

Facts About the
PACKARD EIGHT

236-243



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BODY TYPES

(General)

There are ten distinct body types mounted on the Packard Eight chassis of 136" and 143" wheel bases. The five passenger Touring, four passenger Runabout, four passenger Sport, five passenger Sedan, five passenger Sedan Limousine, five passenger Coupe, and four passenger Coupe are mounted on the 136" chassis; the seven passenger Touring, seven passenger Sedan, and seven passenger Sedan Limousine on the 143" chassis. The body framework is built of thoroughly air dried and kiln dried lumber of the proper species, reinforced by metal braces. The bent woods employed to obtain the correct contours are fabricated on forms and placed in dry kilns having a temperature of 100° to 120° F. and left to dry for twenty-four hours to insure their holding shape. All joints are closely fitted, screwed and glued in a thoroughly workmanlike manner. Careful selection for proper grain is made of the hard wood used in all important members, such as sills, cross sills, cross bars, standing pillars, door pillars and cowl bars.

After first assembly of the body panels to the wooden frame all the surfaces are either wire brushed or sanded to prevent any surface imperfection and irregularity of line in the finished product. The body panels before being finally assembled to the body frame work are given a coat of primer on those surfaces which will be concealed. The joints of all panels are smoothly filed with great care. Exact symmetry of lines is adhered to in the first as well as the last operation.

The following hard woods are used in the body construction of Packard Eight models: ash, birch, rock elm, maple, oak, basswood and spruce.

A distinctly Packard designed instrument board is provided. Under one glass in the center of the board is a speedometer and clock. To the left within easy reach of the driver is mounted the combination ignition and lighting switch, and to the right conforming to the symmetry of the board is mounted an oil gauge and ammeter. To the right of the latter is a gauge showing the gasoline content of the tank in the rear. To the right of the gasoline gauge is a cigar lighter, standard on all Packard Eight open and enclosed bodies. All

instruments are of the same general shape with the Packard bezel. The instrument board light with an adjustable visor, and controlled by a separate button at the top of the switch, is mounted directly over the speedometer and clock. A carburetor choke for starting is conveniently located over the ammeter.

The cowl ventilator is provided with a lever adjustment operated from the driver's seat. It is quickly and easily adjusted to three different positions. A spring makes it rattle-proof. The edges of the hole through the cowl are rolled up to prevent water leakage when the ventilator is closed. An automatic windshield cleaner is standard equipment on all cars.

A tool compartment under the driver's seat is provided in all models except the Sport, where it is located in the tonneau, just back of the front seat. There is also a pocket under the cowl on the right for small hand tools, gloves, rags, etc.

The Packard Eight Open Bodies

Trimmings and Fittings of all Bodies

All materials used in trimming the bodies are of the very best quality. Neatness of finish and good workmanship are most noticeable. The trimming design is of the plaited type with plaits approximately 4" wide. The Sport car has plain trimming. Marshall type cushion springs are used in all seat and seat back cushions. The upholstery material is best quality, first cut, hand buffed, hand crushed, Spanish leather—color, dust-proof gray. Templets shaped to the proper seat contour are used by Packard trimmers to maintain most comfortable riding positions.

The entire tonneau floor and heel panels are covered with horse hair carpet well fitted around the heel kick-up. The front compartment is carpeted with a very durable linoleum with the incline board cast in one piece of raised pattern aluminum. There is a suitable three-step accelerator foot rest cast integral.

The windshield slopes backward to harmonize with the body lines and to eliminate objectionable light reflection. The upper windshield sash swings forward and is fitted with a weatherstrip, which eliminates leakage. The stanchions are substantial steel forgings and the front of the top is fastened securely to them by means of acorn-headed nuts. This makes a solid-rattle-proof connection between the top and windshield. A wrench must be used to release the top. A weather-proof flap

attached to the top is buttoned to the windshield by "lift the dot" fasteners. The lower windshield glass is set in felt, is stationary, and is rattle and rainproof.

The top, of best quality material, is fitted with a plate glass window 8" x 20" in the rear top curtain and except in the case of the Roadster and Sport is fully lined. The bows are carefully placed where there is the least danger of striking the head. Each top is rigidly inspected to insure conformity with the harmonious body lines.

The tailor made fit of the side curtains affords absolute protection from wind and rain. An opening covered with a flap is provided in the left front curtain to permit of signaling from the driver's seat without unfastening or damaging the curtain. When not in use the curtains are stowed in the left hand door pockets where they are quickly accessible. Door curtain operating rods, made of solid bar stock to increase stiffness, are supplied for all open body doors.

All doors except the left front are fitted with outside and inside handles of standard Packard type, nickel plated. The locks are designed to unlock from the inside by either an up or down motion, and the handles are so shaped that they will not catch the clothing. The door latch has the double locking feature.

The doors on all models are made flush so there will be no overlapping moldings to break up the body lines. They swing forward for the front compartment on concealed hinges. The tonneau doors swing to the rear.

Open Body Types

The Packard Eight Touring Bodies (5 and 7 passenger)

The Touring body for five passengers is mounted on the 236 chassis and the seven passenger body on the 243 chassis. The top is neatly lined and so designed to conform perfectly with the long, graceful lines of the body.

The high, narrow radiator and bonnet with distinct Packard characteristics blend into a rounded cowl and are exceptionally well proportioned to the after part of the body. A stationary nickel plated robe rail is fitted to the back of the front seat. A nickel plated tubular foot rail is easily adjusted to two different positions.

The metal molding is neatly attached to the tops of the doors and body sides and continues around the face of the cowl in a graceful curve. It is of walnut finish and adds the final touch to a well proportioned and expertly constructed body.

In the seven passenger body there are two forward folding auxiliary seats upholstered in Spanish leather.

The Packard Eight Runabout Body (2 or 4 passenger)

The Runabout body is mounted on the 236 chassis. The front seat is of generous proportions for two passengers with provision for two additional passengers on the disappearing rumble seat.

The rear compartment is large and roomy and is fitted with a deck light, foot rest, and carpet. The rear compartment lid which forms the back of the rumble seat when open, is so hinged that a light pressure of the hand on the rear will open the compartment. It may be opened when the top is folded as well as when it is up. Seeping of water into this compartment is prevented by a self-draining feature of Packard design.

The luggage compartment back of the front seat is easily reached from the driver's seat through a door opening on the top of the seat back.

An additional feature of this body is the golf bag compartment, which opens from either side in the body panel just over the rear step plate. Ample space is provided for two complete golf bags. It is illuminated by a light controlled by an automatic switch.

Yale cylinder locks are fitted on golf bag compartment and front luggage compartment. A rear deck mat and lugs are provided to protect the deck finish when the top is lowered.

The Packard Eight Sport Body (4 passenger)

The Sport body is mounted on a special 236 chassis. A special radiator and bonnet two inches lower than standard for other models gives the job a racy appearance. The lines of the distinctly Packard radiator are blended into a rounded hood emphasizing the smartness obtained from the low radiator and body lines.

The deep front seat is mounted low and the steering wheel is situated to give a restful riding position to the driver. Tonneau fittings include a combination foot rest and tool compartment.

Provision is made for gloves and packages in a compartment in the back of the front seat.

Yale cylinder locks are fitted on the tool and glove compartments.

The Packard Eight Enclosed Bodies

Trimming and Fittings of all Enclosed Bodies

The enclosed bodies are richly upholstered in the very best grade of all wool broadcloth which will

not show water stain. A button tufting design is followed on the seat and seat backs with plaits about $3\frac{1}{2}$ " wide. Deep Marshall type springs, covered with a generous thickness of curled horse hair with lasting resiliency, and the long fibre cotton wadding, as used by tailors, help to account for the very fine riding quality. Comfortable arm rests are provided at each end of the rear seat. Large templates are used by Packard trimmers to maintain the seat contour, which gives the most restful riding position. Worsted and tapestry lace is used for trimming.

The doors, roof, sides and back of the front seat are trimmed with upholstery cloth to match the seat and seat back. The head lining extends in one section, neatly covering the entire ceiling. Silk window curtains with rollers are furnished on the rear and side rear windows.

The windlace around the doors is covered with worsted material to match the trimming. There is a rubber strip fitted to the bottom of each door to prevent water leaks and air drafts.

The vanity cases and smoking sets are of special Packard design, finished in rich black walnut to match the window mouldings and are located in a very accessible position from the rear seat. The switch for operating the dome light is conveniently located on the right rear pillar above the vanity case.

All enclosed body types with the exception of the four passenger Coupe are equipped with vanity cases and smoking sets. The vanity case only is standard equipment on this model.

All of the door and window moldings are of a rich black walnut finish to match the steering wheel.

A rear vision mirror attached over the windshield is standard equipment.

All doors have outside handles of a square corner design. They are opened from the inside by convenient, easy operating, swivel handles. Combination Butler & Bright nickel finish metal pull-to fixtures are used for closing all doors from the inside.

Inside locks are provided on the left door of the Coupe and on both left doors of the Sedan and the Sedan Limousine and on the right rear door of the Sedan. The inside locking device is a button which when pushed down locks the doors. The locks will not be damaged by slamming if the catch has been set when the door is ajar. Outside locks are provided on the right door of the Coupes and on both right doors of the Sedan Limousines and on the right front door of the Sedans only.

The lower half of the windshield is stationary and the upper half is attached by a piano type hinge which is rattle-proof and operates smoothly. A rubber weather-strip fits over the upper edge of the lower windshield sash and extends up beyond the lower edge of the upper sash on the inside, making a rainproof joint between the sashes. A weather-strip around the sash prevents leakage of water between the sash and stanchions. The upper glass is adjustable from the driver's seat from closed to fully open position. Finger pulls are attached to assist in this operation.

The front pillars and stanchions are specially designed not only to have great strength, but also to give maximum vision from the driver's seat.

An automatic windshield cleaner is standard equipment on all models and an adjustable visor is provided.

All door windows lower flush with the door belt. The two side windows at the ends of the rear seat lower sufficiently for ventilation. The windows are operated by the rotary type window regulator. The glass in the rear window is stationary, rattle and storm proof, being set in channel rubber and securely held in place with a molding finished in black walnut.

The interior hardware fittings are of an exclusive Packard design.

Enclosed Body Types

The Packard Eight Sedan Bodies (5 and 7 passenger)

The Sedan body for five passengers is mounted on the 236 chassis and the seven passenger is mounted on the 243 chassis. These bodies combine perfectly the elements of smartness and utility. Wide plate glass windows and narrow uprights insure maximum vision in all directions.

A fabric covered robe rail of the stationary type is conveniently mounted on the back of the front seat.

A carpet covered foot rail folds back out of position when not required.

The Packard Eight Sedan Limousine Bodies

(5 and 7 passenger)

The Sedan Limousine body for five passengers is mounted on the 236 chassis and the Sedan Limousine body for seven passengers is mounted on the 243 chassis.

The front and rear compartments are divided by a full plate glass partition above the seat back, the glass division being in two sections, either of which may be slid its full length.

The driver's compartment below the belt is upholstered in best quality, first cut, hand crushed, Spanish leather.

The telephone for communication between the driver and the rear compartment is of the Dictograph type with a portable transmitter attached to a cord and reel. It is neatly stowed away out of sight in the pocket under the right arm rest in the rear compartment. The Dictograph horn in the front compartment is of the flush type, being concealed back of the body panel.

In other respects the design and construction is similar to the Sedan bodies.

The Packard Eight Coupe Body (4 Passenger)

The 4 passenger Coupe is mounted on the 236 chassis.

In seating space this model is one of the most commodious on the market. Three passengers can be carried with utmost comfort, and when desired, a forward folding auxiliary seat increases the capacity to four. The seat for two passengers is slightly behind and to the side of the driver's seat.

The very best grade of all wool broadcloth upholstery material is used throughout.

A compartment with a hinged lid is provided directly behind the driver's seat for parcels, portfolios, bags, etc. Ample luggage space is provided by a compartment in the rear deck, the lid of which is fitted with a Yale lock. Provision is made for carrying a golf bag when desired. Leakage of water into the compartment is prevented by a concealed self-draining water trough.

The two rear side windows lower flush with the window belt by means of a rotary type window regulator.

The Packard Eight Coupe Body (5 passenger)

The five passenger Coupe body is mounted on the 236 chassis. This is one of the smartest productions in the entire line. Three passengers are provided for on a generous seat which extends the entire width of the body similar to the Sedan. A well proportioned, comfortable driver's seat is provided and the capacity is increased to five by a large, bucket type, forward-tilting seat of luxurious proportions.

Exceptionally large doors, 30½" wide, permit easy entrance or egress.

A neatly designed luggage trunk at the back lends a clever sport touch. Contained in this trunk are

two medium sized suit cases and a hat box. A cover makes it proof against water or dust. Should it prove convenient to remove the trunk and carry other luggage on the rear platform, the rear body panel is fitted with heavily nickel plated bars which protect it from scratches, and enhance the fine appearance of the car.

Mechanical Features

Motor

The motor is strictly of Packard design and manufacture. It is compact, light in weight, smooth running and exceptionally quiet. The motor has eight cylinders in line, unit power plant, clutch and transmission integral.

Motor accessibility is very apparent from the location of the various units and method of attaching.

The fact that every driven unit has its own individual drive eliminates flexible joints and other connections which wear out and become noisy. The number of hose connections is reduced to a minimum of two, three at least being required by the usual design. The clean lines of the Packard Eight motors are the result of well balanced design.

Gasoline System

A vacuum feed gasoline system is used. The main gasoline tank is located on the rear of the frame with a capacity of 21 gallons. The gasoline filler is placed near the left end of tank. The vacuum feed tank is located on the front of the dash. The gasoline shut-off is at the outlet of the vacuum tank, and the gasoline strainer is located in the bottom of the carburetor body where it is readily removable for cleaning. The gasoline gauge is mounted on the instrument board and reads in gallons.

The carburetor and fuelizer are exclusively Packard design and are located on the right side of the motor.

Carburetor

The carburetor is supported by the manifold which contains the fuelizer. The carburetor is of the automatic float feed type, with an air valve and a cylindrical mixing chamber.

A suction tube leads from the base of the spray mixing tube past the carburetor into the intake passage above the throttle valve. The function of this tube is to prevent flooding of the motor when it is idled or driven by the car in coasting with the clutch engaged.

Fuelizer

The Packard fuelizer was developed for Packard cars to combat the trouble and inconvenience caused by the use of the less easily volatilized fuels that are on the market today. The fuelizer applies heat to the gas being drawn into the combustion chamber so that a much drier mixture of gasoline and air is obtained even at low throttle openings. This feature greatly improves the distribution of the gas to the various cylinders, reduces carbonization, and with the proper use of the carburetor choke on the dash materially reduces crankcase oil dilution. It adds greatly to the pleasure of driving by reducing the duration of the "warming up" period.

The action of the fuelizer is as follows: a small fraction of the gasoline and air mixture passing to the engine is shunted from the throttle valve shaft into a passage in the manifold which leads to the burning chamber of the fuelizer. This mixture is ignited by the spark plug in the side of the fuelizer burning chamber and burns with a steady flame which can be viewed through the inspection glass on top of the fuelizer. The flame heats the burning chamber walls and then the hot burned gas mixes with the charge going into the engine from the carburetor. The application of heat to the ingoing mixture greatly improves its gasification which is particularly important at the lower throttle openings at which time the fuelizer supplies its maximum heat.

The action of the fuelizer is not to be compared with a hot spot manifold. In the hot spot the most heat is furnished when the motor is turning over rapidly and when the motor does not need so much heat. Little or no heat is furnished for initial operation in cold weather when heat is most needed.

The fuelizer furnishes the most heat when the motor is throttled down and goes out at high throttle openings. This action is automatic and is controlled by the action of the throttle valve. When this valve is partly closed there is a suction through the fuelizer, but as the valve is opened the suction through the fuelizer is reduced.

Gasoline economy is little affected one way or the other by the gasoline burned in the fuelizer, but the fuelizer makes possible the use of a light mixture which greatly increases the economy.

The remarkable combination of quick pick-up, great economy, power and speed, easy starting, and rapid warming features which can be obtained only on Packard cars, is due more than anything

else to the highly perfected design and construction of the Packard carburetor and fuelizer.

Cylinders

The cylinders are hard gray iron castings carefully machined and the bores are ground to size.

The motor is of the "L" head type, cylinders cast in one block, with a detachable head which greatly facilitates service and permits the combustion chambers to be completely machined. The cylinder bore is $3\frac{3}{8}$ " and the stroke 5".

Crankcase

The crankcase is cast in two parts and is made of aluminum alloy castings. It is rigidly supported in the frame at four points.

The nine crankshaft and eight camshaft main bearings are cast in the webs of the upper half. The lower half forms the oil reservoir. Baffle partitions located across the bottom of the crankcase retard surging of the oil. The lower half can be removed without disturbing the crankshaft bearings, the front cover, or the clutch and transmission assembly.

There is an inspection opening in the upper half over the flywheel to facilitate checking the timing; also one at the front of the case for inspecting the front end chain adjustment.

The case is of the barrel shaped type, to give maximum strength with minimum weight. This completely ribbed bridge-like structure furnishes ample support for the nine main bearings on the crankshaft.

But few manufacturers of automobiles can stand comparison of their crankcase and crankshaft with those of the Packard Eight.

Crankshaft

The drop forged crankshaft is supported by nine main bearings.

The shorter the distance between supports on a crankshaft, the smaller the tendency for vibration. On the Packard Eight the maximum distance between bearings is $2\frac{15}{16}$ ".

This combined with the large diameters of main and crank pin bearings gives such torsional stiffness that the vibration periods (common to all gas engines) are practically imperceptible in the speed range of the car.

It should also be noted that the arrangement of crank throws is new in order to avoid having the vibration periods of two four cylinder motors.

In effect the Packard Eight is one four cylinder motor with half another four cylinder motor at each end, this combination resulting in a perfection of balance hitherto attained only by six or twelve cylinder motors.

The crankshaft design is strictly a Packard innovation. It gives perfect balance, a feature among eights first introduced by Packard. In the design of the 8 cylinder crankshaft the crank pins for cylinders 3, 4, 5 and 6 lie in one plane at right angles to the common plane of the crank pins for cylinders numbers 1, 2, 7 and 8.

This arrangement together with the new system of counterbalancing and a specially designed vibration damper fitted to the front end of the shaft makes for perfect balance and smooth motor operation. Oil ducts are drilled from the main bearings to each adjacent connecting rod bearing for the purpose of supplying oil to each lower connecting rod bearing.

The crankshaft thrust is taken on the rear main bearing and a special oil guard is provided at that point to minimize the leakage of oil.

Bearings

The crankshaft main bearings, nine in number, are of the bronze shell, babbitt lined type. They are $2\frac{3}{8}$ " in diameter with lengths over all as follows:

Bearing No. 1	$2\frac{11}{32}$ "
Bearing No. 2	$2\frac{5}{64}$ "
Bearing No. 3	$1\frac{31}{64}$ "
Bearing No. 4	$1\frac{5}{64}$ "
Bearing No. 5	$1\frac{5}{64}$ "
Bearing No. 6	$1\frac{5}{64}$ "
Bearing No. 7	$1\frac{3}{64}$ "
Bearing No. 8	$1\frac{5}{64}$ "
Bearing No. 9	$2\frac{1}{2}$ "

The total main bearing length on the Packard Eight motor is $14\frac{3}{8}$ inches. This rigid supporting of the crankshaft assists materially in making the Packard Eight motor free from vibration.

Connecting Rod

The Packard Eight connecting rod is designed with extreme care to give maximum strength with minimum weight. It is of a special I-beam drop-forged type, and the rods are selected so that each rod in any motor varies less than one-quarter of one ounce in weight from its mates. Both of the connecting rod bearings are broached in place to a perfectly true and smooth surface, which, when lubricated by the motor oiling system, assures

noiseless operation for an almost indefinite period. The connecting rod lower end bearing is $2\frac{1}{8}$ " in diameter and $1\frac{1}{2}$ " long.

The crank pin and piston pin bearings are lubricated under pressure, the lubricant to the piston pin being conducted from the crank pin through a rifle bored hole lengthwise of the connecting rod. The crankshaft bearings and connecting rod bearings on Packard cars have been long famous for their wonderful durability and efficiency, and the Packard Eight bearings not only maintain the Packard reputation but enhance it.

Pistons

The pistons are of cast iron and are provided with 3 rings, the lower ring being of the oil-sealing type.

Camshaft

The camshaft is a steel forging with sixteen integrally forged cams, all of which are case hardened and accurately ground. A spiral gear is forged and machined in the center of the shaft for the purpose of driving the gear oil pump below and the ignition distributor above. The camshaft bearings are of cast iron.

The camshaft is lubricated from the crankshaft rear main bearing, which meters the oil in proper quantities through a rifle bored passage extending through the length of the camshaft.

Valves

The valves are made of a special alloy steel which withstands high temperatures, giving maximum service without re-grinding. They are made of round bar stock with the head upset on them which gives radial grain to the metal and adds strength. In this construction the valve and valve head are all one piece which reduces tendency to warp and depreciate in service or to fail by rupture of a weld between the head and stem.

The intake valve diameter is $1\frac{5}{8}$ " and the exhaust valve diameter $1\frac{1}{2}$ ". The enlarged intake valve allows for the correct charge being drawn into the cylinder at high motor speed.

Valve Gear

The valve gear consists of a camshaft operating at half engine speed, silently driven from the front end of the crankshaft by a silent chain designed for this purpose. Each cam on the shaft actuates a rocker arm interposed between the cams and the valve tappets or push rods. The rocker arm performs the dual function of removing the side

thrust, avoiding wear and noise at the valve tappets or push rods and providing opening and closing characteristics for the valves, assuring a well charged cylinder even under very high speed conditions.

Anti-friction rollers are fitted to the rocker arms to contact with the camshaft. All wearing surfaces of valve gear are specially hardened, ground and accurately finished.

Valve Springs

Valve springs are given 100 per cent inspection to insure sufficient strength. Best grade of spring steel is used to insure long life.

Front End Chain and Sprockets

On all gasoline engines it is necessary to drive auxiliary units on shafts other than the crankshaft. On the Packard Eight a silent chain $1\frac{1}{2}$ " wide is used for this work.

The chain drive has only three sprockets and is but $31\frac{1}{2}$ " long, which is as short as it could possibly be made. This minimizes the tendency to stretch. The smaller sprocket which drives the generator also incorporates an adjustment feature whereby the chain may be adjusted with extreme care without disturbing any other parts.

This chain pitch line, approximating an equilateral triangle in shape, has been referred to by authorities as being about as near to the ideal chain layout as has yet been designed.

No attempt has been made to reduce the weight of the sprockets because some flywheel action is desirable. There are holes tapped in the crankshaft sprocket for removal purposes, and the splines in the inside of the generator sprocket engage with those on the generator shaft, permitting easy removal of the generator assembly without disturbing the generator drive.

While considering the drive of the various auxiliary units on the Packard Eight motor, it is important to note that every unit is removable without disturbing another. The distributor at the top of the cylinder block is driven from the camshaft, the oil pump from a downward extension of the distributor drive, the water pump from the fan belt, the generator from the front end chain, and of course, the starter motor drives the flywheel. To adjust the chain, loosen the three nuts on the generator flange studs. The lower stud pivots the generator, making it merely necessary to move the top of the generator away from the motor until the chain has been properly adjusted. The proper

tension can be determined by adjusting until a slight humming noise develops, and then slacking or backing up the adjustment until this noise disappears. Then tighten the three nuts. A total deflection of one-eighth to one-quarter inch of the chain will result from this adjustment.

Electrical System

The electrical system is of the single wire or grounded return type. The source of current is the generator which charges the battery. The positive battery terminal is grounded.

The wiring is protected by enclosing in junction boxes and conduits.

The electric lighting system is protected by means of a circuit breaker which is located at the back of the lighting switch on the instrument board. If a short circuit should develop in the lighting system, the circuit breaker automatically operates and gives warning by means of a buzzing noise which continues to buzz until the short circuit is removed.

Incorporated in the special brake operating mechanism is the switch for the stop light which makes contact when the foot brake pedal is depressed.

The horn is fastened to the left side of the crankcase and the connections to it are very accessible.

The lighting system includes two main headlights, two auxiliary headlights for city driving, parking lights, combination tail light and stop light, instrument board lamp and tonneau light. In enclosed cars the dome light replaces the tonneau light.

The headlights contain lights of three degrees of illumination. Lights of 25-30 candle-power situated at the principal focus of the reflector furnish a high degree of illumination when needed; for city driving auxiliary lights of 20-25 candle-power out of the principal focus furnish a well diffused and ample illumination; for parking, lights of 2 candle-power are furnished by a low filament in the auxiliary bulb.

The headlights are mounted on a cross channel fastened to the front fender brackets. The headlight lenses are non-glare. The combination tail and stop light is supported from a bracket bolted to the frame.

Ignition System

The Packard Delco Ignition unit is mounted directly on the motor cylinder head between number four and number five cylinders and is driven from the camshaft by means of spiral gears. The coil is located on the rear of the dash.

Wiring

High tension wiring is carried through a tube along the top of the cylinder blocks. All wiring is housed and protected.

Battery

The battery is located in a battery case in the right front fender outside of the frame. It is common to the ignition, starting and lighting systems and is composed of three cells. The voltage is 6 volts and the capacity 160-ampere hours. The battery is readily accessible by removing the aluminum cover plate.

Generator

The generator is supported on the right front corner of the motor crankcase with provision for adjustment of the chain to compensate for chain stretch. The cutout relay is mounted on top of the generator.

Starting Motor

The starting motor is located on the left side of the motor close to the cylinder block and attached to the front face of the flywheel housing by means of a long pilot and one dowel screw, so that the starting motor can be easily removed for inspection. The starting motor is engaged with the flywheel by means of a standard Bendix drive and is enclosed and protected from dirt.

Ammeter

The ammeter and oil pressure gauge are mounted under one glass on the instrument board.

Starting Switch

The starting switch is located on the right of the accelerator pedal on the inclined toe-board.

Cooling System

The distinctly Packard radiator is of the cellular type. It is made with a detachable shell. The core is supported on the front cross member and is completely connected so that all of its functions are performed without the shell. This is important from a standpoint of manufacturing and service. The head of the thermostat, which is mounted

on the cylinder head, is the "sylphon," which is an accordion-shaped brass drum filled with a volatile fluid. This drum expands when heated just like pulling out an accordion, and automatically contracts when cooled. Bronze valves are fastened to one end, and are arranged so that, when the motor is cold, the circulating water goes through the by-pass lead instead of through the radiator, which means that the cooling water in the cylinder jackets is rapidly heated up so as to obtain motor efficiency quickly after starting from cold. Just as soon as it is heated up the passage to the radiator is then opened and the by-pass closed. This feature insures a quick warming up of the entire motor. To supplement this, the air flow through the radiator is also regulated by a shutter mechanism.

When cold, the flow will be entirely stopped which allows the engine to heat more quickly the restricted water circulation and the air under the bonnet, thereby adding to carburetor response. During driving, the air flow is regulated to preserve the most efficient condition.

For parking, to retain as much heat as possible the air flow regulator serves as a blanket by closing off the front of the radiator. This is done by simply pressing a button.

The feature of the water pump assembly is its simplicity. Mounted on the front of the cylinder block, it forces the water by centrifugal force through the cylinder water jackets, cylinder head jackets and thence to the radiator.

This construction permits the use of only one packing, which is very accessible, and only two hose connections, thus reducing the probability of leaks to a minimum. The water pump also incorporates the fan drive and the provision for adjusting the fan belt. The fan end of the water pump shaft turns in a roller bearing which is lubricated by a lubricator connector.

The Packard Eight cooling system is a model of simplicity and features extreme accessibility of the really very small number of parts used.

The capacity of the cooling system is $5\frac{1}{2}$ gallons.

Fan

A greatly improved aluminum blade built-up fan is used which provides a maximum draft of air together with ample clearance.

The fan is driven by a rubber belt running in V-groove pulleys from the camshaft.

Lubrication System

The lubrication system is of the circular pressure feed type.

A gear pump submerged in the oil supply in the bottom of the crank case circulates the oil under pressure through a manifold to the nine main crankshaft bearings through holes drilled in the bearing caps, thence through the crankshaft to the connecting rods and piston pins by means of a rifle bored hole lengthwise of the connecting rod. The lubrication of the cylinder walls is accomplished by the surplus oil thrown from the connecting rod and main bearings.

The camshaft and valve gear are lubricated by a lead from the crankshaft rear main bearing which meters the oil in proper quantities through a rifle bored passage extending through the length of the camshaft.

The oil from the various bearings returns by gravity to the reservoir for recirculation.

A regulator valve is provided as a part of the oil pump assembly, limiting the greatest pressure to approximately 50 pounds and so proportioned as to maintain a minimum pressure of 30 pounds under normal engine speeds.

Oil Rectifier

The Packard oil rectifier is standard equipment on all new Packard Eight cars. It controls the lubrication of the cylinder walls and pistons and promotes long motor life, smooth and silent operation by maintaining the viscous condition existing in fresh oil.

The oil rectifier consists of a tank with two separate compartments. The top compartment is connected to the intake manifold of the motor and is subject to the same vacuum or depression existing in the manifold. Another connection to this compartment in the form of a manifold registers with a small port or opening in the side of each cylinder wall, located at a point always sealed by the piston wall. The same compression and depression existing throughout the oil rectifier manifold system results in the drawing off of surplus oil between the pistons and cylinders together with products of combustion or unburned fuel before these elements have had an opportunity of contaminating the oil supply.

When the diluted oil reaches the top compartment of the rectifier the fuel or water which may be present is distilled off by heat from the exhaust manifold, the distillate then passing through the

connection to the intake manifold and becoming part of the mixture passing to the motor.

The rectified oil flows, by gravity, from the top compartment of the rectifier to the bottom through openings controlled by valves operated by a float mechanism contained in the bottom compartment and later at a predetermined point is automatically permitted to return to the crankcase.

The process of distilling the fuel and water from oil is continuous during the entire period the motor is in operation.

Exhaust System

Special attention has been given the design of the exhaust system to approach as near as possible silent discharge of gases into the atmosphere. Rigid construction and mounting, complete dampening of resonance of metal parts and proper provision for the expansion of gases, both in muffler and at the exit to the atmosphere, require proper treatment to accomplish this purpose.

To obtain rigidity the muffler is securely fastened by means of heavy brackets. The muffler in turn acts as the support for the exhaust pipe ends entering it. The front muffler joint is of the gland type packed with asbestos rope. The rear muffler connection is a flange joint, the flange being pinned and brazed to the tail pipe. The muffler itself is of very rigid construction. The outside and inside shells are beaded at intervals to give stiffness, and the entire assembly is held together by five long bolts passing into and clamping all parts rigidly together, forming non-leakable joints. Fitted to the rear of the tail pipe and acting as its support is a specially designed casting, rigidly fastened to the frame. This fitting acts as an exit for the gases to the atmosphere, the mouth being of such shape that gradual expansion takes place with exceptional quietness.

Resonance is reduced by carefully lagging the muffler and exhaust with asbestos which damps out any vibration set up in the shell. Proper expansion of gases in the muffler and tail pipe has been obtained after careful research to determine the exact areas and openings necessary to take care of the volume of exhaust gases emitted from the engine.

Chassis

There is one type Packard Eight chassis built in two wheelbase lengths—136 inch for the five-passenger bodies or less, and 143 inch for the seven-passenger bodies. The angle of the steering column

is 40° 41' on all models except the Sport, which is 36° 27'.

Chassis Lubrication

A new and improved system of oil lubrication has been substituted for the grease gun and its numerous connectors.

The new system consists of a centrally located oil reservoir and hand pump which is connected to the points requiring lubrication by means of concealed pipe lines. Lubricating the entire chassis is accomplished by withdrawing and releasing a spring operated pump handle located at the left of the steering column convenient to the driver. Metering fittings regulate the amount of oil which goes to each point of lubrication.

Frame

The frame has been designed to give ample strength. This has been obtained by using an 8 inch depth of the side member, and by tapering the frame from the front and rear end so that all offsets are eliminated. The frame steel is $\frac{3}{8}$ inches thick. Rigid forgings at each end of the frame are fitted with cross tubes which are riveted in place. These in addition to the regulation cross members form a very strong and rigid construction.

Springs

The front springs are semi-elliptical, 38 inches long and 2 inches wide and are mounted on the under side of the front axle and shackled at their front end by a compression shackle. The rear springs are semi-elliptical, 56 inches long and $2\frac{1}{4}$ inches wide and are shackled in tension at the rear end. Both front and rear springs are parallel to the tapered frame and solidly mounted to the axles, which forms a strong and safe construction.

Weights on Rear Springs

Lbs.

1150 Runabout.

1300 Five passenger Touring, four and five passenger Coupe and four passenger Sport.

1475 Five passenger Sedan, Sedan Limousine and seven passenger Touring.

1625 Seven passenger Sedan and Sedan Limousine.

Front Axle and Steering

The front axle performs two essential functions—acting as a carrying member and providing, in conjunction with the steering gear, means for guiding the car at the will of the driver. As safety is a pre-eminent requisite, the front axle as a support,

must be amply strong and as a control mechanism, must function to the greatest convenience of the driver, that is, there must be easy, dependable steering.

Strength is obtained by properly proportioning the members and selecting the most suitable materials.

Easy steering is obtained by a discriminating design and excellent workmanship. To obtain easy steering the steering knuckle pin is mounted top and bottom on ball bearings. The upper bearing has two rows of balls and takes only radial loads. The lower bearing is specially designed to take, in addition to the radial loads, the downward thrust or load due to the weight on the front axle.

Friction is further reduced by employing ball and socket joints for the front axle cross tube. These joints are self-adjusting without employing the high spring pressures commonly used.

The steering spindles are chrome vanadium steel forgings heat treated to give a tensile strength of 120,000 pounds per square inch.

Unlike conventional designs, the front axle I-beam is made to attach to the upper plate or surface of the front springs rather than the under surface. In other words, the front springs are underslung or clamped to the under surface of the axle I-beam. This construction permits the axle and the main plate of the spring, through which all of the thrust is transmitted, to be assembled in direct contact with each other. With the reverse construction any shifting of spring plates with relation to each other, due to loose spring clips or faulty assembly, causes the front axle to be shifted from its correct position with the resultant tire wear and misalignment of wheels. Again, with the underslung construction, the bending stresses in the front springs, due to braking torque, are greatly reduced.

The steering gear is of the worm and sector type, having three adjustments for accurately assembling the parts with correct relation to each other and to compensate for wear.

Just the right amount of reversibility is provided in the steering gear to obtain the smooth, self-restoring tendency from the front wheels in regaining their straight-ahead driving position after making turns.

The steering gear worm and worm wheel are made from nickel steel and hardened. Each worm with its mating worm wheel are lapped together to obtain smooth, easy operation.

Road shocks commonly transmitted through the steering mechanism are avoided in the Packard

design by the front spring suspension.

The entire steering wheel is walnut, handsomely finished. Harmonizing with the appearance of the wheel is an artistic, compact design for the spark and throttle control. Only the nicked handles of the controls and the walnut finished enclosures of the mechanism are visible. Neatly done in white enamel the control positions are indicated.

A horn button having a satin black finish is located in the center of the steering wheel convenient to the driver.

Turning Radius

The turning radius of the Packard Eight is 22' 6" for the 236 model and 24' 0" for the 243 model.

Clutch

The clutch assembly is mounted in a separate compartment at the front of the clutch and transmission case. This construction thoroughly protects the clutch from dirt, oil and water. The clutch shaft is mounted on an oilless bushing in the motor crankshaft and on a roller bearing in the transmission case. The direct drive and constant mesh gear is forged integral with it.

The clutch spider is machined all over and is reduced in weight to a minimum. It is the light weight of the driven clutch parts that contributes to the smooth and easy gear shift action on the Packard Eight.

The plates which drive the spider are of special steel, are finished perfectly smooth, and have gear teeth cut in them which engage with the gear teeth on the spider. This gives a multiple and accurate gear tooth contact which helps materially to make the clutch action easy and prevent wear and noise.

The other clutch plates which carry linings also have gear teeth cut in them, but these slide on the inside of the flywheel drum. There are four of the plain plates turning with the spider, and five of the plates with linings turning with the flywheel, giving eight bearing surfaces. This assures smooth action, long life and ample capacity to transmit the entire power of the motor to the rear wheels even under the most difficult circumstances.

No adjustments are necessary as the wear is automatically compensated for by the double clutch springs which also give added insurance against slippage. The position of the clutch pedal is regulated by a nut in easy reach under the floor board. A special means has been provided for expelling from the clutch small particles of the

friction material which usually collect in the gear teeth of the clutch drum, due to the wearing action of the plates while engaging.

Transmission

The transmission is of the selective sliding gear type, three speeds forward and reverse, with positive interlocking control. Both the main shaft and the counter shaft are short and stiff and mounted on anti-friction bearings. The case is designed to minimize resonance. All gears used in changing speeds are carefully chamfered to insure easy meshing when shifting. All gears are very carefully heat-treated and ground to insure maximum strength and wearing qualities of the teeth.

Gears with stripped teeth are practically unheard of in Packard cars. This is true because of the alloy steel and the careful manufacturing processes used in their production.

The change speed lever is made to present a neat appearance and the ball at the upper end is convenient to reach without stooping forward. The speeds have the following ratios:

Total Gear Ratios

First.....	15.71 to 1
Second.....	8.20 to 1
Third or high.....	4.7 to 1
Reverse.....	19.66 to 1

Speedometer

The speedometer drive is placed at the rear of the transmission and driven by a spiral gear from the transmission shaft. This gives a very quiet drive and is perfectly lubricated at all times.

The speedometer is mounted on the instrument board and is of the flush type, the clock being included and built into the unit.

Universal Joints

Universal joints are of the all metal type, all bearing surfaces being effectively enclosed, requiring lubrication only at intervals of every ten thousand miles. The propeller shaft is of the tubular type held within close limits for straightness, assuring smooth operation.

Rear Axle

The rear axle is of the semi-floating type. The housing is made of pressed steel. The torque of the rear axle is taken up jointly by the rear springs and a torque arm of rugged construction made of a steel stamping with ends securely riveted in

place. Driving forces are transmitted through the rear axle springs.

The pinion shaft is mounted on adjustable tapered roller bearings specially designed for taking thrust loads.

A new mounting is used for the differential bearing; the bearing cups are pressed into the differential housing and the cones mounted on adjustable threaded sleeves, fitting accurately reamed seats in the differential carrier.

The rear axle shafts are mounted on single row, deep groove ball bearings, which definitely locate them in the housing.

The rear axle gear ratio is 4.7 to 1 on all models except the Sport and Runabout, which is 4.08 to 1.

Wheels

The steel disc wheels, designed for 33 x 6.75 low pressure tires, harmonize with the long wheelbase and general smartness of the body lines. All wheels are interchangeable. Tire inflation is facilitated by accessible valves on the outside of the wheels.

Brakes

The service brake operates on all four wheels and is of the external contracting type on the rear wheels and internal expanding type on the front wheels. All of these are operated by a pedal through a compensating or equalizing linkage.

The initial travel of the foot brake pedal connecting rod is multiplied by a small planetary gear set housed in the pedal anchorage so that the slack in the brake actuating linkage and the brake-shoe-to-drum-clearances are taken up by a comparatively small amount of pedal travel. As the pedal travel continues the linkage builds up its leverage as the connecting rod actuating lever approaches "going over center" so that great pressure may be applied to the brake shoes with normal pedal pressure.

The emergency brake is of the internal expanding type and operates separately on the rear wheels only.

Each brake shoe has a wire woven asbestos facing which makes contact with the brake drum when the brakes are applied.

To eliminate braking stresses in the steering knuckle arms, cross tubes, drag link and steering gear, the steering pivot axis is inclined so that its center line, if continued, would intersect the ground where the tire bears.

The use of four wheel brakes reduces the minimum stopping distance enormously, increases the life of the tires, adds life to the brakes and eliminates skidding to a surprising degree.

Running Boards and Splashers

The running boards are tapered to match the frame. This gives a wider running board under the front door and is therefore an advantage as it gives a little extra room at the point where it is needed. They are carpeted with battleship linoleum bordered with nickel plated brass strips.

The running board splashers are tapered to match the frame and body lines. Leather liners are used between the frame splashers and running board. The radiator front splashers are very readily detachable. It is made to enclose the front spring, front bracket and also forms a very neat joint at the inner edge of the bonnet frame ledge.

The crankcase splashers are made readily removable and form a mud-tight joint between the crankcase and frame.

Tires

For the front and rear wheels straight side cord tires with non-skid treads are used. All tires are size 33 x 6.75 low pressure, 6 ply.

Spare Wheel and Tire Carrier

A spare wheel carrier is supplied on all 236 and 243 models. It is bolted rigidly to the frame rear cross member and cross tube and is of the hub clamping type. No straps or shoes are used. The spare wheel is clamped between the carrier and a screw cover operating by a convenient T-type handle, in which is fitted a barrel type lock.

Standard Painting

Open Cars

Body and door panels—Dust-Proof Gray Deep, striped with Extra Permanent Vermilion.

Moldings—Black.

Wheels—Dust-Proof Gray Deep, striped with Extra Permanent Vermilion and Black, except Sport, which are Permanent Vermilion, striped Black.

Bonnet—Dust-Proof Gray, louvers striped Extra Permanent Vermilion and Black.

All other parts—Black.

All bright metal parts—Nickel plated.

Enclosed Cars

Body and door panels—Packard Blue, striped with Azure Blue with black molding.

Upper body—Black.

Wheels—Packard Blue striped with Azure Blue.

Bonnet—Packard Blue, louvers striped with Azure Blue.

All bright metal parts—Nickel plated.

All other parts—Black.

Standard Trimming

Open Cars

Seats—Spanish leather. Plaited style trimming, plaits approximately 4 inches wide, except Sport, which is trimmed plain. Rear side quarter trimmed in Spanish leather plain.

Garnish moldings and steering wheel are stained walnut in semi-gloss finish.

Instrument board and control sector housing are of enameled imitation walnut in semi-gloss finish to match steering wheel.

Floor and heel panel in tonneau are covered with horse-hair carpet. Pockets in all doors. Pockets in left doors specially constructed and used for storing storm curtains. Pocket under cowl on right side for small tools, etc.

Front compartment floor boards, linoleum carpeted board with aluminum molding. Inclined floor board and toe rest aluminum casting.

Robe rail stationary and nickel plated.

Enclosed Cars

Front seat of Sedan, special Packard upholstery cloth.

Front and rear seats, button tufted style trimming.

Rear seat of Sedan, special Packard upholstery, button tufted, matches interior trimming.

Driver's seat of Coupe, special Packard upholstery cloth to match interior.

Passenger seat of Coupe, special Packard upholstery cloth, button tufted.

Front compartment of five and seven-passenger Sedan Limousines trimmed in leather to belt line, above belt line trimmed in special Packard upholstery cloth.

The entire rear compartment, including roof, sides, seat backs and doors trimmed in special Packard upholstery cloth.

Floor and rear compartment of Sedan and Sedan Limousine carpeted to match upholstery.

Two rear side windows and direct rear window fitted with roller silk curtains to match upholstery.

Finishing strips and steering wheel stained walnut in semi-gloss finish.

Instrument board and steering wheel control housing, enameled imitation walnut in semi-gloss finish to match steering wheel.

Front level floor boards, linoleum carpeted with aluminum molding.

Inclined front floor board and toe rest, aluminum casting.

All silks, carpets and laces to match upholstery.

Standard Equipment

Chassis Equipment

Electric starter.

Electric generator and storage battery.

Power type tire pump and hose.

Electric head and combination auxiliary lights and parking lights, equipped with non-glare lenses.

Electric combination tail lamp and stop light and electric license tag illuminator.

Electric horn.

Tool roll with complete equipment of tools.

One ton jack.

One extra wheel and spare wheel carrier.

Rear wheel carrier lock.

Wheel changing tool.

One spare tire.

One cover for spare tire.

Stabilators.

DeLuxe motometer.

Bumpers front and rear.

Automatic radiator air-flow regulator.

Cowl ventilator.

Instrument Board Equipment

Gasoline gauge.

Ignition and lighting switches.

Cigar lighter.

Speedometer clock combination.

Speedometer includes miles per hour, trip and total odometers.

Ammeter.

Oil pressure gauge.

Carburetor dash adjustment.

Instrument board lamp with adjustable visor.

Tires and Wheels

Low pressure tires, straight side 33 x 6.75 inch, non-skid front and rear.

Steel disc wheels for 33 x 6.75 inch tires.

Open Bodies

Packard one man top with enclosing curtains.

Four door curtain opening attachments.

Packard windshield.

Robe rail.

Folding foot rest.

Tonneau lights.

Folding auxiliary seats in seven-passenger models.

Rear-view mirror.

Automatic windshield cleaner.

Enclosed Bodies

Rotating window regulators.

Dome light.

Fabric covered robe rail, stationary type.

Folding foot rest, carpet covered.

Inside locks on left door of Coupes, on left doors of Sedans and Sedan Limousines and right rear door of Sedans.

Outside cylinder locks on right door of Coupes and right doors of Sedan Limousines and right front door only of Sedans.

Smoking set and vanity case (vanity case only in 4-passenger Coupe).

Folding seats in seven-passenger Sedans and Sedan Limousines.

Rear view mirror.

Automatic windshield cleaner.

Specifications in Brief

Engine

Eight cylinders cast in one block.

Removable cylinder head.

Nine bearing crankshaft.

Piston displacement 357.3 cubic inches. Four-point suspension.

Fuelizer

Exclusive Packard feature—standard equipment.

Cylinders

"L" head type, bore $3\frac{3}{8}$ inches, stroke 5 inches.

Horsepower

36.4 SAE rating—block test actually develops over 80 H. P.

Ignition

Generator, battery, and Packard Delco distributor.

Gasoline System

Vacuum feed tank, capacity 21 gallons.
Gasoline gauge mounted on instrument board.

Frame

Pressed steel, 8 inches deep.
Rigid torsion tubes at front and rear and cross channels preventing frame weave.

Springs

Front semi-elliptic, 38 inches long and 2 inches wide.
Rear semi-elliptic, 56 inches long and $2\frac{1}{4}$ inches wide.

Lubrication

All motor bearings supplied with oil under 30 pounds pressure for normal running. Pressure increases with power requirements. All chassis bearings lubricated by pressure feed oiling system from oil supply reservoir located on dash.

Clutch

Multiple disc, dry plate.
Five lined driving plates, four steel driven plates.

Transmission

Three speeds forward, one reverse—selective type.

Brakes

Service brakes on all four wheels, internal expanding on front and external contracting on rear. The emergency brake internal expanding on rear wheels separate from service brake.

Starting System

Individual starting motor with automatic engagement to flywheel, which has alloy steel heat treated teeth.

Lighting System

Headlights with combination auxiliary driving lights and parking lights.

Instrument board light and combination tail light and warning signal.

Current for lighting supplied to battery by individual 6-volt generator.

Cooling System

Capacity $5\frac{1}{2}$ gallons, with automatic thermostat device regulating temperature of water.

Aluminum bladed fan.

Detachable automatic radiator air-flow regulator.

Wheel Base

136 inches and 143 inches.

Tread

$56\frac{1}{2}$ inches front; $57\frac{1}{2}$ inches rear.

Turning Radius

24' 6" for 136 inch wheel base.

24' 0" for 143 inch wheel base.

DIMENSIONS AND CAPACITY OF PACKARD EIGHT CARS

All Measurements are in Inches

TYPE NUMBER		LENGTH OVER ALL	WIDTH OVER ALL	HEIGHT OVER ALL TOP UP
244	Touring 5 Passenger (236).....	198 1/2	68 1/8	76
246	Sport 4 Passenger (236).....	201 1/2	68 1/8	73
234	Runabout 4 Passenger (236).....	198 1/2	68 1/8	73 1/2
245	Touring 7 Passenger (243).....	205 1/2	68 1/8	76
239	Coupe 4 Passenger (236).....	198 1/2	68 1/8	77 1/2
242	Coupe 5 Passenger (236).....	198 1/2	68 1/8	77 1/2
253	Sedan 5 Passenger (236).....	198 1/2	68 1/8	78
257	Sedan Limousine 5 Passenger (236)...	198 1/2	68 1/2	78
254	Sedan 7 Passenger (243).....	205 1/2	68 1/8	78
256	Sedan Limousine 7 Passenger (243)...	205 1/2	68 1/8	78

APPROXIMATE DIMENSIONS OF PACKARD EIGHT OPEN BODIES

All Measurements are in Inches

	244 TOURING BODY (5-Pass.)	246 SPORT BODY (4-Pass.)	245 TOURING BODY (7-Pass.)	234 RUN- ABOUT BODY (2-4-Pass.)	
Length over all (at belt).....	111 1/8	107	118 1/16	105 1/16	From Lug- gage Com- part- ment
Length—dash to front of front seat.....	26 3/8	26 1/2	26 3/8	26 3/8	
*Length—back front seat to front rear seat.....	25 7/8	19 7/8	34 1/2	13 1/2	
Width over all (at belt—panel to panel).....	55 1/8	50 1/8	55 1/8	51 3/4	
Greatest width floor in tonneau.....	44 1/2	44 1/2	44 1/2	41 3/4	
Front door width.....	22 3/4	21 1/2	22 3/4	22 3/4	
Rear door width.....	22 3/4	21 1/2	22 3/4		
SEATS:					
Front: Depth.....	17 5/8	17 7/8	17 5/8	17 5/8	
Height—floor to top of cushion.....	12	10	12	12	
Height of seat back.....	17 11/16	18 1/2	17 11/16	19 11/16	
Rear: Depth.....	21	21	21		
Width.....	47	42	47		
Height—floor to top of cushion.....	14	12	14		
Height of seat back.....	19 1/2	19 3/8	19 1/2		
Folding: Depth.....			15 3/8	Rumble Seat 16 3/8	
Width.....			13 7/8	39	
Height—floor to top of cushion.....			15 1/8	11	
Height of seat back.....			13 3/4	21 3/8	
†Head Room:—distance from top of seat cushion to headlining of top—front.....	36 7/8	36 1/4	36 7/8	37 7/8	
to headlining of top—rear.....	37 3/4	37 1/4	37 3/4		

*Measured 20" from Floor. †Measured from Point 5" Ahead of Seat Back Cushion. ‡Measured from Bottom of Floor Pan.

APPROXIMATE DIMENSIONS OF PACKARD EIGHT ENCLOSED BODIES

All Measurements are in Inches

	253 SEDAN (5-Pass.)	257 SEDAN LIMO. (5-Pass.)	239 COUPE (4-Pass.)	242 COUPE (5-Pass.)	254 SEDAN (7-Pass.)	256 SEDAN LIMO. (7-Pass.)
Length over all (at belt) except Coupes	113 $\frac{1}{8}$	113 $\frac{1}{16}$	105 $\frac{1}{16}$	107 $\frac{1}{16}$	120 $\frac{1}{16}$	120 $\frac{1}{16}$
Length—dash to front of front seat	26 $\frac{3}{8}$	26 $\frac{3}{8}$	26 $\frac{3}{8}$	26 $\frac{3}{8}$	26 $\frac{3}{8}$	26 $\frac{3}{8}$
Length—back of front seat to front of rear seat	28 $\frac{1}{4}$			10 $\frac{3}{8}$	34 $\frac{1}{2}$	
*Distance from partition to front of folding seat			6 $\frac{1}{2}$	10 $\frac{3}{8}$	8 $\frac{1}{8}$	8 $\frac{1}{8}$
*Distance from front of rear seat to folding seat					7	7
Distance from partition to front of rear seat		29 $\frac{1}{4}$				35 $\frac{3}{4}$
Width over all (at belt—panel to panel)	62	62	60	58 $\frac{3}{4}$	62	62
Width of floor in tonneau	48 $\frac{1}{2}$	48 $\frac{1}{2}$	40	44 $\frac{1}{2}$	48 $\frac{1}{2}$	48 $\frac{1}{2}$
Height of rear compartment	51 $\frac{1}{2}$	51 $\frac{1}{2}$	50 $\frac{3}{4}$	50 $\frac{3}{4}$	51 $\frac{1}{2}$	51 $\frac{1}{2}$
Front door width	25	25	25	29	27 $\frac{1}{4}$	27 $\frac{1}{4}$
Rear door width	25	25			27 $\frac{1}{4}$	27 $\frac{1}{4}$
SEATS:			Driver	Driver		
Front: Depth	17 $\frac{5}{8}$	16 $\frac{5}{8}$	18 $\frac{1}{2}$	18 $\frac{1}{2}$	17 $\frac{5}{8}$	16 $\frac{5}{8}$
Width	46	46	21	23	46	46
Height—floor to top of cushion	12	12	12	12	12	12
Height of seat back	20 $\frac{3}{8}$	17 $\frac{1}{2}$	19	19 $\frac{3}{8}$	20 $\frac{3}{8}$	17 $\frac{1}{2}$
Rear: Depth	21 $\frac{1}{4}$	21 $\frac{1}{4}$	20 $\frac{5}{8}$	20 $\frac{5}{8}$	21 $\frac{1}{4}$	21 $\frac{1}{4}$
Width	49	49	38	47	49	49
Height—floor to top of cushion	14 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$	14 $\frac{1}{4}$
Height of seat back	20 $\frac{3}{4}$	20 $\frac{3}{4}$	19 $\frac{3}{4}$	19 $\frac{3}{4}$	20 $\frac{3}{4}$	20 $\frac{3}{4}$
Folding: Depth			15	17 $\frac{7}{8}$	17 $\frac{7}{8}$	17 $\frac{5}{8}$
Width			13 $\frac{7}{8}$	19 $\frac{1}{2}$	17 $\frac{3}{4}$	17 $\frac{3}{4}$
Height—floor to top of cushion			11 $\frac{7}{8}$	12	15 $\frac{3}{4}$	15 $\frac{3}{4}$
Height of seat back			14 $\frac{3}{4}$	19 $\frac{3}{8}$	14 $\frac{3}{2}$	14 $\frac{3}{2}$
†Head Room:—Distance from top of seat cushion to headlining of top—front	40 $\frac{1}{2}$	39 $\frac{1}{4}$	39 $\frac{3}{4}$	39	40 $\frac{1}{2}$	39 $\frac{1}{4}$
to headlining of top—rear	39 $\frac{1}{4}$	39 $\frac{1}{4}$	38 $\frac{1}{2}$	38 $\frac{1}{8}$	39 $\frac{1}{4}$	39 $\frac{1}{4}$

*Measured 20" from Floor.

‡Measured from Bottom of Floor Pan.

†Measured from Point 5" Ahead of Seat Back Cushion.

License Data

Number of Cylinders.....	8
Cylinder bore.....	3 $\frac{3}{8}$ in.
Horsepower (N. A. C. C. rating).....	36.4
Piston Displacement.....	357.8 cu. in.
Stroke.....	5 in.

Shipping Weights

	236	243
Touring.....	4090 lbs.	4199 lbs.
Roadster.....	4060 lbs.	
Sport (4 passenger)....	4023 lbs.	
Coupe (4 passenger)....	4242 lbs.	
Coupe (5 passenger)....	4337 lbs.	
Sedan.....	4528 lbs.	4655 lbs.
Sedan-Limousine.....	4535 lbs.	4710 lbs.
Chassis.....	3433 lbs.	3483 lbs.

If the weight of a car ready for the road is desired, approximately 180 pounds should be added to the above weights to cover water, gasoline, and oil.

Size of Tires.....	33 x 6.75 in.
Road Clearance.....	10 in.
Wheel Base.....	136-143 in.

Vehicle number on manufacturer's patent plate on dash.

Motor No. on right front crankcase—upper half.