

In this edition of “Tech Tips”, we will discuss the AC circuitry of the APU. This means the AC, or Alternating Current (120 VAC) electrical power necessary to run your Air Conditioning system. IF your APU has our heat function as well, all heat functions are DC based. Often, the complaint of AC Inop is blamed on batteries, battery cables, or other items that are rarely the problem. The AC electrical system needs attention from time to time; keeping electrical connections clean and tight will make a world of difference for your AC system to work correctly.

BEFORE PERFORMING ANY WORK ON THE 120 VOLT SYSTEM, TURN THE INVERTER OFF, AND REMOVE BLACK PLUG FROM THE INVERTER’S OUTLET. SAFETY IS NO ACCIDENT!

In our earlier version APU, Generation 3.6, there are more electrical connections to keep tight & clean. In the newest generation, Gen 3.7 we have sealed 98% of all electrical connections in the APU. But even with a Gen 3.7, it is a good idea to take the connectors apart & confirm good connections are still being made. You can tell what version APU you have by looking at the first two numbers of the serial number. A Gen 3.6 starts with the number 36, followed by a letter, and then 8 more numbers. A Gen 3.7 starts with the number 37, followed by a letter, and then 8 more numbers.

The biggest difference between a 3.6 & a 3.7 from an electrical point of view is the 3.7 does not have a condenser fan relay. Each connection point should be looked at by itself, and confirm each connection is tight. Connection points include the top of the Run Capacitor (the start capacitor comes up from below & joins there), followed by the pressure switch, top of the compressor, and on a 3.6 the condenser fan relay. All of these connections are crucial for the AC system to operate correctly. So any one of them not being solid is going to be a problem.

One thing to keep in mind is this: short(er) run times is usually based in the DC side of the APU; whereas the compressor not starting is USUALLY AC electrical, meaning connections. There is an AC (electrical) service called out in the Dealer Portal for servicing the AC (electrical) portion of the APU. It is in the Reference manual, pages 59 thru 63. These pages will help you confirm every connection within the AC (Electrical) portion of the APU is serviced correctly.

Understand, that no matter how well the rest of the APU is maintained, weak/poor AC (electrical) connections will make the AC system just as unusable as any other needed part of the system. TAKE YOUR TIME when

Remember, Idle Free Technical Support is always just a phone call or email away.

Technical Support Telephone number: (920) 206-9333

Technical Support email: techsupport@idlefreesystems.com