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

EDM-711 TEMPERATURE INDICATOR with Primary CHT, OIL and/or TIT
Supplement No. 1 Revision New

FOR

Single Engine Reciprocating Engine Powered Aircraft as listed on STC SA00954SE.

REG. NO._____

SER. NO. _____

This Supplement must be attached to the **FAA Approved Airplane Flight Manual** when the J.P. Instruments EDM-711 is installed in accordance with Supplemental Type Certificate SA00954SE. For those airplanes without a basic Airplane Flight Manual, the Supplemental AFM must be in the aircraft when the EDM-711 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 manuals, markings, and placards.

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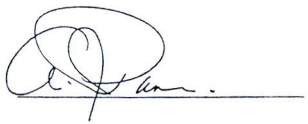

Manager, Special Certification Branch, ANM-190S
Federal Aviation Administration
Seattle Aircraft Certification Office
Transport Airplane Directorate

Date:__August 10, 2001_____

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b. ENGINE MIXTURE LEANING

After establishing desired cruise-power depress the LF button to activate the Lean Find Mode. As the mixture is leaned, one cylinder's column will begin blinking, indicating the exhaust gas temperature (EGT)for that cylinder has peaked. Continue with the leaning procedure, enriching as recommended by the aircraft manufacturer while monitoring the primary engine instruments. Once the leaning procedure has been completed, depress the Step button briefly to exit the Lean Find Mode and enter the Monitor Mode.

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-711 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-711 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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1-GENERAL

DESCRIPTION/OPERATING INSTRUCTIONS

The EGT as displayed is based on probes located near the exhaust outlet for each cylinder and the TIT probe, if installed, is adjacent to the turbo charger. Primary CHT, OIL and TIT probes are in the same location as the original aircraft's factory location.

The analog display is an electronic bar graph (vertical columns, one per cylinder) of EGT, OIL, & TIT temperatures presented as a percentage of maximum EGT or TIT (1650 F). Below the vertical columns the specific value for EGT and CHT are displayed digitally, flashing in the specific location, EGT-CHT every few seconds. A scale of CHT from 300 F to 500 F appears on the left side of the window. The dot over the column indicates which cylinder's digital information is presently displayed. The missing bars at the base of the columns indicate CHT from 300 to 500 degrees F with 25 degrees per bar. OIL temperature and TIT are similarly displayed in the right hand column as a percentage of the Limit. The Oil temperature is displayed as the missing bar in the TIT column when the TIT is installed ("T" over column) and as the column when the TIT is not present, ("O" over the column).

Each Primary function has a remote Limit light (red) and caution light (yellow). Any primary alarm causes the digital function (acronym CHT, OIL, and /or TIT) to flash and a remote yellow 'Caution" light or red "Limit" light to illuminate .

Depressing the LF and STEP button simultaneously brings up the program mode to place the OAT in °F or °C , EGT in 1 or 10 degrees for EGT and K-factor questions. Depressing the LF button will change Oat in °C or °F. Exit by depressing STEP. If either the STEP or LF buttons are not pushed for three minutes the EDM-711 will revert to auto-scanning of the primary functions CHT, OIL, and TIT. Depressing the STEP button will stop the automatic scan and revert to manual scan. Holding the STEP button down causes the functions to index in the reverse order.

During constant power cruise, if the LF button is depressed for five seconds the Bargraph will level at mid scale. Each bar represents 10 °F and now acts as an EGT & TIT trend monitor. Depress again to return to normal; 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 memory module will store 25 hrs of flight, recording every 6 seconds.

Options of Fuel Flow, OAT, IAT (induction air temp.), BAT (voltage) are only displayed digitally with acronyms after the number, as "140 IAT" 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 be displayed. RPM is displayed constantly in the top display. Manifold pressure is displayed in the scan sequence.

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Primary Alarm Limits:

The Primary orange acronyms are programmed to flash at a specific temperature below the programmed limit before reaching the actual limit, that is Oil 20 F, CHT 40 F and TIT 50 F before the Actual Factory Limit. Factory set primary alarm limits for CHT, OIL and TIT (if installed) are the same as the actual aircraft limits and cannot be set by the pilot. The caution and limit lights can only be extinguished by changing power and/or airspeed to reduce the temperatures below the caution or limit trigger points. Tapping the STEP button will stop the display from flashing but will not extinguish the yellow or red lights.

Advisory Alarm Limits:

Exhaust Gas Temperature (EGT), Outside Air Temperature "OAT", Carburetor Air Temperature "CRB", Bus Voltage "BAT", Shock Cooling "CLD", and fuel flow functions "GPH", "REQ", "RES", "MPG", "H.M.", and "USD" appear as orange gas discharge displays of two or three letter acronyms at the bottom of the instrument for each engine. These limits may be set by the pilot.

Alarm hierarchy;

When a primary parameter limit is reached, the pilot should momentarily depress the STEP button on the EDM instrument to extinguish the particular flashing alarm acronym. If another primary alarm has also reached its limit, that acronym will then begin to flash. For each primary parameter which has reached its limit the alarm light will continue to illuminate until the particular primary temperature has been reduced to below its limit. The pilot should continue to monitor the affected parameters as he would if a conventional analog display had reached a limit. The bar graph functions of CHT, EGT, and TIT remain displayed for easy reference if one of these has reached a limit. Alarm light actuation for a particular parameter limit is based on that parameter which reaches a limit first. If two or more parameters reach their limits at the same time, the order of alarm display is 1 CHT, 2 OIL, 3 TIT. No other parameter limit will flash until the pilot depresses the step button on the instrument. A non-primary alarm is "Canceled" by tapping the STEP button giving a 10 minute cancellation period or 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-711. The entire alarm light display dims with a DIM/BRIGHT switch near the instrument The basic instrument display automatically dims in low light conditions.

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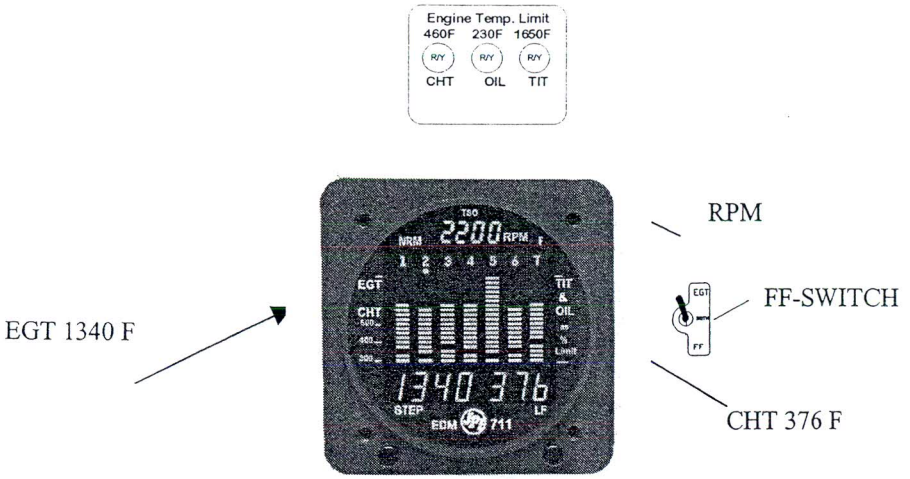

EDM-711-6C

II OPERATING LIMITATIONS

a. The EDM-711 may replace any existing Cylinder Head Temperature, Oil Temperature or Turbine Inlet Temperature indicator required by the aircraft type design or operating limits.

b. The EDM-711 will not be used as primary (CHT, OIL and/or TIT) if any "CAUTION" or "LIMIT" lights are not working.

III. EMERGENCY PROCEDURES

No change

IV. NORMAL PROCEDURES

a. PRIMARY FUNCTIONS

Before each flight, verify that primary "CAUTION" or "LIMIT" lights are working. Whenever main electrical power is turned on the EDM-711 performs a self-test procedure which initially illuminates all "CAUTION" and "LIMIT" lights together and then each light individually. During engine start, there may be a power interruption to the EDM-711 while the starter is engaged. After start, automatic scan of primary parameters will occur after 3 minutes or immediately, by selecting the LF and STEP buttons sequentially.

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Revision No.	Description	Affected Pages	Approval
New	Complete Flight Manual Supplement for EDM-711	1 thru 5	A. J. Pasion Manager, Special Certification Branch Federal Aviation Administration Seattle Aircraft Certification Office Date 8-10-01

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