

# GRT OAT Probe Installation

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Each GRT EFIS flight display system and EIS engine monitor unit has an input for outside air temperature. The EFIS uses it to calculate density altitude, true airspeed, and other data. The EIS has an OAT display for pilot's information. When the OAT probe is wired to the EIS, OAT is shared with the EFIS over the EIS serial connection. The EIS can be bypassed by wiring the OAT directly to the EFIS system through the display unit D-sub (Sport or Mini) or the AHRS (Horizon).

GRT manufactures two OAT probe models: the economical white plastic-coated OAT-02 and the machined aluminum, streamlined OAT-03. Both probes are installed as follows:

1. Pick a mounting location on the aircraft's skin where it is :
  - Out of the prop wash
  - Out of the exhaust stream
  - Away from heated/cooled air, such as cowling or cabin skin
  - Not inside a NACA inlet, where pressure changes can affect air temperature
  - Preferably in the shade.
  - Not under a fairing which can heat up in the sunshine.
  - For many airplanes, the ideal place is on an inspection cover under the wing, outside of the prop wash area.
2. There are 2 wires, 8 feet long, with no polarity sensitivity. Both wires are the same. Either can be attached to EFIS/EIS or ground, and both can be trimmed to final length without affecting OAT readings. Newer probes have one black wire and one gray wire to fit in with the rest of the aircraft wiring color coding. Suggested connection is black to ground and gray to the EFIS or EIS.
  - Attach a D-sub pin (male or female, depending on the connector) to one wire and connect it to the designated OAT connection in the EFIS, AHRS or EIS connector. See EFIS/AHRS Connector Definition or EIS wiring diagram for exact pin placement.
  - Attach the other wire to ground, ideally the same ground point as the connected EFIS or EIS. It is also acceptable to ground the probe to an adjacent area of the skin or structure of an aluminum airplane to save wire/weight.



OAT-02



OAT-03