

# **Fuel Log**

# Diesel Fuel Flow Monitoring Systems

Fuel Log is the latest addition to FloScan's fuel flow line of digital instruments for diesel engines rated from 30 - 5000 kW.

In areas where EPA air quality regulations apply, Fuel Log addresses the need for accurate flow measurement to determine baselines for NOx emission reporting.

Fuel Log can also point out poor engine performance (poor injection, failed turbo's, etc) as well as possible fuel leaks. Discrepancies between tank fill-up records and the totalizer reading will identify this problem immediately.

Fuel Log can also be used for fuel billing purposes by monitoring precise fuel consumption per job or contract.





#### **Fuel Log Model Features:**

- · Instantaneous net fuel burn rate.
- Cumulative (non-resettable) fuel totalizer.
- Resettable fuel (job) totalizer.
- Resettable engine (job) hour meter.
- Pulse signal output for instantaneous net fuel usage. Can be interfaced with Data Logger or SCADA System for recording fuel usage.
- (+/-) 2% accuracy on generator applications.
- · Models available in U.S. gallons or liters.

#### Uses include:

- Provides accurate fuel usage data for determining NOx emissions.
- Identifies poor engine performance with increases in normal fuel consumption.
- Possible fuel leaks can be identified immediately by comparing fill-up records with totalizer reading.
- Provides accurate fuel usage data for billing purposes.
- Cumulative fuel totalizer can be used for determining engine service intervals.
- Pinpoints optimal engine speed under any load or operating condition.

#### **Principal of Operation:**

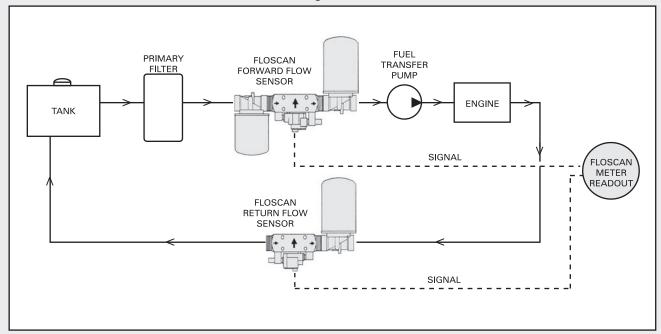
Most diesel engine fuel systems employ forward and return fuel flow lines. The return flow amount must be measured and subtracted from the forward flow amount to determine consumption. The amount of return flow varies by engine type-from as little as 10% of fuel consumption to a much as 1000% or more... necessitating very tight margins for error when measuring flows and calculating the difference. With regard to engines that use the return flow to cool unit injectors (i.e., Detroit Diesel and CAT 3500 Series), the return flow temperature is substantially higher than the forward flow - leading to the possibility of error in measurement caused by the expansion of fuel. FloScan has designed special temperature compensated systems to accurately measure and compensate for these inconsistencies. Each pair of FloScan sensors (forward and return) is individually calibrated and matched to the microprocessor-driven meterhead.

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# Series K Flow Diagrams for Diesel Engines

## High Flow



### Standard Flow

