

# INTRODUCTION

The South Wind Instant Heater, Series 8349, is designed for installation in the Volkswagen Sedans, Karmann Ghia, 1500, and 1600 Sedans.

There are two heaters - one for 6 volt cars and one for 12 volt cars. The heaters are installed in the luggage compartment on the right or left hand side depending upon type of car. Refer to the following Chart for heater model required and side which it is to be installed.

NOTE: Right or left refers to the right or left side of the car as seen from the driver's seat.

| Fig. No. | Type of Car                           | Heater Model | Heater Location |
|----------|---------------------------------------|--------------|-----------------|
| 1 & 2    | 1961 thru 1966 Sedan and Karmann Ghia | 8349-B 6V    | r. h. side      |
| 3        | 6 Volt 1500 & 1600                    | 8349-B 6V    | l. h. side      |
| 1 & 2    | 1967 Sedan and Karmann Ghia           | 8349-C 12V   | r. h. side      |
| 3        | 12 Volt 1600                          | 8349-C 12V   | l. h. side      |
| 4 & 5    | 1968 & later Sedan and Karmann Ghia   | 8349-C 12V   | l. h. side      |

Note: If installation is for 1967 Model Car, Part no. 736563 Fuel Pump (ZVW 257783) must be used to replace Fuel Pump in 8349-C 12V Heater. See Step 6 for Fuel Line Installation.

The ventilating air distribution louver plate which directs the heated air into the passenger compartment is located in the center on the under-side of the luggage compartment (See Figs. 1 thru 5).

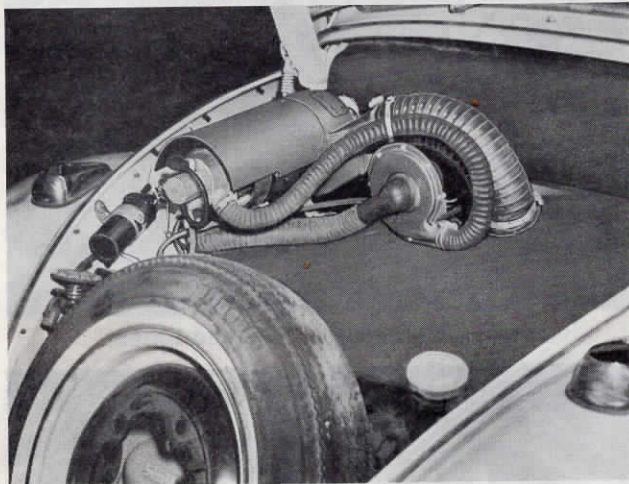


Figure 1 - Sedan 1961 through 1967

## HEATER OPERATION

The heater switch is connected to an electrical power source that is energized through the vehicle ignition switch. Once the ignition switch and heater control switch are engaged, the Instant Heater is completely automatic in its operation, and provides warm air immediately, regardless of the weather.

The heater control switch has a dual function: starting the heater and controlling the ther-

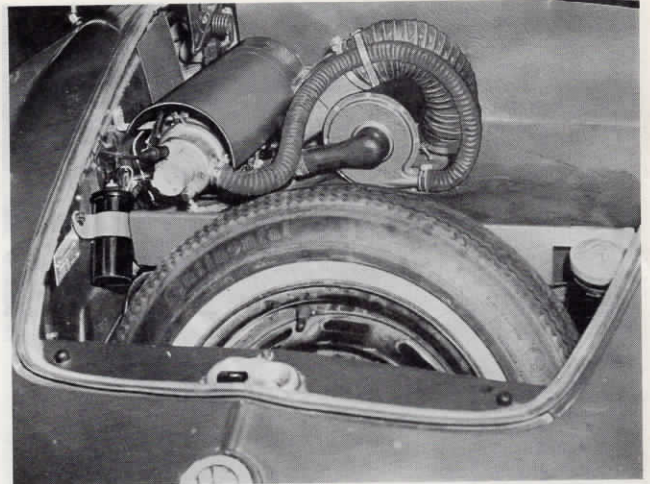


Figure 2 - Karmann Ghia 1961 through 1967



Figure 3 - 1500 and 1600 - 6 and 12 Volt

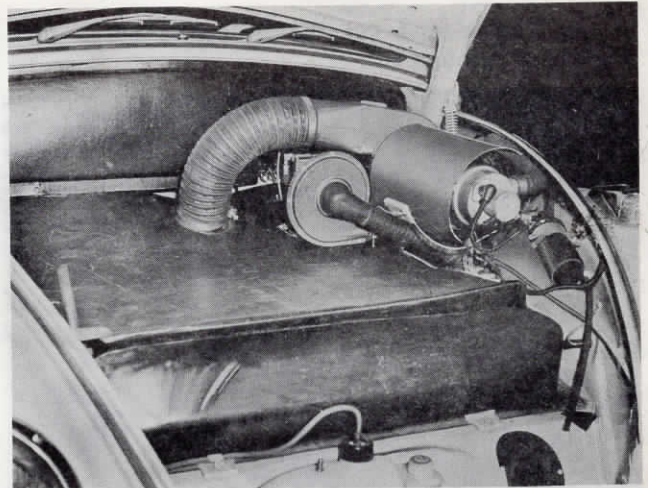


Figure 4 - Sedan - 1968 and Later

mostat setting. Turning the heater control knob to the right or clockwise starts the heater operating; turning it counterclockwise shuts the heater off. Pulling the control knob out raises the temperature, while pushing it in lowers the temperature. The thermostat, located in the ventilating air blower outlet will maintain and control the outlet temperature.

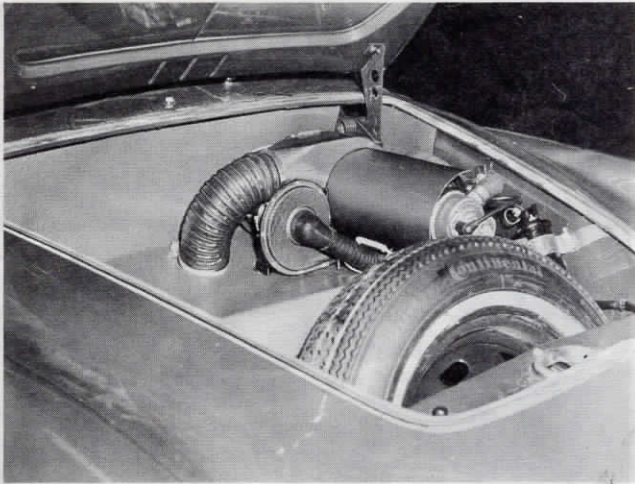


Figure 5 - Karmann Ghia - 1968 and Later

### INSTALLATION PROCEDURE

The following installation procedure is arranged in logical sequence, but the order of

installation may be changed to suit the available equipment and circumstances.

### PRE-INSTALLATION STEPS

1. Disconnect the battery.
2. Remove from the luggage compartment, the floor covering, instrument panel covering and the insulation pad.
3. The drain tube for the fresh air scoop on the 1968 Model 1600 Sedan is located in the center of the luggage compartment. Bend the tube mounting bracket (below the scoop) to the right to provide clearance for installing heater air outlet adapter.
4. On 1968 cars remove left front wheel and on 1968 Sedans disconnect speedometer cable at wheel. Pull speedometer cable and grommet through fender into luggage compartment.
5. When heater is to be installed on right side, remove right front wheel.

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## SECTION I

### Cutting Out Necessary Heater Installation Holes

When installing the Instant Heater, it is more convenient to drill as many of the required installation holes as possible at one operation as a means of reducing installation time. Also, the appropriate tools should be available. Among these tools are an electric drill, a 1/4 inch drive socket set, hole saws of 3-1/2 inch, 2 inch, 1-1/2 inch and 3/4 inch diameters; an assortment of drills should also be available.

Locate and cut the following holes (See Figures 6 through 10):

center punch and cut out the following holes. Refer to following chart and Figures 6 through 10.

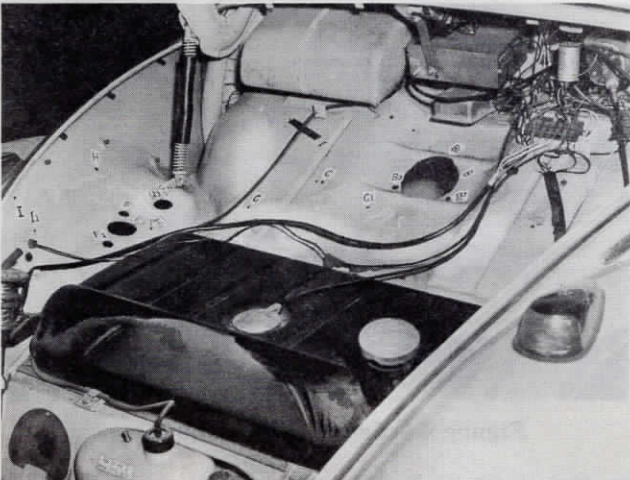


Figure 6 - Sedan - 1961 through 1967

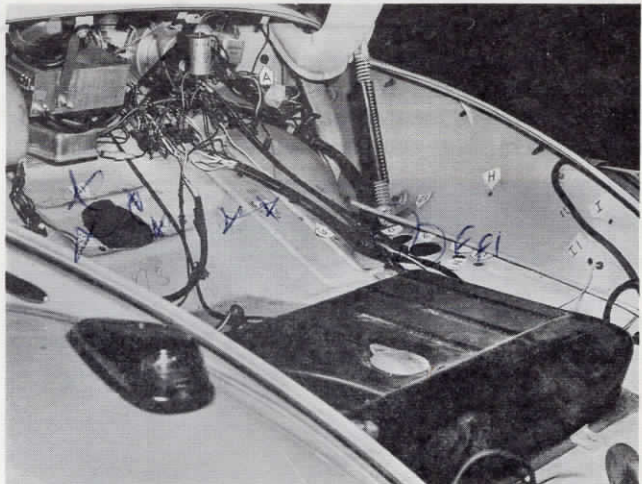


Figure 7 - Sedan - 1968 and Later

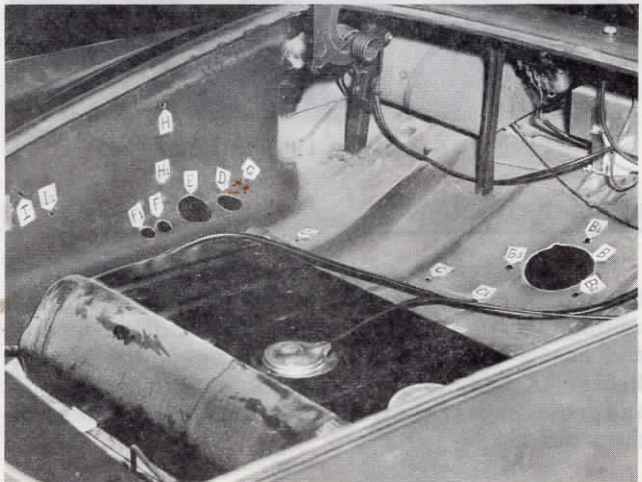


Figure 8 - Karmann Ghia 1961 through 1967

1. Templates are provided in the heater kit and are stamped as to what vehicle they are used on, also each template is stamped with a PM number. SEE CHART.

Follow the instructions on the templates,

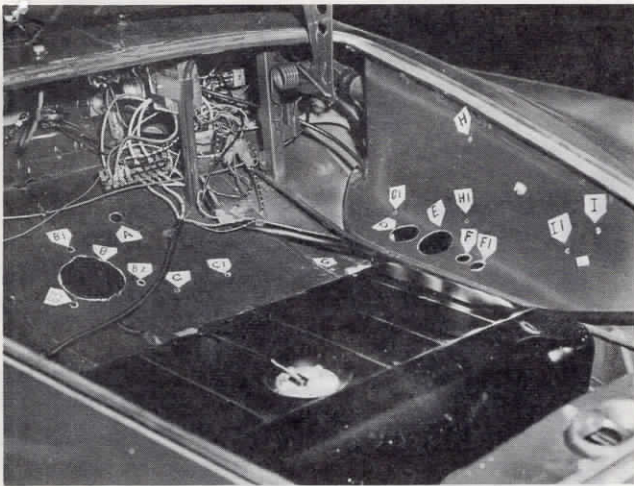


Figure 9 - Karmann Ghia 1968 and Later

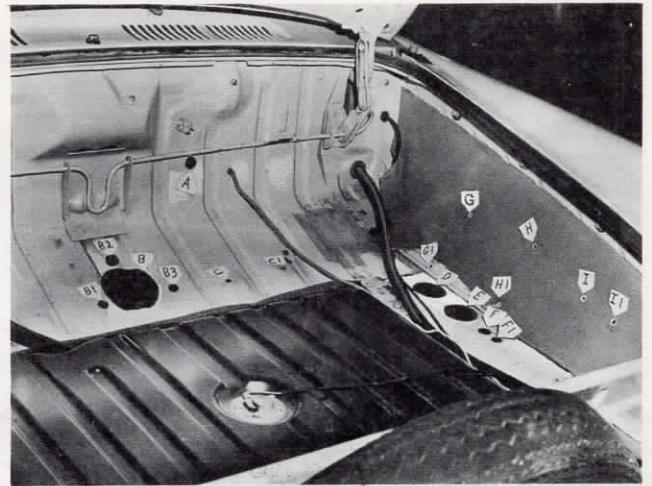


Figure 10 - Models 1500 and 1600

TEMPLATE CHART

| PM #  | DESCRIPTION                                 | VEHICLE USED ON                  |
|-------|---|----------------------------------|
| 34875 | Vent air & comb motor mtg .....             | 1500, 1600 (Prior to 1970)       |
| 34876 | Heater brackets, Ignition coil & .....      | 1500, 1600 (Prior to 1970)       |
| 34877 | Vent air and combustion motor .....         | Sedan (1968 and later)           |
| 34878 | Brackets - Heater .....                     | Sedan (1968 and later)           |
| 34880 | Heater brackets & Ignition coil .....       | Karmann Ghia (1968 and later)    |
| 34881 | Vent air adapter and combustion motor ..... | Karmann Ghia (1968 and later)    |
| 35014 | Heater brackets .....                       | Karmann Ghia (1961 through 1967) |
| 35015 | Combustion Blower & Vent air adapter .....  | Sedan (1961 through 1967)        |
| 35016 | Heater Brackets .....                       | Sedan (1961 through 1967)        |
| 35017 | Combustion Blower & Vent Air Adapter .....  | Karmann Ghia (1961 through 1967) |
| 35203 | Vent Air Blower .....                       | 1600 (1970)                      |
| 35204 | Heater Brackets .....                       | 1600 (1970)                      |

HOLE LOCATION AND DIAMETER CHART

| HOLES               | DIA.              | LOCATION  |
|---------------------|-------------------|---|
| A                   | 3/4"              | Switch Control Cable and Wiring .....               |
| <del>B</del>        | <del>3-1/2"</del> | <del>Ventilating Air Adapter .....</del>            |
| <del>B1-B2-B3</del> | <del>9/32"</del>  | <del>Adapter Plate Mounting Pins .....</del>        |
| <del>C-C1</del>     | <del>3/16"</del>  | <del>Combustion Blower Mounting Bracket .....</del> |
| <del>D</del>        | <del>1-1/2"</del> | <del>Exhaust Tube .....</del>                       |
| <del>E</del>        | <del>2"</del>     | <del>Combustion Air Inlet Duct .....</del>          |
| <del>F-F1</del>     | <del>3/4"</del>   | <del>Drain Tube, Fuel Line .....</del>              |
| <del>C-C1</del>     | <del>3/16"</del>  | <del>Heater Mounting Bracket Rear .....</del>       |
| <del>H-H1</del>     | <del>3/16"</del>  | <del>Heater Mounting Bracket Front .....</del>      |
| I-I 1               | 3/16"             | Ignition Coil .....                                 |
| J*                  | 2"                | Combustion Air Inlet Duct .....                     |
| K*                  | 3/4"              | Fuel Line .....                                     |

\* See Figures 19 through 23 for holes "J" and "K".

**SECTION II**

**INSTALLATION OF VENTILATING AIR LOUVER, SHUTTER AND ADAPTER**

1. Supplied with the heater kit are an air distribution louver, an air shutter assembly, an adapter, a strip of gasket material, and three screws. Install these parts as follows (See Figures 11 through 13):

A. Place the adapter with three studs on it so that studs are protruding through luggage compartment floor.

B. Remove backing from gasket material and install the gasket around the inside of the shutter assembly.

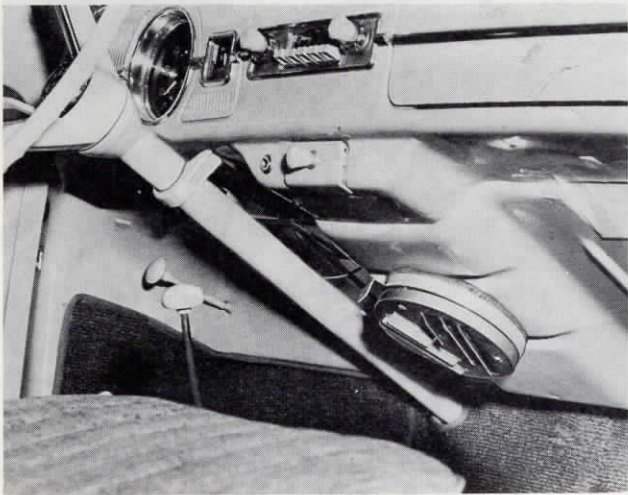


Figure 11 - Sedan

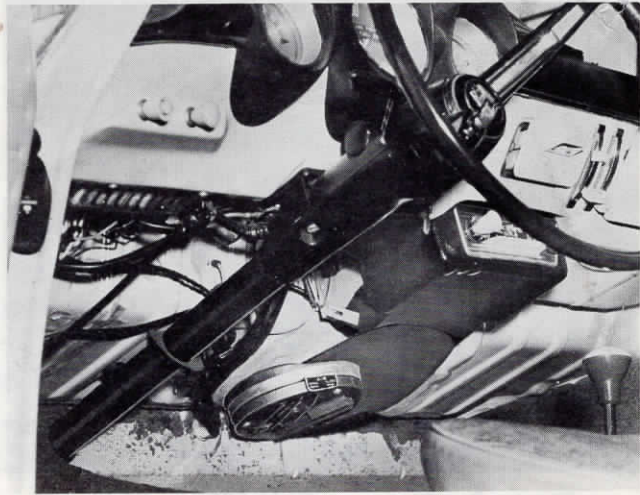


Figure 13 - Models 1500 and 1600

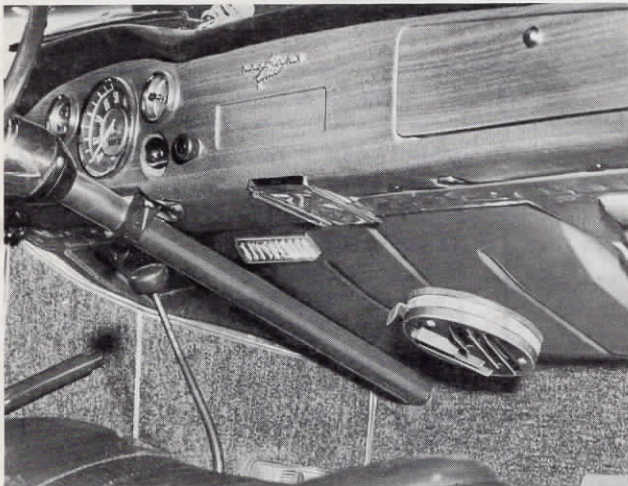


Figure 12 - Karmann Ghia

C. With the shutter closed, place the shutter and gasket against the bottom side of luggage compartment floor, align the three screw holes in the shutter assembly with the three studs on the air outlet adapter so that the shutter control handle is pointed toward the front seat.

D. Place the louver assembly against the shutter assembly as shown in Figures 11 through 13 and secure to adapter with the three screws.

### SECTION III

#### INSTALLATION OF FLOOR COVERING AND INSTRUMENT PANEL COVER

See Figures 14 through 18 for completed cover trim outlines in the following steps.

1. Lay the pad and covering on the luggage compartment floor and cut a hole through both to permit the collar on the adapter to protrude through.

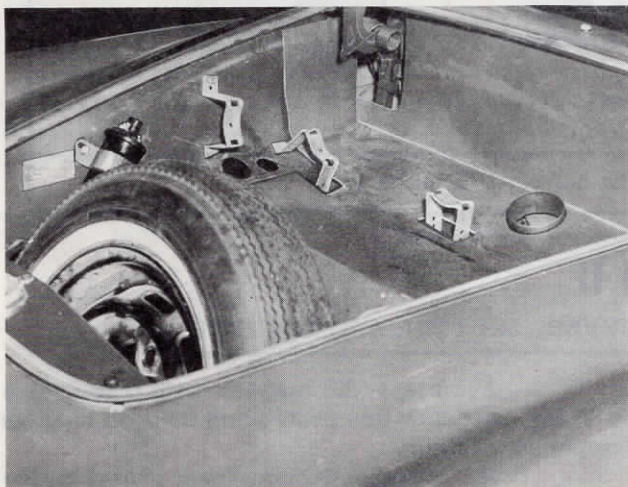


Figure 14 - Karmann Ghia 1961 through 1967

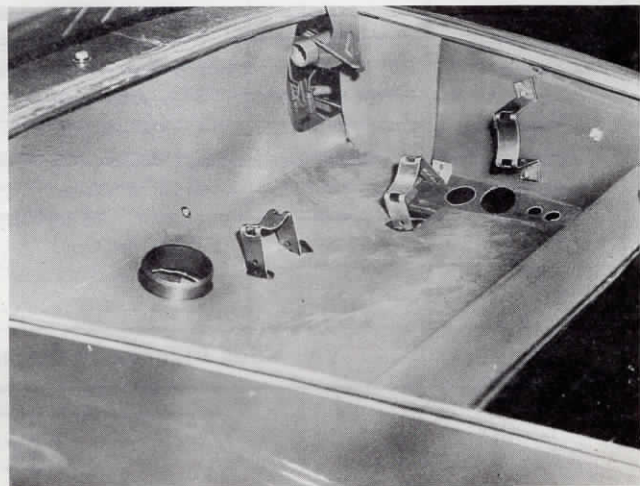


Figure 15 - Karmann Ghia 1968 and Later

2. Cut the corner and pad to permit the combustion air blower bracket legs to locate over mounting holes in deck.

3. Cut or trim the floor covering to allow clearance for the brackets, exhaust tube, combustion air intake duct, fuel line and ignition coil.



Figure 16 - Models 1500 and 1600

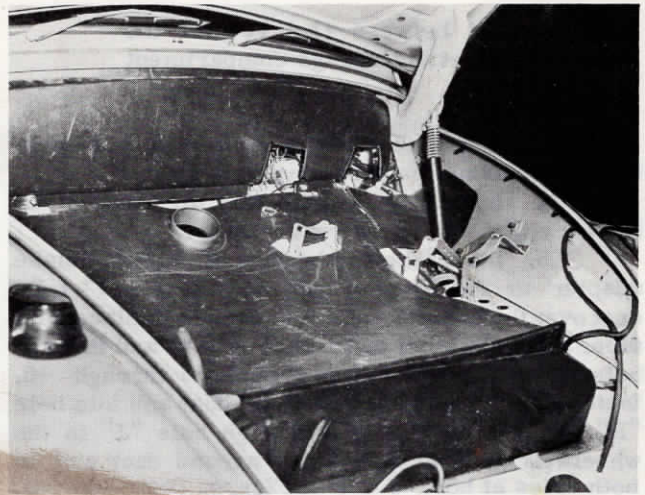


Figure 18 - Sedan 1968 and Later

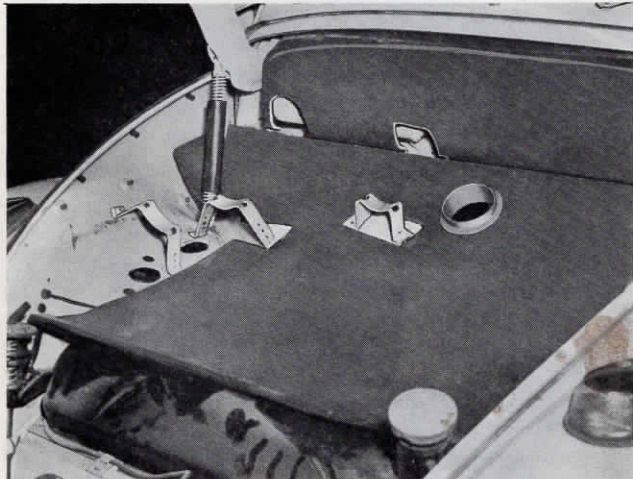


Figure 17 - Sedan 1961 through 1967

4. Make necessary cutout on the instrument panel cover to permit the cover to fit around the combustion air motor. This is not required for the Karmann Ghia.

## SECTION IV

### INSTALLING MOUNTING BRACKETS AND COMBUSTION AIR BLOWER

1. Refer to the following chart and Figures 14 through 18 to find the correct mounting brackets for the vehicle model. Brackets are stamped A-B-C etc.

2. Install the brackets with the sheet metal screws provided.

Use acorn nuts to cover any screw points protruding into passenger compartment.

**NOTE:** The blower bracket for the 1961 through 1967 Sedan is to be installed using one sheet metal screw and one pan head machine screw and nut. The pan head screw is used in the Hole C-1 and is inserted from inside the luggage compartment. Use spacer pro-

MOUNTING BRACKET CHART

| VEHICLE                         | BRACKET LETTER | HOLES  | LOCATION                           |
|---------------------------------|----------------|--------|------------------------------------|
| 1500 & 1600 Sedan               | "A"            | G & G1 | Heater Mounting Rear . . . . .     |
| 1500 & 1600 Sedan (except 1970) | "B"            | H & H1 | Htr Mtg Rear (also front for 1970) |
| 1500 & 1600 Sedan               | "C"            | C & C1 | Combustion Blower Motor . . . . .  |
| Sedan (Right side only)         | "K"            | G & G1 | Heater Mounting Rear . . . . .     |
| Sedan (Left side only)          | "D"            | G & G1 | Heater Mounting Rear . . . . .     |
| Sedan (Both sides)              | "E"            | H & H1 | Heater Mounting Front . . . . .    |
| Sedan (Both sides)              | "F"            | C & C1 | Combustion Blower Motor . . . . .  |
| Karmann Ghia                    | "G"            | G & G1 | Heater Mounting Rear . . . . .     |
| Karmann Ghia                    | "H"            | H & H1 | Heater Mounting Front . . . . .    |
| Karmann Ghia (Right side only)  | "C"            | C & C1 | Combustion Blower Motor . . . . .  |
| Karmann Ghia (Left side only)   | "J"            | C & C1 | Combustion Blower Motor . . . . .  |

vided between the leg of the bracket and luggage compartment floor.

3. Install combustion air blower assembly to bracket using the screw type clamp.

4. Install the combustion air duct to the blower outlet and secure with clamp.

5. Install the combustion air blower intake adapter to the housing and slip the 1-1/2" I.D. duct over the adapter inlet and secure in place with tape. Route the other end of duct over to and through hole "E" in the fender, see Figures 6 through 10. Install the 2" grommet over the duct and into hole "E". Insert end of duct through hole "J" in the wheelwell and put body putty around duct and on both sides of hole "J". (See Figures 19 through 23).

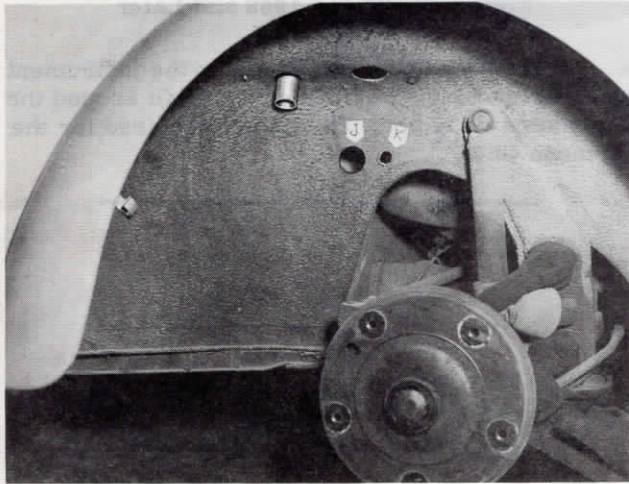


Figure 19 - Sedan 1961 through 1967

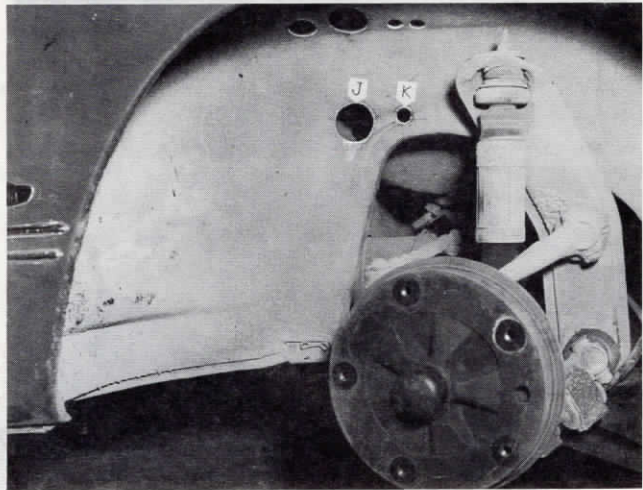


Figure 21 - Karmann Ghia 1961 through 1967

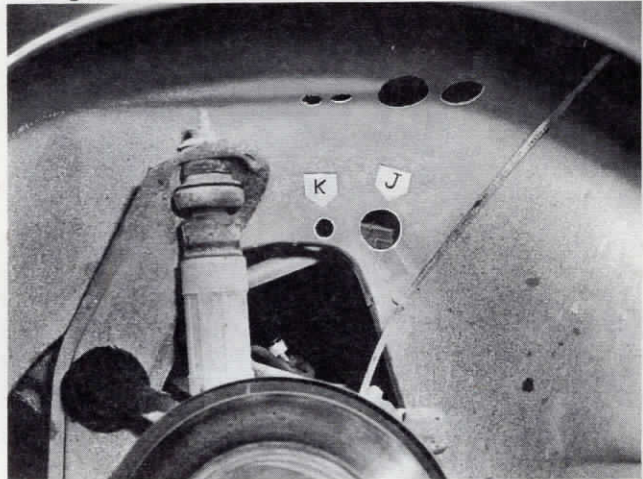


Figure 22 - Karmann Ghia 1968 and Later

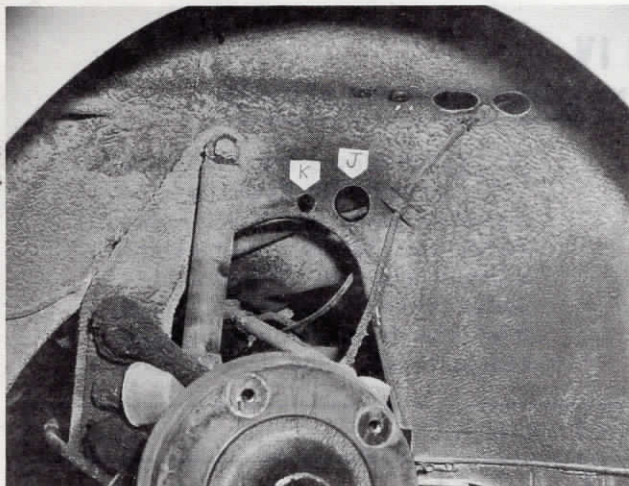


Figure 20 - Sedan 1968 and Later

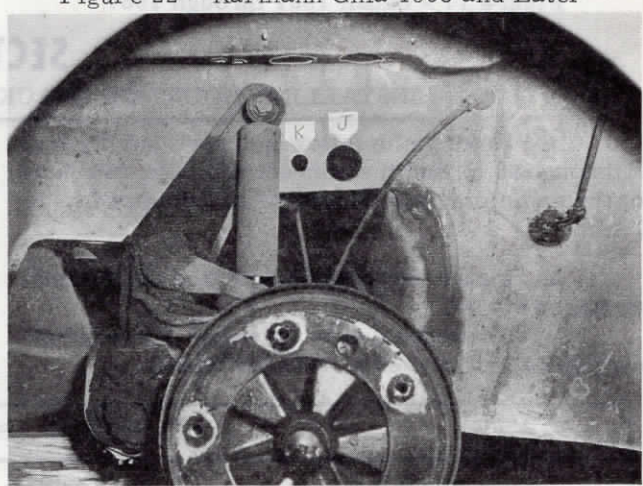


Figure 23 - Models 1500 and 1600

## SECTION V

### INSTALLATION OF HEATER SWITCH, WIRING AND FUEL LINES

1. Furnished in the heater kit is a heater switch mounting bracket to be installed on the underside of the instrument panel in the driver's compartment within five inches of the left side Figure 24 A using dimensions shown as follows in Figure 24 B.

|               |                     |             |
|---------------|---------------------|-------------|
| 1500 and 1600 | .... A- 3" .....    | B- On Ledge |
| Sedan         | ..... A- 5" .....   | B- 1"       |
| Karmann Ghia  | ... A- 2-1/2" ..... | B- 1"       |

2. Install one of the 7/16 inch jam nuts on the heater switch shaft; insert shaft through the

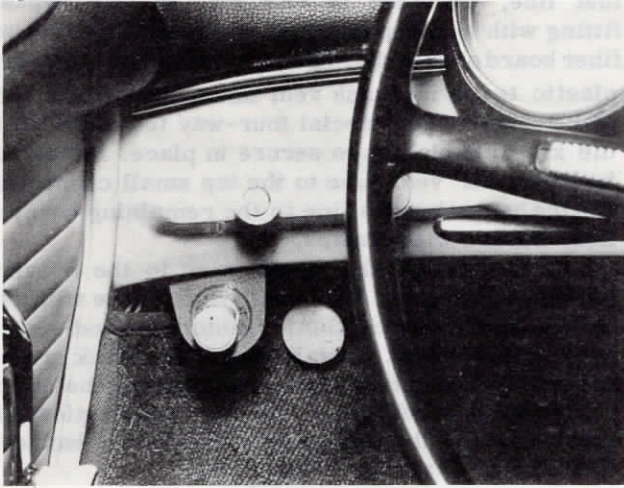


Figure 24A - Switch

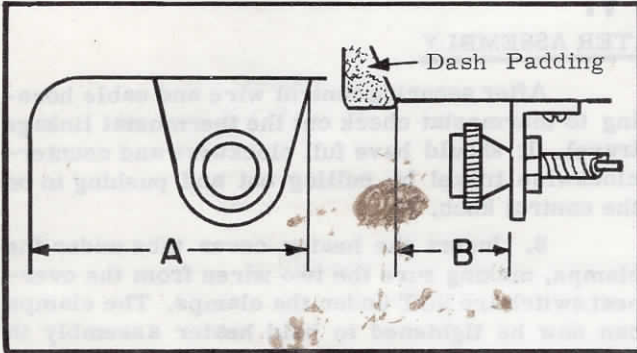


Figure 24B - Switch

bracket from the underside and place the transparent switch plate marked "Off" and "Heat" over the switch so that it rests against the bracket and with the lettering at the top. Next, install the flat washer over the switch and secure the switch in place with the locknut which also serves to hold the plate in place.

3. Install knob on switch shaft so that the black dot is on top.

4. Insert the heater switch control cable wire through hole "A" in the underside of the luggage compartment. (Hole "A" should be a minimum of 6" directly behind the switch).

5. The switch and control cable as supplied is longer than required for 1961 through 1967 Sedan (1200 & 1300) and 1961 through 1967 Karmann Ghia Six (6) inches can be removed for the Sedan and seven (7) inches for the Karmann Ghia.

CAUTION: When cutting off control cable be sure to pull control wire back through housing about 12 inches, cut specified length from housing, push wire back into housing, and cut specified length from wire. This should leave approximately 2-1/2 inches of control wire protruding from the housing with switch shaft pushed all the way in.

6. Insert the wiring harness lead through hole "A" and connect to one of the terminals on the heater switch.

7. Insert the length of wire with fuse through hole "A" and connect to the other terminal on the heater switch. Connect the other side of the fused wire to the cold side of the ignition switch on the terminal board. Use the electrical tee provided to

make this connection.

8. Insert grommet in hole "A" around the control cable and wiring.

9. The luggage compartment floor covering can now be installed.

#### INSTALLATION OF FUEL LINES

At this time the heater fuel line connection can be made into the flexible fuel line at the bottom of the fuel tank (See Figures 25A).

1. Remove the flexible fuel line between fuel tank and fuel line leading to engine, on all cars except the 1600 beginning with 1968 model in which the fuel return line must be removed. (See Figure 25B). Provisions will have to be made to prevent gasoline draining from the tank when this is done. The rubber cap on the brake bleed screw can be used to cap the fitting at the bottom of the tank.

2. Cut the fuel line that was removed and install the fuel tee and clamps. Three screw type

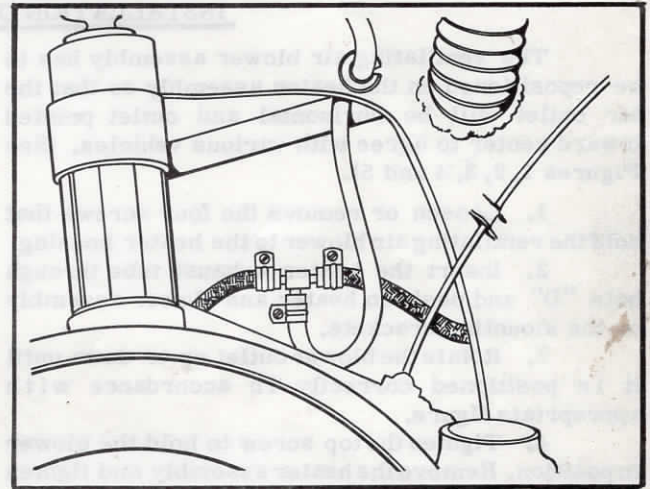


Figure 25A - Fuel Connection

clamps are in the heater kit. The two larger clamps are to be used with the existing fuel line. Install the smaller one on the long fuel line that has only one flared fitting and secure to the branch of the tee. The tee branch should be pointed downward.

3. Thread the fuel line through holes "K"

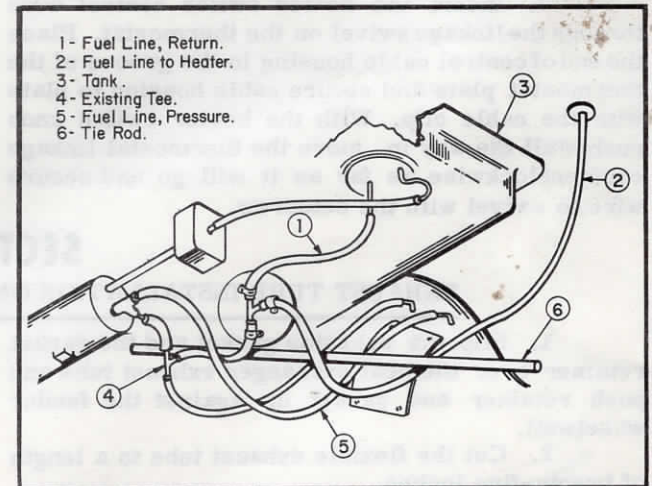


Figure 25B - Fuel Connection and "F" and install the split grommets.

4. Route the heater fuel line from the fuel tank so it will not be close to the heater exhaust tube, and make connection at inlet side of heater fuel pump.

5. Connect the other fuel line with the two flared fittings to outlet side of heater fuel pump and route it along fender to approximate position of burner so fuel line will not be close to the heater exhaust. Connection can be made at the burner later.

6. On 1968 through 1970 cars a fuel bypass line is to be connected to the fitting on the side of the fuel pump top plate. Disregard this step for all cars prior to 1968. For 1967 cars replace the fuel pump supplied in kit with Part No. 736563 Fuel Pump (ZVW 257783) from stock. There is no provision for installing bypass on cars prior to 1968 model. Punch a 1/2 inch hole in the fiber board covering the rear of the instrument panel using the bypass fitting on the pump as a guide. Secure the

fuel line, provided in the kit, to the bypass fitting with a clamp and route bypass line behind fiber board over to the right side of the car. Remove plastic tee in fuel tank vent line at tank filler neck and replace with special four-way tee provided in the kit. Use clamps to secure in place. Install the fuel tank air vent tube to the top small connection and the heater bypass line to the remaining connection. Secure with clamps.

7. Attach the green wire to the breaker points terminal; put the black ground wire with #10 eyelet onto the combustion air motor stud and secure with nut provided. Install the other black ground wire eyelet to one of the screws holding the motor mounting bracket; plug the red combustion air motor lead into the appropriate terminal in harness. (See Wiring Diagram - Figure 31).

## SECTION VI

### INSTALLATION OF HEATER ASSEMBLY

The ventilating air blower assembly has to be repositioned on the heater assembly so that the air outlet will be horizontal and outlet pointed toward center to agree with various vehicles. (See Figures 1, 2, 3, 4 and 5).

1. Loosen or remove the four screws that hold the ventilating air blower to the heater housing.

2. Insert the heater exhaust tube through hole "D" and position heater and blower assembly on the mounting brackets.

3. Rotate the blower outlet up or down until it is positioned correctly in accordance with appropriate figure.

4. Tighten the top screw to hold the blower in position. Remove the heater assembly and tighten the other three screws.

5. Insert the clamps in the two heater mounting brackets.

6. With the heater exhaust tube inserted through hole "D" and heater assembly positioned on the brackets, tighten the two clamps about half way.

7. Insert the heater switch control wire through the linkage swivel on the thermostat. Place the end of control cable housing in the groove of the thermostat plate and secure cable housing to plate with the cable clip. With the heater switch knob pushed all the way in, move the thermostat linkage counterclockwise as far as it will go and secure wire to swivel with the setscrew.

After securing control wire and cable housing to thermostat check out the thermostat linkage travel. It should have full clockwise and counterclockwise travel by pulling out and pushing in on the control knob.

8. Insert the heater cover tabs under the clamps, making sure the two wires from the overheat switch are NOT under the clamps. The clamps can now be tightened to hold heater assembly in position.

9. Connect the combustion air duct to the burner assembly using the clamp provided.

10. Install the rubber drain tube onto the metal drain tube coming off heat exchanger and insert it through hole "F1" and install the split grommet.

11. Connect the fuel line coming from the fuel pump outlet to the burner assembly fitting.

12. Install the ignition coil using screws and flat washers provided into holes "I & I1".

13. Install the ignition cable to the spark plug and insert other end into the ignition coil.

14. Route the wiring harness around back side of heater and connect terminals to proper components. See wiring diagram - Figure 31.

15. Install the 3-1/2" duct onto the ventilating air blower outlet and secure with clamp. Draw duct over to adapter and cut duct to proper length. Then secure duct to adapter with clamp provided.

## SECTION VII

### EXHAUST TUBE INSTALLATION ON KARMANN GHIA & 1300 SEDAN ONLY

1. Slip the asbestos gasket and the gasket retainer over the heat exchanger exhaust tube and push retainer and gasket up against the fender wheelwell.

2. Cut the flexible exhaust tube to a length of twenty-five inches.

3. Install the flexible exhaust tube over the heat exchanger exhaust tube. Using a No. 27 (1/8") drill make a hole through the overlapping edges of both pieces and secure with No. 10 x 5/8 sheet metal screw.

4. Route the flexible tube to the rear of the wheelwell as high and as far back as possible. Secure flexible tubing to the wheelwell with bracket provided. (See Figures 26 through 29).

5. Insert exhaust extension into the flexible tubing with outlet under the lip of the wheelwell facing the rear of the vehicle. Secure the flexible exhaust to the extension by drilling a 1/8" hole in the two pieces and secure with No. 10 x 5/8 sheet metal screw.



6. Secure the exhaust extension to the underside of the vehicle body with clamp and screw provided.

**NOTE:** Make sure the flexible exhaust tube does not interfere with the turning RADIUS of the wheel.

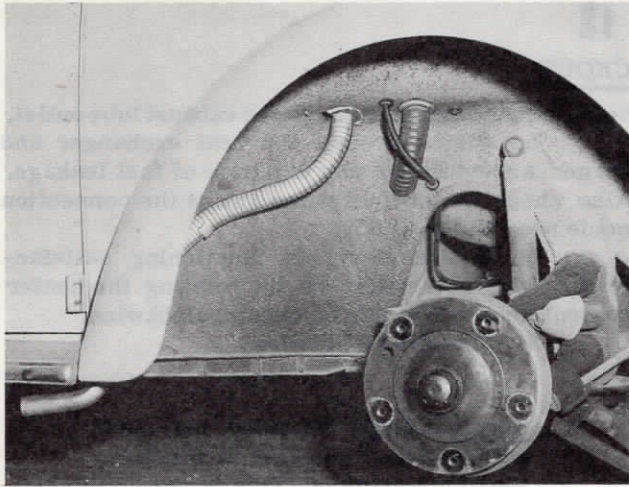


Figure 26 - Sedan 1961 through 1967

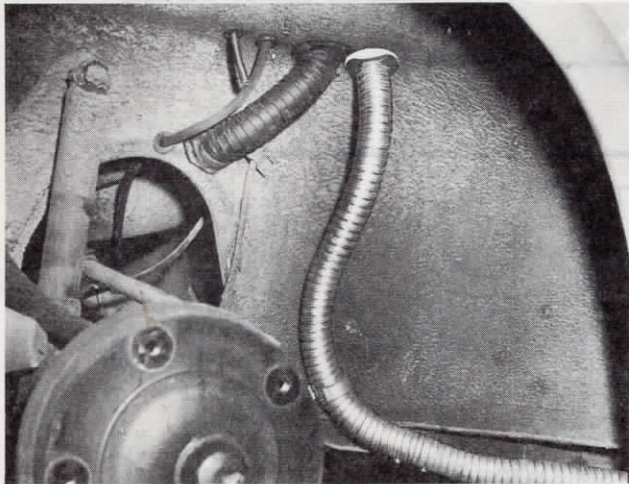


Figure 27 - Sedan 1968 and Later

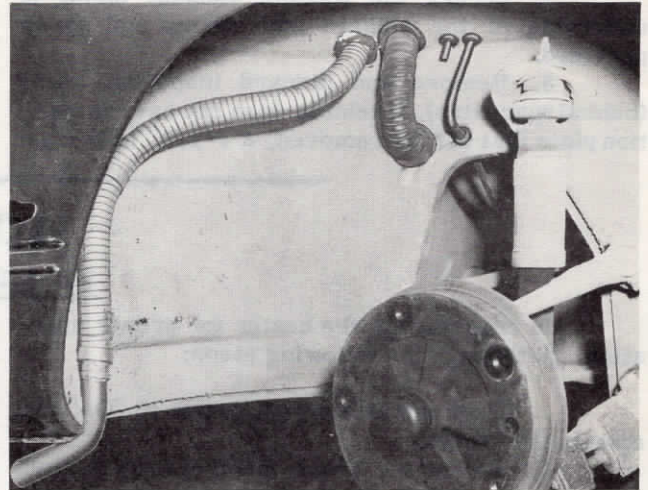


Figure 28 - Karmann Ghia 1961 through 1967

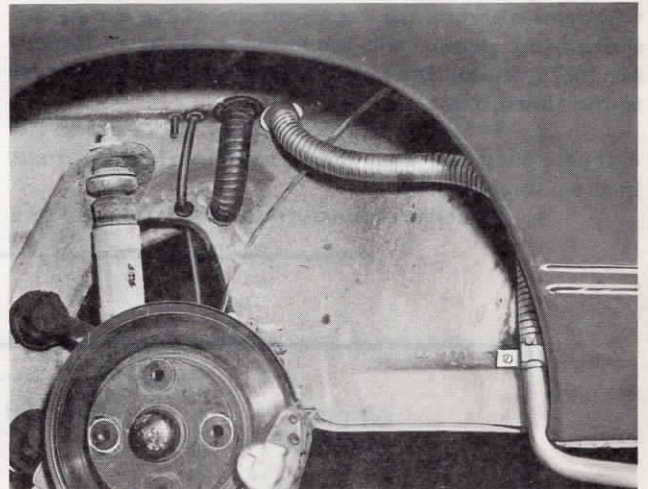


Figure 29 - Karmann Ghia 1968 and Later

## SECTION VIII

### EXHAUST TUBE INSTALLATION ON 1500 & 1600 SEDAN ONLY

1. Cut the flexible exhaust tube to lengths of 15 inches and 30 inches.
2. Slip the 15 inch piece of flexible tubing over the heat exchanger exhaust. Drill both pieces with a No. 27 drill (1/8") and secure with No. 10 x 5/8 sheet metal screw.
3. Route flexible exhaust tubing straight down along inside of wheelwell indentation. (See Figure 30).
4. Insert exhaust extension into the flexible tubing drill both parts with a No. 31 drill and secure with No. 8 x 3/8 sheet metal screw.
5. Attach the 30 inch piece of flexible exhaust tubing to the exhaust extension and secure with No. 8 x 3/8 sheet metal screw.
6. Route the 30 inch piece of flexible tubing around and behind the wheelwell then parallel to the vehicle and to the rear.

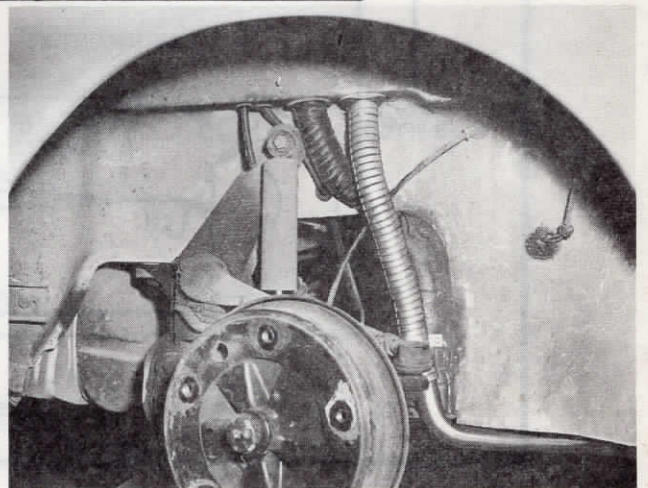


Figure 30 - Models 1500 and 1600

7. Secure the flexible exhaust tubing to underside of the vehicle with clamp and screw provided.

8. Remove and discard inspection plate (behind spare tire). If vehicle does not have inspection plate that can be removed, a 3-1/2" hole must

be cut in the panel in back of the spare tire. This will insure a source of fresh ventilating air into the luggage compartment.

Reinstall vehicle's speedometer cable. Replace the left front wheel and reconnect the battery.

## SECTION IX

### HEATER CHECKOUT

In checking out the heater for proper operation, go through the following steps:

1. Turn vehicle ignition switch to "On" and open heater shutter.

2. Rotate the heater control knob to right or clockwise. Warm air should be felt almost immediately at the driver's compartment. The heater will cycle off when the temperature of the air at the thermostat equals the thermostat setting. As the air cools, the heater will cycle on again in response to the thermostat.

3. Pull the heater control knob out to its extreme position. This should raise the temperature in the compartment.

4. Check to make certain that no fumes are

being emitted except through the exhaust tube outlet.

5. Check around the heat exchanger and burner assembly for any evidence of fuel leakage. Also check at the fuel pump and at the connection made near the fuel tank.

6. If everything is functioning satisfactorily, shut the heater off by rotating the heater control knob to the left or counterclockwise.

7. Shut off the ignition.

NOTE: A slight "smoking" may be noticed when the heater is run for the first few times. This is due to an oil film on the exhaust burning off and is not a defect.

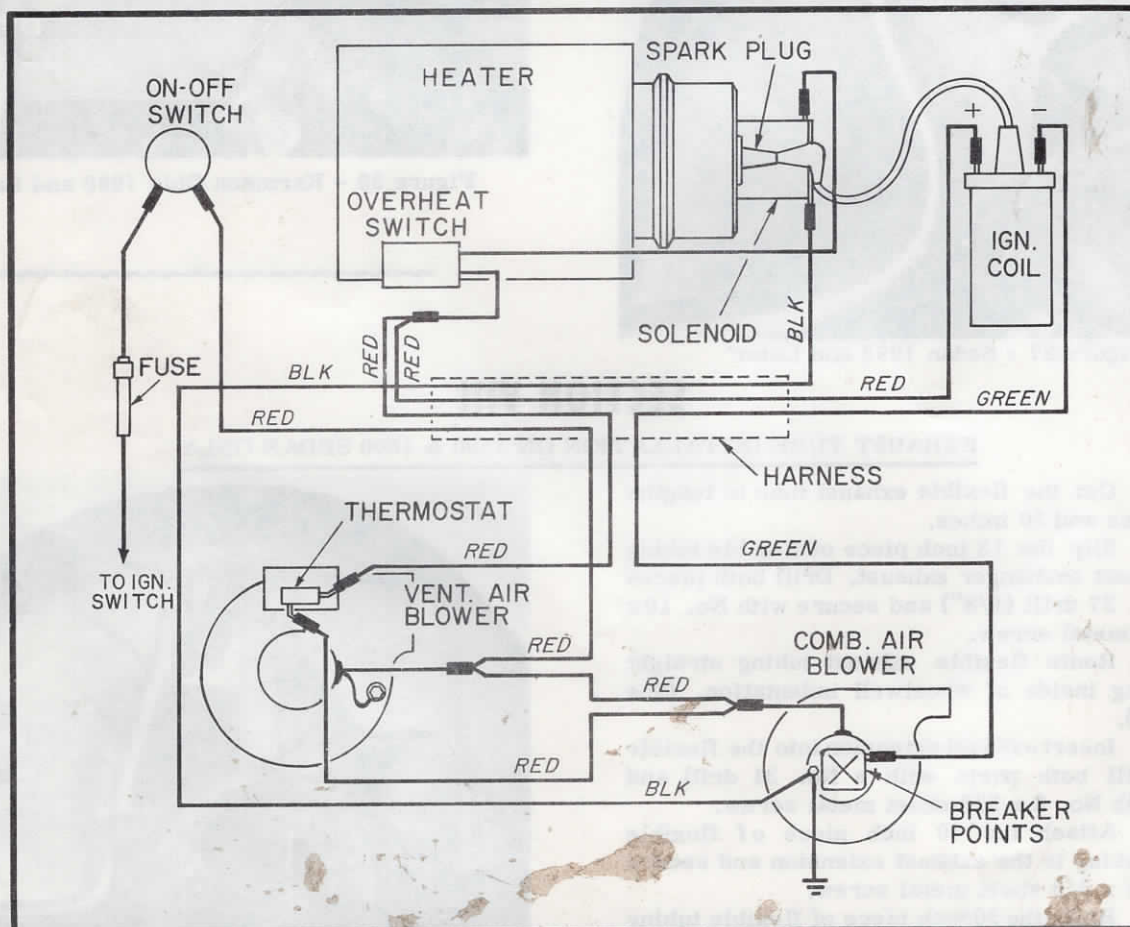


Figure 31 - Wiring Diagram

# SECTION X - PARTS LIST

| PART NO.  | DESCRIPTION                           | QTY |
|-----------|---------------------------------------|-----|
| 18798     | Screw - # 14 x 3/8 S.M . . . . .      | 12  |
| 18803     | Screw - #14 x 5/8 S.M "B" . . . . .   | 1   |
| 77903     | Nut - #8 - 32 Hex . . . . .           | 2   |
| 170296    | Screw - #8-32 x 1-3/4 S.PHS . . . . . | 1   |
| 170321    | Screw - #10-32 x 1 pan hd . . . . .   | 3   |
| 484869    | Washer - #8 Flat . . . . .            | 4   |
| 488589    | Grommet . . . . .                     | 1   |
| 490117    | Nut - Acorn Type . . . . .            | 4   |
| 701372    | Washer - .250 I.D. .625 O.D. . . . .  | 2   |
| 735091    | Clamp . . . . .                       | 2   |
| 735407    | Screw - #10 x 5/8 S.M. BP . . . . .   | 2   |
| 735548    | Clamp Hose . . . . .                  | 2   |
| 735550    | Clamp . . . . .                       | 2   |
| 735558-7  | Duct - 1-1/4 flex . . . . .           | 1   |
| 735590    | Strap . . . . .                       | 2   |
| 735591-1  | Clamp . . . . .                       | 1   |
| 735591-2  | Clamp . . . . .                       | 4   |
| 735591-3  | Clamp . . . . .                       | 2   |
| 735593-10 | Tube - Drain . . . . .                | 1   |
| 735600    | Connector - 3-way . . . . .           | 1   |

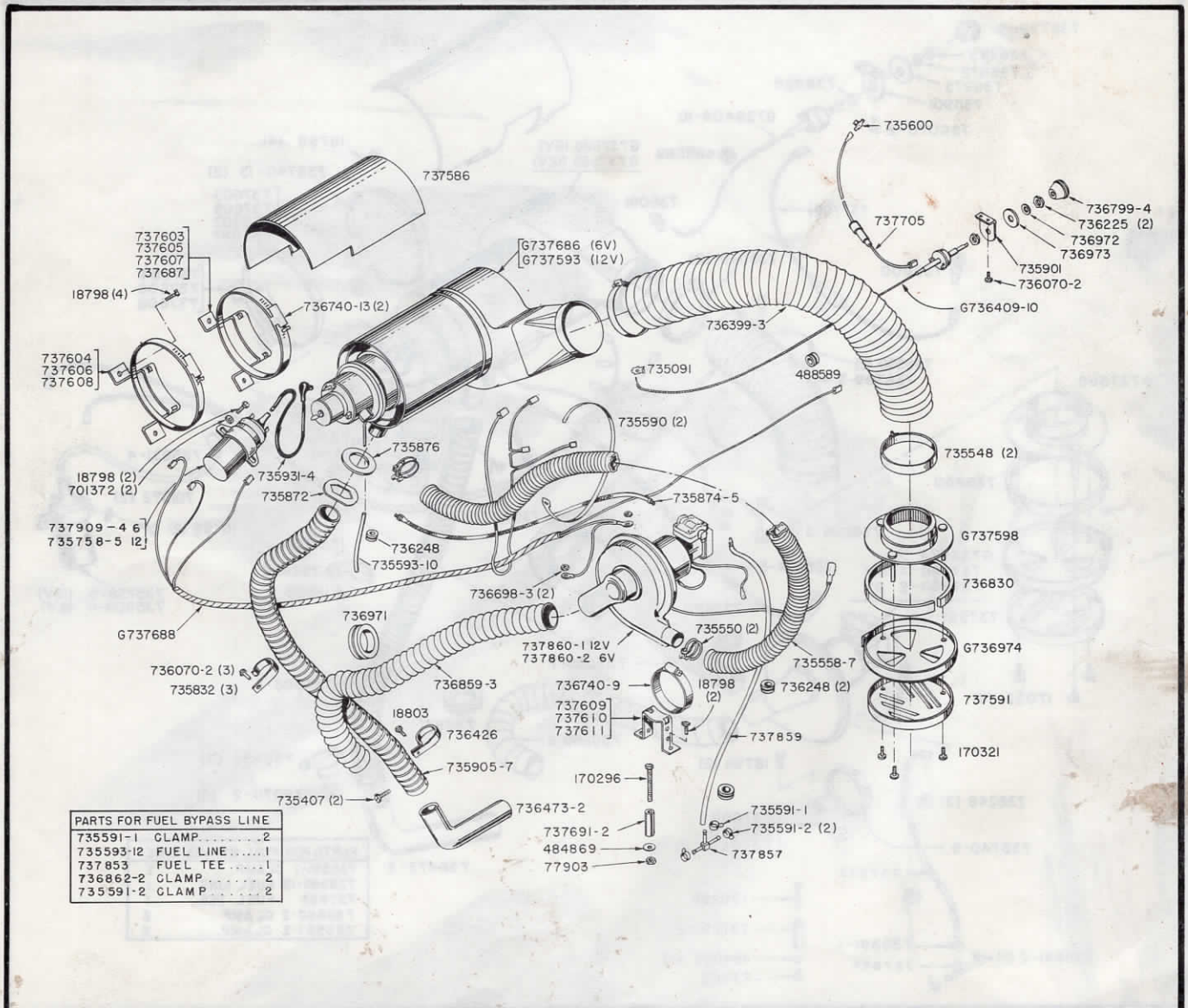


Figure 32 - EXPLODED PARTS VIEW -- RIGHT SIDE

| PART NO.  | DESCRIPTION                  | QTY |
|-----------|------------------------------|-----|
| 735758-5  | Coil - 12 Volt               | 1   |
| 735859-1  | Clamp                        | 3   |
| 735872    | Retainer, Gasket             | 1   |
| 735874-5  | Fuel Line                    | 1   |
| 735876    | Gasket, Exhaust Tube         | 1   |
| 735901    | Bracket                      | 1   |
| 735905-7  | Tube, Exhaust, Flex.         | 1   |
| 735909-4  | Coil - 6 Volt                | 1   |
| 735931-4  | Cable, Spark plug            | 1   |
| 736070-2  | Screw - #8 x 3/8 SM "B"      | 7   |
| 736225    | Nut, Hex 7/16 - 28           | 2   |
| 736248    | Grommet                      | 3   |
| 736399-3  | Duct - 3-1/2 flex.           | 1   |
| 736409-10 | Switch - Temperature Control | 1   |
| 736426    | Clamp                        | 1   |
| 736473-6  | Tube - Exhaust Extension     | 1   |
| 736698-3  | Nut - #8-32                  | 2   |
| 736740-9  | Clamp, Blower                | 1   |
| 736740-13 | Clamp, Heater Mounting       | 2   |
| 736799-4  | Knob, Switch                 | 1   |
| 736830    | Spacer, Gasket               | 1   |

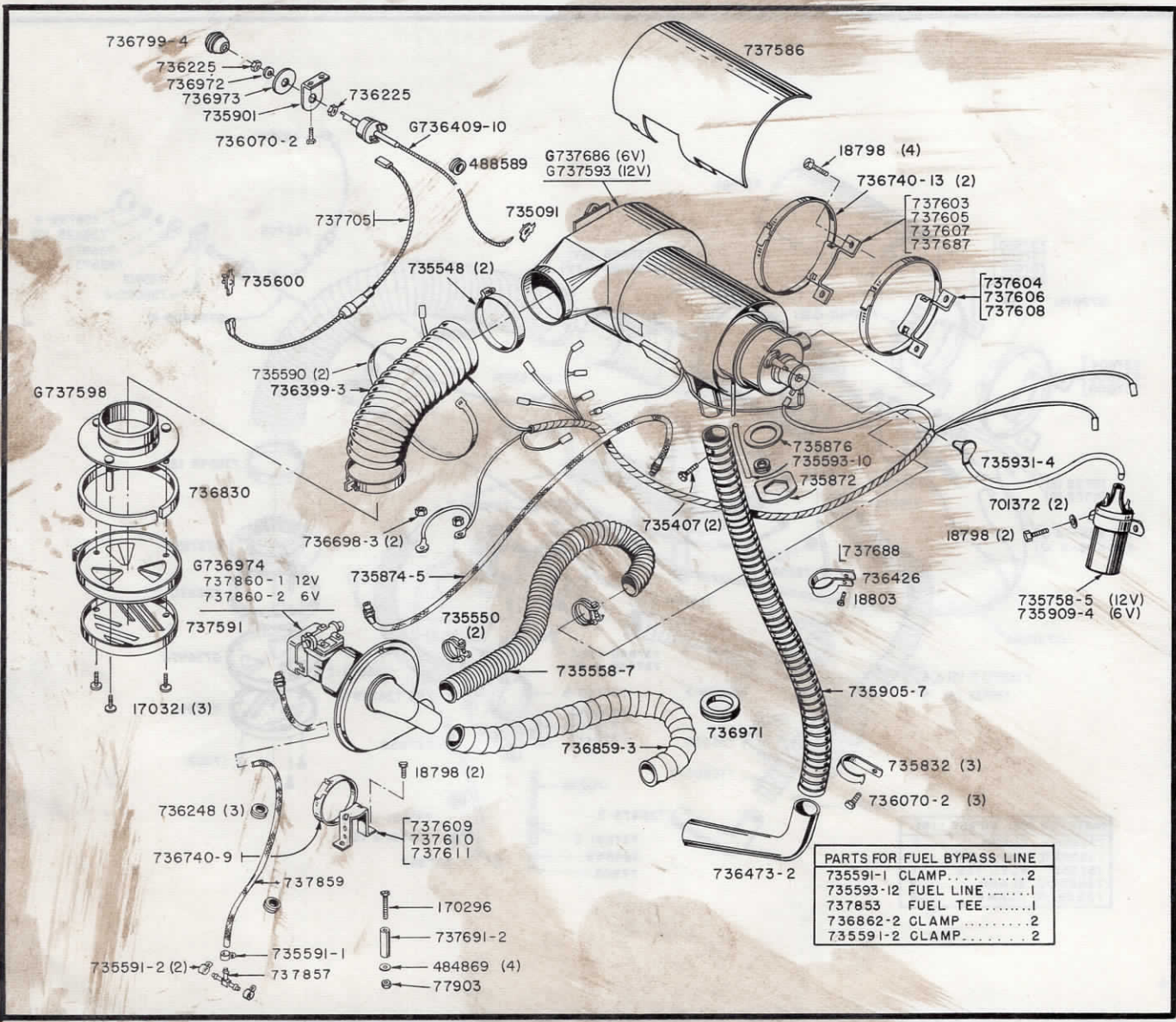


Figure 33 - EXPLODED PARTS VIEW - LEFT SIDE

| PART NO. | DESCRIPTION  | QTY |
|----------|--|-----|
| 736859-3 | Duct - 1-1/2 flex. ....  | 1   |
| 736862   | Clamp.....   | 2   |
| 736971   | Grommet .....  | 1   |
| 736972   | Washer, flat .....   | 1   |
| 736973   | Plate, Instruction .....   | 1   |
| 736974   | Shutter Assembly.....  | 1   |
| 737586   | Shroud, Heater.....  | 1   |
| 737591   | Louver Plate.....  | 1   |
| 737593   | Heater Assembly (12 Volt) .....  | 1   |
| 737598   | Flange .....   | 1   |
| 737603   | Bracket Heater Mtg - Rear - Used on Model 1600 "A" .....                     | 1   |
| 737604   | Bracket Heater Mtg - Front - Used on Model 1600 "B" .....                    | 1   |
| 737605   | Bracket Heater Mtg - Rear - Used on Model 1300 "D" .....                     | 1   |
| 737606   | Bracket Heater Mtg - Front - Used on Model 1300 "E" .....                    | 1   |
| 737607   | Bracket Heater Mtg - Rear - Used on Karmann Ghia "G" .....                   | 1   |
| 737608   | Bracket Heater Mtg - Front - Used on Karmann Ghia "H" .....                  | 1   |
| 737609   | Bracket Combustion Blower - Used on Model 1600 "C" .....                     | 1   |
| 737610   | Bracket Combustion Blower - Used on Model 1300 "F" .....                     | 1   |
| 737611   | Bracket Combustion Blower - Used on Karmann Ghia "J" .....                   | 1   |
| 737666   | Clamp.....   | 2   |
| 737611   | Bracket, Combustion Blower -- Used On Karmann Ghia "J" .....                 | 1   |
| 737666   | Clamp .....  | 2   |
| 737686   | Heater Assembly (6-Volt) .....   | 1   |
| 737687   | Bracket, Heater Mounting - Rear (Used on Model 1300 "K") .....               | 1   |
| 737688   | Harness, Wiring .....  | 1   |
| 737691   | Spacer, 1-3/8" long .....  | 1   |
| 737705   | Cable (With Fuse) .....  | 1   |
| 737686   | Heater Assembly - 6 Volts.....   | 1   |
| 737687   | Bracket, Heater Mtg - Rear (Used on Model 1300 "K") .....                    | 1   |
| 737688   | Harness - Wiring.....  | 1   |
| 737691-2 | Spacer - 1-3/8" long .....   | 1   |
| 737705   | Cable - (with Fuse) .....  | 1   |
| 737853   | Tee - Fuel Return .....  | 1   |
| 737858   | Grommet .....  | 2   |
| 737859   | Fuel Line .....  | 1   |
| 737851-1 | Fuel Line .....  | 1   |
| 737857   | Tee - Fuel.....  | 1   |
| 737859   | Fuel Line.....   | 1   |
| 737860-1 | Combustion Air Blower and Pump - 12 volt .....                               | 1   |
| 737860-2 | Combustion Air Blower & Pump - 6 volt .....                                  | 1   |
| 737861   | Clamp.....   | 2   |
| PM-34875 | Vent Air & Comb. Motor Mtg - 1500 - 1600 Sedan prior to 1970 .....           | 1   |
| PM-34876 | Heater brackets, ignition coil - 1500-1600 Sedan prior to 1970.....          | 1   |
| PM-34877 | Vent Air & Combustion Motor, Sedan 1968 and later .....                      | 1   |
| PM-34878 | Brackets-- Heater - Sedan (1968 and later) .....                             | 1   |
| PM-34880 | Heater Brackets & Ignition Coil - Karmann Ghia (1968 & later) .....          | 1   |
| PM-34881 | Vent Air Adapter & Comb. Motor, Karmann Ghia (1968 & later) .....            | 1   |
| PM-35014 | Heater Brackets - Karmann Ghia (1961 through 1967).....                      | 1   |
| PM-35015 | Combustion Blower & Vent Air Adapter (Sedan 1961 through 1967) .....         | 1   |
| PM-35016 | Heater Brackets - Sedan (1961 through 1967) .....                            | 1   |
| PM-35017 | Combustion Blower & Vent. Air Adapter-Karmann Ghia (1961 through 1967) ..... | 1   |
| PM-35203 | Vent Air Adapter - 1600 (1970).....  | 1   |
| PM-35204 | Heater Bracket - 1600 (1970).....  | 1   |