

## Hints to Help You Enjoy Your MGB Auto Air Conditioner

### for fast cooldown

- Make sure all outside air vents are closed.
- Open a window.
- Turn the air control on high.
- Move the temperature control to its coldest setting.

The superheated air inside your car will be expelled during the first block of driving. Then, merely close the window and ride in cool comfort.

### to remove excessive smoke

The car is equipped with a fresh air heater system which can be used separately from the heater. On this vehicle, turn the "air" control to its lowest position, but do not turn on the heater. This will circulate outside air throughout the car.

### to improve heater performance

During the winter the blower system on your air conditioner can be used to circulate warm air from the heater. Merely turn the fan on at the desired speed while leaving the temperature control off.

## To Turn Unit On

Move air control knob to either high, medium, or low position for desired air volume. Move temperature control knob to coldest position for maximum cooling in stop and go traffic. On long trips, once the temperature inside the car becomes comfortable, the temperature control knob should be moved back slightly to prevent the cooling coil from becoming too cold and freezing up.

### for highway driving

During a long trip when the temperature and humidity are extremely high, frost may appear on the cooling coils. Your unit is equipped with an automatic defrost system which will normally prevent this. However, when the temperature switch is placed in its coldest position, the automatic defrost system will not operate. Therefore, if frost does begin to appear on your cooling coils and your unit no longer supplies enough cold air, move the temperature control slightly toward the off position and move the fan control to high. This will allow the automatic defrost system to operate and the frost will disappear.

### to remove fog

Windows often fog up when the humidity is extremely high. To remove this fog quickly, merely place temperature and fan control on their low position. If inside temperature is uncomfortably low, use the heater in conjunction with the air conditioner. It is not necessary to run the unit continuously, but only when the fogging exists.

## Care and Service of Your New MGB Auto Air Conditioner

By following suggested maintenance procedures and performing periodic service checks on your MGB Auto Air Conditioner, you will enjoy many miles and hours of cool, comfortable driving.

Your MGB dealer should check your unit each spring. The mechanic will check refrigerant, belt tension, condenser and evaporator coils and switches. Compressor oil level should be checked when refrigerant charge is lost.

Periodically check hoses for proper clearance from sharp metal edges and engine manifold. Wash radiator and condenser when you wash your car — condenser and radiator must be kept free of bugs and dirt for efficient operation.

However, do not cover front of radiator with wire screen, as this will restrict air flow.

Have compressor belt tension, compressor mounting bolts and clutch checked periodically by your dealer.

Never polish the face plate of your unit with car or household wax. Use an oil cloth to remove fingerprints, etc., from the face plate.

During the winter months turn on your unit once or twice a month and allow the compressor to operate a few minutes. This will lubricate the compressor seal and prevent seal failure and loss of refrigerant.

**Jaguar Rover Triumph Inc.**

**600 WILLOW TREE ROAD  
LEONIA, N.J.**





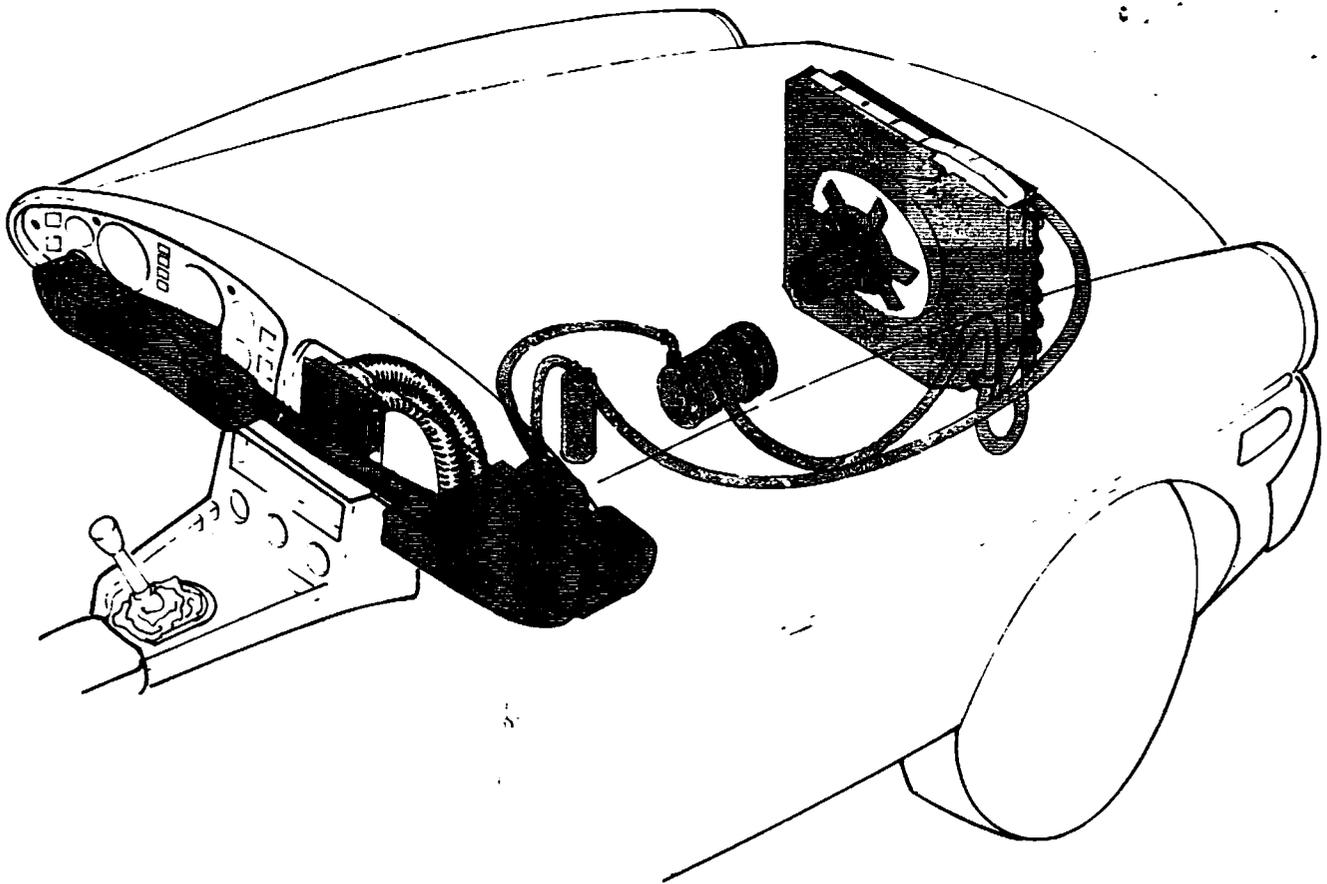
**Jaguar Rover Triumph Inc.**

**600 WILLOW TREE ROAD  
LEONIA, N.J.**

**INSTALLATION INSTRUCTIONS**

**M G B**

**MODEL NO. 107106**



REF NO.	PART NO.	DESCRIPTION	P/A
1	0883494	Wire, Harness Condenser Fan	1
2	0519094	Condenser	1
3	0963986	Fan	1
4	.	Bolt, 1/4 x 1 1/2" NF HH	1
5	.	Bolt, 1/4 x 2 1/4" NF	3
6	.	Nut, 5/16"-NF	4
7	.	Washer Lock 5/16"	4
8	.	Washer, Flat 5/16"	4
9	.	Bolt, 5/16"-NFX 2-1/2" HH B/O	1
10	1259110	Spacer, 21/64" ID x 3/4" OD x 1/2" Long	5
11	1259112	Spacer, 21/64" ID x 3/4" OD x 5/8" Long	2
12	1259113	Spacer, 21/64" ID x 3/4" OD x 3/8" Long	1
13	1259114	Spacer, 21/64" ID x 3/4" OD x 9/16" Long	1
14	0316356	Bracket, Condenser Left	1
15	0316357	Bracket, Condenser Top Right	1
16	.	Screw, 10 x 5/8" HH Self Tapping	6
17	0763968	Shroud, Fan	1
18	0316358	Bracket, Condenser Bottom Right	1
19	.	Screw, #10 x 5/8" HH Z-P	7
20	0316359	Bracket, Radiator Support	1
21	0409415	Tie, Wrap	1
22	0529950	Compressor, Sankyo 508 W/5-1/4 CL	1
23	0985489	Hose, #8 x 33" 90° FMF x Open	1
24	0985562	Hose, #10 x 55" 90° FM O Ring M-Nut x 90°	1
25	.	Hose, Wireform 2" x 14"	1
26	.	Hose, Wireform 2" x 14"	1
27	0409600	Clamp, Valve	1
28	1296340	Valve, Expansion 6 o'clock	1
29	.	Bolt, 1/4-20 x 3/4" HH B/O	1
30	.	Washer, Flat 1/4"	2
31	0316351	Bracket, Rear Mounting	1
32	.	Nut, Keps 1/4" - 20 Z/P	1
33	0763304	Assembly, Top	1
34	1014951	Insulation, Coil D/C	1
35	0560222	Coil, Evaporator	1
36	1014952	Insulation, Coil D/C	1
37	1014524	Scot Foam	1
38	1261600	Mount, Motor	1
39	1300200	Vibration, Eliminator	2
40	1120015	Motor Blower	1

REF NO	PART NO.	DESCRIPTION	P/A
41	0251602	Wheel, Blower	2
42	0763303	Case, Bottom	1
43	.	Hose, Drain 3/8" x 22"	2
44	0038200	Clamp, Drain Hose 3/8"	4
45	0039250	Clip, Snap-In	2
46	0996903	Dot, Plug 2"	1
47	.	Foam, Tape 1/8" x 1/2" x 16"	1
48	0763305	Hose, Adapter	1
49	.	Foam, Tape 1/8" x 1/2" x 38"	1
50	0763306	Bezel, Assembly	1
51	.	Hose, Wireform 2 1/2" x 16"	1
52	1012412	Prestite, 2" x 1/2"	1
53	0316355	Plate, Refrigerant Hoses	1
54	0996922	Grommits	2
55	0996923	Dot, Plug 2 1/2"	2
56	1701032	Escutcheon, Louver	1
57	1800290	Louver	1
58	0883113	Harness, Wiring	1
59	.	Screw, #8 x 1/2" PPH B/O	13
60	1700671	Switch, Plate	1
61	0039501	Nut, Special	2
62	0882782	Knob	2
63	0763309	Plenum Control, Assembly	1
64	1247233	Thermostat	1
65	0882590	Switch	1
66	0763312	Hose, Adapter	2
67	0039568	Clip "S"	8
68	.	Screw, #10-24 x 1" PPH	2
69	0310800	Clamp, Receiver-Drier	1
70	0985491	Hose, #6 x 47" Open x Open	1
71	.	Keps Nuts #10-24	5
72	0985563	Hose, #6 x 48" 90° M-Oring FM-Nut	1
73	0882696	Switch, Pressure Low	1
74	.	Screw, #6 x 1/4" PPH	2
75	0882862	Switch, Pressure High	1
76	.	Screw, #10-24 x 1/2" PPH	3
77	0874901	Circuit, Breaker	1
78	0316780	Bracket, Receiver-Drier	1
79	1331002	Relay	2
80	.	Washer, Flat 1/4"	1

FORWARD EDGE OF WASHER BOTTLE  
BRACKET

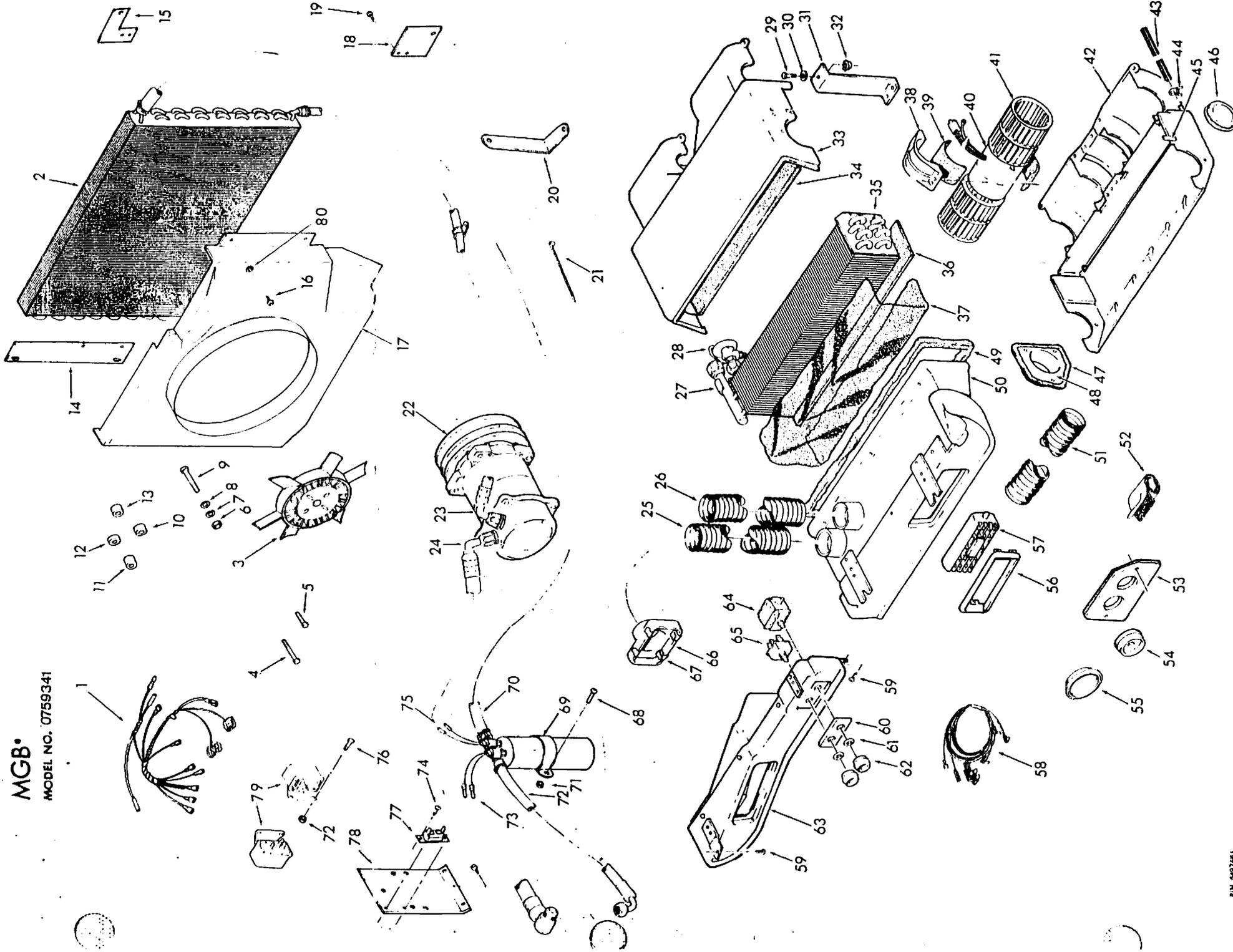
INSIDE EDGE OF WASHER BOTTLE  
BRACKET



DRILL ONE (1) 1/4" DIA. HOLE

MGB

MGB\*  
MODEL NO. 0759341





## INSTALLATION INSTRUCTIONS

8220503

1. Disconnect battery cable. Drain and remove radiator. Remove fan (discard support ring), and belts.
2. Remove AIP. Discard hose, and rotate adjusting (see drawing) 180° for repositioning when re-installing.
3. Remove alternator. Discard bracket and adjust arm.
4. Re-position the air injection pump (A.I.P.) air muffler on the existing air injection rail rear support pedestal. Location: Extreme right hand rear cylinder head stud.
5. Using compressor mount and drawing as a guide, remove necessary bolts from engine. Holding compressor mount in approximate position will help identify bolts to be removed.
6. Loosely install front compressor mount (7223041) to front of engine as shown in drawing.
7. Loosely install rear compressor brace (7223047) to engine. Do not secure at this time.
8. Install compressor/clutch assembly to front and rear compressor mounts. Note the installation of compressor support (7223042) and alternator bracket (7223050). Align compressor clutch to crankshaft and secure front and rear compressor mounts uniformly and securely. Check drawing for spacers and hardware required.
9. Install rear alternator bracket (7223050), mount spacers, and alternator to rear compressor trunions. Follow drawing for proper spacers, hardware and positioning. Do not secure at this time.
10. Remove thermostat housing and insert thermostat spacer (7225028) and gaskets (7225027) as shown in drawing. Replace thermostat housing, using hardware indicated.
11. Install A.I.P. to vehicle (retaining original adjustment bracket) before replacing water pump pulley. With pulley mounted it is not possible to fit nut on adjusting bracket stud.
12. Install alternator arm (7223044) as required.
13. Install fan spacer (7225029) and fan (0963986) per. drawing.
14. Install belts per belt wrap diagram. Check tension and secure all bolts.
15. Replace and refill radiator.
16. Connect battery cable.

## PARTS LIST

7223041 - Compressor Mount, MG 102-1  
7223042 - Compressor Support (Rear), MG 102-2  
7223044 - Alternator Adjusting Arm, MG 102-4  
7223045 - AIP Muffler Bracket, MG 102-5  
7223047 - Compressor Brace (Rear), MG 102-7  
7223050 - Alternator Bracket, MG 102-10 (2)  
7225027 - Thermostat Gasket, MG 103-7 (2)  
7225028 - Thermostat Spacer, MG 103-8  
7225029 - Fan Spacer, MG 103-9  
1000422 - AIP Hose, 3/4" x 18 (VH-6)  
0412012 - Clamps, #12 (2)  
5000008 - Mount Spacer, 1/4 (2)  
5000016 - Mount Spacer, 1/2 (2)  
5002028 - Mount Spacer, 7/8  
0119904 - Compressor Belt, Dayco #15445 (119-121)  
0119970 - Alternator Belt, Dayco #15231

## BOLT LIST

(2) 1/4 x 3/4 NC Bolt  
(4) 1/4 x 2-1/2 NF Bolt  
(3) 5/16 x 2-1/2 NC Bolt  
(2) 5/16 x 3/4 NF Bolt  
(2) 5/16 x 1 NF Bolt  
(1) 5/16 x 1 NC Bolt  
(1) 5/16 x 1-1/2 NF Bolt  
(1) 5/16 x 2 NF Bolt  
(1) 3/8 x 1-1/4 NC Bolt  
(2) 3/8 x 1-1/2 NC Bolt  
(2) 3/8 x 1-3/4 NC Bolt  
(1) 3/8 x 2-1/4 NC Bolt  
(6) 1/4 Lockwasher  
(4) 1/4 Flatwasher  
(8) 5/16 Lockwasher  
(1) 5/16 Flatwasher  
(6) 3/8 Lockwasher  
(2) 1/4 NC Hex Nut  
(3) 5/16 NF Hex Nut  
(6) 3/8 NC Hex Nut

Sankyo (508) compressor  
with 5-1/4" clutch

# INSTALLATION INSTRUCTIONS

## IMPORTANT INFORMATION

IN ORDER TO CONDITION THE CLUTCH FOR PROPER OPERATION THE CLUTCH MUST BE CYCLED AT LEAST SIX (6) TIMES AT APPROXIMATELY 1000 ENGINE R.P.M.

### I PREPARATION OF THE VEHICLE

1. Disconnect the battery. Remove the glove box and latch, and retain for later installation. Remove forward console complete with radio. Console and radio may be reinstalled as a final interior step.
2. Remove and discard the passenger under dash panel and map pocket from the kick panel. Pry off chrome strip on top edge. Cut off approximately 3" from top of pocket and re-install chrome strip. Retain map pocket and refit when completing interior. Also remove and discard the two (2) center fresh air hoses, and using the 2-1/2" plugs supplied, seal the holes as shown.



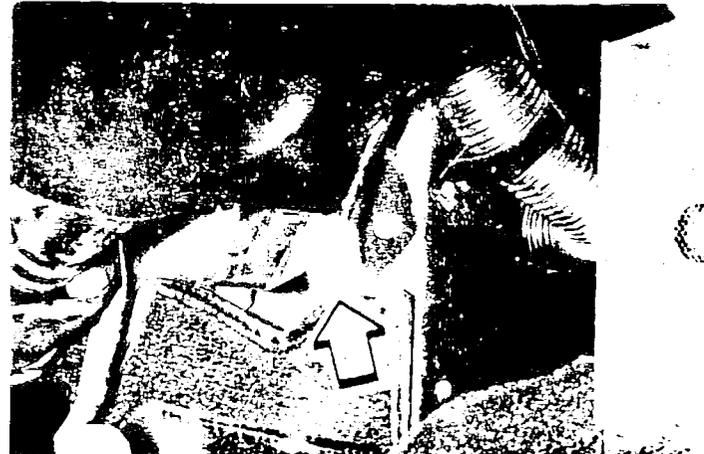
3. Secure the defroster hose to the passenger's defrost with duct tape.



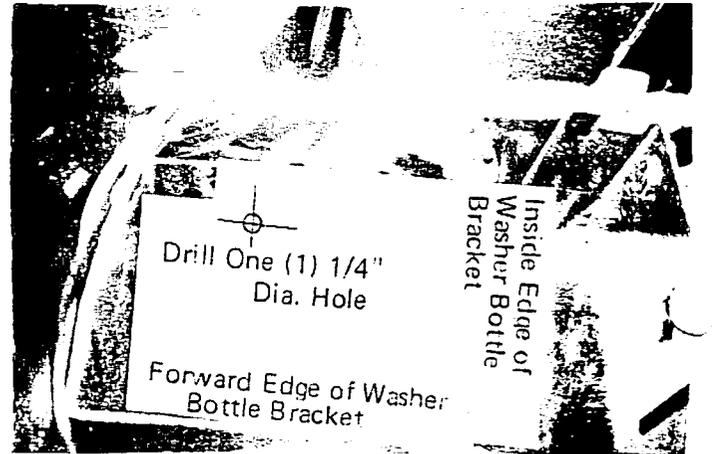
4. Remove and discard the rubber plug, as shown.



5. Gently bend the fresh air floor dump lever as far forward as possible.



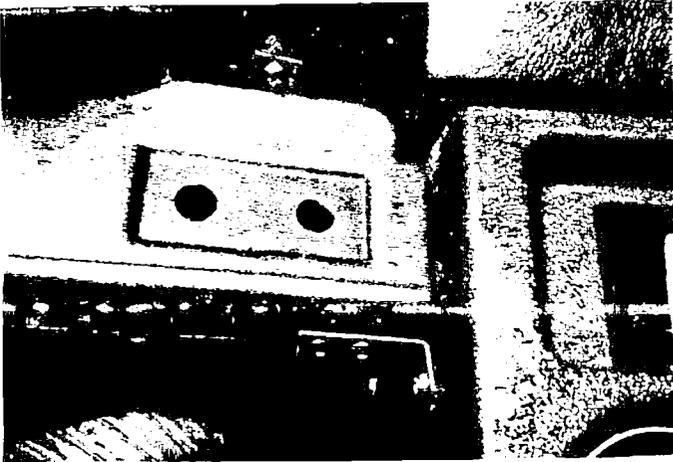
6. Remove the windshield washer bottle from its bracket, and using the template supplied, mark and drill a 1/4" hole.



## II EVAPORATOR INSTALLATION

1. Hold the driver's plenum up to the dash in the exact mounting location and secure the top and bottom bracket to the dash and the console using one (1) #8 x 1/2" PTH screw each.

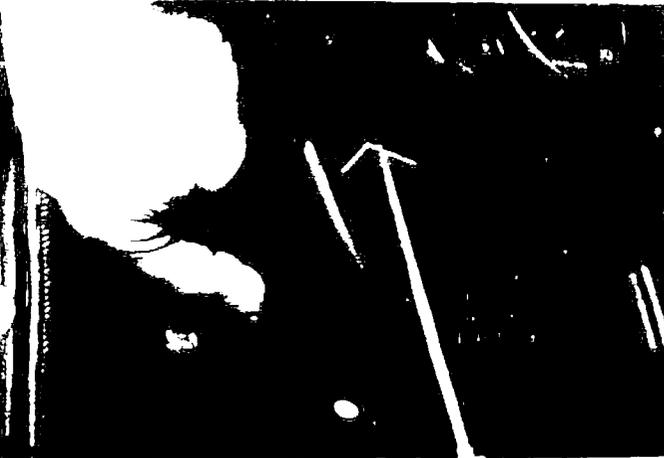
NOTE: BE CERTAIN THE TOP SCREW GOES INTO THE METAL LIP IN THE DASH.



2. Using a ballpoint pen or pencil, lightly mark the dash as shown.

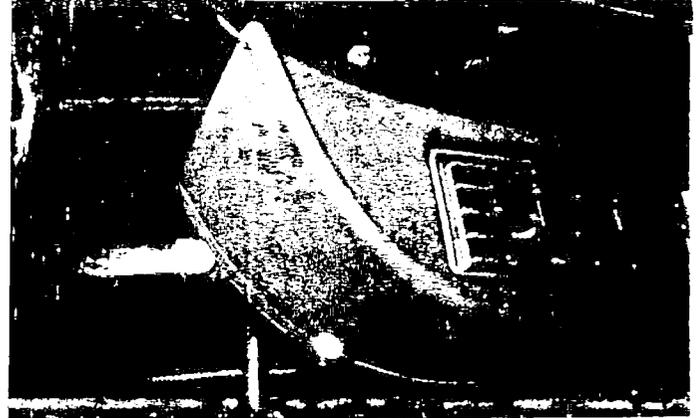


3. Gently slide the end bracket out from under the dash and align the plenum with the pen line previously marked on the dash. Use a punch to mark the hole location, as shown.



4. Drill one (1) 3/16" hole in the dash and slide the bracket over the top edge of the dash lip. Secure the plenum using one (1) #8 x 1/2" PTH screw, as shown.

NOTE: TIGHTEN THE SCREW ONLY ENOUGH TO PROVIDE A SNUG FIT.



5. Route the thermostat cap tube and the wiring behind the console and over to the passenger's floorboard.

6. Fasten the suction hose and the liquid hose to the evaporator fittings as shown. Wrap all exposed metal on the suction hose with prestite tape.



POSITION HOSES AS SHOWN FOR PROPER INSTALLATION

7. Remove glove box door for ease of access to evaporator. Lay evaporator assembly on the passenger's floorboard and route the hose and motor wires over the top of the unit and out the glove box opening.



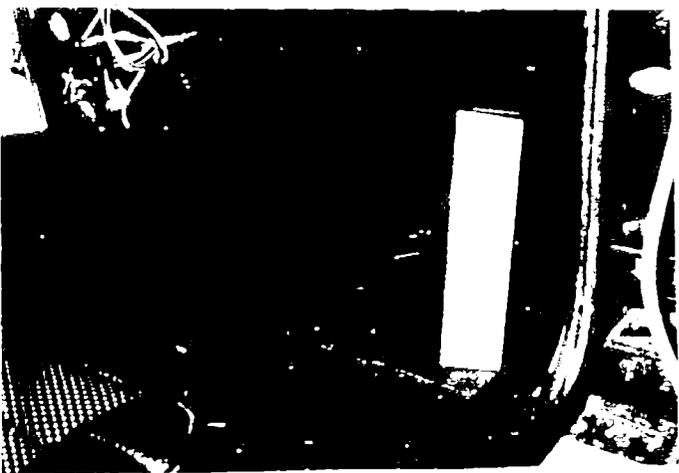
8. Connect the motor tri-plug to the wire harness and insert the cap tube into the coil at least 3". Once capillary tube is inserted in evaporator, use duct tape to secure tube to evaporator case. This will prevent tube from pulling out as evaporator is positioned. Connect the white/green wire to radio power lead in the console.



**NOTE: A BOARD 10" LONG IS HELPFUL FOR EVAPORATOR INSTALLATION IN STEPS 9-11.**

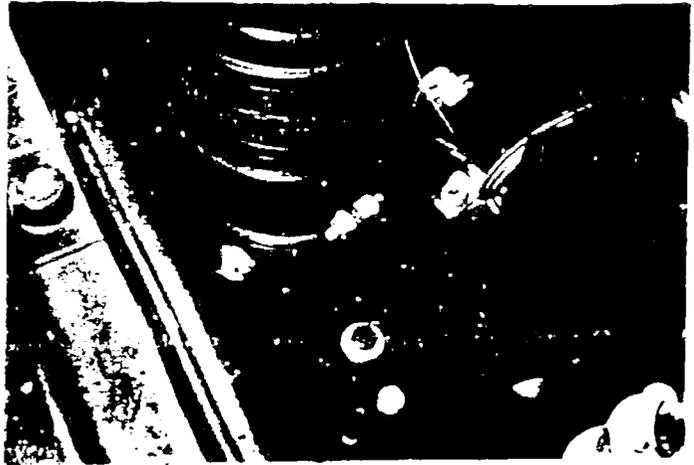
9. Loosen the glove box hinge screws. Lift the evaporator up and install the rear evaporator mount by loosely securing bolt. Slide the two (2) front brackets between the glove box hinges and the dash. Using the 10" board, hold the unit in place.

**NOTE: BE CERTAIN THE REFRIGERANT HOSES ARE NOT BEING CAUGHT BETWEEN THE BOTTOM OF THE WATER BOX AND THE TOP OF THE UNIT.**



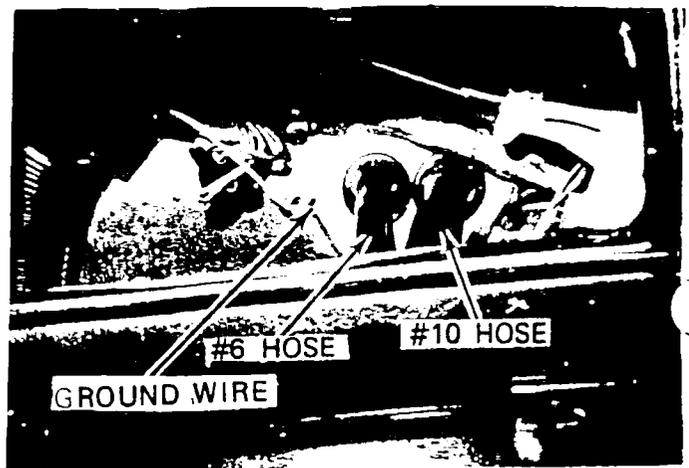
10. Pull the unit as far towards the dash as possible and tighten the glove box hinge screws.

11. Align the rear evaporator bracket with the hole previously located by template and drilled in the firewall and secure the evaporator using one (1) 1/4-20 x 1" bolt, flatwasher and 1/4 - 20 keps nut.



12. Install the rubber grommets into firewall plate. Using two (2) #10 x 5/8" PTH screws and the evaporator motor ground wire, secure the firewall cover plate over the opening in the firewall, as shown. Install the grommets and route the suction hose out the outer hole and the liquid line and wiring out the remaining hole.

**NOTE: LUBRICATING THE GROMMETS AND THE HOSES WITH SILICONE SPRAY WILL PREVENT THE GROMMETS FROM PULLING OUT DURING INSTALLATION.**

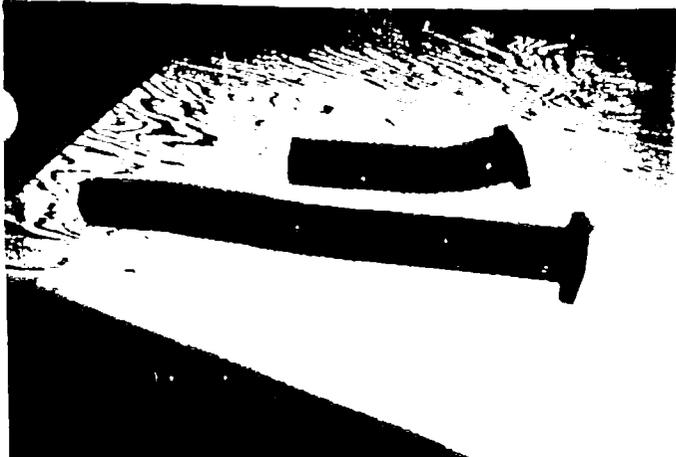


13. Route the 2-1/2" x 16" hose behind the console as shown and connect to the hose adapter on the case. Fasten the hose to the case adapter using one (1) #8x1/2" PTH screw.



14. Insert the 2-1/2" hose into the driver's plenum at least 1/2".

15. Fasten the two (2) 2" hoses to the rectangular duct adapter using two (2) #8 x 1/2" PTH screws, as shown.



16. Attach the long 2" hose with the rectangular dapter to the outside 2" hose adapter on the top of the evaporator. Attach the short 2" hose to the inside hose adapter.



17. Secure the rectangular duct adapter with the long hose to the driver's center duct. Secure the rectangular duct adapter with the short hose to the passenger's center duct. Refer to detail.

18. Reinstall the glove box using the original screws and latch.

19. Drill a 9/16" hole through the right hand side of the transmission tunnel located at the molded circle in the rubber pad. Drill a 9/16" hole approximately as shown in the photo for the right hand. Caution: Care must be taken when drilling holes for the drain hose because the starter motor is located behind the area of the left hand hole and the tire is near the right hand hole location.



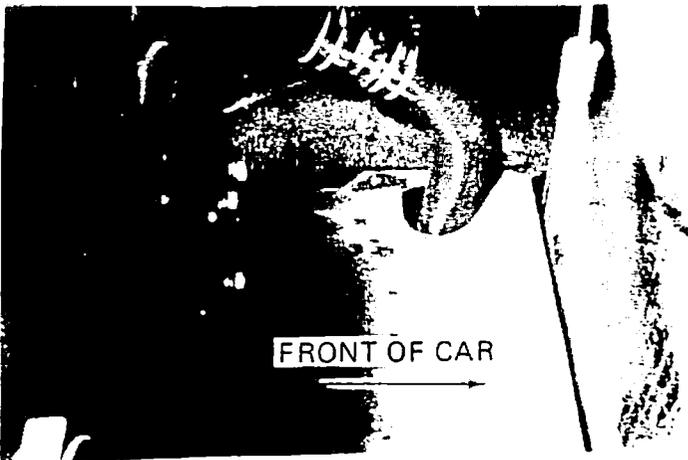
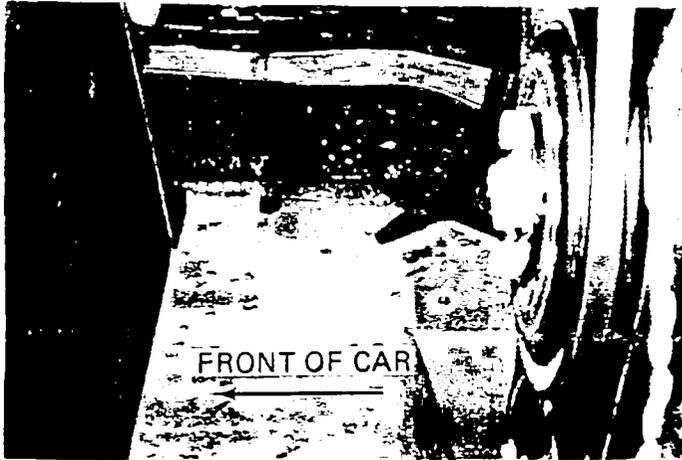
20. Connect the drain hoses to the drain ports of evaporator case using two (2) clamps. Install elbow into drain hose on the wheel well side, as shown.

21. Reinstall radio in console.



### III INSTALLATION OF CONDENSER & HOSE ROUTING

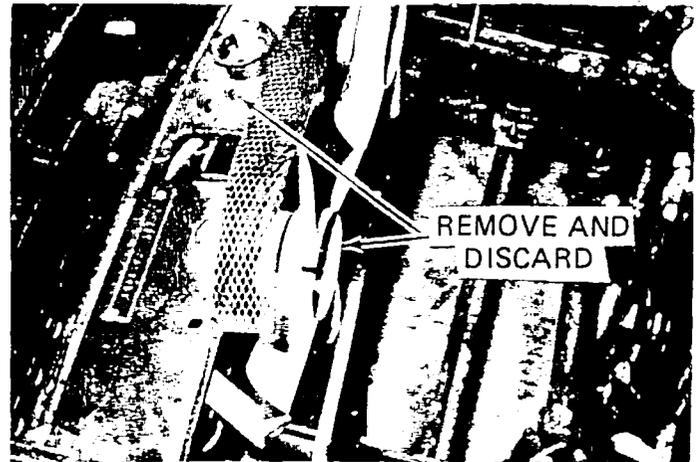
1. Drain the coolant from the radiator.
2. Remove and discard the four (4) nuts, washers, screw and shroud.



3. Remove the upper and lower radiator hoses from the radiator and the four (4) bolts securing the radiator to the cowl. Retain the four (4) flat washers and discard the bolts.

4. Disconnect the overflow hose and the fan sensor wiring from the radiator. Remove the radiator.

- A. Disconnect, remove and discard the driver's condenser fan, motor bracket and hardware.

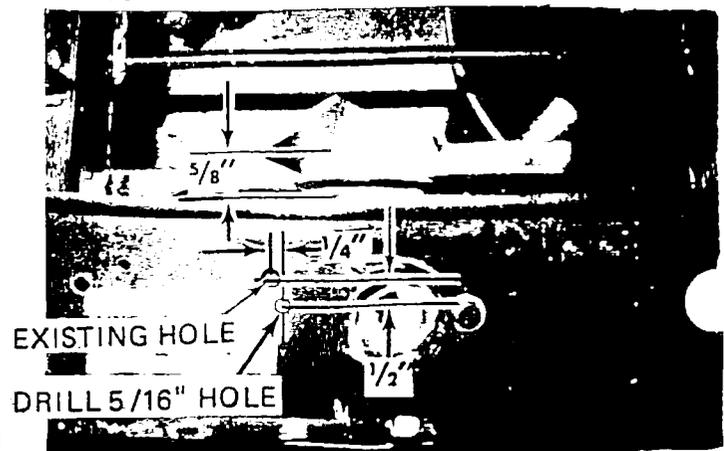


- B. Remove the two (2) bolts securing the passenger's fan bracket and motor.

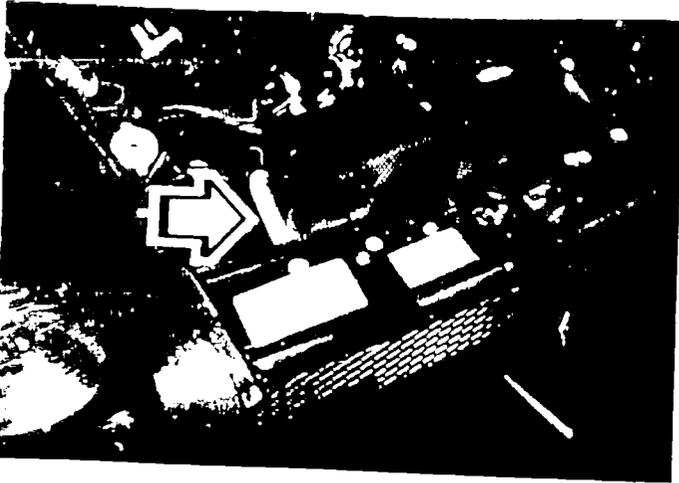
- C. Remove and discard the hood latch bolt and drill through the weld nut as shown enlarging the hole to 5/16".



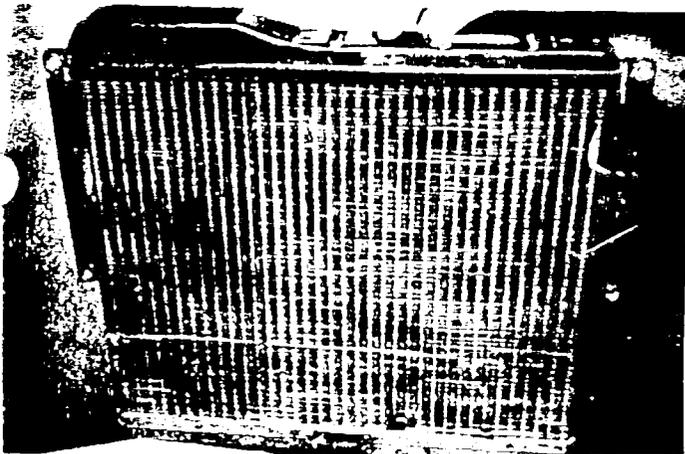
- D. Using the dimensions in the photo, locate and drill one 5/16" hole. Secure the passenger's fan to the cowl using one (1) original bolt and washer and one (1) 1/4" x 1-1/2" NF bolt, lockwasher, flat washer and a 1/2" spacer between the drilled out weld nut and fan bracket. Loosen the fan motor strap and adjust the fan so that the fan blade is 5/8" from the front cowl.



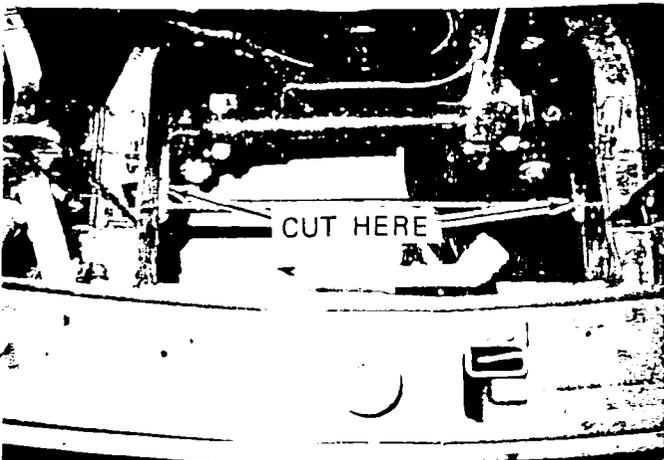
5. Remove and discard the right radiator support strap pictured below. Retain the bolt, washers and nut.



6. Drill out the four (4) weld nuts on the radiator support flanges using a 3/8" drill, as shown.



7. Cut the two front stud plates (previously used to hold the lower shroud) off as close to the frame members as possible.



8. Use seven (7) #10x1/2" HH screws to attach the brackets to the condenser as shown.



9. Secure the #6 x 47" length of #6 refrigerant hose to the bottom fitting of the condenser using a gear clamp.

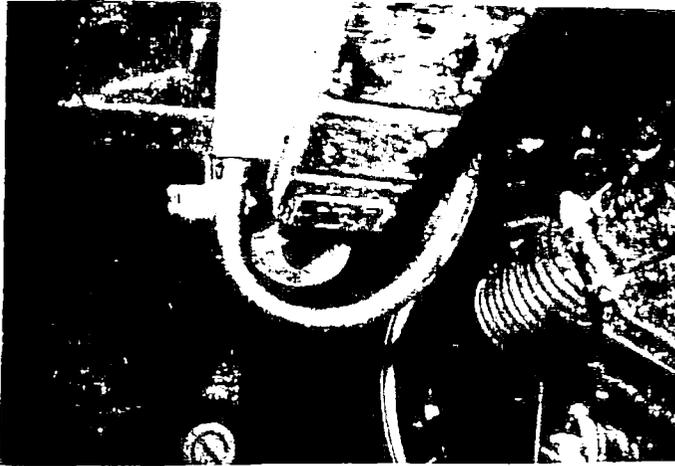
10. Position the fan shroud on the radiator as shown in illustration. Mark and drill the four (4) mounting holes. Secure the fan shroud to the radiator using four (4) #10 x 5/8" HWH screws and flatwashers.



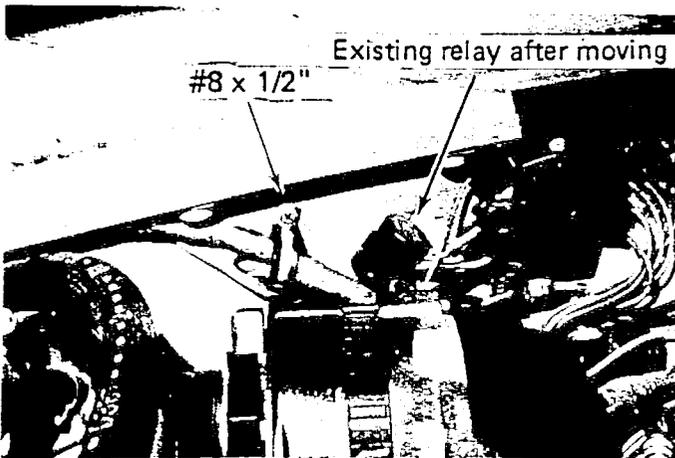
11. Carefully place the radiator assembly in the vehicle, rearward of the support cowlings as shown. Feed the liquid line down between the brace members and insert the condenser in the space immediately forward of the cowlings supports.



12. Route the liquid line as shown.



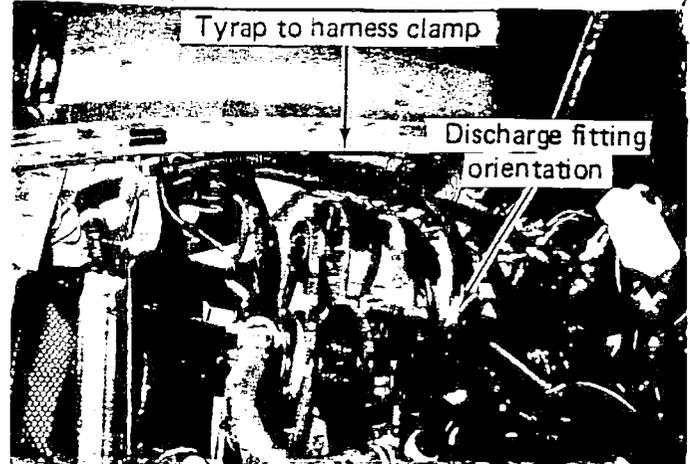
13. Relocate the existing relay to the rear lug and secure the wire harness to the fenderwell as shown using one (1) clamp and one (1) #8 x 1/2" PPH screw.



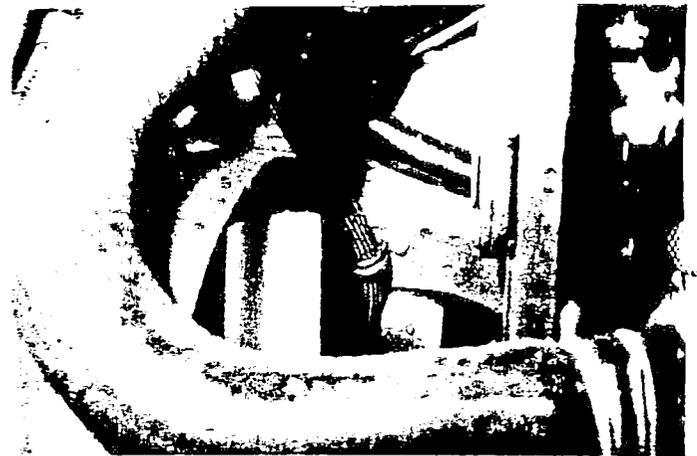
14. Route the #8 and #6 hoses between the radiator overflow bottle and fenderwell as shown.



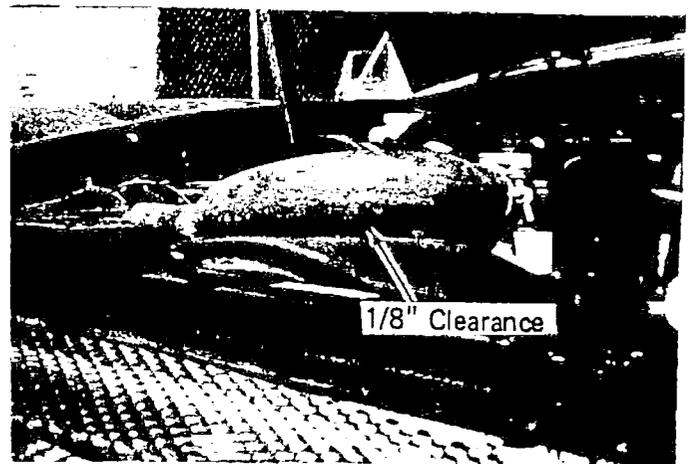
15. Oil the 90° #8 fitting and secure to the compressor. Tie wrap the discharge and liquid hose to the wire harness clamp on the fenderwell as shown. Ensure the suction and discharge hoses do not foul the hood stay, when the hood is lowered.



16. Secure the #6 hose to the vehicle frame using one (1) #6 hose clamp and (1) #10 x 5/8" HH self tapping screw.



17. Resecure the top and bottom radiator hoses, fan sensor wiring, and overflow hose to the radiator. Be certain that there is at least 1/8" clearance between top radiator hose and fan shroud. To increase clearance rotate hose clockwise around top radiator neck before tightening clamp.



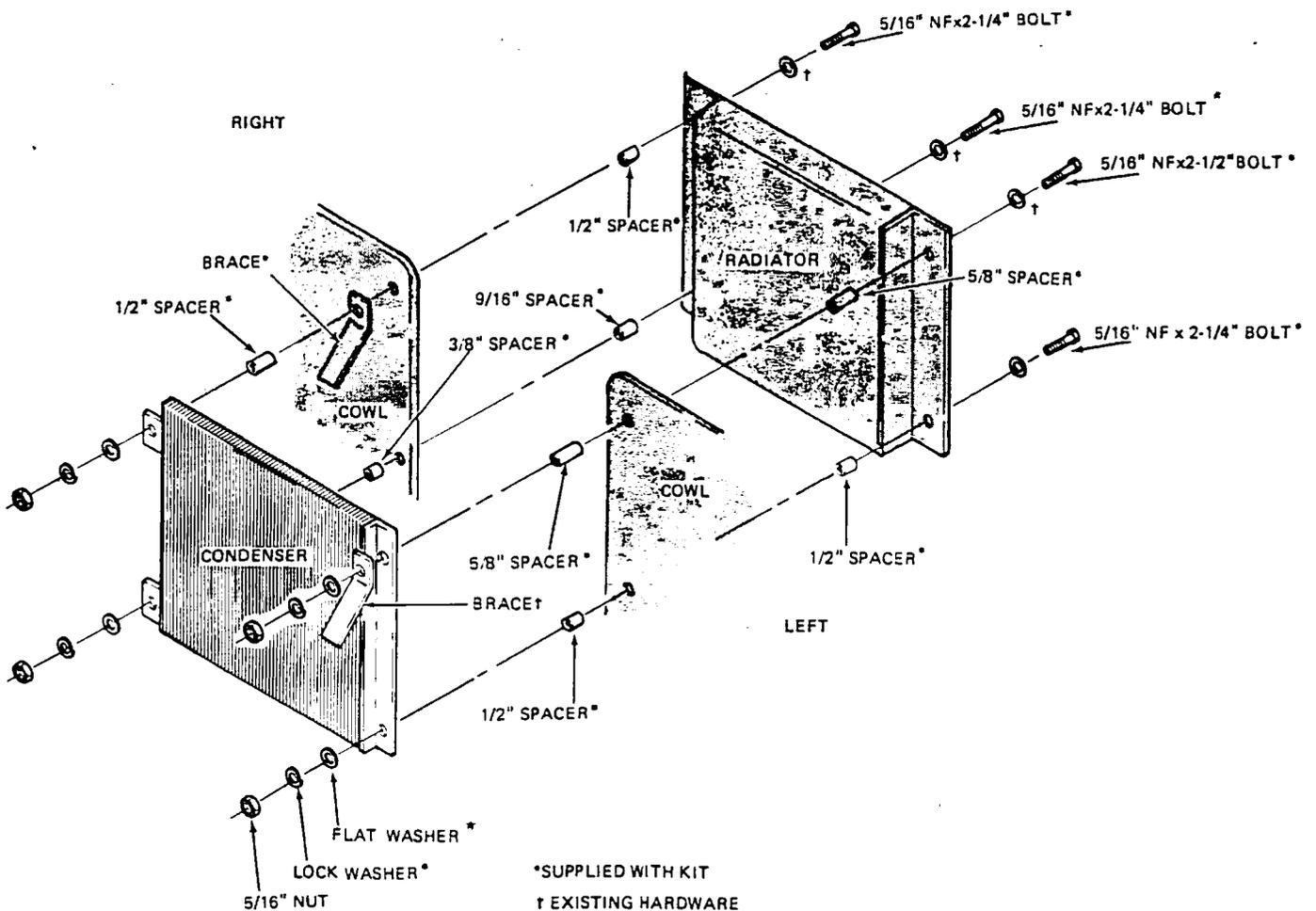
15. Route the open end of the #8 refrigerant hose through the opening in the cowl with the vehicle wire harness. Fasten it to the condenser fitting using one (1) gear clamp as shown.



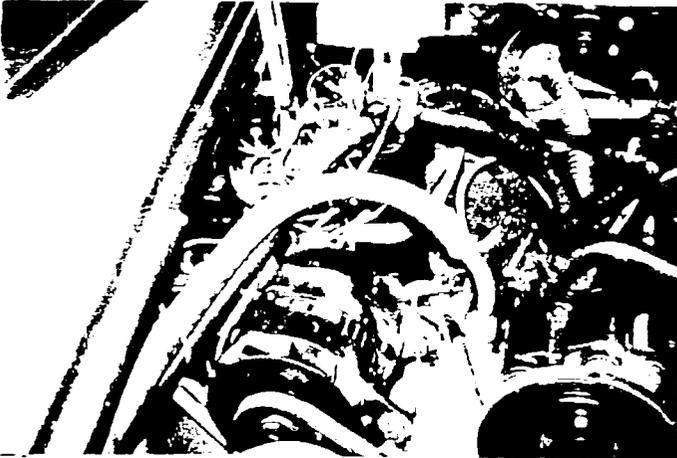
19. Using the bolt, washers and nut removed in Step 6, install the radiator support bracket supplied in the kit. See Illustration.

20. Secure the radiator and condenser to the cowl using the illustration as a guide.

**NOTE: SPACERS MUST BE INSTALLED IN THE CORRECT SEQUENCE FOR PROPER ALIGNMENT.**



21. Connect the condenser fan wire harness to the relay as indicated in wiring diagram. Secure the pressure switches to the receiver-drier and connect the evaporator wiring to the 1331002 relay. Refer to 22. Insert the receiver-drier assembly into the engine compartment and mark the mounting holes using the bracket as a guide. Drill two (2) 1/8" holes and secure the assembly into place using two (2) #10 x 5/8" HH screws. Ensure there is adequate clearance between the receiver-drier mounting plate and the ignition coil. If this is not possible, remove the front bolt from the coil mounting bracket and rotate coil to increase clearance. Drill and install coil mounting bolt.



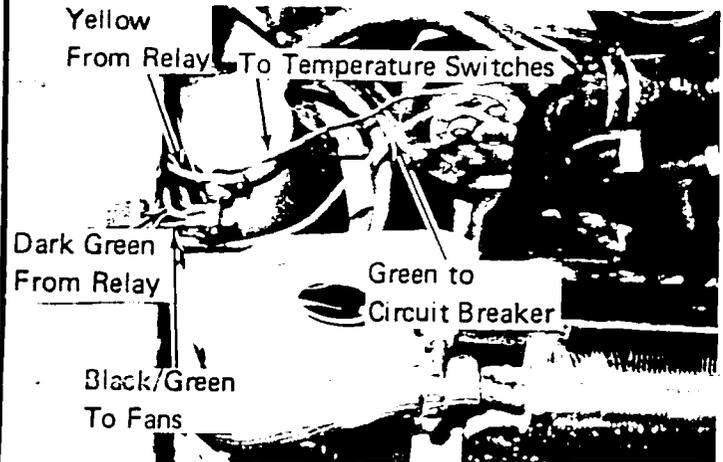
23. Route the #10 refrigerant hose to the fitting as shown. Oil the #10 fitting and loosely attach the suction fitting to the compressor. Tighten fitting to compressor.

24. Oil fittings and hoses and secure to the receiver-drier using gear clamps. **NOTE: BE CERTAIN THE #6 HOSE FROM THE CONDENSER IS ATTACHED TO THE FITTING MARKED "IN" ON THE RECEIVER-DRIER.**

25. Begin evacuation of system.

26. Locate the circuit breaker for the vehicles engine cooling fan. It will be in the area of the fuse block on the passenger's fenderwell. Disconnect the green wire which feeds the radiator temperature switch and connect it to the long green/white male spade wire from the evaporator relay harness. Connect the red wire from relay to the circuit breaker. Route the white power lead from the relay to the fuse block. Piggyback onto the white/maroon stripped wire. (Refer to diagram for proper connection.)

27. Cut the black/green stripped wire 1 1/2" from the fenderwell. Route the 'dark green' wire (with electro lock connector) between the overflow bottle and fenderwell and fasten to the end of the black/green wire going to the condenser cooling fan.



28. Route the yellow wire (with electro connector) between overflow bottle and fender and connect to the end of the black/green wire going to the radiator temperature switch.

29. Evacuate and charge system.

30. Reconnect the battery and check the electrical system. The electric fan is now controlled by the condenser fan relay. The relay, in turn, is controlled either by the radiator temperature switch or the low pressure cut in switch. Power to the two (2) switches are from the ignition circuit, so the relay can be activated only when the ignition is on. This will turn off the fan when the engine is off. The condenser fan circuit is still protected by original circuit breaker.

# WIRING DIAGRAM

