

Tech Tips

January 2017 Edition

Hello.

Happy New Year! This edition of "Tech Tips" will cover the heart of an Idle Free APU; the battery bank. We hope this information is beneficial to you.

To start, we want to first make sure the Trojan Battery warranty policy is understood. The Trojan "Overdrive" warranty covers <u>defects</u> in <u>materials</u> & <u>workmanship</u> for a period of two years. The warranty starts and ends in conjunction with the APU warranty. A warranty determination is made using the information provided to us via warranty pre-authorization.

APU batteries have a life span like anything else. Most AGM batteries are designed for about 400 cycles. A complete discharge and recharge is one cycle. Batteries will need to be replaced on average every 2 years.

Most battery problems are caused by charging issues. There are many reasons a battery, or a group of batteries, may not receive a proper charge. From defective components to corrosion, maintaining your system is critical to battery health. For example, if a corroded connection results in a battery remaining in a discharged state for any period of time, this battery may never accept a full charge again. **THIS IS NOT A DEFECT IN MATERIAL OR WORKMANSHIP,** and will be revealed during testing.

Routine preventative maintenance is critical to uncovering issues with connections, defective battery seperator, blown fuse, etc...

Idle Free Systems requires specific information to consider a battery for warranty. This information is submitted via the battery pre-authorization form in our dealer portal. What do we need?

- 1. Heat sticker on top of battery must not be activated
- 2. Battery voltage MUST be above 10.5 VDC when found.
- 3. Voltage at least 12.5 VDC prior to test. NOTE: not possible if battery was ever below 10.5 VDC
- 4. If battery passed step one and two and CCA is below 438, battery is warrantable.

All testing must be verified with printouts from analyzer or photos of results. All brands of battery analyzers use different algorithms, meaning the PASS/FAIL results on your analyzer are irrelevant to our decision.

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Our Dealer Portal contains an abundance of information including:

"10 reasons your APU AGM batteries are not fully charged"

When confronted with battery issues we highly recommend this list as a starting point in identifying the root cause. History tells us customers too often install new batteries without identifying the root cause of why batteries failed pre-maturely to start with.

- 1. Truck battery bank has a bad battery
- 2. Truck and/or DC Cables are not connected to the correct connection point.
- 3. DC Cables are the wrong size (gauge).
- 4. DC Cables are too long (voltage drop)
- 5. Battery connection points are contaminated CORROSION!!!
- 6. Alternator was replaced with the wrong alternator (too small)
- 7. Truck starter battery replaced and cable left off/placed on the wrong connection point, very common!
- 8. APU Battery connections in the trucks battery bank is incorrect (similar to #2)
- 9. APU to truck battery connection points are stacked onto insulated terminals in OEM battery box
- 10. Battery cable connections loose (Marinco connectors not tight).

Always remember our technical support team is standing by to answer questions

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