FAA APPROVED
AIRPLANE FLIGHT MANUAL SUPPLEMENT OR
SUPPLEMENTAL AIRPLANE FLIGHT MANUAL (INCLUDING POH AND FAA AFM)
(FOR THOSE AIRCRAFT WITHOUT A BASIC AIRPLANE FLIGHT MANUAL)

EDM-760 TEMPERATURE INDICATOR FOR

Twin Reciprocating Engine Powered Aircraft as listed on Approved Model List of

STC SA00729SE.

REG. NO._____

SER. NO. _____

This Supplement must be attached to the FAA Approved Airplane Flight Manual when the J.P. Instruments EDM-760 is installed in accordance with Supplemental Type Certificate SA00729SE. For those airplanes without a basic Airplane Flight Manual, the Supplemental AFM must be in the aircraft when the EDM-760 is installed.

The information contained in this Airplane Flight Manual Supplement/ Supplemental Aircraft Flight Manual supplements or supersedes the basic manual/ placards only in those areas listed. For limitations, procedures and performance information not contained in this supplement, consult the basic Airplane Flight manual, Markings and Placards.

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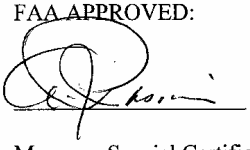

Manager, Special Certification Branch, ANM-190S
Federal Aviation Administration
Seattle Aircraft Certification Office
Transport Airplane Certification Directorate

Date: August 31,1999

Revision No.	Description	Affected Pages	Approval
Original	Complete Flight Manual Supplement for EDM-760	1 thru 4	Mgr. Special Certification Branch, ANM-190S FAA, Seattle ACO Transport Airplane Directorate Date August 31 1999

I GENERAL

The EDM-760 twin temperature indicator displays temperature digitally and in analog format for both Left and Right engines simultaneously. The EGT as displayed is based on probes located near the exhaust outlet for each cylinder and the TIT probe, if installed, in the turbo charger inlet. Before each flight during the run-up the pilot should verify that the left engine is displayed on the left display and the right engine on the right. . These probes are not necessarily collocated with the primary probes therefore, EDM-760 may not indicate the same as the aircraft primary instruments. The analog display is an electronic bar graph (vertical columns, one per cylinder) of EGT & TIT temperatures presented as a percentage of TIT. Below the vertical columns the specific value for EGT and CHT are displayed digitally. The dot over the column indicates which cylinder's digital information is presently displayed. The missing bars at the base of the columns indicates the hottest and coldest Cylinder Head temperature trend . Within a four bar range at the base of the column a trend is formed showing the hottest and the coldest cylinder with respect to the others. Depressing the LF and STEP button simultaneously brings up the adjustable Scan Rate, OAT in ^{o}F or ^{o}C. Depress the LF button until the desired scan time is reached. Exit by Depressing STEP.

If the EDM-760 buttons are not depressed for 10 minute the system will start scanning automatically. Depressing the STEP button will stop the automatic scan and index through all the functions available. During constant power cruise, if the LF button is depressed for five seconds the bar graph will level at mid scale and the letter “N” (normalize) will illuminate. The leveled bars represent the peaks of each column. Each bar represents 10 ^{o}F and now acts as an EGT & TIT trend monitor, quickly showing an increase or decrease in temperature. Depress again to return to normal illuminating the “P”(percentage); nothing else is affected. With the fuel flow option there is a three position toggle switch. The positions are: 1) **EGT**, digital and Bargraph display of temperatures, 2) **FF**, digital display of GPH, REM and USED Fuel. Temperature Bargraph remains. 3) **Both** , cycles through everything installed. The data port output, sends RS232 serial data every 6 sec.
Options of Fuel Flow, TIT, OAT, IAT (induction air temp. Carb temp.), OIL, BAT (voltage) are only displayed digitally with headlines after the number, as "230 OIL" or “14 GPH”. A large value (50 +) of "CLD" indicates shock cooling usually associated with rapid descents at low power. Optional functions not installed will not display.

Alarm limits set for this instrument if different from JPI limits.

CHT_____
OIL_____
TIT_____
DIF_____
CLD_____
BAT_____
TECH_____
DATE_____

Analog Temperatures EGT 1 thru 6 Percent of 1650 F

Digital Temperature

EDM-760

DATA

Switch

STEP

LeanFind

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***GENERAL** (cont.)*

An alarm causes the digital function to flash as soon as the particular limit is exceeded. Factory set alarm limits for CHT (450 ^{o}F) and OIL (230^{o}F) are lower than the actual aircraft limits and can not be set by the pilot. The values may be adjusted to suit individual preference by a qualified technician. Other factory set alarm limits are: "BAT" Voltage 15.5/11.0 or 31.0/22.0 Hi/Lo as appropriate; "DIF" (differential Hi/Lo EGT) 500 ^{o}F, "TIT" 1650 ^{o}F Hi; "OIL" Lo 90 ^{o}F; "CLD" (Rate of change of cylinder head temperature in degrees per minute) -60 degrees/minute. The pilot should be aware of the setting of each alarm for his particular aircraft. An alarm is "Canceled" by holding the step button in for 5 seconds and seeing the word "OFF". Then, only that particular alarm is canceled. Canceled alarms will not appear again until the power has been removed and reapplied to the EDM-760. The entire display dims automatically depending on the ambient lighting.

The Cylinder Head with the Gasket probe and oil temperature will indicate generally higher temperatures than instruments provided by the aircraft manufacturer because the EDM-760 sensing thermocouples are not collocated with the primary instrument sensing probes. Therefore, airplane flight manual limitations based on primary instrument indication take precedence over those of the EDM-760

II OPERATING LIMITATIONS

A. The EDM-760 may not replace any existing instrument or indicator required by the aircraft type design or operating limits.

B. The EDM-760 display may not be used in lieu of, or to supersede, engine operating limitations established by the airframe or engine manufacturer during certification.

III. EMERGENCY PROCEDURES

No change

IV. NORMAL PROCEDURES

CAUTION
Comply with manufacturer's Airplane
Flight Manual leaning procedure.
Do not exceed applicable engine
or aircraft limitations.

After establishing desired cruise power depress the LF button to activate the Lean Find Mode. As the mixture is leaned, one column on the EDM-760 display will begin blinking, indicating the exhaust gas temperature for that cylinder has peaked showing its digital value along with the fuel flow (option) at that time. Continue with the leaning procedure as recommended by the aircraft manufacturer while monitoring the primary engine instruments and the EDM-760 display. Once the leaning procedure has been completed, depress the Step button briefly to exit the Lean Find Mode and enter the Monitor Mode.

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