

## **AAP Inc. / CRUISAIR**

**Prevost conversions have evolved and changed over the years. Components, devices and systems have changed as technology changed, as buyers changed their needs, and as new designs have dictated change. But there has been one product name that has been a constant for decades, and that is Cruisair as manufactured by AAP Inc. of Milford, VA. The product has changed to an extent but the basic unit still does what it is supposed to do very well and is still 100% supported.**

**Cruisair heat and air conditioners are split systems with the condensing units mounted in the basement or bays of converted coaches, with the evaporators mounted in the “house” portion of the coach. The units are robust, serviceable, and relatively quiet.**

**<https://www.aap.com/pages/about-us>**

**Today, 40 years since it was established AAP Inc. continues to build new units, service all units, offer rebuilt units, sell parts, and will even service units installed in coaches at their facility in Milford, VA. I recently visited their facility with the intent to replace all my units as part of my program to completely refresh my entire 15 year old coach. I had previously done the same thing to a prior coach myself, but this time we treated ourselves by having someone else do the work of replacement.**

**As a mechanical system, heating and A/C units are often buried somewhere out of sight on a coach and on my Liberty the four units were located behind the front drop down bumper and in between the entertainment center on one side, and behind the electrical bay on the other side. As installed originally, routine service such as recharging can be provided with the units in place but any extensive repairs such as compressor or fan motor replacement requires removal from their installed position.**

**Due to their age, and potential for the units to begin experiencing service issues it was decided to replace the originals with rebuilt units. For all practical purposes the units are brand new with only sheet metal cases and the condensing coils original. The replacement process begins with gaining access, and to the extent we were able we arrived at AAP with anything that would be in the way removed from the coach. Specifically dropping the front bumper was all that was needed for the front two units. The two units in the center of the coach necessitated that the first bay have most of its contents left behind so access is as easy as possible from the bay. The second bay entertainment center had to be removed and that was done prior to leaving for AAP. Both of the 2<sup>nd</sup> bay units had to come out through the 2<sup>nd</sup> bay.**

**Fortunately I was able to take advantage of 2 projects at once. I had to remove the entertainment center to replace all house batteries so the timing of the Cruisair project was ideal because two major projects were done with only one removal of the entertainment center.**



**Meet Dana Young of AAP, Inc. If you have been to the Prevost show in West Palm Beach you will recognize him. It's really Dana. Trust me.**

**He was working on the coach within 20 minutes of arrival. At the AAP facility there is a 50 amp plug so the coach was powered up immediately, and after a short discussion a plan was made to remove and replace units in a sequence that allowed us to have one or more working units so we could have heat or air available as needed.**

**Dana knows our coaches. He knows how to efficiently access fittings, electrical connections and fasteners that secure the units to the chassis. In the photo above he already had the center port condensing unit out and was working to remove the forward unit. As can be seen removal and replacements of the units is a one man job. There is limited room to work so even if an army of technicians was available the process is still going to be a one man job. And that one man is prepared for the job. He obviously knew exactly what tools to have at hand, he knew how many pillows and blankets he needed to avoid sharp edges and to provide limited comfort while working in strange or difficult positions.**

**It was great watching someone who knows exactly what to do. There were no false moves, he had the right tools at hand, and the sequence was one perfected over time.**



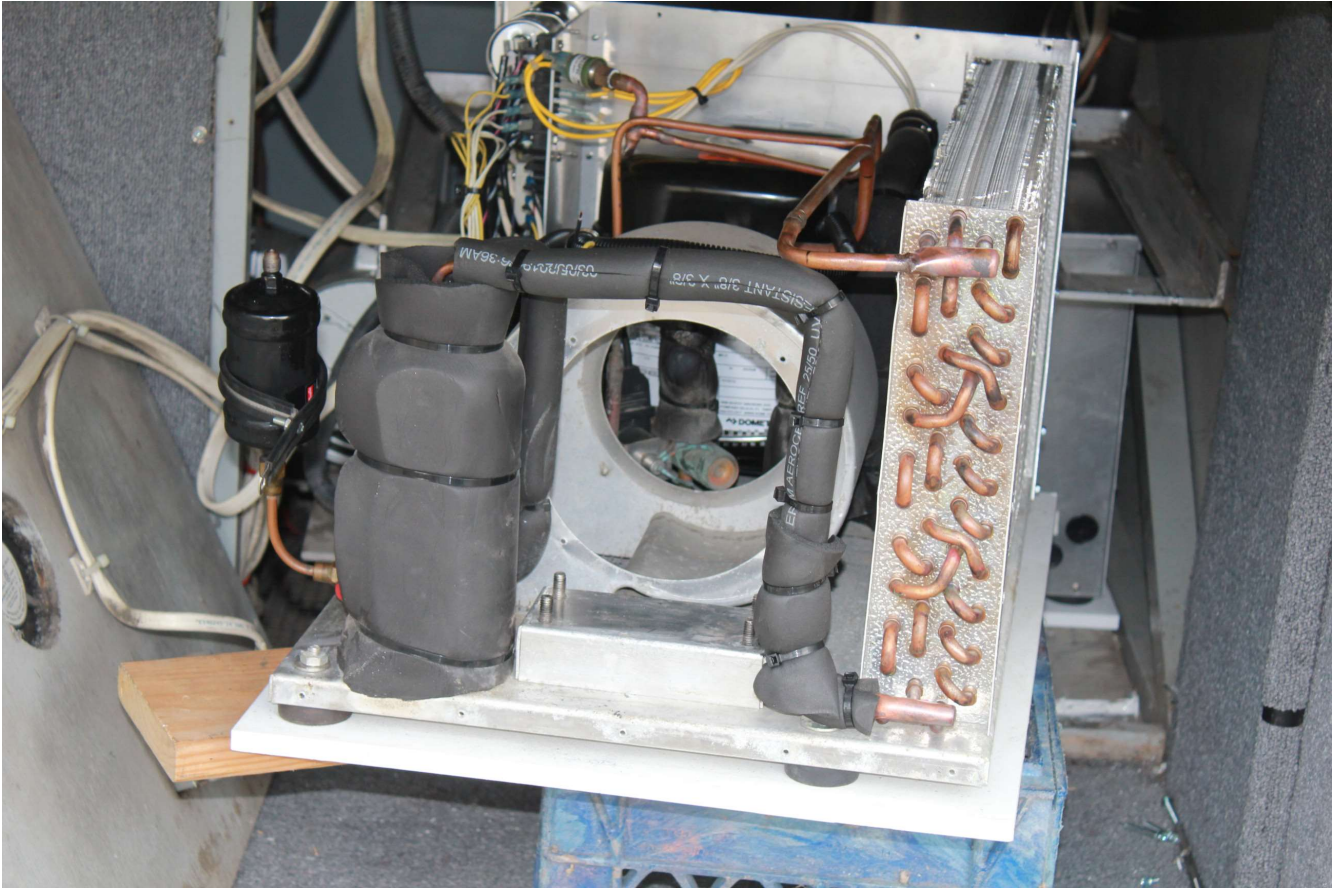
The old front units are out and Dana is getting the replacement unit set up for installation. What is worth noting is AAP Inc. doesn't leave much to chance. The units being installed had been running in their shop for about a week to verify they were absolutely working perfectly.



Once installed each unit has its refrigerant charge adjusted. Every unit on every conversion has its refrigeration charge dependent on the length of the refrigeration lines between the condensing units and the evaporator units. After the units are installed and the evaporator unit has been “vacuumed” to insure there is no moisture in the system the valves are opened and refrigerant is added to optimize performance.

Multiple ways of verifying the performance were used. In the photo above a temperature gauge was used to define the air temperature as it comes through the evaporator and the difference in temperature between that and the air in the room is important information. AAP wants to see a temperature spread of at least 14 degrees F, but knows on our coaches each unit in the coach is going to display a different temperature spread. The front unit often has the closest spread and units more to the rear are expected to have a greater spread.

But the charge is also checked via the refrigeration gauges, and then all is verified in the old fashioned way. If the return line to the condenser is ice cold it is as good an indication of the proper operation as anything else.



**AAP is fussy. Everything is checked. A vibration noise was heard on one unit shown above. Dana checked for loose panels, loose parts, a twisted mounting surface, and finally pulled a unit that had been installed and found interference with a new blower fan motor and a panel because the new motors are slightly different dimensionally than the originals. He went to a lot of extra work to insure everything was not only OK, but that even the tiniest details were covered. Operation of the units was obviously checked not only for temperatures in both heat and cool modes, but as was seen for anything unusual such as a noise that should not be there.**

**The visit to AAP was a real experience. The company is in a modest building but it is clear they are more than capable of building, servicing, rebuilding, and installing Cruisairs. On the way home the ambient temps were in the mid 80s with bright sunshine. We spent the day the installations were complete parked where we were doing some shopping and we ran all four units and found once the coach interior was comfortable only two units were needed to remain a comfortable 73 degrees. Our Cruisairs are robust easily serviced units and it was very nice knowing the expertise and support for them is available. Not everyone will find it convenient to go to Milford, but they will offer parts and support to anyone needing them for the Cruisairs. Good job Dana and AAP Inc.**

**Jon W. Wehrenberg 3/22/2020**