AE FUEL GUARDIAN

AE FUEL GUARDIAN LOW FUEL ANNUNCIATION SYSTEM

This system gets your attention before you have to switch tanks. When the annunciator light flashes, you will know your precise fuel quantity and also the time to engine shut-down for that tank. HOW DOES IT WORK? - The optical fuel sensor is a non-contact sensor mounted in a single hole in the fuel tank. It operates by bouncing a beam of light into the sensors lens. If it is reflected back into the sensor, there is no liquid present. If it is not reflected back, it is dissipated into the liquid media. The sensor output is pulled down, or activated.The electronics constantly monitors the sensor outputs of both tanks. When a low fuel level is detected, the appropriate light starts to blink, getting the pilot's attention immediately. After the pilot sees the alarm, he can press the acknowledge button. This action turns the light on solid (continuous) denoting a low fuel quantity. This function of the annunciator eliminates the distracting flashing action of the lights for the pilot, yet he can still see that he has a low fuel indication.
The AE Fuel Guardian also has an audio output that can be wired into the aircraft intercom or audio system if desired. The audio beep is only present when the annunciator lights are flashing.
The AE Fuel Guardian annunciator lights can also be wired into the aircraft dimmer bus if desired for night flight.
This system is 100% solid state and is compatible with 12VDC or 24VDC electrical systems. The installer sets the sensors to provide low fuel warning at whatever level is desired. System includes (2) annunciator panel lights, (2) optical sensors, (1) push button, Sensor drive and annunciator electronics enclosure, wiring, and lettering decals. For Experimental aircraft only.

Kit With One Sensor.....P/N 10-01811.....
Kit With Two Sensor.....P/N 10-00399.....

AE AIRSPEED SWITCH & RELAY BOARD

RELAY BOARD USE: Control your Flap & Elevator Trim motors
This board allows you to use any inexpensive switch [Single Pole, Double Throw, (ON)-OFF-(ON), Spring Loaded, 3 Position] to control your flap and elevator trim motors. You can series as many switches as you desire control your flap & elevator trim motors. Free connection diagrams for relay boards and airspeed switch for several typical systems.

AIRSPEED RELAY USE:

Flap Deployment Protection at High Airspeeds
When our relay board is used with our airspeed switch, you can protect you flaps from being actuated in the downward direction when your airspeed is too high (above the white arc). We provide the end user with easy connection diagrams for several different systems.
Automatic Speed Adjust for Elevator Trim Motors
Many have complained about the fast adjustment speed of elevator trim motors at high airspeeds. When our relay board is used with our airspeed switch, it eliminates this problem. You will have two speeds, fast for slower airspeeds, and slower for high airspeeds. The slower speed is adjusted by supplying this relay board a lower motor drive voltage.

RELAY BOARD SPECIFICATIONS

Each board includes two independent, Single Pole, Double Throw Relays
Relay contacts are protected against inductive sparking generated from switching inductive loads such as motors. For use on 12Vdc systems. Switch currents up to 10 Amps. Boards are stackable to 3 levels high for saving panel space. Mounting hardware included

AE Relay Board One.....P/N 10-01814.....
AE Relay Board Two Staked.....P/N 10-01815.....
AE Relay Board Three Staked.....P/N 10-01816.....
AE Airspeed Switch & Board.....P/N 10-01817.....

AE LOW OIL LEVEL SENSOR

This sensor is a "float type" Low Oil Level Sensor that can be installed in the bottom of an oil sump using spare drain holes. When a low oil condition is sensed, a NC contact will open, indicating a low oil level. This sensor was designed for the high vibration enviro
nment of an aircraft engine. It is also available with electronics and a flashing LED indicator. This sensor indicates a low oil level that is less than 4 quarts in a Lycoming O-360-A1A. This sensor is compatible with many engines.

This sensor package was designed to be "Fail Safe". By "Fail Safe", they mean that if you utilize this sensor in the oil drain plug position, and you forget to reconnect the sensor to the electronics after an oil change, the panel light will come on indicating a low level. This scenario also holds true if you lose electrical connection to the sensor.

A small, reliable, light weight electronics package is provided with the sensor to allow its fail safe mode of operation. This electronics package is easily "wire tied" up under the instrument panel along with all the other instrument wiring. No mounting hardware is required. The electronics is powered by +12Vdc. It can be made 24V compatible by adding a small zener diode in series with the electronics. See below.

AE Low Oil Level Sensor P/N 10-01812.....
AE Low Oil Level Sensor w/ electric P/N 10-01813.....
Flap Positioning System FPS-Plus-nt P/N 11-02981.....
Flap position System W/ Elevated Trim Compensation P/N 11-02980.....

IK TECHNOLOGIES

AIM-1 AIRCRAFT INFORMATION MONITOR

If you're a "numbers" kind of guy or gal, this is the choice for you. The compact, all-in-one AIM-1 features a large-character, back-lit, sunlight-readable LCD screen that displays clearly labeled engine information -- no guessing what the numbers mean.
Cylinder head temperatures (CHTs) and exhaust gas temperatures (EGTs) for four cylinders are displayed simultaneously on bright, color-coded LED bargraphs, allowing for rapid scanning, comparison and instant recognition of normal (green), cautionary (yellow) or warning (red) conditions. Pressing the "MODE" button displays the precise numeric value of each CHT and EGT on the LCD screen.
Want to see what you're squawking? A touch of the "change screen" button displays your Mode C Altitude, which can then be offset by inputting barometric pressure or equivalent field elevation.
Outside air temperature, density altitude and a comprehensive, customized checklist are available as options.

P/N 11-03367.....

Sensors / Senders		
Description	**Part No.**	**Price**
UMA 1E1 Oil Pressure Sender	10-00007	.
UMA 1B3 Oil Temperature Sender	10-00418	.
FloScan Fuel Flow Sensor	11-01203	.
Westach Hall Effect Sensor Bendix 720-14RB	10-00863	.
(not req. for electronic ignition) Slick 720-14R	10-00861	.

IK-2000 AIRCRAFT INFORMATION MONITOR

The glass cockpit of the "future" has already become the standard in todays commercial and business aircraft. Why should you build & fly a contemporary aircraft with instruments designed half a century ago? Aircraft Spruce announces a breakthrough in instrumentation that will allow you, the experimental airplane builder/pilot, to enjoy all the benefits of a state-of-the-art multifunction flight & engine monitoring system at a fraction of the cost of similar systems currently available.

Six independent microprocessors are used to acquire, measure and display data in the I-K 2000, ensuring continued instrument operation in the unlikely event of a processor or power-supply failure. This monitor was built with reliability in mind. Multiple displays can be used in a single aircraft. Ideal for tandem airplanes such as Vari-EZ, Long-EZ, Berkut, etc.

For experimental aircraft only. These devices are not presently STC-ed or PMA-ed. May be possible to install in certificated aircraft with FAA 337 field approval.

6 Cyl. System ..... P/N 11-03368 .....
FADEC Interface ..... P/N 11-03367 .....

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