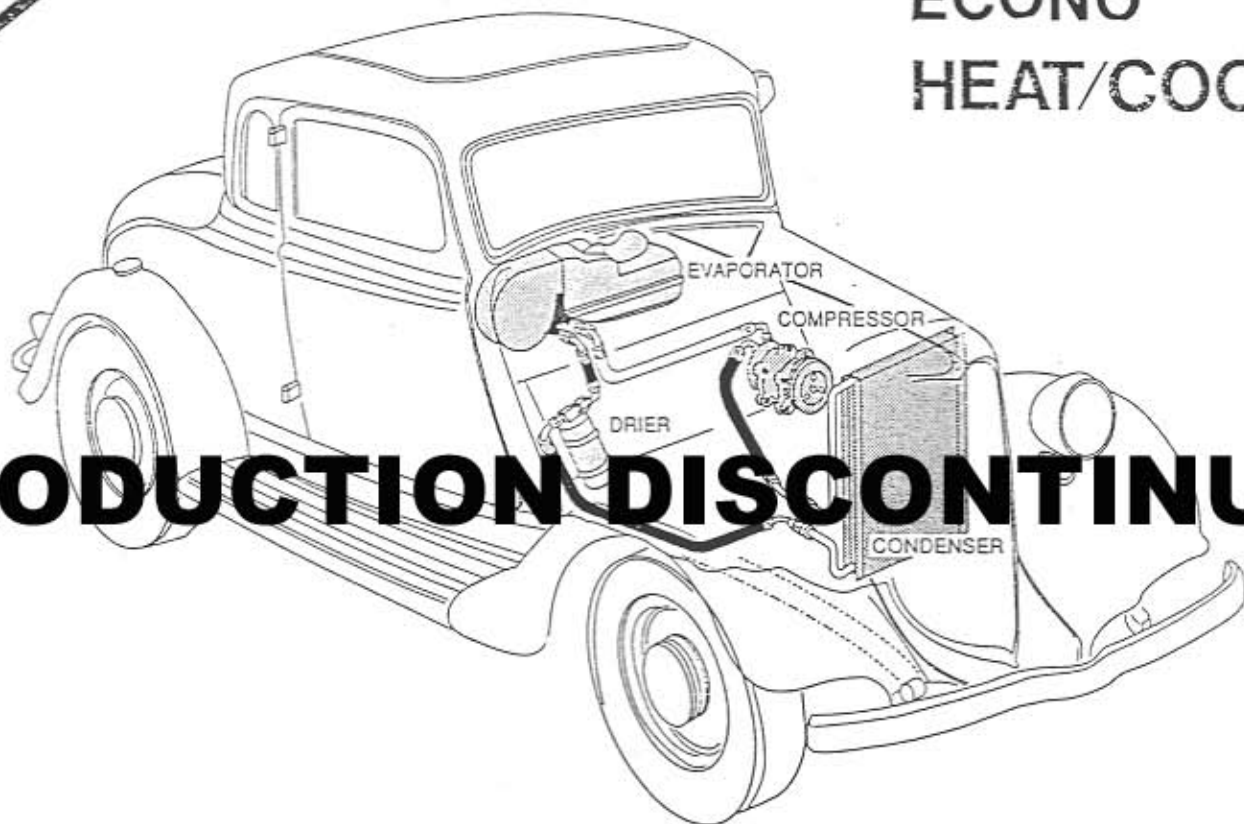


10305 IH 35 N-SAN ANTONIO-TEXAS 78233-PH 210 654-7171

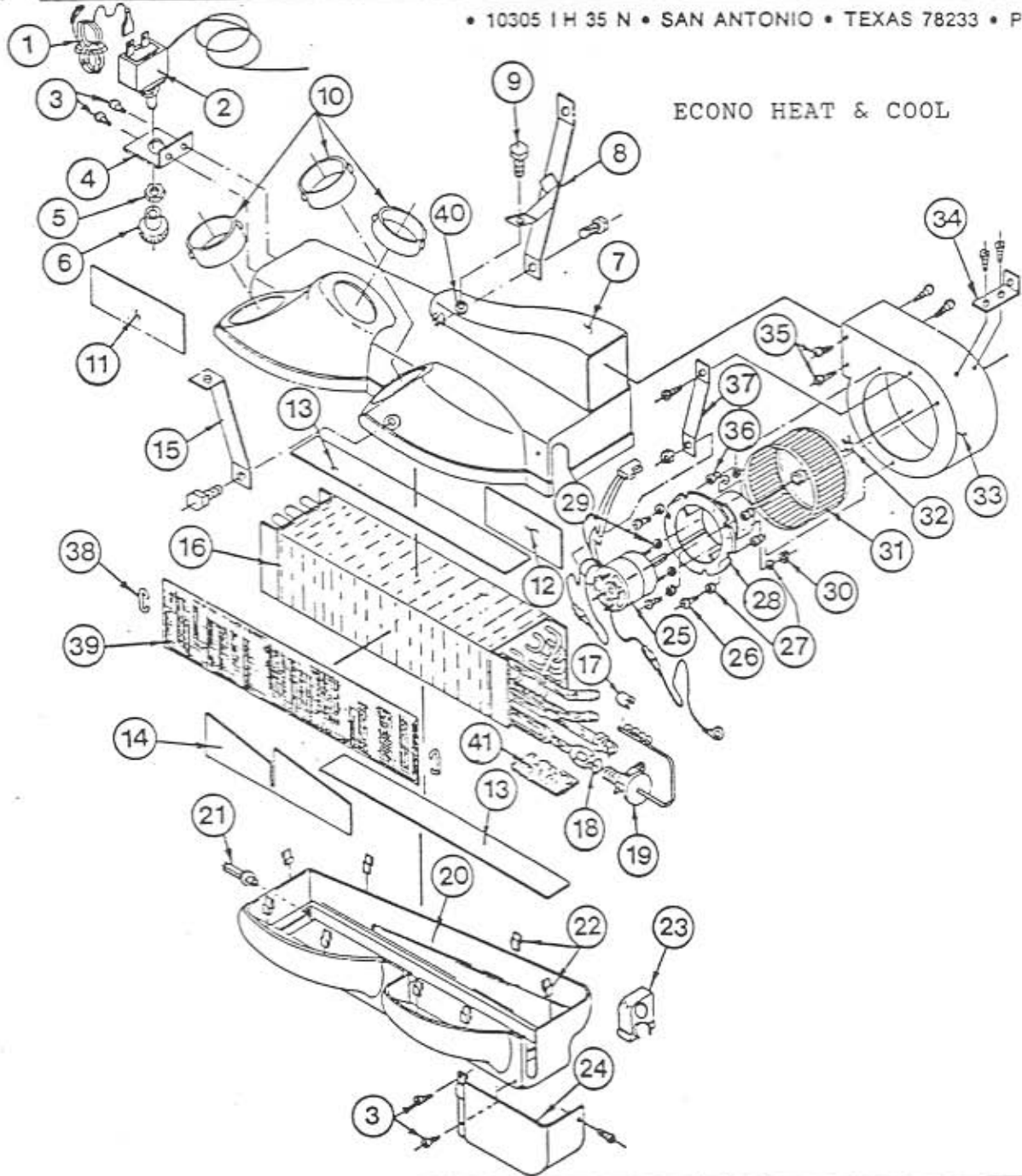
INSTALLATION INSTRUCTIONS

ECONO HEAT/COOL



REFRIGERANT CAPACITIES: R-134a 1.8 lbs.
R-12 2.0 lbs.

LUBRICANT CAPACITIES: NEW COMPRESSOR-NO ADDITIONAL OIL NEEDED
USED COMPRESSOR-CONSULT VINTAGE AIR



NO	QTY	PN	DESCRIPTION	NO	QTY	PN	DESCRIPTION	NO	QTY	PN	DESCRIPTION
1	1	23135YUM	COMPRESSOR LEADS	15	1	64135YFE	BRKT EYAP CASE F	29	2	18120YUB	RUBBER WASHER
2	1	11013VUE	THERMOSTAT	16	1	55210YUE	EYAP COIL	30	3	18251YUB	10/32 MACHINE NUT
3	5	18233YUB	PAN HD SCREW	17	1	65530YUE	EXP VALVE CLAMP	31	1	13335YUE	BLOWER WHEEL(CCN824)
4	1	64103YUB	ADJ.THERM.BRKT	18	1	33858YUF	#8 O'RING	32	1	65177YUE	BLOWER WHEEL CLAMPS
5	1	18157YUB	SHAFT NUT	19	1	08126YUE	EXP VALVE O'RING	33	1	62334YUE	BLOWER HOUSING(847-2)
6	1	49457YUI	CONTROL KNOB	20	1	62110YUE	ECONO EYAP CASE BOT	34	1	63136VFE	BRACKET
7	1	62100YUE	ECONO EYAP CASE TOP	21	1	65592YUE	1/2 STD DRAIN PLUG	35	6	18235YUB	8x1/2 PAN HD SCREW
8	1	64850YUB	BRKT EYAP CASE TOP	22	8	65980YUE	*S*CLIPS	36	4	18101YUB	10/24 WEELNUT
9	3	18287YUB	1/4 x 1/2 CORSE BL	23	1	62199YUE	HEAT & FITTING COVER	37	1	64125YUE	BRACKET
10	3	62422YUE	2-1/2 HOSE ADAPTER	24	1	62337YUE	BLOWER MOTOR COVER	38	2	65520YUE	HOG RING
11	1	21625YUP	ECONO/STD PAD F.L.	25	1	40150YUG	3SPEED S/SHAFT MOTOR	39	1	65600YUP	EYAP SCREEN
12	1	21650YUP	ECONO/STD PAD F.R.	26	4	18253YUB	10/24x1 MACH SCREW	40	3	18100YUB	1/4 JACNUTS
13	2	21675YUP	UNIVERSAL PAD T./B.	27	5	18123YUB	3/16 FLATWASHER	41	10	49003YUP	PRESTITAPE
14	1	21600YUP	ECONO CASE PAD STM F.	28	1	62333YUE	MOTOR MOUNT (836)				

INSTALLATION INSTRUCTIONS

ECONO HEAT & COOL

The Vintage Air "ECONO" Heat & Cool System was designed especially for your street rod. It will fit neatly behind the dash of your car out of sight. Read the directions completely and remove all parts from box, to identify each of them with packing list.

The installation of this unit varies according to the body manufacturer or modifications to original body. The cowl vent may remain operational. (see step 2 below) Take your time, double check before drilling or cutting.

THE EVAPORATOR WAS DESIGNED TO FIT ON THE PASSENGER SIDE.

1. Before beginning remove cowl vent handle and glove box to ease installation. If the dash is easily removable remove it now. Check for and fill in any holes in the firewall and floor. Insulate and seal firewall, floor, door panels and head liner to reduce the amount of heat entering into the car.
2. The evaporator should fit with blower wheel toward firewall. Duct hose outlets face upper cavity and to drivers side. Drain outlet points to driver's side and is always on bottom (down) side of evaporator. You may reverse the evaporator or change the location of the unit, however, the evaporator drain must remain on the bottom of the unit. Figure 1. If you need to relocate the drain, contact Vintage Air for instructions. □

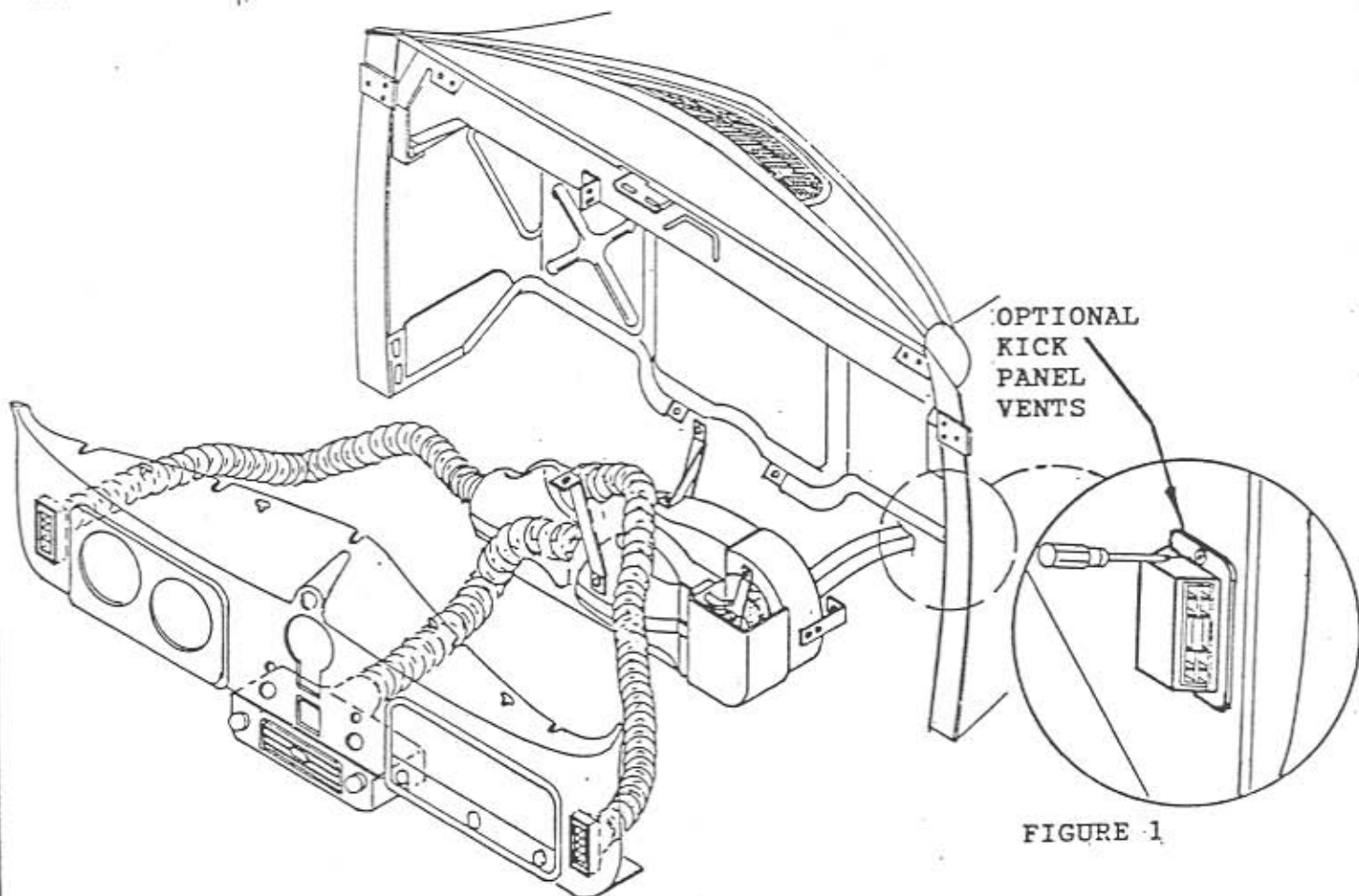


FIGURE 1

3. Brackets are furnished to mount the evaporator case using the cowl vent. (Attach to firewall as shown). Figure 2

4. The cowl vent handle will work if moved to the side. You can also convert to electric or cable operation. If you close off the cowl vent the unit will fit higher in the car. NOTE: To mount unit higher, simply determine the new location, mark and redrill the bracket to fit as described in Step 6. Figure 2

5. When fitting evaporator:

- A. Remove blower motor cover.
- B. Attach front and rear brackets to the evaporator using 1/4 X 20 X 1/2" bolts.
- C. Fit refrigeration fittings with hoses for proper clearance inside the car. (Refer to hose routing instructions.)

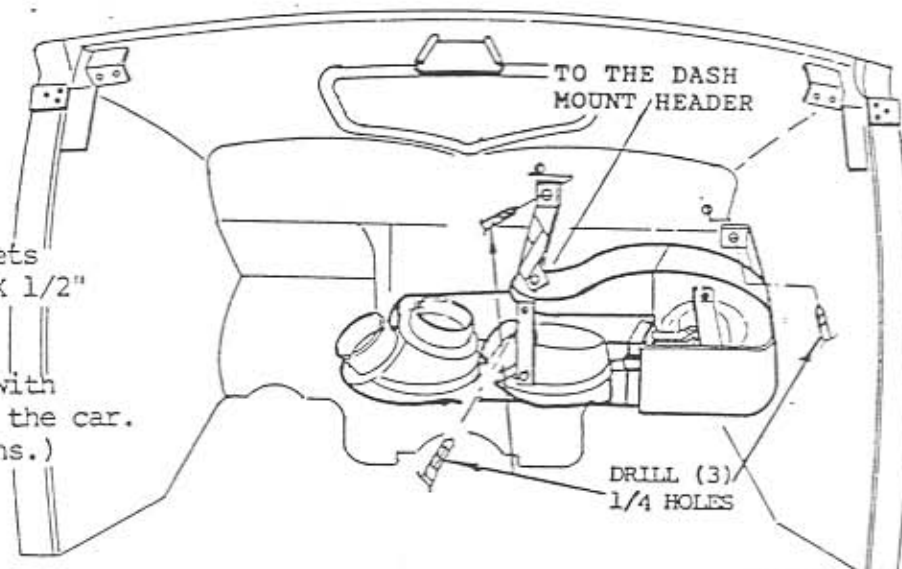


FIGURE 2

6. Have a helper hold the unit up as high as possible, with blower housing against passenger side kick panel. Locate the bracket on the top right side of the blower housing. Drill thru the 1/4" hole in the bracket to mark the firewall. Check to see if the location you marked looks ok and will clear obstructions on both sides of the firewall. If so, drill 1/4" hole in the firewall. Attach the evaporator to the firewall by the blower motor bracket with a 1/4 X 20 X 1/2" bolt and nut. Using the rear evaporator bracket as a guide mark and drill thru the 1/4" hole in the bracket. Attach this bracket to the firewall with a 1/4 X 20 X 1/2" bolt. This will locate the evaporator horizontally. Now secure the front-evaporator support strap to the unit with the 1/4 X 20 X 1/2" bolt furnished. This support bracket will attach to the dash mount header. With the unit held in place and level mark thru the 1/4" hole at the top of the bracket to the sheet metal header. Make sure that the spot marked will provide a good mounting location for this bracket. Drill mounting 1/4". Secure the mount strap to the cowl header as shown in Figure 2 with a 1/4" bolt.

NOTE: The vents that are being used should be in place at this time.

7. The duct hose should be put on the evaporator at this point and run to the vents to insure proper clearance.

8. Fit and cut your duct hose to length at this time.

10. Place duct hose that you have cut to length on the evaporator duct hose adapters before you finally install the unit into the car. As Figure 1 shows

11. Install and tighten evaporator fittings with hose attached to the evaporator. Place the evaporator on a work bench and tighten each connection with two wrenches, one on the fitting and one on the counterpart fitting attached to the evaporator. Reinstall evap blower motor cover at this time. As Figure 3 shows.

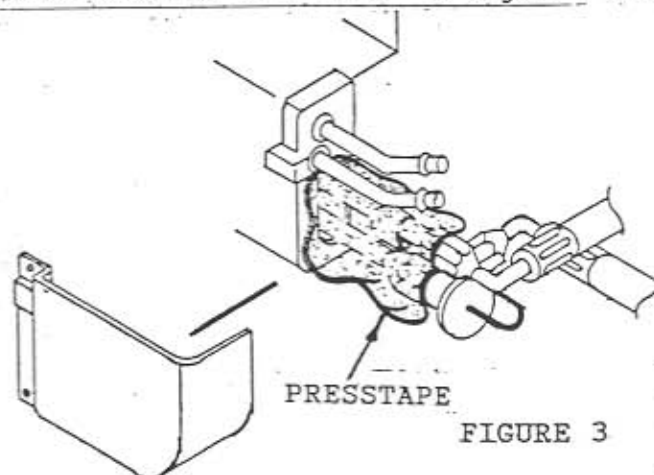


FIGURE 3

12. Check to insure that the thermostat capillary tube is in the coil fully. With the refrigeration hoses and duct hoses on the unit, lift it into place. Make sure that the firewall fittings are accessible with the unit in place. If not, tighten all refrigeration fittings inside the car now while you can reach them. Lift the unit into place and tighten the bracket bolts to secure the evaporator

13. Run refrigeration and hot water lines. (Refer to Hose Routing Instructions.)

WARNING: Fill the engine cooling system with 50% anti-freeze. Failure to do so could damage your system.

14. Leak check your system at this time

It will be easier to correct

a leak if you find it now before the car is back together.

15. With your unit in place, stretch the duct hose tightly to the dash vent and recheck the length. Trim to insure that the hose is pulled tightly with a minimum of kinks or sharp bends in the hose. This will insure maximum air flow.

16. Make electrical and vacuum connection according to the diagrams furnished.

NOTE: The blue 12GA wire with the circuit breaker should be run to power source of at least 12GA wire. Connect molding plug with the (red, yellow, orange) wires to the corresponding plug from the blower motor. The red wire from the blower motor with the black extension and ring terminal must be grounded. The blue and yellow wires from the blower motor must be plugged together. The black clutch wire runs from the thermostat on the unit thru the firewall and to the black wire on the compressor. Be careful to insure that this wire is not pinched or in a position to rub on a sharp edge as it goes thru the firewall. A vacuum accumulator with check valve will help system work under a variety of conditions, including engine off. (Ford Dealer parts)

17. Center outlet: You may use center panel furnished or you can mount the vents in dash. If you use the control panel the top mounting lip should be back $\frac{1}{4}$ " to $\frac{1}{2}$ " back from lower leading edge of dash. Illustration: In Figure 1

18. Reinstall dash and insure that the duct hose is snugly on the dash vent hose adapters.

19. Check operation.

—The switch on the left is the fan switch - controls 3-speed fan motor. Figure 4.

—The switch on the right is the mode selection. Full counter-clockwise position is economy position. Air should come out of dash vents. In the first position, the A/C position, cold air should come out of the dash outlets. The second position is heat. Hot air should come out of the dash vents. The heater valve line should have vacuum.

—The fan speed can be operated in any mode position.

NOTE:

- A. Wrap the suction line and expansion valves according to the hose routing instruction.
- B. If you have the aluminum control panel option refer to the instructions furnished with that kit for operations.

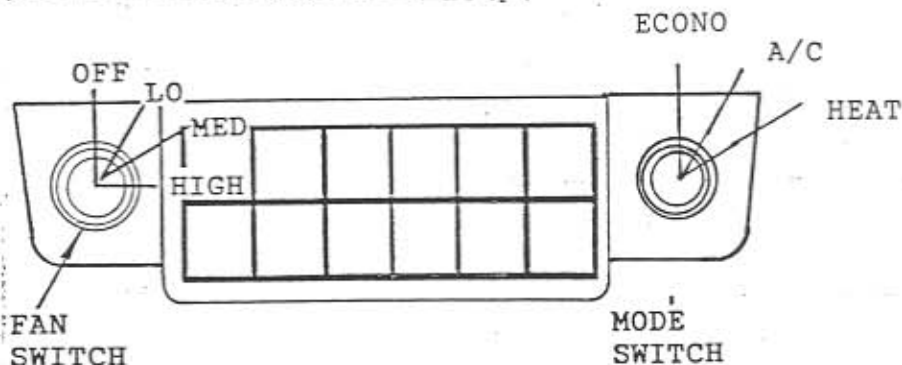


FIGURE 4

REFRIGERATION HOSE ROUTING INSTRUCTIONS

(31300VUD)

Every street rod is a little different depending on the:

- 1) Type of car/engine and location of engine.
- 2) Type of air conditioning equipment used.
- 3) Owners preferences.

There are many other factors that go into making each air conditioner installation different. Usually all of the above decisions are made before any consideration is given to the air conditioner installation. The air conditioner is then installed around everything.

Planning your hose routing:

1. Mount the major components on your car.

a) The compressor.

b) The condenser.

c) Evaporator (NOTE: The evaporator is mounted in place for hose routing, but must be removed and placed on a work bench to tighten the evaporator hose fittings.

Two wrenches must be used to tighten the fittings on the evaporator. One on the fitting and one on the counter part fitting attached to the evaporator.)

NOTES:

a) While you are making these lines, determine how they will be held in place (clamps, brackets, etc), you should run them exactly like they will be when finished before you cut them to length.

b) When the hoses are made, remove them and lube all o-rings and fitting seats with refrigeration oil before final tightening.

c) Have a professional air conditioning technician leak-check and service your air conditioner.

d) It is a good idea to leave the radiator shell off until the system is leak-checked in case resealing is necessary.

2. After all the components are mounted, remove the hose cover from the evaporator unit. Push the 5/16" hose onto fitting (3) and screw it loosely to the expansion valve. Push the 1/2" hose onto fitting (13) and screw it loosely to the large threaded fittings coming out of the evaporator.

3. At this time, try to determine where you want your lines to go thru the firewall.

Move the hoses to that point. Hold the fittings (6) and (14) up to their respective hoses and determine if the hose will conform to the location for the bulkhead fittings (1) and (2) or bulkhead plate.

The 1/2" hose is hard to bend at a sharp angle and the fittings take up a certain amount of space. So before you drill holes in your firewall make sure that you can make the hoses fit what you have planned. The engine compartment appearance is a consideration when choosing this location.

WHEN YOU HAVE DECIDED WHERE YOU WANT TO PLACE YOUR BULKHEAD FITTINGS:

4. Mark these points with a grease pencil and make a template from the inside locating where the holes will be cut. With this template, locate the same points on the outside of the firewall. Mark these points with a grease pencil.

5. With fitting (1) location determined, hold fitting (6) to the drier to determine the best location for the drier that will allow adequate room for the hose and fittings that connect the drier to the bulkhead fitting.

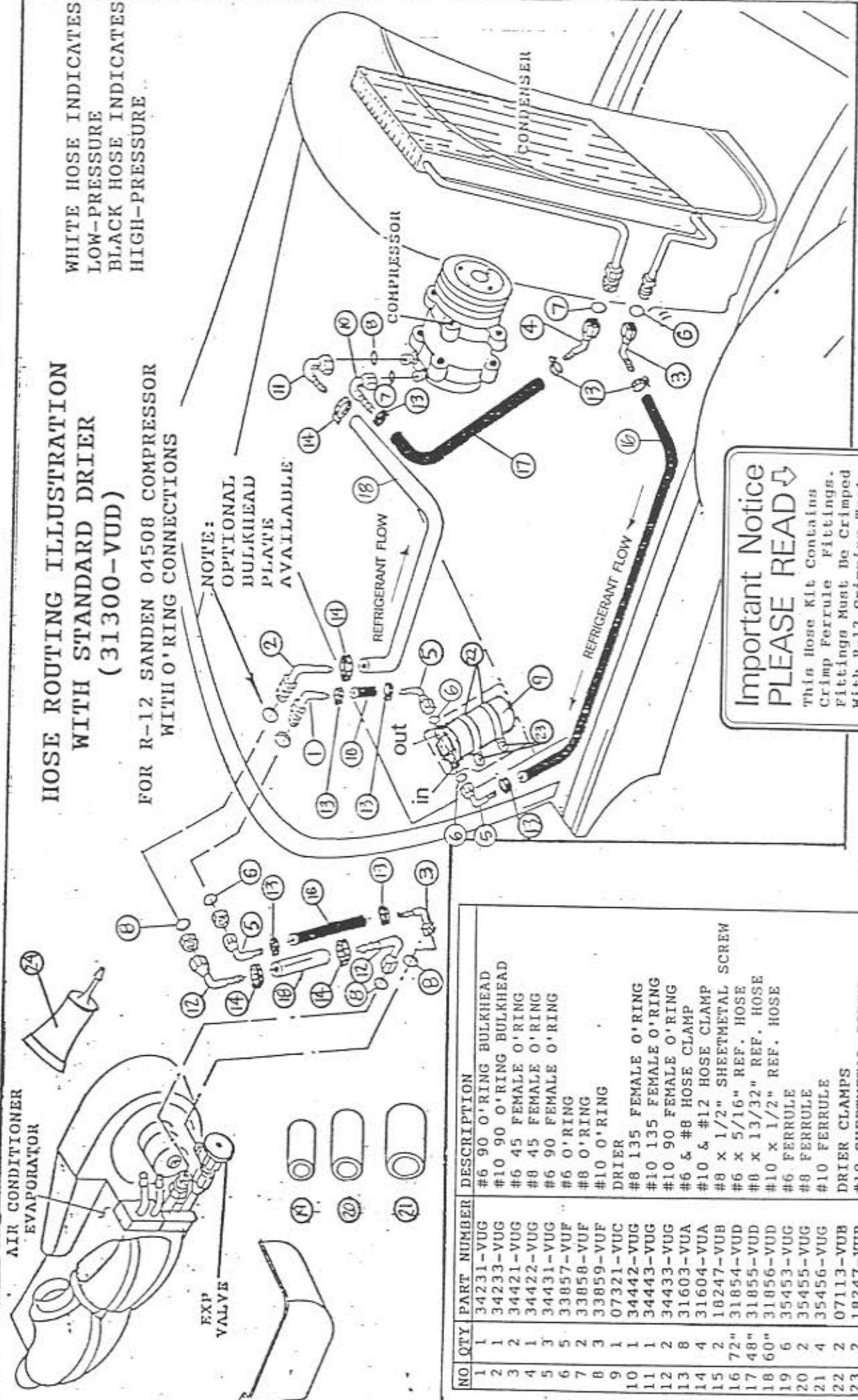
6. Mount the drier. (Keep the drier capped as much as possible, if you must screw the fitting to the drier, tape it closed.)

NOTE: The drier is usually mounted wherever you have room for it. Just remember to mount it in the coolest spot possible and vertically so the sight glass is directly on top. (Not next to the exhaust manifold). Inside the car is okay!

7. If all looks okay, at this point, cut holes for bulkhead fittings and install them.

VANGUARD

• 10305 I.H. 35H. • SAN ANTONIO • TEXAS 78233 • PH 210-654-7171



HOSE ROUTING ILLUSTRATION WITH STANDARD DRIER (31300-VUD)

FOR R-12 SANDEN 04508 COMPRESSOR
WITH O-RING CONNECTIONS

NOTE:
OPTIONAL
BULKHEAD
PLATE
AVAILABLE

WHITE HOSE INDICATES
LOW-PRESSURE
BLACK HOSE INDICATES
HIGH-PRESSURE

**Important Notice
PLEASE READ**

This Hose Kit Contains
Crimp Ferrule Fittings.
Fittings Must Be Crimped
With R-12 Crimping Tool.

AIR CONDITIONER
EVAPORATOR

EXP
VALVE

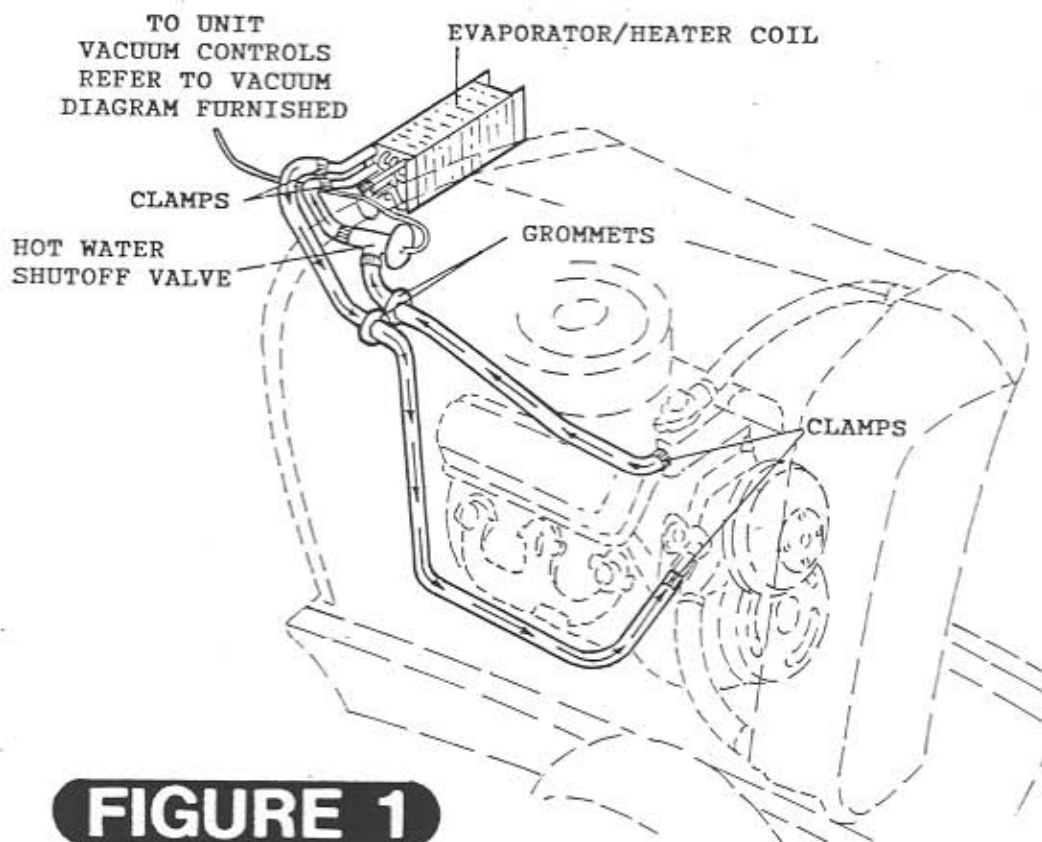
NO	QTY	PART NUMBER	DESCRIPTION
1	1	34231-VUG	#6 90 O-RING BULKHEAD
2	1	34233-VUG	#10 90 O-RING BULKHEAD
3	2	34421-VUG	#6 45 FEMALE O-RING
4	1	34422-VUG	#8 45 FEMALE O-RING
5	3	34431-VUG	#6 90 FEMALE O-RING
6	5	33857-VUF	#6 O-RING
7	2	33858-VUF	#8 O-RING
8	3	33859-VUF	#10 O-RING
9	1	07321-VUC	DRIER
10	1	34442-VUG	#8 135 FEMALE O-RING
11	1	34443-VUG	#10 135 FEMALE O-RING
12	2	34433-VUG	#10 90 FEMALE O-RING
13	8	31603-VUA	#6 & #8 HOSE CLAMP
14	4	31604-VUA	#10 & #12 HOSE CLAMP
15	2	18247-VUB	#8 x 1/2" SHEETMETAL SCREW
16	72"	31854-VUD	#6 x 5/16" REF. HOSE
17	48"	31855-VUD	#8 x 13/32" REF. HOSE
18	60"	31856-VUD	#10 x 1/2" REF. HOSE
19	6	35453-VUG	#6 FERRULE
20	2	35455-VUG	#8 FERRULE
21	4	35456-VUG	#10 FERRULE
22	2	07113-VUB	DRIER CLAMPS
23	2	18247-VUB	#10 SHEETMETAL SCREW
24	1	41116-VUP	TUBE of OIL

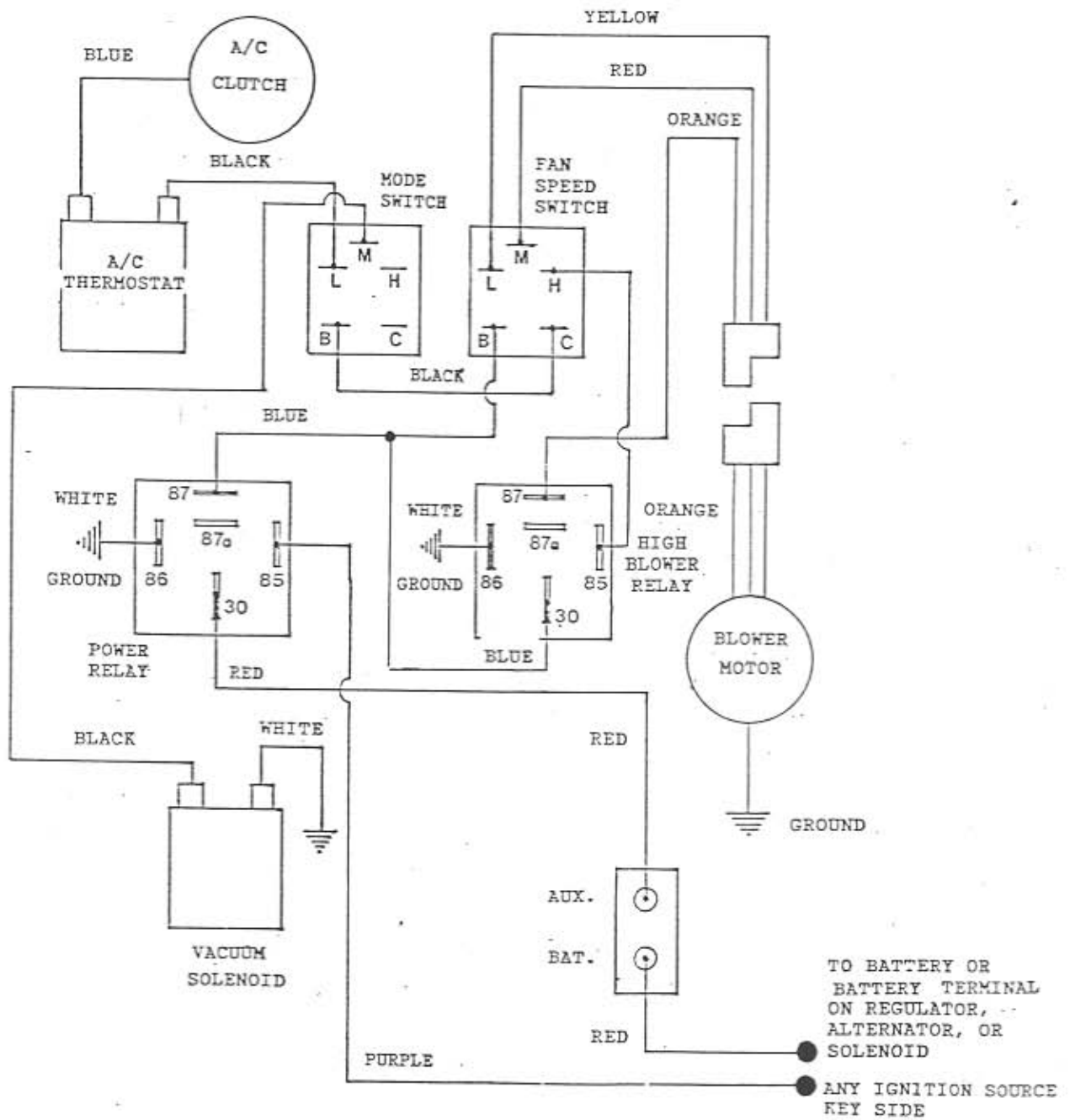
HEATER HOSE INSTALLATION

1. After the heater is in place, run 5/8" heater hose from the bottom heater fitting thru firewall or behind kick panel thru floor to the intake manifold heater connection. Install the vacuum heater control valve in this line. SEE FIGURE 1.
2. Install 5/8" heater hose on top fitting of heater thru firewall or behind kick panel thru floor board and out to water pump connection.
3. Fill radiator with coolant. Check all heater connections for leaks.

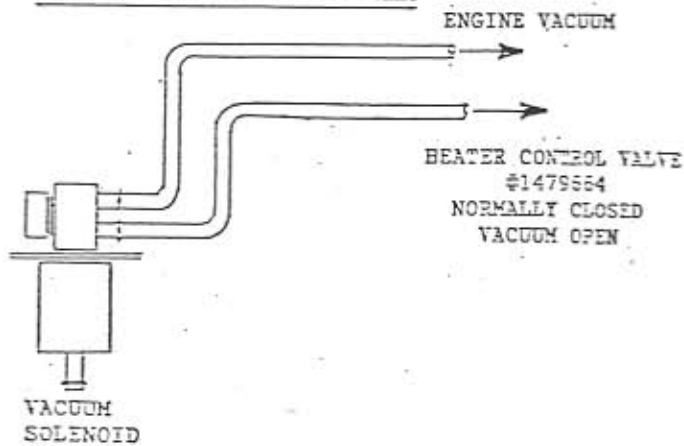
WARNING: Fill the engine cooling system with 50% anti-freeze. Failure to do so could damage your system.

4. Start engine and run until normal operating temperature is reached. Place switch in heat position and select fan speed desired. The system should be heating the vehicle.
5. When valve is closed inlet side of valve should be hot and outlet side should be cool. When the valve is open both inlet and outlet side should be hot.

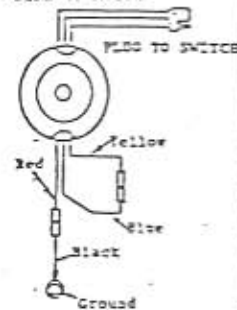




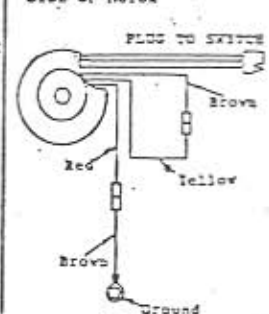
HEAT & COOL VACUUM DIAGRAM



TYPE 1 MOTOR
3 WIRE OUT OF EACH
SIDE OF MOTOR



TYPE 2 MOTOR
6 WIRES OUT OF ONE
SIDE OF MOTOR





D.O. # _____

ECONO HEAT & COOL
PACKING LIST

1- Evaporator with blower	# _____
1-*Control pod with wiring & with Brackets	# _____
2-*Louvers #'s check page bottom	# _____
1- Drain kit	#63250-VUE _____
1- 2-1/2" X 6' duct hose	#06250-VUE _____
OTHER	# _____

DATE: _____

CHECKED: _____

PACKED: _____

*Control pod with wiring & with Brackets:
Check year and make in room #2

*Louvers;
02100 = 2-49053-VUL
02200 = 1-49051-VUL, and 1-49151-VUL
02300 = 0-Louvers