

Facts

PACKARD
EIGHT
CARS

ON $129\frac{1}{2}$ " AND $136\frac{1}{2}$ "
WHEELBASES



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Packard Eight Body Types

General Body Construction

For several years now Packard has been making its own bodies. Our body shops, including the die and metal stamping departments, are considered to rank among the foremost in the automobile industry. Some of the equipment and processes now in common use by the majority of automobile body plants originated and were developed in the Packard shops. Every item of material, workmanship and finish, which might add to the beauty and quality of the Packard body, is regarded important by those who have designed and those who are building this part of our car.

The body framework is built of thoroughly air dried and kiln dried lumber of the proper species, reinforced by metal braces. The individual wooden parts are carefully cut and shaped to master forms. During this process careful selection for proper grain is made of the hardwood used in all important members such as sills, cross sills, cross bars, standing pillars, door pillars, roof rails and cowl bars. The hardwoods used in the body construction are ash, birch, maple. The floor boards are made of laminated fir, which prevents warping if exposed to moisture.

The wooden body framework with the metal braces is completely assembled in a large metal frame. All joints are fitted closely, glued and screwed in a thoroughly workmanlike manner.

The metal body panels are made of 19 gauge, normalized sheet steel. This grade of sheet metal is finer grain and more homogeneous than that ordinarily used. It contributes immensely to the strength and safety of the Packard body. In our metal stamping department steel faced dies instead of ordinary iron dies are used to produce the sharp, accurate contours of window castings, mouldings and door sections. The roof rails, rear quarters and back are butt-welded electrically to produce even, continuous surfaces.

Before the metal panels are applied to the wood frame the wood frame is painted to impregnate it against moisture and the inside of the metal panels which will not again be exposed are also treated to prevent rusting. So accurately are the wooden frames and metal panels assembled that practically no fitting is ever necessary when the metal parts are applied to the frame.

All Packard bodies are now thoroughly insulated against sound, squeaks and rattles. Factory experts conducted a study of noises over a period of many months and by a process of detection and elimination built a number of cars which were tested very severely and found to be as nearly perfect as it is possible to build. Every point of contact of wood-to-metal or metal-to-metal is now insulated with a rubber compound which forms a film of rubber between joints and surfaces. Other materials used in various places include friction tape, rubber coated fabric and cotton wadding.

After all the metal panels have been assembled to the wood frame the body passes into the sand blast. In reality a

very fine grade of metal chips or grit is used in place of sand. This produces a uniform surface slightly roughened into myriads of small barbs. This surface, also, is the finest possible foundation for the paint. We have never known of any cases where paint has not adhered perfectly and permanently to this surface.

Immediately after the sand blast operation the body is thoroughly air cleaned of all loose particles of the metal grit. This also insures having the surface of the metal perfectly dry before the primer coat is sprayed on. The primer coat is immediately followed by five synthetic oil type surfacer coats which are oven dried and water sand rubbed to an even finish. At this point any surface imperfections are removed and a black sealer or filler coat is applied.

The body is now ready for the eight full coats of the color lacquer. These are evenly applied with powerful air guns and allowed to oven dry before they receive the oil sand rub. Before the body goes into the upholstery department it receives two more thin coats of the color lacquer. This air dries while the body is being upholstered. The final processes consist of a light sand rub followed by clay polishing.

We have made no mention of the almost continuous series of inspections which take place during the body construction. The most outstanding of these inspections is the "white room." This is a booth with floor, sides and ceiling painted a dazzling white and indirectly lighted from all directions. The reflection of light on all surfaces of the body is such that the

smallest dent or projection can be immediately detected. Where any such imperfections are found the body is sent to the repair department and reinspected before it is finally accepted.

We may justly be proud of our Packard bodies. They not only uphold our well-earned reputation of the past but insure an even greater future reputation in the field of fine automobiles.

Design Refinement

The new bodies, while maintaining the simple enduring lines, have been lowered and given a more sweeping appearance. This has been done by raising the belt line one inch and carrying the bottom of the body down $\frac{3}{4}$ " by adding that amount to the sill. The bottom of the body curves down from the dash in a pleasing line, reducing the height of the side splash.

The chassis on which these bodies are mounted has been lowered $1\frac{3}{4}$ " between the motor and the rear axle, thus reducing the overall height of the car 1", although the radiator and cowl remain at their former height. The windshield has been set at a 7° angle. This, with a flowing curve where the front pillar joins the cowl, has given the front of the body a more pleasing appearance. Slight changes have also been made in the window reveals and castings and windshield header which blend them with the other new body lines.

In the interior appointments several changes have been made. A striking new instrument board with a dark burl walnut finish sets off to advantage the black

tooled instrument sub-panel. The instruments are of the new round face airplane type with the clock placed at the extreme right and the speedometer on the left. In the top center is the gasoline gauge and just below to the right and left are located the oil gauge and motor thermometer. The ammeter is placed in the center near the bottom with the carburetor choke control on the left and a new wireless type cigar lighter to the right. The choke control has been changed to the Bowden wire type, which is easy to operate and completely eliminates rattles in this connection. The whole sub-panel is surrounded by a neat chromium finished band. Indirect lighting is furnished by two 3 candlepower bulbs controlled by a separate switch just to the left of the panel. On the instrument board to the right of the panel is the ignition switch. A reading lamp has been built into the under side of the overhanging cowl and is controlled by a separate switch.

The window mouldings, garnish mouldings and cowl mouldings are all metal in a combination of plain dark walnut and burl finish. A convenient ash receptacle has been incorporated in the center of the cowl moulding and is easily reached by both driver and passenger in the front compartment.

The interior hardware has been redesigned, omitting the catalin knobs which have been replaced with metal knobs in chromium finish. The door handles and window regulator handles are perfectly plain in bright platinum finish and designed to harmonize with the appearance of the new trimming. The door lock handles have been removed from the

window moulding and are now remote control type placed on the side of the doors. Increased leverage with this construction provides easier operation. Raising each handle slightly locks the doors, while a downward motion releases the lock and operates the door latch. Each handle is curved and makes a convenient door pull-to grip. Where robe rails are used they are of the stationary type with the brackets incorporating suitable assist handles. In the rear compartment placed just forward of each side arm rest is a cigar lighter and ash tray, replacing the combination smoking set and vanity set. The foot rest in the rear compartment is now a flat board covered with carpet and is adjustable to two comfortable positions. It folds back out of the way when not in use.

The inside of the rear doors in all four door body types and the doors of the coupe type have been equipped with a spacious recessed pocket. The flap folds flat unnoticeably against the inside of the door trim.

The tonneau lights in the enclosed bodies now have a dual switch. This light may be turned on and off by opening and shutting the rear doors or it may be controlled by the customary switch located on the door pillar.

All door sill scuff plates are chromium-plated metal and slope downward quite steeply toward the outside of the car. This construction makes it impossible for water to be blown in under the doors even during the most severe storm.

The new method of upholstering is not materially changed. Instead of a plain

pillow type this is now combined with the roll type, which provides a comfortable support at the passenger's shoulders. The upholstery materials are of the highest grade and the cushions and seat backs are built to carefully designed contours over deep luxury type springs. Each spring is securely fastened in place and enclosed in individual burlap wrappings. This prevents any noise should two coils come in contact. Each coil is of sufficient size and strength to positively prevent distortion under the severest loads.

The cowl ventilator cover is now covered with a screen to keep out dirt and insects. It is operated by a lever from the driver's seat and is easily and quickly adjusted to three different positions. A spring makes it rattle-proof. A side cowl ventilator with screen has been added on each side near the inclined toe board to increase the air circulation in the front compartment. These ventilators are easily opened from the inside.

The door hinges have been increased in width from $1\frac{3}{4}$ " to 2", providing greater strength and rigidity in the mounting of the door. The hinge pin has also been increased in diameter and an oil groove added. This makes it possible to insure positive lubrication of this part at all times.

Great care has been taken in insulating all bodies against heat, cold, and noise. The body dash is entirely new and set on an angle to allow for the engine clearance. The gauge of the metal in the main dash has been increased for strength. The dash has been insulated on the motor side by a $\frac{3}{4}$ " piece of insulating material, which in turn has been covered by an

auxiliary metal dash. The back of the dash has been covered with a $\frac{1}{8}$ " thick facing material which has a leather type grain finish. Both the front and rear surfaces of the dash have been cleared up to improve the appearance. This is especially true with that portion of the dash visible from the driver's seat. The front level floor board and inclined toe board are metal stampings covered with a $\frac{3}{4}$ " piece of insulating material. This is in turn covered by a hair felt pad that is finished on the top with an enameled drill material which can be easily cleaned. The rear floor, the rear seat pan and the tool compartment are also covered with this felt insulator. Both front and rear compartment floors are covered with a neat wool carpet. In the front compartment this carpet extends up the dash for about six inches to improve the appearance.

An interesting and valuable feature of the new bodies is the panel insulation. All metal panels below the belt line are provided with a specially designed method of eliminating body rumble. Before the body is trimmed a thick insulating gum is smeared on the surface. Imbedded in this material are sheets of heavy perforated fiber board. The whole is again covered with the gum material. This method of insulation very effectively stops vibration of the body and door panels and reduces resonance which might cause rumbling noises.

This comprehensive system of body insulation, together with chassis improvements which will be discussed later, has produced a body in which the quietness and freedom from all annoying noises will

be as pleasing during the entire life of the car as it is on the first day it is driven.

Previous Features Carried Over

The adjustable driver's seat will be standard in all body types. Packard has standardized this type of seat rather than a full adjustable front seat. The passenger seat is so arranged that it is in the most comfortable position for the great majority of people. It is really the driver who must be in the correct position and the Packard type adjustable seat meets all requirements without inconveniencing the passenger. The support supplied to the side door pillars with the straight-across seat construction is a valuable feature, although this support is not necessary under all normal conditions.

Another feature of previous models found in the new cars is the adjustable steering column. This may be raised and lowered through 5° , thus providing a range of adjustment in the driving position to suit any driver.

Non-shatterable glass is of course still standard equipment in all windshields and windows except the curved portion of the Limousine partition. It is interesting to note that many states are agitating for a law compelling all passenger vehicles to be equipped throughout with this type of glass instead of just in the windshield as is common practice in some bodies.

The popular and convenient instrument board package compartments have been retained in the new design.

Enclosed Bodies

Types

On the 129½" wheelbase:

Type 503—5 Passenger Sedan
Type 901—Chassis

On the 136½" wheelbase:

Type 543—5 Passenger Sedan
Type 504—7 Passenger Sedan
Type 505—7 Passenger Sedan-Limousine
Type 506—5 Passenger Club Sedan
Type 507—5 Passenger Coupe
Type 508—2-4 Passenger Coupe
Type 902—Chassis

Details of Enclosed Body

The new sloping windshield has been provided with built-in concealed sector arms. It may be locked in any one of seven positions including shut and full open. A small chromium finished finger grip at each end furnishes the means of adjustment. The left hand grip directly in front of the driver is pivoted and when raised releases the locking mechanism so the windshield may be opened. Dropping the grip locks the windshield in the desired position. It may be operated entirely by one hand. The sides and bottom of the frame are fitted with live rubber, effectively preventing water leakage. The hinge at the top is also protected by a sponge rubber strip which acts as a weather seal.

Although the front pillars have been widened at the bottom to blend with the new body lines, the width of the pillar at the line of vision is still narrow so that maximum vision is obtained at all times.

Two independent windshield wipers of the oscillating type, a rear vision mirror and adjustable sun visors are all standard equipment. The windshield wiper motors are completely concealed behind the header bar.

The upholstery material in all enclosed bodies, with the exception of the Limousine front compartment and the rumble seat of the two-four passenger Coupe, is all wool broadcloth of the finest quality, except the headlining, which is cotton moleskin. The Limousine front compartment has black Colonial grain leather and the Coupe rumble seat Colonial grain leather to harmonize with the paint scheme. Curled hair of lasting resiliency and long fiber cotton wadding are used to cover the cushion springs and give the proper seat contours. Arm rests in the rear compartment have a sponge rubber core which permanently maintains their shape. A leather bead is used to bind the edges and intersections of the seat cushions and backs. Worsted tapestry lace is also used to finish various parts. The enclosed bodies are equipped with rear pillar grips of the loop type made of material to harmonize with the upholstery.

Details of Enclosed Body Types

Sedans (5 and 7 passenger)

We now have two five passenger Sedans, the type 503 on the 129½" wheelbase and the type 543 on the 136½" wheelbase. The seven passenger Sedan is also on the longer wheelbase. The Sedan on the shorter wheelbase is the most popular of all models. It represents the ideal combination of smartness and utility.

The type 543 five passenger Sedan on the longer chassis meets a constantly growing demand for a more spacious five passenger body with full vision. It has a graceful appearance on the longer chassis and provides considerably more room in the tonneau than the Club Sedan. The seven passenger Sedan is equipped with two folding auxiliary seats which drop into recesses in the back of the front seat when not in use. There is ample leg room for the rear seat passengers when the auxiliary seats are being used.

Sedan-Limousine (7 passenger)

In seating arrangement this is identical with the seven passenger Sedan. A neat division with glass partition which may be lowered is built into the back of the front seat. The front compartment is upholstered in leather below the belt and the driver's seat made stationary without the adjustable feature. The front seat is, however, exceptionally comfortable and is upholstered with the same care and precision as the rear seat. The passengers may communicate with the chauffeur through a telephone of the dictograph type. The portable speaker is fastened to the right side of the body just in front of the arm rest. The flexible cord is contained on a concealed reel. In this body type the robe rail is of the flexible cord type.

Club Sedan (5 passenger)

This body type is a close-coupled five passenger model with four doors. In appearance it is in the class of the sport car while still keeping the dignity of the Packard enclosed car. The rear seat is set near enough to the front seat to pro-

vide easy, intimate communication between the passengers. The leg room, however, is ample for even taller than average people. Two foot hassocks adjustable to any position are used instead of a folding type foot rest. The smoking sets in this body are recessed into the rear quarters. Between the body and the spare wheel a rear platform provides for an attractive trunk should one be desired. The platform is, however, equipped with chromium-finished guard rails which present a pleasing appearance without the trunk.

Coupe (5 passenger)

This body type is admirably suited to the owner who wants a small car because he does not ordinarily carry passengers, but who wants to provide comfortable accommodation for his friends if the occasion demands. It is a two-door model with the front seats of the bucket type fully upholstered. The driver's seat is adjustable as in other body types and the companion seat tilts forward to allow access to the rear seat. A counterbalance makes this tilting seat easily handled in any position. The rear seat extends the full width of the body and can seat three passengers with utmost comfort. The floor is recessed to provide additional leg room. The back of the body is extended in a graceful rear deck which furnishes a large luggage compartment.

Coupe (2-4 passenger)

This is a permanent top, two-door Coupe. The front compartment seat and interior fittings are of the same proportion and design as the five passenger Sedan. Provision is made for two additional passen-

gers in a disappearing rumble seat. The rear deck lid is large, which allows the rumble seat back to be made on such generous proportions as to insure perfect comfort for the passengers. A luggage compartment is located back of the front seat and is easily accessible to the driver. In it are found the lever to release the rear deck and the window regulator for the rear window which may be lowered if desired. A golf bag compartment extends across the floor back of the front seat and is reached through a door on the right side. The rumble seat compartment is large and roomy and is fitted with a light, carpet, and foot rest.

Convertible Bodies

Types

On the 136 $\frac{1}{2}$ " wheelbase

Type 509—2-4 Passenger Coupe Roadster

Type 523—5 Passenger Convertible Sedan

Type 527—5 Passenger Convertible Victoria

Details of Convertible Bodies

These bodies will immediately appeal to those who enjoy a sport car or who desire the convenience of a closed car which can be quickly converted into an open car. Each body in finish and design has the atmosphere of a truly individual custom car. The method of upholstering and the interior fittings are the same as used in the Packard Eight enclosed bodies. In place of broadcloth upholstery, however, the finest quality first-cut, hand crushed Colonial grain leathers are used in colors to harmonize with the paint schemes.

The windshield slopes backward and is of the one-piece construction with the same simple hold-open mechanism as is employed on the enclosed bodies. Two independent automatic windshield wipers of the oscillating type and a rear vision mirror are standard equipment.

All windows lower flush with the tops of the doors. Each glass is surrounded with chromium-plated mouldings which not only make it more rigid but also decrease the friction in the felt lined channels when raised or lowered. The window operating mechanism is a counterbalanced type providing exceptionally easy adjustment. All glass is non-shatterable.

The tops are of the best quality Burbank fitted over specially designed wood and metal bows. The design of the top is such that ease in collapsing is maintained at no expense of rigid, rattle-proof construction. All door windows may be raised or lowered with equal ease when the top is up or down. Particular attention has been paid to all joints between the top and windshield and side pillars to make the car weatherproof under all conditions.

Details of Convertible Body Types

Coupe Roadster (2-4 passenger)

This body incorporates the sporty Roadster lines with the utility of the Convertible Coupe. The doors are fitted with windows which are easily raised or lowered whether or not the top is in place. The top is fully collapsible and disappears inside a compartment back of the front seat. This compartment is covered with a neat Burbank flap which does not break the

straight sweeping Roadster lines when the top is down. A luggage compartment covered with a door is located at the bottom of the top compartment.

The seating arrangement is very similar to the two passenger stationary Coupe. The front seat is of generous proportions for two passengers, with the driver's seat adjustable. Provision for two additional passengers is made in the disappearing rumble seat. A feature of the large and roomy rear compartment is the arrangement for carrying golf bags. A door opens from the right side of the body panel just forward of the rear fender. An ample space is provided for two complete golf bags without interfering with the leg room of the passengers in the rumble seat.

The rumble seat cushion and back are fully upholstered and are as comfortable as the front seat. The rumble seat compartment is fitted with a deck light, carpet and foot rest, as well as leather arm pads on each side.

Convertible Victoria (5 passenger)

This body is a companion sport model to the popular five passenger Coupe enclosed body. The two doors are exceptionally wide and permit easy access to the rear seat. The front seats are fully upholstered, although the backs fold forward to allow free passageway into the rear. The driver's seat is adjustable. The full width rear seat provides ample room to seat three passengers comfortably and it is equipped with a center folding arm rest to increase the comfort when only two passengers are carried.

The top on this body also lowers into a recessed compartment back of the rear seat, folding flush with the body line. This enhances the beauty of the low straight sporty lines of this body.

A spacious metal trunk is standard equipment for the rear platform. It is painted to match the body panels and carries out the beautiful proportion of the entire car.

Convertible Sedan (5 passenger)

This body incorporates all the interior features found in the enclosed type 543 five passenger Sedan, including adjustable driver's seat. The rear seat is wide enough to accommodate three passengers, although a folding center arm rest is provided for occasions when only two passengers are riding. A feature of the folding arm rest is that it is fully upholstered and when folded does not interfere with the comfort of the center passenger in the rear seat.

Provision has been made for installing a drop type division glass between the front and rear compartment. This division disappears completely back of the front seat when not in use and may be raised and lowered when the top is up as well as down.

The narrow center pillar posts above the belt line are removed when the top is collapsed. This does not interfere with the operation of the door windows or the partition glass. A spacious compartment is built into the lower back of the front seat to accommodate these pillar posts when removed.

The top folds down neatly into a compact form which is covered by a Burbank top boot furnished as standard equipment.

Open Body Types

On the 136 $\frac{1}{2}$ " wheelbase

Type 500—7 Passenger Touring

Type 501—4 Passenger Phaeton

Type 521—4 Passenger Sport Phaeton

Details of Open Bodies

The open bodies are built of the same materials and with the same fine precision as the enclosed and convertible bodies. The new low sweeping lines accentuate the sporty appearance of these bodies.

A non-shatterable glass windshield of the swinging sash type is mounted in substantial chromium-finished forgings. The windshield folds forward when the top is lowered. With the top up, a weather-proof flap extends downward and is attached to the windshield by Lift-the-Dot fasteners. Thumb nuts securely clamp the top bow to the windshield, giving a rattle-proof connection.

The top and side curtains are of the finest quality Burbank material, carefully cut and fitted on each individual job. The fit thus obtained insures absolute protection from wind and rain. Each door curtain is supported with a solid rod inserted in the top edge of the door. This prevents damaging the celluloid windows in the curtains when the doors are opened. When not in use the side curtains are carried in specially designed pockets in the left doors. The right hand rear doors are fitted with the same convenient type of recessed pocket as the enclosed bodies.

The construction of the top consists of chromium-plated metal slats attached to walnut finish wooden bows. The bows

are placed where there is the least danger of passengers striking their heads. The geometry of the top bow construction insures having the top collapse into a small compact form. Standard equipment includes the Burbank top boot.

The entire interior is upholstered in first-cut, hand crushed Colonial grain leather. The seat cushions and backs are constructed to the same luxurious contours as the enclosed cars. The driver's seat in all open bodies is adjustable. Carpets in the front and rear compartment are made of an interwoven horsehair material, the same material being used on the heel kick-up.

All doors are fitted with outside door handles of the standard Packard design. Inside handles are of the non-projecting design, recessed so they will not catch the clothing.

A single automatic windshield wiper of the oscillating type, a rear view mirror and a spot light on the driver's side are standard equipment.

Details of Open Bodies

Touring (7 passenger)

This body is notable for an extremely roomy tonneau. It affords comfortable accommodation for three passengers on the rear seat and two on the fully upholstered folding auxiliary seats. A carpet covered adjustable foot rest adds to the comfort of the rear seat passengers.

Phaeton (4 passenger)

The long low lines of this body give it a foremost place among sport models. The seating arrangement is ample to accom-

modate four passengers, although five can be carried if desired. An arm rest with smoking set is built into each side of the body at the rear seat. Built into the back of the front seat is a large luggage compartment. The sloping cover to this compartment makes a comfortable foot rest.

Sport Phaeton (4 passenger)

This body in detail is the same as the Phaeton. It is equipped with a hinged tonneau cowl with folding type single piece windshield of non-shatterable glass. Counterbalances on the cowl make it extremely easy to raise and lower. A courtesy light automatically turned on when the rear door is opened is installed on each side of the back of the front seat. Screen covered side ventilators give ample air circulation in the tonneau.

Standard Upholstery for Packard Eight Cars

The standard broadcloth for enclosed cars will be 72-194 with side walls and headlining to match for paint schemes C, D, E, M and X. For paint schemes A, B and F, broadcloth 122-199 with side walls and headlining to match has been specified.

Leather is standard trim in the rumble seat only of the two passenger Coupe and throughout the entire car in all open cars, Coupe Roadsters, Convertible Victorias and Convertible Sedans. The standard leathers are as follows:

Colonial grain 739 for scheme A
Colonial grain 546 for schemes B and X
Colonial grain 704 for scheme C
Colonial grain R-201 for schemes D and E

Colonial grain 714 for scheme F
Colonial grain 744 for scheme M

Where leather is used in the front compartment of Sedan-Limousines, Colonial grain leather 546 will be standard in all paint schemes.

Standard Paint Schemes

The following standard paint schemes will be available on Packard Eight cars:

Paint Scheme "A"

Standard black chassis parts Black

Body and bonnet mouldings and window castings, also body base moulding and body above moulding on enclosed cars only

..... Rogers Domestic Gray

Window reveals, cowl and bonnet above moulding, body above moulding on open cars and convertible cars only, body and bonnet below moulding and steel or wood wheels when specified

..... Rogers Beige Gray

Stripe—Body, bonnet and wheels

Dupont's Deep River Green 244-6202

Paint Scheme "B"

Standard black chassis parts Black

Body and bonnet mouldings and window castings, also body base mouldings Black

Window reveals, cowl and bonnet above moulding, also body above moulding, body and bonnet below moulding and steel or wood wheels when specified . . . Packard Blue

Stripe—Body, bonnet and wheels

standard position and size . . Gold Bronze

Paint Scheme "C"

Standard black chassis parts Black
Body and bonnet mouldings and
window castings, also body base
mouldings and body above
moulding on enclosed cars only . . Black

Window reveals, cowl and bonnet
above moulding, body above
moulding on open cars and con-
vertible cars only, also body and
bonnet below moulding and steel
or wood wheels when specified . .
..... Rubicelle Deep

Stripe—Body, bonnet and wheels
standard position and size. Gold Bronze

Paint Scheme "D"

Standard black chassis parts Black
Body and bonnet mouldings and
window castings, also body base
moulding Black

Window reveals, cowl and bonnet
above moulding, also body above
moulding, body and bonnet be-
low moulding and steel or wood
wheels when specified . . . Shirvan Green

Stripe—Body, bonnet and wheels
standard position and size. Gold Bronze

Paint Scheme "E"

Standard black chassis parts Black
Body and bonnet mouldings and
window castings, also body base
moulding and body above mould-
ing on enclosed cars only
..... Riverhead Green

Window reveals, cowl and bonnet
above moulding, body above
moulding on open cars and con-
vertible cars only, body and bonnet

below moulding and steel or wood
wheels when specified

..... Bonaventure Green
Stripe—Body, bonnet and wheels
..... Dupont's Perugia Green

Paint Scheme "F"

Standard black chassis parts Black

Body and bonnet mouldings and
window castings, also body base
moulding and body above mould-
ing on enclosed cars only
..... Ault & Wiborg Midnight Blue

Window reveals, cowl and bonnet
above moulding, body above
moulding on open cars and con-
vertible cars only, body and bon-
net below moulding and steel or
wood wheels when specified
..... Ault & Wiborg Countess Blue

Stripe—Body, bonnet and wheels
..... Ault & Wiborg Light Blue

Paint Scheme "M"

(For enclosed cars except convertible cars)

Standard black chassis parts Black

Body and bonnet above moulding,
window castings, cowl and bonnet
above moulding, body and bonnet
below moulding, body and bonnet
moulding and body base mould-
ing and steel or wood wheels when
specified Valentine's Aztec Olivine
Brown 300-5061

Window reveals Aztec Olivine Brown
Light 300-5062

Stripe—Body, bonnet and wheels
..... Dupont's Tacoma Cream 244-1299

Paint Scheme "M"

(For open cars and convertible cars)

Standard black chassis parts Black

Body and bonnet moulding, also

body base moulding . . Valentine's Aztec

Olivine Brown 300-5061

Body above moulding, cowl and

bonnet above moulding, body and

bonnet below moulding and steel

or wood wheels when specified

. . . Aztec Olivine Brown Light 300-5062

Stripe—Body, bonnet and wheels

. . . . Dupont's Tacoma Cream 244-1299

Paint Scheme "X"

Standard black chassis parts Black

Body and bonnet mouldings and

window castings, also body base

mouldings Black

Window reveals, cowl and bonnet

above moulding, also body above

moulding, body and bonnet below

moulding and steel or wood

wheels when specified Black

Stripe—Body, bonnet and wheels

standard position and size . . . Old Ivory

The standard color for wire wheels on all paint schemes will be black. Special orders are issued when some other color is desired. Steel and wood wheels will be painted to match body panels as indicated.

The exposed metal parts and partitions in Sedan-Limousines will be the same color as the body above moulding.

Windshield frames on all enclosed cars will be black for paint schemes B, C, D and X and for paint schemes A, E, F and M they will be painted the same color as

the window reveals. The windshield frames on all open cars and convertible types will be chromium plated.

Convertible Victoria trunks will be painted the same color as the body panels.

Mechanical Features

Motor

The motor is strictly of Packard design and is manufactured in the Packard factory. The motor is a unit power plant, eight cylinders in line with clutch and transmission integral. It is of well balanced design, compact, light in weight and exceptionally smooth running.

Every driven unit has its own individual drive, which increases accessibility of the units for repair or adjustment and eliminates flexible joints that wear out and become noisy. The exceptionally clean appearance of the Packard Eight motor is the result of the experience gained by years of careful engineering. Maximum efficiency in combustion is obtained by a well balanced layout of carburetor and intake manifold in conjunction with the best design of cylinder head and pistons. The heavy counterbalanced crankshaft with its vibration damper and the light weight reciprocating parts contribute largely to the phenomenal smoothness of the motor.

Design refinements (see catalogues for illustrations) incorporated in this new motor are: A new drop forged valve rocker arm with force feed lubrication to the roller, making possible the use of increased valve spring tension which eliminates sticking valves; steel backed main bearings instead of bronze; stronger

connecting rods with cap secured with through bolts; new type piston rings to give maximum compression and lubrication control; replacement of cylinder lubrication device by a column of high pressure oil injected into each cylinder with each revolution of the crankshaft; combined carburetor air cleaner and intake silencer; air cleaner incorporated in crankcase breather; redesign of exhaust and intake manifolds to shorten warming-up period; fan blades altered to give greater efficiency and quieter operation; motor completely mounted in rubber; redesign of flywheel and vibration damper to increase smooth and quiet operation; a small metric size spark plug with wider temperature range; new design of cylinder head combustion chamber which reduces detonation and increases compression ratio from 4.85 to 1 to 6 to 1. All cylinder head nuts are of the acorn type, chromium plated and polished. Aluminum parts are sandblasted smooth. The enameled parts are finished in Crane gray and black enamel.

Gasoline System

The gasoline supply tank is located at the rear of the chassis and has a capacity of 25 gallons of fuel. The filler cap is now of the bayonet lock type without the wire lock bail. A mechanical fuel pump located on the front end of the motor is used to draw the fuel from the supply tank at the rear to the carburetor. A gasoline gauge is mounted on the instrument board and registers the amount of fuel in the rear supply tank in gallons.

A gasoline filter with a glass sediment chamber is interposed between the

supply tank and the carburetor to segregate the dirt and water which may be present in the fuel. This is located on the fuel pump where it can easily be observed and the accumulation of foreign substances emptied before causing stoppage of the feed line.

Carburetor

The carburetor is Packard in design and is located on the right side of the motor. It is of the expanding type and automatically provides the correct proportions of air and gasoline throughout the entire range of the motor speeds. All conditions are compensated for by a single adjustment. A better control of the gas mixture in cold weather starting has been provided by automatically spring loading the carburetor air vanes while the choke is being used. The aspirating tube is of the diffusing type to guard against vapor lock when using high test gasolines.

Cylinders

The motor is of the "L" head type, cylinders cast en bloc, with a detachable head. The cylinders are hard gray iron castings, carefully machined and the bores are honed to size. The cylinder bore is $3\frac{3}{16}$ ". The cylinder blocks are cast in the Packard foundry by the best known method from an iron mixture containing 20 per cent steel. The addition of the steel makes the metal more closely grained and increases the strength as well as making a more homogeneous material. They are cast eight in block for compactness and lessened weight.

The intake manifold is designed to distribute gas in exactly the same volume to

each cylinder. It is also provided with a hot spot or preheating surface which assists in further vaporizing the gas as it passes into the cylinders over this heated area.

Water passages are large to give perfect circulation, one entire side of the block being cast open for the purpose of cleaning and inspecting water chambers and outside of cylinder barrels. This opening is covered by a steel plate which acts as a manifold to give even distribution of water around cylinder barrels and is easily removed.

Cylinder bores are accurately finished and honed for size and held to close limits for roundness and taper. The bottom edge of the bore is beveled and enables the block to be slipped over the pistons. The top face of the cylinder block is carefully machined to insure parallel non-leaking joints.

The cylinder head is removable, thus facilitating service work and permitting the combustion chambers to be completely cleaned. The combustion chamber is of the high turbulence type, specially designed to reduce the possibility of detonation with the use of standard grades of gasoline. The compression ratio is increased from 4.85 to 1 to 6 to 1.

Crankcase

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

To improve bearing fits under all operating conditions, Packard bearing caps are

made of cast iron. The crankcase is cast in two parts and is made from aluminum alloy. It is mounted in the frame with four-point rubber suspension.

The crankshaft and camshaft main bearings are supported by webs cast in the crankcase upper half. The lower half forms the oil reservoir. This can be removed without disturbing the crankshaft bearings, the gear cover or the transmission case. Baffle partitions are cast cross-wise in the lower half to retard surging of oil.

There is an inspection opening at the front of the case for inspecting front end chain adjustment. The spark setting can be checked by removing the motor starter motor and lining up the mark on the face of the flywheel with the pointer attached to the crankcase.

Crankshaft

The crankshaft is manufactured from a steel drop forging and supported in the crankcase by nine main bearings. The shorter the distance between supports, the less the tendency for vibration. On the 129½ and 136½ inch wheelbase models the maximum distance between main bearings is 2½". (Contrast this with motors depending on fewer than 9 main bearings.) This, combined with the large diameters of the main and crankpin bearings, gives such torsional stiffness that the vibration periods (common to all gas engines) are practically imperceptible in the speed range of the car.

The crankshaft design is strictly a Packard innovation; the crankpins for the

cylinders 3, 4, 5 and 6 lie in one plane at right angles to the common plane of the crankpins for cylinders 1, 2, 7 and 8. This arrangement, together with the new system of counterbalancing which relieves certain bearing loads, and a refined new design of vibration damper fitted to the front end of the shaft, makes for perfect balance and smooth motor operation. There are 96 separate and distinct manufacturing operations performed on a Packard crankshaft. Oil ducts are drilled from the main bearings to each adjacent connecting rod bearing for the purpose of supplying oil to each connecting rod and piston pin bearing.

The crankshaft thrust is taken on the No. 7 main bearing. A special oil guard is provided at the rear bearing to minimize the leakage of oil.

Bearings

The crankshaft main bearings, nine in number, are of the steel shell, babbit lined type. They are $2\frac{5}{8}$ " in diameter with lengths over all as follows:

Bearing No. 1.....	2"
Bearing No. 2.....	$\frac{61}{64}$ "
Bearing No. 3.....	$1\frac{17}{64}$ "
Bearing No. 4.....	$\frac{61}{64}$ "
Bearing No. 5.....	$1\frac{45}{64}$ "
Bearing No. 6.....	$\frac{61}{64}$ "
Bearing No. 7.....	$1\frac{3}{8}$ "
Bearing No. 8.....	$\frac{61}{64}$ "
Bearing No. 9.....	$2\frac{21}{64}$ "

The total main bearing length on the $129\frac{1}{2}$ and $136\frac{1}{2}$ inch wheelbase model motors is $12\frac{3}{4}$ ". The 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 to give maximum strength with minimum weight. It is manufactured from a special I-beam steel drop forging 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 the connecting rod and piston pin bearings are diamond-bored to a perfectly true surface absolutely parallel with each other. The connecting rod lower end bearing is $2\frac{3}{16}$ " in diameter and $1\frac{3}{32}$ " long. The connecting rod is rifle-bored lengthwise to provide a passage for oil which is forced up to the piston pin bearing under pressure. The connecting rods have been reinforced at the bottom end and the caps secured with through bolts which add to the life of the rod bearings under the high motor speeds now developed. The crankshaft and connecting rod bearings on Packard cars have a reputation for extremely long life and efficiency and the Packard Eight bearings are designed to maintain this high standard which has been acquired by years of careful design and manufacturing.

Pistons

The pistons are of aluminum alloy with "Invar" struts to control expansion and are fitted with four rings of a new design with which the maximum is to be obtained in the way of compression and lubrication control. The lower ring is a special

design oil sealing type. A heavy rib is cast in the bottom of the skirt to give long life and freedom from piston slaps.

Camshaft

The camshaft is a steel forging with sixteen integrally forged cams and eight bearings, all of which are hardened and accurately ground. A spiral gear is machined in the center of the shaft for the purpose of driving the oil pump below and the ignition distributor above. The camshaft is lubricated from the crankshaft rear main bearing, which meters the oil in proper quantities through a rifle-bored passage extending the length of the camshaft.

Valves

The valves are made of special alloy steel which withstands high temperatures without distorting, consequently giving maximum service without regrinding.

They are made of round bar stock with the head upset on the stem, which gives a radial grain to the metal and adds strength. In this construction the valve and valve head are all one piece, which reduces the tendency to warp and depreciate in service or rupture of a weld between the head and stem. The intake valve is $1\frac{7}{16}$ " in diameter and the exhaust valve $1\frac{1}{4}$ ". The larger intake valve allows for the correct charge being drawn into the cylinder at high motor speeds.

Valve Gear (See Instruction Book for Illustrated Details)

The valve gear consists of a camshaft operating at half engine speed driven from the front end of the crankshaft by a

silent chain designed for that purpose. Each cam on the shaft actuates a rocker arm or lever interposed between the cams and the valve push rods. This rocker arm performs the dual function of removing side thrust, which causes excessive wear on valve push rods and provides opening and closing characteristics for the valves, assuring a well charged cylinder even under very high speed conditions. The stamped steel rocker arms have been replaced by a new design drop forged rocker arm.

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

A novel design of valve spring assembly incorporating two separate springs, each operating at a very low stress, is used on all Packard Eight motors.

Front End Drive

On all 4-cycle engines it is necessary to drive auxiliary units on shafts other than the crankshaft. On the Packard Eight this is accomplished by means of a silent chain running over three sprockets. This chain is $1\frac{1}{2}$ " wide and but 32" 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 without disturbing any other parts.

This chain pitch line, approximately 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 belts, the generator from the front end chain and, of course, the starter motor drives the flywheel.

To adjust the chain, it is necessary only to 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 adjusted properly.

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.

A voltage regulator maintains the proper relation between charge and discharge

of battery regardless of driving conditions.

The electric lighting system is protected by a 20-ampere, 25-volt fuse, located on the front of the dash to the right of the lubricator tank. The two poles in the fuse block are connected by a heavy resistance, which will allow enough current to pass to dimly light the lamps in case the fuse burns out. This convenient feature prevents the car from being left in total darkness in case of a short circuit burning out the fuse.

Incorporated in the brake operating mechanism is the switch for the stop light which makes contact when the 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 of the double filament type, two parking lights, tail light combined with stop light, two instrument board lights, one for reading, dome lights in enclosed cars, tonneau lights in Touring cars, Sport Phaetons and Convertible Sedans and rear compartment lights in Coupe Roadsters and two-four passenger Coupes. All lamps are chromium plated.

The lighting switch is located on the lower end of the steering gear and is operated by a lever at the steering wheel. The main driving lights are provided with a special reflector and lenses that employ a depressible beam design. In the new cars a thirty-two candlepower bulb is used in place of a twenty to provide better illumination. The reflector has two focal points so situated that

each filament of the two filament bulb used reflects from a different focal point.

The headlights are mounted on a pressed steel chromium-plated cross channel fastened to the front fender brackets. The headlight lenses are non-glare. The tail light is supported from a hollow bracket enclosing the wiring, bolted to the frame.

Ignition System

The Packard North East ignition unit is mounted on the motor cylinder head between number four and number five cylinders and is driven from the camshaft by spiral gears. It contains a full automatic spark control, thus eliminating the manual spark control from the instrument board. The coil is attached to the front face of instrument board with the switch and lock projecting through the board. This has been done to make the car more theft-proof.

Wiring

The high tension wiring is carried in a steel rectangular housing along the top of the cylinder block. Each high tension wire has its own separate compartment. The low tension wires are well insulated and gathered together into one unit or wiring harness.

Battery

A new battery has been specified which carries a larger quantity of electrolyte over the plates than the standard battery and thus requires attention only about one-fourth as often as the ordinary battery. It is located in a battery case in the right front fender outside the frame. It is common to the ignition, starting and lighting

system and is composed of three cells. The voltage is 6 volts and capacity 160 ampere hours. The battery is readily accessible by removing the cover plate. A new cover plate has been designed which is equipped with a lock operated by the ignition key.

Generator

The generator is supported in the right front corner of the crankcase with an adjustable mounting to provide for chain stretch. The protecting fuse is located in the cutout relay on top of the instrument. The generator is designed so as to provide current to the battery at the very low car speeds now encountered in city traffic.

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 easily be removed for inspection or the checking of the motor timing.

The starting motor is engaged with the flywheel by means of a standard Bendix drive and is enclosed and protected from dirt.

Starting Switch

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

Ammeter

The ammeter is mounted on the instrument board and indirectly lighted for night driving.

Cooling System

The radiator shell and shutters have been extended forward in a V-shaped projection. The radiator cap has been made larger and lower with bayonet type lock and eliminating the wire bail lock. The radiator core is of the cellular type and its operation is independent of the outer steel shell. The core is mounted on rubber and secured to the dash with a V-shaped brace. The core is also attached to the headlamp crossbar by two brackets which helps reduce front-end movement.

The air flow through the radiator is regulated by a thermostatically controlled shutter mechanism, built into the assembly.

When cold, the air flow will be entirely stopped, which allows the engine to heat more quickly. During driving, the air flow is regulated to preserve the most efficient operating temperature.

Water Pump

The feature of the water pump assembly is its simplicity. Here again is evidence of Packard's ingenuity in constant search for the simple over a complicated design and construction. 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 water pump construction permits the use of only one packing, which is very accessible and has 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 belts.

The water pump shaft is mounted on two ball bearings, which are lubricated by an oil reservoir that is replenished through a conveniently located oil cup.

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 five gallons.

Fan

The fan is of the built-up construction consisting of sheet steel blades riveted to a pressed steel hub. This construction is sturdy, light in weight and provides a maximum draft of air together with ample clearance.

The fan is driven by two belts running in V-shaped grooved pulleys from the end of the crankshaft and turns at motor speed.

By driving the fan off the crankshaft we are able to use a large diameter driven pulley, which is an important factor in eliminating fan belt slippage.

Lubrication System (See Instruction Book for Diagram)

The lubricating system is of the circulating pressure feed type.

A gear pump submerged in the oil supply in the bottom of the crankcase 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.

Adequate lubrication of the pistons and cylinders without excessive oil consumption has been obtained by drilling the crankshaft so that a column of oil under high pressure is injected into each cylinder with each revolution of the crankshaft. The oil on the cylinder walls is properly controlled by the new type oil ring. This change provides the lubrication that is necessary to keep cylinder wear to a minimum and eliminates the necessity of the cylinder lubricating valve formerly employed when starting.

An oil filter attached to the left side of the cylinder block removes from the oil carbon and dirt that is too minute to be trapped by the oil pump strainer, thus preventing wear due to abrasive material passing through the bearings.

The crankcase oil gauge has a dial indicator actuated by a float at the oil level and is calibrated in ten equal divisions. The oil is drained by means of a plug in the bottom of the crankcase below the gauge.

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 the length of the camshaft.

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

A regulator valve is provided as part of the oil pump assembly, limiting the

maximum pressure to approximately 50 lbs. and so proportioned as to maintain a minimum pressure of 30 lbs. under normal engine speeds.

The crankcase oil vapors are drawn through small holes in the side of the cylinder bores into the valve compartment. From this chamber they pass across through the center of the block and down a vent tube which projects below the level of the motor pan.

Exhaust System

Special attention has been given the design of the exhaust system to approach as nearly 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.

The newly developed type of muffler is securely fastened to the frame by means of heavy brackets and acts as the support for the exhaust pipe. The exhaust pipe and tail pipe are fastened in the muffler by means of a split clamping device. The muffler consists of an inner and outer shell. The space between is packed with a porous material. The inner tube, through which the gases pass, is perforated. As the waves of exhaust gas enter the muffler, they cause some of the gases to penetrate the porous material, which thus acts as an expansion chamber to slow them up.

The result is that the gases pass out of the tail pipe evenly at constant pressure in-

stead of with the uneven explosive impulses with which they enter the muffler. Since the gases pass straight through with no obstruction the back pressure is reduced.

Chassis

There are two chassis, one having a wheelbase of $129\frac{1}{2}$ inches and the other $136\frac{1}{2}$ inches. The angle of the steering column has been made adjustable through a range of 5 degrees.

Chassis Lubrication (See Catalogues for Illustrations)

The oil lubrication system consists of a centrally located oil reservoir and automatic pump which is connected to the points requiring lubrication by means of concealed pipe lines. Lubricating the entire chassis is accomplished by the pump located in the oil reservoir, which is operated by a diaphragm built into the top of the tank. The diaphragm housing is connected to the intake manifold and the diaphragm is actuated by the variation in vacuum that occurs in the manifold under different throttle openings. Metering fittings regulate the amount of oil which goes to each point of lubrication.

This system distributes oil from a central reservoir to the following forty points:

- 5 Spring bolts—front and rear.
- 8 Spring shackle bolts—front and rear.
- 2 Steering cross tube ball joints.
- 1 Steering sector shaft.
- 1 Steering connecting rod ball joint front.
- 1 Steering lever ball joint.
- 10 Front axle brake shaft bearings.

- 4 Intermediate brake shaft bearings.
- 2 Brake rear connecting rod levers.
- 1 Clutch throwout bearing.
- 1 Clutch throwout shaft bearing.
- 1 Clutch pedal.
- 1 Brake pedal.
- 1 Gasoline pump.
- 1 Universal joint center bearing (on $136\frac{1}{2}$ inch wheelbase only).

Designed with and built into the Packard chassis, this positive lubricating system protects the precision built into Packard cars. With it clean oil is supplied in sufficient measured quantity exactly where it is needed, thus assisting the owner to control depreciation, which is frequently the largest of the various motoring costs.

Frame

The frame is an entirely new design and has been dropped $1\frac{3}{4}$ inches between the rear of the motor and the rear axle to obtain a lower appearance. This has been accomplished without sacrificing chassis road clearance or head room in the body. The rear portion of the frame has also been dropped one inch and the gasoline tank covered with a splashers similar to that on the 840-845 models using two chromium plated trimming strips.

The front cross member (in addition to the front cross tube) is a built-up box section which increases the strength and rigidity at this point.

The rear cross tube has been replaced by a channel section.

The center cross channel has been replaced by a large X-shaped member

which provides the maximum in frame strength and rigidity. These, in addition to the regulation cross members, form a very strong and rigid construction.

Body Mounting

All bodies are now mounted on heavy inter-woven fabric shims which are impregnated with a graphite compound. The new shim makes it possible to obtain a secure mounting of body to chassis which will be free from annoying squeaks.

Springs (See Catalogue for Details of Increased Safety Provided with the Packard Spring Trunnion and Bracket Assembly)

The front springs are semi-elliptical, 42 inches long and $2\frac{1}{4}$ inches wide and are mounted on the under side of the front axle and shackled at the front end by a compression shackle. The rear springs are semi-elliptical, $60\frac{1}{2}$ inches long and $2\frac{1}{2}$ inches wide and are mounted on compression shackles at the rear end. The front and rear springs are mounted parallel to the center line of the car, which forms a strong and safe construction. All springs are fitted with metallic covers which effectively prevent loss of lubricant or entrance of water or dust to the spring leaves.

An automatic adjustment of the spring shackles is a feature that eliminates the necessity of frequent adjustments at this point to prevent rattles.

The shock absorbers are the same type as those on the eighth series cars, but are now arranged so that they can be instantly adjusted to suit different road and temperature conditions through a control located in the front compartment

to the left of the steering column. This is an entirely new feature introduced by Packard that contributes more to real riding comfort and good car control than any accomplishment of recent years.

Three distinct adjustments are provided: soft ride for smooth city pavements; intermediate for poorer pavement; firm ride for high speeds in the open country.

The shock absorber connecting links are now of the oilless type that are quiet in operation and require absolutely no attention.

Weight Distribution on Springs

Each spring of a vehicle loaded to normal capacity will carry the load indicated as follows:

Standard Springs

Front Springs

All Bodies.....	{ Left 850 Lbs. Right 950 Lbs.
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Rear Springs

Sedan (5) ($129\frac{1}{2}$ inch).....	1200 Lbs.
Coupe (2-4).....	1100 Lbs.
Touring (7).....	1000 Lbs.
Sedan (5) ($136\frac{1}{2}$ inch).....	1200 Lbs.
Sedan (7).....	1300 Lbs.
Limousine (7).....	1300 Lbs.
Club Sedan (5).....	1200 Lbs.
Coupe (5).....	1100 Lbs.
Phaeton (4).....	1000 Lbs.
Coupe Roadster (2-4).....	1100 Lbs.
Sport Phaeton (4).....	1000 Lbs.
Conv. Victoria (5).....	1100 Lbs.
Conv. Sedan (5).....	1100 Lbs.

Front and rear springs with a higher or lower rate of action can be supplied on special order to meet unusual conditions.

Front Axle and Steering (See Instruction Book for Further Details)

The front tread has been increased from $56\frac{15}{16}$ to $57\frac{1}{2}$ inches.

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 preëminent 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.

To obtain easy steering, the steering knuckle pin is mounted top and bottom on ball bearings. The upper bearing has a single row 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 molybdenum steel forgings heat treated to give a tensile strength of 120,000 pounds per square inch.

Unlike conventional designs, 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 sector are made of nickel steel and hardened. The steering worm and shaft are mounted on taper roller bearings and the end thrust of the sector shaft is taken on ball thrust bearings. The worm and sector are lapped together to obtain smooth, easy operation.

Road shocks commonly transmitted through the steering mechanism are avoided in the Packard design of mounting the rear end of the left front spring. Instead of being solidly anchored to the frame bracket, the left front spring is attached at the rear end to a shock absorbing device which effectually eliminates wheel shimmy, steering rattles, wheel tramp and other difficulties that

are inherent with low pressure tires and front wheel brakes.

The steering wheel is 18½ inches in diameter and made of hard black rubber over a steel spider. The section through rim is ⅞ in. in diameter. Harmonizing with the appearance of the wheel is an artistic compact design for the light and throttle control. Only the chromium-plated handles of the controls are visible above the wheel center plate.

Clutch

A single plate form of clutch driving through a series of compression springs is employed. The friction discs are specially treated moulded asbestos contacting with the driving face of the flywheel and the iron clutch driving plate. The outstanding features of this design are: smooth engagement, the dampening out of motor vibration or harshness due to the cushion spring drive, free release when hot or cold and long life through the reduction of wear to a negligible amount.

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 a ball bearing in the motor crankshaft and on a ball bearing in the transmission case. The direct drive and constant mesh gear is forged integrally with it.

The clutch throwout has been changed to a walking beam type and is automatically lubricated by the chassis system. A single spherical bearing is used in this construction which greatly re-

duces the pedal pressure necessary to release the clutch.

Transmission

The transmission is of the selective sliding gear type, four speeds forward and reverse, with positive interlocking control. The whole transmission has been lengthened and equipped with gear synchronizers on the third and fourth speeds. Both the main shaft and the countershaft are short and stiff and mounted on anti-friction bearings. The case has been changed from cast iron to aluminum to reduce weight and 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 housing is located well forward in the driving compartment projecting through the inclined toe board and the ball at the upper end is convenient to reach without leaning forward.

Transmission Gear Ratios

Packard Eight

First.....	14.7 to 1
Second.....	8.63 to 1
Third.....	6.48 to 1
Fourth.....	4.69 to 1
Reverse.....	11.9 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 at the left side of the instrument board.

Universal Joints

Universal joints are of the oil lubricated all-metal type, all bearing surfaces being effectively enclosed, requiring lubrication only at intervals of every 2500 miles. The propeller shaft is of the tubular type, held within close limits for balance, assuring smooth operation.

In the 136½ inch wheelbase chassis two universal joint shafts are specified, one of which is carried in a self-aligning ball bearing supported by a rubber mounting in the X-shaped cross member of the frame.

Rear Axle and Differential

The Hypoid gear design has produced silence of running as far superior to the spiral bevel gear as this form of gearing was superior to the old form of straight bevel gearing first used in automobiles. This form of gearing is used on all Eight models. The standard ratio for the Packard Eight models is 4.69 to 1; special ratios of 4.41 and 5.07 to 1 are furnished as special equipment. The rear axle is essentially the same as that in the Eighth series except that the tread has been increased from 57¾ to 59 inches.

The rear axle is of the semi-floating type. The housing is made of pressed steel. Driving forces and the torque of the rear axle are transmitted through the rear axle springs.

The pinion shaft is straddle mounted on ball bearings specially designed for taking the loads imposed.

The rear axle shafts are mounted on tapered roller bearings, locked in place, which definitely locate them in the housing.

Wheels

The steel disc wheels, designed for low pressure tires and equipped with wheel hub shrouds, 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.

Wood and wire wheels are furnished as optional special equipment and are interchangeable on the hubs and carriers.

Wire wheels are standard equipment with the following body types:

- 501 Phaeton
- 521 Sport Phaeton
- 509 Coupe Roadster
- 527 Conv. Victoria
- 523 Conv. Sedan

Brakes

The present Packard four wheel brakes are the internal expanding, self-energizing type on both front and rear wheels. They are actuated by mechanism that requires from 15 to 30% less angular movement of the shoe to secure a given clearance

than does a two shoe brake. Further, more of the pedal movement is available for taking up wear.

The braking system has been improved by a change in the operating linkage and the use of a special moulded lining that not only increases braking efficiency but minimizes squeaks and insures a long period of operation before adjustments are required.

It is practically impossible for any dirt or water to be thrown on the brake lining, due to the construction of the brake drum which overlaps the backing plate.

The design is such that the brake lining surface is concentric with the brake drum when the brake is applied. The resultant brake has 93% of the circumference of the drum in active contact. The reverse braking effort has been greatly aided by the insertion of the auxiliary shoe which acts with a powerful effect when the brake drum moves in the reverse direction.

The brake cross shafts have been mounted in self-aligning spherical bearings which are lubricated automatically from the chassis system. This design eliminates the possibility of brake cross arms binding and preventing good brake retraction. In addition this permits assembly fits that insure the mechanism against rattles.

The brake pedal has been removed from the transmission and is now mounted on a shaft attached to the frame. The levers on the cross shafts have been shortened to reduce twisting effect. The total result is a powerful, positive operation of the brakes.

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 made of steel, covered with a ribbed rubber mat and bordered with deep steel mouldings finished in chromium plate.

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

The front fender brackets are welded to the fenders, thus making a rigidly supported fender and eliminating the possibility of squeaks at this point.

Bonnet

The bonnet has been lengthened $1\frac{3}{8}$ inches. A new type of bonnet fastener is specified which operates from a single chromium finished handle located in the center of the bonnet sides. The plain louvers have been replaced by four doors in each bonnet panel.

Tires

Straight side non-skid 6-ply cord tires 19 x 6.50 base are specified for both front and rear wheels.

Tool Box

A tool box similar in appearance to the battery box has been incorporated in the left front fender.

Spare Wheel and Carrier

A spare wheel carrier is supplied on all Packard Eight cars. It is bolted rigidly to the frame rear cross member and cross channel and is of the hub clamping type. No straps or shoes are required.

The spare wheel is clamped between the carrier and the disc shaped cover and locked in place by means of a flush type lock.

Bumpers

The front and rear bumpers have been changed to a massive and sturdy appearing single bar type. They are attached to the frame with chromium-plated clamps.

Custom Equipment

This equipment may be specified and includes the following:

- Two wheels mounted in front fenders.
- Fender lamps.
- Rear folding trunk rack.
- Full rear bumper.

The trunk rack has been re-designed with the top bar carrying out the typical radiator lines. Between the top two bars the Packard emblem is mounted. The metal rails on the back of the rack are now chromium plated. A rack folding to either 8 or 30 degrees may be specified.

The 30 degree rack may be used only with the following:

- Phaeton
- Sport Phaeton
- 2-4 Coupe
- Coupe Roadster
- Type 503 Sedan
- Convertible Sedan

Club Sedan not equipped with platform trunk.

Standard Equipment

Chassis Equipment

- Electric starter. Bendix screw shift.
- Electric generator and storage battery.
- Electric headlights with two filament bulbs, equipped with non-glare lenses.
- Electric tail lamp and license tag illuminator combined with rear signal light.
- Electric horn.
- Tool roll with complete equipment of tools.
- One-ton jack.
- Parking lamps.
- Extra wheel and carrier.
- Wheel carrier lock.
- Wheel changing wrench.
- Packard hydraulic shock absorbers.
- Bumpers—front and rear.
- Complete instrument board.
- Bonnet with complete locking mechanism.
- Front fenders with battery and tool boxes.
- Side splashers and running boards complete.

Instrument Board Equipment

Gasoline gauge.
Tumbler type ignition switch.
(Lighting switch on steering wheel.)
Cigar lighter.
Clock.
Speedometer, including miles per hour, trip and total odometers.
Ammeter.
Oil pressure gauge.
Dash motor thermometer.
Carburetor dash adjustment.
Instruments lighted indirectly by two three-candlepower bulbs.
Reading lamp.
Package compartment at each end of board.

Specifications in Brief

Engine

Eight cylinders cast in one block.
Removable cylinder head.
Nine bearing crankshaft.
Piston displacement 320 cubic inches.
Four-point suspension in rubber.

Cylinders

"L" head type, bore $3\frac{3}{16}$ inches, stroke 5 inches.

Horsepower

32.5 S. A. E. rating—block test actually develops 110 H. P.

Ignition

Generator, battery and Packard "North East" distributor.

Gasoline System

The main tank in the rear has a capacity of 25 gallons. A gasoline gauge is mounted on instrument board.

Frame

Pressed steel, 8 inches deep.

Rigid torsion tube and built-up box section at front, with rigid channel section at rear end and large X-shaped center cross member, gives entire chassis great firmness and strength.

Springs

Front semi-elliptic, 42 inches long and $2\frac{1}{4}$ inches wide.

Rear semi-elliptic, $60\frac{1}{2}$ inches long and $2\frac{1}{2}$ inches wide.

Lubrication

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

Clutch

Special design single plate disc clutch.

Transmission

Four speeds forward, one reverse—selective type with synchronized third and fourth speed gears.

Brakes

Service brakes are internal expanding on all four wheels. The parking brake operates separately from the service brake on the rear wheels only. 16" drums.

Starting System

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

Lighting System

Headlights with auxiliary driving lights and parking lights.

Instrument board lights.

Combination tail and stop lights.

Current supplied to battery by six-volt generator.

Lighting switch control lever is located at top of steering gear.

Cooling System

Capacity—5 gallons, with automatic thermostat control of both air flow and water temperature.

Six-bladed steel fan.

"V"-shaped fan belts with great driving power.

Turning Radius

129½ inch wheelbase—23'.

136½ inch wheelbase—24' 3".

Special Equipment

The following may be specified when desired:

Wire wheels.

Wood wheels.

Custom equipment.

Rear double wheel carrier.

Right hand tail lamp.

Eight de luxe type double horn.

Fender lamps.

Eight de luxe type bumpers with stabilizer in front bumper.

License Data

Number of cylinders.....8

Cylinder bore.....3⅞"

Horsepower (N. A. C. C.

rating).....32.5

Piston displacement.....320 cu. in.

Stroke.....5"

Shipping Weights

Packard Eight	Lbs.
Phaeton, Type 501—4 Pass.....	4300
Sport Phaeton, Type 521—4 Pass...	4400
Touring, Type 500—7 Pass.....	4345
Coupe Roadster, Type 509—2-4	
Pass.....	4420
Conv. Sedan, Type 523—5 Pass....	4573
Conv. Victoria, Type 527—5 Pass..	4317
Coupe, Type 508—2-4 Pass.....	4475
Coupe, Type 507—5 Pass.....	4505
Club Sedan, Type 506—5 Pass....	4555
Sedan, Type 504—7 Pass.....	4735
Sedan-Limo., Type 505—7 Pass....	4770
Sedan, Type 543—5 Pass.	
(136½" wheelbase).....	4590
Sedan, Type 503—5 Pass.	
(129½" wheelbase).....	4570
Chassis, Type 902 (136½" wheel-	
base).....	3440
Chassis, Type 901 (129½" wheel-	
base).....	3420

If weight of a car ready for the road is desired, approximately 245 pounds should be added to the above weights to cover gasoline, water and spare tire.

Vehicle number is on Packard patent plate located on motor side of dash.

Motor number is on left front motor supporting arm.

DIMENSIONS AND CAPACITY OF PACKARD EIGHT CARS

(All measurements are in inches)

Type Number	Body Models	Length Over All—Bumper to Bumper	Width Over All At Front Fenders	Height Over All Unloaded
503	Sedan (5) (short wheelbase).....	199	71 ⁷ / ₈	70 ³ / ₄
500	Touring (7).....	206	71 ⁷ / ₈	69 ⁷ / ₈
501	Phaeton (4).....	206	71 ⁷ / ₈	68 ⁹ / ₁₆
521	Sport Phaeton (4).....	206	71 ⁷ / ₈	68 ⁹ / ₁₆
509	Coupe Roadster (2-4).....	206	71 ⁷ / ₈	65 ³ / ₄
527	Convertible Victoria (5).....	206	71 ⁷ / ₈	66 ¹ / ₄
523	Convertible Sedan (5).....	206	71 ⁷ / ₈	68 ³ / ₈
508	Coupe (2-4).....	206	71 ⁷ / ₈	69 ³ / ₄
507	Coupe (5).....	206	71 ⁷ / ₈	70 ¹ / ₂
506	Club Sedan (5).....	206	71 ⁷ / ₈	70 ³ / ₄
543	Sedan (5) (long wheelbase).....	206	71 ⁷ / ₈	70 ³ / ₄
504	Sedan (7).....	206	71 ⁷ / ₈	70 ³ / ₄
505	Sedan-Limousine (7).....	206	71 ⁷ / ₈	70 ³ / ₄

DIMENSIONS OF PACKARD EIGHT ENCLOSED BODIES

(All measurements are in inches)

	503 Sedan (5 Pass.)	508 Coupe (2-4 Pass.)	507 Coupe (5 Pass.)	506 Club Sedan (5 Pass.)	543 Sedan (5 Pass.)	504 Sedan (7 Pass.)	505 Sedan- Limo. (7 Pass.)
Length over all (at belt) except Coupes.....	112 $\frac{7}{8}$	114 $\frac{5}{8}$	113 $\frac{7}{8}$	104 $\frac{3}{4}$	112 $\frac{7}{8}$	119 $\frac{7}{8}$	119 $\frac{7}{8}$
Length—dash to front of front seat.....	24 $\frac{5}{8}$	24 $\frac{5}{8}$	23 $\frac{7}{8}$	24 $\frac{5}{8}$	24 $\frac{5}{8}$	23 $\frac{7}{8}$	23 $\frac{7}{8}$
Length—back of front seat to front of rear seat.....	22 $\frac{1}{8}$			15	22 $\frac{1}{8}$		
Distance from partition to front of folding seat.....			6			4 $\frac{7}{8}$	6 $\frac{3}{8}$
*Distance from front of rear seat to folding seat.....							4 $\frac{7}{8}$
Width over all (at belt) panel to panel.....	62	60	60 $\frac{3}{4}$	62	62	62	62
Width of floor in tonneau.....	47	46	45 $\frac{3}{4}$	47	47	47	47
Height inside.....	48 $\frac{5}{8}$	47	49 $\frac{3}{4}$	48 $\frac{5}{8}$	48 $\frac{5}{8}$	48 $\frac{5}{8}$	48 $\frac{5}{8}$
Front door width.....	31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$
Rear door width.....	31 $\frac{7}{8}$			31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$	31 $\frac{7}{8}$
SEATS:							
Front: Depth.....	17 $\frac{3}{8}$	17 $\frac{3}{8}$	17 $\frac{3}{8}$	17 $\frac{3}{8}$	17 $\frac{3}{8}$	17 $\frac{3}{8}$	17 $\frac{3}{8}$
Width.....	44 $\frac{1}{2}$	44 $\frac{1}{2}$	19 $\frac{1}{4}$	44 $\frac{1}{2}$	44 $\frac{1}{2}$	44 $\frac{1}{2}$	44 $\frac{1}{2}$
Height (floor to top of cushion).....	13 $\frac{1}{8}$	13 $\frac{1}{8}$	13	13 $\frac{1}{8}$	13 $\frac{1}{8}$	13 $\frac{1}{8}$	13
Height of seat back.....	20 $\frac{3}{4}$	20 $\frac{3}{4}$	20 $\frac{3}{4}$	20 $\frac{3}{4}$	20 $\frac{3}{4}$	20 $\frac{3}{4}$	21 $\frac{1}{8}$
Rear: Depth.....	20		19	19	20	20	20
Width.....	47		50	49	49	47	47
Height (floor to top of cushion).....	13 $\frac{3}{4}$		14 $\frac{1}{4}$	13 $\frac{1}{2}$	13 $\frac{3}{4}$	13 $\frac{3}{4}$	13 $\frac{3}{4}$
Height of seat back.....	21 $\frac{3}{8}$		21 $\frac{1}{4}$	22	21 $\frac{3}{8}$	21 $\frac{3}{8}$	21 $\frac{3}{8}$
Folding: Depth.....		16 $\frac{1}{2}$				16 $\frac{1}{4}$	16 $\frac{1}{4}$
Width.....		41 $\frac{1}{4}$				18 $\frac{7}{8}$	18 $\frac{7}{8}$
Height (floor to top of cushion).....		11				15 $\frac{1}{2}$	15 $\frac{1}{2}$
Height of seat back.....		20 $\frac{1}{2}$				14 $\frac{1}{2}$	14 $\frac{1}{2}$
†Head Room: Distance from top of seat cushion to headlining of top—front.....	35 $\frac{3}{4}$	35 $\frac{3}{4}$	35 $\frac{1}{2}$	35 $\frac{3}{4}$	35 $\frac{3}{4}$	35 $\frac{3}{4}$	35 $\frac{3}{4}$
to headlining of top—rear.....	36 $\frac{1}{4}$		36 $\frac{7}{8}$	37 $\frac{5}{8}$	36 $\frac{1}{4}$	36 $\frac{1}{4}$	36 $\frac{1}{4}$

*Measured 20" from floor.

†Measured from point 5" ahead of seat back cushion.

DIMENSIONS OF PACKARD EIGHT OPEN AND CONVERTIBLE BODIES

(All measurements are in inches)

	500 Touring (7 Pass.)	501 Phaeton (4 Pass.)	521 Sport Phaeton (4 Pass.)	509 Coupe Roadster (2-4 Pass.)	527 Conv. Victoria (5 Pass.)	523 Conv. Sedan (5 Pass.)
Length over all (at belt) except Coupes.....	118 $\frac{1}{2}$	113 $\frac{5}{8}$	113 $\frac{5}{8}$	114 $\frac{5}{8}$	98 $\frac{5}{8}$	112 $\frac{7}{8}$
Length—dash to front of front seat.....	23 $\frac{7}{8}$	24 $\frac{5}{8}$	24 $\frac{5}{8}$	24 $\frac{5}{8}$	24 $\frac{5}{8}$	24 $\frac{5}{8}$
Length—back of front seat to front of rear seat.....	27 $\frac{1}{8}$	19 $\frac{1}{4}$	19 $\frac{1}{4}$			21
Distance from front of rear seat to folding seat.....					6 $\frac{5}{8}$	
Width over all (at belt) panel to panel.....	59 $\frac{1}{8}$	59	59	60	59 $\frac{3}{4}$	62
Width of floor in tonneau.....	47	48	48	46	45 $\frac{3}{4}$	47
Front door width.....	28 $\frac{1}{4}$	28 $\frac{1}{4}$	28 $\frac{1}{4}$	33 $\frac{1}{2}$	40 $\frac{1}{2}$	35 $\frac{1}{8}$
Rear door width.....	27 $\frac{7}{8}$	27 $\frac{7}{8}$	27 $\frac{7}{8}$			30 $\frac{1}{4}$
SEATS:						
Front: Depth.....	17 $\frac{1}{2}$	17 $\frac{1}{2}$	17 $\frac{1}{2}$	18 $\frac{3}{8}$	18 $\frac{1}{2}$	18 $\frac{3}{8}$
Width.....	44	44	44	44 $\frac{1}{2}$	20	44 $\frac{1}{2}$
Height (floor to top of cushion).....	12 $\frac{1}{2}$	12 $\frac{1}{2}$	12 $\frac{1}{2}$	11 $\frac{1}{8}$	11	11 $\frac{1}{8}$
Height of seat back.....	19	19	19	22 $\frac{1}{2}$	21 $\frac{3}{4}$	22 $\frac{1}{2}$
Rear: Depth.....	20 $\frac{1}{8}$	19	19		18 $\frac{3}{8}$	20
Width.....	46	48 $\frac{1}{4}$	48 $\frac{1}{4}$		49	45
Height (floor to top of cushion).....	13 $\frac{1}{2}$	12 $\frac{1}{4}$	12 $\frac{1}{4}$		12	13
Height of seat back.....	18 $\frac{3}{4}$	21 $\frac{3}{4}$	21 $\frac{3}{4}$	16 $\frac{1}{2}$	22 $\frac{1}{2}$	22 $\frac{3}{4}$
Folding: Depth.....	16 $\frac{1}{4}$			41 $\frac{1}{4}$		
Width.....	18 $\frac{7}{8}$			11		
*Height (floor to top of cushion).....	15 $\frac{1}{2}$			20 $\frac{1}{2}$		
Height of seat back.....	14 $\frac{1}{2}$					
†Head Room: Distance from top of seat cushion to headlining of top—front.....	36 $\frac{3}{8}$	33 $\frac{1}{8}$	33 $\frac{1}{8}$	35	35 $\frac{5}{8}$	35 $\frac{3}{4}$
to headlining of top—rear.....	37 $\frac{1}{8}$	36 $\frac{3}{4}$	36 $\frac{3}{4}$		36	36 $\frac{1}{2}$

*Measured from bottom of floor pan.

†Measured from point 5" ahead of seat back cushion.