

DANHARD, INC.

Air Conditioning

"It really cools"

214-328-8541



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**SPORTSMOBILE
115 VOLT MOBILE AIR CONDITIONING SYSTEM
PART #60-2040
(RETAIN THIS BOOKLET FOR FUTURE REFERENCE)**

CONSTRUCTION OVERVIEW:

THE 60-2040 SYSTEM DIFFERS IN DESIGN FROM MOST COOLING SYSTEMS IN THAT THE MAJOR SYSTEM COMPONENTS ARE OF AUTOMOTIVE DESIGN. BLOWER MOTORS, FAN MOTORS, REFRIGERANT HOSE, AND FITTINGS COME FROM THE AUTOMOTIVE INDUSTRY. THESE COMPONENTS OPERATE ON 12 VOLTS,

CREATING A SAFER SYSTEM.

SHOULD SERVICE EVER BE NECESSARY, THESE PARTS CAN BE OBTAINED AT MOST AUTOMOTIVE A/C SERVICE CENTERS.

OZONE FRIENDLY R-134a IS ALSO USED AS THE REFRIGERANT. AGAIN, THE SYSTEM CAN BE CHARGED AT ANY APPROVED AUTOMOTIVE SERVICE CENTER.

THE SYSTEM IS DESIGNED TO OPERATE
FROM A 115 VOLT,
60 HERTZ, 1 PHASE POWER SUPPLY .

SHOULD THE SYSTEM EVER FAIL TO OPERATE PRORERLY, THE POWER SUPPLY SHOULD BE CHECKED BY A QUALIFIED TECHNICIAN.

THE ABILITY OF THE SYSTEM TO MAINTAIN THE DESIRED VEHICLE INSIDE TEMPERATURE DEPENDS UPON THE SIZE OF THE VEHICLE AMOUNT OF WINDOW AREA, INSULATION, COLOR AND GEOGRAPHICAL LOCATION.

AS A GENERAL RULE AIR ENTERING THE AIR CONDITIONER WILL BE COOLED 15 TO 30 DEGREES DEPENDING ON TEMPERATURE AND HUMIDITY.
FOR EXAMPLE : IF THE AIR ENTERING THE AIR CONDITIONER IS 80 DEGREES THE AIR LEAVING THE UNIT SHOULD BE 50 TO 65 DEGREES.

PARKING THE VEHICLE IN A SHADED AREA, KEEPING WINDOWS AND DOORS SHUT WILL HELP REDUCE HEAT GAIN.

AS LONG AS THE TEMPERATURE DIFFERENCE IS BEING MAINTAINED, THE AIR CONDITIONER IS OPERATING AT CAPACITY.
IF THE DESIRED INSIDE TEMPERATURE CANNOT BE MAINTAINED, THEN THE HEAT GAIN OF THE VEHICLE IS TOO GREAT FOR THE CAPACITY OF THE AIR CONDITIONER.

Note
IT IS IMPORTANT THAT WHEN THE OUTDOOR TEMPERATURE DROPS IN THE EVENING TO BELOW 70 DEGREES THAT THE THERMOSTAT NOT BE SET TO THE COLDEST SETTING. THIS WILL PREVENT THE COOLING COIL FROM BECOMING ICED -UP. IF ICING SHOULD OCCUR, TURN THE THERMOSTAT TO THE "OFF" POSITION AND SELECT THE "MAN" POSITION FOR THE FAN. THIS WILL HELP DEFROST THE UNIT.

INSTALLATION

ALTHOUGH UNIVERSAL IN DESIGN, 60-2040 HAS SPECIFIC REQUIREMENTS TO INSURE PROPER OPERATION.

1. WHEN INSTALLING , AVOID LONG HOSE RUNS BETWEEN COMPONENTS. REFRIGERANT CHARGE IS BASED ON 8-10 FEET FOR EACH SIZE OF HOSE.
2. AVOID EXTREMELY SHORT HOSES(LESS THAN 18"). REMEMBER, THE KEY IS FLEXIBILITY OF THE HOSE .

3. THE CONDENSER MUST BE MOUNTED **OUTSIDE** FOR PROPER OPERATION. **THE CONDENSER MUST NOT BE ALLOWED TO RECIRCULATE HEAT**, AS THIS WILL CAUSE PERFORMANCE PROBLEMS.

4. THE COMPRESSOR IS SHIPPED WITH STEEL SPACERS INSIDE OF THE MOUNTING BUSHINGS. DO NOT REMOVE THESE SPACERS.

CHARGING THE SYSTEM

DUE TO UNKNOWN VARIABLES, CHARGING THE SYSTEM AFTER INSTALLATION SHOULD BE PERFORMED AS FOLLOWS;

1. EVACUATE THE SYSTEM FOR A MINIMUM OF 1 (ONE) HOUR. THIS WILL ENSURE THAT ANY MOISTURE PRESENT IS REMOVED.
 2. BASED UPON AN AVERAGE LENGTH OF 10' FEET OF EACH SIZE OF HOSE REQUIRED FOR INSTALLATION, CHARGE THE SYSTEM WITH APPROX. 1.75 TO A **MAXIMUM** OF 2.25 LBS. OF R-134a. REFRIGERANT CHARGE CAN BE ADJUSTED ACCORDINGLY IF HOSE LENGTHS VARY.
- A TYPICAL 2.0 LB. CHARGE OF R-134a WITH 10' HOSES ON A 80* DAY SHOULD READ APPROX. 35-45 LOW PRESSURE AND 150-175 HIGH.

OPERATING THE SYSTEM

- ① **IF GENERATOR DRIVEN, GENERATOR SHOULD BE AT OPERATING TEMPERATURE BEFORE STARTING**
- ② SELECT DESIRED TEMPERATURE ON DIGITAL THERMOSTAT
- ③ SELECT FAN TO "AUTO" OR "ON"
SELECT *COOL* *
- ④ SELECT LOW, MEDIUM OR HIGH BLOWER SPEED

NOTE: THERE ARE THREE BLOWER SPEEDS TO CHOOSE FROM.

THERMOSTAT AS BUILT IN 5 MINUTE DELAY BEFORE *RESTARTING*.
THE CONTROLLER HAS A BUILT IN DELAY OF 2 MINUTES IF POWER IS
DISCONNECTED.

MAINTENANCE

CONDENSER SHOULD BE CHECKED PERIODICALLY FOR DEBRIS.

EVAPORATOR DRAIN HOSE SHOULD ALSO BE CHECKED FOR PROPER DRAINAGE.

THE DIGITAL THERMOSTAT HAS TWO "AA" BATTERIES THAT NEED TO BE
REPLACED ONCE A YEAR.

IF THERMOSTAT DOES NOT FUNCTION PROPERLY, REMOVE COVER AND LOCATE
THE **RESET BUTTON** TO CLEAR THE MEMORY.

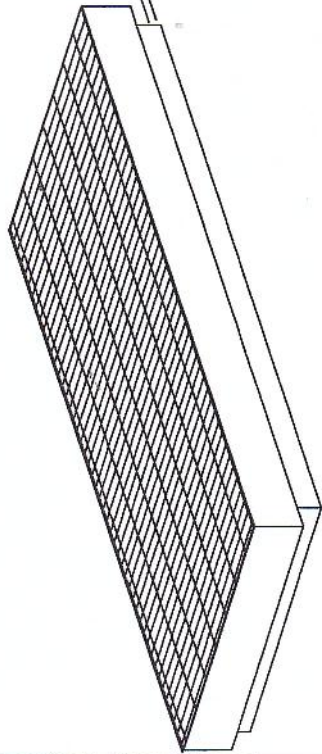
CUSTOM MANUFACTURED FOR *SPORTSMOBILE*
BY *DANHARD INC.*

(RETAIN THIS BOOKLET FOR FUTURE REFERENCE)

FROM CONTROLLER

RED
BLACK
BLUE

12 VOLT CONDENSER WIRING



Thermostat

72

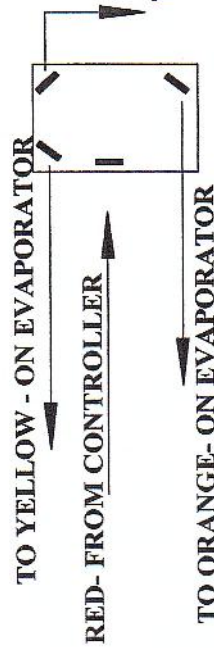
RH
RC
W
Y
B
O
G

WIRING LEGEND
 RED-RH POWER
 BLACK-Y COOL
 GREEN-G BLOWER

RED
BLACK
GREEN

BLOWER SWITCH DETAIL

BACK VIEW

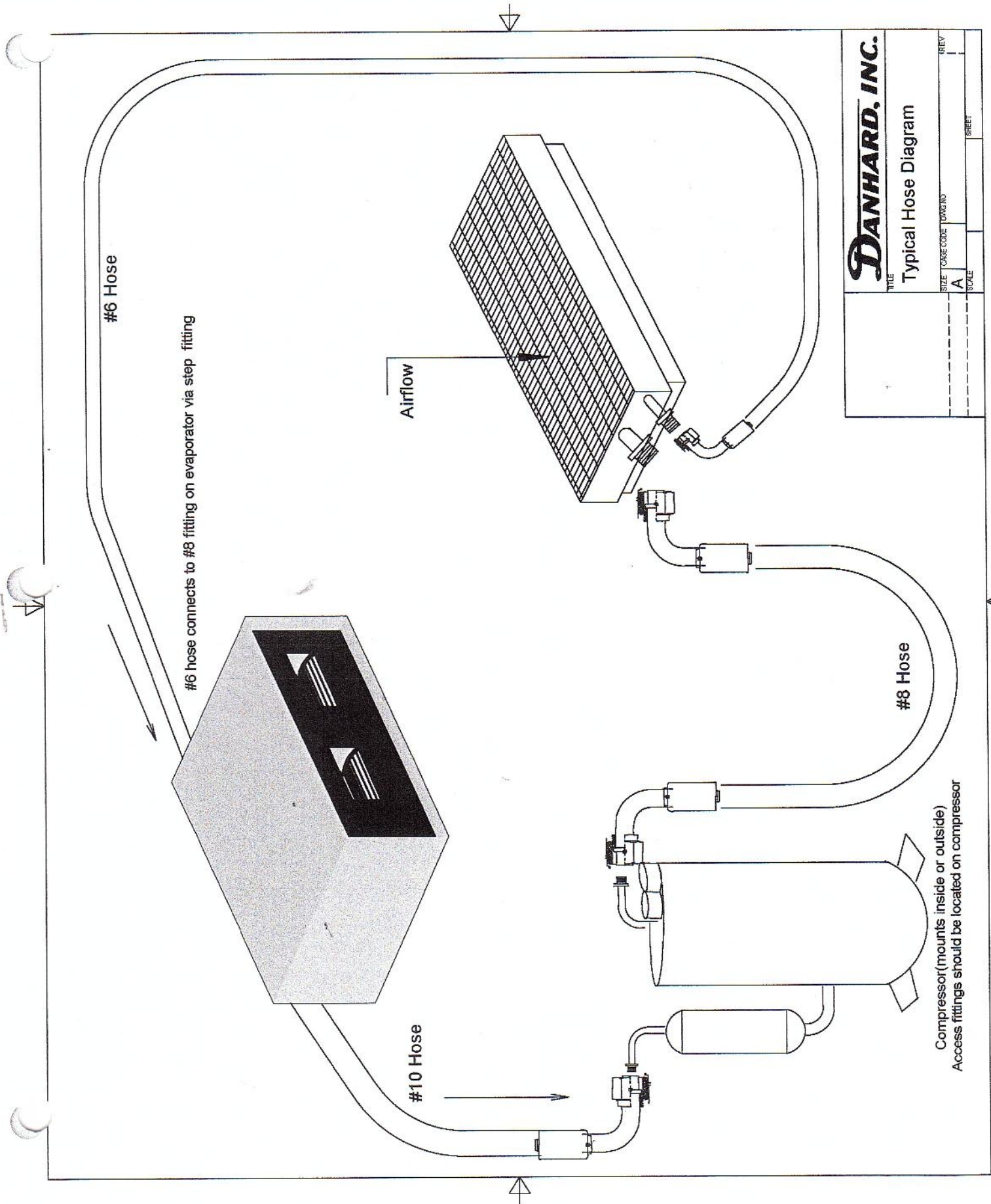


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TITLE: 60-2040 Details

SIZE	CODE	DATE	REV
A			

SCALE: SHEET



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Typical Hose Diagram

SIZE	CAGE CODE	QUANTITY	REV
A			
SCALE			SHEET

#6 Hose

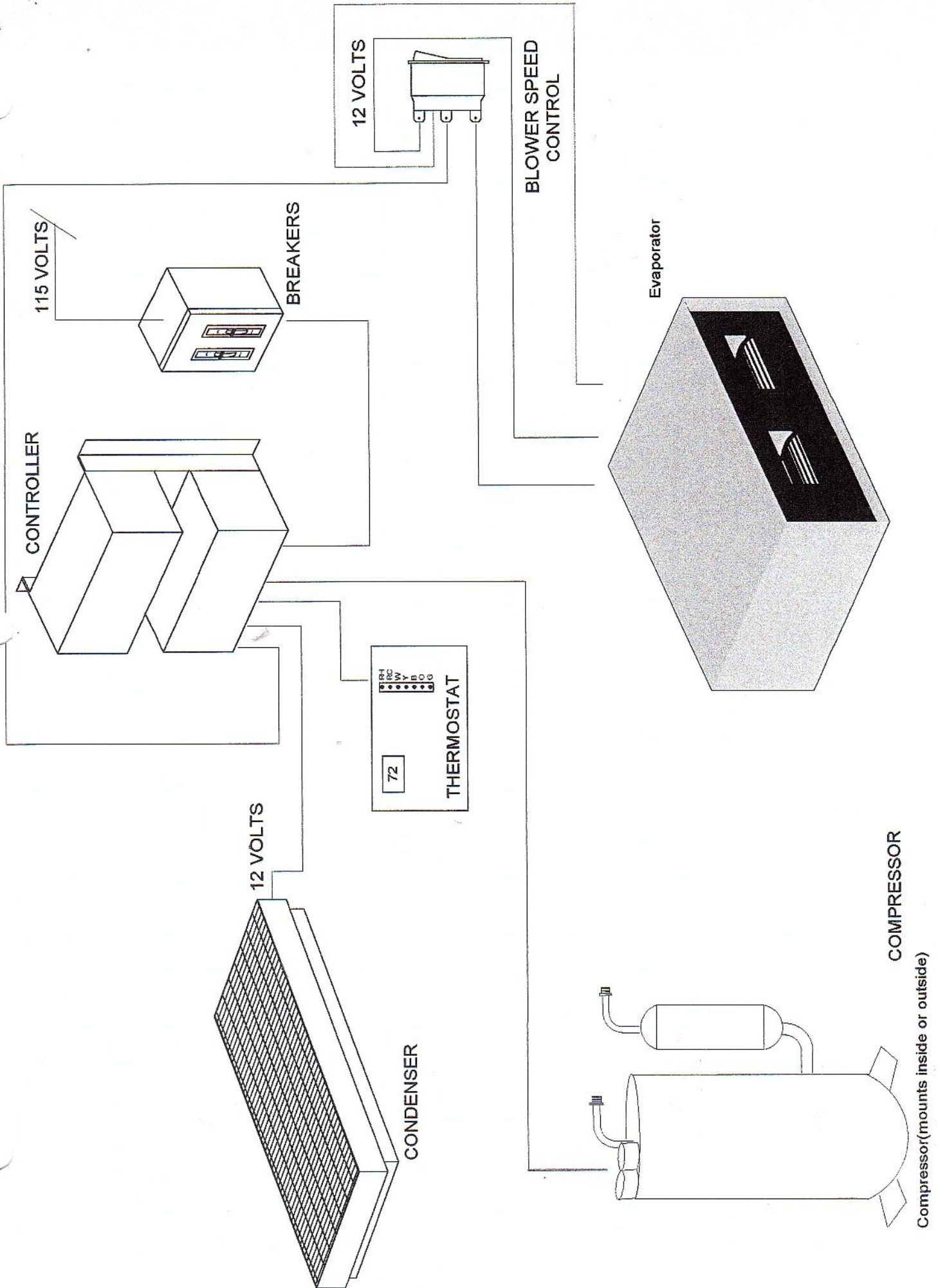
#6 hose connects to #8 fitting on evaporator via step fitting

Airflow

#8 Hose

#10 Hose

Compressor (mounts inside or outside)
Access fittings should be located on compressor



115 VOLT

CONTROLLER

BREAKERS

12 VOLT

BLOWER SPEED CONTROL

Evaporator

THERMOSTAT

CONDENSER

COMPRESSOR

Compressor(mounts inside or outside)

12 VOLT

RHC
W
F
B
G

72

DANHARD 110V AIR CONDITIONER

WHAT CAN YOU DO TO HELP COOL YOUR SPORTSMOBILE?

Your Sportsmobile is very well insulated, but keep in mind it has a steel body and lots of windows. Steel and glass are excellent heat conductors. Hot travels to cool, so anything you can do to keep the heat from entering your Sportsmobile is a plus.

1. **Park under shade** – whenever possible. Of course parking on grass is much better than the extreme of parking on black asphalt in the heat of the day.
2. **If you park in the sun** – have the sun to the rear of the Sportsmobile when you can.
3. **Windshield and cab door windows** – the windshield and cab door windows let in a lot of solar heat gain, especially if you are facing into the sun. Sportsmobile windshield and cab door screens are made of white fiberglass and will block 70% of this heat gain. These screens also provide daytime privacy.
4. **Curtains/Shades** – closing these will also help keep the heat out.
5. **Let the hottest air out** – crack the upper windows or open a roof vent some. It's easier to cool 100° than 120°.
6. **For faster cool down** – when you are parked, idle the vans engine for 30 minutes or so. Turn both the vans dash A/C and the Danhard A/C blowers to high. **Warning** – never idle your vans engine when parked over grass as the catalytic converter could start a fire.