Tech Tips

August 2018 Edition

This month's Tech Tips will cover something that is at Root Cause of the worst complaint you can hear in the cooling season… "My AC is Inop". Battery banks, and inverters are often blamed when a system doesn't work. The Root Cause may be something obvious, IF YOURE LOOKING FOR IT. **DC cables/wiring connections can fail, causing AC systems to become '*Inop*'**. As mentioned in a Tech Tip article that covered AC (Alternating Current) circuits, there is a great way to identify if a compressor's failure to start is caused by something in the AC circuit, or in the DC circuit. Watch the 6-LED volt meter while the compressor tries to start. If the display goes from several lights to one or none, and the compressor doesn't start, it is a DC Voltage/connection problem. If the LEDs flicker, & the compressor doesn't start, there is an AC voltage issue somewhere in the APU. In either case, after the compressor stops trying to start, the same number of light will come back on. This can cut your diagnostic time down, as now you know if it is an AC or DC voltage problem.

The different locations for DC connection issues can be found in the Reference Manual, on pages 61-64 (Reference section 113). The DC circuitry in the Idle Free APU is in two locations; the Under-Bunk Box (UBB), and in the eAPU. A pair of cables provide DC power between the two, but if kept free from corrosion, & their connection integrity (kept tight) is maintained, those connections don't cause problems. The smaller gauge wiring used in the eAPU's DC circuits can cause 'AC Inop" issues. In Gen 3.6 APUs, the condenser fan circuit can cause trouble, if corrosion-resistance & tight connections aren't maintained. Also, in all eAPUs, make sure the ground connection between the battery separator & the negative of the IFS battery banks is kept in good condition, although not an AC problem, a battery bank not recharging will also result in '**AC Inop**' complaints. The Compressor Ground circuit in Gen 3.7s can be an issue to if the same concern for tight, corrosion-free connections is not maintained. Use the wiring diagrams available in the Reference Guide, or on the Dealer Portal so the correct wires are connected to the correct components. If necessary, call Tech Support, & we will guide you to/thru these diagrams.

The smallest component, or a single poor connection in the DC circuitry can bring an APU to a halt. Preventative Maintenance is key! Preventative Maintenance fixes the smaller issue before they become show stoppers.

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

PHILLIPS & TEMRO industries®
9700 West 74th Street, Eden Prairie, MN 55344
Phone: 952-941-9700 • Fax: 952-941-2285 • www.phillipsandtemro.com