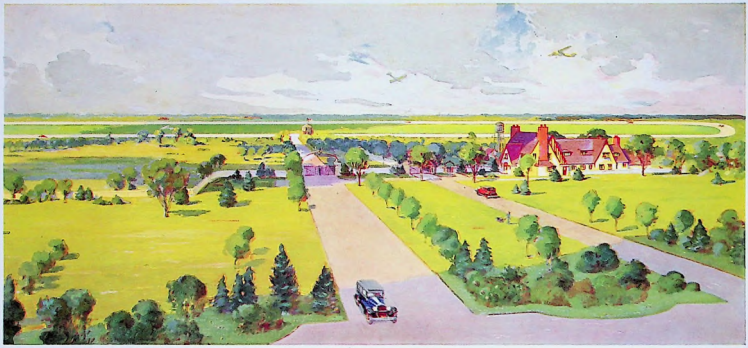
MECHANICAL FEATURES OF THE PACKARD STANDARD EIGHT



The Packard proving grounds includes a two and one-half mile concrete track, the fastest in the world, and provides every facility, including a resident staff of engineers and technical experts, for the most exacting study and testing of motor cars.

A MECHANICAL DESCRIPTION

of the

PACKARD STANDARD EIGHT 6-26 6-33

PACKARD was the first prominent American motor car manufacturer to announce the use of the eight-in-line or straight-eight motor. This was in 1923 after eight years of experience with a perfected V-type motor. Today finds 20 leading makers in this country using the straight-eight motor while the number offering the V-type has dropped from 30 to four. And in Europe, the original home of the V-type motor, the record is now 22 to none, for there is not a single V-type stock motor car built in Europe today.

The new Packard Standard Eight motor includes every improvement and refinement Packard has learned in building the great Packard Eight for more than five years. It is extremely simple in design and challenges comparison with any motor of similar power, particularly those of the complicated design now being so rapidly superseded by the straight-eight type. Some idea of its simplicity can be had by a study of the illustrations on the opposite page.

Please note how accessible every unit is and that each may be removed for adjustment or repair without interfering with any other. This simplicity accounts for the very low service charges for Packard motor work. On page seven you will find a most interesting and non-technical discussion of motor design principles and some of the reasons why Packard knows there is every advantage and not a single disadvantage in building a straight-eight motor of Packard's design.

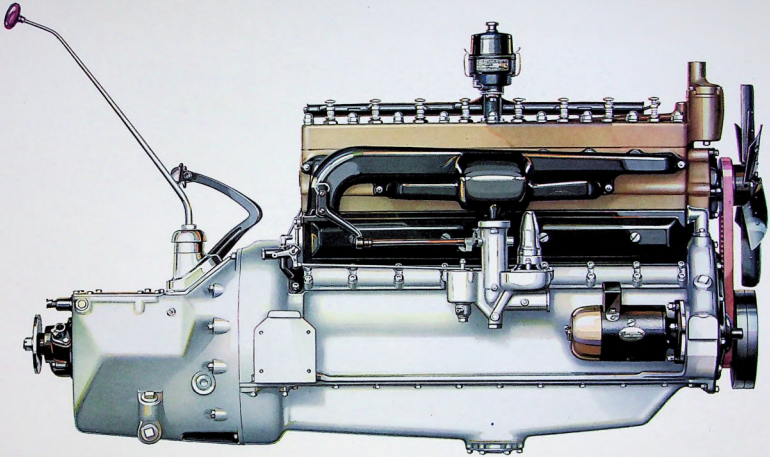
On page six of this section you will find some illustrations of the Packard Shock Absorbing System, a combination of new Packard and European inventions that is found exclusively on the new Packard cars. These inventions include Packard's own double-acting hydraulic shock absorbers, built into the axles, and a unique shock-absorbing device mounted at the rear of the left front spring. The former contributes to an entirely new riding comfort and the latter to a safety in steering operation never before known. Front wheel shimmy and steering whip have been absolutely eliminated, long the goal of the world's leading motor car engineers. We believe that either of these new features alone will make it worth your while to buy a Packard and that you will agree with us after you have investigated it.

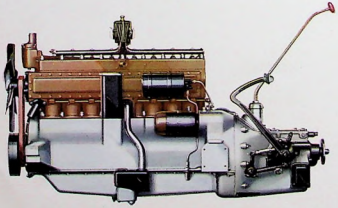
We call your particular attention to page five which illustrates and explains the lubrication features of the Packard motor and chassis. We believe that no other car is so adequately protected against the costly wear and tear of friction. And cost is not the only factor to consider, for there is a mental and physical satisfaction in having a car that is free from annoying squeaks and rattles. If you do not ask the next Packard owner you see anything else, please be sure to ask him what he thinks of the labor-saving and money-saving chassis lubricator. He lubricates every chassis point requiring frequent and regular attention in less time than it takes to sound the horn and with less effort than used in setting the hand brake.

Another improvement, and one most interesting to women, is in the steering mechanism. Ball bearings are now provided on the cross shaft in the steering gear case, and the last frictional resistance to almost effortless steering has been removed. You will sense this the moment you guide the car around a corner or in and out of traffic.

We have long said that only a ride can tell the Packard story. We cordially invite you to ride in one of the new cars and put it to any test your ownership would ever call for. We do want you to experience and appreciate the exclusive comfort and safety features we have added and to feel the power thrill of the new motor. Any Packard dealer stands ready to serve you and without any obligation on your part.

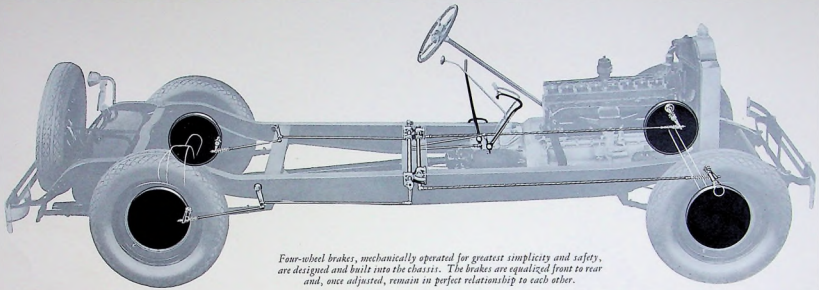
"Ask The Man Who Owns One"





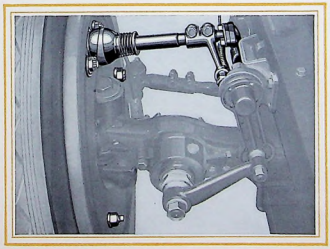
SIMPLICITY · ACCESSIBILITY · ECONOMY

Simplicity in design assures economy in maintenance costs because of labor saved due to the accessibility of parts for either adjustment or repair.

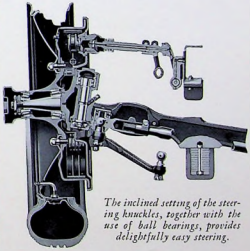


Four-wheel brakes, mechanically operated for greatest simplicity and safety, are designed and built into the chassis. The brakes are equalized front to rear and, once adjusted, remain in perfect relationship to each other.

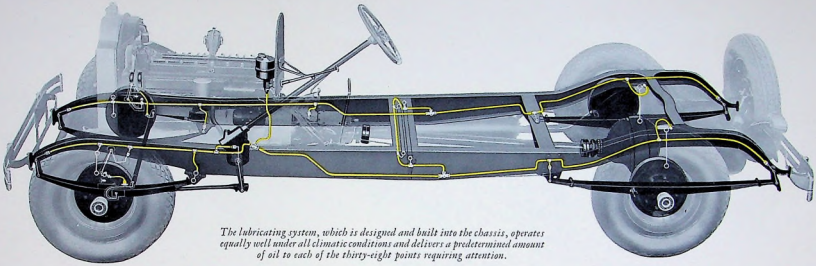
Brakes are self-energizing and but slight pedal pressure is required to produce utmost efficiency in even the coldest weather.



The brakes are of the internal-expanding type, with brake drums flanged for protection against oil or dirt reaching braking surfaces, minimizing wear and noise. Emergency-brake action is independent of service brakes.

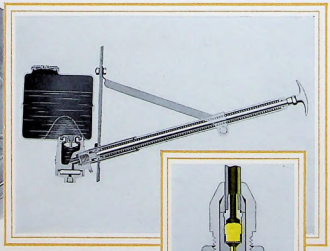


The inclined setting of the steering knuckles, together with the use of ball bearings, provides delightfully easy steering.

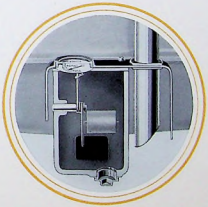


The lubricating system, which is designed and built into the chassis, operates equally well under all climatic conditions and delivers a predetermined amount of oil to each of the thirty-eight points requiring attention.

Cylinder and piston surfaces are bathed in oil when the motor is cold by a valve connected with the choke rod.

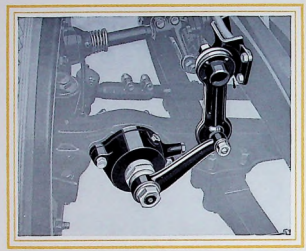


Each of the thirty-eight lubricated points has the proper amount of oil measured to it, with a third and final screening at point of outlet.



An oil gauge mounted on the left side of the motor registers the amount of oil in the crankcase and the necessity for attention.

THE PACKARD SHOCK ABSORBING SYSTEM

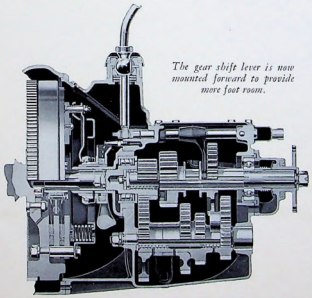


The shock absorbers on the Packard Eight are Packard in design and manufacture and are found on no other car. They are not an addition to the chassis but rather an integral part of it.

Cross section showing construction and calibrated metering valve.

Both front and rear shock absorbers are two-way in their action and make possible the use of much more resilient springs, the riding adjustment being made in the shock absorbers.

The rear of the left front spring is provided with a shock-absorbing device.



The gear shift lever is now mounted forward to provide more foot room.

The steering gear, worm and sector type, is fitted throughout with ball bearings.

STRAIGHT-EIGHT SIMPLICITY AND STRENGTH

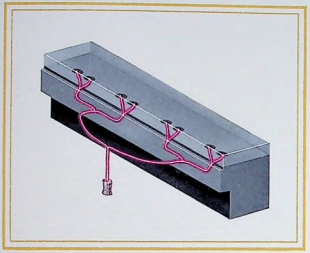


Illustration A

LEFT—*Fuel passages from the carburetor to inlet valves in the Packard Eight motor.*

RIGHT—*Fuel passages in the typical 90-degree V-type eight motor.*

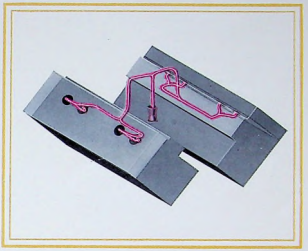
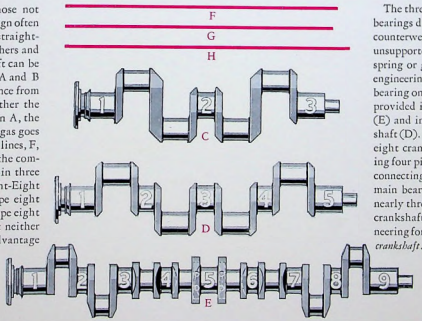


Illustration B

WE present these pictures because those not familiar with the principles of motor design often wonder whether the end cylinders in a straight-eight motor get gas equally with the others and also whether a straight-eight crankshaft can be as strong as a shorter one. Illustrations A and B show that the gas travels the same distance from the carburetor to each inlet valve in either the straight-eight or V-type eight motor. In A, the gas goes up and right and left. In B, the gas goes up, *then down* and right and left. The red lines, F, G and H, are drawn to scale and show the comparative distances the gas has to travel in three types of motors—the Packard Straight-Eight (F), the three-bearing 90-degree V-type eight (G) and the five-bearing 90-degree V-type eight (H). These simple pictures prove that neither type of motor is at any practical disadvantage over the others in fuel distribution.



The three crankshafts are shown for length and bearings distribution only and all do not include counterweights. All engineers know that as an unsupported section is doubled the tendency to spring or give is multiplied by eight. The best engineering practice calls for a crankshaft main bearing on each side of each crank pin. This is provided in both the Packard Eight crankshaft (E) and in the five-bearing V-type eight crankshaft (D). However, in C, a three-bearing V-type eight crankshaft, there are two crank pins, taking four piston blows from the four pistons and connecting rods, between each pair of crankshaft main bearings, the unsupported section being nearly three times as great as in E, the Packard crankshaft, and according to the accepted engineering formula—*not nearly so stiff as the Packard crankshaft.*

SPECIFICATIONS

POWER PLANT

MOTOR—Eight cylinders cast in one block. Four-point suspension. Bore, $3\frac{7}{8}$ inches; stroke, 5 inches. Horsepower, S.A.E. rating, 32.5. Motor actually develops more than 90 horsepower.

CYLINDERS—L-head. Made from special iron and steel alloy.

PISTONS—Cast from special aluminum alloy. Piston design developed by Packard. Fitted with four rings.

CONNECTING RODS—Drop-forged from special steel. I-beam in type and rifle bored lengthwise to provide oil passage from crankshaft to piston-pin bearing.

VALVES—Intake, chrome-nickel steel. Exhaust, silicon-chrome steel.

CRANKCASE—Aluminum alloy casting. Mounted at four points. Ventilated. Nine main bearings afford rigid support for the crankshaft. Lower half provides motor-oil reservoir. Oil gauge with dial indicator on left-hand side.

CRANKSHAFT—Nine main bearings. Drop-forged, heat-treated, machined all over, and balanced both at rest and at speed. Drilled passages provide for oil distribution and newly designed counterbalances result in operating smoothness and relief from excessive bearing pressures.

CLUTCH—Single dry plate. Positive and dependable. Spring-cushioned drive. Operates equally well under all climatic conditions.

TRANSMISSION—Selective sliding-gear type, three speeds forward and one reverse. All gears alloy steel, hardened and ground, insuring long life and quiet operation. Shafts mounted in best quality ball and roller bearings.

FUEL SYSTEM

SUPPLY—Twenty-two-gallon tank mounted at rear between frame members. Fuel drawn from tank by vacuum system located on dash and then to carburetor by gravity feed. Filtered through fine mesh screen before entering carburetor.

CARBURETOR—Designed for maximum efficiency under varied conditions. No adjustments for operator to make.

COOLING SYSTEM

RADIATOR—Highly polished chromium-plated casing of new design with cellular core. Thermostatically controlled shutters are standard equipment.

WATER COOLING—Capacity, 5 gallons. Forced circulation by centrifugal pump located in forward end of cylinder block. Only two hose connections required.

TEMPERATURE CONTROL—Thermostat controls passage of water, which is circulated back through cylinder block until normal motor temperature is reached, when it is passed through radiator.

FAN—Steel with six blades $18\frac{3}{4}$ inches in diameter, mounted on roller bearing.

LUBRICATING SYSTEM

MOTOR LUBRICATION—Pressure feed by gear-type oil pump, submerged in oil supply in lower half of crankcase. Oil is automatically filtered and its circulation controlled as required by different motor speeds.

CHASSIS LUBRICATION—The thirty-eight chassis points requiring regular lubrication are oiled by means of a pressure-pump plunger, located at the left of the steering column and operated from the driver's seat. Operates perfectly at any temperature.

ELECTRICAL SYSTEM

IGNITION—Packard-North East distributor mounted in accessible position on cylinder head. Coil is mounted on back of instrument board, protected from excess heat and water.

GENERATOR—Packard-Dyneto. Mounted at right front of motor and driven by silent chain, easily accessible for proper attention. Furnished with cut-out relay and entirely automatic in operation.

STARTING MOTOR—Packard-Dyneto. Mounted at left rear of motor, and automatically engaged with hardened-steel gear ring shrunk on flywheel. All parts enclosed and automatic in operation.

BATTERY—Six-volt, 140 ampere-hour, located on right running board at juncture with fender. Accessible for routine attention and long life through better cooling due to radiation.

WARNING SIGNAL—Mounted at left of motor, under hood. Electrically operated by push button at center of steering wheel.

LIGHTING EQUIPMENT—Single-wire type, fully protected by a 20-ampere fuse. Includes two non-glare main headlights of 21 candlepower with tilting beam feature; parking lamps; combination tail, signal, and backing light, the signal light automatically operated by brake-pedal action, and the backing light by gear-shift lever; instrument-board light; spotlight and tonneau light in open bodies; dome light in enclosed bodies.

OPERATING CONTROLS

GEAR-SHIFT LEVER—At right of driver. Housing well forward giving increased foot room.

BRAKE LEVER—At left of driver, well forward, permitting free use of left front door.

SERVICE BRAKES—Mechanically operated, internal expanding on front and rear wheels. Automatically equalized, front to rear.

HAND BRAKE—Internal expanding on rear wheels. All brakes have 16-inch drums.

STEERING GEAR—Worm-and-sector type. Ball thrust bearings for both worm and sector. Steering wheel, 18 inches in diameter. Black rubber over a steel frame.

MOTOR—Accelerator at right of brake pedal. Hand-throttle and lighting-switch levers built into the central portion of steering wheel.

INSTRUMENT BOARD—Oil-pressure gauge, motor thermometer, ammeter, fuel-supply gauge, speedometer and clock are grouped in thecenter of the instrument board and are indirectly illuminated for night driving. Ignition switch, integral with the coil, mounted at the left of center panel and fitted with lock and key. Cigar lighter at the right of panel.

TOILET AND SMOKING CONVENIENCES—The Sedans, except the Club Sedan, and Sedan-Limousine have smoking and vanity cases. The Coupe is equipped with vanity case only, because of space limitations.

MISCELLANEOUS

FRAMES—Depth, 8 inches. Tapered in design to eliminate offsets. Very rigid in construction, due to liberal use of cross-members and heavy cross-tubes, all riveted securely.

SPRINGS—Semielliptical. Front, 38 inches by 2 inches; rear, 56 inches by $2\frac{1}{2}$ inches. Front springs underslung and shackled at front end. A spring trunnion assembly mounted at the rear end of the left front spring tends to eliminate entirely shimmy and wheel wabble which are inherent with low-pressure tires.

WHEELS—Disc steel type. Demountable at hub and interchangeable, front and rear. Wood or wire wheels optional special equipment on same hubs at slight additional cost.

WHEEL CARRIER—One extra wheel and carrier with self-contained flush-type lock.

SHOCK ABSORBERS—Packard hydraulic.

TIRES—6-26 models, 32x6 inches; 6-33 models, 32x7 inches. Low-pressure nonskid cord tires, front and rear.

SPEEDOMETER—Driven through a flexible shaft connected with spiral driving gears in the transmission assembly. Mounted on the left-hand side of instrument board.

FENDERS—Deep crown, of extra heavy gauge steel.

WHEELBASE—$126\frac{1}{2}$; $133\frac{1}{2}$ inches.

TURNING RADIUS—6-26—22 feet; 6-33—23 feet 6 inches.

TOOLS—Tool roll with complete equipment of tools, one-ton jack, wheel-changing equipment.

PAINTING

Those who buy the Packard Standard Eight may express their own preferences in selecting from a wide range of optional colors.

The right is reserved to change specifications or prices without incurring any responsibility with regard to cars previously sold.

PACKARD MOTOR CAR COMPANY

DETROIT PRESS
PRINTED IN U.S.A

The Packard Standard Eight

The Convertible

Coupe

Two Passengers

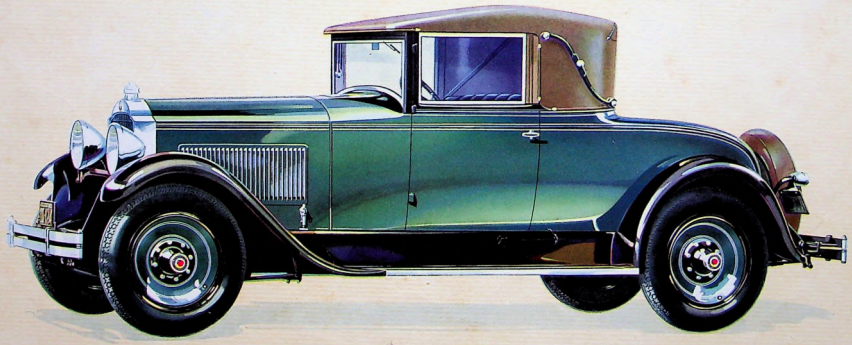


Plate 2

THE PACKARD STANDARD EIGHT 6-26

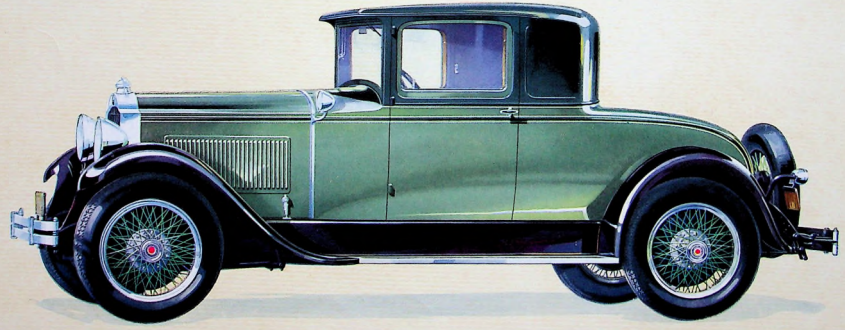
Interior of the Convertible Coupe • Two Passengers

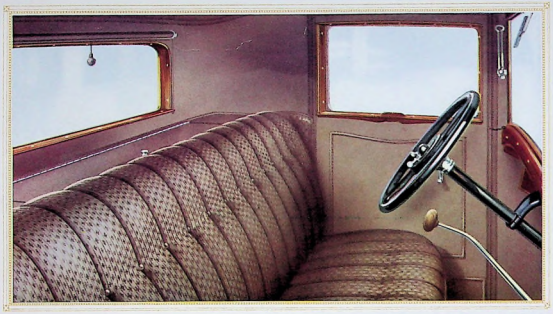
This two-passenger convertible coupe has all the advantages of both the closed and open car. It may be used as a coupe or runabout, as the owner pleases. It affords accommodations for extra passengers in a most comfortable rear seat that folds down neatly and easily when not in use. The top may be lowered quickly and housed in a neatly tailored boot, procurable at a small additional charge.

The Packard Standard Eight

The Coupe

Two Passengers





THE PACKARD STANDARD EIGHT 6-26

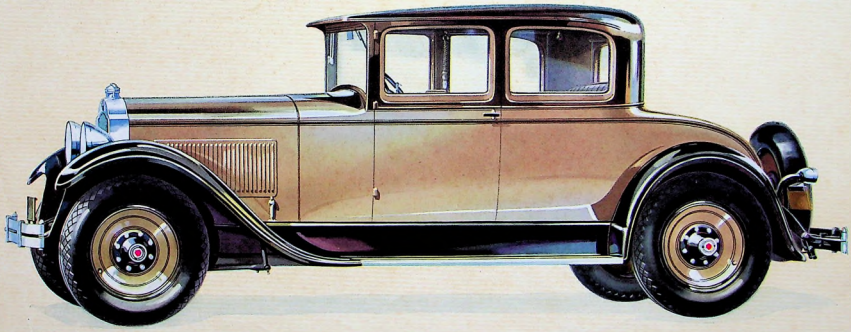
Interior of the Coupe • Two Passengers

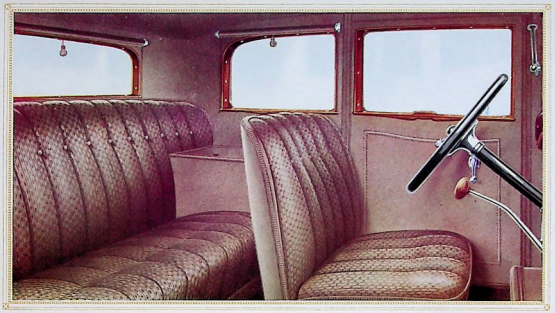
THE two-passenger permanent top coupe has accommodations for two additional passengers in a rumble seat that folds flush within the rear deck of the car when not in use. The rear window lowers by means of a regulator and this affords easy communication among all occupants. Ample luggage space is provided in two compartments, making this car very attractive to business and professional men.

The Packard Standard Eight

The Coupe

Four Passengers





THE PACKARD STANDARD EIGHT 6-33

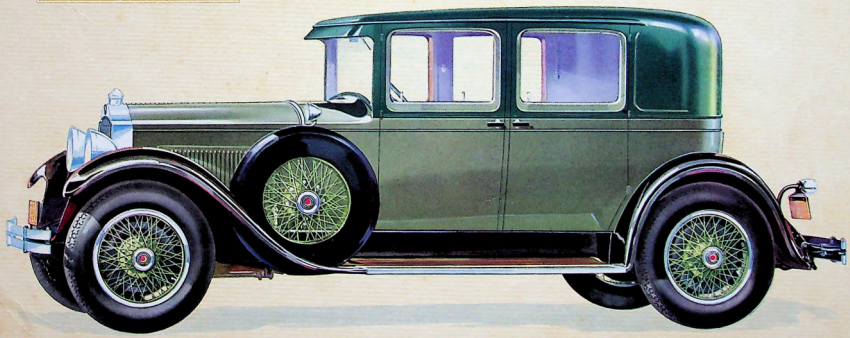
Interior of the Coupe • Four Passengers

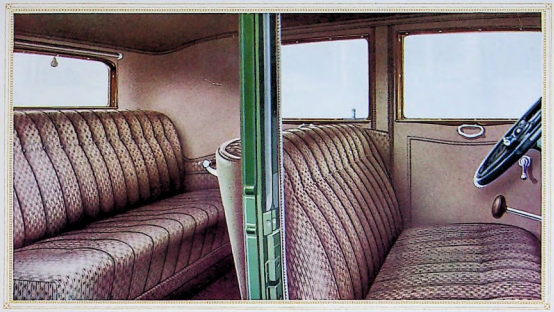
THE four-passenger coupe continues to be a most popular car among professional or business men and those with small families. The newest model of the Packard Eight seats four adults most comfortably. Ample luggage space is provided in the rear deck, furnished with a lock. The various coupes have no roof extension over the windshields but are furnished with drop visors on the inside.

The Packard Standard Eight

The Club Sedan

Five Passengers





THE PACKARD STANDARD EIGHT 6-33

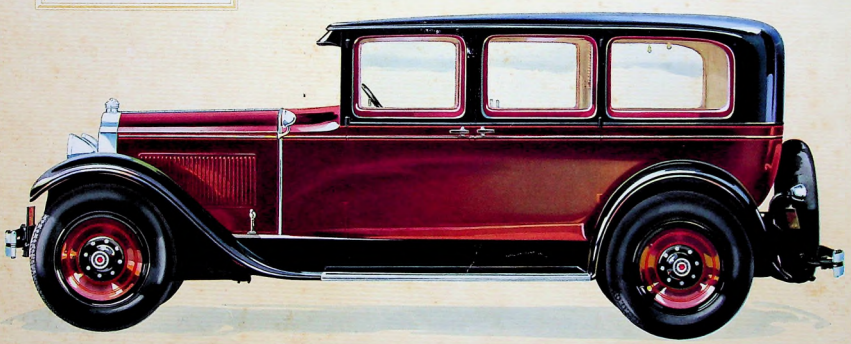
Interior of the Club Sedan • Five Passengers

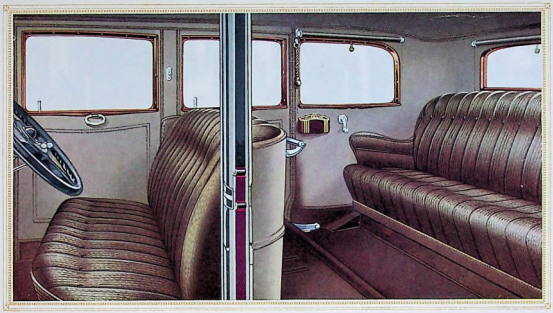
THE five-passenger club sedan is one of the smartest models of the Packard Eight. Often used for touring, a folding trunk rack is provided as standard equipment so that a rear trunk can be mounted with a minimum of expense. The door and window mouldings are all genuine black walnut and blend most beautifully with the standard upholstery patterns. This is one of the most comfortable Packard models and combines the intimacy of the coupe with the roominess of the sedan.

The Packard Standard Eight

The Sedan

Seven Passengers





THE PACKARD STANDARD EIGHT 6-33

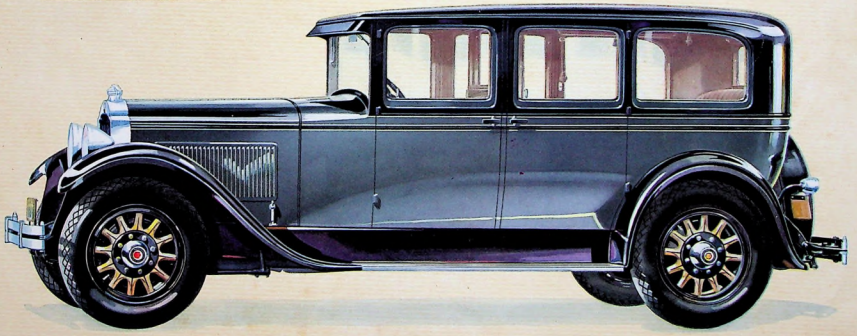
Interior of the Sedan · Seven Passengers

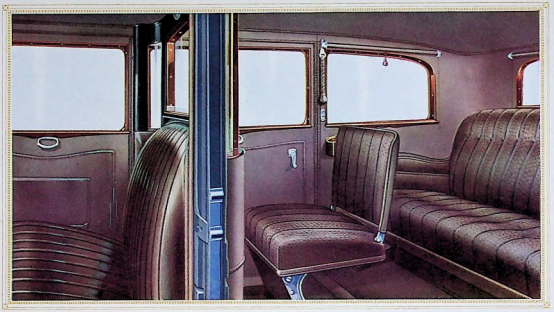
THE seven-passenger sedan is offered at no extra cost in a variety of beautiful and tasteful color combinations. This is also true of all the other models shown in this portfolio. All are fully chromium plated, a treatment affording a brilliancy and a permanency not possible by any other means. The upholstery covering is a beautiful figured broadcloth, pleasing in appearance and lasting in wearing qualities.

The Packard Standard Eight

The Sedan-
Limousine

Seven Passengers





THE PACKARD STANDARD EIGHT 6-33

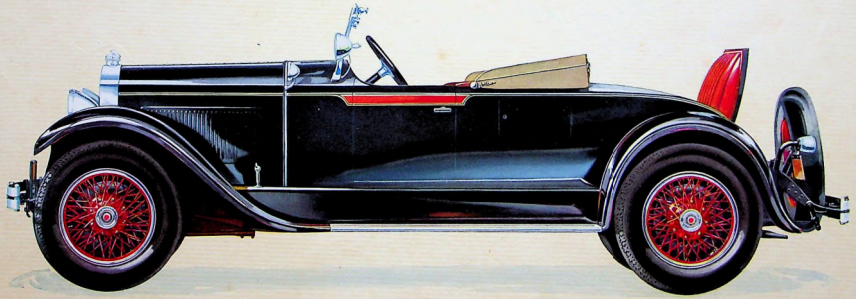
Interior of the Sedan-Limousine • Seven Passengers

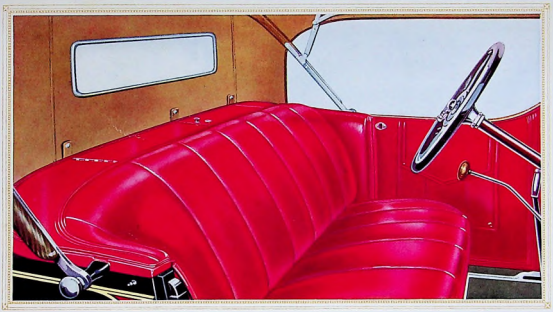
THE seven-passenger sedan-limousine may be used readily for either formal or informal use. The two compartments may be used as one or separated by a plate glass division that slides up from within the front seat-back. The two emergency seats also fold away into the seat-back, a most unusual design. The front compartment is trimmed in fine Colonial leather below the belt. A telephone provides communication between the passengers and the driver.

The Packard Standard Eight

The Runabout

Two Passengers





THE PACKARD STANDARD EIGHT 6-33

Interior of the Runabout • Two Passengers

THE two-passenger runabout is one of the most beautiful of all Packard models. As indicated on the other side of this page, it also has accommodations for additional passengers. Many prefer to have their cars with wire wheels and cowl and spotlights and these may be had at reasonable prices. Ample luggage room is provided and the rear seat may be comfortably used when the top is down.