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Product
T2000SFL

Revision
All

Title
No Alt Diagnostic

Description
Interpretation of the No Alt Message

The “No Alt” diagnostic means that the T2000SFL transponder cannot interpret the code on its parallel inputs (*the ten wires that come from the altitude encoder*) as a valid altitude. The fact that “No Alt” is displayed means that the main microprocessor is working. It simply doesn’t understand what it is seeing. There are a few reasons why this may happen.

- Some encoders can take a lengthy time to warm up to operational temperature before the encoder outputs are enabled. While this is happening the T2000SFL will display the “No Alt” diagnostic.

- If you have programmed the T2000SFL to only switch the encoder on while in mode C then the diagnostic will display ‘No Alt” until the encoder warms up. If this is the case then you will need to set the Encoder Power software switch in the T2000SFL to “All”. This function is in the Mode menu (see page 19 of the User Manual). The Mode menu can be accessed by holding in the MODE button while the transponder is booting through its power on self test routine. Scroll through the options until E/C POW is displayed on the top line. If the bottom line says “= Alt” then change it to read “= All”.

- A fault with the interconnecting harness is the most common external cause of this fault. An open circuit in a wire or a short to an adjacent pin will cause a wrong code or an illegal code to be presented to the microprocessor. A symptom of this condition is accurate display of altitude across a range of altitudes and “No Alt” displayed across another band of altitudes. ATC report of loss of altitude data while descending or ascending is also evidence of this fault.

- The next most common cause for this diagnostic is a faulty external altitude encoder. There are number failure modes that can occur in an encoder that are beyond the scope of this document. The end user can check that the encoder is correctly supplied with power (typically 12V or 24V) and that polarity is correct. If the supply appears to be correct then exchanging the suspect unit with a known good unit is a useful next step.

- Most installations elect to take the encoder power from the switched supply on pin 2 of the T2000SFL connector. Selecting ALT DISPLAY on the rotary mode switch will force supply to pin 2 regardless of the software settings. If there are no volts on pin 2 then the transponder has been damaged and will need to be returned for service.

- Assuming the above steps have been checked then the only thing left is an internal fault within the transponder and the unit will need to be returned for service.