

J.P.Instruments Fuel Flow Installation Manual

FS-450

Report # 400

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Rev A : Date 08/16/2000

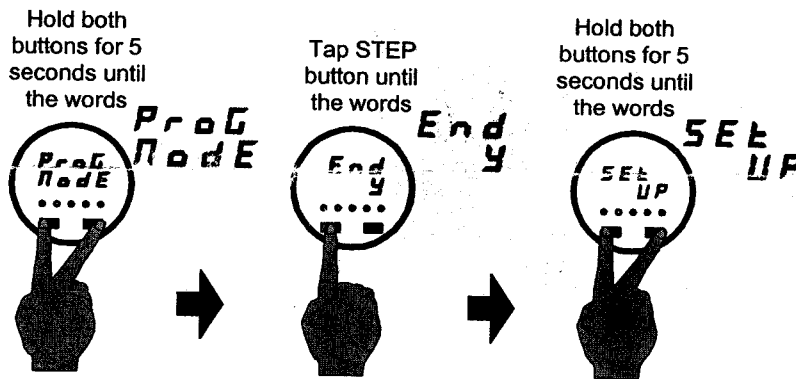
FAA Approved

- A reading of " — " dashes indicate no fuel flow transducer signals. A problem at this step could be caused by a poor connection or crossed flow transducer wires.
- With the engine running, check the "FLOW" Display to read properly.
- After running the engine, check the fuel hoses, transducers and fittings for leaks.

Operation Instructions

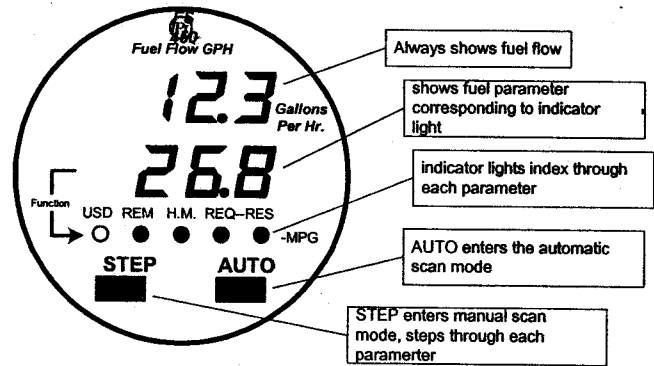
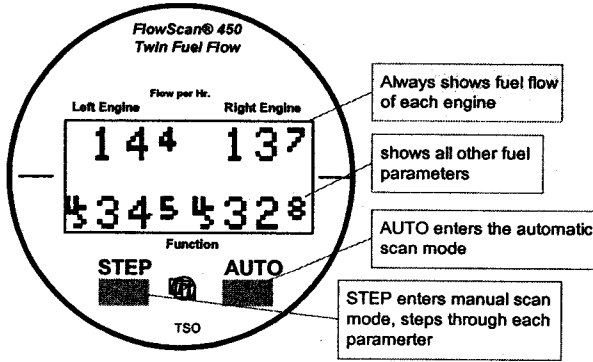
The FS-450 Fuel Scan uses a small turbine transducer that measures the fuel flowing into the engine. Higher fuel flow causes the transducer turbine to rotate faster which generates a faster pulse rate. Prior to engine start you inform the FS-450 Fuel Scan of the known quantity of fuel aboard, and it will keep track of all fuel used. There are two standard operating modes of the FS-450: Automatic Scanning, and Manual Scanning. The FS-450 has programmable alarms. When the remaining amount of fuel falls below the alarm limit the bottom display will show the amount of fuel REMaining and the specific cue light will flash. When the remaining time falls below the alarm limit the bottom display will show the MINutes of fuel remaining and the specific cue light will flash. When an alarm is displayed, tapping the STEP button will temporarily disable the alarm indication for the next ten minutes. When an alarm is displayed, holding the STEP button until the word **OFF** appears will disable that alarm indication for the remainder of the flight. After initial self-test, you will be asked to inform the FS-450 of start up fuel. The FS-450 will display **FUEL GAL** (or **Ltr** liters or **Lbs** pounds) for one second, and then flash **FILL ?** until any button is pressed. The display will pause at each parameter for a few seconds in the Automatic scanning mode. In the Manual scanning mode, tap the STEP button to advance to next parameter. Holding the STEP button will display the previous parameters in the sequence (rapidly backwards).

Procedure—Changing the Set Up by entering the program mode.



Tap STEP to next item	AUTO sequences through these values	Description
FUEL GAL	GAL → Ltr → Lbs →	Selects fuel units
MAIN = 50	Hold or tap AUTO to select main capacity	Main tank capacity, in units selected
AUX? n	n ↔ y	Y—Yes—aircraft has auxiliary tanks (next step)
AUX = 0	Hold or tap AUTO to select AUX capacity	Auxiliary tank capacity (skipped if AUX? is no)
MIN = 45	Hold or tap AUTO to select low time limit	Alarm limit in minutes for low time in tanks
REF = 10	Hold or tap AUTO to select low quantity limit	Alarm limit for low fuel quantity in tanks, in units selected
CARB? n	n ↔ y	Y—Yes—carbureted engine
End y	n ↔ y	Y—Yes to exit; N—No to review list again

- Digital display for numeric readouts and messages: top display is fuel flow and the lower display for all other parameters.
- Indicator lights to show what information is being displayed on the digital display



Parameter Description

Example

Comments

Parameter Description	Example	Comments
USD —Total Fuel Used	38.2	Since last refueling or trip total.
REM —Fuel Remaining	37.2	In gallons, liters or pounds
H.M. —Time to Empty	02.45	Hours. Minutes Remaining at current fuel burn
REQ —Fuel required to next GPS WPT or Destination	25.8	Present with GPS interface Valid signal and way point
RES —Fuel Reserve at next GPS WPT or Destination	I 1.3	Present with GPS interface Valid signal and way point

Instructions for Continued Airworthiness (ICA)

There are no field adjustments and or calibration requirements for the FS-450 series instrument after initial installation. ICA is not required. Maintenance of nonfunctioning or malfunctioning components is limited to removal and replacement of JPI factory supplied new or repaired components as described in the troubleshooting section of the installation instructions