SERVICE MANUAL

SECTION III

ACCESSORIES

Packard Motor Car Company
Detroit 32, Michigan

INDEX

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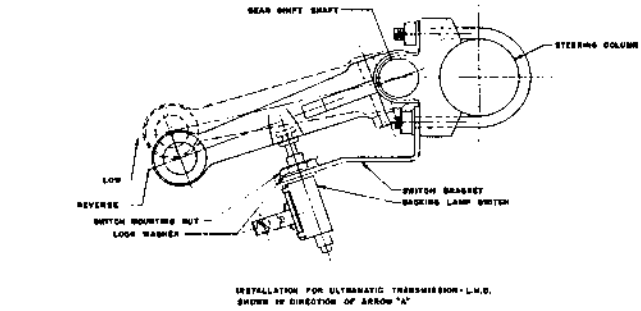
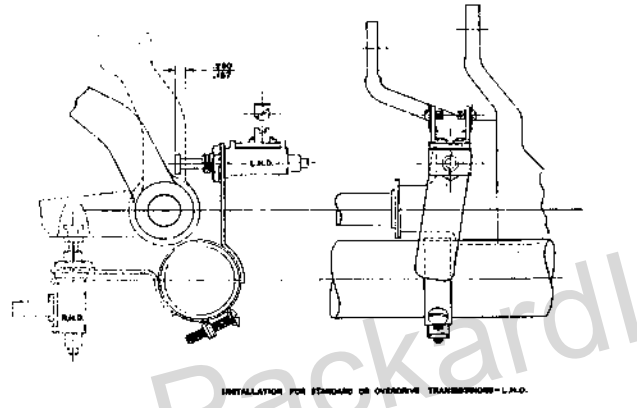
ACCESSORIES

Backing Lamp Installation

Mount the backing lamp switch around the steering column as shown in *lower* figure 1 for L.H.D. standard or overdrive transmission, and for the R.H.D. Ultramatic Drive.



INSTALLATION FOR ULTRAMATIC TRANSMISSION - L.H.D. SHOWN IN DIRECTION OF ARROW "A"



INSTALLATION FOR STANDARD OR OVERDRIVE TRANSMISSIONS - L.H.D.

Figure 1—Location of the Backing Lamp Switch

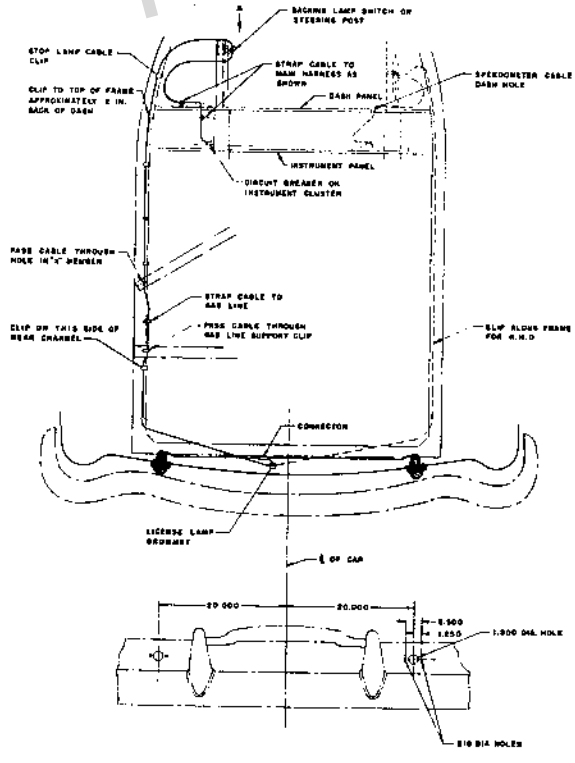


Figure 2—Backing Lamp Location

Mount the backing lamp switch and bracket on the "U" bolts as shown in *upper* figure 1 for the L.H.D. Ultramatic Drive.

Drill the lamp holes as shown in figure 2. Clean the surface around the lamp stud holes on the inside of the trunk to insure lamp ground. Mount the backing lamp as shown in figure 3, making sure the gasket is located correctly, the wide side of the gasket to the outside of the car.

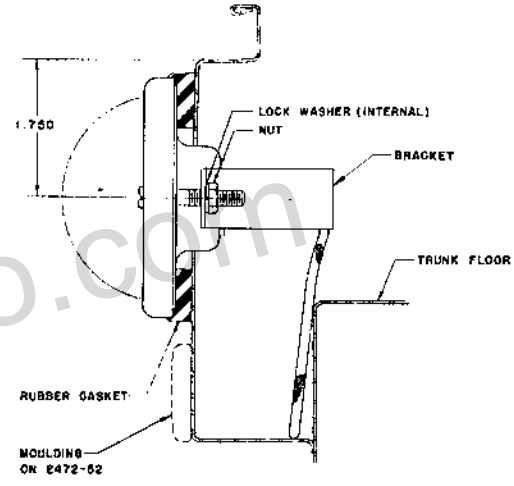


Figure 3—Backing Lamp Installation on the Luggage Compartment Lower Panel

Connect the backing lamp cables and switch cable to the junction as shown in figure 2. Run the long cable through the license lamp grommet in the trunk floor, over the top of the cross member and along the top side of the bottom flange of the frame. Clip the cable to the frame at six points as shown. Then run the cable through stop lamp cables, clip, and attach the terminal to either post of the backing lamp switch.

Attach the short cable to the backing lamp switch, run it underneath the air duct, and strap it to the main harness on the dash. Run the cable through the main harness grommet and strap to the main harness under the instrument board. Attach the cable to the short post on the 10 ampere circuit breaker located on the instrument cluster. This circuit breaker is adjacent to the temperature gauge and is fed through the ignition switch.

On Ultramatic Drive equipped cars, place the selector lever in the reverse position and watch the action of the switch; if necessary, loosen the hex nut on the switch and shift the position of the switch on its bracket for correct alignment with the lever.

On Uni-mesh transmission equipped cars, place the gear shift in reverse position, rotate the switch bracket on the column until the switch plunger is depressed .187 inch to .250 inch, and tighten the clamp screw.

For right-hand drive installation, assemble the clamp type bracket and switch on the steering post. Adjust it so that the switch will be operated by the reverse selector lever. Run the short cable from switch under the air duct and through the speedometer grommet in the dash to the short post on the 10 ampere circuit breaker on the cluster. Run the long cable back along the flange of the frame on the right side of the car and clip the cable as required.

Bonnet Ornament Installation (Pelican)

On the "200" models, remove the ornament on the bonnet. Locate and drill one 1/4" hole 3 3/8" directly forward of the front hole now in the bonnet for ornament attachment. Locate and drill one 7/16" hole 5" directly to the rear of the rear hole now in the bonnet for ornament attachment. Touch up the edges of the two holes drilled with lacquer of the same color as the bonnet. Install the (pelican) ornament. Install the attaching screws, flat washers, and cup washers. Tighten securely.

Note: It is not necessary to drill additional holes when installing the pelican ornament on the "300" and Patrician "400" models.

Exterior Windshield Visor Installation

Mask the underside of the visor panels, and the stainless steel mouldings. Sand the surface to be painted with #320 or #400A wet or dry sandpaper. Finish the top side of the panels, the roof mounting bracket, and the heads of the mounting screws with the same identical color as the car body.

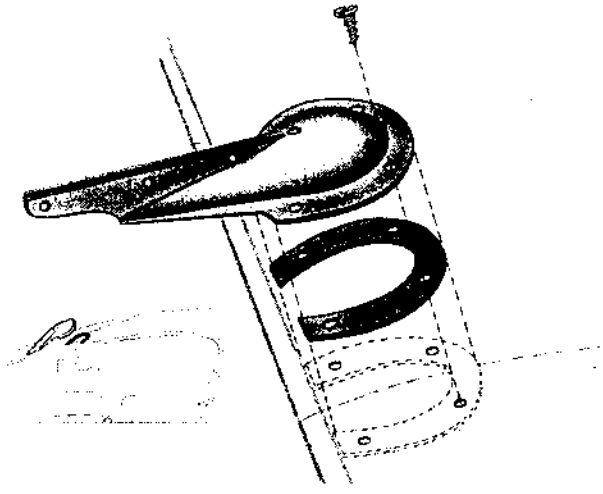


Figure 4—Sketch Showing Bracket Attaching Screw Hole Locations in the Roof

Assemble the visor temporarily and place it in position on the car roof. Pencil mark the two rear holes through the bracket. Remove and disassemble the visor. Using the roof bracket as a template, pencil mark the four hole locations on the roof as shown in figure 4, and center punch the centers. Drill four 1/8" holes, using a stop on the drill to prevent drilling through the headlining.

Place the gasket between the bracket and the roof. Install the attaching screws and tighten securely. Tape the rain gutter and roof panel at the mounting position to protect the finish. Assemble the visor panels to the roof bracket, placing the inner flange of the panels between the arms of the roof bracket. Install the attaching screws, lockwashers, and nut, and tighten securely.

Place a pencil mark on the rain gutters 12" from the forward end of the gutter. Place the ends of the visor panels in the gutter at this position. Install the end brackets over and under the gutter; align the holes, and install the sheet metal attaching screws. To eliminate marring the visor finish, place a piece of paper between the bracket and panel. The paper may be removed before the final tightening.

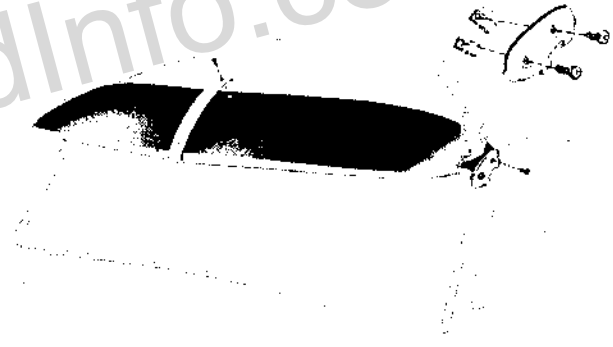


Figure 5—Exterior Windshield Visor Installation

Hook the curved end of the center medallion over the visor panels at the center and draw tightly over the rear edge. Fasten the rear end of the medallion to the roof bracket using the self-tapping sheet metal screw.

Align the leading and trailing edge of the visor; remove the paper from behind the brackets, and tighten all screws securely.

Gas Filter Installation

Disconnect the gas line at the carburetor end. Remove the gas line fitting from the carburetor. Install this fitting into the threaded hole marked "in" on the gas filter. Tighten the fitting securely.

Install the G-142868 nipple (furnished in the kit) in the threaded hole marked "out" on the gas filter, and tighten by hand. Install the filter to the carburetor by

entering the protruding end of the nipple into the threaded hole in the carburetor float cover and tighten securely.

Realign the gas line and connect to the fitting in the filter. Tighten securely. Bend the tube to allow sufficient clearance between the tube and heater hose, and the tube and lower radiator hose. This is precautionary to prevent vapor lock.

Gas Tank Filler Door Lock Installation

Locate and drill 3/4 inch diameter hole in the gas tank filler door. See figure 6. File a notch for the tang washer as shown. Locate and drill two .152 inch diameter holes through the fender panel flange of the door opening, as shown in figure 6.

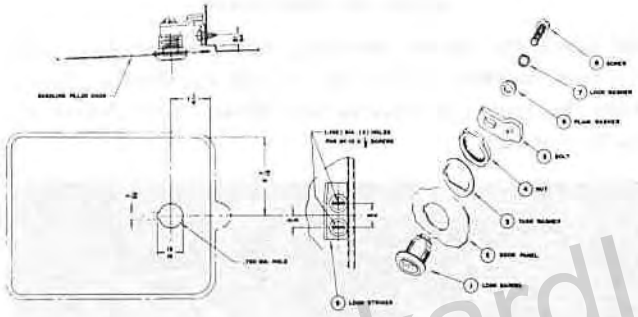


Figure 6—Layout of the Fuel Filler Door Lock Component Parts

Attach the lock striker to the fender flange of the door opening with the number 10 x 1/2 screws furnished. Assemble the lock through the door in sequence. Check the operation of the lock.

Belt Moulding Rear View Mirror Installation

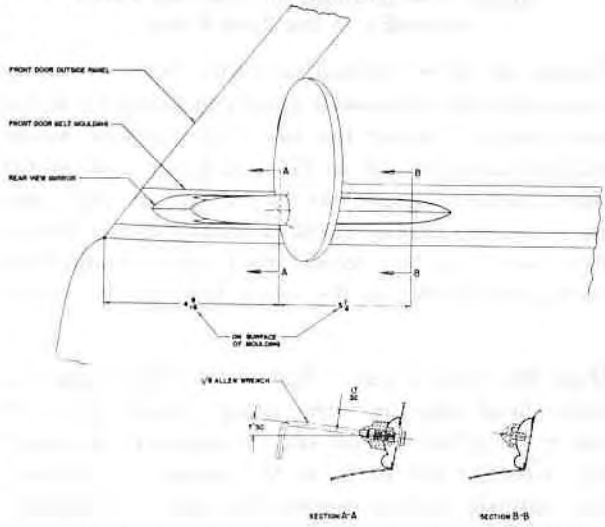


Figure 7—Installation Layout of the Rear View Mirror

Locate the drill fixture on the moulding at the recommended position as shown at section "A-A." Drill 7/32 inch diameter hole with the fixture in position marked number 1 through the moulding and outside door panel. See figure 7. Locate the fixture at section "B-B" and repeat the drilling operation through the moulding only. Shift the fixture forward over the 7/32 inch diameter hole at section "A-A," using the position marked number 2, and redrill to 15/32 inch diameter through the moulding and panel.

Assemble the screw fastener to the mirror base (two turns only). Place the Allen wrench in the small hole in the mirror base and start the washer in the hole by pushing lightly and jiggling counterclockwise until the washer is in place. Tighten the mirror securely with the Allen wrench by turning counterclockwise.

Caution: Do not turn the fastener screw clockwise or it may fall between panels.

Fresh Air Heater Installation

Remove the upper radiator splasher, and remove the two 1/4 inch bolts attaching the right-hand air duct to the radiator side splasher. Remove two 1/4 inch bolts attaching the air duct to the side splasher, and also four screws attaching the air duct adapter to the dash. Remove the complete air duct assembly from the car.

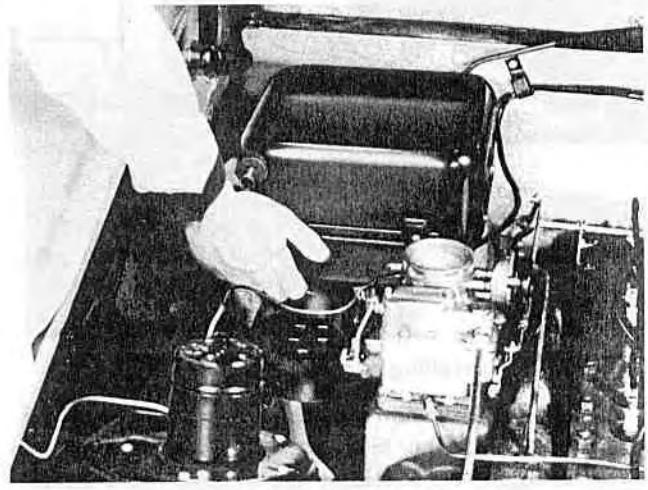


Figure 8—Installing the Heater

Assemble the short air duct assembly, supplied with the heater kit, to the radiator side splasher, using the previous two 1/4 inch bolts. Fasten the other end of the air duct assembly to the side splasher, using one 1/4 inch bolt. Replace the upper radiator splasher.

Remove the cover plates for heater assembly and thermal valve in the dash. Install the heater assembly to the dash panel on the engine compartment side.

Assemble the air distributor adapter over the four studs protruding inside the car, using the 5/16-18 nuts and washers provided. See figure 9.

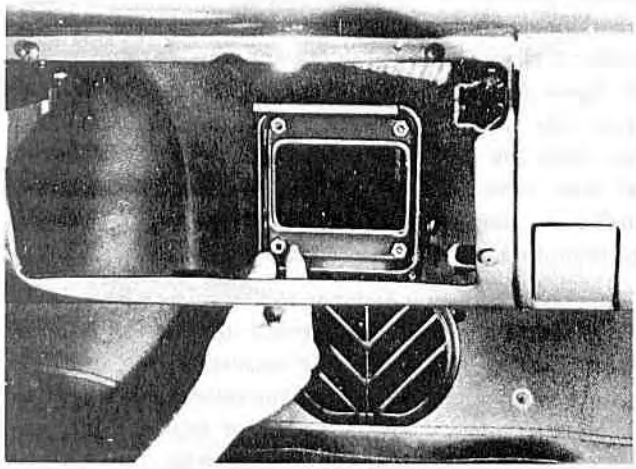


Figure 9—Installing the Air Distributor Adapter

Assemble the air inlet adapter assembly to the dash from the engine compartment side, using three self-tapping screws. Assemble the air distributor assembly over the adapter, using two 10 tapping screws at the bottom. See figure 10.

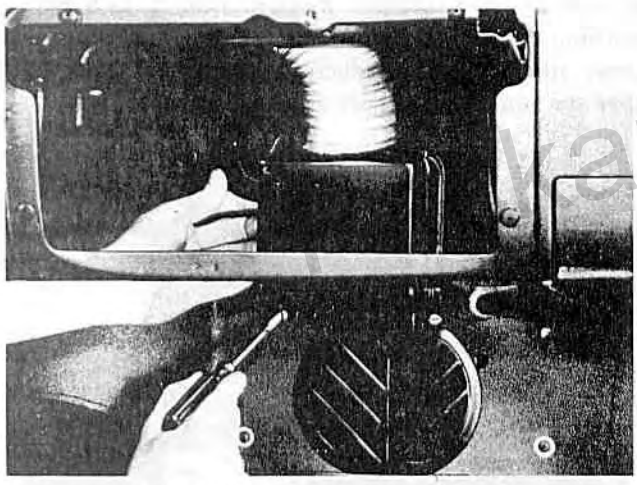


Figure 10—Installing the Air Distributor Assembly

Assemble the plenum chamber to the air distributor assembly, using four No. 10 self-tapping screws, as shown in figure 11. Assemble the thermal valve assembly to the dash panel, using two No. 10 tapping screws. See figure 12.

Install the bowden cables from the control mechanism to the thermal valve, and air distributor valve. Remove the plug from the hole at the bottom of the fresh air control panel and install the heater blower switch. In the assembly of the bowden cables to the air duct valve bell crank arms, place the control levers opposite the "air" position, and with the air duct valves in open position, tighten the cables in place.

Remove the button covers from the three holes on the right side splasher, add the rubber grommets. Install

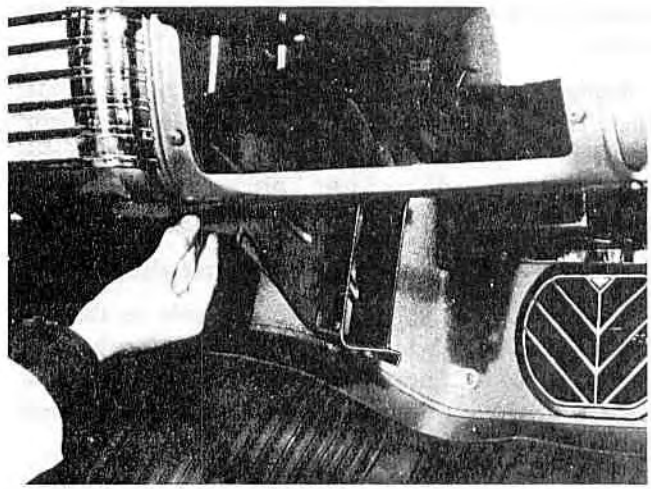


Figure 11—Installing the Plenum Chamber on the Air Distributor

and attach the blower assembly with plain washers and $\frac{5}{16}$ nuts supplied in the kit. Attach the flexible hoses from the front air duct to the blower and blower to heater assembly.

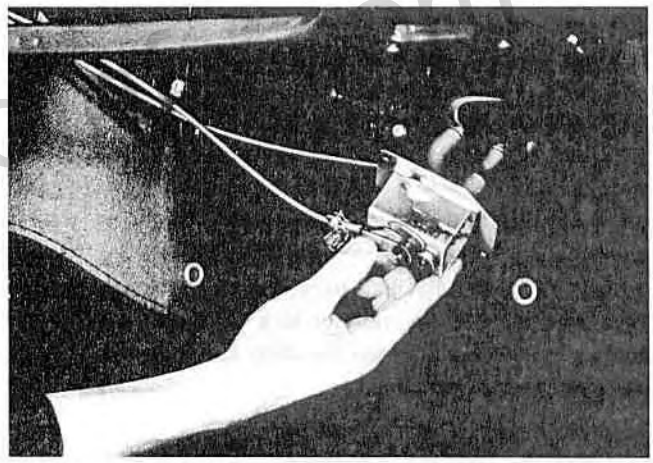


Figure 12—Installing the Thermal Valve Assembly in the Dash Panel

Untape the blower switch lead wire from the wiring harness under the instrument panel and connect it to the blower switch. Connect the wire with the fuse holder from the blower switch to the fuel gauge post of the ignition switch. Untape the blower motor lead wire from the wiring harness at the carburetor starter switch, and connect it to the blower feed cable. Ground the blower ground cable to the heater hose bracket screw.

Drain the cooling system. Remove the plugs from the cylinder head and the water pump. Install the inlet elbow in the cylinder head, and the nipple in the water pump. Connect the hoses to the heater and thermal valve. Refill the cooling system with water or anti-freeze as required.

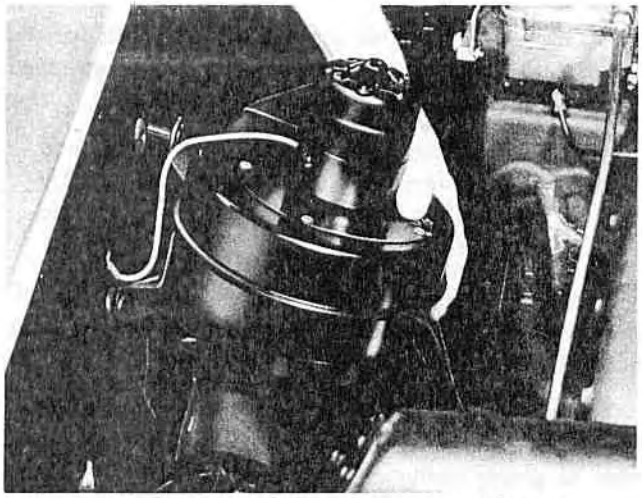


Figure 13—Installing the Heater Blower on the Side Splasher

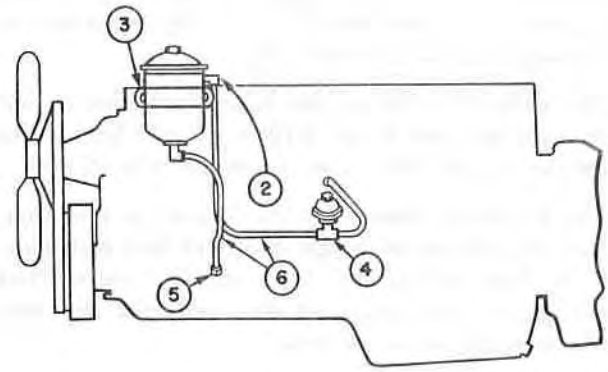


Figure 14—Schematic of the Oil Filter Installation

Flexible Windshield Visor Installation

Wash the inside upper section of the windshield thoroughly, and leave it wet for installing the visor. Wipe one section of the visor free from any dust, using a clean, lintless cloth. Place the visor against the wet upper area of the windshield and smooth it out with the palm of the hand. With the finger tips, slide the visor upward and outward, fitting its curved edge along the windshield moulding. Be sure the windshield is thoroughly wet when sliding the visor into position.

Use the enclosed applicator to smooth out the visor by pressing the felt edge of the applicator toward the outer edges of the visor. Install the second section of the visor following the same procedure, allowing it to overlap the first section installed.

Measure off and mark the center of the windshield. Cut both sections of the visor where they overlap at the center mark, using a sharp razor or scissors. Bring the cut edges close together, and smooth the visor into position.

Engine Compartment Lamp Installation

Locate and punch two .147" diameter holes 18-3/4" to the left from the center line of the car, 15/16" and 2 3/16", respectively, below the dash dividing seam.

Mount the engine compartment lamp to the front side of the dash, attaching it with the two sheet metal screws. Connect the lamp cable to the "B" (battery) terminal of the regulator. Adjust the position of the lamp so the light will go out when the bonnet is closed, but not latched. The mounting holes in the bracket are elongated so the lamp position may be adjusted. Tighten the attaching screws securely.

Engine Oil-Filter Installation

Insert the elbows in the oil filter where it is marked inlet and at the bottom of the filter where it is marked outlet, as shown at number two of figure 14. Mount the oil filter on the tapped holes provided in the left front side of the cylinder head, using the screws and lockwashers furnished, as shown in number three of figure 14.

Remove the connection, replace it with a tee connection, and reassemble the gauge as shown in number four of figure 14. Remove the pipe plug from the cylinder block and replace it with a tube connector as shown at number five on figure 14. Attach the oil inlet and outlet tubing as shown at number six of figure 14.

Drain and flush the old crankcase oil. Refill the crankcase, and add one extra quart for the oil filter. Start the engine, run it for a few minutes, and check all connections for oil leaks.

Note: To insure maximum engine protection and economical operation through the use of clean oil, renew the oil filter cartridge every 8,000 to 10,000 miles. Under very severe conditions where the oil on the dip stick becomes discolored before 8,000 miles of use, replace the old oil filter cartridge with a new one.

Spotlight Installation

Place the bracket on the belt moulding, measuring 1 7/16 inch from the edge of the door on parallel line with the belt moulding. Spot two holes through the bracket and drill 1/8 inch holes.

Place the rubber gasket under the bracket and mount with 2 sheet metal screws.

Insert the drill bushing enclosed in the bracket and tighten the screw. Drill 1/2 inch hole through the door, holding the drill level and firm to prevent the drill from creeping.

Wiring Instructions

After installing the light, drill a 1/4 inch hole through the trim moulding about 1/2 inch from the

inside bracket. Insert the rubber grommet and loosen the screw in the trim moulding, prying the moulding out enough to fish the wire out.

Dress the wire behind the door panel, coming out even with the door hinge. Drill a 1/8 inch hole in the door close to the hinge and mount the wire clip.

Slip the plastic loom over the wire up to the hinge. Locate the clip on the hinge. Spot and drill with number 19 drill and tap for 10-32 machine screw. Place the clip over the loom and wire and lock clip with 10-32 machine screws provided.

Thread the wire through the hinge box and over the side panel and connect the spotlight wire to the 30 ampere circuit breaker, long post, mounted on the cluster between the clock and speedometer.

When a rear view mirror has been previously installed on the outside belt moulding, it should be removed, as the spotlight assembly includes a mirror. This will require replacing the trim moulding that has been previously drilled for a rear view mirror. A completely illustrated set of mounting instructions are enclosed with the spotlight.

Windshield Washer Installation

Fasten the jar mounting bracket with No. 10 self-tapping screws to the fender splasher using the four .157 inch diameter holes provided in the top rear corner of the left fender splasher.

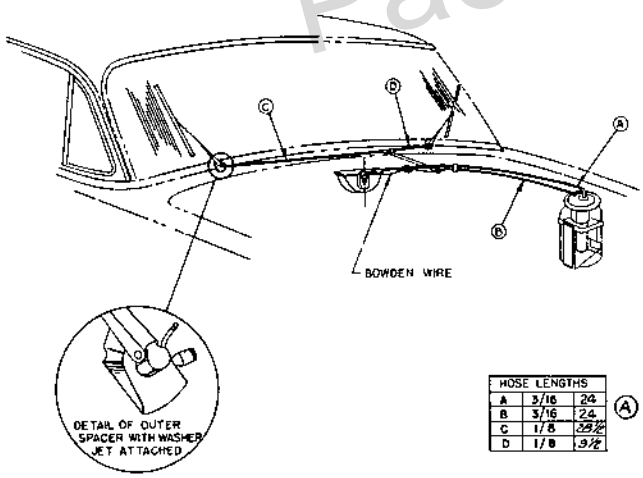


Figure 15—Schematic of the Windshield Washer Layout

Run hose "A" from the center fitting on the washer pump to the windshield wiper motor connection. Then run hose "B" from the side fitting of the washer pump through the dash and attach it to the tee connection. Run hose "C" and "D" from the hose connection on each of the wiper spacers, as shown in the circled section on figure 15, to the tee connection.

Hoses "A" and "B" are strapped together where hose "B" runs through a hole provided in the dash for the windshield wiper bowden wire. Hose "A" is strapped to the bowden wire as shown in figure 15.

Note: Hoses must not be kinked or pinched and must not interfere with any working parts. Apply a light coat of gasket shellac to the fittings before attaching the hoses.

Remove the screw plug on the side of each windshield wiper spacer which conceals the nozzle attaching holes. Do not install the nozzles at this time.

The automatic washer is operated by vacuum from the engine. Fill the jar with clean water. Do not use a dirty or greasy container or pour water through a dirty funnel, as dirt or small particles may clog the jets.

Note: It is suggested that the entire system be flushed out with water before installing the nozzles.

The control which operates the windshield wiper also operates the windshield washer. To operate the windshield washer, turn the wiper knob *counterclockwise* as far as it will go to charge the jar and wash the windshield. Then turn the wiper knob *clockwise* to operate the blades.

Screw the jets into the wiper spacers. Turn the jets so that the pinhole openings will direct a stream of water on the glass near the top of the wiper blades.

The use of the washer in freezing temperature is not recommended, and the system should be drained. However, if it is desired to use the washer at various times during the winter months when correct conditions prevail, a special harmless *"all season solvent"* can be obtained from your Packard dealer with complete instructions regarding its usage.

Caution: Do not use cleaning solutions or chemicals which may damage the car finish or washer parts.

If the water or solution does not flow freely through the jets, check the following:

(a) Check the jar for an adequate supply of water.

(b) Check the tube lines to make sure they are free from obstruction of any kind, and are not kinked.

(c) To clean the nozzles, unscrew the cap at the end of the jet and flush.

Radio Electric Antenna Installation

Tape the paper template to the left fender, locate, and cut out 1 1/4 inch diameter hole for the antenna insulator gasket. See figure 16. Install the gasket.

Drive out the 3/4 inch knockout plug in the dash panel. Install the antenna lead-in cable grommet. Assemble the antenna lead-in cable to the antenna

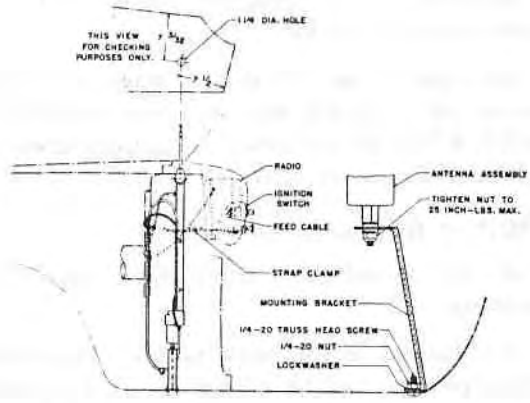


Figure 16—Location of the Antenna (Side View)

assembly. Assemble the mounting bracket loosely to the antenna assembly. Remove the dome nut and insulator from the antenna assembly. Insert the complete assembly under the fender through the insulator gasket. Assemble the mounting bracket to the lower fender flange with the screws, washers, and nuts furnished in kit. See figure 17. *Do not tighten.* Install the insulator and dome nut. *Do not tighten.*

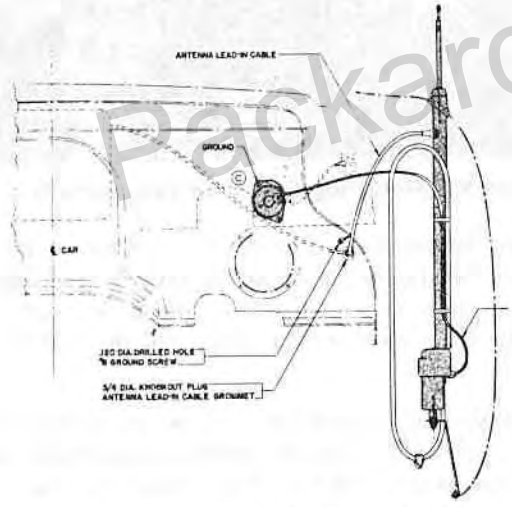


Figure 17—Antenna Installation in the Front Fender (Front View)

Push the antenna lead-in cable through the antenna lead-in grommet. Drill .120 inch hole in a convenient location near the grommet. Ground the lead-in cable with the No. 8 self-tapping ground screw. Push the antenna motor cables through holes located in the main wiring harness grommet. Ground the shielded portion of the motor cable under the head of the upper screw of the grommet retainer.

Attach the antenna motor feed cable to fuel gauge post (long terminal) of the ignition switch. Insert the feed cable and terminal into the operating switch terminal marked "B". Insert the motor cable end terminals into the two remaining switch terminals marked "D" and "U". See wiring circuit diagram figure 18. Turn the ignition switch "on" and check the operation. Pull the switch knob out to raise the antenna, push in to lower. Raise the antenna fully. Reverse the motor cable terminals if the antenna operation is opposite of what it should be.

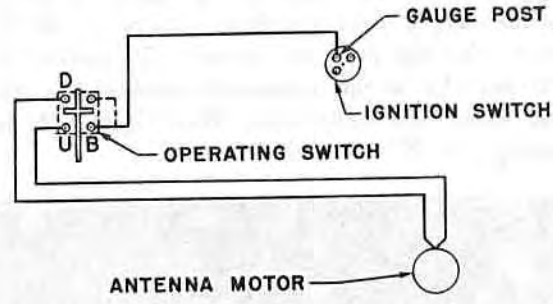


Figure 18—Electric Antenna Wiring Circuit Diagram

Locate and drill 7/16 inch hole, 2½ inches directly below the headlight switch. Cover this area with masking tape to avoid damaging the panel. Assemble and install the operating switch, spacer, adapter, nut, knob, and set screw to panel. Clamp motor cables to the wiring harness with the strap furnished in the kit. Plug the antenna lead-in cable into the left side of the radio near the top.

Check the antenna for vertical alignment in both front and side views. Tighten the mounting bracket to the fender. Tighten the mounting bracket to the antenna. Tighten the dome nut.

Start the engine and check the radio operation.

Radio Installation

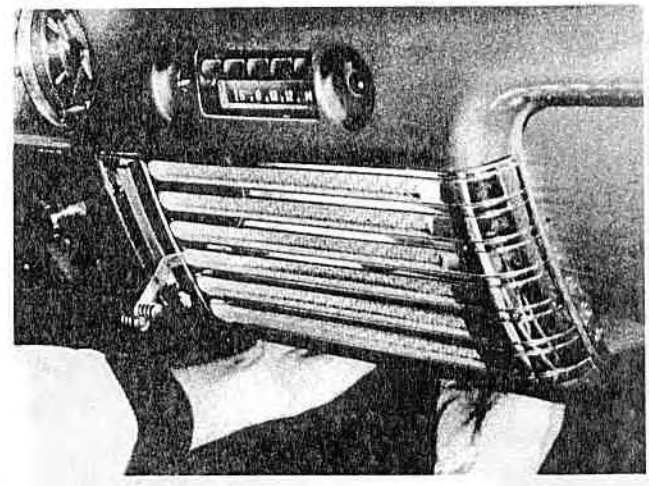


Figure 19—Positioning the Radio in the Instrument Panel

Remove the decorative cover on the instrument panel, which covers the opening for the radio dial and controls by rotating the two speed nuts 1/4 turn. Mount the "Z" bracket to the bottom of the radio using the plain washer and the screw and lockwasher assembly. Tighten "hand tight."

Lift the set up behind the instrument panel and guide the volume control and manual control shafts through the instrument board openings as shown in figure 19. Put the control knob escutcheon cups on the shafts and attach with the thin nut. Attach "Z" bracket to the hole provided in the instrument panel with a self-tapping screw and lockwasher. Then tighten the screw holding the "Z" bracket to the radio.

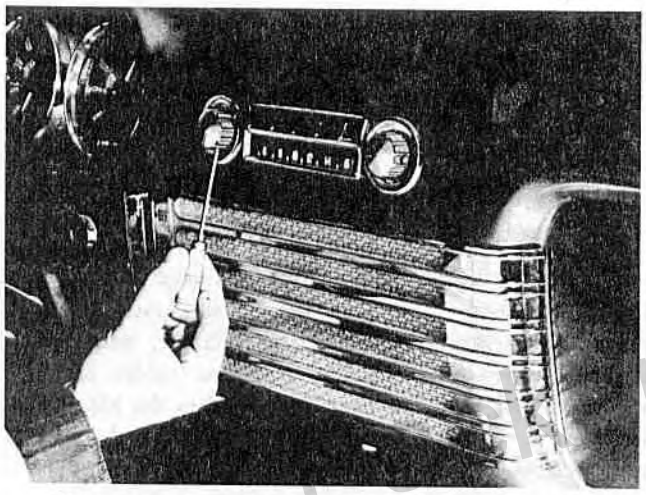


Figure 20—Installing the Radio Control Knobs

Install the tone control lever on the left shaft. Then place the spring washer on the shaft between the tone control lever and knob. Install the knobs. Tighten the set screws in both knobs.

Connect the "A" lead to the battery post of the 10 ampere circuit breaker. Insert the fuse and connect to the lead from the receiver. Plug the antenna lead into the antenna connector socket.

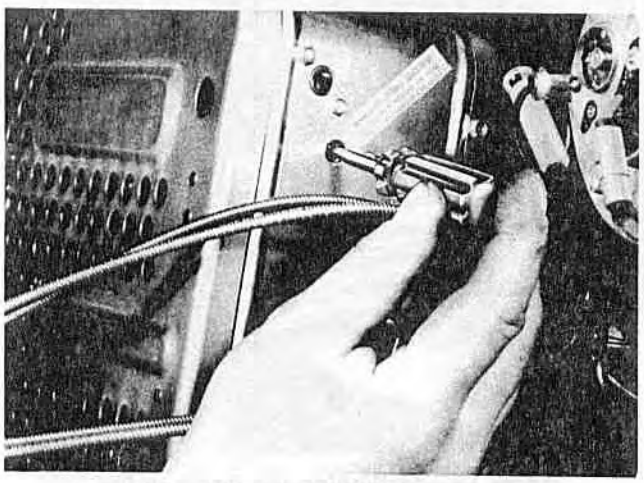


Figure 21—Adjusting the Antenna Trimmer

Turn the radio on and allow it to warm up. With the antenna fully extended, tune in a weak station between 600 and 1000 kc. and adjust the antenna trimmer for maximum volume. See figure 21.

Push Button Adjustment

Turn the set on and allow to warm up for ten or fifteen minutes.

Select the stations in the order of their frequency. It is suggested that they be arranged with the lower frequency station on the left, etc.

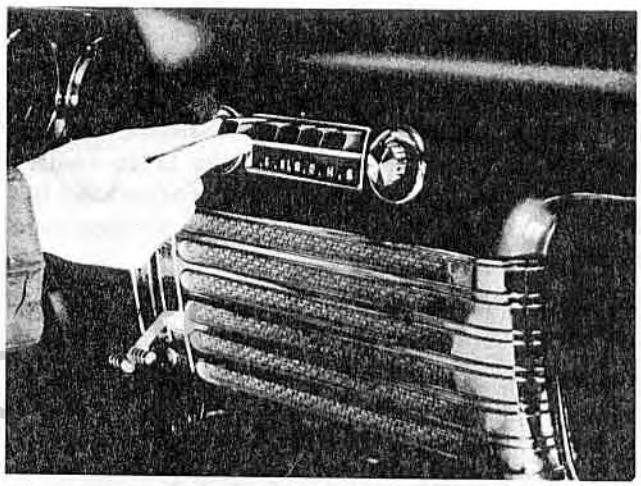


Figure 22—Adjusting the Radio Push Buttons

Pull the button slightly to the left and out as far as it will go. See figure 22. Manually tune in the desired station, making certain that the signal is tuned in accurately. Push the button in firmly to the end of its travel.

Repeat the same procedure for the remaining four buttons. Each station can be readily identified by the dial pointer which indicates the station frequency. A station setting may be changed at any time by repeating the above procedure.

Interference Suppression

Care in performing these operations will result in satisfactory elimination of ignition noise. Be sure that all condenser cases make good ground connection, and that all connections are tight.

Cut the distributor-to-coil, high tension lead about two inches from the distributor cap and install the screw-in type suppressor, as shown in figure 23. Install a .5-mfd. condenser on the generator and connect it to the armature terminal.

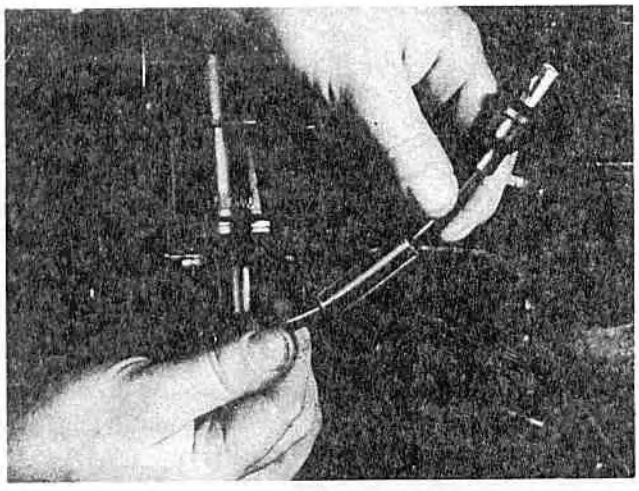


Figure 23—Installing the Suppressor in the Coil to Distributor Secondary Wire

A .5 mfd. condenser is required on the ignition switch. Connect the condenser lead to the coil terminal of the ignition switch, and mount the condenser bracket between the courtesy lamp and flange of the instrument board.

Be sure to scribe or scratch the date of installation of the new radio on the serial number plate to assure proper handling of warranty service by an Authorized Radio Service Station.

Sequence of Radio Checks

(a) Turn on the radio and listen for the vibrator hum.

(b) Test the antenna by using a dummy antenna.

(c) Test the antenna for grounds and open circuits by tapping with an insulated screwdriver handle. Noise caused by antenna means a loose connection. Be sure the antenna lead is properly insulated and shielded.

(d) Filter the voltage regulator "B" battery terminal with a condenser.

(e) Filter the generator armature terminal with a condenser.

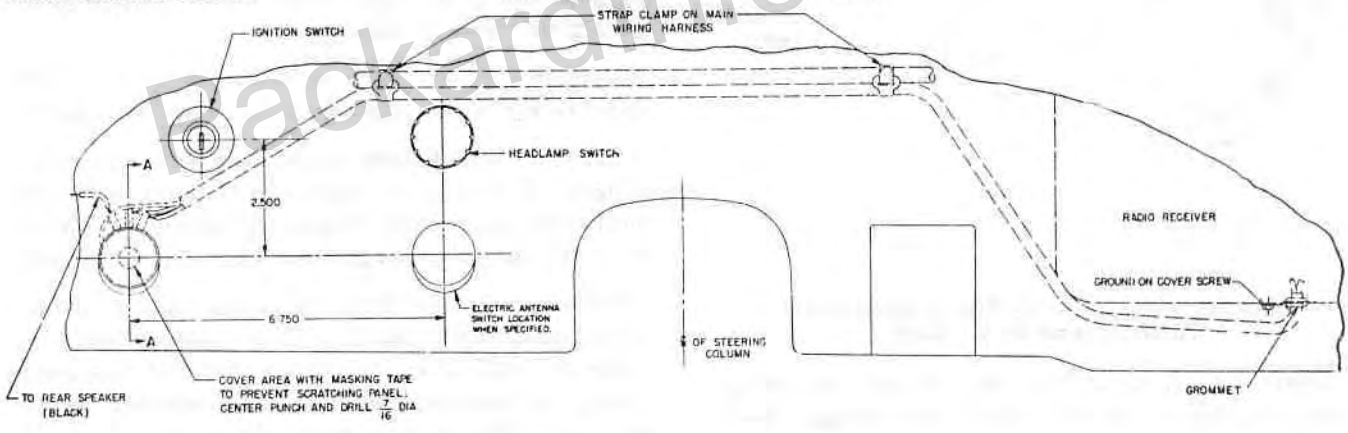
(f) Install 8500 ohm to 18000 ohm suppressors on the spark plugs.

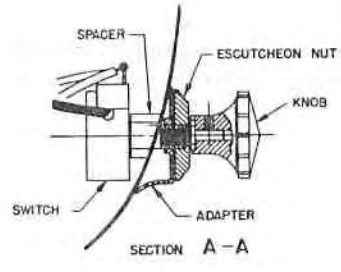
(g) Install a condenser on the instruments.

(h) Shield any accessory leads which pass through the engine compartment. Install and fasten the leads along the frame if possible.

(i) Be sure the bonnet is well grounded. Keep the shielding as short as possible. Test for bonnet noise by inserting a screwdriver between the bonnet and body for a good ground. Install a hood ground clamp.

(j) Be sure to shield the rear seat speaker lead during installation.





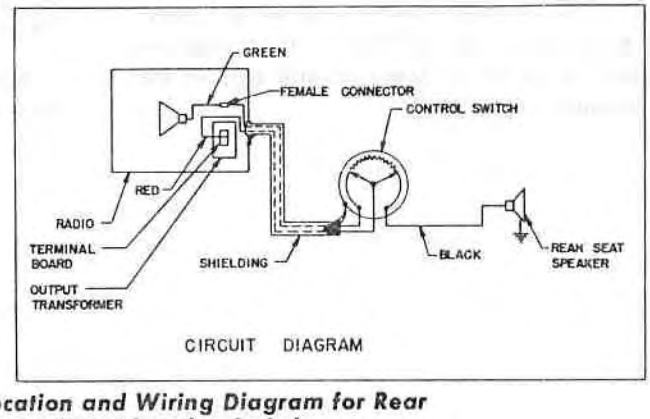


Figure 24—Location and Wiring Diagram for Rear Compartment Speaker Switch

Rear Compartment Radio Speaker Installation

Cover the area of the panel for the switch with masking tape and locate with the center punch. Drill a $\frac{7}{16}$" hole. See figure 24.

Assemble the spacer on the switch, and insert the switch in the hole. Place the adaptor on the switch and tighten the escutcheon nut. Install the knob. See section A-A, figure 24.

Route the black rear speaker cable from the speaker control to the left side of the car. This cable should run behind the kick pad to the floor. At the floor, route the cable under the floor mat along the edge of the door to the rear. Remove the rear seat cushion and route the cable into the trunk compartment through the jute insulation at the base of the rear seat back panel. Be sure the cable is placed so that the rear seat cushion will not pinch it.

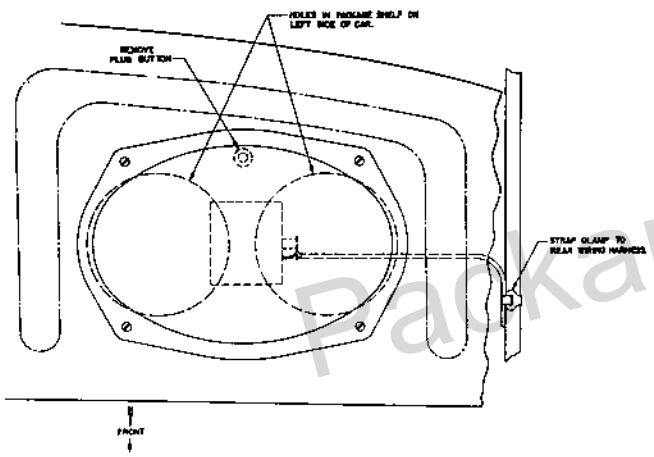


Figure 25—View Showing Rear Compartment Speaker Location on Shelf

Locate the two large holes and the four mounting holes provided in the left side of the package shelf metal panel. Working from inside the trunk, pierce the four mounting holes first.

Working from the inside of the car, cut out the paper board shelf panel to the size of the two large holes in the metal panel as shown in figure 25 and remove the shelf plug button.

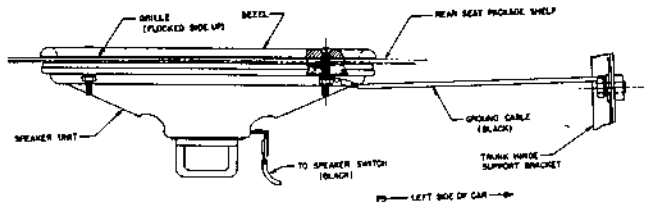


Figure 26—Cross Section View Showing Rear Compartment Speaker Installation

Lay the flocked screen and bezel in position as shown in figure 26 and drop the bolts into place. From the trunk side, mount the speaker as shown in figure 26.

Attach the ground cable to one of the speaker mounting bolts and to the upper screw on the hinge support bracket, as shown in figure 26.

Strap the speaker cable to the rear harness at the upper corner of the trunk to make a neat installation.

Strap the braided harness to the main harness as shown in figure 24. Remove the back cover from the radio, and run the braided harness through the hole in the bottom of the set, using a rubber grommet to protect the harness.

Pull the green lead from the output transformer terminal board. This terminal is a push-in type. *Do not unsolder the lead from the speaker.* Connect this green lead to the green lead in the harness; then push the insulator over the connector to completely cover the metal.

The red lead from the harness is to be inserted in the prong type terminal on the terminal board from which the green lead was removed.

Replace the radio cover and attach the ground terminal from the speaker control harness under the cover screw.

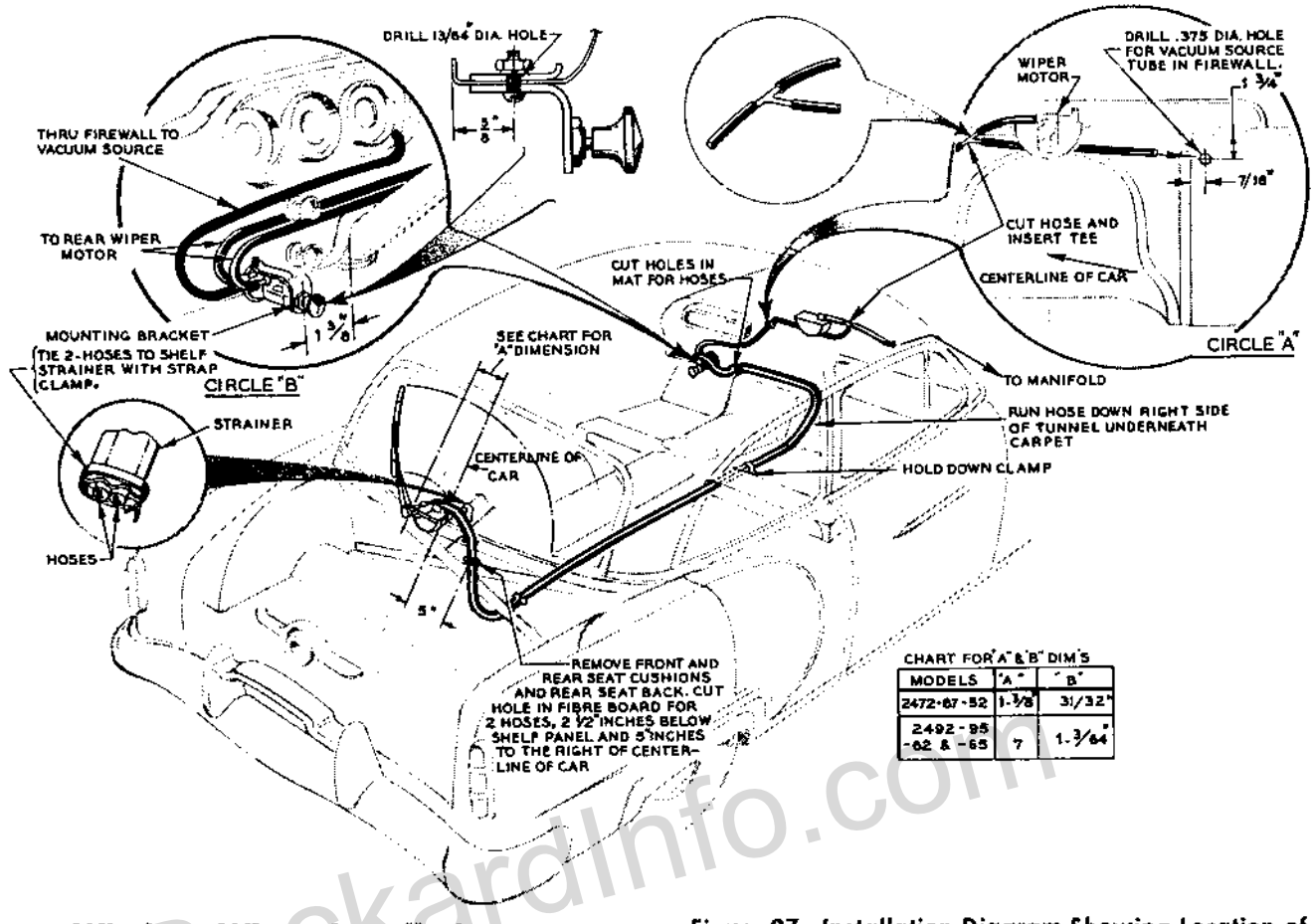


Figure 27—Installation Diagram Showing Location of Wiper Motor, Valve, Hoses, Etc.

Rear Window Wiper Installation

Locate and drill the body hole (with a $31/32$" diameter circle saw), using "A" and "B" dimensions according to figures 27 and 28 as indicated in the reference chart. Hold the drill straight along the outer line of the shaft. Shape the hole as indicated in figure 27. Clear under the panel opening as shown.

Caution: Double check the dimensions before drilling.

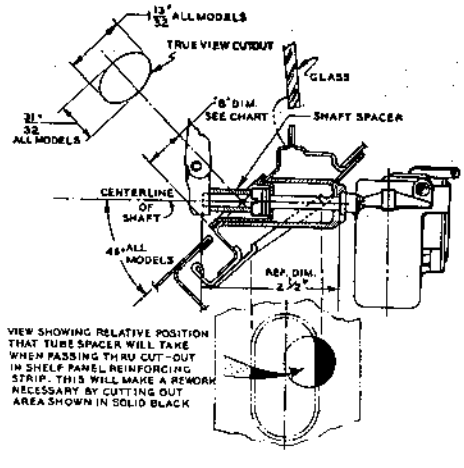


Figure 28—Cross Section View Showing Location of Rear Window Wiper Motor

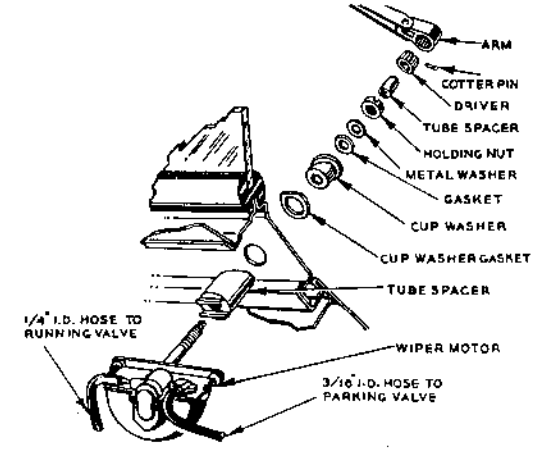


Figure 29—View Showing Relative Position of Wiper Motor Attaching Parts

Install the motor, placing the parts as shown in figure 29. Tighten the holding nut securely. Do not attach the arm and blade at this time.

Mount the control valve bracket as illustrated in circle "B" of figure 27, using the machine screw, lockwasher, and hex nut provided. Mount the control as indicated in figure 30.

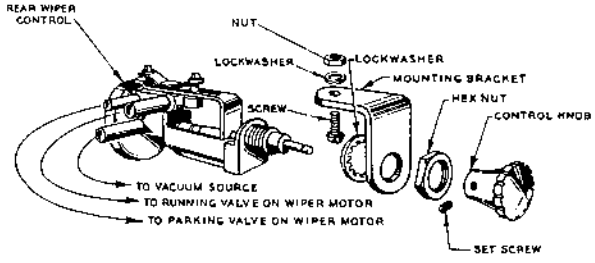


Figure 30—View Showing Relative Position of Valve Attaching Parts

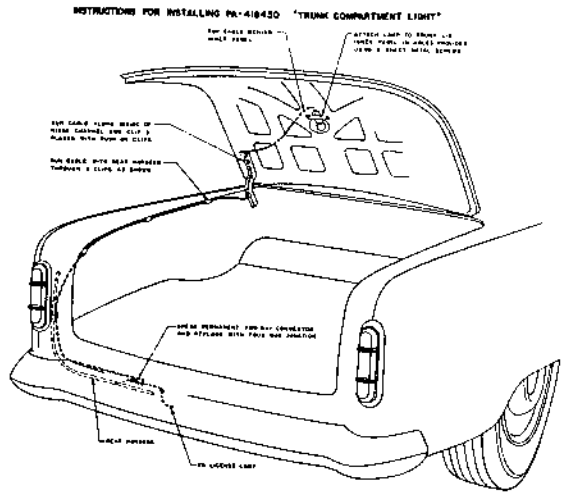


Figure 31—Wiring Diagram For the Trunk Compartment Light

At the motor, connect $\frac{3}{16}$" I.D. hose to the parking valve and the longer $\frac{1}{4}$" I.D. hose to the operating valve. Run both hoses together under the floor mat as illustrated in figure 27. Connect to the control valve as illustrated in figure 30. Install the shorter $\frac{1}{4}$" I.D. hose between the control valve and tee connection inserted in the windshield wiper motor vacuum line. Refer to circle "A" of figure 27.

The control provided with the rear window wiper set is a combination push-pull and turn type. Push-pull to turn it off or on, and turn to adjust the speed.

After installation has been made, start the engine; turn the control on to see that the wiper operates properly. Then turn the wiper off by pushing in on the control. This will bring the wiper shaft into the parked position.

With the wiper turned off, but the engine running, attach the knurled driver to the wiper motor shaft, using the cotter pin provided. Place the arm and blade in the parked position on the glass, and slip the arm over the knurled driver. Turn on the motor and check the installation. If the blade does not park correctly, slip the arm off and adjust it in the desired position.

Spare Tire Valve Extension Installation

Drill a $\frac{5}{16}$" diameter hole in the rear body panel $1\frac{1}{2}$" to the right of the trunk lid, and two or three inches below the bottom edge of the trunk lid. Assemble the connection tightly to the valve on the spare tire, and install the hose through the wheel opening; and run it along the right side of the trunk compartment.

Insert the valve core end through the hole in the body with the small nut and lockwasher against the inside of the body panel. Assemble the gasket and large retaining nut on the outside surface of the body and tighten securely. Check the tire pressure and then install the valve cap.

Trunk Compartment Light Installation

Attach the lamp to the trunk lid inner panel, using the two attaching screws furnished in the package. Holes are provided in the trunk lid inner panel. Install the lamp cable between the trunk lid inner and outer panels, and place it along the inside of the left hinge channel. Clip the cable to the hinge channel in three places, using the push-on type clips.

Support the lamp cable along side of the rear harness, using the harness clips as shown in figure 31. Remove the permanent two-way "Wade" connector at the license light connection. Replace the connector with a four-way junction. Plug in the license light feed cable, the license light cable, and the trunk compartment light cable.

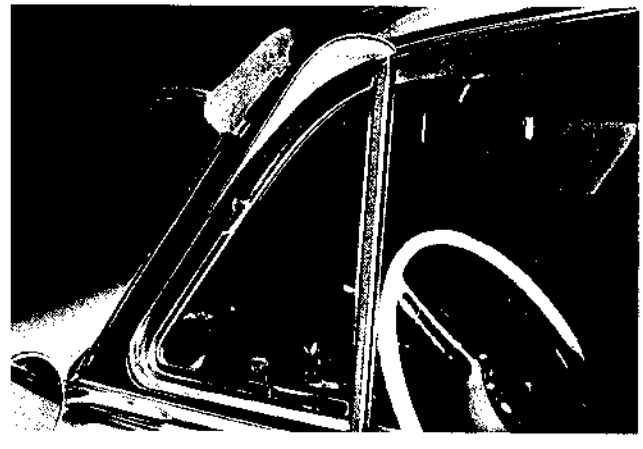


Figure 32—Front Door Window Wing Water Deflector

Front Door Window Wing Water Deflector

A front window wing deflector is available for 24th and 25th Series cars that permits an owner to keep the window wing open during a storm, and still not have water dripping into the interior of the car.

The water deflector can be easily installed by following the directions listed below:

Open the window wing to the full extent. Insert the water deflector between the door outer panel and weatherstrip with the circular notch in the water deflector located at the window wing pivot pin. Push the deflector in as far as possible between the weatherstrip and door outer panel.

Pull the lip of the weatherstrip away from the deflector at the area of the drilled holes in deflector. Using the deflector as a template, drill three No. 40 (.098") diameter holes in the door outer panel. Install the attaching screws and tighten securely. Using 3M weatherstrip cement, seal the openings around the screw heads and the opening at the bottom of the deflector to make a water-tight fit. See figure 32.

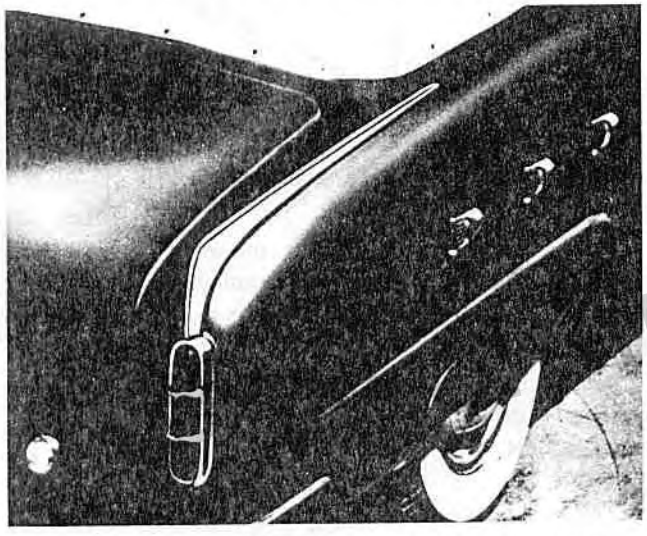


Figure 33—Rear Fender Top Moulding Installed

Rear Fender Top Moulding

Rear fender top moulding having a chrome finish is now available to add further beauty to the rear fenders of the "200" Series car. A template and complete installation instructions are provided with this part. This V-shaped moulding is installed in the following manner:

Remove the rear lamp from the fender and line up the two $\frac{7}{16}$" diameter holes in the template with the upper lamp holes in the fender.

Tape the template in this location on the fender. Then line up with crease-line of fender and mark the hole locations.

Punch and drill the holes in the fender to the sizes indicated on the template.

Reassemble the rear lamp loosely to the rear fender. Then place the rear fender top moulding in position, using the rubber insulators and attaching nuts. Tighten the attaching nuts. Move the rear lamp tightly to the top moulding and tighten firmly. See figure 33.

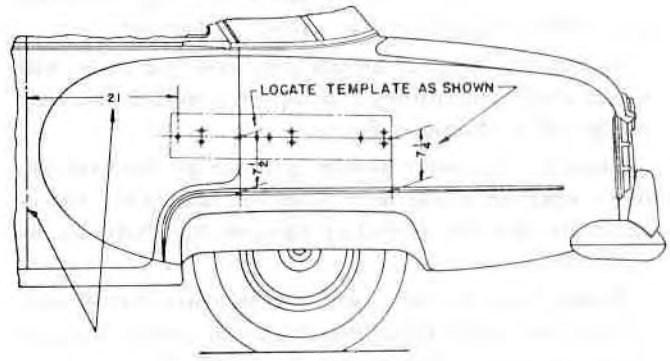


Figure 34—Rear Fender Trim Louvre Locations

Rear Fender Trim Louvre

Rear fender trim louvres are available for the "200" Series cars. With this part, installation instructions and a template are provided. Install these parts as follows:

Tape the template to the fender panel. Punch and drill nine .385" to .390" diameter holes. Assemble the retaining clips in the drilled holes. These clips may be installed in the fenders by pushing them in with a small screwdriver. Or a tool may be improvised by taking a blunt scratch awl and sliding a small nut ½" over the end and welding it at this position.

Place the louvres in position on the fender and tap them lightly with a rubber mallet until they fit tightly against the fender. See figure 34.

Rear Window Defroster Installation

A rear window defroster is available, complete with a template and installation instructions. This defroster is installed as follows:

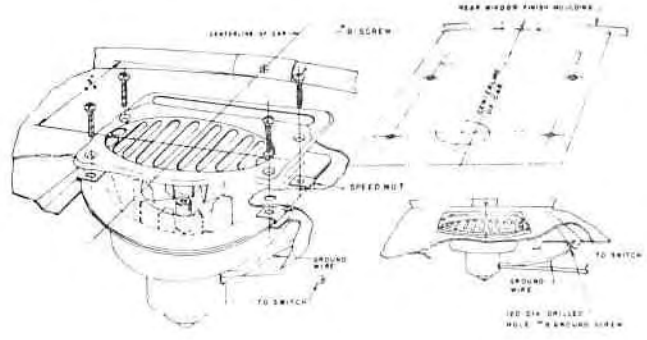


Figure 35—Locating the Rear Window Defroster

Locate and tape the template in the center of the shelf panel trim. Mark and cut out a 2½" diameter hole and a ⅝" x 5 5/16" slot. Drill or punch four 3/16" diameter holes through cardboard as shown in figure 35.

Locate the defroster blower unit from the under side of the shelf panel through the opening next to the shelf cardboard as shown in figure 35.

Place the defroster blower grille in position on top of the openings in the shelf panel and line up the attaching holes with the drilled or punched 3/16" holes in the trim panel.

Fasten both the grille and the defroster blower unit to the trim panel, using the number 8 screws, through speed nuts in the blower unit. See figure 35.

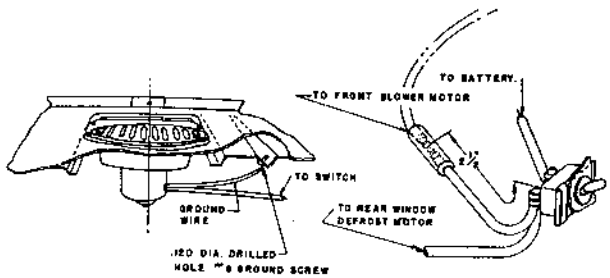


Figure 36—Connecting the Rear Window Defroster

Drill a .120" diameter hole in the shelf panel and attach the ground wire with a number 8 screw. See figure 36.

Run the wire from the rear window defroster motor under the scuff plates and behind the cowl side trim panel. See figure 37.

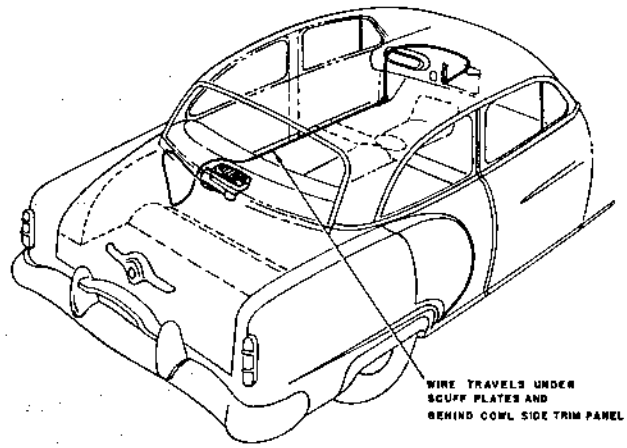


Figure 37—Defroster Motor to Switch Wire Location

Disconnect the front blower motor wire from the heater blower switch on the instrument panel and connect the rear window defroster wire to the switch. See figure 36.

Reconnect the front blower motor wire to the douglas connector on the rear window defroster motor wire. See figure 36.

RADIO

TROUBLE SHOOTING AND CORRECTIVE MEASURES

CONDITION	POSSIBLE CAUSE	CORRECTION
1. Radio dead.	(a) Blown fuse.	(a) Install a new fuse. Test the radio and check the condition of the vibrator. Check and reset the voltage regulator.
	(b) Dead vibrator.	(b) Test the vibrator by replacing it with a new one.
	(c) Dead tube.	(c) Test the tubes by replacing with a new tube until the radio operates satisfactorily.
	(d) Antenna open or grounded.	(d) Test the antenna by using a dummy antenna with 10 feet of lead wire.
	(e) Voltage regulator set too high will cause fuses to burn out and vibrator to stick. It will also shorten the life of the tubes.	(e) Correct cause of the radio not operating by testing the fuse, tubes, and vibrator. After the cause is located, test and reset the voltage regulator.
2. Radio cuts out intermittently.	(a) Antenna lead intermittent, open, or grounded.	(a) With the antenna connected to the radio and the volume on full, wiggle the antenna lead. If noise is heard from the speaker, check the antenna lead for loose or broken connections or intermittent ground to the shielding. Install a new antenna lead.
	(b) Antenna intermittently grounded to the car body.	(b) If wiggling the antenna lead does not cause a noisy condition, hit the antenna with an insulated screwdriver handle. If noise results, check the antenna for intermittent grounding. Repair or install new antenna.
	(c) Intermittent tube.	(c) Disconnect the antenna from the radio. Turn on the volume to "full." Tap each tube with an insulated screwdriver handle. If the tubes are noisy or intermittent, tapping them will cause a crackling noise in the speaker. Install the necessary new tubes.
	(d) Intermittent vibrator.	(d) Test the vibrator by installing a new one.
	(e) Loose connections.	(e) Inspect and tighten all connections and shielding.

RADIO

TROUBLE SHOOTING AND CORRECTIVE MEASURES—Continued

CONDITION	POSSIBLE CAUSE	CORRECTION
3. Unsatisfactory tone.	(a) Faulty tube.	(a) Test the tubes by replacing with a new tube until the radio operates satisfactorily.
	(b) Low battery.	(b) Test and recharge the battery.
	(c) Improper tuning.	(c) Be sure the radio is tuned properly to the center of the station signal. Check and reset the push button tuning.
4. Radio reception is weak.	(a) Antenna not fully extended.	(a) Extend the antenna to the full limit.
	(b) Radio station is too weak.	(b) Test the radio on another station.
	(c) Antenna trimmer not properly adjusted.	(c) Adjust the antenna trimmer accurately.
	(d) Antenna open or grounded.	(d) Test the antenna by using a dummy antenna.
	(e) Weak tube.	(e) Test the tubes by replacing with new ones until the radio operates satisfactorily.
	(f) Worn vibrator.	(f) Install a new vibrator. Test and reset the voltage regulator.
	(g) Low battery.	(g) Test and recharge the battery.
5. Radio reception is noisy.	(a) Antenna not fully extended.	(a) Extend antenna to full limit.
	(b) Radio station is too weak.	(b) Test the radio on another station.
	(c) Electrical interference of accessory circuits.	(c) Shield any accessory leads when passing through engine compartment. Install all the leads along the frame if possible.
	(d) Antenna trimmer not properly adjusted.	(d) Adjust the antenna trimmer properly.
	(e) Antenna open or grounded.	(e) Test the antenna by using a dummy antenna.
	(f) Noisy tube.	(f) Test the tubes by replacing with new ones until the radio operates satisfactorily.
	(g) Noisy vibrator.	(g) Install a new vibrator.

TROUBLE SHOOTING AND CORRECTIVE MEASURES—Continued

CONDITION	POSSIBLE CAUSE	CORRECTION
5. Radio reception is noisy. (Continued)	(h) Faulty installation.	(h) Recheck installation. Install all necessary shielding and suppressors.
	(i) Wheel static is caused by the composition of the tire. Wheel bearing lubricant causes high resistance, allowing the wheel and tire to store a great amount of electrical energy. Discharge of the current causes noise in the radio.	(i) Check for wheel static by driving on a smooth, asphalt road and apply the brakes suddenly. If the radio reception is then okay, install static collectors in the front wheel dust caps. Be sure there is no lubricant between the static collector and the end of the spindle.
	(j) Tire static is caused by sparking between the sections of the tire, and often causes punctures by burning a hole in the tube. Tire static will cause noisy reception.	(j) Check for tire static by driving on a smooth, asphalt road with two wheels off the road on the shoulder. If the radio reception is then okay, eliminate tire static installing Packard Static Powder #410448 in each of the wheel tubes, using Injector #410447.
6. Faulty automatic tuning on signal seeking radio.	(a) If automatic tuner stops immediately after releasing bar, automatic tuning tube is faulty.	(a) Install a new automatic tuning tube.
7. If radio cannot be corrected by the above operations, remove the set and send it to the Authorized Radio Service Station for any major repairs.		

SERVICE BULLETIN INDEX

Date	Service Bulletin	Subject