



Network ENGINE Fuel Usage Calibration

File Number:

NET ENGI CAL

TECHNICAL NOTE

July 7, 1999

Due to mechanical variations between fuel injection mechanisms, errors in fuel usage readings may occur. The following procedure should be used to calibrate the fuel usage functions of the Network ENGINE. The first step in the calibration procedure is to gather and record accurate actual fuel usage data along with the usage reported by the Network ENGINE.

Gathering Data

The best method for obtaining accurate actual fuel usage is to record the amount of fuel required to refill the boat's tanks. Starting with full tanks, record the total amount of fuel required to refill the tanks to the starting level after a period of boat usage. At the time of the fill-up also record the total fuel used by both engines as reported by the Network ENGINE [Push the **FUEL** key 6 times until the display reads GALS T or gal s x10 t]. For the best results this procedure should be repeated several times. Remember to reset the fuel usage on the Network ENGINE after each fill up as follows:

- 1 Push the **FUEL** key until the display reads GALS, GALS p, gALS s, gALS t or gal s x10 t
- 2 Push the **SETUP** key, the fuel display will flash
- 3 Push the **ENTER** key, the fuel display will reset to 0.0
- 4 Push the **FUEL** key, the display will stop flashing

Calculating the Fuel Calibration Correction Value

The fuel calibration or fuel cal value on the Network ENGINE is adjusted based on the percentage of difference between actual usage and reported usage. The default fuel cal value is 1.000 which represents 100.0%. The formula for calculating the calibration correction value is:

$$(A - R) \div A = \text{Calibration Correction Value}$$

Where A = Actual usage in Gallons
R = Reported usage in Gallons

For example if the Actual usage is 110 gallons and the Reported usage on the Network ENGINE is 98 gallons the calibration correction value would be calculated as follows:

$$(110 - 98) \div 110 = 0.109$$

If the actual usage is less than reported usage the resulting calibration correction value will be a negative number. For example if Actual usage is 98 gal. and Reported usage is 110 gal.:

$$(98 - 110) \div 98 = -0.122$$

This calculated calibration correction value will be added to the fuel cal value.

Entering the Calibration Correction Value

- 1 Simultaneously push and hold the **TACHO** and **LIGHTS** keys until version is displayed.
- 2 Push the **ENTER** key. The software version will be displayed. (Note: If it is version 1A please contact B&G Service.)
- 3 Push the **FUEL** key until fuel cal is displayed.
- 4 Push the **ENTER** key. cal and the current fuel calibration value will be displayed as illustrated below.
- 5 Using the ▲ [TACHO] and ▼ [FUEL] keys adjust the fuel calibration value so that it equals the sum of the current value plus the calculated correction value. (Add the correction value if it is a positive number, subtract if it is negative.)
- 6 Push the **ENTER** key.
- 7 Push the **TACHO** key until exit is displayed.
- 8 Push the **ENTER** key. The new fuel calibration value will now be applied to all of the fuel usage readings on the Network ENGINE. This procedure may be repeated if additional calibration is necessary based on further observation.

