Model FTI-2.8

Engineering Specifications
Automated Diesel Fuel Maintenance System
Diesel Fuel Tanks Up To 5,000 Gallons

Part I - General

1.1 Description

A. The diesel fuel storage tank shall be equipped with a **FM APPROVED**, and **NFPA COMPLIANT, Automated** Fuel Maintenance System. The FTI-2.8 will remove particulate through 2.0 microns and near 100% water separation from stored diesel fuel.
B. A fuel stabilizer shall be added to the diesel fuel in storage.
C. A fuel biocide shall be added to the diesel fuel in storage

Part II- Products

2.1 Products Included

A. The fuel maintenance system shall be a Fuel Technologies International FTI-2.8

2.2 Fuel Maintenance System

A. **Pump / Motor**
Pump: 2.8 GPM, Spur Gear, Iron Casing, Viton Seals, Pressure Relief Valve
Motor: 1/3 hp, 120V AC @ 6.5 Amps, 1 Phase, 60 HZ, TEFC, Thermally Protected

B. **Electrical Connection** --------120V AC, Single Phase, 15 AMP, 60 Hz.

C. **System Inlet Connection – 1/2" NPT**
System Outlet Connection – 1/2" NPT
Minimum Recommended Supply Line Pipe Size – 1.0" NPT

2.3 Programmable 7 Day Controller

A. The controller shall be a: **UL LISTED ASSEMBLY CONSISTING OF:**

1. Siemens / IDEC PLC - inputs: 6, outputs: 4, relays: 10 Amp, UL/CSA/CE/FM Approvals
2. Siemens / IDEC 24VDC Power Supply - UL/CSA/CE/FM Approvals
3. Motor Contactor - DC 24V, 20 Amp, UL/SA/CE Approvals
4. Motor Overload – 120V AC rated at 8 Amps, UL/SA/CE Approvals
5. Terminal Block - 26 Amp, 18-12 AWG.
6. Lighted Switch [On, Off, Auto] - Rated at 600V, 10 Amp, UL/SA/CE Approvals
7. Lockable Disconnect Switch - Rated at 600V, UL/CE Approvals
8. Dry Contact General Alarms - One set dry contacts provided [normally open for all alarms.]
9. Siemens Logo TD – Touch Display

2.4 Vacuum Switch

5 Amp, SPDT @ 120/240V AC and 12/24V DC, Buna-N Seals

2.5 2 Stage Filter

Stage 1: Particulate Removal --------- 2 Micron
Stage 2: Water Removal -----Near 100% Water Separation (With See-Thru Bowl and Water Sensor Probe)

(Filter shall be Spin-on Removable)

2.6 Auto - Shutoff with Audible Alarm

A. System shall Shutoff Automatically and Sound an Audible Horn for the following Alarms.
1. More than 18 In. Hg (filter plugged)
2. Water level in See-Thru bowl at Maximum.
3. Leak in Cabinet.
4. Motor Overload

2.7 Enclosure

A. The complete FTI assembly shall be housed in an Cabinet manufactured to NEMA 3R standards and designed for wall mounting.
The single door is hinged on left-hand side & is removable. The Cabinet and Fabricated parts are coated with Zinc Primer for ultimate corrosion resistance, and then Powder Coated

B. Dimensions - 24"W x 24"H x 9"D, Total System Shipping Weight - 120 lbs.

2.8 Leak Detector

10 VA, 0-50V DC, N.O. (closes with liquid present)

Part III - Execution

3.1 Installation

A. The complete Diesel Fuel Maintenance System with cabinet shall be designed for wall mounting.
B. A suction line (**with foot valve**) to be installed at the sump end of the storage tank 1" from the bottom and plumbed to the FTI fuel maintenance system. The return line to be installed at the opposite end of the storage tank.
C. Caution should be taken not to exceed the 15-ft. lift capability of the fuel circulation pump.
D. A **Fuel Stabilizer** to be added to the existing fuel in tank annually.
E. Additional **Fuel Stabilizer** to be added in proportion to new fuel added to the storage tank.
F. A **Fuel Biocide** shall be added to the diesel fuel in storage
G. **Ball valves** should be installed at supply and return lines to isolate system for maintenance.

INSTALLATION PRECAUTIONS:

THIS MODEL FTI-2.8 HAS NO PROTECTION AGAINST THERMAL EXPANSION OF THE FUEL LINES. IF THE FUEL LINES ARE INSTALLED WITHOUT PRESSURE RELIEF, DAMAGE MAY OCCUR TO THE PUMP, MOTOR OR FILTER. INSTALLER SHOULD PREVENT ANY CLOSED LOOP WITH FTI SYSTEM IN THE MIDDLE.

FTI WILL NOT BE RESPONSIBLE FOR ANY DAMAGE DUE TO EXCESSIVE LINE PRESSURE CAUSED BY FUEL THERMAL EXPANSION.