OWNER'S OPERATIONAL MANUAL

Golden Anniversary

PACKARD

OPERATING YOUR

1949

23rd SERIES

PACKARD

PACKARD MOTOR CAR COMPANY
DETROIT 32, MICHIGAN

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contents

contents

Packard service

Every fine piece of workmanship is worth caring for and this is true of your Packard. Advanced engineering and manufacturing have built luxury, durability and safety into your car. Packard Authorized Service can best assist you with its proper care and maintenance. At home your Packard Dealer knows your car best. When traveling, a nation-wide network of authorized dealers are ready to provide any service your Packard may require.

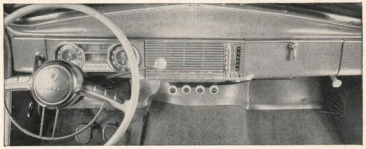
Packard Dealers are interested in keeping Packard owners well satisfied with their cars at the lowest maintenance cost possible.

manufacturer's warranty

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

This warranty shall not apply to any vehicle which shall have been repaired or altered outside of an Authorized Packard Service Station in any way so as in the judgment of the Manufacturer to affect its stability or reliability, nor which has been subject to misuse, neglect, or accident.

CONTROLS



Much of the pleasure of driving is derived from the comfort of the driver and the ease with which the car can be operated. The Packard instruments and controls are so grouped that all are in plain view and readily accessible to the driver.

front seat adjustment

The position of the front seat may be adjusted by lifting the lever on the left-hand side of the front seat base and sliding the seat forward or backward. When a comfortable position is found, the seat is locked in position by releasing the lever.

rear view mirror

The rear view mirror may be adjusted to assure full rear vision. By rotating the mirror one-half turn it may be raised or lowered to suit the height of the driver.

ignition switch

The ignition switch, which is illuminated when the parking lights are on, is conveniently located in the instrument panel just to the left of the speedometer. The ignition switch has two positions in addition to the central or off position. When the ignition key is turned to the left of the off position, the gasoline gauge, temperature indicator, battery charge indicator, and accessories only are operative. When the key is turned to the right of the off position, the engine ignition system also becomes operative.

the console-key instrument panel

For ease of operation all of the push-button type light and accessory control switches are grouped in the Console-Key Instrument Panel under the radio grille.

Fluorescent lettering behind transparent plastic clearly identifies each control switch knob.

headlights and parking lights

The "Sealed Beam" headlights used on Packard cars provide two separate beams:

1. A country (upper) beam, which illuminates the road evenly for a considerable distance ahead of the car. This beam is for use on the open highway when no other vehicles are approaching.

2. A traffic (lower) beam, which is low enough to prevent glare in the eyes of oncoming drivers. This beam should be used on city streets or heavily traveled highways and whenever passing an approaching vehicle.

The headlight switch is protected against accidental operation by a latch in the switch knob. To operate the switch, press upward on the bottom of the knob with the forefinger to release the latch while pressing the knob forward with the thumb.

Parking lights are turned on by pressing the "HEADLITE" switch knob once. The headlights are lighted by pressing the switch knob a second time. Thus, pressing the switch knob once lights the parking lights; twice, lights the headlights; three times, extinguishes all lights.

With the headlights on, select the country or traffic beam as traffic and road conditions demand, by depressing the foot switch at the left of the clutch pedal. An indicator light, located above the headlight switch, tells the driver when any light is on. Another indicator light, located at the top of the speedometer dial, is lighted when the country beam is in use to warn the driver to switch to the traffic beam when another car approaches.

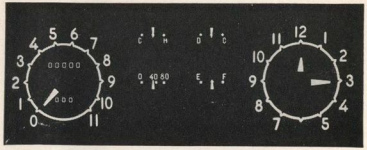
CAUTION **Never pass an approaching car with country beams on and this warning light burning.**

the flite-glo instrument panel lighting

Illumination of the Flite-Glo instruments is by means of "black light." This type of illumination prevents annoying glare and reflection since only the figures and hands are visible.

The lighting of the Flite-Glo instruments and the fluorescent lettering which identifies the switch knobs is controlled by the "INST-LITE" switch on the Console-Key Instrument Panel. When the headlights or

parking lights are on, the instruments and the lettering may be made to glow or be turned off by pressing the instrument panel light switch knob.



fog light switch

When a car is equipped with fog lights, these are controlled by pressing the "FOGLITE" switch knob, which lights the tail lights as well as the fog lights. By this arrangement the car may be driven without the use of headlights or parking lights.

courtesy lights

Courtesy lights, mounted under each end of the instrument panel, are turned on to illuminate the floor in the front compartment when either front door is opened and extinguished when the door is closed.

Pressing the "MAPLITE" switch knob lights both courtesy lights. Pressing the switch knob a second time extinguishes the lights.

Some models are equipped with door switches which light either the rear quarter lights or the dome light when a rear door is opened. When the door is closed the light is extinguished.

steering direction signal

Direction signal lights, both front and rear, are controlled by a lever on the left side of the steering column directly below the steering wheel.

To signal your intention to turn, move the lever in the direction the steering wheel will be rotated when making the turn. The signal lever will automatically return to the off position when the wheels are returned to straight ahead after completing the turn.

Movement of the signal lever illuminates a signal light, located at the top of the clock dial, indicating that the direction signal is operating.

rear compartment light

Rear compartments of all models are lighted by means of either a dome light or rear quarter lights. These lights are controlled by means of a switch conveniently mounted on the door center pillar.

CAUTION **Night driving safety is assured by occasionally having all lights checked by your dealer. For bulb and fuse chart, see Page 30.**

windshield wiper

The windshield wipers are controlled by a knob located on the left side of the steering column shroud below the steering wheel. Turning the knob clockwise starts the windshield wipers and the speed is increased by continuing to turn it clockwise until full speed is reached.

the comfort-aire ventilating system

A built-in ventilating system provides a flow of fresh air into both sides of the front compartment through grilles located in the panels forward of the doors. This flow of fresh air is varied by means of control knobs located under the center of the Console-Key Instrument Panel. The maximum flow of air is obtained by turning the left control knob fully to the left and turning the right control knob until the index mark on the face of the knob is at the top. Turning the knobs to the right from these positions reduces the flow of air, and turning the knobs fully to the right closes off the air supply entirely.

parking brake

The parking brake lever is located under the left-hand end of the instrument panel within easy reach of the driver.

hood lock

The hood latches are operated by remote control levers located at each side of the front compartment just below the instrument panel. An additional safety catch must be released from outside the car before the hood can be raised.

To raise the hood on either side, push the remote control lever on that side forward as far as possible to the unlocked position. Then raise the hood about one inch and insert the fingers

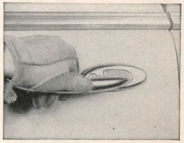
through the opening at a point about two feet ahead of the rear edge of the hood and press the safety catch in toward the engine. The hood is held in the raised position by a prop, located on the forward side of the dash, which may be raised and the end engaged in the opening provided on the underside of the hood.

CAUTION **Do not raise either side of the hood if the latch on the opposite side has been released. Always lock the hood on *both sides* before operating the car.**

glove box

A conveniently located compartment in the right-hand side of the instrument panel is opened by turning the latch handle. The key which locks the luggage compartment also locks the glove box.

door locks

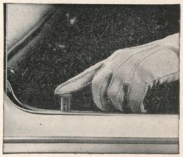


It is not necessary to turn the outside door handles when opening the doors. Simply pull the handle outward and the door latch will be released.

The doors may be locked from inside the car by pushing the lock buttons downward. Either the right or left door may be locked or unlocked from the outside with the ignition key regardless of the position of the lock button.

Should a lock button be accidentally put in the locked position while the door is open, it will snap to the unlocked position when the door is closed. This feature eliminates the possibility of accidentally locking the keys in the car.

Never leave your car unlocked when unattended.



the overdrive

The Overdrive, which is supplied as extra equipment, reduces the number of revolutions of the engine at any given car speed as compared with conventional high gear. This reduction in engine speed provides greater economy, quietness, and smoothness, all of which contribute to greater driving pleasure.

operation of the overdrive

ENGAGEMENT AND LOCKOUT

The Overdrive is made operative or locked out by means of a control knob located under the edge of the instrument panel at the right of the steering column. The Overdrive may be made operative while driving at any speed by pushing the control knob in as far as possible.

To lock out the Overdrive at speeds below engaging speed (22 miles per hour) press lightly on the accelerator pedal and pull out the control knob. At speeds above engaging speed (22 miles per hour) press the accelerator pedal firmly to the floor board to kick down into conventional gear, then pull out the lockout knob.

It is advisable to lock out the overdrive to obtain maximum engine braking action when driving on icy or slippery road surfaces and when descending steep grades.

The shifting in and out of Overdrive while driving is controlled by means of the accelerator pedal.

To bring the Overdrive into operation, the car is started and the gears shifted in the normal way. When the car speed has reached the Overdrive engaging speed (approximately 22 miles per hour), it may be engaged by momentarily lifting the foot from the accelerator pedal, then returning it and resuming normal driving. The car will remain in Overdrive as long as the car speed is maintained above approximately 17 miles per hour. When the car speed drops below approximately 17 miles per hour, the Overdrive will automatically shift back into the conventional high gear.

FOR QUICK PASSING

If, when operating in Overdrive, it is desired to shift back into conventional high gear to obtain quick acceleration for passing another vehicle, it may be done by pushing the accelerator pedal firmly to the floor board. Then, when the foot is momentarily lifted from the accelerator, the Overdrive will automatically come into operation again.

the electromatic clutch

The Electromatic Clutch, which is supplied as special equipment on Overdrive equipped cars, automatically accomplishes the engagement and disengagement of the clutch. The car is started, gears shifted, and the accelerator pedal used in the usual way but without touching the clutch pedal. Even when stopping, it is not necessary to touch the clutch pedal.

To lock out the Electromatic Clutch and restore the normal use of the clutch pedal, press the "CLUTCH" switch knob on the instrument panel. When it is desired to return to Electromatic operation, push the switch knob a second time.

the ultramatic drive

Cars equipped with the Packard Ultramatic Drive do not have the conventional foot operated clutch or the multi-speed transmission. In these vehicles, engine power is transmitted to the rear wheels through a hydraulic unit which smoothly and automatically accomplishes the normal functions of a conventional clutch and transmission.

The Ultramatic Drive is brought into operation simply by moving a selector lever on the right hand side of the steering column below the steering wheel. A quadrant, located on the steering column in plain view of the driver, indicates the position of the lever and the selected operating range. The indicator is illuminated whenever the ignition switch is turned on.

operation of the ultramatic drive

The high range position, indicated by the letter "H" on the quadrant, is used for all normal forward driving conditions.

If, when operating in the high range at speeds below approximately 50 miles per hour, the driver desires quick acceleration for passing another vehicle, it may be done by pressing the accelerator pedal firmly to the floor beyond the spring loaded throttle stop.

The low range, "L", is used only in deep sand or snow, on long, hard pulls, and when ascending and descending steep grades.

Reverse position, "R", is used to move the car in a reverse direction. To place the selector lever in the "R" position, it is necessary to first raise the lever and then move it downward.

The neutral position, "N", is used when the car is standing with the engine running. In this position, the engine may be accelerated without moving the car.

Parking position, "P", should be used only to supplement the hand brake when parking on a hill. It is not advisable to use the parking brake position for normal parking purposes since the rear wheels are not free to turn and damage may result if another vehicle applied power in an attempt to move the car. The selector lever must be raised before it can be moved to the "P" position and it should *not* be moved to this position while the car is in motion.

starting the engine

The engine can be started only if the selector lever is in the "P" or the "N" position. The starting motor wiring circuit is such that the starter will not become energized if the selector lever is in any other position.

Under normal conditions, the engine should be started with the selector lever in the "N" position. In extremely cold climates, especially after the car has been standing for a considerable length of time, it is advisable to start the engine with the selector lever in the "P" position. This will overcome any tendency of the car to creep since the rear wheels are not free to turn.

pushing the car

If it ever is necessary to push the car to start the engine, which sometimes is done if the battery is weak, the selector lever should be placed in the neutral position, "N", and the ignition switch turned on. When the car attains a speed of 25 miles per hour, the selector lever should be moved to the high range position, "H", at which time the engine will turn over.

oil requirements

The oil level in the Ultramatic Drive unit should be checked every 1000 miles and, if necessary, oil added to maintain the level at the full mark on the dip stick. The level should be checked with the selector lever in the "N" position while the engine is idling and after it has been allowed to idle for two or three minutes.

The level is checked from the underside of the car by turning the round cap, located on the left side of the unit, approximately ½ turn clockwise and then withdrawing the cap and dip stick.

Oil is added after removing the square-recessed plug from the top of the unit at the rear. Oil may be added either from the underside of the car using an oil gun with a curved spout or from the front compartment after folding back the center section of the floor mat.

Every 10,000 miles, the unit should be drained and refilled.

It is recommended that the Packard Ultramatic Drive be serviced only by authorized Packard service stations.

fresh air heater

The fresh air heater and defroster equipment, which is available for all models as an accessory, automatically maintains the desired car temperature regardless of outside temperatures

WINTER USE

Turn the left "AIR" control knob fully to the right to close off the left side ventilator.

Turn the right "AIR" control knob fully to the left. In this position,

the right side ventilator is closed off and all fresh air is directed into the blower unit for distribution through the heater and defroster outlets as desired. In moderately cold climates, the knob may be left in this position throughout the winter since cold air will emerge from the heater and defroster outlets only until the engine begins to warm up. However, if this cold air affects driver or passenger comfort, or in extremely cold climates, the knob may be turned fully to the right to completely close off air through the air duct and then turned fully to the left after the engine has warmed up.

Turn the "HEAT-DEFR" knob fully to the left to direct all air through the defroster outlets. Turning the knob fully to the right directs all air through the heater outlet. Intermediate positions distribute air through both the heater and defroster outlets as desired. When the engine reaches normal operating temperature, select a position which will provide the amount of defroster air necessary to keep the windshield clear. The balance of incoming air then will be directed downward through the heater outlet for driver and passenger comfort.

Press the Console-Key "BLOWER" switch once. In this position the blower fan is running at maximum speed; pressing the switch a second time reduces the fan speed. Pressing the switch a third time stops the blower fan motor. It is not always necessary to operate the blower fan. Weather, driving, and traffic conditions may be such that sufficient air will be delivered through the heater and defroster outlets by the air blast through the air duct when the car is in motion.

Regulate the "HIGH-TEMP" knob until the desired car temperature is obtained. The knob may be left in this position throughout the winter unless a higher or lower temperature is desired. The selected temperature automatically will be maintained by thermostatic action.

SUMMER USE

Turn the left "AIR" control knob fully to the left. Turn the right "AIR" control knob until the index mark on the face of the knob is at the top. In these positions both side ventilators are fully opened to provide a flow of fresh air into the front compartment. This flow of fresh air may be varied or completely closed off by turning the control knobs to the right.

The fresh air heater may be used to supplement the ventilating system by providing cool air ventilation while parked or driving at low speed. Turn the right "AIR" control knob fully to the left to direct the fresh air into the blower unit, turn the "HIGH-TEMP" knob fully to the right to its off position, and then operate the blower fan at full speed.

INSTRUMENTS

temperature indicator

This instrument shows the temperature of the cooling liquid in the engine. The pointer should register at about the center mark except on long, hard drives in summer weather, when it may register nearer to the "Hot" side. This condition need not cause alarm as the pressure type system will normally prevent boiling or water losses at temperatures up to 227°F.

When the ignition switch is turned off the pointer will come to rest on the hot side of the indicator. To check the temperature when the engine is not running, turn the ignition key to the left of the off position, then wait until the indicator hand stops moving.

gasoline gauge

The gasoline gauge indicates the quantity of fuel in the tank only when the ignition key is turned. When the ignition is turned off, the pointer drops beyond the "Empty" mark. To check the fuel level in the gasoline tank when the engine is not running, turn the ignition key to the left of the off position and wait until the pointer stops moving.

oil pressure gauge

The oil pressure gauge should always show pressure while the engine is running. If it does not, stop the engine at once and investigate the cause. Since this gauge is electrically operated, a short time will elapse between the starting of the engine and the registration of full pressure on the gauge.

battery charge indicator

The battery charge indicator shows whether the battery is being charged or discharged. The generator output is controlled by a regulator which reduces the amount of charge to fit the requirements of the battery. When the battery is fully charged, the indicator will read nearly zero.

speedometer

When the speedometer is equipped with a trip mileage recorder, it may be set back to zero to record the length of a trip by means of a knob located under the edge of the instrument panel below the ignition switch. The knob should be pushed upward and turned in a clockwise direction to set the trip mileage at zero.

STARTING THE ENGINE

The Packard engine has been designed to give quick, easy starting even in the coldest weather if the following instructions are followed.

When starting the engine always depress the clutch pedal and hold in this position until the engine has started. This will relieve the starting motor of the load imposed by turning the transmission gears. This load is especially high in cold weather when the transmission grease has become thickened.

Turn the ignition switch on and then slowly depress the accelerator pedal just far enough to engage the starter. As soon as the engine starts, release the accelerator pedal. Do not allow the engine to race even momentarily.

CAUTION **When starting a cold engine, do not press the accelerator pedal beyond the point at which the starter is engaged. The throttle linkage is so designed that the choke is opened when the accelerator pedal is pressed to the floor.**

Should excessive choking or flooding result from any cause, depress the accelerator pedal slowly to the floor (thus opening the choke) and hold in this position until the engine starts.

the right gasoline

The Packard engine provides all the benefits of modern high compression design and will operate efficiently on the so-called "regular" grades of gasoline. An increase in performance will be attained by the use of premium fuels such as "Ethyl" gasoline, if the engine is especially tuned and the ignition advanced to take advantage of the high anti-knock quality of these fuels.

the gasoline tank filler cap and signal

The gasoline tank filler cap is located under the hinged lid in the left rear fender. The gasoline tank is fitted with a filling signal which whistles while the tank is being filled and stops when the tank is within one gallon of being full. To prevent overflowing, instruct the attendant to fill only while the whistle blows.

THE BREAK-IN PERIOD

The manner in which any new car is driven for the first 250 miles has a pronounced effect upon its subsequent operation and this applies to the brakes, gears, rear axle, and other units, as well as to the engine.

Unless emergency demands it, do not fully open the throttle for acceleration or hill climbing, and limit speed to 50 miles per hour until at least 250 miles have been driven. Observance of this advice will pay big dividends in ultimate satisfaction.

LUBRICATION

authorized lubrication

Lubrication can be done most satisfactorily by Authorized Packard Service Stations. They have specialized equipment and use only correct lubricants.

Packard Dealers will be glad to explain the Packard Lubrication-Inspection Plan. It will save you money and be helpful in maintaining the

long life and excellent performance built into your Packard. It assures you the right lubricant at every required point, in the right amount, at the right time.

engine oil recommendations

The use of good engine oil of the correct viscosity is of great importance in obtaining maximum performance, economy, and satisfaction from your car.

Different types of engine oil are made to meet various requirements of everyday driving, as follows:

REGULAR TYPE

This term designates engine oil generally suitable for use in internal combustion engines under moderate operating conditions.

PREMIUM TYPE

This term designates engine oil having the oxidation stability and bearing corrosion preventive properties necessary to make it generally suitable for use in internal combustion engines where operating conditions are more severe than regular duty.

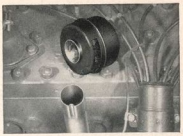
Both types of oil are furnished in several grades.

oil additives

"Break-in" oils or compounds are unnecessary. They should not be used under any circumstances unless the supplier can furnish satisfactory proof that the compound contains no harmful ingredients.

oil selection by grade

During the first 1000 miles, use the oil that was in the crankcase when the car was delivered. When it is necessary to add oil during this period, use nothing heavier than 10-W oil in winter and S.A.E. 20 or 20-W in summer.



After the first 1000 miles, oil should be selected to give the best protection for climatic and driving conditions.

During cold weather, an oil should be used that will permit easy starting at the lowest atmospheric temperature that is likely to be encountered.

When the engine crankcase is being refilled, the engine oil should be selected, not on the basis of atmospheric temperature existing at the time of the change, but on the anticipated minimum temperature for the period during which the oil is to be used. Unless the selection is made on this basis, difficulty in starting may be experienced at each sudden drop in temperature.

The viscosity grades of engine oil for use in your Packard car at the various cold weather temperatures are given in the chart below:

If the anticipated minimum atmospheric temperature will be:	Use the grade indicated:
Not lower than 32°F above zero	S.A.E. 20 or 20-W
As low as 10°F above zero	20-W
As low as 10°F below zero	10-W
Below 10°F below zero	10-W plus 10% kerosene

During summer weather, the use of S.A.E. 20 engine oil will permit better all-around performance of the engine than will heavier bodied oils. S.A.E. 30 oil should be used if it is expected that the average daylight temperature will be 90°F or above, or if the car is regularly driven at high speeds.

maintaining oil level

Check the oil level every time gasoline is purchased and add oil as necessary. Two level marks are stamped on the oil stick. The oil level should

always be maintained between these two marks. Never permit the oil level to get below the lower mark. Add only enough oil to bring the level up to the full mark. Always be sure to have the right amount before starting on a long drive.

changing crankcase oil

Under normal driving conditions, draining the crankcase and refilling with fresh oil every 2000 miles is recommended.

Under adverse driving conditions, it may become necessary to drain the crankcase oil more frequently. These conditions are as follows:

1. Driving through dust storms or on extremely dusty roads. This may contaminate the engine oil with dust in spite of the engine air cleaners.

2. Cold weather. Frequent starts and short runs during cold weather may contaminate the oil with water due to condensation inside the crankcase.

3. Hard driving. Hard driving and heat tend to thicken oil and this may interfere with easy starting in cold weather.

air cleaners

Whenever the crankcase oil is changed, the mesh in the oil filler cap, which serves as the air intake for the crankcase ventilating system, should be cleaned in gasoline and *dipped in engine oil.*

The carburetor air cleaner element should also be cleaned and re-oiled with clean engine oil by means of an oil can. With the heavy duty oil bath type cleaner, empty the oil reservoir, clean, and refill with approximately one pint of S.A.E. 50 engine oil in summer; S.A.E. 20 in winter, every 5000 miles or oftener if driving conditions warrant.

rear springs

The rear springs of your car should never be lubricated either by packing or spraying.

Insulating liners are installed between the spring leaves to control spring action, and these are adversely affected by oil or grease. Should rear springs develop a squeak, do not have them lubricated. Consult a Packard Dealer for correction.

lubricants

The rear axle is equipped with a hypoid gear and pinion and is to be lubricated with S.A.E. 90 Hypoid Lubricant.

The lubricant level should be inspected every 1000 miles and Hypoid Lubricant added if required. The axle should be drained and refilled with fresh Hypoid Lubricant each fall with the approach of cold weather.

S.A.E. 80 Hypoid Lubricant should be used in those localities where the temperature drops to 10 degrees or more below zero for long periods of time.

The transmission and overdrive should be drained and refilled each spring with a high grade mineral gear oil of S.A.E. 90 viscosity.

Use S.A.E. 80 if difficulty in shifting gear is experienced during extremely cold weather.

The lubricant level should be inspected every 1000 miles and lubricant added as required.

The steering gear should be filled at all times with a lubricant of S.A.E. 90 viscosity.

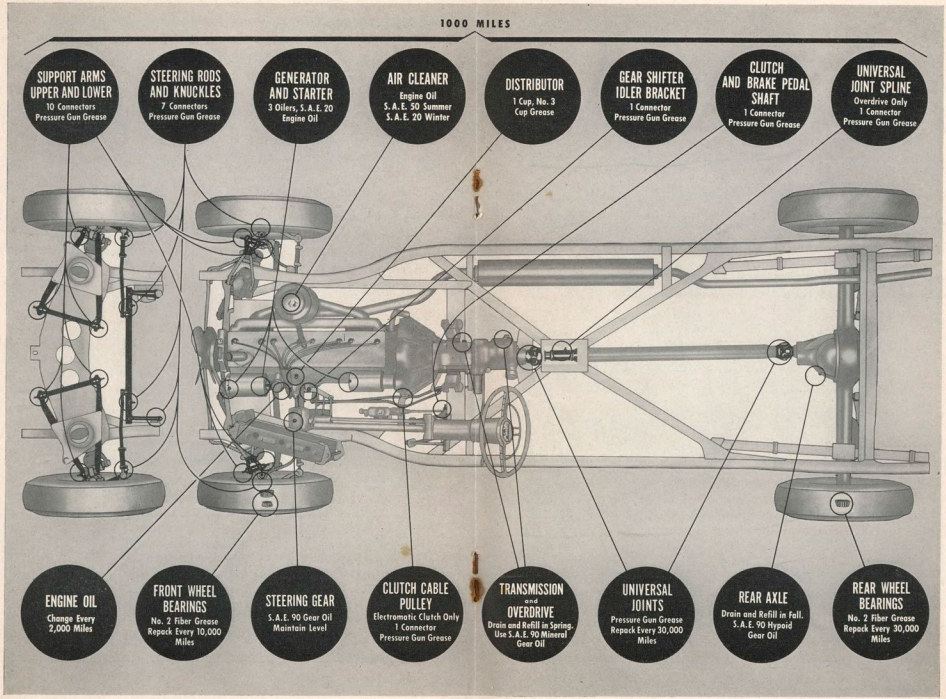
chassis lubrication

Detailed instructions for lubrication are listed and illustrated in the "Lubrication Chart." All chassis lubricating points require attention every 1000 miles.

seasonal and periodic operations

Following are several items of lubrication and maintenance regularly required which are emphasized here for your convenience.

Front wheel bearings	Repack every 10,000 miles
Rear wheel bearings	Repack at 30,000 miles
Universal joints	Repack at 30,000 miles
Oil filter (where used)	Renew cartridge 8,000 miles
Brakes	Check fluid level every 6,000 miles
Cooling system	Flush twice a year—spring and fall
Gasoline lines and strainers	Clean out twice a year—spring and fall
Engine oil pan	Remove and clean once a year

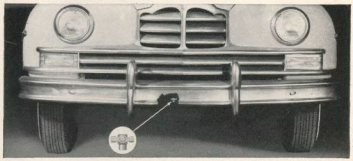

1000 MILES
SUPPORT ARMS UPPER AND LOWER
10 Connectors
Pressure Gun Grease
STEERING RODS AND KNUCKLES
7 Connectors
Pressure Gun Grease
GENERATOR AND STARTER
3 Oilers, S.A.E. 20
Engine Oil
AIR CLEANER
Engine Oil
S.A.E. 50 Summer
S.A.E. 20 Winter
DISTRIBUTOR
1 Cup, No. 3
Cup Grease
GEAR SHIFTER IDLER BRACKET
1 Connector
Pressure Gun Grease
CLUTCH AND BRAKE PEDAL SHAFT
1 Connector
Pressure Gun Grease
UNIVERSAL JOINT SPLINE
Overdrive Only
1 Connector
Pressure Gun Grease
ENGINE OIL
Change Every
2,000 Miles
FRONT WHEEL BEARINGS
No. 2 Fiber Grease
Repack Every 10,000
Miles
STEERING GEAR
S.A.E. 90 Gear Oil
Maintain Level
CLUTCH CABLE PULLEY
Electromatic Clutch Only
1 Connector
Pressure Gun Grease
TRANSMISSION and OVERDRIVE
Drain and Refill in Spring.
Use S.A.E. 90 Mineral
Gear Oil
UNIVERSAL JOINTS
Pressure Gun Grease
Repack Every 30,000
Miles
REAR AXLE
Drain and Refill in Fall.
S.A.E. 90 Hypoid
Gear Oil
REAR WHEEL BEARINGS
No. 2 Fiber Grease
Repack Every 30,000
Miles

THE COOLING SYSTEM

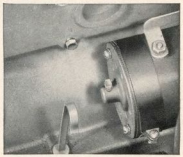
A pressure type cooling system is used to assure the most efficient cooling possible. This pressure is made possible by the use of a pressure type radiator cap which seals the cooling system completely. The pressure maintained in the system raises the boiling point of the cooling solution from 212°F to 227°F. This increase in boiling point reduces the danger of boiling and consequent loss of cooling solution regardless of operating conditions.

CAUTION **When removing the radiator cap, loosen it to the first notch and allow the pressure in the radiator to be released before completely removing the cap.**

draining the cooling system



Before draining the cooling system the engine should be run until the cooling solution is thoroughly warmed up. Then remove the radiator cap and open the drain cock, located on the right side of the radiator under the front bumper, and remove the plug from the left side of the cylinder block near the starter. This will permit complete draining of the engine. When the car is equipped with a heater, the lower hose connection at the heater must be removed to completely drain the system.



regular care

The radiator level should be maintained at about one inch below the bottom of the filler neck. If more water is added it will flow out of the radiator vent after the engine has become warm.

cooling system rust inhibitor

One-half pint of Packard Rust Preventive, a special chemical that retards the formation of rust and scale, should be added to the cooling system whenever the system is drained and refilled with water.

anti-freeze

Among the anti-freeze compounds that have been found satisfactory are those made from ethylene glycol (permanent type), denatured ethyl alcohol (ethanol), and methyl or wood alcohol (methanol) prepared by reputable manufacturers and treated by them to reduce the rust forming properties of water.

No inhibitor or treatment should be added to an anti-freeze that already contains an inhibitor.

CAUTION **Kerosene or other oils, or solutions containing calcium chloride, magnesium chloride, sodium silicate, or other inorganic salts, honey, glucose, or sugar are not satisfactory for use in the cooling system.**

Before installing anti-freeze solution, the cooling system should be inspected and serviced for winter operation.

The system should be thoroughly cleaned and all loose scale and iron rust removed. Cylinder head nuts should be tightened, or the gaskets replaced if necessary. This will avoid the possibility of anti-freeze solutions leaking into the engine, or exhaust gas blowing into the cooling system. Anti-freeze, or water, mixed with engine oil may form sludge, which will interfere with lubrication, and in some cases, may form varnish-like deposits which will cause gumming and sticking of the moving parts.

The water pump seal and radiator hoses must be leak-tight, not only to avoid loss of liquid, but to prevent air from being drawn into the cooling system. Aeration of the cooling liquid causes foaming and promotes oxidation which may result in serious corrosion.

After the anti-freeze solution has been installed, the entire system, including the hose connections, cylinder head gasket and pump, should be inspected regularly to insure that no leaks have developed.

The use of the pressure radiator cap on Packard cars serves to raise the boiling point of the anti-freeze solution and reduce the probability of loss through evaporation or boiling.

A hydrometer test will indicate whether anti-freeze or water, or both, should be added to bring the solution to the proper level and to maintain the desired freezing point.

anti-freeze chart

See the specifications on page 45 for cooling system capacity. If heater and defroster are installed, add ½ quart to the capacity given in the chart.

Cooling System Capacity	Add Qt. Ethylene Glycol	For Protection Down to	Add Qt. Alcohol	For Protection Down to
18 qt.	6	0°F	7	0°F
	7	−10°F	8	−10°F
	8	−20°F	9	−20°F
19 qt.	7	−7°F	7	−2°F
	8	−16°F	8	−10°F
	9	−28°F	9	−15°F
			10	−25°F

FOR BEST PROTECTION

Keep filled to correct level.
Don't put cold water in hot engine.
Check fan belt and hose often.
Flush system twice a year.
Have your dealer check leaks.
Use a "rust resistor".

ELECTRICAL SYSTEM

battery care

The life of a battery is dependent upon the care it receives. The water level should be checked every 1000 to 2000 miles of average operation. When it is necessary to replenish the water, use only distilled water.

When filling the battery the electrolyte should not be allowed to overflow since it may cause damage to the battery. Battery electrolyte is very corrosive and may damage any parts with which it comes in contact. When electrolyte is spilled or corrosion appears on the battery terminals or parts adjacent to the battery, the affected parts should be washed with a solution of bicarbonate of soda and then rinsed. The soda will neutralize the effect of the electrolyte and prevent further corrosion.

lighting system

The only services required by "Sealed Beam" headlights are wiping off lenses, checking aim periodically, and replacing the unit in cases of burnt out filaments or damage.

No dust or moisture can get inside the "Sealed Beam" headlight unit because the reflector and lens are sealed together permanently. This feature eliminates cleaning, except for wiping off the outside of the lens, and provides proper focusing and maximum light efficiency.

aiming headlights

We recommend taking the car to an Authorized Packard Service Station every six months to have the aim of the headlights checked and corrected if necessary.

Headlight aiming is done best with precision equipment, although a properly marked aiming screen is satisfactory.

light bulb chart

Location	Candle-Power	Mazda No.
Courtesy Lights	6	82
Glove Box Light	2	55
Headlights	35-45 Watt	—
Indicator Light Bulbs		
Headlight High Beam	1	51
Headlight Switch Position	1	51
Direction Signal	1	51
Instrument Lights	2	55
License Light	3	63
Parking and Direction Signal Light (Front)	3-21	1154
Reading Lights	6	82
Stop and Tail Light	21-3	1158
Trunk Light	2	55

fuse chart

Circuit	Location	Cap. Amps	No.
Clock	In cable at rear of clock	3	SFE-3
Direction Sig. Flasher	In plug above ash tray	9	SFE-9
Radio	In cable on left side of radio	14	SFE-14
Overdrive	On relay on dash panel	30	SFE-30
Heater	In cable near ignition switch	30	SFE-30
Head, Tail and Stop Lights	Circuit Breaker	30	

WHEELS AND TIRES

Maintaining correct tire pressure at all times is most important if maximum tire life is to be obtained.

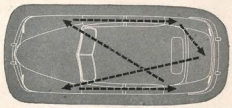
The tires are designed to operate at a specific pressure and over-inflation or underinflation will adversely affect tire life as well as car comfort and safety. The tires always should be checked cold and never should be bled to reduce the pressure built up by heat. Following these principal rules and periodically cross switching the tires will provide the long and satisfactory mileage for which the tires are designed.

Tires should be checked every week or ten days and inflated to the pressure specified on page 46. When touring or driving several hundred miles a day, check the tire pressure every day or two. Reinstall the tire valve caps. They provide an essential service in keeping dirt out and in sealing the valve opening, thus preventing loss of air pressure.

cross switching tires

Cross switching tires at regular intervals of from 2000 to 5000 miles greatly increases their useful life by subjecting them equally to the various types of wear.

The Packard recommended system is illustrated in the sketch.



tire warranty

All tires supplied as original equipment carry the following tire manufacturer's warranty:

"Every tire of our manufacture, bearing our name and serial number, is guaranteed by us to be free from defects in workmanship and material, without limit as to time or mileage, and to give satisfactory service under normal operation conditions.

"If our examination shows that any tire has failed under the terms of this guarantee, we will either repair the tire or make an allowance on the purchase of a new tire."

changing wheels

Emergency wheel changing in case of a flat tire is most easily accomplished by observing the following procedure exactly:

If a rear wheel is to be changed, the wheel shield is removed by removing the screw at the rear of the shield using the spark plug wrench furnished in the tool kit. The shield will then drop down at the rear and can be swung clear of the fender.

Make sure the hand brake is set.

Remove the hub cap, using flattened end of combination wheel wrench and jack handle as a pry.

Loosen the wheel mounting bolts not more than a turn or two.

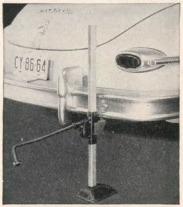
Assemble the jack to its base and place the jack under the bumper bar directly in front of or behind the tire to be changed. Place the locating pin on the lifting pad of the jack in the hole located in the lower edge of the bumper bar. Be sure the jack bar is in a vertical position before attempting to lift the car.

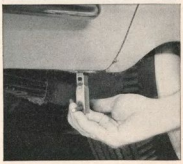
Raise the car to a height just sufficient to remove the wheel.

Remove the wheel retaining bolts and lift off the wheel and tire.

Install the spare wheel by reversing the foregoing operations.

To install the wheel shield, engage the projecting lugs in the fender at the lower front corner of the shield into their respective holes in the shield. Swing the shield upward into place over the remaining lugs. Install the retaining screw at the rear of the shield and tighten with the spark plug wrench.





CLEANING THE CAR

painted surfaces

Fine dust may be safely removed by dusting with a soft, clean, cloth but "scrubbing" a dirty car with dry cloths is almost certain to scratch it.

Clean the car by washing with plenty of cold or luke-warm water. Soak the dirt off as much as possible and rinse sponges frequently to remove grit and dirt. Dry with a clean chamois. Avoid washing the car in the sun or when the lacquered surfaces are hot. Never use hot water.

In sections where salt, calcium chloride, or similar chemicals are used on the roads, frequent washing of the car is necessary to preserve the finish. Where cars are to be exposed to freezing temperatures immediately after washing, all water must be removed from the lock cylinders and the edges of the doors and adjustable windows to prevent sticking due to the formation of ice.

A high luster can be restored by a thorough treatment with Packard Blue Coral or any other properly formulated body polish. The presence of color on the rubbing cloths simply indicates the removal of chalked or dead surface pigment loosened by exposure.

Any lacquered surface upon which alcohol solutions have been spilled should immediately be flushed with water.

glass

Plate glass although hard can quite easily be scratched. Cleaning a dirty windshield when dry by operation of the wiper blade or with dry cloths is apt to cause minute surface scratches. Wet glass before cleaning.

chromium plating

Among the more common elements that attack chromium plating are: sulphur dioxide present in the air, especially in large industrial centers; calcium chloride used on city streets to melt ice and on dirt roads to prevent dust; also the salt air of coastal territories. When plating is scratched or scuffed to the base metal, ordinary moisture becomes a damaging agent. Rust, originating at the root of a scratch, will continue to spread underneath the plating unless attended to when it first appears.

First, go over all plated surfaces with a clean cloth moistened with Packard Chromium Cleaner or kerosene, follow this with a clean cloth

wet with clear water, and then rub dry with a soft clean cloth. The rough treatment given car bumpers is apt to damage the plating. Should rust appear, use a mild scouring compound to remove every trace of rust and prevent further oxidation by applying a coat of wax, varnish, or clear lacquer over the damaged area.

upholstery

Where the use of cleaning fluid is indicated, use Packard Fabric Cleaner or a cleaning fluid in which carbon tetrachloride is the principal ingredient. To avoid rings, work from the outside toward the center.

Battery Acid will destroy upholstery if allowed to remain. Neutralize the acid as soon as possible by pouring enough household ammonia water directly on the spot to saturate the fabric as far as the acid extends. Give the ammonia water a full minute to neutralize the acid and then sponge the fabric with a wet cloth. Use cold water.

Blood Stains, rub with a clean cloth wet with cold water.

Candy or Fruit stains should be rubbed with a clean cloth wet with very hot water. If chocolate is present in the candy stain, use lukewarm water. After drying, sponge with a clean cloth wet with cleaning fluid.

Gum, moisten with cleaning fluid; remove with a dull knife.

Ice Cream, rub with a clean cloth wet with very hot water. If this is not satisfactory, use a cloth wet with warm soap suds and rinse with a cloth wet with cold water. After drying, sponge with cleaning fluid.

Lipstick, pour cleaning fluid directly on spot and immediately hold a clean blotter on stain. Repeat until clean.

Shoe Polish, for black or tan polish, use a cloth wet with cleaning fluid. If white polish cannot be brushed off, wet with cold water, allow to dry, and then brush off.

Grease or Oil, small spots should be rubbed with a cloth wet with cleaning fluid. Pour cleaning fluid on large spots and blot with clean blotters.

Tar, moisten with cleaning fluid and remove with a dull knife. Sponge with cloth wet with cleaning fluid.

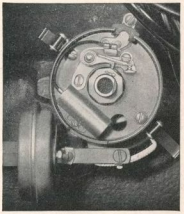
Paints and Lacquer, rub with a cloth wet with turpentine and then sponge with a cloth wet with cold water.

Water Spots, sponge the entire panel with a cloth dampened with cold water; then sponge the spots with a cloth moistened with cleaning fluid.

MINOR SERVICE OPERATIONS

CAUTION Never start or run an engine in a closed garage. Exhaust gases from gasoline engines contain carbon monoxide gas—a deadly poison gas which gives no warning of its presence . . . it is colorless and odorless.

distributor points



If the ignition system is to operate properly, the distributor points must make good contact and have a certain specified gap when open.

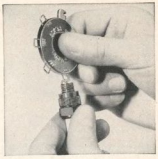
The contact points should be either bright or a light grey in color. When the points are blackened, they may in an emergency be cleaned with a fine point file and reset to the proper gap. The car should then be taken to the service station to determine whether the points have been seriously burned and that the gap is properly set.

To inspect the points, remove the distributor cap by unsnapping the two retaining springs and lift out the distributor rotor. The points may now be examined by separating them with the fingers. Do not bend the breaker arm.

To adjust the points, place the shift lever in high gear position and, while watching the distributor points, move the car until one of the high points on the cam is directly under the fiber cam follower on the breaker arm. The points are now at their greatest opening.

It should now be possible to insert a piece of 0.015 inch feeler stock between the points. A slight drag should be felt as the feeler is moved between the points. If no drag is felt or the points grip the feeler tightly, loosen the lock screw holding the base of the stationary point and turn the screw in the slotted hole in the base. When a slight drag is felt on the feeler, retighten the lock screw, and recheck the point gap with the feeler.

spark plugs



The porcelain portion of the plugs should be wiped off occasionally to prevent the accumulation of dust and dirt. Dirty porcelains may attract moisture on damp days which will cause hard starting and poor performance.

Each spring and fall the plugs should be removed, the electrodes cleaned, and the point gap checked with a wire type spark plug feeler gauge. If the gap is more than 0.030 inch or less than 0.025 inch, it should be corrected by bending the ground electrode (the electrode which is fastened to the outer shell of the plug). Never bend or pry against the center electrode as the porcelain may be broken.

When installing the plugs use the wrench furnished and tighten snugly with the fingers. Avoid over-tightening.

fan belt

To assure proper cooling circulation by the water pump and battery charging by the generator, the fan belt must be correctly adjusted at all times.

The correct adjustment will permit the belt to be flexed ½ inch between the fan pulley and the generator pulley by the pressure of a thumb.

If the belt is loose, it should be tightened by loosening the adjusting strap screw on the generator and prying the generator outward until the proper tension is obtained, then tightening the adjusting strap screw.

Do not overtighten the belt. Overtightening may result in damage to the water pump and generator bearings.

air cleaners

The carburetor air cleaner should be washed and re-oiled every 1000 to 2000 miles.

Remove the cover and lift out the cleaner element. Wash by immersing in clean gasoline and shake until dry. Re-oil with clean engine oil by means of an oil can. Allow surplus oil to drain off and reinstall.

When the car is equipped with a heavy duty oil bath cleaner, empty the oil reservoir, wash out and refill with approximately one pint of S.A.E. 50 engine oil in summer and S.A.E. 20 in winter every 5000 miles or oftener if driving conditions warrant.

The combination crankcase oil filter cap and air cleaner should be cleaned and re-oiled at each oil change. Clean the cap by immersion in gasoline, shake dry, and dip in clean engine oil. Allow surplus oil to drain off and reinstall.

clutch pedal adjustment

If the clutch pedal does not have free play (the distance the pedal travels before the resistance of the clutch is felt), there is danger of the clutch slipping and eventually being damaged.

Loosen the adjustment lock nut on the rod between the clutch relay lever and the throwout lever, which extends out of the flywheel housing on the left side of the car. Turn the acorn-shaped nut clockwise (when viewed from the rear) until the correct clutch pedal free play, as given in the specifications on page 46, is obtained.

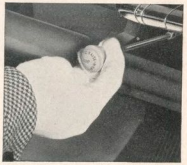
* * *

CONVERTIBLE

the top

The convertible top may be raised or lowered without leaving the driver's seat by means of a control button located under the edge of the instrument panel at the right of the steering column.

LOWERING THE TOP



To lower the top, stop the car and release the top clamp by turning the handle above the center of the windshield in a counterclockwise direction until the top can be raised slightly by hand. Pull the control button out and hold in this position until the top is fully lowered into the compartment behind the rear seat and then attach the hold-down straps at each side of the top.

THE TOP BOOT

To improve the appearance of the car and protect the top from dirt when it is folded down, a top boot is available as an accessory.

To install the top boot fold in any excess top material at the sides so that the boot will fit smoothly. Attach the hold-down straps to the loops at each side of the top and tighten. Lay the top boot over the folded top and, starting at the center and working both ways, secure all boot fasteners.

The top boot is removed by reversing the foregoing instructions.

RAISING THE TOP

To raise the top, stop the car and turn both sun visors downward. Unfasten the hold-down straps at each side of the top. Press the top control knob in and hold in this position until the top is completely raised.

Pull the front of the top down until firmly seated over the dowels in the top of the windshield frame. Lock in place by turning the top clamp handle in a clockwise direction until tight. Snap the two fasteners on each side of the top at the rear.

CARE OF THE TOP

Brush dust from the top at frequent intervals.

Clean with soap and water only. *Never* use dry cleaning solvents or gasoline.

Never lower the top while it is wet.

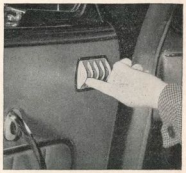
Keep the top compartment clean. Dust and dirt will soil the inside of the top when lowered.

Never attempt to raise or lower the top while the car is in motion as irreparable damage may result.

If the top does not fold into the compartment properly, it should be raised and the compartment checked for packages, etc.

Do not oil the top levers or pivots. If squeaks develop, see your Packard Dealer.

the windows



The windows of the Convertible may be opened or closed quickly and effortlessly without diverting the driver's attention from the road. A button under each door window and under each rear side window provides convenient control for all passengers. A set of master controls is mounted on the left door so that the driver may open or close any window in the car while seated behind the wheel.

Windows are opened by pressing the control buttons downward and are closed by raising button upward.

the seat adjustment

In the Packard Convertible, a control button located on the left side of the front seat frame controls the movement of the seat.

Moving the button rearward moves the seat back away from the steering wheel. As the seat is moved back it is also lowered to accommodate the tall driver. When a comfortable position is reached, releasing the control button will lock the seat in that position.

As the seat is moved forward toward the steering wheel, it is raised for the comfort of the short driver.

the electro-hydraulic system

The Packard Convertible is equipped with an Electro-Hydraulic power system which is used to open and close the windows, raise and lower the top, and move the front seat to a comfortable driving position. These operations may be performed at any time whether the engine is running or stopped. Control buttons are so mounted that all are within easy reach of the driver.

It is recommended that all service on this system be performed by Authorized Packard Dealers. This system is designed to give long trouble-free operation with a minimum amount of service.

The only service required is lubrication of the drive motor upper bearing and replacing the hydraulic fluid in the reservoir at 5000 mile intervals or each spring and fall.

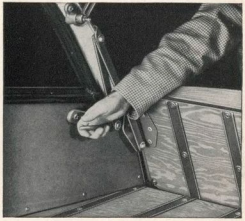
At these intervals lubricate the motor bearing with four or five drops of S.A.E. 10 or 10-W oil. Open all windows and place the front seat in its rearmost position. Remove the reservoir from the pump unit and discard the fluid. Wash the reservoir with alcohol and fill to the level mark with Packard Brake Fluid and reinstall. If the gasket between the pump unit and the reservoir is damaged, it must be replaced.

NEVER USE MINERAL OIL OF ANY KIND IN THIS SYSTEM.

Only Packard Brake Fluid should be used since the use of mineral oil in this system will damage all rubber parts, which will necessitate the renewal of many of the operating units.

STATION SEDAN

the cargo compartment



Both front doors and the cargo compartment door are locked and unlocked by means of the ignition key. A separate key is used for the glove compartment.

Turn the upper cargo compartment door handle to the left and swing the door upward. Press downward on the two slotted props and secure in position by tightening the two wing nuts.

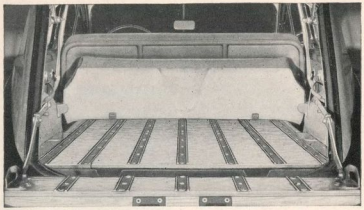
The tailgate is locked by means of two locking handles located one on each side of the cargo compartment. The gate may be unlocked by lifting the locking handles upward.

The Station Sedan may be driven with the tailgate down and the compartment upper door open. The wing nuts which lock the slotted door props in position should be securely tightened if the door is to be left open.

license plate position

If the sedan is to be driven with the tailgate down, the tail light may be swung downward to a vertical position by simply pulling the license plate into a vertical position.

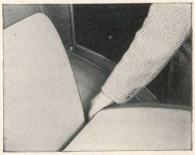
extending compartment



The entire floor of the cargo compartment in the Packard Station Sedan is fitted with metal skid strips to permit the sliding of luggage without scratching either the luggage or the floor.

The rear seat may be folded out of the way to make the full capacity of the Station Sedan cargo compartment available.

Lift the rear edge of the rear seat cushion and swing forward toward the front seat.



Unfasten the retaining strap at the right side of the rear seat back. Tip the seat back forward and engage the two metal loops at the top of the seat back in the clips at the back of the seat cushion.

closing compartment

Place both tailgate locking handles in the upward or unlocked position, then close the tailgate. Press downward on both locking handles to secure the tailgate in the closed position

Return the tail light to its normal position by pushing the license plate into its correct position.

Loosen wing nuts on the upper door props and, while supporting the door, release the props by raising upward slightly.

Lower the door into position and lock by turning the locking handle to the right.

removing spare wheel

The spare wheel in the Station Sedan is concealed under the sub flooring in the cargo compartment.

The spare wheel is accessible through a removable section of the cargo compartment floor.

To remove the spare wheel, lift the rear of the compartment floor upward slightly, then pull this section of the floor toward the rear and lift out. The spare wheel may now be removed.

Reinstall by reversing the above operations.

care of the station sedan

The original beauty of the wood paneling on your Station Sedan can be maintained by proper care and periodic varnishing.

With average care it will not be necessary to varnish the wood panels oftener than once each year. Constant exposure to sun, rain, snow or salt air may make varnishing necessary at shorter intervals. A coat of varnish should be applied when the surface becomes dull, checked, or scratched.

If varnishing is done at the first sign of dullness, it will not be necessary to strip off the old varnish before applying a fresh coat.

varnishing

Lightly sand all varnished surfaces with fine sandpaper and carefully inspect all joints for signs of dry rot or black stains. If stains are evident at the joints, they should be scraped down to solid wood and then stained to the proper shade. This work can best be done by an experienced refinisher.

If gouges or scratches in the varnish are found, the edges should be "feathered" or tapered off so that they will not be visible after the varnish has been applied. Cracks or openings at the joints should be filled with a non-hardening type of filler before varnishing. Gouges should be filled with plastic wood or stick shellac and then sanded smooth.

After sanding, all surfaces should be carefully wiped to remove all dust with a tack rag prepared by moistening the rag with a solution of two parts of gasoline and one part varnish. Wring as dry as possible before using.

Apply a full coat of high quality spar varnish with a good varnish brush. Allow 12 to 15 hours drying time before using the car.

upholstery

The seat covering and headlining may be cleaned with Packard Fabric Cleaner or mild soap and water. Care should be used when cleaning the woven material on the seat backs and cushions to avoid saturating the padding.

SPECIFICATIONS

model	eight	super eight	custom eight
over-all length	204 11/16″	211 11/16″	213 1/4″
7 Pass.		225 11/16″	
max. width	77 1/2″	77 1/2″	77 1/2″
wheelbase	120″	127″	127″
7 Pass.		141″	
height—loaded	64 1/2″	64 1/2″	64 1/2″

Weight—Consult the dealer who sold you the car, or the Motor Vehicle Commissioner in your state.

engine

Type	8 Cyl. "L" Head	8 Cyl. "L" Head	8 Cyl. "L" Head
Bore	3 1/2″	3 1/2″	3 1/2″
Stroke	3 3/4″	4 1/4″	4 5/8″
Comp. Ratio	7.00 to 1	7.00 to 1	7.00 to 1
Brake Horsepower	135 @ 3600 rpm	150 @ 3600 rpm	160 @ 3600 rpm
Oil Pressure	40 lb	40 lb	50 lb
Oil Capacity	7 qt	7 qt	7 qt
Water Capacity	18 qt	19 qt	19 qt
Heater Capacity	1/2 qt	1/2 qt	1/2 qt
Thermostat Rating			
Standard	151°	151°	145° to 150°
High Reading	160° & 180°	160° & 180°	160° to 165°
Fuel Tank	17 gal	20 gal	20 gal
Valve Clearance			
Intake	0.007″	0.007″	Hydraulic
Exhaust	0.010″	0.010″	Hydraulic

electrical

Battery	15 Plate—100 hr.	15 Plate—100 hr.	17 Plate—120 hr.
Generator	40 Amp. Shunt	40 Amp. Shunt	40 Amp. Shunt
Regulator	Voltage & Current Control	Voltage & Current Control	Voltage & Current Control
Breaker Gap	0.013″—0.018″	0.013″—0.018″	0.013″—0.018″
Spark Plugs	10 mm	10 mm	10 mm
Spark Plug Gap	0.025″—0.030″	0.025″—0.030″	0.025″—0.030″
Ignition Timing	6° btdc	6° btdc	6° btdc
Headlights	Sealed Beam	Sealed Beam	Sealed Beam

model . . . . eight	. . . super eight	. . custom eight
clutch		
Type	Dry Disc 10″	Dry Disc 10½″	
Clutch Pedal Free Play	1¼″-1½″	1¼″-1½″	
transmission		
Type	Selective Silent Synchronized	Selective Silent Synchronized	Ultramatic Drive
Oil Capacity	2 pt	2 pt	12 Qt.
Overdrive Capacity	1¼ pt	1¼ pt	
Total Capacity	3¼ pt	3¼ pt	
rear axle		
Type	Hypoid	Hypoid	Hypoid
Oil Capacity	4 pt	4 pt	6 pt
7 Pass.		6 pt	
Ratio			
Standard	3.9 to 1	3.9 to 1	3.54 to 1
7 Pass.		4.09 to 1	
Overdrive	4.1 to 1	4.1 to 1	
7 Pass.		4.36 to 1	
suspension		
Type	Independent Parallelogram	Independent Parallelogram	Independent Parallelogram
Front Springs	Coil	Coil	Coil
Shocks			
Front	Two-Way	Two-Way	Two-Way
Rear	Direct Acting	Direct Acting	Direct Acting
steering		
Gear Make	Gemmer	Gemmer	Gemmer
Ratio	26.2 to 1	26.2 to 1	26.2 to 1
Gear Oil	S.A.E. 90	S.A.E. 90	S.A.E. 90
King Pin Angle	5° 50′	5° 50′	5° 50′
Caster Angle	−1°± ½°	−1°± ½°	−2°± ½°
7 Pass.		−2°± ½°	
Camber Angle	0°± ½°	0°± ½°	0°± ½°
Toe-In	0+1/16″−0	0+1/16″−0	0+1/16″−0
Tire Pressure	24 lb	24 lb	24 lb
7 Pass.		26 lb	

ACCESSORIES

We invite your attention to the following Packard Approved Accessories that will add to your driving safety, comfort, and convenience. Your Packard Dealer will show you the items you find of particular interest.

SEAT COVERS—Pack-Tex or San-Tex attractively styled, with a choice of materials and colors. Easily cleaned. Protect the upholstery of your car.

VANITY MIRROR—A convenience for lady passengers. Hooks on the sun visor with strong spring steel clips.

OUTSIDE REAR VIEW MIRRORS—Provide a view of traffic off the rear corners of the car.

EXHAUST EXTENSION—Protects bumper from discoloration by exhaust carbons. Heavily chrome plated.

Ask for an illustrated catalog of Packard Approved Accessories describing many other items such as Spot Light, Fog Lamps, Underhood Light, Spare Tire Valve Extension, Trunk Compartment Light, etc. Your dealer carries a complete line of Packard Protective Materials that will help you keep your car looking new for years to come.

FOR YOUR CONVENIENCE

Vehicle No._____

Engine No._____

Ign. Key No._____ Trunk Key No._____

Paint Scheme_____ Trim Set No._____

Tire Serial No.

1._____ 2._____

3._____ 4._____

5._____


APPROVED
Packard
SERVICE

ASK THE MAN WHO OWNS ONE