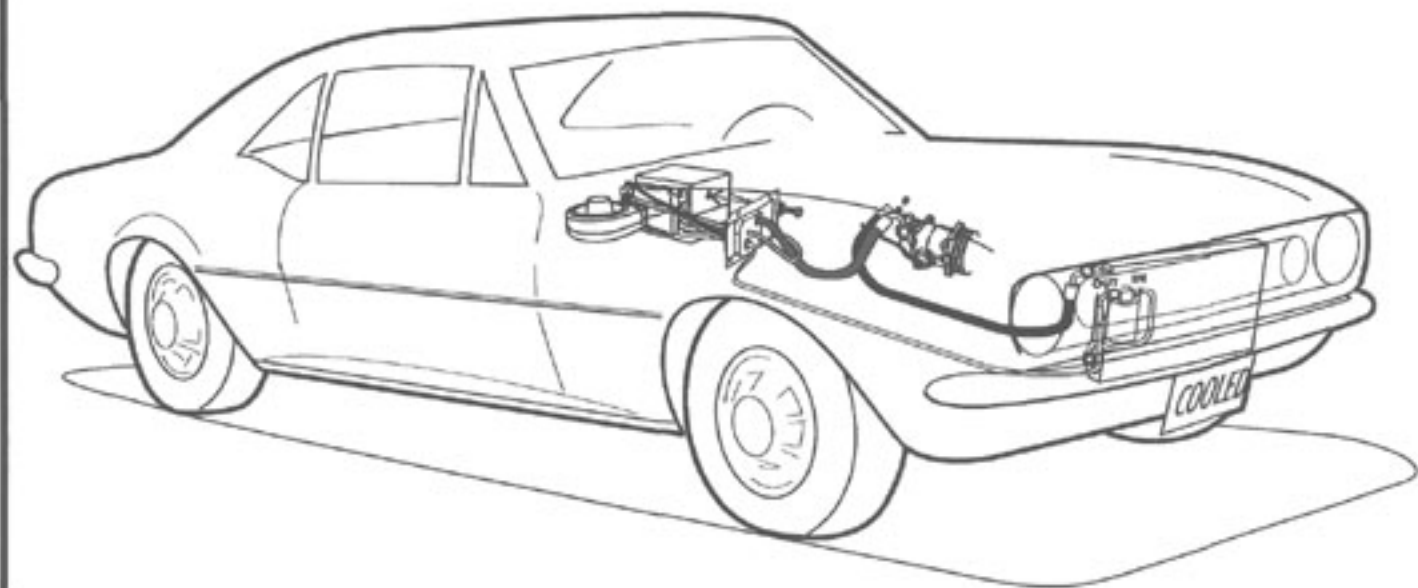


**VENTAGE  
AIR**

**INSTALLATION INSTRUCTIONS FOR**

**67-68  
CAMARO  
&  
FIREBIRD**

**WITHOUT FACTORY AIR  
(55074-VCZ-A)**



# 1967/68 CAMARO & FIREBIRD WITHOUT FACTORY AIR

## IMPORTANT NOTICE-PLEASE READ

WE RECOMMEND UPGRADING TO THE HEAVY DUTY RADIATOR  
(23" x 17" x 2") WITH A FAN SHROUD  
AND A 6 BLADE FAN WITH A FAN CLUTCH.  
ALL OF THESE COMPONENTS ARE AVAILABLE FROM VINTAGE AIR.

### FOR MAXIMUM SYSTEM PERFORMANCE VINTAGE AIR RECOMMENDS THE FOLLOWING:

- 70067-VCR - '67/69 CAMARO RADIATOR
- 32067-VCF - FAN SHROUD
- 32918-VUF - 18" FAN
- 32518-VUF - OEM FAN CLUTCH

### SERVICE INFO:

EVACUATE THE SYSTEM FOR 45 MINUTES WITH SYSTEM COMPONENTS (DRIER, COMPRESSOR, EVAPORATOR AND CONDENSER) AT A TEMPERATURE OF AT LEAST 85° F. ON A COOL DAY THE COMPONENTS CAN BE HEATED WITH A HEAT GUN OR BY RUNNING THE ENGINE WITH THE HEATER ON BEFORE EVACUATING.

LEAK CHECK AND CHARGE TO SPECIFICATIONS.

### REFRIGERANT CAPACITIES

#### 134a SYSTEM

CHARGE WITH 1.8 LBS. OF REFRIGERANT

#### R-12 SYSTEM

CHARGE WITH 2.0 LBS. OF REFRIGERANT

### LUBRICANT CAPACITIES

NEW COMPRESSOR - NO ADDITIONAL OIL NEEDED  
USED COMPRESSOR - CONSULT VINTAGE AIR

10305 I.H. 35 N. - SAN ANTONIO, TX. - 78233 - ph.210-654-7171 - fax 210-654-3113

## INSTALLATION INSTRUCTIONS FOR 1967/68 CAMARO & FIREBIRD



BEFORE STARTING THE AIR CONDITIONER INSTALLATION, CHECK FOR PROPER OPERATION OF ALL COMPONENTS (RADIO, LIGHTS, WIPERS, ETC.). STUDY THE INSTRUCTIONS, ILLUSTRATIONS AND DIAGRAMS. FOR EASE OF INSTALLATION CHECK OFF (✓) EACH PROCEDURE PRIOR TO MOVING ON TO NEXT STEP.

### ENGINE COMPARTMENT

#### IF YOUR VEHICLE HAS AN EXISTING A/C SYSTEM-

- PROPERLY PURGE THE A/C SYSTEM OF REFRIGERANT. DO NOT VENT R-12 INTO THE ATMOSPHERE.

#### REMOVE THE FOLLOWING: (SEE FIGURE 1)

- JACK UP VEHICLE AND PLACE JACK STANDS UNDER FRAME. / REMOVE RIGHT FRONT TIRE (RETAIN).
- DRAIN RADIATOR.
- REMOVE HOOD LATCH ASSEMBLY (RETAIN), INCLUDING HOOD LATCH SUPPORT.
- REMOVE HEATER HOSE CLAMP FROM INNER FENDER PANEL AND DISCONNECT THE HEATER HOSES FROM THE HEATER CORE. TAPE THE OUTLETS ON THE HEATER CORE.
- ANY OTHER ACCESSORIES ATTACHED TO INNER FENDER PANEL MUST BE REMOVED AT THIS TIME.
- REMOVE BATTERY AND BATTERY TRAY. YOU MAY GAIN ACCESS TO THE FORWARD BATTERY TRAY SECURING BOLTS BY REMOVING HEADLAMP BEZEL (RETAIN).
- ALTHOUGH IT IS POSSIBLE TO REMOVE THE OEM BLOWER MOTOR PLENUM WITHOUT REMOVING THE OUTER FENDER FROM THE CAR, ON 1968 MODELS IT IS VERY DIFFICULT. REMOVE FENDER AND SKIRT ACCORDING TO FACTORY SERVICE MANUAL FOR YOUR PARTICULAR YEAR AND MODEL.
- DISCONNECT THE BLOWER MOTOR WIRE AT THE MOTOR FLANGE.
- REMOVE THE BLOWER MOTOR ATTACHING SCREWS AND REMOVE THE MOTOR (DISCARD).
- PRY THE FLANGE GENTLY (SEALER ACTS AS AN ADHESIVE).
- REMOVE THE BLOWER MOTOR PLENUM (DISCARD) AND CLEAN THE OEM SEALER FROM THE FIREWALL.
- REMOVE THE BLOWER MOTOR WIRING (DISCARD).

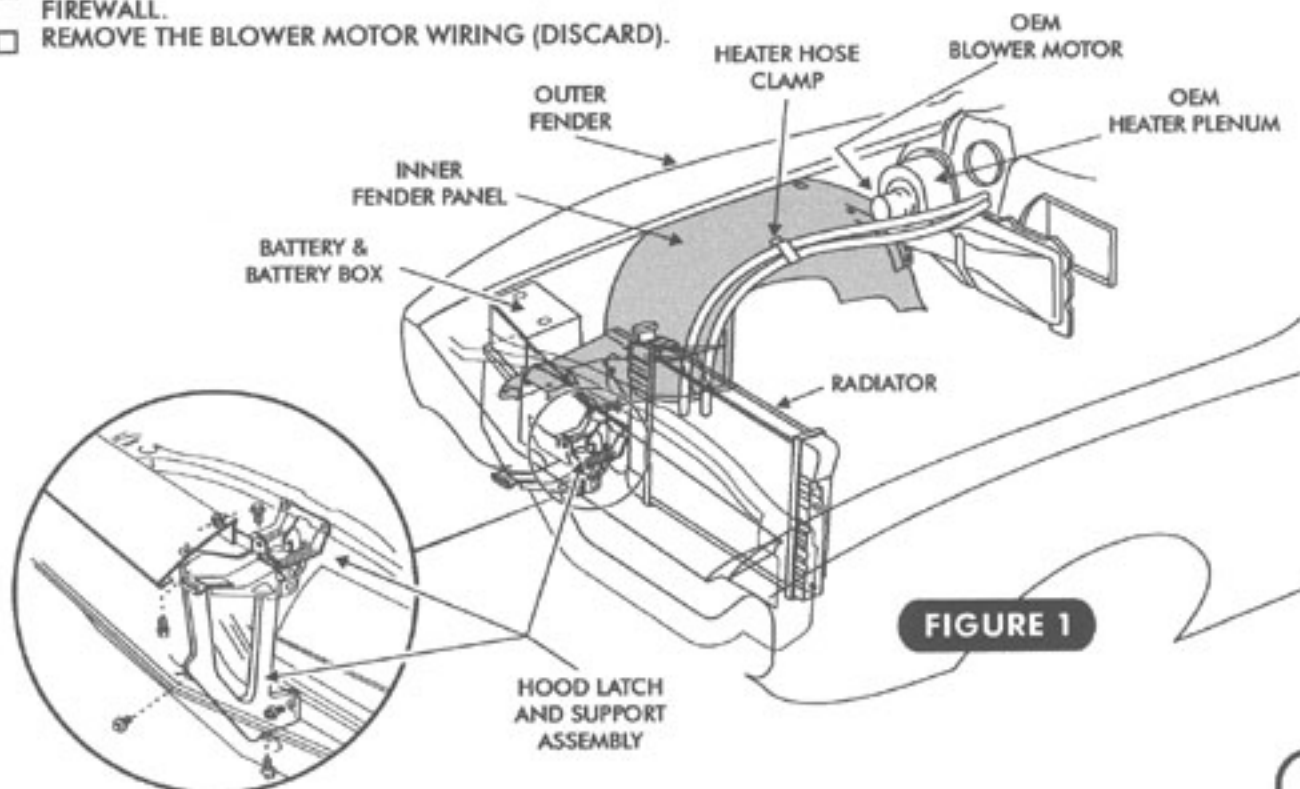


FIGURE 1

## PASSENGER COMPARTMENT

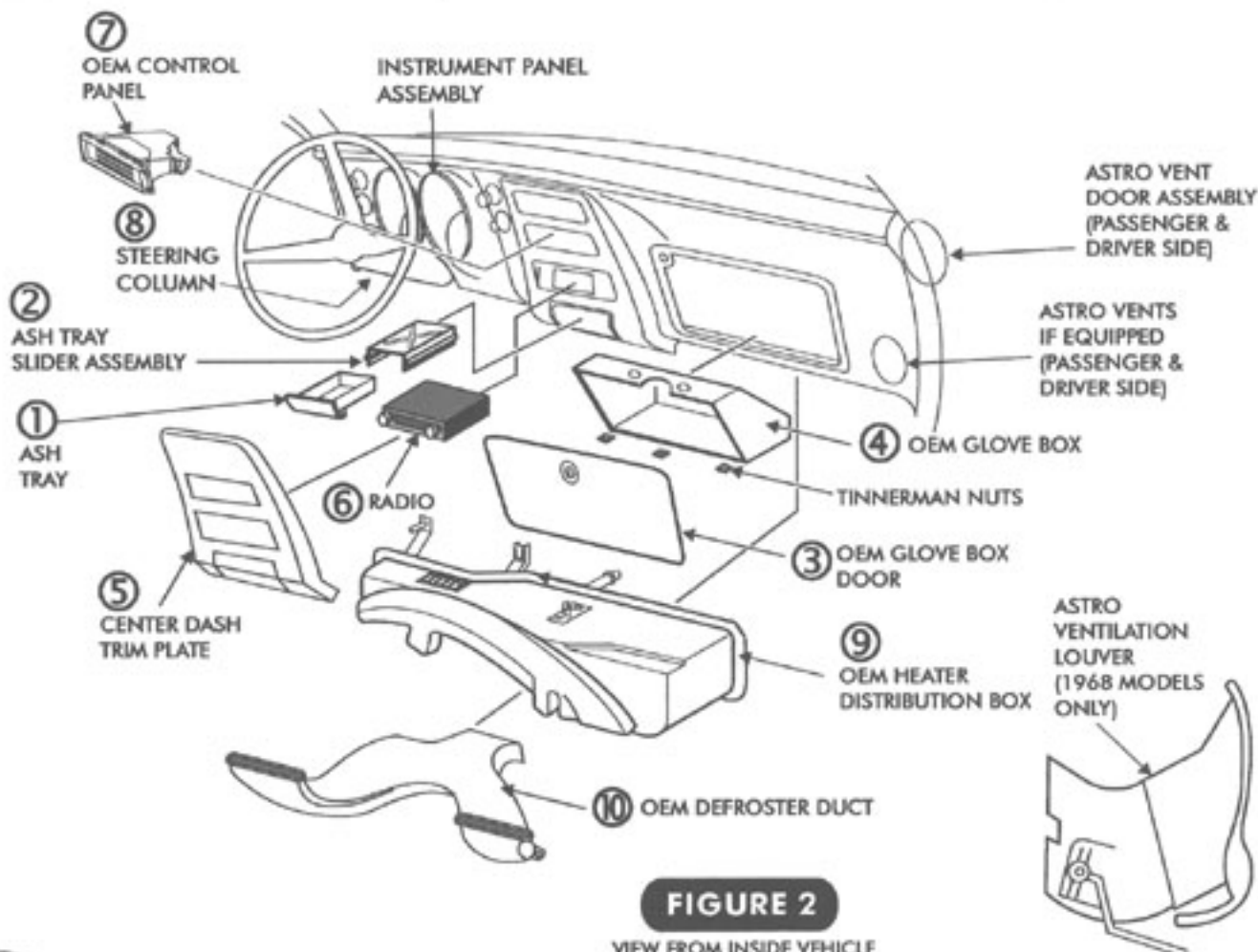
REMOVE THE FOLLOWING: SEE FIGURE 2

- 1. REMOVE THE ASHTRAY (RETAIN).
- 2. REMOVE ASH TRAY SLIDER ASSEMBLY (RETAIN).
- 3. REMOVE GLOVE BOX DOOR (RETAIN).
- 4. REMOVE AND DISCARD OEM GLOVE BOX (SAVE THE THREE TINNEMAN NUTS FROM THE BOTTOM EDGE).
- 5. REMOVE THE CENTER DASH TRIM PLATE (RETAIN).
- 6. REMOVE THE RADIO (RETAIN).
- 7. REMOVE OEM CONTROL PANEL (RETAIN).
- 8. LOOSEN STEERING COLUMN AND LOWER. REMOVE THE INSTRUMENT PANEL ASSEMBLY (RETAIN).

**NOTE** → ON 1968 MODELS EQUIPPED WITH ASTRO VENTILATION YOU MUST REMOVE THE ASTRO VENTS AND DOOR ASSEMBLIES (RETAIN THE DASH VENTS AND DISCARD THE DOOR ASSEMBLIES).

- 9. REMOVE THE HEATER DISTRIBUTION BOX (DISCARD).
- 10. REMOVE THE OEM DEFROST DUCT (DISCARD).

**NOTE** → REMOVE THE FRONT SEATS (OPTIONAL FOR EASE OF A/C INSTALLATION ONLY).



**FIGURE 2**

VIEW FROM INSIDE VEHICLE

## CONDENSER ASSEMBLY

- THE CONDENSER ASSEMBLY MOUNTS TO THE FRONT OF THE CORE SUPPORT. LOWER CONDENSER ASSEMBLY INTO POSITION. BE SURE THE TOP BRACKET IS BEHIND (FRONT LIP) FLANGE ON TOP OF THE CORE SUPPORT. FASTEN DRIVER SIDE LOWER CONDENSER BRACKET TO CORE SUPPORT USING 5/16" X 2" BOLT AND NUT. LOWER HOOD LATCH SUPPORT BRACKET INTO PLACE. NOTE THAT THE LOWER MOUNTING TAB OF LATCH SUPPORT BRACKET WILL SLIP BEHIND PASSENGER SIDE LOWER CONDENSER BRACKET AND AGAINST THE CORE SUPPORT. ATTACH HOOD LATCH SUPPORT BRACKET WITH ORIGINAL 5/16" BOLT. NOTE THAT THE LOWER BOLT WILL PASS THROUGH THE PASSENGER SIDE LOWER CONDENSER BRACKET AND SECURE IT TO THE CORE SUPPORT. SEE PAGE 4, FIGURE 4.
- REPLACE HOOD LATCH ASSEMBLY. THE 2 (TWO) ORIGINAL 5/16" BOLTS CONNECTING IT TO THE CORE SUPPORT WILL NOW PASS THROUGH AND SECURE THE TOP CONDENSER BRACKET. SEE PAGE 4, FIGURE 3.

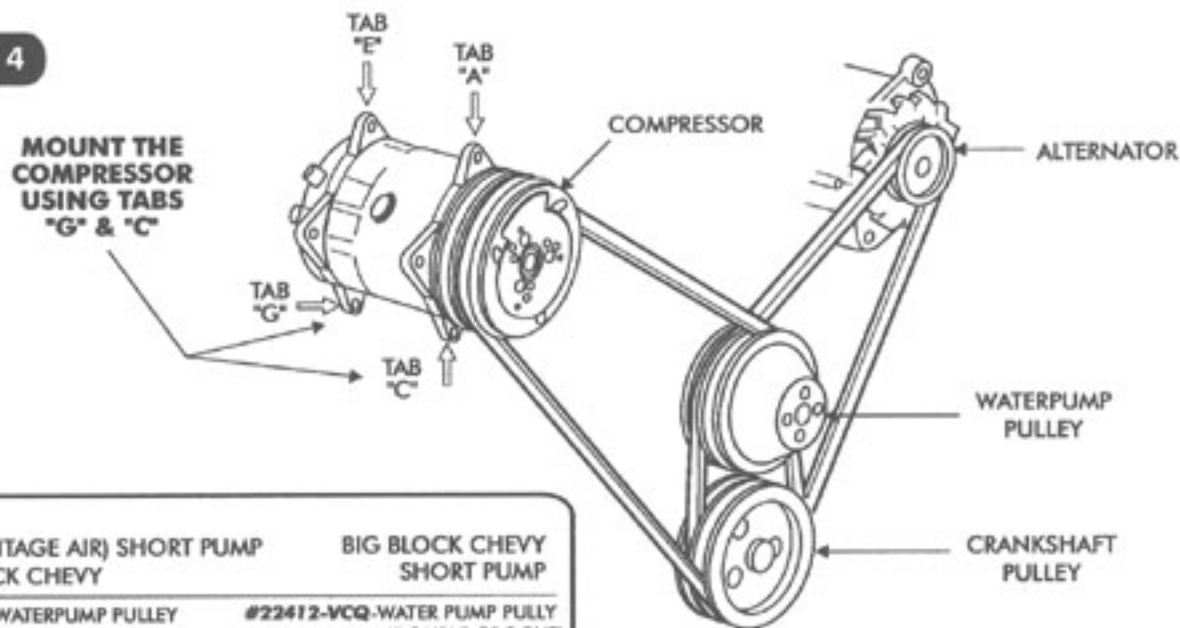
## COMPRESSOR & BRACKETS

- REFER TO SEPERATE INSTRUCTIONS INCLUDED WITH THE BRACKET KIT TO INSTALL THE COMPRESSOR BRACKET. REFER TO FIGURE 4 FOR COMPRESSOR MOUNTING POSITION.

## PULLEYS

- IN MOST INSTANCES THE BELT LENGTHS WILL REMAIN THE SAME. SEE FIGURE 4.

**FIGURE 4**



**PULLEYS (VINTAGE AIR) SHORT PUMP  
SMALL BLOCK CHEVY**

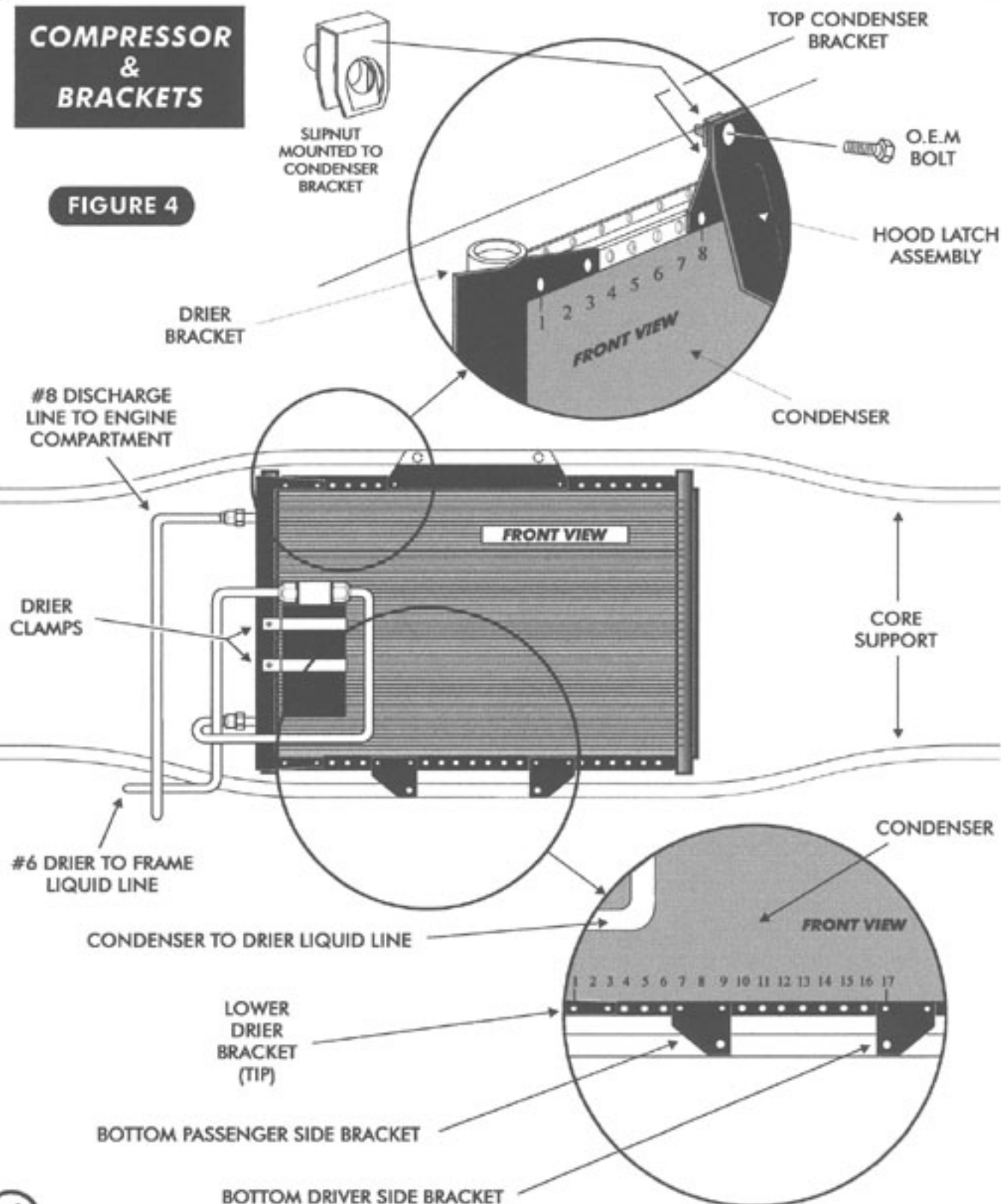
- #22302-VCQ - WATERPUMP PULLEY (DOUBLE GROOVE)
- #22312-VCQ - CRANKSHAFT PULLEY (DOUBLE GROOVE)
- #22313-VCQ - CRANKSHAFT PULLEY (TRIPLE GROOVE)  
(WITH POWER STEERING A 3 GROOVE CRANK PULLEY IS REQUIRED)

**BIG BLOCK CHEVY  
SHORT PUMP**

- #22412-VCQ-WATER PUMP PULLY (DOUBLE GROOVE)
- #22413-VCQ-CRANKSHAFT PULLY (TRIPLE GROOVE)

**COMPRESSOR  
&  
BRACKETS**

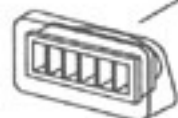
**FIGURE 4**



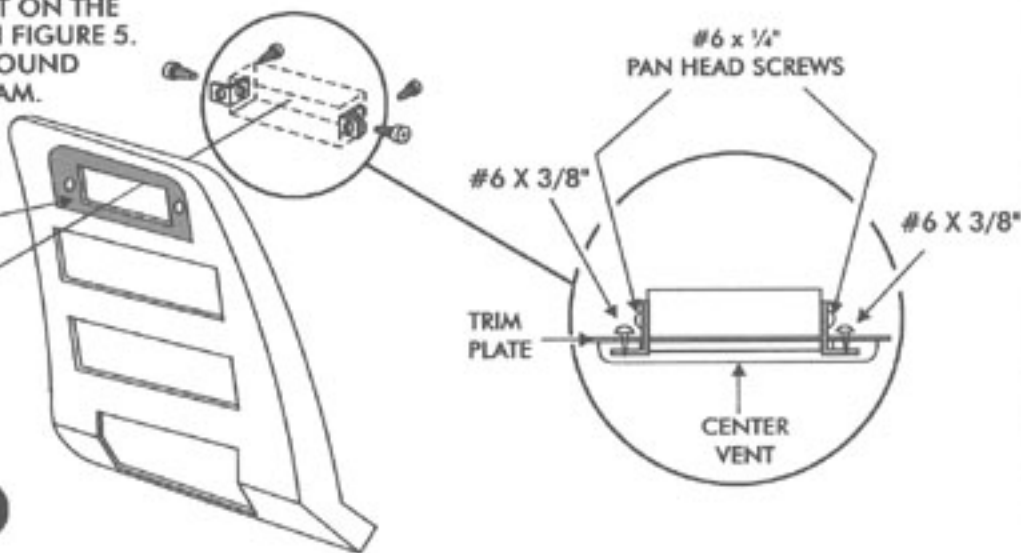
## PASSENGER COMPARTMENT

- LOCATE CENTER VENT OPENING USING TEMPLATE ON PAGE 19. CAREFULLY CUTOUT OPENING, DO NOT EXCEED DIMENSIONS GIVEN ON TEMPLATE.
- INSTALL THE CENTER VENT ON THE TRIM PLATE AS SHOWN IN FIGURE 5.
- FOAM BACK OF PLATE AROUND DUCT WITH SUPPLIED FOAM. USING TEMPLATE ON PG. 19 TO CORRECT SIZE.

CUT OUT HOLE WITH TEMPLATE ON PAGE 18.



**FIGURE 5**



**NOTE** → IF EQUIPPED WITH PASSENGER AND DRIVER SIDE VENTS YOU MAY OMIT THE FOLLOWING VENT INSTALLATION PROCEDURES.

(FOR VINTAGE AIR VENTS ONLY)

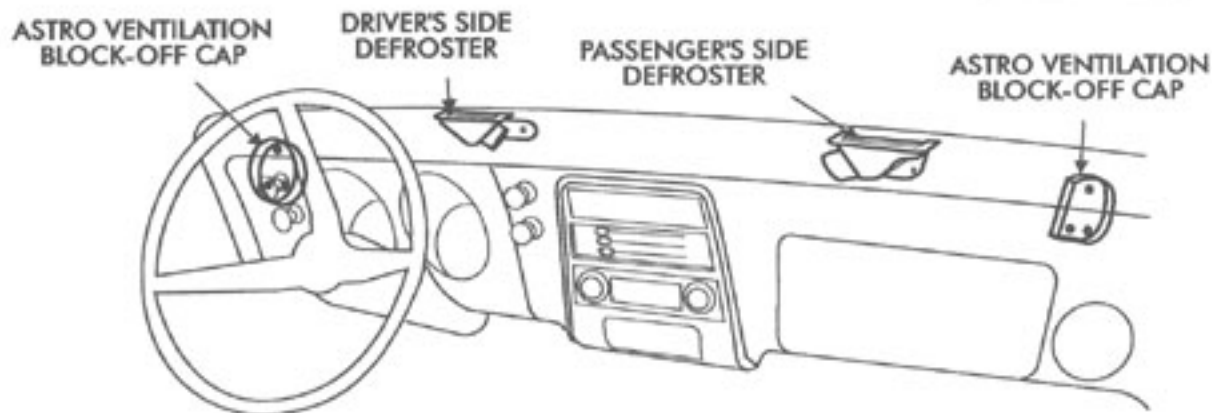
- IF YOUR VEHICLE WAS NOT EQUIPPED WITH OEM PASSENGER AND DRIVER SIDE VENTS YOU MUST USE TEMPLATE (PG. 22 & 23) TO LOCATE AND CUT THE HOLES FOR VENT INSTALLATION.
- INSTALL THE VENTS AT THIS TIME.
- IF VEHICLE IS EQUIPPED WITH ASTRO-VENTILATION YOU MUST INSTALL THE ASTRO-VENT BLOCK-OFF CAPS (SEE FIGURE 6).
- INSTALL THE DEFROST DUCTS UNDERDASH AS SHOWN IN FIGURE 6 BY DRILLING ONE (1) 7/64" HOLE FOR EACH VENT. ATTACH USING ONE (1) #8 x 1/2" SHT. MTL. SCREW FOR EACH VENT.

**NOTE** → PUT A SMALL AMOUNT OF SILICONE SEALER ON EACH SCREW BEFORE INSTALLING.

(FOR OEM ASTRO VENTS ONLY)

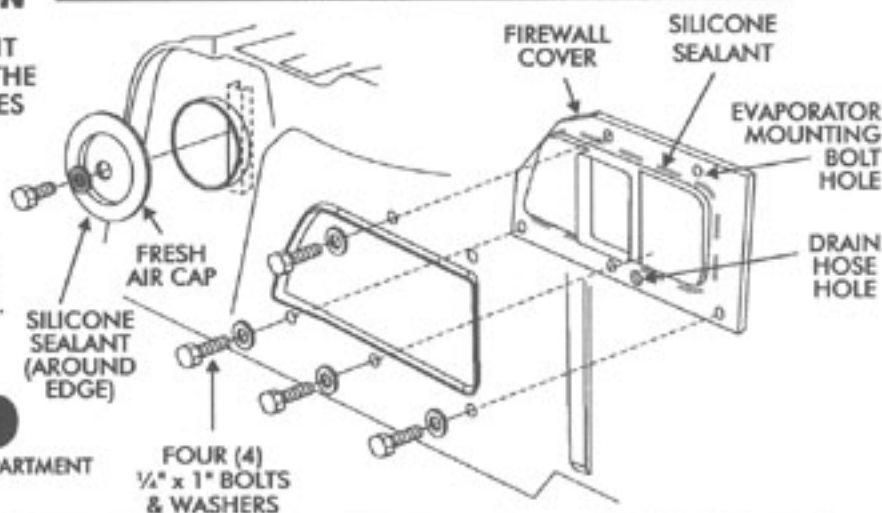
- CUT AND MODIFY AS SHOWN ON PAGE 20.
- REINSTALL MODIFIED ASTRO VENTS IN DASH

**FIGURE 6**



### FIREWALL COVER INSTALLATION

- PUT A 1/4" BEAD OF SILICONE SEALANT (AS SHOWN IN FIGURE 7) AROUND THE INSIDE PERIMETER OF THE BOLT HOLES ON THE FIREWALL COVER. INSTALL COVER FROM INSIDE THE PASSENGER COMPARTMENT USING FOUR (4) 1/2" x 1" BOLTS AND WASHERS IN THE HOLES INDICATED IN FIGURE 7.
- ATTACH FRESH AIR CAP TO FIREWALL WITH 1/2" x 1" BOLT & 1/4" BEAD OF SILICONE (SEE FIGURE 7).



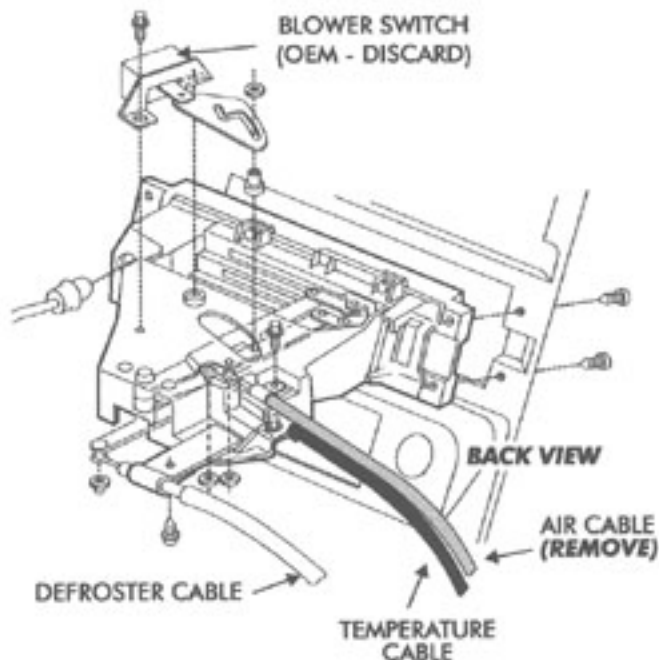
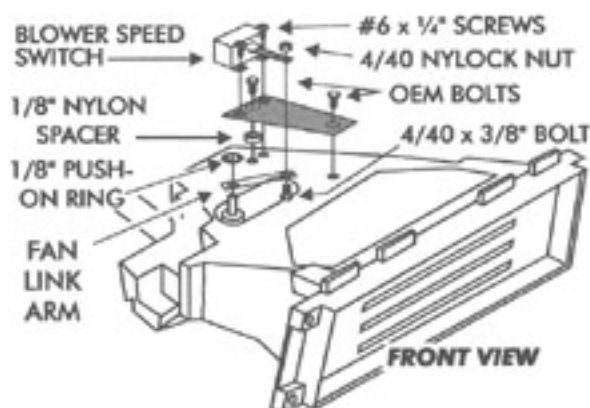
**FIGURE 7**

VIEW FROM ENGINE COMPARTMENT

### CONTROL PANEL CONVERSION

- LOCATE THE OEM HEATER/DEFROST CONTROL PANEL.
- REMOVE THE TOP CABLE (AIR CABLE - DISCARD).
- REMOVE THE OEM BLOWER SWITCH (DISCARD SWITCH BUT RETAIN THE ATTACHING SCREWS).
- PLACE 1/8" NYLON WASHERS UNDER BLOWER SWITCH MOUNTING PLATE AND INSTALL PREVIOUSLY REMOVED OEM SCREWS.
- ATTACH THE FAN LINK ARM TO THE NEW SWITCH AS SHOWN IN FIGURE 8. TIGHTEN THE NYLOCK NUT ONLY TIGHT ENOUGH TO REMOVE EXCESS PLAY (THE ARM SHOULD ROTATE FREELY, BUT HAVE NO UP AND DOWN MOVEMENT).
- LOWER THE SWITCH TO THE MOUNTING PLATE AND SLIDE THE FAN LINK ARM OVER THE OEM PIN. ATTACH THE SWITCH TO THE PLATE WITH TWO #6 x 1/4" PAN HEAD SHT. MTL. SCREWS.
- GREASE ALL MOVING PARTS IN THE CONTROL PANEL.

**FIGURE 8**

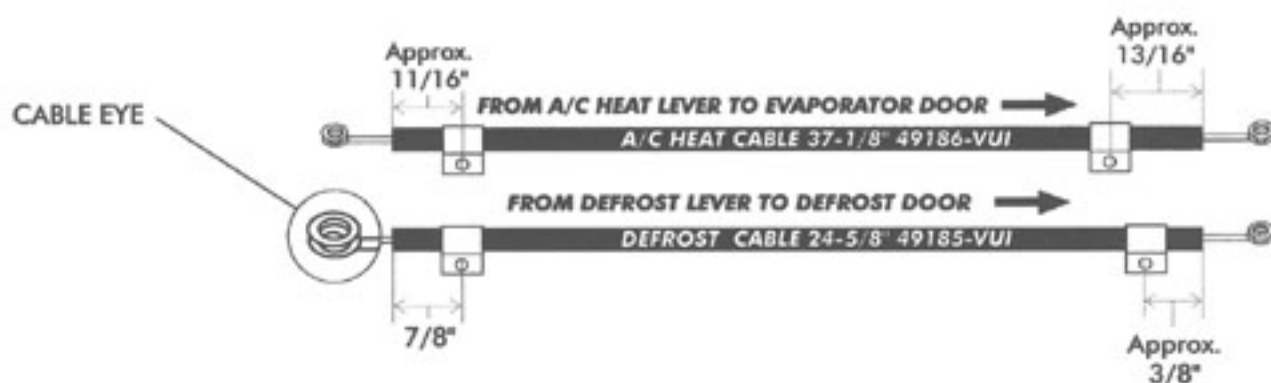




## EVAPORATOR TESTING:

VINTAGE AIR RECOMMENDS TESTING OF CONTROL PANEL & EVAPORATOR ON THE WORK-BENCH FOR PROPER OPERATION, PRIOR TO INSTALLATION.

- ATTACH CABLES TO EVAPORATOR AND CONTROL PANEL AS SHOWN ON PG. 8, FIGURE 9.
- AFTER INSTALLING CABLES AND VERIFYING FULL OPENING AND CLOSING OF EVAPORATOR DOOR, HEAT/DEFROST DOOR. YOU ARE READY TO COMPLETE THE WIRING TO VERIFY PROPER OPERATION OF THE UNIT.

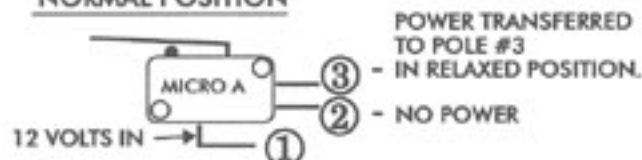


**NOTE** → THE COMPRESSOR SAFETY SWITCH (BOTH BINARY OR TRINARY TYPE) WILL NOT OPERATE COMPRESSOR CLUTCH, (SWITCH ON) UNTIL THERE IS REFRIGERANT PRESSURE AVAILABLE. CHECK FOR PROPER A/C COMPRESSOR CLUTCH POWER (12 VOLTS) AT THE THERMOSTAT. (THE OPTIONAL TRINARY SWITCH CONTROLS AN ELECTRICAL FAN. SEE INSTRUCTIONS PACKAGED WITH THE SWITCH)

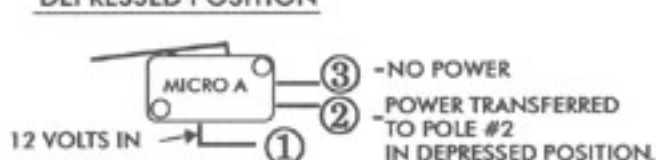
**NOTE** → ALL VINTAGE AIR MICRO SWITCHES ARE CAREFULLY SET AT THE FACTORY. HOWEVER.... IF YOU SHOULD EXPERIENCE A PROBLEM WITH THE OPERATION OF YOUR A/C UNIT - DOUBLE CHECK THE ADJUSTMENT OF THE MICRO SWITCHES.

## MICRO SWITCH ADJUSTMENTS

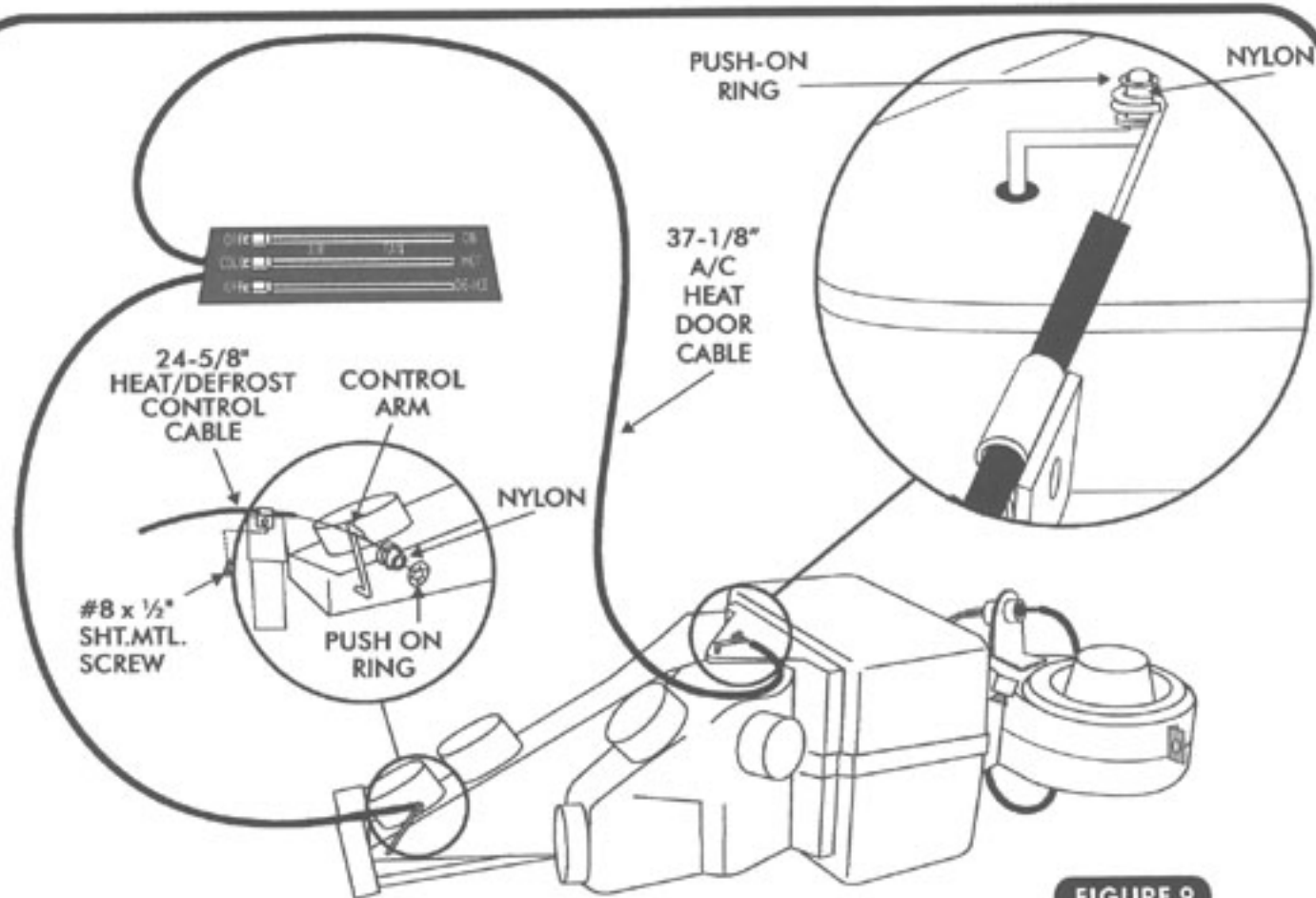
### NORMAL POSITION



### DEPRESSED POSITION



BY DEPRESSING THE ARM ON THE MICRO SWITCH AN AUDIBLE CLICK WILL BE HEARD TRANSFERRING POWER TO POLE #2. RELEASE THE ARM AND ANOTHER CLICK WILL BE HEARD, TRANSFERRING POWER TO POLE #3.


**FIGURE 9**

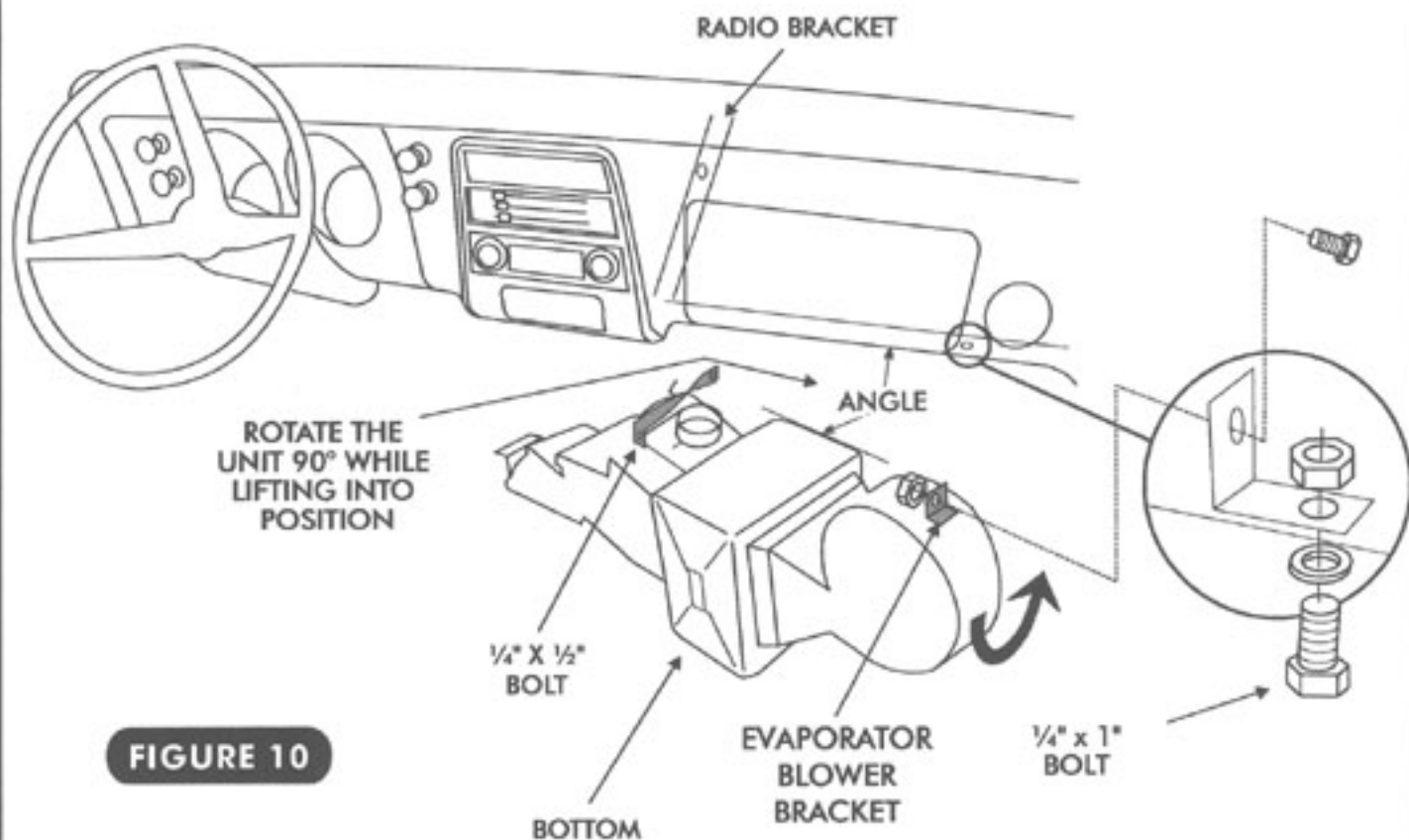
### WIRING FOR TESTING

- ATTACH THE WIRE FROM POLE #1 OF MICRO A ON THE TOP OF THE EVAPORATOR TO THE A/C POLE ON THE BLOWER SPEED SWITCH. (SEE WIRING DIAGRAM PG18).
- ATTACH RED, BLUE, YELLOW AND ORANGE BLOWER SPEED SWITCH WIRES AS SHOWN ON PG. 18
- ATTACH ALL WHITE WIRES TOGETHER AND GROUND TEMPORARILY.
- THE RED WIRE IN THE WIRING HARNESS CONNECTS TO BATTERY POWER. (12 VOLTS)
- THE PURPLE WIRE WILL ALSO NEED TO BE CONNECTED TO DIRECT POWER FOR TESTING PURPOSES. IT MUST BE HOOKED TO **IGNITION ON POWER ONLY** ONCE INSTALLED IN THE VEHICLE.
- ADJUST THE CONTROL PANEL LEVERS TO THE **A/C MODE**. SEE PG16
- TURN THE BLOWER SPEED SWITCH TO **LOW**. THERE SHOULD BE POWER AT THE A/C THERMOSTAT.
- SELECT THE **HEAT** MODE AND POWER WILL CEASE AT THE THERMOSTAT.
- SELECT **DEFROST** MODE AND A/C CLUTCH POWER WILL RETURN TO THE THERMOSTAT.
- IF ALL TESTS WERE SUCCESSFUL **TAG AND LABEL** THE WIRES FOR EASE OF INSTALLATION INTO THE VEHICLE. REMOVE CABLES FROM THE EVAPORATOR UNIT. REMOVE RED, BLUE, YELLOW, ORANGE, AND WIRE FROM POLE #1 OF MICRO FROM BLOWER SWITCH.
- EVAPORATOR IS NOW READY TO INSTALL.

## EVAPORATOR INSTALLATION

**NOTE** → IMPORTANT: BEFORE INSTALLING THE EVAPORATOR BE SURE THAT ALL WIRING AND CABLES HAVE BEEN CHECKED FOR PROPER OPERATON.

- LIFT EVAPORATOR AND ROTATE INTO POSITION
- ATTACH DRIVER SIDE MOUNTING BRACKET ON THE EVAPORATOR UNIT TO THE RADIO BRACKET USING OEM SCREW. INSERT THE 1/4" x 20 x 1" BOLT WITH FLAT WASHER THRU THE REMAINING HOLE IN A.B.S. FIREWALL COVER. SECURE TO THE JACKNUT ON THE REAR OF THE EVAPORATOR SEE PG13, FIGURE 17.
- THE PASSENGER SIDE EVAPORATOR BRACKET ASSEMBLY CONSISTS OF 2 SEPARATE BRACKETS. ONE BRACKET COMES MOUNTED ON THE EVAPORATOR UNIT. THE OTHER BRACKET IS PACKED IN THE DRAIN KIT BAG. THIS BRACKET MOUNTS TO THE TOP OF THE LOWER DASH PANEL THROUGH AN EXISTING HOLE. CONNECT THIS BRACKET TO THE DASH AND THE MATING BRACKET USING 1/4" X 20 X 1" BOLTS AND NUTS, AS SHOWN IN FIGURE 10.



**FIGURE 10**

## HOSES: REFRIGERATION / HEATER / VACUUM

### HEATER HOSES:

- ❑ LOCATE FIREWALL CAP. THE HOLES IN THE FIREWALL CAP WILL BE REFERRED TO BY NUMBERS. SEE FIGURE 11. INSERT A LENGTH OF 5/8" HEATER HOSE THROUGH HOLE #3 IN FIREWALL CAP. CONNECT THIS END OF HOSE TO THE LOWER HEATER CORE OUTLET, AND FASTEN WITH CLAMP. KEEP THE FIREWALL CAP APPROXIMATELY 7" FROM FIREWALL. ROUTE HOSE AND CONNECT OTHER END TO THE SUCTION (WATER PUMP) SIDE OF COOLANT SYSTEM AND FASTEN WITH CLAMP.
- ❑ INSERT ANOTHER LENGTH OF 5/8" HEATER HOSE THROUGH HOLE #2, CONNECT TO THE UPPER HEATER HOSE OUTLET AND FASTEN WITH CLAMP. DO NOT CONNECT OTHER END AT THIS TIME.
- ❑ SLIDE FIREWALL CAP TOWARD FIREWALL UNTIL IT IS SEATED AGAINST FIREWALL CAP. DO NOT FASTEN FIREWALL CAP AT THIS TIME.
- ❑ CAREFULLY MEASURE AND CUT THE UPPER HOSE IN HOLE #2 APPROXIMATELY 8" FROM FIREWALL CAP. CONNECT THIS HOSE TO THE OUTLET SIDE OF THE HEATER CONTROL VALVE AND FASTEN WITH CLAMP. SEE FIGURE 11.
- ❑ CONNECT ANOTHER LENGTH OF 5/8" HEATER HOSE TO THE INTLET ON HEATER CONTROL VALVE AND FASTEN WITH CLAMP. ROUTE THIS HOSE AND CONNECT TO ENGINE COOLANT SYSTEM DISCHARGE PORT AND FASTEN WITH CLAMP.
- ❑ REMOVE FIREWALL CAP BY CAREFULLY SLIDING IT AWAY FROM THE FIREWALL UNTIL IT RESTS AGAINST THE HEATER CONTROL VALVE. THIS WILL ALLOW ACCESS TO THE A/C HOSE FITTINGS.

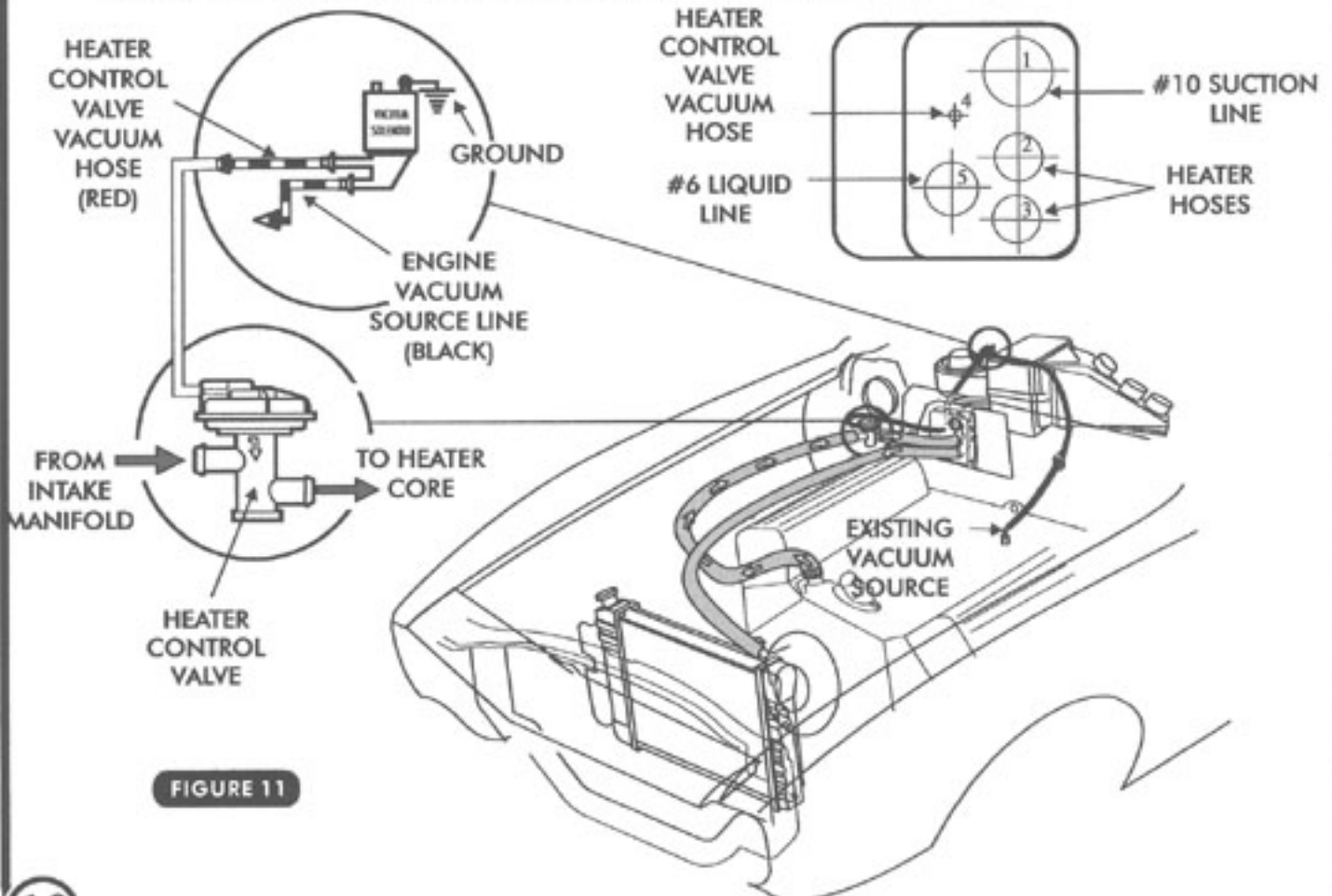
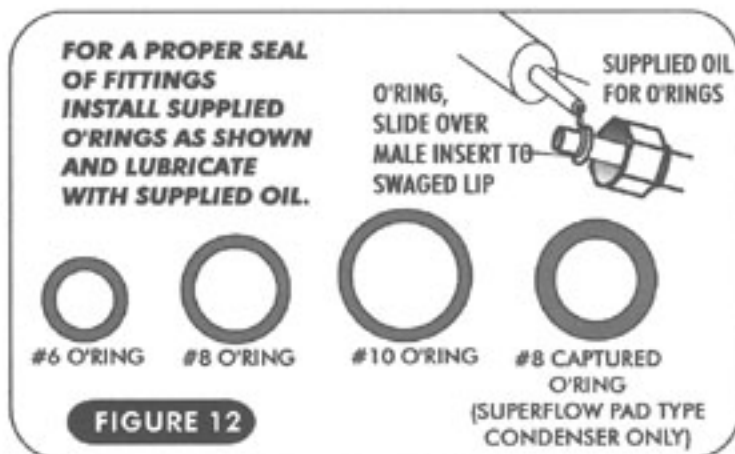
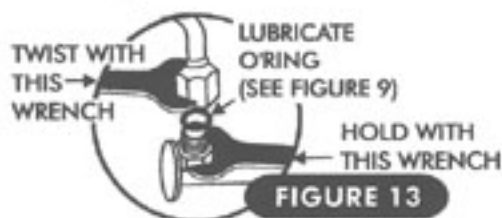


FIGURE 11

## HOSES: REFRIGERATION

- LOCATE THE O'RING PACKAGE. THERE IS A SPECIFIC SIZE AND THICKNESS O'RING FOR EACH CONNECTION. THE SMALL WHITE TUBE IS A SPECIFIC OIL FOR O'RINGS AND THREADS. SEE FIGURE 12. O'RINGS SHOULD NOT BE REUSED ONCE A FITTING IS TIGHTENED (DISCARD AND INSTALL NEW O'RINGS). DO NOT OVER TIGHTEN. ALWAYS USE TWO (2) WRENCHES TO PREVENT TWISTING FITTINGS ON HARDLINE (SEE FIGURE 13).



- STUDY FIGURES 14, 15 & 16 ON PAGE 12. THESE FIGURES SHOW ROUTING DETAILS.
- LOCATE #6 ALUMINUM HARDLINE W/ GROMMET INSTALLED. SLIDE GROMMET NEXT TO BINARY SWITCH PORT ON LINE. PASS THE END OF THIS LINE WITH THE 90° BEND THROUGH HOLE #5 OF THE FIREWALL CAP. LOCATE A #6 O'RING. LUBRICATE AND INSTALL ON THE END OF THE #6 LINE WITH THE 90° BEND. CONNECT THIS END TO THE EXPANSION VALVE AND TIGHTEN.
- LOCATE REMAINING #6 ALUMINUM HARDLINE. THIS LINE WILL CONNECT THE DRIER TO THE #6 LINE FROM THE EXPANSION VALVE. ROUTE THIS LINE AS SHOWN IN FIGURE 16. MAKE THE CONNECTION TO THE DRIER FIRST. LOCATE A #6 O'RING. LUBRICATE AND INSTALL ON THE #6 LINE. CONNECT TO THE DRIER AND TIGHTEN. LOCATE A #6 O'RING, LUBRICATE AND INSTALL ON #6 LINE FOR THE FINAL CONNECTION OF THE TWO #6 LINES, CONNECT AND TIGHTEN.
- LOCATE #10 SUCTION HOSE. (1/2" ID LINE WITH A STRAIGHT AND A 135° END). LOCATE LARGE 1/4" X 1/2" GROMMET AND INSTALL ON #10 SUCTION HOSE OVER NUT ON STRAIGHT FITTING. SLIDE GROMMET PAST FITTINGS AND ONTO RUBBER HOSE. PASS THE END WITH THE STRAIGHT FITTING THROUGH HOLE #1 IN FIREWALL CAP. LOCATE A #10 O'RING, LUBRICATE AND INSTALL ON THE END WITH STRAIGHT FITTING. CONNECT THIS END TO EVAPORATOR #10 OUTLET. DO NOT TIGHTEN AT THIS TIME.
- LOCATE A #10 O'RING, LUBRICATE AND INSTALL ON THE #10 SUCTION HOSE 135° END.
- LOCATE SUPPLIED PRESS TAPE. WRAP THE #10 CONNECTION WITH PRESS TAPE. CONNECT THIS END TO THE COMPRESSOR SUCTION PORT. ADJUST A/C BELT AND THEN TIGHTEN BOTH FITTINGS
- SLIDE THE COVER AGAINST THE FIREWALL.
- SECURE WITH 4 S-CLIPS AND SEAL WITH SILICONE.
- SLIDE #10 AND #6 GROMMET TO FIREWALL CAP AND INSTALL IN COVER.
- LOCATE #8 ALUMINUM HARDLINE, THIS IS AN EXTENSION FROM THE CONDENSER TO THE ENGINE COMPARTMENT, LOCATE A #8 O'RING, LUBRICATE AND INSTALL ON THE END WITH THE SHORT 90° BEND. ROUTE AS SHOWN IN FIGURE 16. CONNECT TO CONDENSER AND TIGHTEN.
- LOCATE #8 DISCHARGE HOSE. LOCATE A #8 O'RING, LUBRICATE AND INSTALL ON THE 135° FITTING END OF THE #8 DISCHARGE HOSE. CONNECT THIS END TO THE DISCHARGE PORT OF COMPRESSOR.
- LOCATE ANOTHER #8 O'RING. LUBRICATE AND INSTALL ON THE STRAIGHT FITTING OF THE #8 DISCHARGE HOSE. CONNECT THIS END TO THE #8 ALUMINUM HARDLINE EXTENSION FROM THE CONDENSER AND TIGHTEN BOTH ENDS OF LINE.

EVAPORATOR INSTALLATION (CONTINUED)

FIGURE 14

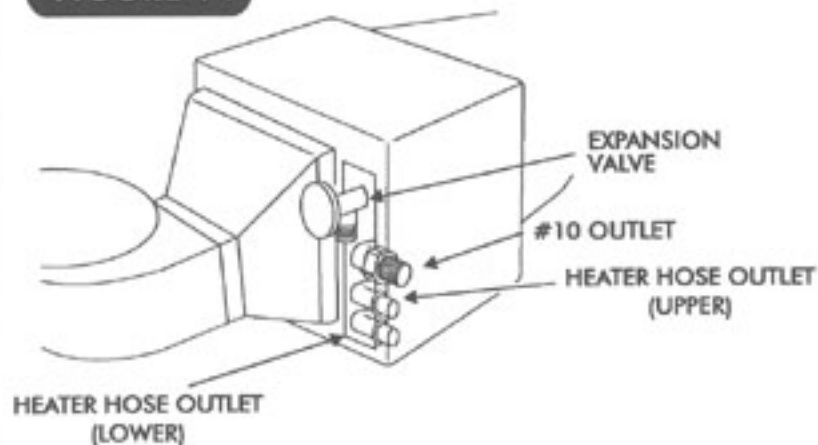


FIGURE 15

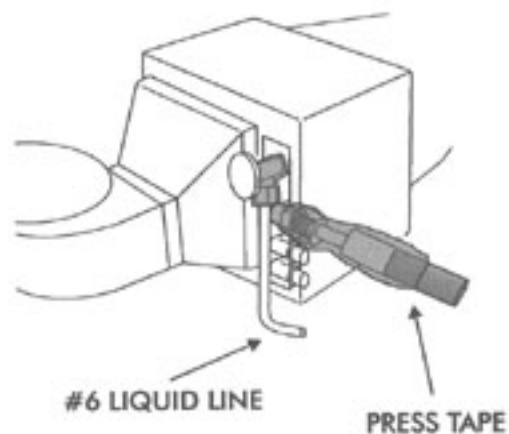
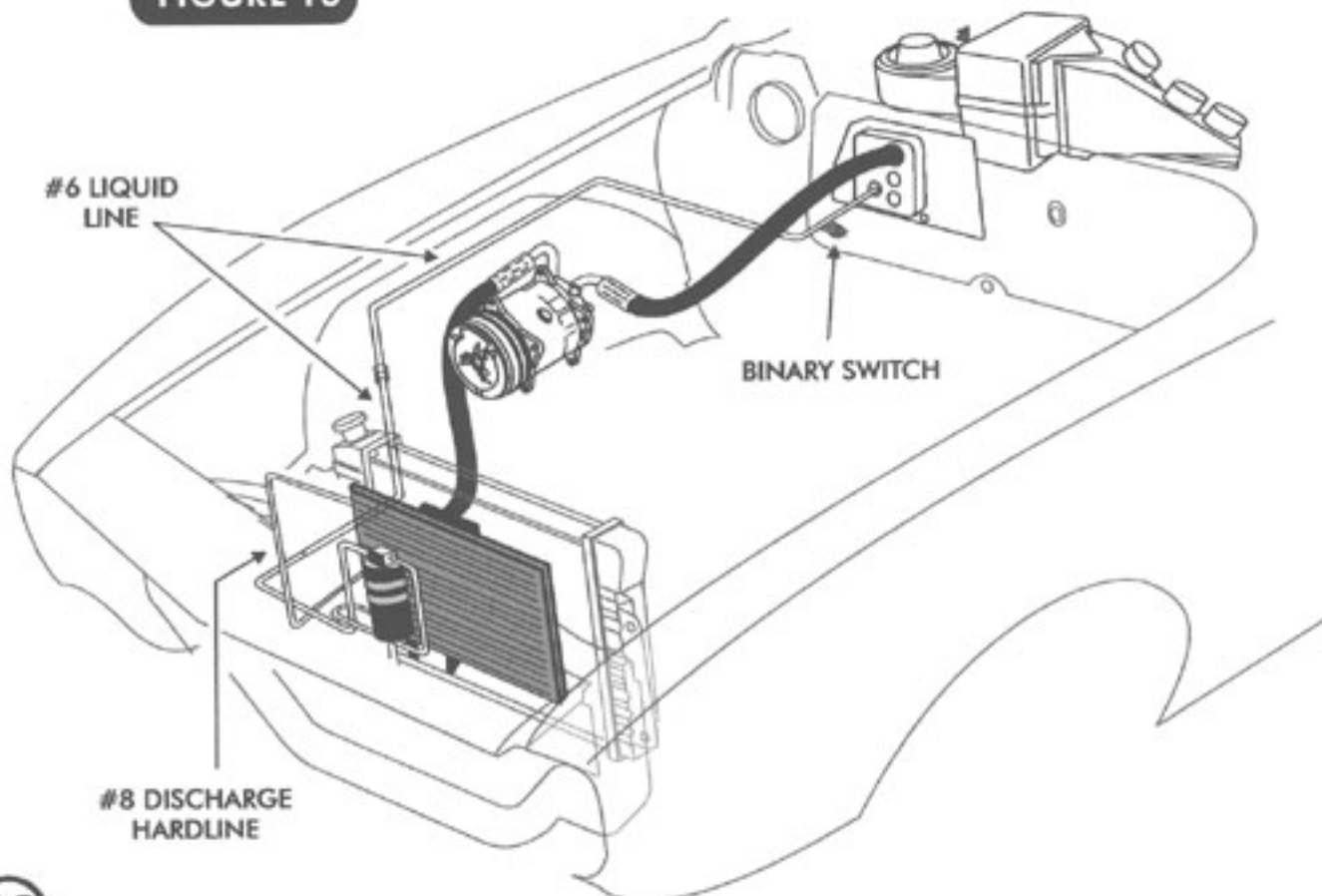


FIGURE 16

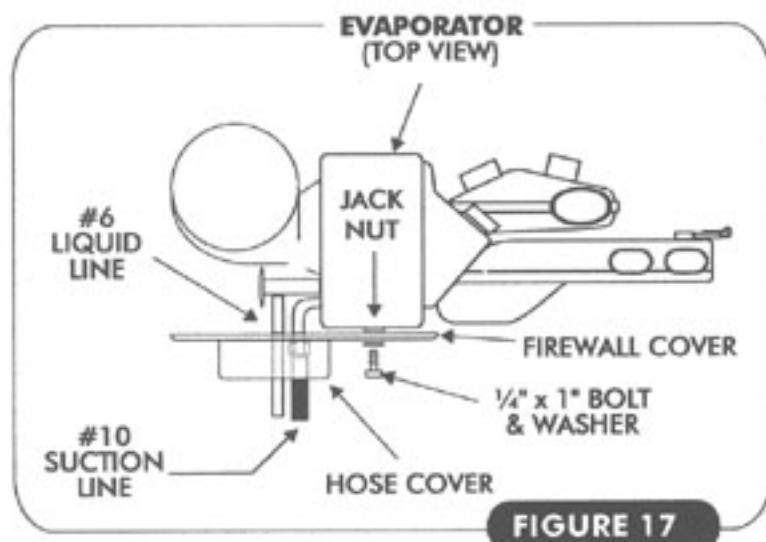
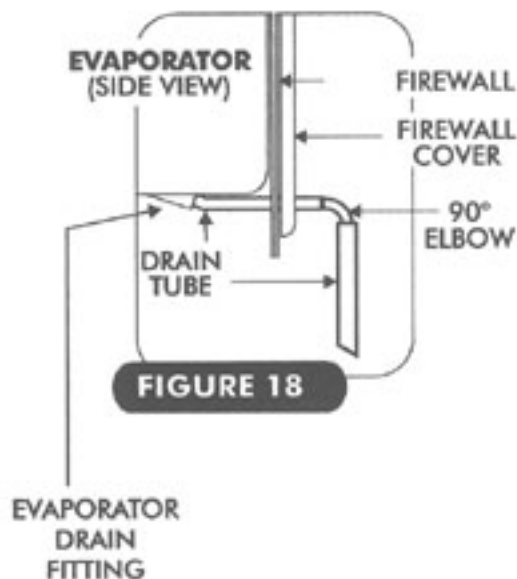


## HOSES: REFRIGERATION / HEATER / VACUUM

- DRILL A 5/8" HOLE IN THE FIREWALL USING THE HOLE IN THE FIREWALL COVER AS A GUIDE. INSERT DRAIN HOSE THRU FIREWALL AND SLIP THE END ONTO THE EVAPORATOR DRAIN FITTING. SEE FIGURE 18.
- INSERT BLUE COMPRESSOR WIRE LEAD (LOCATED ON THE THERMOSTAT) THRU THE GROMMET WITH THE # 10 LINE IN IT, AND ATTACH TO THE COMPRESSOR SAFETY SWITCH LOCATED ON THE #6 ALUMINUM HARDLINE. ATTACH THE OTHER BLUE WIRE TO THE SAFETY SWITCH AND CONNECT TO THE COMPRESSOR.

## VACUUM

- ROUTE THE VACUUM LINE FOR THE HEATER CONTROL VALVE THRU THE 15/64" HOLE IN THE HOSE COVER AND ATTACH ONE END TO THE HEATER CONTROL VALVE (THE OTHER VACUUM LINE CONNECTS TO AN ENGINE VACUUM SOURCE). SEE PAGE 10, FIGURE 11 FOR VACUUM LINE CONNECTIONS.


**FIGURE 17**

**FIGURE 18**

 EVAPORATOR  
DRAIN  
FITTING

## CONTROL PANEL INSTALLATION

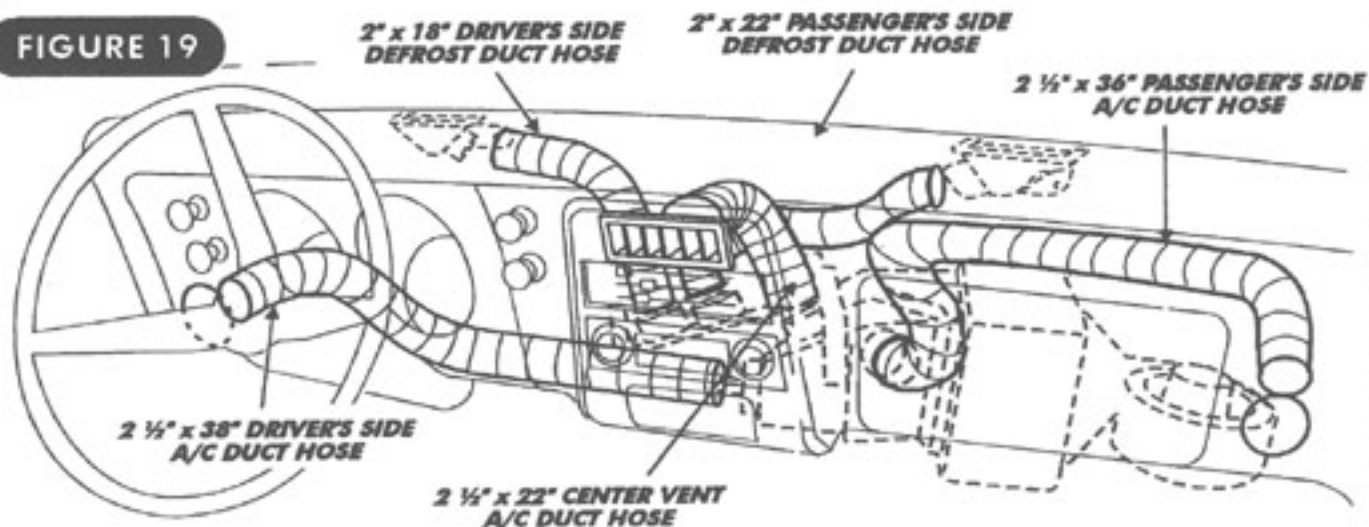
- INSTALL THE CONTROL PANEL INTO THE DASH.
- ATTACH 24-5/8" DEFROST CABLE TO DEFROST CABLE BRACKET w/#8 SCREW AS SHOWN IN FIGURE 9 PAGE 8.
- SECURE CABLE END WITH 1/8" PUSH ON RING.
- ATTACH 37-1/8" A/C HEAT DOOR CABLE TO THE A/C HEAT DOOR BRACKET w/#8 SCREW . SECURE CABLE END WITH AN 1/8" PUSH ON RING (SEE FIGURE 9, PAGE 8).

## WIRING

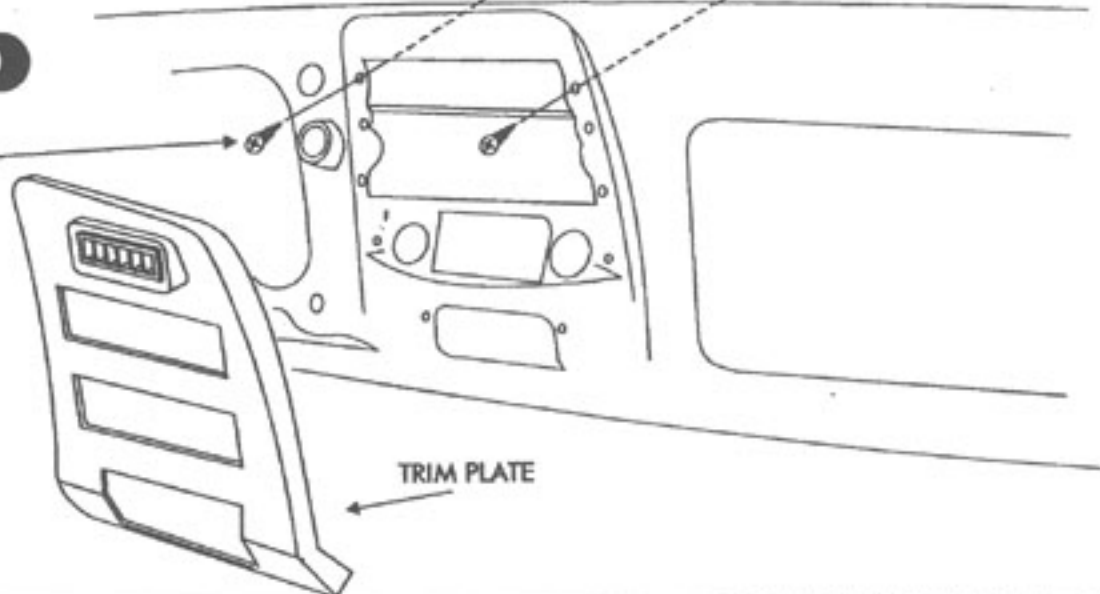
- CONNECT ALL WIRING ACCORDING TO SCHEMATIC ON PAGE 18.

## DUCT HOSES

- ATTACH ABS CENTER VENT HOSE ADAPTER. SEE FIGURE 20.
- STRETCH DUCT HOSES OUT TO MAXIMUM LENGTH, CUT TO SIZES SHOWN BELOW.
- ROUTE AND ATTACH DEFROST DUCT HOSES TO THE DEFROST DUCTS.
- ROUTE AND ATTACH DRIVER'S AND PASSENGER'S SIDE HOSES (SEE FIGURE 19).
- ATTACH CENTER VENT DUCT HOSE TO THE EVAPORATOR AND THE CENTER VENT HOSE ADAPTER.
- REINSTALL THE RADIO, ASHTRAY GLIDER AND ASHTRAY.
- INSTALL THE CENTER TRIM PLATE

**FIGURE 19**

 CENTER VENT  
HOSE ADAPTER

**FIGURE 20**

 8 X 1/2  
SHEETMETAL  
SCREWS


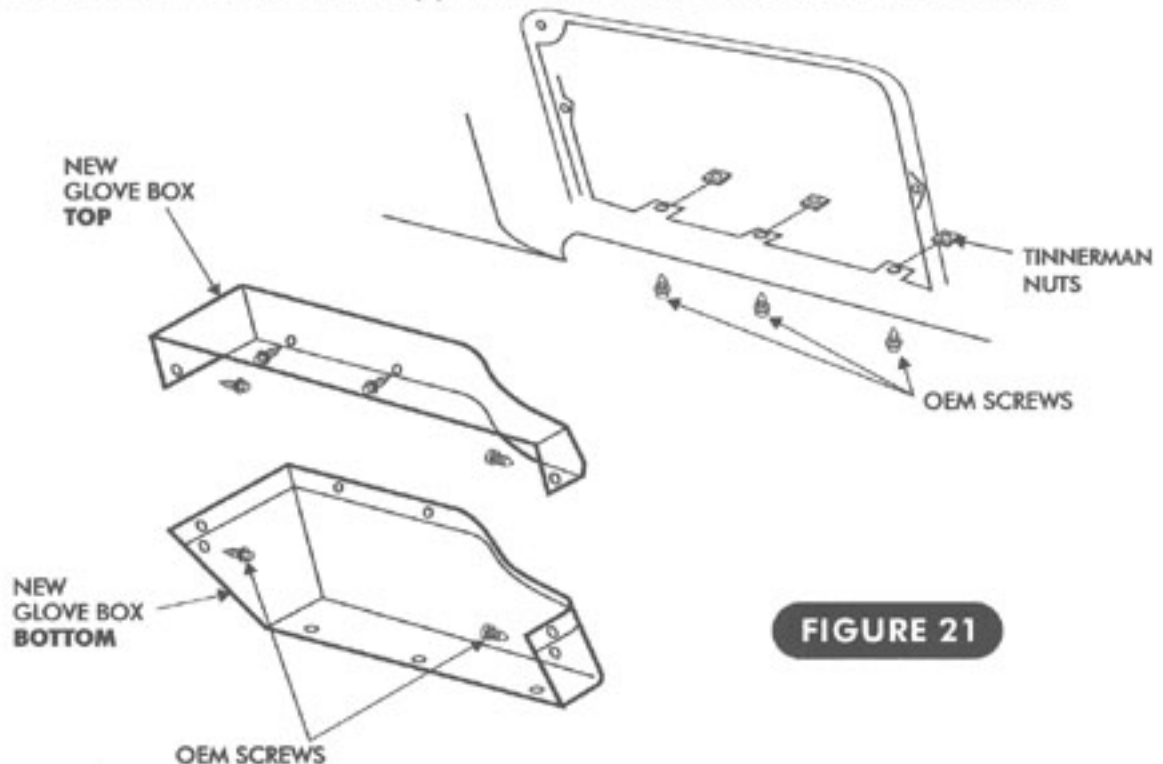
TRIM PLATE



## GLOVE BOX INSTALLATION

THE NEW GLOVE BOX IS MADE IN TWO (2) PIECES FOR EASY INSTALLATION.

- LOCATE THE THREE (3) TINNEMAN NUTS PREVIOUSLY REMOVED FROM THE ORIGINAL GLOVE BOX SHELL AND SLIDE THEM INTO POSITION AT DOOR HINGE HOLES PUNCHED IN DASH.
- INSERT BOTTOM HALF OF NEW GLOVE BOX, SECURING ONLY WITH ONE OEM SCREW ON EACH SIDE THROUGH DASH HOLES (SEE FIGURE 21).
- INSERT TOP HALF OF GLOVE BOX AND FASTEN TO BOTTOM HALF USING FIVE (5) #6 x 3/8" BLACK PAN HEAD PHILLIPS SCREWS (SEE FIGURE 21).
- INSTALL GLOVE BOX DOOR USING THREE (3) OEM SCREWS THROUGH THE TINNEMAN NUTS.



**FIGURE 21**

## FINAL STEPS

- REPLACE THE INSTRUMENT PANEL ASSEMBLY AND RAISE THE STEERING COLUMN INTO PLACE AND TIGHTEN.
- REINSTALL ALL PREVIOUSLY REMOVED ITEMS (FENDER SKIRT, FENDER, WHEEL, BATTERY BOX, BATTERY AND SEATS).
- FILL RADIATOR WITH AT LEAST A 50/50 MIXTURE OF APPROVED ANTIFREEZE AND WATER. IT IS THE OWNER'S RESPONSIBILITY TO KEEP THE FREEZE PROTECTION AT THE PROPER LEVEL FOR THE CLIMATE IN WHICH THE VEHICLE IS OPERATED. FAILURE TO FOLLOW ANTIFREEZE RECOMMENDATIONS WILL CAUSE HEATER CORE TO CORRODE PREMATURELY AND POSSIBLY BURST IN AC MODE AND/OR FREEZING WEATHER, VOIDING YOUR WARRANTY. DOUBLE CHECK ALL FITTINGS, BRACKETS AND BELTS FOR TIGHTNESS.
- VINTAGE AIR RECOMMENDS THAT ALL AC SYSTEMS BE SERVICED BY A CERTIFIED AUTOMOTIVE AIR CONDITIONING TECHNICIAN.
- EVACUATE THE SYSTEM FOR A MINIMUM OF 45 MINUTES PRIOR TO CHARGING AND LEAK CHECK PRIOR TO SERVICING.
- CHARGE THE SYSTEM TO THE CAPACITIES STATED INSIDE THE FRONT COVER OF THIS INSTRUCTION MANUAL.

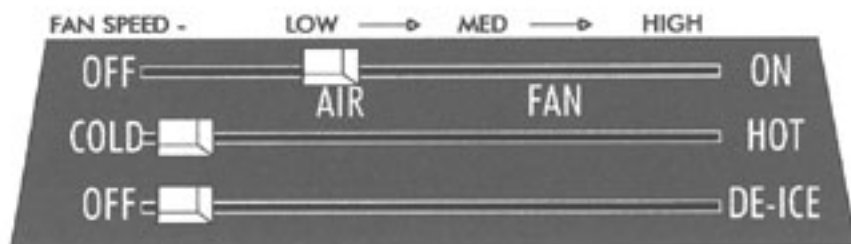
## OPERATION OF CONTROLS

### SYSTEM OFF



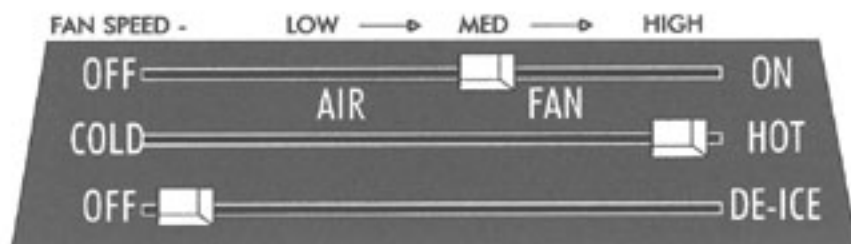
### A/C MODE

SELECT FAN SPEED WITH THE TOP LEVER. THE BOTTOM TWO LEVERS MUST BE IN THE FAR LEFT POSITION FOR THE A/C MODE.



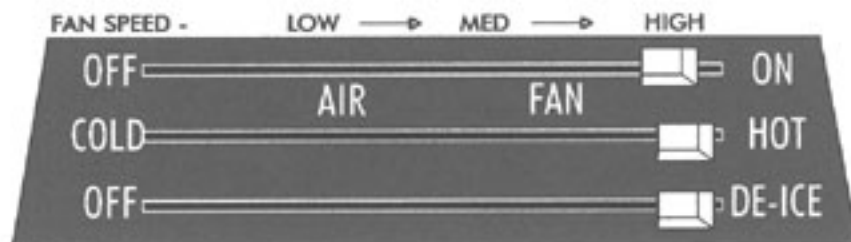
### HEAT MODE

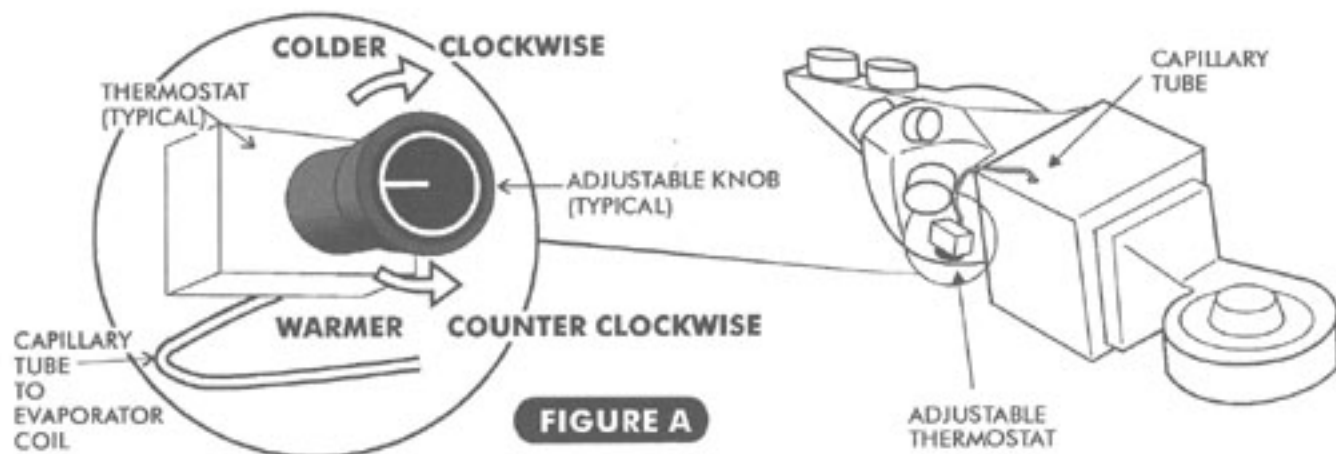
SELECT FAN SPEED WITH TOP LEVER. SLIDE CENTER LEVER TO THE RIGHT.



### DEFROST MODE

SELECT FAN SPEED WITH TOP LEVER. SLIDE CENTER LEVER TO THE FAR RIGHT. SLIDE BOTTOM LEVER TO THE FAR RIGHT.





**FIGURE A**

## AIR CONDITIONING ADJUSTMENTS:

- THE AIR CONDITIONER THERMOSTAT CONTROLS COIL TEMPERATURE, IT IS SHIPPED ADJUSTED FULLY COLD (CLOCKWISE), IN THE MAJORITY OF CASES THE A/C WILL OPERATE CORRECTLY AS SHIPPED.
- TURNING THE KNOB ON THE THERMOSTAT TO THE RIGHT (CLOCKWISE) MAKES THE SYSTEM OPERATE COLDER. IF THE THERMOSTAT IS SET TOO COLD THE EVAPORATOR WILL "ICE UP" - THE EVAPORATOR COIL IS RESTRICTED WITH ICE AND COLD AIR FLOW WILL BE REDUCED.
- TURNING THE KNOB TO THE LEFT (COUNTER CLOCKWISE) MAKES THE SYSTEM OPERATE WARMER. THE COMPRESSOR CLUTCH WILL CYCLE OFF FREQUENTLY AND THE A/C SYSTEM WILL NOT GET AS COOL AS IT COULD.

## ADJUSTING A/C THERMOSTAT

**1.) SYMPTOM:** THE A/C WORKS WELL AT FIRST THEN QUILTS COOLING. THE AIR FLOW FROM THE VENTS IS LOW AND THE COMPRESSOR CYCLES INFREQUENTLY.

**SOLUTION:** THE THERMOSTAT IS SET TOO COLD AND THE EVAPORATOR IS "ICING UP" AND RESTRICTING AIR FLOW. ALLOW THE ICE TO MELT AND SET THE THERMOSTAT WARMER (COUNTER CLOCKWISE) 10% OF A TURN EACH ADJUSTMENT UNTIL THE SYMPTOMS DIMINISH.

**2.) SYMPTOM:** A/C NEVER GETS COLD AND THE COMPRESSOR CLUTCH CYCLES FREQUENTLY.

**SOLUTION:** THE THERMOSTAT IS SET TOO WARM. SET THE THERMOSTAT COLDER (CLOCKWISE) 10% OF A TURN EACH ADJUSTMENT UNTIL THE COMPRESSOR CLUTCH CYCLES INFREQUENTLY. AVOID SETTING THE THERMOSTAT TOO COLD.

**3.) SYMPTOM:** THE A/C NEVER GETS COLD, SOMETIMES EVEN BLOWS HOT, AND THE A/C COMPRESSOR CLUTCH INFREQUENTLY CYCLES OFF.

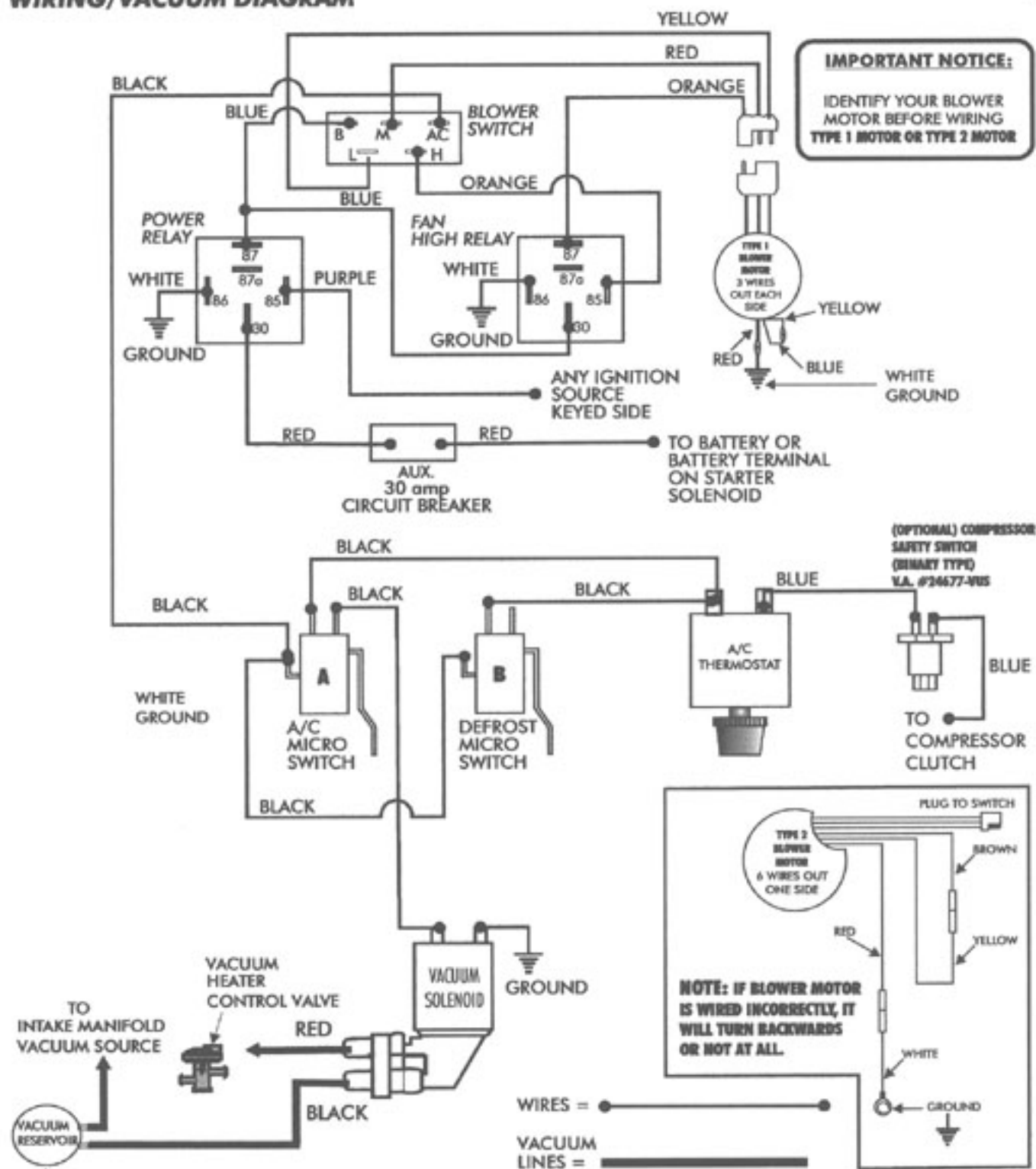
**SOLUTION:** THE HEATER MAY BE ON AT ALL TIMES. CAREFULLY FEEL AROUND THE HEATER HOSES AT THE FIREWALL. THEY SHOULD BE COLD WHEN THE A/C IS ON. IF THE HOSES ARE HOT....

- THE HEATER CONTROL VALVE MAY BE INSTALLED BACKWARDS. CHECK THE FLOW DIRECTION ARROW ON THE VALVE AGAINST THE ILLUSTRATION IN YOUR INSTALLATION INSTRUCTIONS.
- CABLE OPERATED: THE VALVE MAY BE MISADJUSTED.
- HEATER CONTROL VALVE IS INSTALLED IN WRONG HEATER HOSE.

## WIRING/VACUUM DIAGRAM

**IMPORTANT NOTICE:**

IDENTIFY YOUR BLOWER MOTOR BEFORE WIRING  
TYPE 1 MOTOR OR TYPE 2 MOTOR

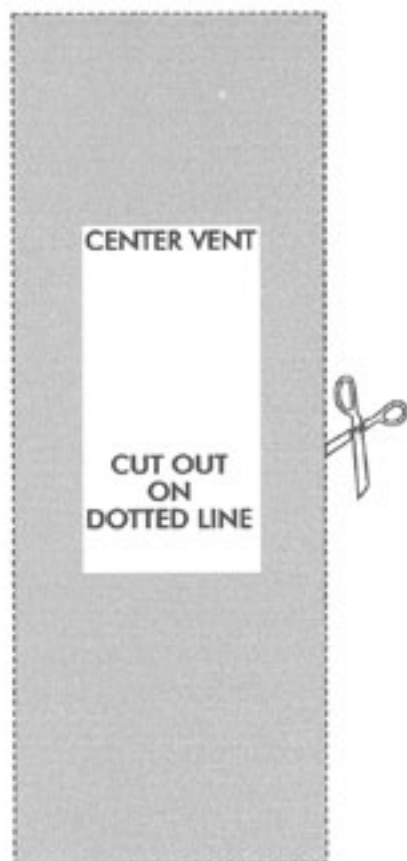


**NOTE: IF BLOWER MOTOR IS WIRED INCORRECTLY, IT WILL TURN BACKWARDS OR NOT AT ALL.**

**\* ATTACH ALL WHITE WIRES (↔) TO CHASSIS GROUND.**

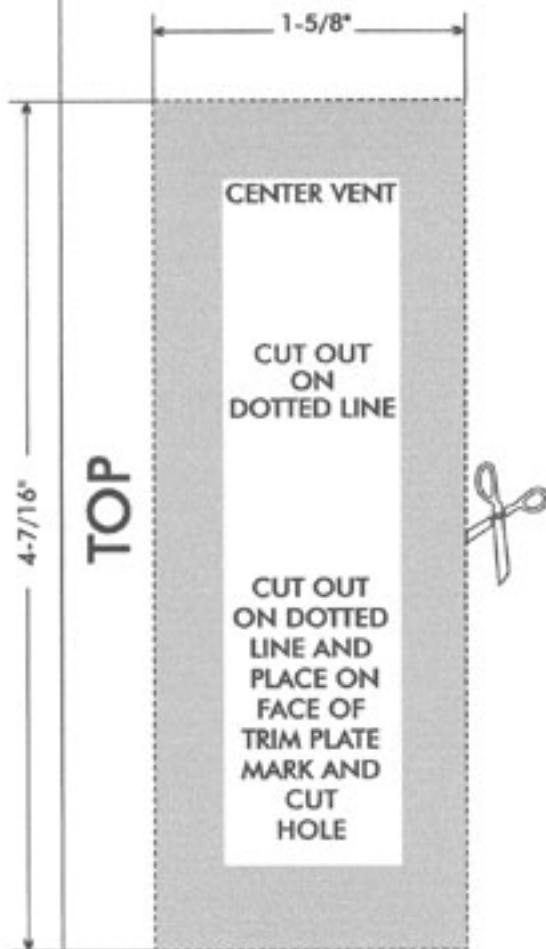
**CENTER VENT TEMPLATE FOR VINTAGE AIR LOUVER ONLY**

CUT SUPPLIED  
FOAM TO MATCH  
TEMPLATE. PEEL  
PROTECTIVE BACKING  
AND STICK TO BACKSIDE  
OF TRIM PLATE

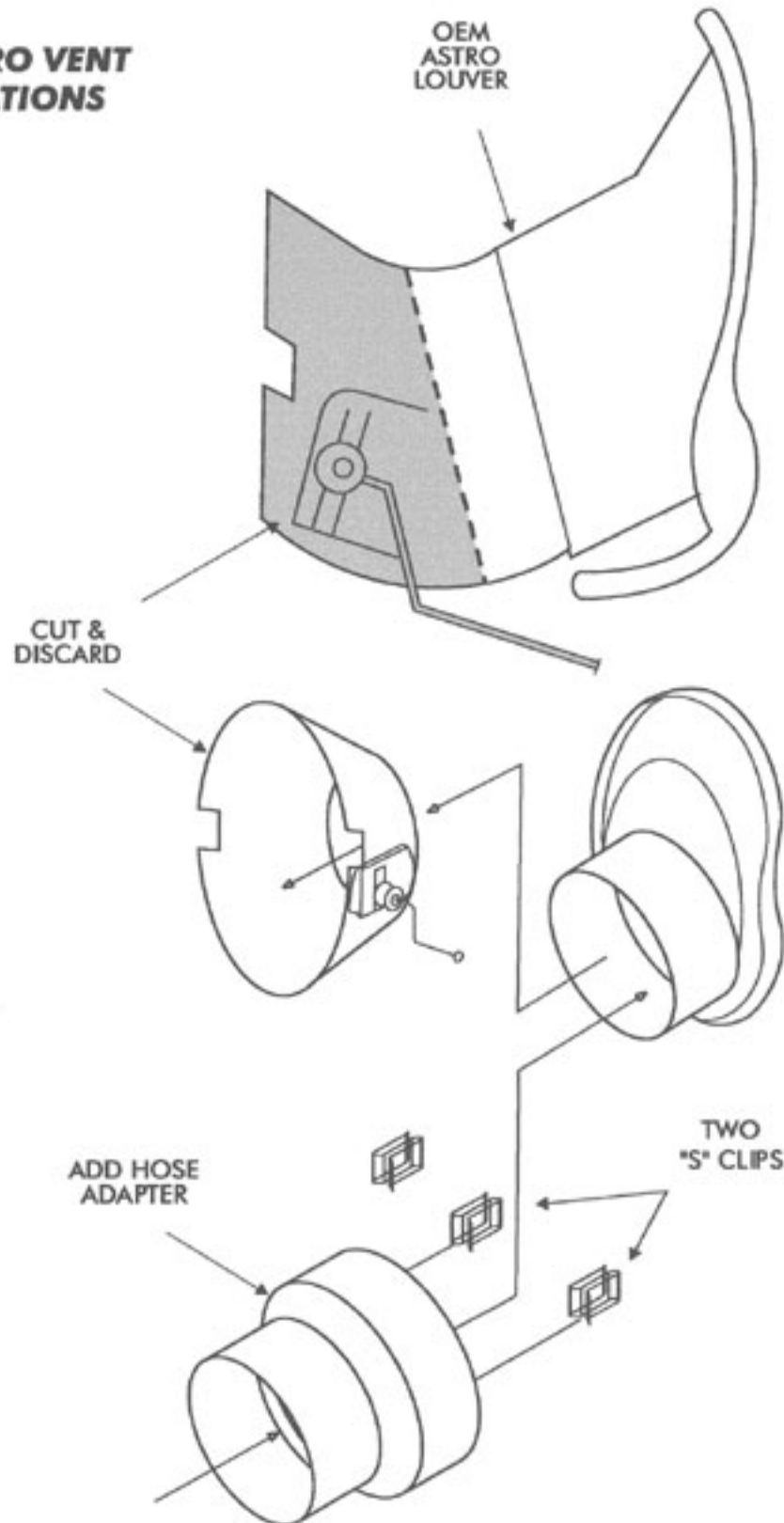


**FOAM TEMPLATE**

TEMPLATE FOR CUTTING  
HOLE IN TRIM PLATE FOR  
V.A. CENTER LOUVER  
INSTALLATION



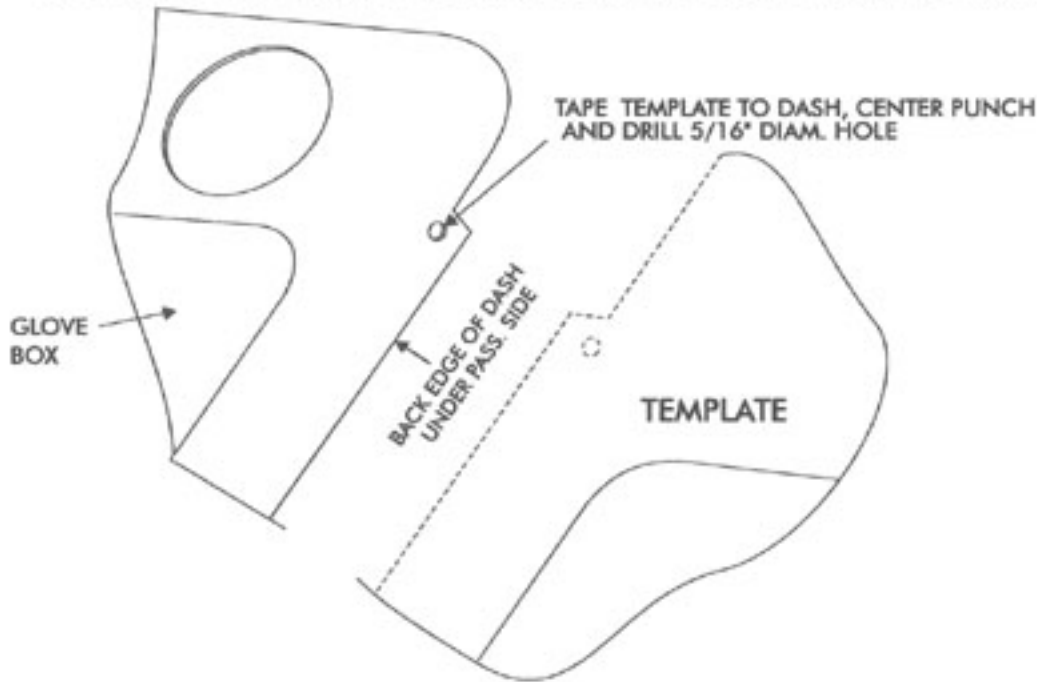
**O.E.M. ASTRO VENT  
MODIFICATIONS**



## PASSENGER COMPARTMENT

**NOTE: MOST CARS HAVE THIS HOLE.. IF YOURS DOES NOT, USE THE TEMPLATE PROVIDED IN ORDER TO LOCATE THE HOLE.**

WITH TEMPLATE PROVIDED ON THIS PAGE DRILL A 5/16" HOLE UNDER THE RIGHT SIDE OF THE DASH. THE 5/16" HOLE IS FOR THE BLOWER HOUSING BRACKET MOUNTING BOLT (SEE FIGURE 10, PG. 9).



### TEMPLATE FOR 1967/68 CAMARO without FACTORY AIR CONDITIONING

CUT ON  
DOTTED LINES  
OF TEMPLATE  
AND PLACE AS  
SHOWN ABOVE.



ALIGN WITH  
EDGE OF  
GLOVE BOX

TOP

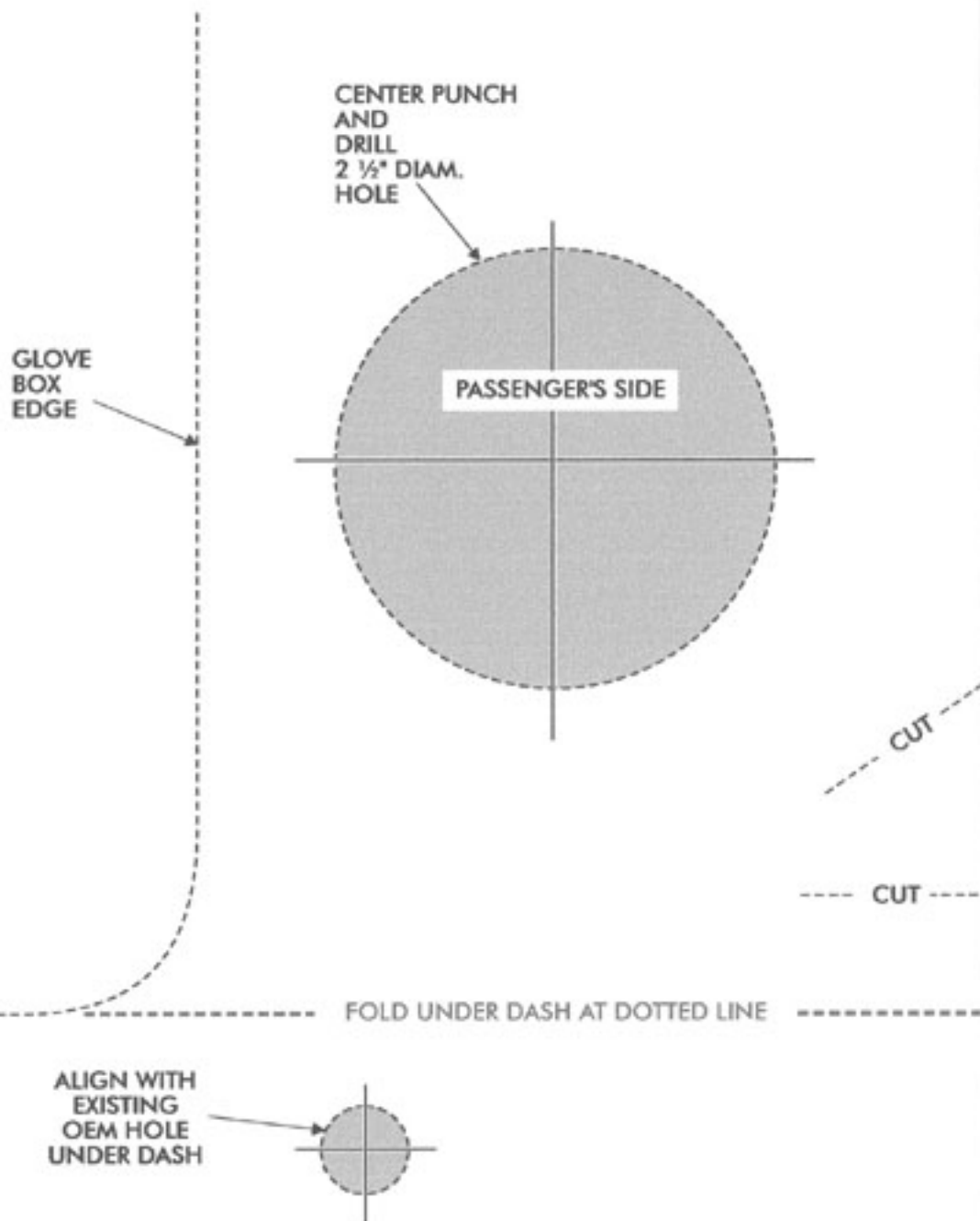
FOLD UNDER DASH AT LINE

TOP

5/16 HOLE

BACK  
EDGE OF  
DASH

**PASSENGER'S SIDE VENT TEMPLATE FOR VINTAGE AIR LOUVER ONLY**  
1967 CAMARO

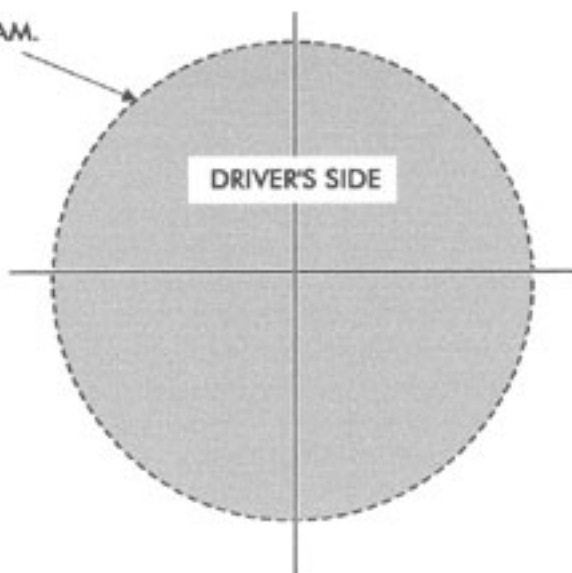


TEMPLATE FOR BALL LOUVER  
ON PASSENGER SIDE AREA



## DRIVER'S SIDE VENT TEMPLATE FOR VINTAGE AIR LOUVER ONLY 1967 CAMARO

CENTER PUNCH  
AND  
DRILL  
2 1/2" DIAM.  
HOLE



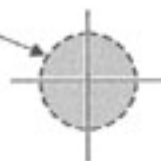
ALIGN  
THIS  
EDGE  
WITH  
DASH  
TO  
INSTRUMENT  
PANEL  
PARTING  
LINE

CUT

CUT

FOLD UNDER DASH AT DOTTED LINE

EXISTING  
OEM HOLE



DRIVER SIDE  
TEMPLATE  
FOR  
INSTALLING  
O.E.M.  
ASTRO  
VENTILATION  
LOUVERS  
INTO A  
NON-AIR  
DASH.

EDGE  
OF  
DASH  
ROLL  
AT  
INSTRUMENT  
CLUSTER

CUT HERE

CUT HERE

CUT HERE

CUT HERE

CUT HERE

FOLD UNDER DASH

DRILL 1/8" HOLE

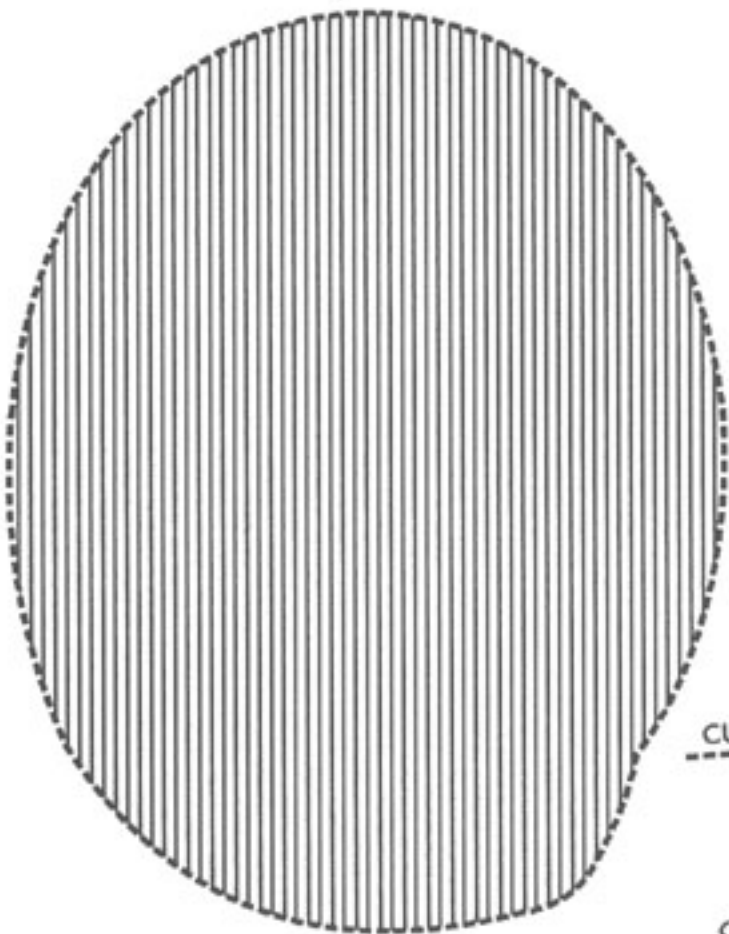


PASSENGER SIDE TEMPLATE FOR INSTALLING  
O.E.M. ASTRO VENTILATION LOUVERS  
INTO A NON-AIR DASH.

GLOVE BOX  
EDGE



CUT ON  
DOTTED LINE



CUT HERE

CUT HERE

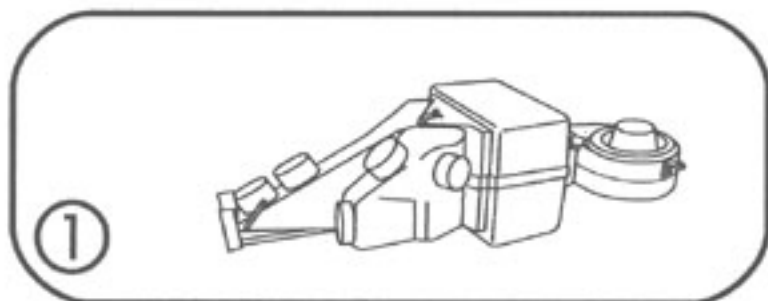
CUT HERE

CUT HERE

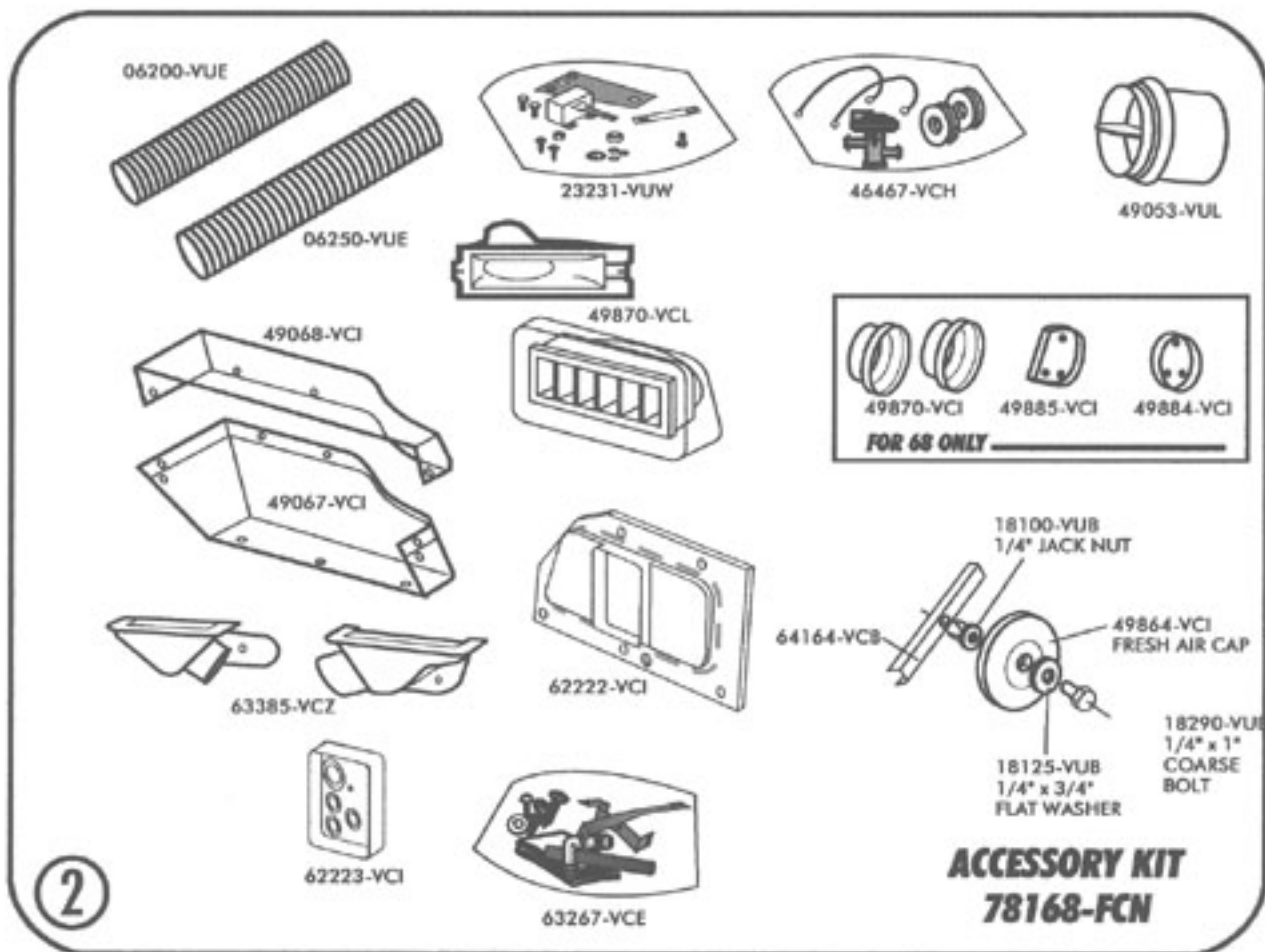
-- FOLD UNDER DASH --

DRILL 1/8" HOLE





## EVAPORATOR KIT 55074-VCZ-A



### 1967-68 CAMARO & FIREBIRD w/OUT FACTORY AIR EVAPORATOR KIT PACKING LIST

NO.	QTY	PART NO.	DESCRIPTION
1.	1	55467-VCE-A	EVAPORATOR w/BRACKETS
2.	1	78168-FCN	67-68 CAMARO w/OUT AIR ACCESSORY KIT

CHECKED BY: \_\_\_\_\_  
 PACKED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_