

Dynon OAT Installation and Usage Guide

Dynon Avionics
Revised August 30, 2005

Thank you for your purchase of the Dynon Avionics True Airspeed/Density Altitude OAT probe. The following instructions will give you the information you need to install and use the probe. Keep in mind that this probe is designed specifically to work with the EFIS-D10. Do not expect it to work properly with another OAT or TAS/Density Altitude system.

Tools and Materials Required

- Dynon Avionics OAT probe/cable with nylon nut and washer.
- Drill with 3/8" bit
- Dynon Avionics EDC-D10 remote compass module.
- 2 machined D-sub pins
- D-sub pin crimp tool
- Loctite

Software Required

The Dynon Avionics OAT probe requires you to have EFIS-D10 software version 01.09 (or later) loaded onto your EFIS-D10. Load this version of the software onto your EFIS-D10 with EDC-D10 connected *before* you attempt to use your OAT probe. Instructions for loading new software onto your EFIS-D10 can be found at www.dynonavionics.com/downloads.

Installation

Mount Location

It is important that the OAT probe be mounted somewhere on the skin of the airplane where it will not be affected by heat sources (sun, engine, airplane interior, etc). The OAT probe must also be mounted at a distance such that you do not have to extend the supplied cabling to reach the EDC-D10 remote compass module. The ideal location would receive no heat from the aircraft engine or any other source in the airplane body. While this may be impractical, it is a good idea to mount the probe as far away from heat sources as possible.

Mounting Instructions

After the mounting location has been determined, drill a 3/8" hole in the skin at the desired location. Clip the zip-tie off the coil of cable attached to the OAT probe. String the nylon washer down the cable and over the threaded end of the OAT probe. From outside the skin of the airplane, insert the cable first and then the threaded end of the OAT probe. From within the skin of the airplane, gently pull the cable until the threaded

end of the OAT probe pokes through the hole. Thread the nylon nut down the cable and up to the threaded end of the OAT probe. Spread some loctite around the threads of the OAT probe. Twist the nut onto the threads of the OAT probe and tighten.

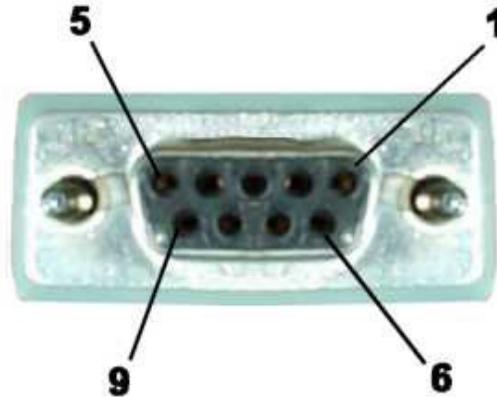
Wiring Instructions.

Once you have physically mounted the OAT probe, route its attached cable to the EDC-D10 remote magnetic compass module. Crimp female pins onto the yellow and red wires, but leave the blue wire/shield combination bare.

Plug the yellow wire into pin 2 on the female D9 connector which mates with the EDC-D10.

Plug the red wire into pin 7. Connect the blue wire/shield combination to the same ground which feeds the EDC-D10 through pin 1. The

front of the female connector is pictured at right. You will be pushing the pins into the back of this connector.



WARNING: DO NOT CONNECT WHILE THE EFIS IS POWERED!

OAT/TAS/DA Display

Once you have uploaded the latest version of software onto your EFIS-D10 and installed the OAT sensor, you can view data obtained from it. To display the data from the OAT probe, bring up the menu system and navigate to the INFO menu (MORE > INFO).

Select the side of the screen that you wish to display TAS/DA information on (LEFT or RIGHT). Push the button labeled OAT. The values for outside air temperature, density altitude and true airspeed should display in the format seen below. Temperature is displayed in degrees Celsius, density altitude in feet, and true airspeed in knots.

Example:

```
OAT 25C  
09960FT  
090 KTS
```

Calibration and Adjustment

With no calibration or adjustment, it is possible for the OAT sensor to read as much as 5 degrees Celsius off the actual value. Therefore, it may be necessary to adjust the displayed air temperature value to compensate for this. To make this adjustment, you must enter the menu system and proceed through the following set of button presses:

MORE > SETUP > MORE > MORE > OATADJ

This will display the OAT adjustment menu. Now, press INC or DEC to increase or decrease the currently displayed OAT value.

It is important to make this adjustment when the air surrounding the OAT probe is at a known temperature. This can be achieved with a standard thermometer or another OAT sensor on your plane. Adjust the displayed OAT until it agrees with your independent temperature reference.

Troubleshooting

OAT value fluctuates wildly

If the OAT probe is improperly wired, the EFIS-D10 will not receive a valid signal from it. Verify that the three wires coming from the OAT probe are wired exactly as described in the Wiring Instructions section above.

OAT value is consistently high/low

You need to adjust the displayed OAT value to correct for sensor inaccuracies. Follow the instructions in the Calibration and Adjustment section above.

INFO items will not allow display of OAT/TAS/DA

The menu system prevents access to the outside air temperature-based information when either the EDC-D10 is not properly connected to the EFIS-D10 or the OAT probe is not properly connected to the EDC-D10. First, make sure that the EDC-D10 can communicate with the EFIS-D10 by moving a headphone speaker around near the EFIS-D10. If the EDC-D10 is properly connected the heading should not change. If this is the case, the problem is with the connection of the OAT probe to the EDC-D10. Verify that the wiring matches that described in the wiring section above.