bearings	.001"-.003"	.001"-.003"	.001"-.003"
Camshaft End Play	.0025"-.006"	.0025"-.006"	.0025"-.006"
Camshaft Sprocket—Material and Size	Cast Iron—42 teeth	Cast Iron—42 teeth	Cast Iron—42 teeth Hardened
PISTON			
Weight	20¼ oz.	17¼ oz.	20¾ oz.
Weight with Rings and Pin	23¾ oz.	23½ oz.	26¾ oz.
Overall Height	3⅞"	3⅞"	3¾"
Height Centerline of Pin to Top	2⅜"	2⅛"	2⅜"
Type and Material	Autothermic Aluminum alloy with strut	Autothermic Aluminum alloy with strut	Autothermic Aluminum alloy with strut
Skirt Clearance	.0005"-.001"	.0005"-.001"	.0005"-.001"
Piston Pin—Size	3½" x ⅞"	2¹³⁄₁₆" x ⅞"	3¼" x ⅞"
Type	Floating	Floating	Floating
Lubrication of Pin	Pressure	Pressure	Pressure
Piston Pin Hole Ream	.87515"-.87485"	.87515"-.87485"	.87515"-.87485"
Piston Pin Fit in Piston	Finger Push at 160°	Finger Push at 160°	Finger Push at 160°
Piston Pin Fit in Rod	Size to Size	Size to Size	Size to Size
Piston Pin Oversizes	.003"-.006"	.003"-.006"	.003"-.006"
No. of Rings per Piston	3	3	3
No. of Oil Rings per piston	1	1	1
Depth of Piston Ring Grooves No. 1	.1882"	.1782"	.1882"
Depth of Piston Ring Grooves No. 2	.1837"	.1782"	.1837"
Depth of Piston Ring Grooves No. 3	.1817"	.1762"	.1817"

PISTON Continued	Packard One-Ten 1900	Packard One-Twenty 1901	Packard One-Sixty and One-Eighty 1903-4-5-6-7-8
Type of Compression Rings	1 Per. Circle No. K200 1 Per. Circle No. K70	1 Per. Circle No. K200 1 Per. Circle No. K70	1 Per. Circle No. K200 1 Per. Circle No. K70
Type of Oil Rings	1 Per. Circle No. X90-"C" Wall	1 Per. Circle No. X90-"C" Wall	1 Per. Circle No. X90-"C" Wall
Width of Compression Rings No. 1	.0930"-.0935"	.0925"-.0935"	.0930"-.0935"
Width of Compression Rings No. 2	.1240"-.1235"	.1240"-.1235"	.1240"-.1235"
Width of Oil Rings	.1865"-.186"	.1865"-.186"	.1865"-.186"
Piston Ring Wall Thickness No. 1	.165"-.175"	.152"-.162"	.165"-.175"
Piston Ring Wall Thickness No. 2	.165"-.175"	.152"-.162"	.165"-.175"
Piston Ring Wall Thickness No. 3	.122"-.130"	.121"-.129"	.122"-.130"
Piston Ring Gap—Compression	.007"-.017"	.007"-.017"	.007"-.017"
Piston Ring Gap—Oil	.007"-.015"	.007"-.015"	.007"-.015"
Location of Rings	Above Pin	Above Pin	Above Pin
Piston Oil Drain Holes	12—5/32"	12—5/32"	12—5/32"
Piston Oversizes	.005", .010", .020", .030", .040"	.005", .010", .020", .030", .040"	.005", .010", .020", .030", .040"

CONNECTING ROD			
Weight	1 lb. 15.6 oz.	1 lb. 15.6 oz.	2 lbs. 10 oz.
Material	Steel Forging	*Steel Forging*	*Steel Forging*
Bearing Type	Detachable Shell	Detachable Shell	Detachable Shell
Center to Center Length	7 15/16"	7 11/16"	9 1/4"
Diameter of Crankpin Bearing	2 3/32"	2 5/32"	2 1/4"
Length of Crankpin	1 1/4"	1 1/4"	1 3/8"
Clearance Bearing to Crankpin	.0005"-.0015"	.0005"-.0015"	.0005"-.0015"
End Play on Crankshaft	.004"-.010"	.004"-.010"	.004"-.010"
Oil Lead to Piston Pin	Rifle Drilled	Rifle Drilled	Rifle Drilled
Bearing Material	Babbitt	Babbitt	Babbitt
Assembled in Motor	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft	Oil Hole Toward Camshaft
Cap Attached	Bolts, Nuts and Lock Nuts	Bolts, Nuts and Lock Nuts	Bolts, Nuts and Cotters
Shims	Not Used	Not Used	Not Used

CRANKSHAFT			
Type	Counterbalanced	Counterbalanced	Counterbalanced
Material	Steel Forging	Steel Forging	Steel Forging
No. of Counterweights	6 Forged Integral	8 Forged Integral	8 Bolted
No. of Main Bearings	4	5	9
Main Bearing Diameter	2 3/4"	2 3/4"	2 3/4"
Thrust Taken On	No. 1	Center	Center
Vibration Damper	Rubber Friction Disc, Waterproof	Rubber Friction Disc, Waterproof	Rubber Friction Disc, Waterproof
Weight	81 1/2 lbs.	95 lbs.	104 lbs.
End Play	.003"-.008"	.003"-.008"	.003"-.008"
Main Bearing Material	Babbitt Lined Steel Shell	Babbitt Lined Steel Shell	Babbitt Lined Steel Shell
Clearance—All Main Bearings	.0005"-.0015"	.0005"-.0015"	.0005"-.0015"
Crankshaft Sprocket—Material and Size	Steel—21 teeth	Steel—21 teeth	Steel—21 teeth
Shims	Not used	Not used	Not used

MOTOR LUBRICATION			
Type	Full Pressure	Full Pressure	Full Pressure
Oil Pump Type	Gear	Gear	Gear
Crankcase Capacity	5 qts.	6 qts.	7 qts.
Oil Filler Location	Left Side	Left Side	Left Side
Oil Filter Location	Spl. Eqpt.	Spl. Eqpt.	Left Side
Oil Measuring Stick	Left Crankcase	Left Crankcase	Left Crankcase
Oil Intake	Floating	Floating	Floating
Crankcase Ventilator	R.H. at rear of block	R.H. at rear of block	R.H. at rear of block
Oil Pressure—Normal Driving	*40 lbs.*	40 lbs.	50 lbs.
Oil Drain	Hex. Head Flange Plug 5/8"-18	Hex. Head Flange Plug 3/8"-18	Hex. Head Flange Plug 5/8"-18

CHASSIS LUBRICATION			
Every 1,000 Miles			
Crankcase—S.A.E. 30* *Below —10° F. — 10W + 10% Kerosene —10° F. —10W +10° F. —20W +32° F. —S.A.E. 30	Drain and Refill 5 Qts.	Drain and Refill 6 Qts.	Drain and Refill 7 Qts.

CHASSIS LUBRICATION Cont.

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
Average Daylight Temperature 90° F. —S.A.E. 40			
Knuckle Pins—Pressure Grease Gun	2 Lub. Connectors	2 Lub. Connectors Reservoir Type	2 Lub. Connectors Reservoir Type
Steering Connecting Rod—Pressure Gun Grease	2 Lub. Connectors	2 Lub. Connectors	2 Lub. Connectors
Steering Tie Rods—Pressure Gun Grease	4 Lub. Connectors	4 Lub. Connectors	4 Lub. Connectors
Universal Joint Spline—Gun Grease		1 Lub. Connector	1 Lub. Connector
Generator—S.A.E. 30	2 Oilers	2 Oilers	2 Oilers
Starter Motor—S.A.E. 30	2 Oilers	2 Oilers	2 Oilers
Distributor—No. 3 Cup Grease	1 Cup	1 Cup	1 Cup
Clutch and Brake Pedal—Pressure Gun Grease	1 Lub. Connector	1 Lub. Connector	2 Lub. Connectors
Steering Crank—Pressure Gun Grease	1 Lub. Connector	1 Lub. Connector	1 Lub. Connector
	15	16	17
Every 10,000 Miles			
Support Arm Pin,—Outer, Gun Grease	4 Lub. Connectors	4 Lub. Connectors	4 Lub. Connectors
Front Wheel Bearing Fibre Grease	(4) Repack 4 oz. per wheel	(4) Repack 4 oz. per wheel	(4) Repack 4 oz. per wheel
Transmission, S.A.E., 140 Summer, 90 Winter	Drain and Refill (2 Pts.)	Drain and Refill (2 Pts.)	Drain and Refill (2 Pts.)
Transmission Overdrive Case, S.A.E. 140 Summer, 90 Winter	Drain and Refill (1¼ Pts.)	Drain and Refill (1¼ Pts.)	Drain and Refill (1¼ Pts.)
Steering Gear, S.A.E., 140 Summer 90 Winter	Drain and Refill (11 oz.)	Drain and Refill (11 oz.)	Drain and Refill (11 oz.)
Rear Axle—See Packard Dealer	Drain and Refill (5 Pts.)	Drain and Refill (6¾ Pts.)	Drain and Refill (6¾ Pts.)
Every 30,000 Miles			
Rear Wheel Bearing Fibre Grease	Repack 2 oz. per wheel	Repack 2 oz. per wheel	Repack 2 oz. per wheel
Universal Joints, Gun Grease	Repack	Repack	Repack

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CLUTCH

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
Type	Single Dry Plate	Single Dry Plate	Single Dry Plate
Free Pedal	1½"-2"	1¾"-2"	1¾"-2¼"
Facing Material	U. S. Asbestos No. 1133-G Woven	U. S. Asbestos No. 1133-G Woven	U. S. Asbestos No. 1133-G Woven
Size Facing	6" x 9½" x .125"	6" x 10" x .125"	6½" x 11" x .125"
Throwout Bearing Lubrication	Packed	Packed	Packed
Clutch Spring Pressure	163 lbs. at 1⅜"	125 lbs. at 1⅜"	160 lbs. at 1.677"
No. of Springs	9	9	9
Vibration Neutralizer	Springs	Springs	Springs

TRANSMISSION

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-6*	Packard One-Sixty and One-Eighty *1904-7*	Packard One-Sixty and One-Eighty *1905-8*
Type	Selective-Silent Synchronized	Selective-Silent Synchronized	Selective-Silent Synchronized	Selective-Silent Synchronized	Selective-Silent Synchronized
No. of Forward Speeds	3	3	3	3	3
Overdrive High	3.28 Std.	3.15 Std.	3.15 Std.	3.15 Std.	3.28 Std.
High	4.55 4.3	4.36 4.09	4.36 3.92	4.36 4.09	4.54 4.36
Second	6.96 6.57	6.67 6.25	6.67 5.99	6.67 6.25	6.94 6.67
First	11.05 10.44	10.59 9.93	10.59 9.53	10.59 9.93	11.03 10.59
Reverse	14.38 13.59	13.78 12.92	13.78 12.40	13.78 12.92	14.35 13.78
Oil Capacity	2 Pts.	2 Pts.	2 Pts.	2 Pts.	2 Pts.
Overdrive	1¼ Pts.	1¼ Pts.	1¼ Pts.	1¼ Pts.	1¼ Pts.
Oil Level Plugs	½"-14 pipe	½"-14 pipe	½"-14 pipe	½"-14 pipe	½"-14 pipe
Gear Teeth	Helical	Helical	Helical	Helical	Helical
Steering Post Shift	Standard Equipment "Mechanical"	Standard Equipment "Mechanical"	Standard Equipment "Mechanical"	Standard Equipment "Mechanical"	Standard Equipment "Mechanical"

FRAME

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-6*	Packard One-Sixty and One-Eighty *1904-7*	Packard One-Sixty and One-Eighty *1905-8*
Type	Taper Pressed Steel Double Drop, Box Section Side Rail in Front	Taper Pressed Steel Double Drop, Box Section Side Rail in Front	Taper Pressed Steel Double Drop, Box Section Side Rail in Front	Taper Pressed Steel Double Drop, Box Section Side Rail in Front	Taper Pressed Steel Double Drop, Box Section Side Rail in Front
Depth	6 15/16"-1900 6 11/16"-1909 Convt.	6 15/16"-1901 7"-1901 Convt.	6 15/16"-1901 7"-1901 Convt.	7"-1903-5-6-7 7⅛"-1905-8	7"-1903-4-6-7 7⅛"-1905-8
Thickness	¾"-1900 ½"-1900 Convt.	¼"-1901 ¾"-1901 Convt.	¼"-1901 ¾"-1901 Convt.		

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
FRAME—Continued			
No. of Cross Members	5, I-Beam X Type Member in Center	5, I-Beam X Type Member in Center	5, I-Beam X Type Member in Center
Wheelbase	122"	127"	127"-*1903-6* 138"-*1904-7* 148"-*1905-8*
STEERING GEAR			
Make	Packard	Packard	Packard
Type	Worm and Double Tooth Roller	Worm and Double Tooth Roller	Worm and Double Tooth Roller
Ratio	*20.19* to 1	*20.19* to 1	20.19 to 1
Steering Wheel	18"-3 spoke "T"	18"-3 spoke "T"	18"-3 spoke "T"
Type of Steering Wheel	Vulcanized Rubber Over Steel Frame	Vulcanized Rubber Over Steel Frame	Moulded Plastic Over Steel Frame
Minimum Turning *Radius*	*20 ft. 6 in.*	21 ft. 2 in.	22 ft. 6½ in.-*1903-6* 24 ft.-*1904-7* 24 ft. 6 in.-*1905-8*
FRONT SUSPENSION			
Make	Packard Safe-T-Flex	Packard Safe-T-Flex	*Packard Safe-T-flex*
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Axle End	Reverse Elliot	Reverse Elliot	Reverse Elliot
Steering Knuckle Pin Bearings Upper and Lower	.866 x 1.1875 1.089" long 26 rolls-.1184 Dia.	.866 x 1.1875 1.089" long 26 rolls-.1184 Dia. .855 x 1.189 1.187" long	.855 x 1.189 1.187" long Antimony Lead
Thrust Bearings	Antimony Lead	Antimony Lead	Ball Bearing *1903-4-5-6-7-8*—Neg. 1°15' + − ½°
Caster	½° + − ½°	½° + − ½°	0 + ⅛ − 0
Front Wheel Toe-In	0 + ⅛ − 0	0 + ⅛ − 0	2½°
Knuckle Pin Angle	2½°	2½°	59⅛"
Tread	59⅛"	59⅛"	1° + ¾° − 0
Camber	1° + ¾° − 0	1° + ¾° − 0	

FRONT SUSPENSION—Continued			
Wheel Bearing—Inner	Timken 14130 Cone 19278 Cup	Timken 2585 Cone 2523 Cup	Timken 2585 Cone 2523 Cup
Wheel Bearing—Outer	Timken 09074 Cone 09194 Cup	Timken 1380 Cone 1329 Cup	Timken 1380 Cone 1329 Cup
Wheel Bearing Adjustment	Tighten Nut and Back Off ½ turn and lock	Tighten Nut and Back Off ½ turn and lock	Tighten Nut and Back Off ½ turn and lock
ELECTRICAL			
Battery—Make	Willard SW-1-95 15 Plate	Autolite PN-17P 17 Plate	Autolite PN-17P 17 Plate
Battery—Capacity	95 Ampere Hours	114 Ampere Hours	114 Ampere Hours
Battery—Size	9" x 7" x 8¾"	10¼" x 8⅛"	10¼" x 8⅛"
Ignition Timing	6° BTDC	7° BTDC	5° BTDC
Breaker Point Gap	.018"-.022"	.0125"-.0175"	.0125"-.0175"
Spark Control	Full Automatic	Full Automatic	Full Automatic
Spark Advance Begins At	600 r.p.m. Engine	600 r.p.m. Engine	500 r.p.m. Engine
Distributor (Vacuum Control)	Autolite ICC-4305 Delco-*1110092*	Autolite IGP-4502	Autolite IGT-4102
Spark Plug—Size	10 mm	10 mm	10 mm
Spark Plug—Make and Type (2)	104 AC or Champion Y4	104 AC or Champion Y4	104 AC or Champion Y4
Spark Plug Gap	.0255"-.0305"	.0255"-.0305"	.0255"-.0305"
Generator—Make and Type	Autolite GDZ-4801-F Delco 1102682	Autolite GDZ-4801-F	Autolite GEA-4802-A
Generator Drive	Belt	Belt	Belt
Generator Cut-In Speed—Cold	920 r.p.m. Autolite 900 r.p.m. Delco	920 r.p.m. Autolite	780 r.p.m.
Generator Maximum Charging Rate (Cold—8 Volt)	35 Ampere	35 Ampere	35 Ampere
Generator Maximum Charging Rate (Hot—8 Volt)	35 Ampere	35 Ampere	35 Ampere
Generator Voltage Regulator	Autolite VRP-4002-C Delco 1118202	Autolite VRP-4002-C	Autolite VRP-4002-C
Generator Voltage to Close Cut-Out	6½ to 7 volts	6½ to 7 volts	6½ to 7 volts
Generator Ventilated	Yes	Yes	Yes
Starter Motor—Make and Type	Autolite MAW-4021 Delco 1107037	Autolite MAW-4021	Autolite MAX-4041
Starter Drive	Bendix Shift	Bendix Shift	Solenoid Actuated
No. of Flywheel Teeth	140	140	140
No. of Teeth in Bendix Pinion	9	9	9

ELECTRICAL—Continued

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
Pinion Meshes	From Front	From Front	From Front
Light Control	On Instrument Board and Foot Switch	On Instrument Board and Foot Switch	On Instrument Board and Foot Switch
Headlamp Current Protection	Thermostat Relay	Thermostat Relay	Thermostat Relay
Auxiliary Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Body Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Tail Lamp Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
Stop Light Fuse	SFE 20 Ampere	SFE 20 Ampere	SFE 20 Ampere
W. S. Wiper Protection	Thermostat Relay	Thermostat Relay	None
Clock Fuse	SFE 4 Ampere	SFE 4 Ampere	SFE 4 Ampere
Overdrive Relay	SFE 30 Ampere	SFE 30 Ampere	SFE 30 Ampere
Headlamp Lens—Dia. at Bezel	6½"	6¼"	6⅛"
Headlamp Bulb—Sealed Beam	40-30 Watt	40-30 Watt	40-30 Watt
Export	6 Volt 50-21 C.P. C. M. Hall	50-21 C.P. C. M. Hall	50-21 C.P. C. M. Hall
Horn—Make and Type	Sparton	Sparton	Sparton
Horn Location	Mounted on Engine	Mounted on Engine	Mounted on Engine
Battery Terminal Grounded	*Positive*	Positive	Positive
Ampere Draw of Horns (2)	22-25 Ampere	22-25 Ampere	33-36 Ampere
Ampere Draw of Car Heater Motor	6 Ampere at 7 Volts	6 Ampere at 7 Volts	6 Ampere at 7 Volts
Ampere Draw of Car Defroster	4½ A. at 7 Volts	4½ A. at 7 Volts	4½ A. at 7 Volts
Ampere Draw of W. S. Wiper	4½ Ampere at 6 Volts	4½ Ampere at 6 Volts	Vacuum Wiper
Ampere Draw of Lights	30-40 Watts	30-40 Watts	30-40 Watts
Ampere Draw of Coil—Idling Cold	2.75 Amperes	2.4 Amperes	2.4 Amperes
Ampere Draw of Coil—Stopped Cold	5 Amperes	5 Amperes	5 Amperes
Clock—Make and Type	Electric—Borg	*Electric—Borg*	*Electric—Borg*
Cigar Lighter	Automatic	Automatic	Automatic
Starter Stall Torque	18 ft. lbs., 4 volt 670 Ampere	18 ft. lbs., 4 volt 670 Ampere	45.9 ft. lbs., 4 volt 906 Ampere
Ignition Coil	Autolite CE-4644 Delco 1116307 on Cylinder Head	Autolite CE-4644 *on Cylinder Head*	Autolite CE-4645 on Cylinder Head
Spring Tension on Contacts—Distributor	19-28 oz.	19-23 oz.	19-23 oz.

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COOLING SYSTEM

Water Pump	Centrifugal Self-adjusting	Centrifugal Self-adjusting	Centrifugal Self-adjusting
Water Pump Drive	Fan Belt	Fan Belt	*Fan Belt*
Radiator Core	Cellular	Tubular	Tubular
Capacity of System	3¾ gal.	4¾ gal.	5 gal.
Fan	4 blade 18"	4 blade 18"	5 blade 18½"
Driving Pulley	On Crankshaft	On Crankshaft	On Crankshaft
Ratio	.963 to 1	.963 to 1	*1.027 to 1*
Thermostat Starts To Open	147½° (in cylinder)	147½° (in cylinder)	162½° (in cylinder) 135° (in shutters)
Radiator Shutter	No	No	Yes
Fan Belt	49¾ O.D. x ¾" x 42°	49¾ O.D. x ¾" x 42°	52¼ O.D. x 1" x 42°
Radiator Hose—Inlet	13 x 2⅛ x 1¾ I.D. 120° Angle-Moulded	*13 x 2⅛ x 1¾* I.D. 120° Angle-Moulded	11½ x 2¼ x 1¾ I.D. 130° Angle-Moulded
Radiator Hose—Outlet	3" x 1¾" I.D.	3" x 1¾" I.D.	3" x 1¾" I.D.
Heat Indicator	On Instrument Board	On Instrument Board	On Instrument Board
Fan Belt Adjustment	At Generator	At Generator	At Generator
Gravity Flow of Radiator	24 gal. per min.	38 gal. per min.	42 gal. per min.
Radiator Cap	Pressure Type (4½ lbs. per sq. in.) (12 lbs. per sq. in. *for air cond.*)	Pressure Type (4½ lbs. per sq. in.) (12 lbs. per sq. in. *for air cond.*)	Pressure Type (7 lbs. per sq. in.) (12 lbs. per sq. in. for air cond.)

GASOLINE SYSTEM

Carburetor—Make and Size	Stromberg 1⅛" Down-draft, Single *Barrel*	Carter WAI—1" Down-draft Duplex	Stromberg 1¼" Duplex Down-draft
Gasoline Feed	Mechanical Pump A.C.	Mechanical Pump A.C.	Mechanical Pump A.C. in combination with Vacuum Pump
Pump Drive	Off Camshaft	Off Camshaft	Off Camshaft
Gasoline Filter	Incorporated in Fuel Pump	Incorporated in Fuel Pump	Incorporated in Fuel Pump
Gasoline Gauge	Electric	Electric	Electric
Gasoline Tank Capacity	17 gal.	20 gal.	20 gal.
Air Cleaner and Silencer	A.C. Standard	A.C. Standard	A.C. Oil Bath Type
Carburetor Heat Control	Thermostat	Thermostat	Thermostat

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
GASOLINE SYSTEM—Continued			
Automatic Choke	Thermostatically Controlled	Thermostatically Controlled	Thermostatically Controlled
Carburetor Fuel Level	5/8" below top of bowl	5/8" below top of bowl	3/8" below top of bowl
REAR AXLE			
Type	Semi-floating	Semi-floating	Semi-floating
Make	Packard	Packard	Packard
Final Drive	Hypoid Gears	Hypoid Gears	Hypoid Gears
Propulsion	Through Springs	Through Springs	Through Springs
Axle Housing	Banjo type Pressed Steel	Banjo type Pressed Steel	Banjo type Pressed Steel
Universal Joints	"Universal Products" Roller Bearing Type	"Mechanics" Roller Bearing Type	"Mechanics" Roller Bearing Type
No. Required	2	2	2
Oil Capacity	5 pts.	6¾ pts.	6¾ pts.
Wheel Bearings	Timken Cone 25877 (2) Cup 25821 (2)	Timken Cone 26878 Cup 26830	*Timken Cone 26878-1903-6* Cup 26830-*1904-7* Timken Cone 3576 Cup 3525-*1905-8*
Tread	60⅝"	60⅝"	59 19/32"—*1903-4-6-7* 62⅜"—*1905-8*
Standard Gear Ratio (without overdrive)	4.3 to 1	4.09 to 1	3.92 to 1—*1903-1906* 4.09 to 1—*1907-1907* 4.36 to 1—*1905-1908*
Pinion Back Lash	.003"-.005"	.003"-.005"	.003"-.005"
No. Teeth—Gear and Pinion	43-10	45-11	47-12—*1903-1906* 45-11—*1904-1907* 43-11—*1905-1908*
Oil Drain Plugs	½"—14 pipe	½"—14 pipe	½"—14 pipe

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SPRINGS			
Front—5 passenger Sedan—Standard	1430x69—coil	1525x74—coil	1750x77 Rate Coil *1903-6* 1870x85 Rate Coil *1904-7* 2050x100 Rate Coil *1905-8*
Rear—5 passenger Sedan Standard	880x105—*Leaf*	970x110 Leaf	1040x110 Leaf *1903-6* 1080x110 Leaf—*1904-7* 1250x122 Leaf—*1905-8*
7 passenger Sedan—Standard			
Front—Size	5.21 O.D.—4" I.D.	5.23 O.D.—4 I.D.	5.81 O.D. 4½ I.D. *1903-6* 5.89 O.D.—4⅜ I.D. *1905-8* 5.87 O.D.—4½ I.D. *1904-7*
No. of Coils	6.4 *Effective*	9.22 *Effective*	8.41 Effective—*1903-6* 7.94 Effective—*1905-8* 7.96 Effective—*1904-7*
Rear Length and Width	54⅜ x 2	54⅜ x 2	54⅜ x 2—*1903-6* 54⅜ x 2—*1904-5-7-8*
Shackles	Rubber Bushed	Rubber Bushed	Rubber Bushed
Spring Covers	*No*	*No*	*No*
Shock Absorbers—Front	Delco Hydraulic Two-Way	Delco Hydraulic Two-Way	Delco Hydraulic Two-Way
Shock Absorbers—Rear	Monroe Direct Acting	Delco Direct Acting	Monroe Direct Acting *1903-6* Delco Direct Acting *1904-5-7-8*
Shock Absorber (Lateral Stabilizer)	None	*Houde* Two-Way	*Houde* Two-Way
Shock Absorber Stabilizer	*Front Only*	*Front*	Front Only—*1903-6* Front and Rear—*1904-5-6-7-8*
Spring Material—Front and Rear	Silico Manganese	Silico Manganese	Silico Manganese

	Packard One-Ten *1900*	Packard One-Twenty *1901*	Packard One-Sixty and One-Eighty *1903-4-5-6-7-8*
BRAKES			
Type	Internal Expanding on all 4 wheels	Internal Expanding on all 4 wheels	Internal Expanding on all 4 wheels
Operation	Hydraulic—2 shoe	Hydraulic—2 shoe	Hydraulic—2 shoe
	158.5 sq. in.	171.5 sq. in.	196 sq. in.—*1903-6* 234 sq. in.—*1904-5-7-8*
Effective Area Hand Brake	79.25 sq. in.	85.7 sq. in.	98 sq. in.—*1903-6* 117 sq. in.—*1904-5-7-8*
Lining Size and Material			
Primary	1¾"x⅜"x10⅝" Marshall 2201	1¾"x⅜"x11½" Marshall 2201	2"x⅜"x11½"—*1903-6* Marshall 2201 2¼"x⅜"x13"—*1904-5-7-8* Marshall 2201
Secondary	1¾"x⅜"x12" Marshall 2201	1¾"x⅜"x13" Marshall 2201	2"x⅜"x13"—*1903-6* Marshall 2201 2¼"x⅜"x13"—*1904-5-7-8* Marshall 2201
Drum Diameter	11" centrifuse	12" centrifuse	12" centrifuse
WHEELS			
Make and type	Motor Wheel Demountable Disc	Motor Wheel Demountable Disc	Motor Wheel Demountable Disc
Size of Tire	15x6.50—4 ply	15x7.00—4 ply	15x7.00—4 ply—*1903-6* 16x7.00—6 ply—*1904-5-7-8*
Recommended Tire Pressure—Front (Warm)	26 lbs.	26 lbs.	Frt.—*1903-6*—26 lbs.
—Rear	28 lbs.	28 lbs.	Rear—*1903-6*—28 lbs. Frt.—*1904-7*—27 lbs. Rear—*1904-7*—29 lbs. Frt.—*1905-8*—28 lbs. Rear—*1905-8*—32 lbs.

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CHART OF INTERIOR UPHOLSTERY AND TRIM SELECTIONS

CHART OF INTERIOR UPHOLSTERY AND TRIM SELECTIONS

Model	Cloth Options (Standard)	Cloth Options (Standard)	Two-Tone Options Closed Cars (Extra Cost)	Trim Styles Standard and Two-Tone	Upholstery Springs	Floor Front	Floor Rear	Instrument Panel	Steering Wheel	Convertible Leather Options	Convertible Two-Tone Leather (Extra Cost)	Convertible Top Options
One-Ten Special	2	Tan stripe Broadcloth Blue gray stripe Broadcloth	Not available	Two sets of two narrow pleats running fore and aft.	**Seats** Semi-Luxury **Backs** Conventional	Rubber Mat	Carpet	Mahogany graining with tan plastics	Tan — hard rubber	Green Tan Red Gray Blue Black	Red leather and tan Bedford cord Blue leather and gray Bedford cord	Tan (Std.) **Extra cost** Black Blue D. Brown D. Green
One-Ten DeLuxe	2	Tan stripe Broadcloth Blue gray stripe Broadcloth	Blue—Gray Brown—Tan D. Green—L. Green Dark—Bedford Cord Light—Broadcloth	**DeLuxe**—Same as One-Ten Special except for leather pick-up **Two-Tone**—Horizontal pleated panels.	**Seats** Semi-Luxury **Backs** Conventional	Carpet	Carpet	**DeLuxe** Mahogany and tan **Two-Tone** Painted to match upholstery with blending plastics	**DeLuxe** Two-color hard rubber **Two-Tone** Painted to match panel and upholstery —two color	Green Tan Red Gray Blue Black	Red leather and tan Bedford cord Blue leather and gray Bedford Cord	Tan (Std.) **Extra cost** Black Blue D. Brown D. Green
One-Twenty	3	Tan shadow stripe Broadcloth Blue gray Broadcloth Gray Bedford Cord	Blue—Gray Brown—Tan D. Green—L. Green Dark—Bedford Cord Light—Broadcloth	One set of medium wide pleating across center of seat and back—fore and aft—leather pick-up **Two-Tone**—Horizontal pleated panels.	**Seats** Luxury **Backs** Conventional	Carpet	Carpet	**Standard** Burled walnut and tan plastics **Two Tone** Painted to match upholstery with blending plastics.	**Standard** Two-color hard rubber **Two-Tone** Painted to match panel and upholstery —two color	Green Tan Red Gray Blue Black	Red leather and tan Bedford cord Blue leather and gray Bedford cord	Tan (Std.) **Extra cost** Black Blue D. Brown D. Green
One-Sixty	4	Tan with chalk stripe Broadcloth Olive and blue stripe Broadcloth Gray and blue stripe Broadcloth Brown Bedford Cord	Blue—Gray Brown—Tan D. Green—L. Green All broadcloth Extra cost—127" WB. No extra cost—138" WB. Not available—148" WB.	One horizontal pleat on seat cushion and riser. One on seat back **Two-Tone**—Horizontal pleated panels.	**Seats** Luxury **Backs** Conventional	Mohair Carpet	Mohair Carpet	**Standard** Burled Walnut grain with tan or gray plastics **Two-Tone** Painted to match upholstery with blending plastics	**Standard** Tan or gray plastic to match upholstery **Two-Tone** Plastic two-color on 3 optional wheels to match upholstery.	Green Tan Red Gray Blue Black	Red leather and tan Bedford cord Blue leather and gray Bedford cord	Tan (Std.) **Extra cost** Black Blue D. Brown D. Green
One-Sixty DeLuxe Convertible Sedan and Coupe only				Two-tone leather and cloth—horizontal pleated panels.	**Seats** Luxury **Backs** Conventional	Mohair Carpet	Mohair Carpet	Painted to match upholstery tan or gray plastics	Plastic—two color to match upholstery		**(No extra cost)** Gray leather—Green Cloth Tan leather—Green Cloth L. Blue leather—Blue Cloth Gray leather—Blue Cloth Tan leather—Rust Cloth Pig grain—Rust Cloth Pig grain—Brown Cloth Brown leath:—Brown Cloth	Tan (Std.) **Extra Cost** Black Blue D. Brown D. Green
One-Eighty	5	Blue-gray stripe Broadcloth Gray Bedford Cord Blue Bedford Cord Tan pin stripe Broadcloth Brown—tan Broadcloth combination		Pillow type—down pillows over sponge rubber	Marshall backs and cushions	Mohair Carpet	Mohair Carpet **Option** Deep pile crushed mohair	**Standard** Crotch Walnut graining tan plastics	**Standard** Plastic—two-tone tan	None	None	None

PACKARD ONE-TEN SPECIAL, ONE-TEN DELUXE AND ONE-TWENTY BODY INFORMATION

Number of Passengers	Body Style	Series Number	Wheel-base	Over-all Length	Body Model Number	Shipping Weight
	Packard One-Ten Special					
5	4-Door Touring Sedan	1800	122"	201 1/16"	1482	3260 lbs.
5	2-Door Touring Sedan	1800	122"	201 1/16"	1484	3250 lbs.
2-4	Club Coupe	1800	122"	201 1/16"	1485	3230 lbs.
2-4	Convertible Coupe	1800	122"	201 1/16"	1489	3260 lbs.
2	Business Coupe	1800	122"	201 1/16"	1488	3190 lbs.
	Station Wagon Special	1800	122"		1483	3460 lbs.
	Station Wagon Deluxe	1800	122"	—	1463	3460 lbs.
	Chassis	1800	122"	201 1/16"	—	2430 lbs.
	Packard One-Ten Deluxe					
5	4-Door Touring Sedan	DE 1800	122"	201 1/16"	DE 1482	3280 lbs.
5	2-Door Touring Sedan	DE 1800	122"	201 1/16"	DE 1484	3270 lbs.
2-4	Club Coupe	DE 1800	122"	201 1/16"	DE 1485	3250 lbs.
2-4	Convertible Coupe	DE 1800	122"	201 1/16"	DE 1489	3280 lbs.
	Packard One-Twenty					
5	4-Door Touring Sedan	1801	127"	206 3/4"	1492	3535 lbs.
5	2-Door Touring Sedan	1801	127"	206 3/4"	1494	3525 lbs.
2-4	Club Coupe	1801	127"	206 3/4"	1495	3470 lbs.
2-4	Convertible Coupe	1801	127"	206 3/4"	1499	3570 lbs.
5	Convertible Sedan	1801	127"	206 3/4"	1497	3725 lbs.
2	Business Coupe	1801	127"	206 3/4"	1498	3360 lbs.
	Station Wagon	1801	127"	—	1493	3720 lbs.
	Station Wagon Deluxe	1801	127"	—	1473	3720 lbs.
	Chassis	1801	127"	206 3/4"	—	2630 lbs.

PACKARD ONE-TEN SPECIAL, ONE-TEN DELUXE AND ONE-TWENTY BODY DIMENSIONS

ALL MEASUREMENTS ARE IN INCHES

Body Models		5-Pass. 4-Door Touring Sedan	5-Pass. 2-Door Touring Sedan	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Wheel Base	"110"	122	122	122	122	—	122
	"120"	127	127	127	127	127	127
Seat Width Front—Shoulders		56⅜	57½	57¼	57¼	56⅜	57¼
Hips		50	48¾	48¼	48¼	50	48¼
Elbow		55	55	55	55	55	55
Rear—Shoulders		56	56	54	48¾	52	—
Hips		47½	47⅛	49	47½	47⅛	—
Elbow		58	58	58	49	56	—
Seat Height (Floor to top of cushion) Front Seat		13⅛	13⅛	13⅛	13⅛	13⅛	13⅛
Rear Seat		15¾	15⅝	14⅛	14¼	15¾	—
Seat Depth (Front to back of cushion) Front Seat		18½	18⅛	18½	18½	18½	18½
Rear Seat		19	19	17½	17½	19	—

PACKARD ONE-TEN SPECIAL, ONE-TEN DELUXE AND ONE-TWENTY BODY DIMENSIONS—Continued

ALL MEASUREMENTS ARE IN INCHES

Body Models		5-Pass. 4-Door Touring Sedan	5-Pass. 2-Door Touring Sedan	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Seat Back Height (From top of cushion) Front Seat		21⅝	21⅜	21⅜	21⅜	21⅝	21⅜
Rear Seat		23⅝	23½	23⅝	21⅞	22⅝	—
Head Room Front Seat to Roof		38½	38½	38½	37¾	38	38½
Rear Seat to Roof		36¾	36¾	34	33¼	34	—
Floor to Roof (Center)		49¾	49¼	—	—	48	—
Leg Room—Rear Seat Front of Rear Cushion to Back of Front Seat (intermediate position)		23¼	26¼	20¼	20	24⅛	—
Leg Room—Front Seat Front of Seat Cushion to Toe Board 6" from Floor		22⅛	22⅛	22⅛	22⅛	22⅛	22⅛
Back of Seat Cushion to Toe Board 6" from Floor		40⅝	40⅝	40⅝	40⅝	40⅝	40⅜
Steering Wheel to Top of Cushion (intermediate position)	"110"	5¾	5¾	5¾	5¾	—	5¾
	"120"	5⅜	5⅜	5⅜	5⅜	5⅜	5⅜
Back of Rear Seat Cushion to Dash Pad		88¾	88¾	77¼	77¼	88¾	88⅜

PACKARD ONE-TEN SPECIAL, ONE-TEN DELUXE AND ONE-TWENTY BODY DIMENSIONS—Continued

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 2-Door Touring Sedan	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Over-all Dimensions						
Car Height Loaded "110"	68 35/64	66 35/64	65 1/8	65 3/8	—	65 1/8
"120"	67 5/64	67 5/64	65 5/8	65 5/8	66	65 5/8
Fender to Fender—Front	73 11/16	73 11/16	73 11/16	73 11/16	73 11/16	73 11/16
Fender to Fender—Rear	73	73	73	73	73	73
Body Width (to panels)	69 3/16	66 1/16	66 1/4	66 3/4	66 3/16	66 1/4
Car Length Bumper to Bumper "110"	201 1/16	201 1/16	201 1/16	201 1/16	—	201 1/16
"120"	206 1/4	206 3/4	206 1/4	206 1/4	206 1/4	206 1/4
Body Length Over-all	*136*	*136*	*136*	136	136	136
Trunk Dimensions						
Inside Height—5-Wheel Car	28	28	15 3/4	15 3/4	11 5/8	15 3/4
Inside Width—5-Wheel Car	47 11/16	47 11/16	47 11/16	47 11/16	47 11/16	47 11/16
Inside Height—6-Wheel Car (120 only)	28	28	24	24	19 7/8	24
Inside Width—6-Wheel Car (120 only)	47 11/16	47 11/16	47 11/16	47 11/16	47 11/16	47 11/16
Cu. Ft. Capacity (Usable) 5 Wheels	17.84	17.84	21.85	18.85	15.85	21.85
Cu. Ft. Capacity (Usable) 6 Wheels for "120" Only	22.12	22.12	26	23	20	26
Size of Trunk Door Opening Width	37 15/16	37 15/16	39	39	37 11/16	39
Size of Trunk Door Opening Height	31 1/2	31 1/2	41 25/32	41 25/32	31 1/2	41 25/32

PACKARD ONE-TEN SPECIAL, ONE-TEN DELUXE AND ONE-TWENTY BODY DIMENSIONS—Continued

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 2-Door Touring Sedan	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
General						
Front Door Width	34 15/16	40 3/4	39 3/8	39 3/8	34 15/16	39 3/8
Rear Door Width	28 3/8	—	—	—	28 3/8	—
Windshield—Width	44 11/16	44 11/16	44 11/16	44 11/16	44 11/16	44 11/16
Windshield—Height	13 3/8	13 3/8	13 3/8	13 3/8	13 3/8	13 3/8
Rear Windows—Width	34	34	34	23 1/2	23 1/2	34
Rear Windows—Height	13 3/16	13 3/16	13 3/16	5 5/8	5 5/8	13 3/16
Hood Length "110"	61 25/32	61 25/32	61 25/32	61 25/32	—	61 25/32
Hood Length "120"	66 19/32	66 13/16	66 19/32	66 19/32	66 19/32	66 19/32

PACKARD SUPER-8 ONE-SIXTY BODY INFORMATION

Number of Passengers	Body Style	Series Number	Wheelbase	Over-all Length	Body Model Number	Shipping Weight
5	**Packard Super-8 One-Sixty** 4-Door Touring Sedan	1903	127"	206 3/16"	1472	3995 lbs.
2-4	Club Coupe	1903	127"	206 3/16"	1475	3900 lbs.
2-4	Convertible Coupe	1903	127"	206 3/16"	1479	3965 lbs.
5	Convertible Sedan	1903	127"	206 3/16"	1477	4140 lbs.
2	Business Coupe	1903	127"	206 3/16"	1478	3875 lbs.
	Chassis	1903	127"	206 3/16"	—	2885 lbs.
5	4-Door Touring Sedan	1904	138"	217 11/32"	1482	4305 lbs.
	Chassis	1904	138"	217 11/32"	—	3000 lbs.
7	Touring Sedan	1905	148"	227 3/16"	1471	4495 lbs.
7	Touring Limousine	1905	148"	227 3/16"	1470	4570 lbs.
	Chassis	1905	148"	227 3/16"	—	3150 lbs.
	Packard Super 8 One-Sixty Deluxe					
2-4	Convertible Coupe	DE 1903	127"	206 3/16"	DE 1479	3985 lbs.
5	Convertible Sedan	DE 1903	127"	206 3/16"	DE 1477	4160 lbs.

PACKARD SUPER-8 ONE-SIXTY BODY DIMENSIONS

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Touring Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limo.	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Wheel Base	127	138 5/16	148	148	127	127	127	127
Seat Width Front—Shoulders	56 3/8	57 1/2	57 1/4	57 1/4	57 1/4	57 1/4	56 3/8	57 1/4
Hips	50	50	50	50	48 1/4	48 1/4	50	48 1/4
Elbow	55	55	55	55	55	55	55	55
Rear—Shoulders	56	56	56	56	54	18 3/4	52	—
Hips	47 1/2	47 1/2	49 1/2	49 1/2	49	47 1/2	47 1/2	—
Elbow	59	59	63	63	53	49	56	—
Folding Seat	—	—	2 Seats 24 Wide	2 Seats 24 Wide	—	—	—	—
Seat Height (Floor to top of cushion) Front Seat	13 3/8	13 1/4	13 1/8	12 3/4	13 3/8	13 3/8	13 1/4	13 1/8
Rear Seat	15 1/4	15 1/8	15 1/4	15 1/4	14 1/8	14 1/8	15 3/4	—
Folding Seat	—	—	12 3/8	12 3/4	—	—	—	—
Seat Depth (Front to back of cushion) Front Seat	18 1/2	18 1/2	18 1/2	18 3/4	18 1/2	18 1/2	18 1/2	18 1/2
Rear Seat	19	19	19	19	17 1/2	17 3/8	19	—
Folding Seat	—	—	16 1/2	16 1/2	—	—	—	—

PACKARD SUPER-8 ONE-SIXTY BODY DIMENSIONS—Continued

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Touring Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limo.	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Seat Back Height (from top of cushion)								
Front Seat	21⅝	21⅜	21⅝	22¾	21⅜	21⅜	21⅝	21⅜
Rear Seat	23⅜	23⅜	23⅝	23⅝	23⅝	21¾	22⅜	—
Folding Seat	—	—	13¾	13¾	—	—	—	—
Head Room								
Front Seat to Roof	38⅛	38½	38¾	39	38½	37¾	38	38½
Rear Seat to Roof	36¾	36¾	36¾	36¾	34	33¼	34	—
Folding Seat to Roof	—	—	38½	38½	—	—	—	—
Floor to Roof (Center)	49¼	49¼	50⅛	50⅛	—	—	48	—
Leg Room—Rear Seat								
Front of Rear Cushion to Back of Front Seat (intermediate position)	33¼	37½	35	35	20¼	20	24⅛	—
Front of Folding Seat to Back of Front Seat	—	—	9½	7	—	—	—	—
Front of Rear Seat Back to Folding Seat at 20" height from floor (Intermediate Position)	—	—	26⅛	26⅛	—	—	—	—

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PACKARD SUPER-8 ONE-SIXTY BODY DIMENSIONS—Continued

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Touring Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limo.	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Leg Room—Front Seat								
Front of Seat Cushion to Toe Board 6" from Floor	22⅛	23⅛	21⅛	22⅛	22⅛	22⅛	22⅛	22⅛
Back of Seat Cushion to Toe Board 6" from Floor	40⅝	41⅝	39⅝	40⅞	40⅝	40⅝	40⅝	40⅝
Steering Wheel to Top of Cushion (Intermediate Position)	5⅜	5½	5½	5⅜	5⅜	5⅜	5⅜	5⅜
Back of Rear Seat Cushion to Dash Pad	88¾	99⅝	109⅝	109⅝	77¼	77¼	88¾	88⅝
Over-all Dimensions								
Car Height Loaded	67⅜	68⅛	68¼	68¼	66¼	66¼	66⅝	66¾
Fender to Fender—Front	73 11/16	73 11/16	73 11/16	73 11/16	73 11/16	73 11/16	73 11/16	73 11/16
Fender to Fender—Rear	73	73	75	75	73	73	73	73
Body Width (to panels)	66 3/16	66⅝	66⅝	66⅝	66¼	66¼	66 3/16	66¼
Car Length Bumper to Bumper	206¼	217 1/16	227 3/16	227 3/16	206¼	206¼	206¼	206¼
Body Length Over-all	136	147 5/16	157	157	136	136	136	136

PACKARD SUPER-8 ONE-SIXTY BODY DIMENSIONS—Continued

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Touring Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limo.	2-4-Pass. Club Coupe	2-4-Pass. Convert. Coupe	5-Pass. Convert. Sedan	2-Pass. Business Coupe
Trunk Dimensions								
Inside Height—5-Wheel Car	28	28	28	28	15⅜	15⅜	11⅝	15¾
Inside Width—5-Wheel Car	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16
Inside Height—6-Wheel Car	28	28	28	28	24	24	19⅞	24
Inside Width—6-Wheel Car	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16	47 1/16
Cu. Ft. Capacity (Usable) 5 Wheels	17.84	17.84	17.84	17.84	21.85	18.85	15.35	21.85
Cu. Ft. Capacity (Usable) 6 Wheels	22.12	22.12	22.12	22.12	26	25	20	26
Size of Trunk Door Opening Width	37 15/16	37 15/16	37 15/16	37 15/16	39	39	37 15/16	39
Size of Trunk Door Opening Height	31½	31½	31½	31½	41 25/32	41 25/32	31½	41 25/32
General								
Front Door Width	34 15/16	39⅝	39⅝	39⅝	39⅝	39⅝	34 15/16	29⅝
Rear Door Width	28⅜	34⅝	34⅝	34⅝	—	—	28⅜	
Windshield—Width	44 11/16	44 11/16	44 11/16	44 11/16	44 11/16	44 11/16	44 11/16	44 11/16
Windshield—Height	13⅝	13⅝	13⅝	13⅝	13⅝	13⅝	13⅝	13⅝
Rear Windows—Width	34	34	34	34	34	23½	23½	34
Rear Windows—Height	13 15/16	13 15/16	13 15/16	13 15/16	13 15/16	5⅝	5⅝	13 15/16
Hood Length	66 19/32	66 19/32	66 19/32	66 19/32	66 19/32	66 19/32	66 19/32	66 19/32

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PACKARD SUPER-8 ONE-EIGHTY BODY INFORMATION

Number of Passengers	Body Style	Series Number	Wheelbase	Over-all Length	Body Model Number	Shipping Weight
5	Packard Custom Super-8 One-Eighty Convertible Victoria *(Darrin)	1906	127"	206 3/16"	1429	4040 lbs.
5	4-Door Touring Sedan	1907	138"	217 1/16"	1412	4350 lbs.
5	4-Door Sport Brougham *(LeBaron)	1907	138"	—	1452	4450 lbs.
5	4-Door Sport Sedan *(Darrin)	1907	138"	—	1422	4490 lbs.
5	4-Door Formal Sedan	1907	138"	217 1/16"	1432	4350 lbs.
7	Touring Sedan	1908	148"	227 3/16"	1451	4590 lbs.
7	Sedan *(LeBaron)	1908	148"	—	1421	4740 lbs.
7	Touring Limousine	1908	148"	227 3/16"	1450	4650 lbs.
7	Limousine *(LeBaron)	1908	148"	—	1420	4850 lbs.
7	All Weather Cabriolet *(Rollson)	1907	138"	217 1/16"	794	—
7	All Weather Town Car *(Rollson)	1908	148"	227 3/16"	795	—
	Chassis	1906	127"	206 3/16"	—	2910 lbs.
	Chassis	1907	138"	217 1/16"	—	3025 lbs.
	Chassis	1908	148"	227 3/16"	—	3175 lbs.

* For body dimensions see Custom Body Section

PACKARD CUSTOM SUPER-8 ONE-EIGHTY BODY DIMENSIONS

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Formal Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limousine
Wheel Base	138½	138½	148	148
Seat Width				
Front—Shoulders	57½	57⅛	57¼	57¾
Hips	50	50	50	50
Elbow	55	55	55	55
Rear Shoulders	56	55½	56	56
Hips	47⅛	47½	49⅛	49⅛
Elbow	59	59	63	63
Folding Seat	—	16⅜	2 Seats 19 Wide	2 Seats 19 Wide
Seat Height (Floor to top of cushion)				
Front Seat	13¼	12¾	13⅛	12⅝
Rear Seat	15¼	15¼	15¼	15¼
Folding Seat	—	12½	12⅝	12⅝
Seat Depth (Front to back of cushion)				
Front Seat	18½	18¾	18½	18½
Rear Seat	19	19	19	19
Folding Seat	—	15	16½	16½

PACKARD CUSTOM SUPER-8 ONE-EIGHTY BODY DIMENSIONS—Contd.

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Formal Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limousine
Seat Back Height (From top of cushion)				
Front Seat	21⅛	22¼	21¼	22¼
Rear Seat	23⅜	23⅜	23⅝	23⅝
Folding Seat	—	13	13¾	13¾
Head Room				
Front Seat to Roof	38½	39	38½	39
Rear Seat to Roof	36¾	36¾	36¾	36¾
Folding Seat to Roof	—	37⅛	38½	38½
Floor to Roof (Center)	49¼	49¼	50¼	50¼
Leg Room—Rear Seat				
Front of Rear Cushion to Back of Front Seat (Intermediate position)	26	25¼	35	35
Front of Folding Seat to Back of Front Seat	—	—	5⅛	7
Front of Rear Seat Back to Folding Seat at 20" height from floor (intermediate position)	—	26½	26⅛	26¼

PACKARD CUSTOM SUPER-8 ONE-EIGHTY BODY DIMENSIONS—Contd.

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Formal Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limousine
Leg Room—Front Seat Front of Seat Cushion to Toe Board 6" from floor	23 1/8	22 1/8	22 1/8	22 1/8
Back of Seat Cushion to Toe Board 6" from floor	41 5/8	40 7/8	41	40 3/8
Steering Wheel to Top of Cushion (intermediate position)	5 1/4	5 3/4	5 1/4	5 3/4
Back of Rear Seat Cushion to Dash Pad	99 3/4	99 3/8	109 3/4	109 3/4
Over-all Dimensions Car Height Loaded	68 1/4	68 1/4	68 1/4	68 1/4
Fender to Fender—Front	73 11/16	73 11/16	73 11/16	73 11/16
Fender to Fender—Rear	73	73	75	75
Body Width (to panels)	66 3/8	66 3/8	66 3/8	66 3/8
Car Length Bumper to Bumper	217 1/2	217 1/2	227 3/16	227 3/16
Body Length Over-all	147 3/32	147 3/32	157	157

PACKARD CUSTOM SUPER-8 ONE-EIGHTY BODY DIMENSIONS—Contd.

ALL MEASUREMENTS ARE IN INCHES

Body Models	5-Pass. 4-Door Touring Sedan	5-Pass. 4-Door Formal Sedan	7-Pass. Touring Sedan	7-Pass. Touring Limousine
Trunk Dimensions Inside Height, 5-Wheel Car	28	28	28	28
Inside Width, 5-Wheel Car	47 11/16	47 11/16	47 11/16	47 11/16
Inside Height, 6-Wheel Car	28	20	28	28
Inside Width, 6-Wheel Car	47 11/16	47 11/16	47 11/16	47 11/16
Cu. Ft. Capacity (Usable), 5 Wheels	17.84	17.84	17.84	17.84
Cu. Ft. Capacity (Usable), 6 Wheels	22.12	22.12	22.12	22.12
Size of Trunk Door Opening Width	37 15/16	37 15/16	37 15/16	37 15/16
Size of Trunk Door Opening Height	31 1/2	31 1/2	31 1/2	31 1/2
General Front Door Width	39 5/8	39 5/8	39 5/8	39 5/8
Rear Door Width	34 3/8	34 3/8	34 3/8	34 3/8
Windshield—Width	44 11/16	44 11/16	44 11/16	44 11/16
Windshield Height	13 3/8	13 3/8	13 3/8	13 3/8
Rear Windows—Width	34	28 3/8	34	34
Rear Windows—Height	13 1/16	10 3/4	13 3/16	13 3/16
Hood Length	66 13/32	66 13/32	66 13/32	66 13/32