

The summer of 2015 I drove my car to Dave Doddek's house with the intent of replacing rusty tubes and installing fresh hoses. We had the help of 5 Great Lakes members showing up at different times to assist in what started as a simple project and swelled into removing everything on the car except the doors, glass, and suspension. The heater tubes were being held together by the rubber hoses and the replacement of the radiator tubes from the engine required the removal of the engine and transmission. While we were going this far with fixing things Dave suggested removing the gas tank and checking for rust. Luckily there was no rust on the gas tank except a little surface rust in one spot but while wiping the tank down with cleaner we notice that the paint literally wiped off of the tank with a rag.....this led to a light cleaning and repainting the tank with 1 primer coat and 3 coats of black acrylic enamel. The removal of the Heater / AC box showed us how badly the heater tubes had rusted on the ends indicating replacement by drilling out the weld points on the passenger side of the console and installation of new stainless heater tubes with hoses. From the engine compartment.

Disassembling the AC/Heater box opened up some serious design concerns with engineer Dave. We immediately noticed that there is no way for the air to actually circulate through the center of the core due to the restricted space. The core is surrounded by Styrofoam with less than 1/16 of an inch all around which doesn't supply enough space for water to drain out the bottom before freezing. I know that I experienced the cold water on my leg in a sharp turn.

Heater Box showing the openings for the fan.



Template of the core showing the actual air inlet



You can see how little of the core is actually getting airflow by comparing the template of the fan against the actual ac core. The solution was to install a plenum box allowing the air from the fan to flow through the core without being restricted by size of the opening and the speed of the air as it hits the fins and is directed through the core. This plenum design works for my 74 L but might require some modification on the other three models of air boxes.

AC/Heater core is larger than many new cars.



Two 5x4x3 ends using 1/2 inch fold over used for welding.

$14 \frac{3}{8} \times 4 \frac{7}{8} \times 4 \frac{1}{2} = L 14 \frac{3}{8} \times W 8 \frac{7}{8}$   
using 1/2 inch fold over for attachment.



Plenum Box mounted on the AC/Heater.

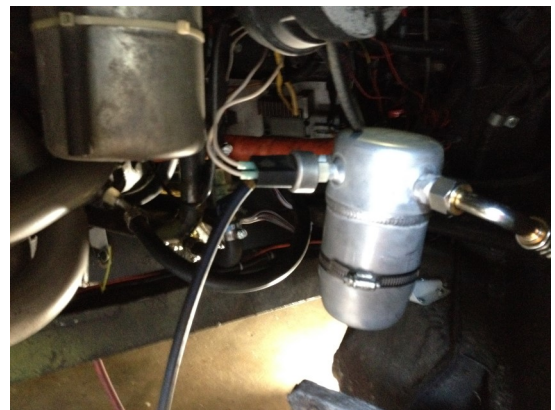


The center of the Styrofoam removed to allow airflow to force the water down the drain. This area was sprayed with a rubber coating prior to assembly so protect the subsurface from moisture.

New actual 3 speed fan motor purchased from a vendor.



R134 Dryer receiver with pressure switch mounted by the compressor.



The AC valve assembly was removed from the side of the ac/ Heater box and replaced by the 8 inch long orifice tube that mounted in the hose between the under dash unit and the front mounted AC condenser. The more efficient orifice tube is designed for R134 and used in most all automobiles since 1980.

The factory original single speed blower motor utilized a wire/connecter melting resistor coil on the passenger side of the AC/ Heater box to give a slower 2nd speed. This was no longer needed since the more efficient 3 speed blower motor that I purchased flows more air on low and medium. When you read further you will understand why I purchased the new 27 step fan switch from Pantera Electronics. This drop in the dash electronic switch uses the high speed circuit on the new blower motor to give a full range of air settings that make driving the Pantera a joy on a hot day.

Charging the system with R134 we were getting 44 degrees at the warmest setting and 35 degrees at the coldest from the vent outlets.

The blower motor is available on Ebay for \$59.95 from Omega Environmental Technologies #26-19902. Listed as dual Wheel blower motor, 3 speed, 12 v, 3 inch, bh1300, ta 1000.

They have in line heater valves and trinary switches on their website that will also work nicely in the Pantera.



List of parts AC Hoses and lines used

Universal condensers, \$50-70

<http://www.acpartshouse.com/categories/air-conditioning-and-heating/universal-condensers?page=1>

Universal Fit A/C Condenser For Aftermarket, Add-on, Or Other Non-specific Applications. With Mounting Rails On All Sides.

11x20 CN2000 \$48.15

**Dryer** - \$26.08

<http://www.acpartshouse.com/inventory/101317-1992-chevrolet-oldsmobile-pontiac-minivanaccumulator>

1992 Chevrolet Oldsmobile Pontiac Minivan Accumulator

Inline Orifice Tube – Added between the front condenser and the evaporator. Used with an accumulator in the engine compartment.

hose fittings

<http://www.acpartshouse.com/ac-fittings>

FH6000B Bulk #6 AC Hose ID 5/16 , OD 3/4—3/8 Fitting Size

FH8000B Bulk #8 AC Hose ID 12/32, OD 29/32=1/2 Fitting Size

FH10000B Bulk #10 AC Hose ID 1/2, OD 1" - 5/8 Fitting Size

FH 1200 B Bulk #12 AC Hose ID 5/8, OD 13/32—3/4 Fitting Size

FT0045C Straight Female Flare—Beadlock-Without Service Port 6 Fitting 6 Hose

FT0046C Straight Female Flare—Beadlock-Without Service Port 8 Fitting 8Hose

FT1106C Straight Female Flare—Beadlock-Without Service Port 10 Fitting 10 Hose

FT0047C Straight Female Flare—Beadlock-Without Service Port 10 Fitting 10Hose

Slightly less than 3 lbs of R134.

Many thanks to Dave Doddeck and the Great Lakes Pantera Members that helped in the 17 week disassembly and reassembly of my car. It's friends like these that jump in to help that make being in the club a worthwhile experience.

Gerry Romack

1/2"  $\leftrightarrow$

Large Piece  
Not To Scale.

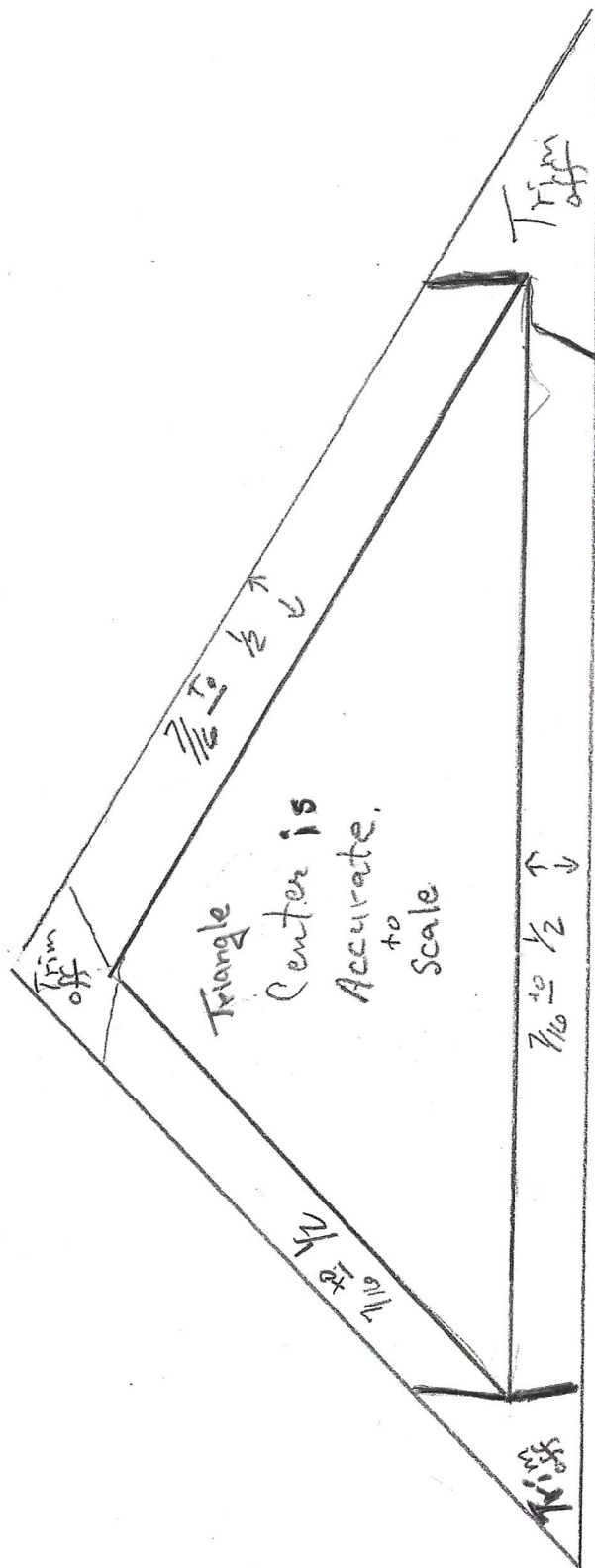
14 3/8"



8 1/2"

8 7/8"  $\leftrightarrow$

3 1/2"  $\leftrightarrow$



Triangle  
Center is  
Accurate,  
to  
Scale

1 1/2"  $\leftrightarrow$

4 3/8"  $\leftrightarrow$

1/2"  $\leftrightarrow$

1 1/2"  $\leftrightarrow$