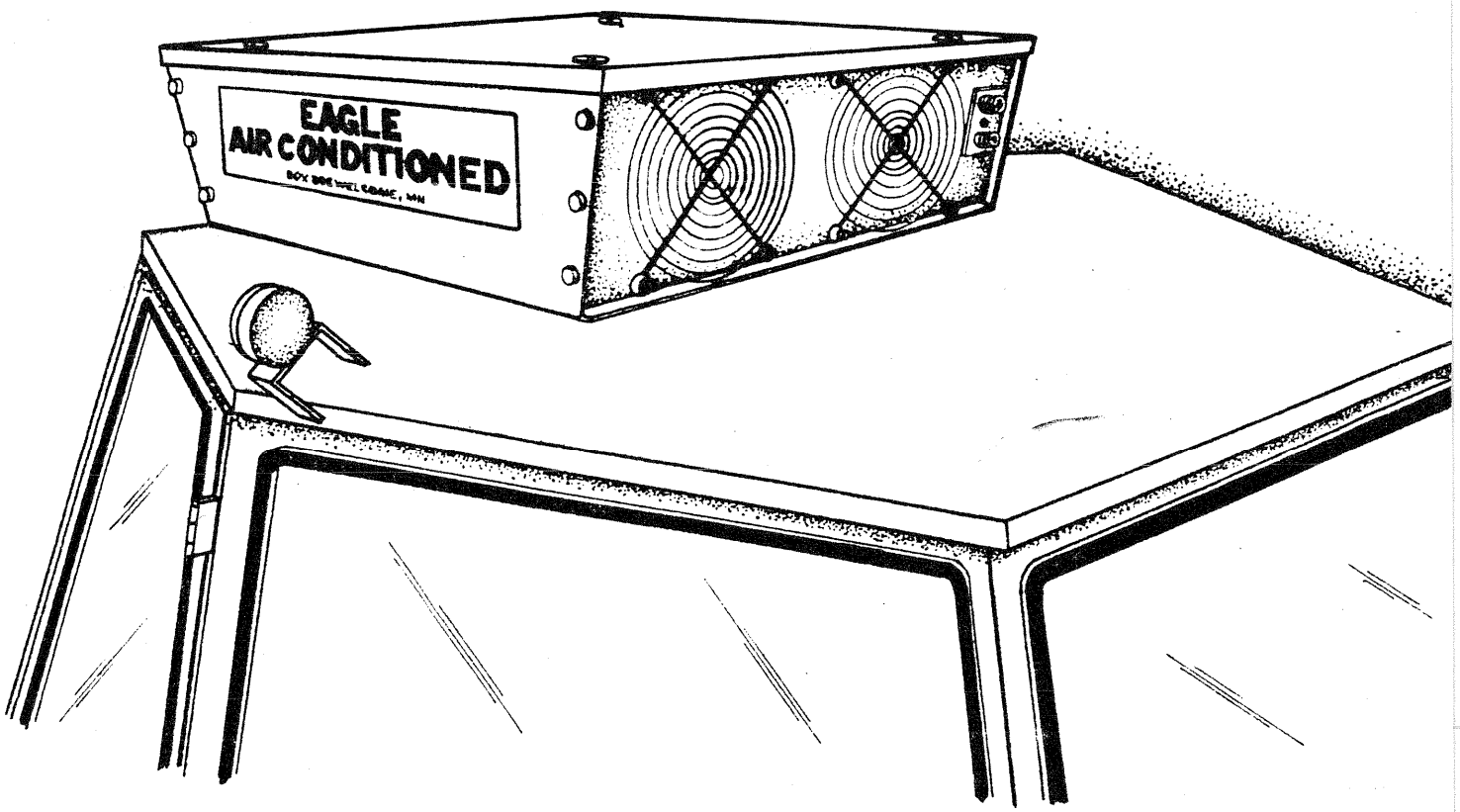
# EAGLE
# OPERATOR'S MANUAL

# COMPLETE ROOF UNIT




EAGLE AIR Conditioning

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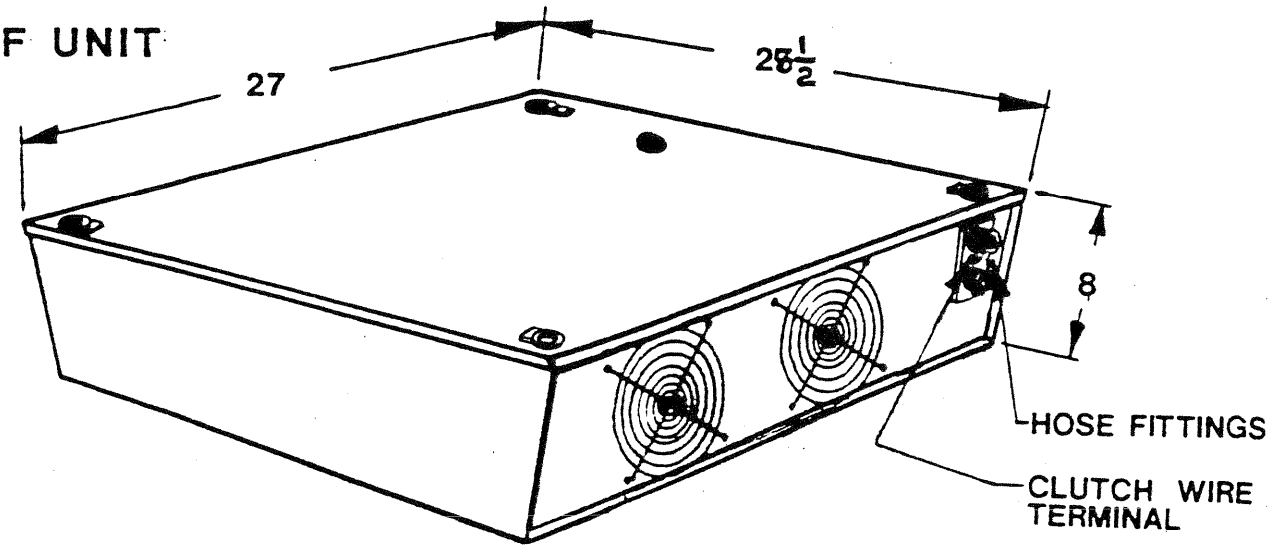
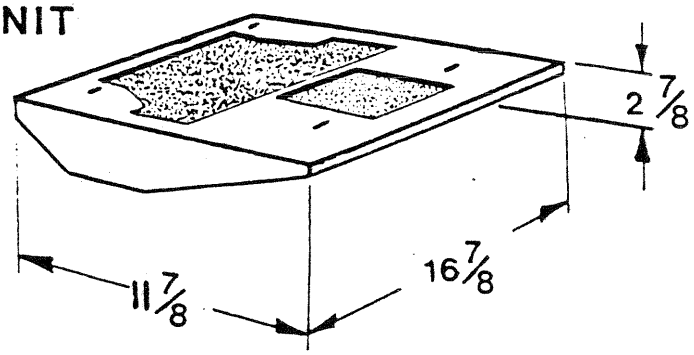
80-312

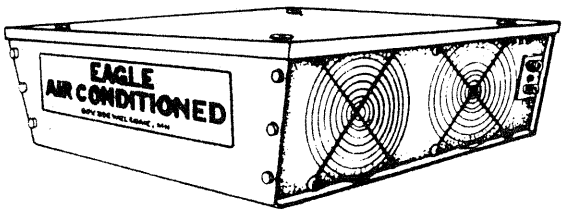
# SIZE SPECIFICATIONS

## ROOF UNIT




## CAB UNIT






# INSTALLATION OF THE UNIT

Start by locating a spot on the roof of the machine that is away from rollbars. Also inside the cab make sure there are no obstructions in the way of mounting the Cab Console.

Next tape down the drawing template on the top of the roof. This template shows all holes that need to be drilled and what size to use. Make sure that you place it with the front arrow pointing towards the front. In the center are two 1 1/4 dia. holes that have to be cut to connect each hole.

In one of the boxes are two Air Guide Brackets. See Illustration A. They fit into the slot you made connecting the 1 1/4 dia holes together. The flange goes on the outside of the roof is fastened to the roof with four small selftapping screws (use a 3/32 dia drill). From inside the cab take a look at the thickness of your cab roof. If there is foam, metal, or an open area below the bottom of the Air Guide Brackets you need to use the plastic bag that is included. See Illustration A.

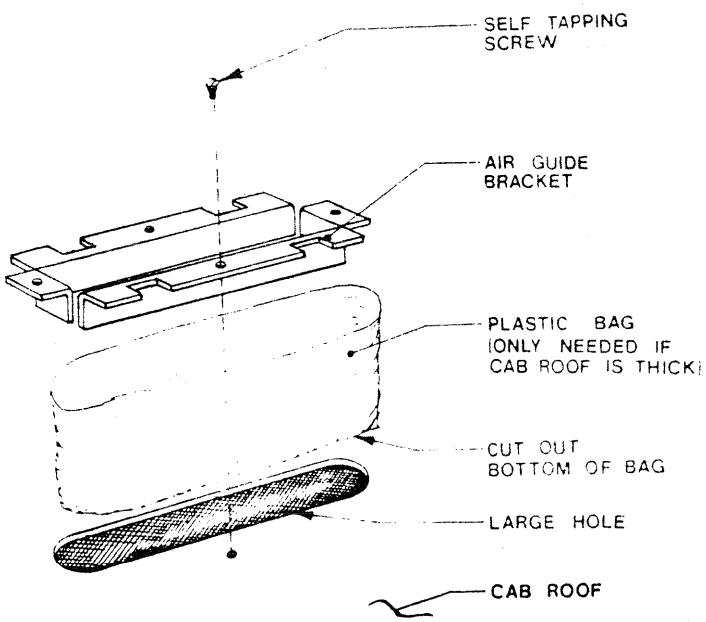



ILLUSTRATION A

By looking at your roof top , now you must determine if it is somewhat flat or rounded. If it is rounded a lot you must use the rubber boot included. Glue this to the cab roof with the two large slots matching up with the holes you already put into the cab roof.

Now you are ready to place the Roof Unit in place. Align holes and set unit into place making sure that the wires get into the center slot.

Remove the main cover of the roof unit and the inside cover with the decal on it. You should now see the Evaporator Blower.

Next install the shock mounts as shown in Illustration B.

Now inside the cab you must adjust the Long Coupling Nuts so that they measure 2 1/2". Lock into place with 5/16 nc hex nut.

Now crimp the wire connectors included to the six wires coming thru the cab roof. Notice that there are two different sizes of wire connectors so match them up correctly - the large one goes to the largest diameter wire and so on. See Illustration C. The wiring diagram at the back of this manual may also help.

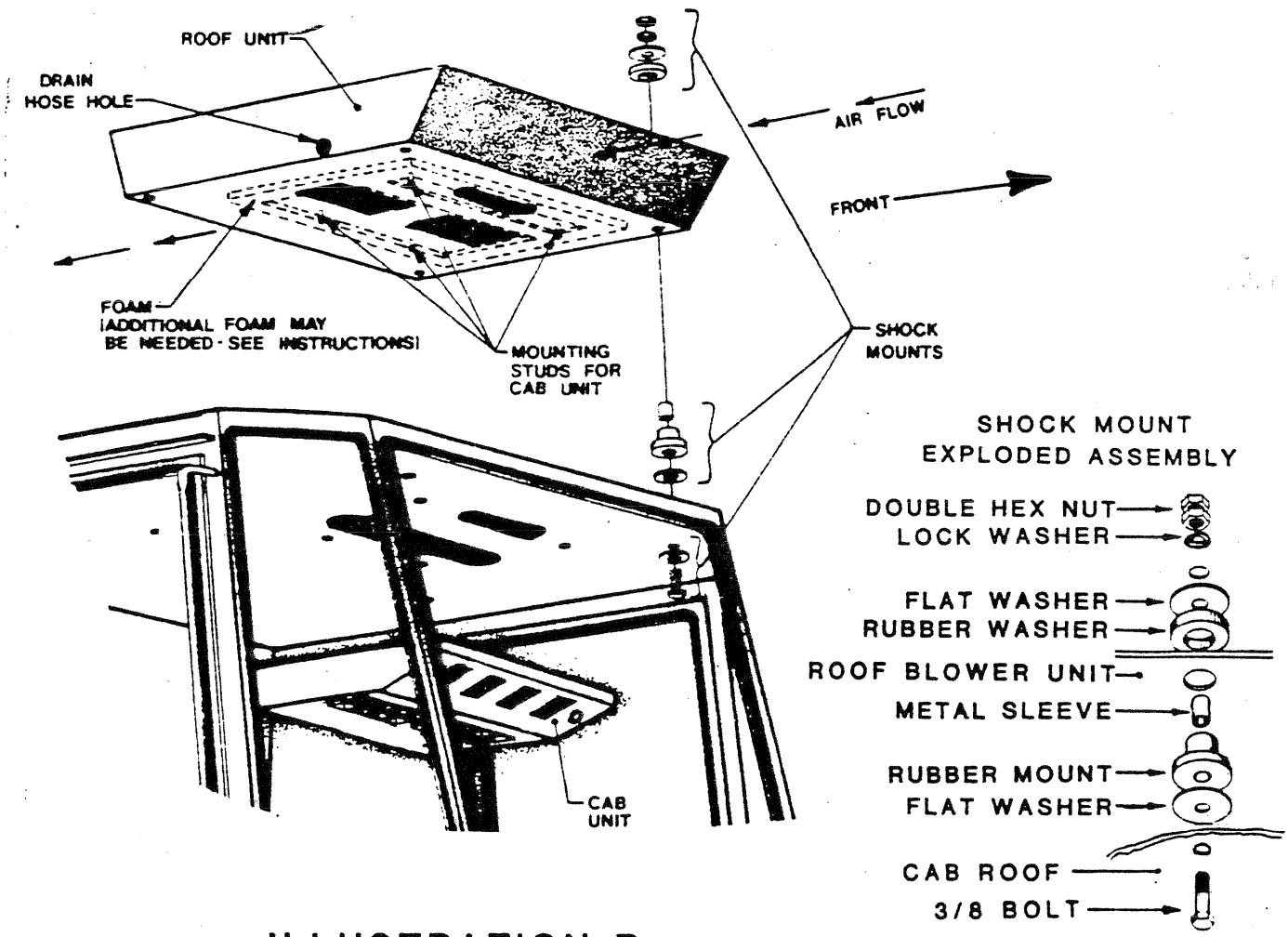
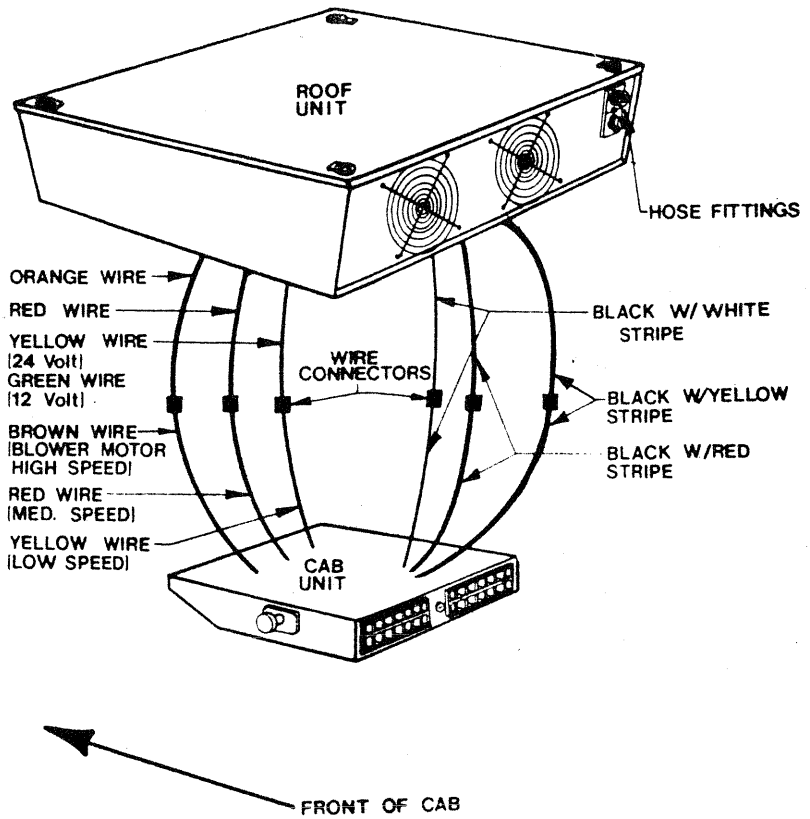



ILLUSTRATION B

# ILLUSTRATION C




From the Cab Unit there are two ring latches holding the Recirculation Plate Assembly. Remove this along with the four Louvers from the Cab Unit. You should be able to see four holes now used to mount to the Cab Unit. Remove the four truss head screws holding the Control Panel in place. It will now hang there by the wires.

Slip the wires from the Roof Unit thru the Grommet in the Cab Unit. Selecting the correct length of bolts for your cab roof thickness.

Make sure the Temperature Probe is put thru the Grommet in the Cab Unit and also put thru the Grommet in the Roof Unit. Hook it on the Roof Unit so that it will not pull thru. Next connect the wires together from the Roof Unit to the Cab Unit using Illustration C as a guideline. Now put the four mounting screws holding the Control Plate back into place.

Get on top of the roof and take the Temperature Probe around the Blower and insert into the Evaparator Coil.

Put the remaining mounting bolts to the Cab Unit in place and tighten units together. Replace Recirculation Plate Assembly and all four louvers.

Last put the Main Cover on top of the Roof Unit. Make sure that the hole (covered with a plug) aligns with the Drier side of the housing. This is used to view the Sight Glass of the Drier. See Illustration D.

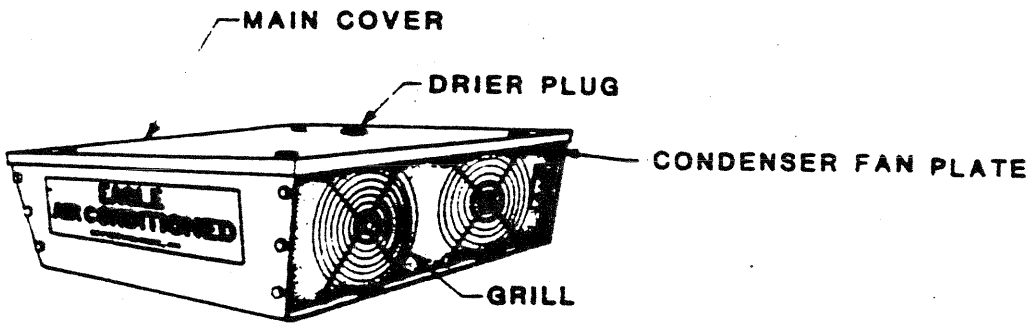



**ILLUSTRATION D**

The Standard Cab Unit and the optional Low Profile Cab Unit have an electrical terminal for a power wire (10 ga. wire). The Roof Unit also has an optional power wire terminal that can be used. See Illustration E. Use only one or the other, not both.

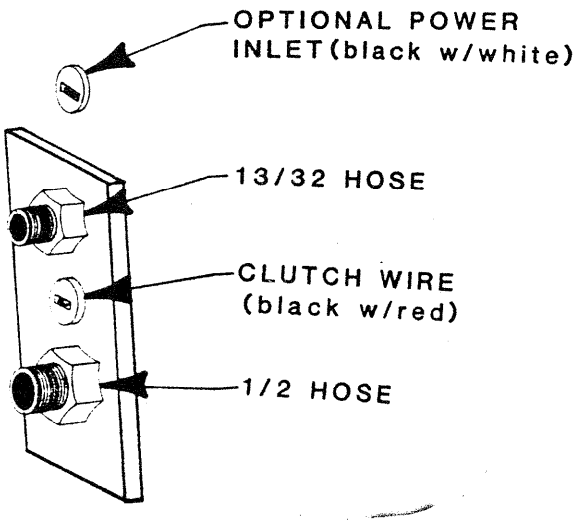
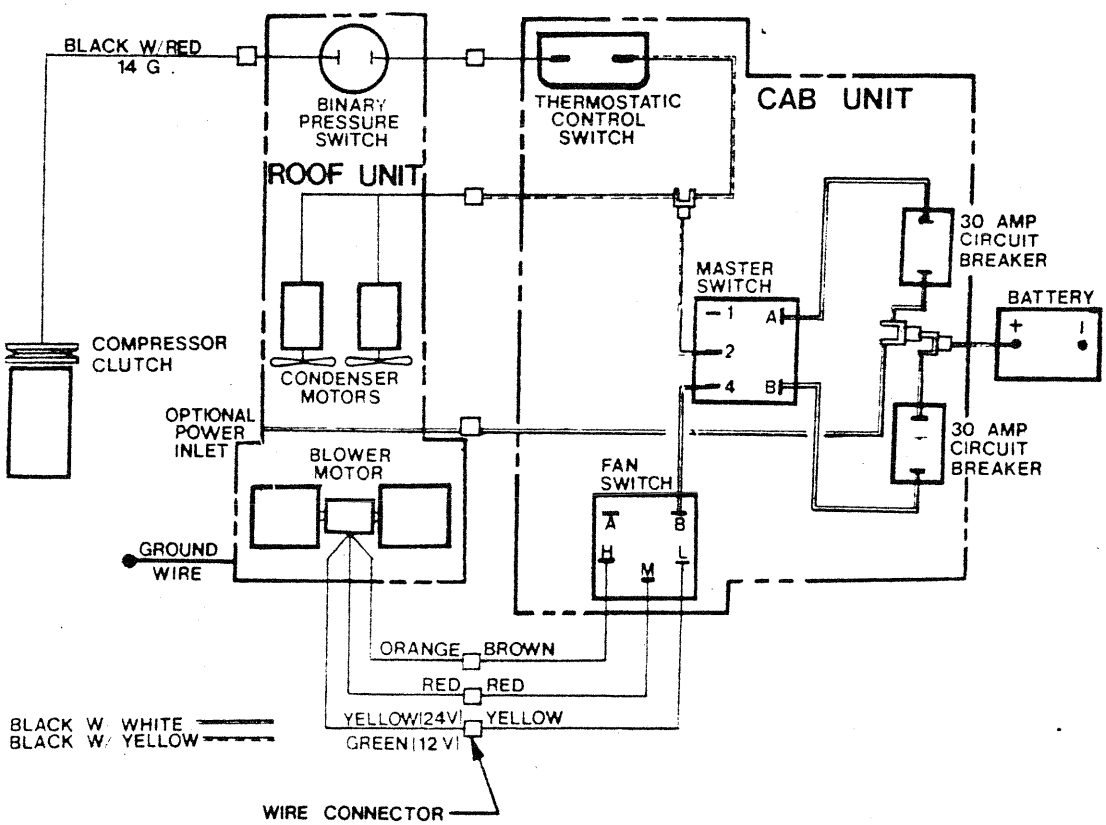


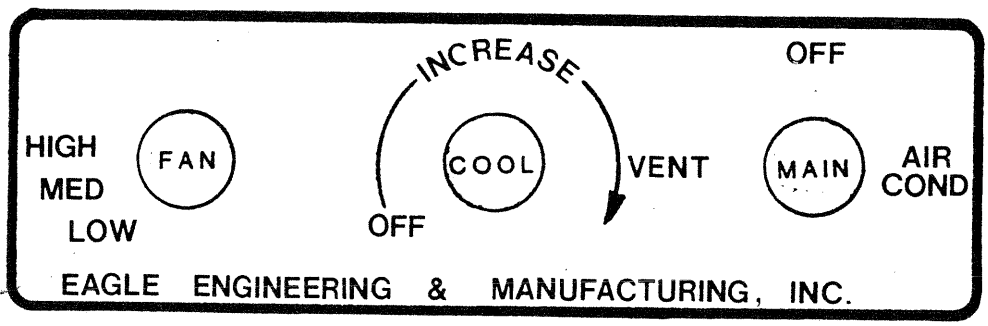

ILLUSTRATION E.




## AIR CONDITIONING SYSTEM WIRING DIAGRAM

# I. AIR CONDITIONING / VENTILATION OPERATION

This system is designed to give both Air Conditioning and Ventilation capacities for complete comfort in all weather conditions. It gives you a fresh air supply (pressurization) during all functions of the unit.




## A. SWITCH CONTROL

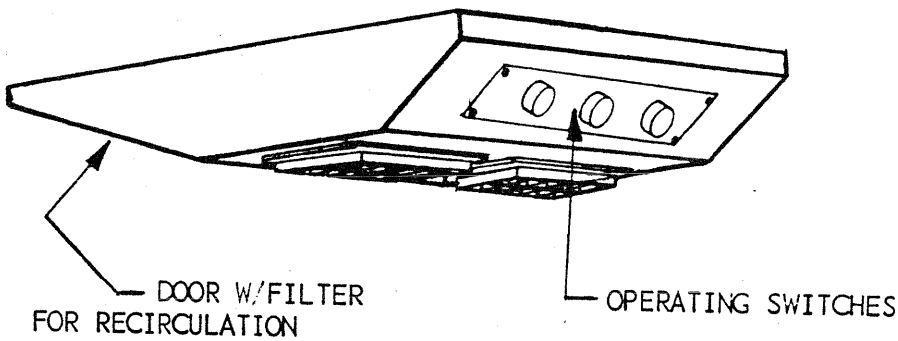
**MAIN:** The Main Switch will turn ON and OFF the system desired. The Air Conditioning System will operate by turning the knob clockwise. The Ventilation system will operate by turning the knob counter-clockwise.

**COOL:** The Thermostatic Switch will control the temperature within the cab of the machine. Turning the switch clockwise or "INCREASING" will make the compressor run longer thus pulling more warm air and moisture (humidity) out of cab This switch only works when the "SWITCH" is turned to the "AIR COND" mode.

**FAN:** The Blower Fan switch has three speeds to select from, "LOW", "MED," and "HI" This switch will operate in either the "AIR COND" or the VENT" mode of the Main Switch.

**VENTILATION:** Filtered air that is not heated or cooled can be accomplished by turning the Main Switch counter-clockwise to the "VENT" mode. Air flow will be controlled by the "FAN SWITCH".

## CAB UNIT



# C. FILTER CLEANING

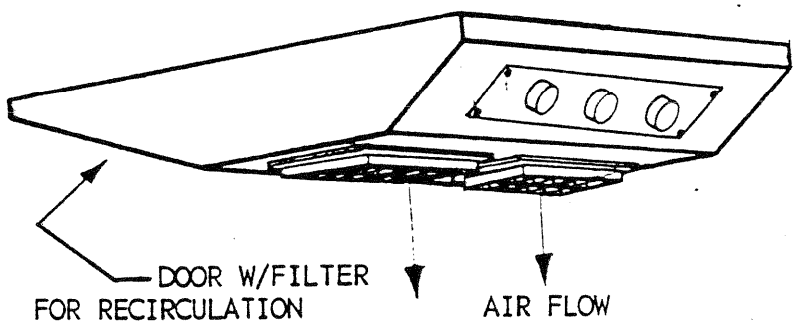
## MAIN FILTER:

By removing the top cover of the roof unit and flipping the two latches on the filter door you can inspect the main filter. It should be cleaned by using air pressure or replaced as needed.

## RECIRCULATION FILTER:

The cab unit has two ring latch towards the front of the cab. By turning them you can remove the recirculation bracket assembly and examine the air filter. Clean or replace as needed.

**CAB UNIT**



# MECHANICAL TROUBLE CHECK CHART

## 1. BELT TROUBLE

| SYMPTOM | CAUSE | CORRECTION |
|---|---|---|
| Slipping | Loose | Adjust Belt to ½" Depression |
| | Overcharge | Correct Charge |
| | Air in System | Evacuate & Recharge |
| Excessive Wear | Pulley Not in Line | Align Pulley |
| | Too Tight | Adjust or Replace |
| | Bad Idler Bearing | Replace |
| | Belt Wrong Width | Replace |

## 2. VIBRATION OR NOISE—COMPRESSOR AREA

| | | |
|---|---|---|
| Vibration or Noise | Stuck Compressor or Clutch | Replace |
| Vibration | Overcharge | Correct Charge |
| | Air in System | Evacuate & Recharge |
| | Mount or Compressor Bolts Loose | Tighten |
| | Drive Pulley Loose | Tighten |
| | Incorrect Belt Tension | Correct Tension |
| Noise Clutch Engaged | Bad Compressor | Replace |
| Noise Clutch Engaged or Not | Clutch Bearing | Replace |
| Noise | Clutch Loose | Tighten |
| | Clutch Rubbing Field | Align |
| | Bad Belt | Replace |
| Chatter or Knock | Compressor Low on Oil<br>Valve Plate Broken | Add Oil |

## 3. NOISE—ROOF UNIT

| SYMPTOM | CAUSE | CORRECTION |
|---|---|---|
| Rubbing or Scraping | Fan Blade or Blower Motor | Replace or Repair |
| Hissing | Low Charge and/or Leak | Repair Leak and/or Correct Charge |
| Chatter or Knock | Expansion Valve | Replace |
| Noisy Case | Loose Brackets or Screws | Tighten |
| Motor Squeal | Dry Bearings | Replace |

## 4. AIR CONDITIONING—INADEQUATE AFTER SHORT PERIOD OF OPERATION

| | | |
|---|---|---|
| Cooling Quits | Moisture | Replace Dryer |
| Cooling Intermittent | Moisture | Replace Dryer |
| Cooling Intermittent | Thermostat | Replace Thermostat |
| Cooling Quits | Thermostat | Replace Thermostat |
| Cooling Quits | Clutch | Check Pull-in of Clutch or Replace |

## 5. ELECTRICAL TROUBLES

| | | |
|---|---|---|
| Blower Motor or Condenser Fan Motor Inoperative | Defective Circuit Breaker<br>Bad Wiring Connection | Replace. Clean and Tighten Connections |
| | Tight Motor Bearing | Repair or Replace Motor |
| | Switch Open or Shorted | Repair or Replace Motor |
| Slow Running Blower | Loose Connection | Clean & Tighten Connection |

| SYMPTOM | CAUSE | CORRECTION |
|---|---|---|
| Slow Running Blower | Shaft Binding-Blower | Replace Motor (Worn Bearings) |
| | Wheel Misaligned | Replace |
| | Bad Blower Switch | Replace |
| | Insufficient Current | Larger Altermator |
| Clutch Inoperative | Defective Circuit Breaker | Replace |
| | Loose Connection | Clean & Tighten Connection |
| | Broken Wire (Ground) | Repair Wire |
| | Defective Thermostat | Replace |
| | Shorted or Open Field | Replace Field |

## 6. AIR CONDITIONING SYSTEM TROUBLE (Gauges must be connected)

| | | |
|---|---|---|
| High Head Pressure | Overcharge of Refrigerant | Purge as Necessary |
| | Air in System | Evacuate & Recharge |
| | Condenser Clogged | Clean |
| | Defective Condenser Fan Motors | Check Electrical System Before Replacing Fan Motors |
| Low Head Pressure | Undercharge of Refrigerant | Complete the Charge |
| | Bad Compressor Valve Plate or Gasket | Repair or Replace |
| | Restriction in Dryer | Replace Dryer |
| Low Suction Pressure | Restriction in Lines | Clean the Lines |
| | Restriction in Expansion Valve | Replace Expansion Valve & Dryer |
| | Improper Expansion Valve in Charge | Replace the Expansion Valve |
| | Broken Expansion Valve Cap Tube (Valve Remains Closed) | Replace the Expansion Valve |
| | Freon Leak | Check Hoses & Fittings Tighten, Repair or Replace |

## PRODUCT SERVICE:

The organization purchasing a system from Eagle Engineering & Manufacturing, Inc. will be responsible for the unit being properly installed in accordance with the Eagle Engineering & Manufacturing, Inc. installation instruction. Eagle Engineering & Manufacturing, Inc. will service all Eagle installed systems for a period of 6 months from the date of installation at no charge. All further servicing and warranty or non-warranty repairs will be handled by Eagle Engineering & Manufacturing, Inc. in accordance with the current Product Service Policy. Eagle Engineering & Manufacturing, Inc. will not be responsible for any repair or field service work performed by persons other than the Eagle Engineering & Manufacturing, Inc. personnel.

## WARRANTY: (AIR CONDITIONERS)

Eagle Engineering & Manufacturing, Inc. warrants to the original purchaser for use that, if any part of the product proves to be defective in material within six months from date of original Eagle Engineering & Manufacturing, Inc. installation and Eagle Engineering & Manufacturing, Inc. is notified within 30 days after such defect is discovered, Eagle Engineering & Manufacturing, Inc. will (at our option) either replace or repair said part. This warranty does not apply to damage resulting from misuse, neglect, accident or improper installation or maintenance.

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