SCHWEIZER
269 SERIES

SCHWEIZER SERVICE LETTER

SUBJECT: INTERFACE AND PROGRAMMING OF THE GPS150/150XL TO DISPLAY SHADIN FUEL FLOW DATA ON THE GPS

MODELS AFFECTED: Model 330 Helicopters S/N 0001, 0002, 0006, 0008, 0009, 0012, 0018, 0023, 0024 and 0027)

COMPLIANCE: At Owner/Operators Discretion

REFERENCE: Garmin Installation Manuals

Schweizer has been informed that Garmin GPS 150 GPS units with Software Version **3.00 or higher** and ALL GPS150XL GPS units can receive and display fuel flow data from a Shadin Fuel Flow System. GPS150 units with Software Versions **2.07 and below** will not accept data from the Shadin and will not display fuel flow data on the GPS150. All GPS150/150XL units will send GPS information to the Shadin for "endurance" calculations.

Installations with Garmin GPS 150 GPS units with software version **3.00 or higher** and all GPS150XL GPS units will not receive fuel flow data from the Shadin Fuel Flow System as delivered from Schweizer.

Schweizer installed the interconnecting wiring between the GPS150/150XL and the Shadin, based on the original GPS150 design information that only indicated a one wire connection between the GPS150 (Pin "24") and the Shadin (Pin "9"). This circuit is an RS232 data "output" circuit from the GPS150/150XL to the Shadin. This will provide GPS data to the Shadin.

For Garmin GPS 150 GPS units with Software Version **3.00 or higher** and all GPS150XL GPS units, design information indicates a second wiring interconnect between the GPS150/150XL and the Shadin. This circuit is an RS232 data "input" circuit to the GPS150/150XL from the Shadin. This will provide Shadin fuel flow data to the GPS150/150XL. **This wiring will not be in your helicopter.** This wiring modification is FAA approved. Reference drawing 269A6297 Rev A.

A 22 gauge shielded wire must be added between the GPS150/150XL (PIN #17) and the Shadin Fuel Flow Indicator (Pin #6), and the GPS150/150XL must be reprogrammed in order to provide this function. This wire should be a shielded wire with the shield grounded at the GPS150/150XL end.

Install the wire between the GPS150/150XL (Pin"17") and the Shadin (Pin"6") in order to display Shadin fuel flow data on the GPS150/150XL. Then re-program the SET-UP on the GPS150/150XL as follows:

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FOR GPS150 UNITS:

With electrical power supplied to the GPS150, turn the unit "on". On the self-test page is the software version number. When self-test is completed, the data base page is displayed. Press "ENT" key at the database page. The GPS will start looking for satellites. Press the "SET" key, then rotate the "LARGE" knob until "I/O Channel 1" page is displayed. Press "CRSR" Key. A cursor will appear on the field next to the "INPUT" legend. Rotate the "SMALL" knob until "SHADIN-FUEL" appears. With "SHADIN-FUEL" displayed, rotate the "LARGE" knob to move the cursor to the "OUTPUT" Field. Rotate the "SMALL" knob untiL "AVIATION" is displayed in the "OUTPUT" field. Press the "CRSR" key to remove the cursor from the display. The "I/0 CHANNEL 1" should now indicate "INPUT: SHADIN-FUEL", "OUTPUT: AVIATION". The GPS150 can now be turned "OFF" or switched back to another function (such as NAV).
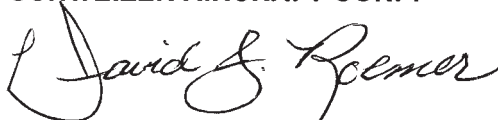
GPS150XL:

With electrical power supplied to the GPS150XL, depress and hold the "ENT" key while turning the unit "ON". Release the "ENT" key when the display activates.The "DISPLAY TEST PAGE" is displayed. Rotate the "LARGE" knob until the "I/O CHANNEL 1" page is displayed. Press "CRSR" key. A cursor will appear on the field next to the "INPUT" legend. Rotate the "SMALL" knob until "SHADIN-FUEL" appears. With "SHADIN-FUEL" displayed, rotate the "LARGE" knob to move the cursor to the "OUTPUT" field. Rotate the "SMALL" knob until "AVIATION" is displayed in the "OUTPUT" field. Press the "CRSR" key to remove the cursor from the display. The "I/0 CHANNEL 1" should now indicate "INPUT: SHADIN-FUEL", "OUTPUT: AVIATION". The GPS150XL can now be turned "OFF".

The programming of the "I/0 CHANNEL 1" "INPUT" will now allow data sent from the SHADIN (to GPS150/150XL, Pin "17") to be displayed on the GPS150/150XL. The programming of the "I/0 CHANNEL 1" "OUTPUT" will now allow data sent from the GPS150/150XL (Pin "24") to be sent to the Shadin.

GPS150 units with <u>Software Versions</u> **2.07 and below** may have their software version upgraded in order to provide the fuel flow data interfaces capabilities. Contact an authorized Garmin International Service Center to make these arrangements.

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David J. Roemer, Manager
Customer Support Services