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Tips to Review on Shadin Fuel Airdata System Installations

- 1) Pitot-Static Plumbing: Be aware that Fuel Airdata Systems connected to different Pitot-Static systems from other aircraft equipment may have results that do not agree with that equipment.
- 2) For digital ADC units that tap signal from an existing aircraft fuel flow system, **DO NOT USE FUEL FLOW TRANSDUCER POWER FROM PIN 1 OR PIN 9 OF J-1**. For digital Digidata units that tap signal from an existing aircraft fuel flow system **DO NOT USE FUEL FLOW TRANSDUCER POWER FROM PIN 3 OF P-1**.
- 3) No OAT on the ADC or Digidata;
 - a. Check for 5 volts to the red wire on the OAT probe.
 - b. Check for continuity to pins 14 and 15 of J-1 of the FADC from the OAT probe. For the Digidata, check continuity to pins 8 and 9 of P-3 from the OAT probe.
 - c. Substitute a 15K ohm 1% resistor for the OAT probe across pins 14 and 15 of J-1 on the ADC or across pins 8 and 9 of P-3 on the Digidata. The OAT should read approximately 5°C.
 - d. If step c. is okay, then wire the OAT probe directly to J-1 of the FADC to test it. For the Digidata, wire the OAT probe directly to P-3 to test it.
 - e. Insert a Micro-ammeter in series with one of the OAT probe leads. 273 μ a is equal to 0°C. The scaling is linear with 1°C = 1 μ a.

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- 4) No serial communications with the GPS or Loran;
 - a. Check to be sure that step 2 in this document was complied with.
 - b. Check the packing slip from the distributor for the system configuration and verify that it is correct for your application.

- 5) No Heading;
 - a. Make sure there is a 26v 400 Hz power supply in the system for H and C.
 - b. Z and C (AC common) are tied together on the Digidata. In the FADC, Z and C (AC common) must be connected together at the source (bootstrap).

- 6) Digidata....Constant Warm Up Message;
 - a. Disconnect P-3 (This will let you know if anything in the Heading or OAT circuits is loading the system).
 - b. Out of the aircraft...Apply 14 to 28 volts to pin 1 and Ground to pin 2 of P-1....If the Warm Up message continues, return the unit to Shadin for repair.

- 7) Digidata P/N 912802....No Fuel Flow;
 - a. Check pin 3 of P-1 for transducer power...approximately 15 volts.
 - b. Check pin 15 (Left transducer signal input) for 5 volts (open circuit).
 - c. Check pin 13 (Right transducer signal input) for 5 volts (open circuit).
 - d. If 5 volts is present at 13 & 15, tap either one or both rapidly to ground. This action should present a tenth or two of fuel flow on the display.
 - e. The transducer grounds (black wire or pin C) should be returned to pin 11 (left or single) and pin 10 (right or rear).