

Facts About the "Twin-Six"

NUMBER SIX ISSUED MARCH, 1920
Supersedes Numbers 1, 2, 3, 4 and 5

Packard
MOTOR CARS



Property of
Packard Motor Car Company
Detroit, Michigan

The Packard "Twin-Six"



The practice of calling the Twin-Six "3-35" has been discontinued and it will be simply designated as "Packard Twin-Six."

The windshield is of the same design as used on the Third Series bodies and slopes backward to harmonize with the body lines and eliminate objectionable light reflection.

On the open car it has swinging upper and lower sashes and it is possible to swing the lower sash backward so as to ventilate the front compartment. The upper sash may be thrown forward to act as a rain vision. Both the upper sash and stanchion may be folded forward when the top is in the lowered position. Rubber weather strips are set into the windshield sash moulding around the sides and bottom, a flap from the top of the upper sash upper moulding serving to prevent wind and rain from blowing in over the top of the windshield.

The windshield on enclosed bodies has swinging upper and lower sashes, but of course the stanchions must be stationary. The upper sash glass overlaps the lower glass a sufficient amount so that in ordinary rainy weather water will not come through into the body. A rubber moulding, however, is furnished with each car to prevent rain from driving through into the front compartment, should its use be necessary. Windshields of all models are equipped with a windshield cleaner which effectively clears the glass in rainy weather and an adjustable sun-shade is provided for windshields of the two inside drive models, the Duplex Sedan and Duplex Coupe. Stanchions are drop-forged in all cases and sash mouldings are drawn steel tubing.

The fender design is of a semi-crown type made of a one-piece steel stamping.

Open body panels are aluminum stampings with the exception of the touring body which is of stamped steel construction. The touring body has sills of steel construction and the other body types have sills of wood. The heel panels, seat frames and floor pans in the bodies are also of steel construction. The body dash, cowl and cowl board are one unit, made of steel stampings welded together. The enclosed body panels are steel below the belt. The roof panel is made of one-piece aluminum from the visor front end to the belt at the rear of the body. This eliminates any possibility of roof leaks in panel joints.

The wheel housings are made integrally with the rear seat or tonneau panel.

In the open car all doors are trimmed to give the maximum pocket space. The pockets have been redesigned and the flaps are of a square-cornered pattern. The tool pocket is in the right-hand side of the body cowl and is in both open and closed bodies of all types.

The foot rest is of an entirely new design, being a solid brass tube nickel plated and knurled all over. The open ends of the tube are neatly closed with nickel plated caps.

The very satisfactory Packard top is continued. The gypsy curtain is made integral with the back curtain and the latter is attached to the body with a nickel plated moulding.

The top curtains for all open models have been entirely redesigned and when in place afford absolute protection from wind and rain. Door curtain operating rods, made of solid bar stock to increase stiffness, are supplied for all open body doors and are stowed in pockets at the side of the rear seat where they are readily accessible. The curtains are stowed in the left-hand door pockets where they are quickly accessible.

All door stops are taken care of in the construction of the hinges, which eliminates the undesirable features of the old door stops.

The robe rail in open bodies is of the folding type and is black enameled.

A flexible robe rail is used in the enclosed bodies trimmed in cloth to match the upholstery and held in place with nickel plated fastenings.

The Marshall type of cushion springs is continued in all seat cushions in both open and enclosed cars.

The finishing mouldings on the top rail of open bodies are an aluminum section which is applied in such a manner as to conceal the nails used in attaching.

The seven-passenger touring body is equipped with a small locker located between the auxiliary folding seats and fitted with a Yale lock.

All open bodies are equipped with horsehair carpet in the rear compartment.

An umbrella holder is located in the right rear quarter of the touring car.

In all types of cars the passengers face forward.

Window curtains with rollers are furnished on the rear compartment windows and the door curtains are mounted on the bodies above the door, thus not exposing them to the weather when the door is open.

The toilet cases in the enclosed bodies are of the open type and made of walnut, and the fittings are of an entirely new distinctive Packard design.

The finishing mouldings in the enclosed bodies are finished to match the walnut toilet cases.

The electric telephone for communication between the rear compartment and the driver in enclosed bodies is the autophone type of instrument, with a portable receiver attached to a cord and reel, and is neatly stowed away out of sight in the pocket under the right arm rest in the rear compartment.

All enclosed bodies with the exception of the Duplex Coupe are of the round rear cornered type.

Body Types

Twin-Six

Touring
Phaeton
Runabout
Limousine
Duplex Coupe
Duplex Sedan

Touring Body

Capacity 7 passengers, with two forward folding auxiliary seats.

The body is an improvement over the "3-35" body having some changes in the seating arrangement. The front seat is made deeper and lowered about one inch. This change in the front cushion also provides greater clearance between the driver

and the steering wheel and gives increased comfort. The rear seat is lowered about two and one half inches and made deeper. The top curtains have been redesigned and made storm-proof. The same exterior body lines are retained as in the "3-35" type.

Phaeton

Capacity 4 or 5 passengers. This body resembles the touring body except it has more of the square-cornered lines and a much narrower appearance when viewed from the rear. There is less tonneau room, no auxiliary seats and a narrower rear seat than the touring. The doors are about two inches wider.

Runabout Body

Capacity 2 passengers on the front seat and 2 passengers on the rumble seat. The rear compartment is large and roomy and is fitted with a deck light, foot rest, robe rail 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. Seeping of water into the compartment is prevented by a self draining feature of Packard design. The large luggage compartment, back of the front seat, is easily reached through a door opening on top from the driving seat.

Limousine Body

Capacity 7 passengers. Partition between driver's seat and tonneau and two forward folding auxiliary seats. This body is of the conventional open front type. The rear seats have been lowered about three and one half inches and the doors made wider. The partition glass between the driver's seat and tonneau drops down to the belt line of the body. The roof has been lowered approximately two inches, giving the car a lower appearance.

Duplex Coupe Body

Capacity 4 or 5 passengers. This body has more of the square-cornered lines than the Limousine or Duplex Sedan bodies and slightly less head room in the rear compartment. Two passengers can be seated on the front seats and two or three in the rear compartment. There are no auxiliary seats. The front seat is continuous across the full width of the body and is separated from the rear compartment by a partition with glass above the belt line which can be readily lowered flush with

the top of the front seat when required. The doors are wide and the seats low and comfortable, being only thirteen and one half and fourteen inches from the floor to the tops of the seat cushions, in the front and rear compartments respectively. The windshield is equipped with an adjustable sunshade.

Duplex Sedan Body

Capacity 7 passengers. This body has the exterior appearance of the "3-35" Imperial Limousine, but the roof has been lowered considerably and the doors made wider giving the car a much lower appearance, and greatly improving the entire design, without sacrificing body comfort. Two passengers can be seated on the front seat and three on the rear with two forward, folding auxiliary seats for two others. The same construction of the partition with full-dropping glass is used in this body as in the Duplex Coupe. This feature enables the car to be quickly and easily converted from the owner-driven family type of brougham or sedan to the more formal, chauffeur-driven imperial limousine type, by simply raising the glass partition separating the two compartments. The front seat is continuous the entire width of the body. The doors are wide, the seats low and comfortable, the front being fourteen and the rear only fifteen inches from the floor to the tops of the cushions. The windshield is equipped with an adjustable sunshade.

Motor

Twin-Six unit power plant with motor, clutch and transmission integral.

Fuelizer

The Packard Fuelizer is a new automatic device which heats the gas passing from the carburetor to the engine by burning a small amount of mixture in a combustion chamber situated on the intake header. The combustion chamber is supplied with mixture from a small auxiliary carburetor, built in one piece with the main float chamber. The auxiliary carburetor's sole purpose is to supply the mixture for combustion. This mixture is ignited by a conventional spark plug connected to the regular engine ignition system. The hot, burnt gas from this chamber passes into the fresh charge, changing it to a dry gas. The maximum heat is supplied when the motor is idling, the flame automatically diminishing as the throttle is

opened. The entire device is, to use an electrical term, a shunt around the main carburetor. The suction of the intake is shunted through the auxiliary system when the throttle is partially closed, causing the Fuelizer to function at a time when the engine requires the heated charge. When the throttle is open the shunt ceases to operate. In other words, the great value of the Fuelizer lies in the fact that the maximum heat is supplied under idling conditions when it is most needed, and the minimum heat under heavy load conditions when the motor is already sufficiently warm. In this respect its action is exactly opposite from that of the ordinary exhaust heated device.

An interesting feature of the Fuelizer is an observation window of Pyrex glass through which the quality of the mixture in the combustion chamber can be determined from the colors of the flame. A steady green flame indicates a good mixture, a dark blue flame shows too thin a mixture, and a reddish yellow flame, one that is too rich. With the Fuelizer, it is possible, even in cold weather, to operate the car with the choke adjustment set at normal running position, within twenty to thirty seconds of the time the motor is started. The acceleration is considerably increased, particularly at low speeds. There is practically no collection of gasoline in the crankcase. Spark plug fouling is eliminated. The frequency of necessary carbon cleaning and valve grinding and the rate of wear on cylinders and pistons is greatly reduced. Gasoline economy is little affected one way or the other, except that in cold weather a somewhat increased gasoline economy will be noted with the Fuelizer in operation.

Cylinders

3" x 5" cast in two blocks of six each. The cylinder blocks are L-head and have detachable heads with one-piece gaskets, which greatly facilitate cleaning the cylinders and permits machining of the combustion chambers all over. This construction eliminates valve chamber plugs. The intake connection from a single carburetor to the header goes into the block at the top and forms the water outlet to the radiator, thus helping carburetion of low-grade gasoline. The carburetor is suspended between the cylinder blocks, or in the "Cylinder Valley." The right and left blocks are interchangeable. The left block is set $1\frac{1}{4}$ " forward of the right block, so that the connecting rods are side by side on the crank pins.

SAE horsepower rating—43.2.

Crank Case

Constructed of aluminum alloy. Four-point support gives rigidity.

Webs are integral with the crank case upper half. The crank case lower half is ribbed longitudinally which stiffens the case and rapidly cools the oil. There is an inspection opening in the upper half over fly wheel, as well as one in front of the crank case for tightening the front end chain.

Crank Shaft

2 $\frac{1}{2}$ " in diameter with three main bearings. Independent oil ducts supply oil to each connecting rod bearing. Crank pins 1 and 2 oil from front bearings, 3 and 4 from center bearings, 5 and 6 from rear bearings.

Bearings

Connecting rod bearings 2 $\frac{1}{4}$ " diameter, 1 $\frac{1}{2}$ " long, placed side by side on crank pins. Crank shaft bearings 2 $\frac{1}{2}$ " diameter and lengths as follows:

Front 2 $\frac{1}{16}$ ".

Center 3".

Rear 3 $\frac{1}{2}$ ".

The crank shaft bearing caps are of cast aluminum and ribbed for strength.

Connecting Rods

Drop forged, I-beam section, machined all over to get lightest possible weight. All interchangeable.

Pistons

The piston is made of cast iron with three rings at the top.

Cam Shafts

Hollow, located directly over the crank shaft and driven by a silent chain. Three bearings with twenty-four integral tangential cams with $\frac{1}{16}$ " lift, so designed that the noise of the valve returning to its seat is eliminated. The contour of the cams has been changed to obtain this result. The nose of the cam has been tapered off onto the back face so that the movements of the push rods begin and end more gradually. Hollow cam shaft forms oil lead to cam shaft bearings and gauge. The cam shaft bearings are babbitt lined.

Valves

Diameter 1½" in the clear. They are operated through tappets of Standard Packard type and are located on the inboard sides of blocks in the "Cylinder Valley." They are accessible after removing hand covers.

Valve Springs

The valve springs are double.

Front End

The cam shaft and generator are driven from the crank shaft by means of an adjustable triangular silent chain, 1½" wide.

Fan

A greatly improved steel fan is being used with a new type of fan belt. The new fan provides a maximum draft of air, together with ample clearance between the fan and the belt.

Electrical System

The whole electrical system is of the single-wire or the ground return type. In place of running two wires to lamps and other electrical units, only one wire is required, the other terminal being run directly to a ground connection to the frame.

The wiring is enclosed in the housing behind the dash and is out of sight entirely; and since this is built into the body, binding posts have been provided at the front of the dash which facilitates removal of all wires and conduits when the body is removed.

At the back of the dash binding posts are provided for the connections to the coils and switch.

The fuses are retained on the front of the dash, on the left-hand side, and the cover over them is readily detachable.

The horn is fastened directly to the dash, and the connections to it are very accessible, and are out of sight, as well as being protected from dampness. A very simple connection is made at the base of the steering post which can be easily detached when the steering gear is removed. This eliminates any necessity of breaking a connection in the wire to the horn button, which is a possible source of trouble.

The battery is supported inside of the frame at the right side and can be easily reached for inspection by removing the front floor board.

The lighting system includes two main head lights, two auxiliary head lights for city driving, two small side lights attached to the lower half of the windshield, tail light, gauge light, tonneau light in open bodies and dome lights in enclosed bodies. An inspection lamp with cord is also furnished with the tool kit and is connected at the dash connection.

The head lights are supported by the front fender brackets, and reinforced by a cross tube, which strengthens the fender brackets and at the same time holds the lamps in line. The head light lenses are Liberty. The tail lamp is supported from a bracket bolted to the tire carrier. This is reversible for use in the different states requiring different tail light locations.

The tail lamp can be supported in this manner on tire carriers for either one or two tires.

Ignition System

The ignition unit is located at the front of the motor between the cylinder blocks and contains two six-cylinder distributors and two circuit breakers arranged to break 60 degrees apart, operated by a single triangular cam. The coils are located on the rear of the dash.

Wiring

High tension wiring carried in tubes along tops of cylinder blocks. All wiring is housed and protected.

Battery

120 ampere hours capacity, supported inside of the frame at the right side and can be easily reached for inspection by removing the front floor board.

Generator

Supported on crank case web at right front corner of motor with provision in drive for adjustment of chain to compensate for chain stretch. Detachable regulator mounted on top of generator. The chain oiler has been eliminated and lubrication is provided through the end of the generator shaft.

Starting Motor

The starting motor has been redesigned, and a new unit is being furnished by Bijur. The gear case is ribbed to produce rigidity, and larger bearings are used. The spring on the starter shaft, which is mounted in back of the starter pinion, is shorter and softer. This prevents the pinion from chattering against the fly-wheel when the motor starts.

Ammeter

Located on instrument board.

Starting Switch

Located on right of accelerator pedal under inclined toe board and operates automatic gear shift.

Chassis

There is but one type of Twin-Six Chassis.

The wheel base is 136 inches.

The angle of the steering column is 42 degrees.

The tread is 56 inches.

Grease Cups

A new type of grease cup has been standardized throughout the chassis, which eliminates to a large extent the disagreeable handling of grease. The grease is supplied in paper cartridges, which can be slipped into the grease cup without soiling the fingers.

Frame

The frame has been designed to give maximum strength. This has been obtained by using the $7\frac{1}{2}$ " depth of the side member as formerly and by tapering the frame from the front and rear ends so that all offsets are eliminated. Rigid forgings at each end of the frame are fitted with cross tubes which are splined, pressed and 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, 41" long and $2\frac{1}{4}$ " wide. The front spring is shackled at its rear end by a compression shackle and the bolt is well supported, as it extends through the frame. The

rear springs are semi-elliptical, 60" long and 3" in width and are shackled at the rear end. Both front and rear springs are parallel to the tapered frame and firmly mounted to it, which forms a stronger and safer construction than we have ever used.

Springs for Different Types of Cars

950-pound used on Runabout.

1050-pound used on Phaeton.

1200-pound used on Touring.

1350-pound used on all enclosed cars.

Steering

The steering is of the worm and nut type, with a ball thrust bearing which is mounted on the upper end of the steering gear case between the joint of the case and the pillar tube. It is therefore very accessible and very easily lubricated. The outer end of the steering yoke shaft is made with integral splines which match with the splines on the upper end of the steering lever. This lever is clamped by a through bolt which makes a very rigid fastening. The lower end of the steering lever is fitted with a ball joint between it and the steering connecting rod rear end. This eliminates a complicated block joint. The steering sockets have been turned over so that the sockets come above the balls, preventing the collection of water and dirt in the ball joints, and greatly increasing their life. The steering column is at an angle of 42 degrees on all models, and consequently only one steering gear and one mounting in the frame is necessary. The upper end of the column is supported by brackets attached to the instrument board which makes a very firm construction. The spider which supports the control lever sector has been constructed so that it can be readily removed and the steering wheel taken off without disturbing any other parts. The steering wheel is 18" in diameter with an oval section notched rim. An aluminum rim is cast integrally with the spokes and the hub, making the wheel especially strong.

The electric horn button is in the center of steering wheel and there is a fixed quadrant above the wheel for the spark and throttle control. The ignition, light switches, and the hand pressure pump are placed on the instrument board where they can be readily reached by the driver.

Turning Radius

The turning radius of the Twin-Six is 23 feet, 6 inches.

Rear Axle

The rear axle is semi-floating. The housing is made of pressed steel reinforced with nickel steel tubes. The torque of the rear axle is taken up by a torque arm of rugged construction made of a steel stamping with forged ends securely riveted in place. The rear axle shaft is chrome vanadium steel, the outer ends being carried on annular ball bearings of $4\frac{3}{4}$ " diameter. The size of both the rear axle outside bearings and the differential pinion bearings has been greatly increased, and they will now withstand almost any amount of punishment with minimum wear and a large factor of safety. Drain holes have been added to the rear axle tube just inside the spring seats to prevent the leakage of oil on to the brakes.

Wheels

Thirty-four inches in diameter and made of second growth hickory. On the front wheels the inner bearing dust closure is affected by means of a pressed-in stamping which eliminates the right and left hand threading of the front wheel hub cores and therefore makes it possible to use the front wheels interchangeably on both right and left side. The outer brake drum bolts on the rear wheels have been moved inboard to improve the appearance. It is now possible to use the front and also the rear wheels interchangeably on both the right and left hand side, which is a great advantage in service.

Brakes

The brakes are external contracting and internal expanding.

The shafts for both foot and hand brake have been brought inboard and carried on their inner ends on a bearing which is bolted to the rear axle bearing sleeve; and since this also supports the outer bearing, proper alignment of these bearings is assured.

The foot brake is equipped with equalizers and the connections are kept from rattling by separate retracting springs on the rear axle.

Running Board 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 most needed.

The running board splashers are tapered to match the frame and body lines.

The radiator front splashers are very readily detachable after removing four screws from each side. It is made to enclose the front spring front bolts and also forms a very neat joint at the inner edge of the frame, where it matches the inner edge of the bonnet frame ledge.

The crank case front splashers are also made readily removable, and forms a mud-tight joint between the crank case side splashers and the front cross member.

Clutch

Packard dry plate clutch with six driving plates. The clutch shaft is mounted on annular ball bearings both front and rear and has the transmission direct drive gear integral with it. The adjustment of the clutch pedal is made very accessible and easy by means of a thumb screw which is placed in easy reach from above. The clutch throwout bearing has been designed so that it has no load upon it except when the clutch is disengaged. It operates easily and has a very soft action, due to the light springs which regulate the position of the brake shoe. Molded asbestos material is now being used for a clutch facing instead of the woven facing formerly used. The new material has a great deal more surface and will give a longer life.

Transmission

Three speed selective, with housing bolted to clutch housing. Reverse gear constant mesh type. The oil level in the transmission case has been raised to more completely cover the reverse gear. This eliminates the reverse rattle which was sometimes experienced. Constant mesh gears are at front of unit and have front bearing in clutch housing rear wall. The speedometer shaft is driven from a pair of spiral gears installed in the rear end of the transmission shaft. The change speed lever is made so as to present a neat appearance and the ball is located at the upper end where it is convenient to reach without stooping forward. The three speeds are geared in the following ratios:

	Ratio	M. P. H.
First.....	14.89 to 1	6.82
Second.....	7.24 to 1	14.01
Third or High.....	4.36 to 1	23.33

This is with 35x5 cord tires and motor speed of 900 R.P.M.

Speedometer

The speedometer drive is placed at the rear of the transmission and driven by a special 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 one unit.

Cooling System

The radiator is of the same general shape, retaining, of course, the Packard characteristics. It has approximately the same capacity of 8½ gallons and is made with a detachable shell which can be readily removed. The core is supported directly from the front cross member and is completely connected so that all of its functions are performed without the casing. This is important from a standpoint of manufacturing and service. The thermostat is mounted on the radiator top tank. The water pump is driven by the generator shaft. The water circuit is as follows: Pump delivery to the left block is through a tube passing from the pump through the crank case to the inlet header. Delivery to the right block is direct from the pump to the inlet header. Outlets to the radiator are through a cored carburetor manifold, converging through a single opening in the thermostat. The by-pass leads from the thermostat around the radiator casing into the radiator outlet elbow.

Lubricating System

All motor bearings are supplied with oil under 20 to 25 pounds pressure for normal running, pressure increasing with the power requirements. The pressure is maintained by means of an improved pump driven from the motor and regulated by an oil pump relief valve. Oil is conveyed from the crank case reservoir under pressure to the crank shaft bearings and through hollow crank shaft to crank pin bearings. The piston pin bearings and cylinder walls are lubricated by spray from the connecting rod lower end bearings. Cam shaft and all other bearings, including front end drive, supplied with oil under pressure. Valve mechanism lubricated by oil mist from the crank case.

Gasoline System

A pressure feed gasoline system is used. The tank is located on rear of the frame with a capacity of twenty gallons, including a three-gallon reserve.

The gasoline filler is placed at the extreme left side and the valve at the extreme right side. The gasoline strainer is located in a special unit directly back of the motor crank case arm. The power pressure pump is placed in front of, and is driven by, the generator shaft. The hand pump is located on the instrument board.

The carburetor is of Packard design. The inlet manifold is cored out so that it also serves as a water outlet for the cylinders. The hot water is thus brought close to the entering gas, reducing condensation. This permits the thermostat in the radiator at the rear of the top compartment and the water piping is consequently greatly simplified because there is only one pipe from the cylinders to the radiator.

Exhaust System

The two outlet manifolds lead from the motor and join together in an intermediate manifold which connects through the crank case pan to the exhaust pipe. The exhaust gas is thus carried, after leaving the cylinders, to one pipe, which leads under the motor on the left side of car to the muffler. The inner shells of the muffler have been more securely clamped to prevent all rattles.

Exhaust

The exhaust manifolds are built so as to connect with the exhaust pipe on the left hand side of the motor instead of the right side as formerly. The exhaust manifold intermediate is connected to the exhaust pipe through the crank case web and does not go over the crank case arm as formerly.

Tires

Standard, straight side, Kelly-Springfield Cord or Firestone Cord, 35"x5", rib tread front and 35"x5" non-skid tread rear. Alternate and optional tires. (See Trade Letter on Twin-Six Tire equipment.)

Standard Painting

Chassis Only

When ordered alone:

The entire chassis, except the wheels, black, not striped.

Wheels, cream yellow, striped with black.

Steering wheel rim, mahogany.

When ordered with enclosed body:

The entire chassis, except wheels, black, not striped.
Wheels, Packard blue, striped with black.
Steering wheel rim, mahogany.

Open Cars

Body and door panels, Packard blue, striped with cream yellow.
Mouldings, black.
Back of front seat, black paint rubbed finish.
Wheels, cream yellow, striped with black.
All other parts standard black.

Enclosed Cars

Body and door panels, Packard blue, striped with black.
Upper body, Under body, Body front, black.
Body panels, Door panels, Mouldings, Packard blue.
Wheels, Packard blue, striped with black.
All other parts standard black.

Standard Trimming

Open Cars

Seats, black, hand buffed, straight grain leather, plaited.
Tonneau sides, doors, and front seat back, leather.
Floor and heel panel, horse-hair carpet.
Pockets in all doors.

Enclosed Cars

Front compartment:

Front seat, black, dull finish, hand buffed, pebble grained leather, plaited.
Pockets in both front doors of Limousine.
Tool pocket, right side under cowl.
Front floor boards, linoleum carpeted.

Rear compartment:

Entire rear compartment, including roof, sides, seat backs and cushions, trimmed in choice of four optional Packard upholstery cloths.

Trimming:

Plain except seat back and cushions (which are plaited).
Floor, carpet to match upholstery.
Detachable rubber mat.

Pockets in both rear side panels, under arm rests.
All windows with the exception of the partition and rear windows, fitted with roller curtains of silk to match the upholstery.

Toilet cases and smoking sets of special Packard design in walnut finish, inlaid.

Finishing strips and steering wheel rim, walnut finish.

Standard Equipment

Chassis—Includes:

Electric starter
Electric generator and storage battery
Gasoline tank, tubing and connections
Hand pressure pump
Front fenders and splashers
Running boards, covered with battleship linoleum

Equipment:

Power tire pump
Speedometer and clock
Electric head and auxiliary lights equipped with non-glare lenses
Electric rear lamp combined with electric license tag illuminator
Detachable electric inspection lamp and cord
Electric horn
Tool roll with complete equipment of tools
One-ton jack
Rear tire carrier for one extra tire with tire lock
One extra rim
Extra spark plugs
Extra lamp bulbs, battery syringe and extra fuses in special carrying case
Rim changing and tire repair equipment
Snubbers
Moto-meter

Tires and Rims

Straight side Kelly-Springfield Cord and Firestone Cord, 35"x5", rib tread front and 35"x5" non-skid rear.
Rims 34"x4½" all around, Firestone straight-side Type "C" Detachable Demountable.

Open Bodies

Packard one man, lined top complete with enclosing curtains and envelope
Four-door curtain opening attachments
Packard windshield and windshield cleaner

Electric tonneau light
Robe rail
Folding foot rest

Enclosed Bodies

Hand window regulators
Dome lights
Inlaid walnut toilet cases with complete equip-
ment of silver mounted fittings
Electric cigar lighter and ash trays
Autophone
Watch
Hassocks
Fatigue cushions
Flexible robe rail
Locks on all doors

The Twin-Six Specifications in Brief

- Motor**
"V" type, 12 cylinders, arranged in blocks of 6 at an angle of 60 degrees, four-point suspension.
- Cylinders**
"L" head type, bore 3 inches, stroke 5 inches.
- Horsepower**
43.2 S. A. E. rating. Block test, actually develops over 75 H. P.
- Ignition**
Generator, battery and Packard-Delco distributor.
- Frame**
Pressed steel, 7½" deep, rigid torsion tubes at front and rear, and cross channels, prevent frame weave.
- Springs**
Semi-elliptic, front 41" long and 2¼" wide. Rear, semi-elliptic, 60" long and 3" wide.
- Lubrication**
Pressure feed, 20 to 25 pounds pressure for normal running, increasing with power requirements.
- Clutch**
Multiple disc, dry plate clutch. Six driving discs.
- Transmission**
Threespeeds forward and one reverse, selective type.
- Brakes**
Internal emergency and external service brakes on 17" drums.
- Starting System**
Separate starting motor, special Packard-Bijur type independent of generator.
- Lighting System**
Head lights, auxiliary driving lights, instrument board, tonneau and rear lights. Current for lighting supplied to battery by special Packard-Bijur type generator. Seven volts.
- Cooling System**
Capacity 8½ gallons with automatic thermostat regulating temperature of water.
- Wheel Base**
136 inches.
- Tread**
56 inches.
- Turning Radius**
23 ft. 6 inches.

Dimensions and Capacity of Packard Twin-Six Cars

	Length Over all Top Down	Width Over all	Height Over all Top Up
194 Touring—7-passenger, including folding seats.....	165 ¹¹ "	68 ³ / ₂ "	70 ¹¹ "
195 Phaeton—4 or 5-passenger.....	158 ¹¹ "	66 ³ / ₂ "	65 ³ / ₂ "
196 Runabout—4-passenger, including rumble seat.....	158 ¹¹ "	66 ³ / ₂ "	61 ¹¹ "
207 Limousine—7-passenger, including folding seats.....	168 ¹ / ₂ "	68 ³ / ₂ "	83 ¹¹ "
208 Duplex Sedan—7-passenger, including folding seats.....	188 ³ / ₂ "	68 ³ / ₂ "	83 ¹¹ "
209 Duplex Coupe—4 or 5-passenger.....	188 ³ / ₂ "	68 ³ / ₂ "	81 ³ / ₂ "

Approximate Dimensions of Packard Twin-Six Open Bodies

All Measurements are in Inches

	194 TOURING BODY	195 PHAETON BODY	196 RUNABOUT BODY
Length over all.....	122 ¹¹ / ₂ "	113 ³ / ₂ "	113 ³ / ₂ "
Length, dash to front of seat.....	111 ¹¹ / ₂ "	105 ¹¹ / ₂ "	105 ¹¹ / ₂ "
*Length, front rear seat to folding seat.....	10 ¹¹ / ₂ "	25 ¹¹ / ₂ "	25 ¹¹ / ₂ "
*Length, back front seat to folding seat.....	38 ¹¹ / ₂ "	30 ¹¹ / ₂ "	30 ¹¹ / ₂ "
*Length, back front seat to front rear seat.....	58 ¹¹ / ₂ "	52 ¹¹ / ₂ "	52 ¹¹ / ₂ "
Width over all.....	68 ¹¹ / ₂ "	68 ¹¹ / ₂ "	68 ¹¹ / ₂ "
Greatest width, floor in coupe, right.....	33 ¹¹ / ₂ "	24 ¹¹ / ₂ "	24 ¹¹ / ₂ "
Front door width over moldings, left.....	23 ¹¹ / ₂ "	24 ¹¹ / ₂ "	24 ¹¹ / ₂ "
Rear door width over moldings.....	22 ¹¹ / ₂ "	24 ¹¹ / ₂ "	24 ¹¹ / ₂ "
SEATS:			
Front:			
Depth.....	18 ¹ / ₂ "	18 ¹ / ₂ "	19 ¹¹ / ₂ "
Width.....	13 ¹ / ₂ "	13 ¹ / ₂ "	13 ¹ / ₂ "
Height of seat back.....	28 ³ / ₂ "	26 ³ / ₂ "	26 ³ / ₂ "
Rear:			
Depth.....	20 ¹¹ / ₂ "	19 ¹¹ / ₂ "	19 ¹¹ / ₂ "
Width.....	14 ¹¹ / ₂ "	14 ¹¹ / ₂ "	14 ¹¹ / ₂ "
Height of seat back.....	30 ³ / ₂ "	30 ¹¹ / ₂ "	30 ¹¹ / ₂ "
Folding: Depth.....	13 ³ / ₂ "	13 ³ / ₂ "	13 ³ / ₂ "
Width.....	15 ³ / ₂ "	15 ³ / ₂ "	15 ³ / ₂ "
Height, floor to top of cushion.....	27 ³ / ₂ "	27 ³ / ₂ "	27 ³ / ₂ "
Height of seat back.....	27 ³ / ₂ "	27 ³ / ₂ "	27 ³ / ₂ "
*Measured 20" from floor.			
		Rumble Seat 33 ¹ / ₂ " 12 ¹¹ / ₂ "	

Approximate Dimensions of Packard Twin-Six Enclosed Bodies

All Measurements are in Inches

	207 LIMOUSINE BODY	208 DUPLEX SEDAN BODY	209 DUPLEX COUPE BODY
Length over all.....	121 ³ / ₄ "	121 ³ / ₄ "	114 ¹ / ₂ "
Length of front compartment.....	47 ¹ / ₄ "	47 ¹ / ₄ "	49"
Length of rear compartment.....	70 ¹ / ₈ "	70 ¹ / ₈ "	62"
*Distance from partition to front of folding seat.....	13"	13"	
*Distance from front rear seat to folding seat.....	8 ³ / ₄ "	8 ³ / ₄ "	31"
*Distance from partition to front of rear seat.....	39 ³ / ₄ "	39 ³ / ₄ "	58 ¹ / ₂ "
Width over all.....	63 ⁵ / ₈ "	63 ⁵ / ₈ "	45"
Width of floor in rear compartment.....	45"	45"	50"
Height of front compartment.....	51 ¹ / ₂ "	50 ¹ / ₂ "	51 ¹ / ₂ "
Height of rear compartment.....	52"	52"	31"
Front door width over moulding, right.....	23 ¹ / ₄ "	30 ³ / ₄ "	31"
Front door width over moulding, left.....	23 ¹ / ₄ "	30 ³ / ₄ "	31"
Rear door width over moulding.....	30 ¹ / ₂ "	30 ¹ / ₂ "	
SEATS:			
Front: Depth.....	15 ¹ / ₂ "	15 ¹ / ₂ "	16"
Width.....	47"	47"	39"
Height, floor to top of cushion.....	14"	14"	13 ¹ / ₂ "
Height of seat back.....	29"	29"	28 ¹ / ₂ "
Rear: Depth.....	21"	21"	21"
Width.....	48 ¹ / ₂ "	48 ¹ / ₂ "	47 ¹ / ₂ "
Height, floor to top of cushion.....	15"	15"	14"
Height of seat back.....	34"	34"	33"
Folding: Depth.....	13"	13"	
Width.....	14"	14"	
Height, floor to top of cushion.....	13 ¹ / ₂ "	13 ¹ / ₂ "	
Height of seat back.....	26 ³ / ₄ "	26 ³ / ₄ "	

*Measured 20" from floor.

Packard Motor Car Company
Detroit, Michigan