FUEL POLISHING:
Automatic Operation Conditioning Protocol Description

Filter protocol

The status of the SAFA filter system is displayed on the PLC screen. In this screen you can select and modify the working modes for SAFA, see alarms and cancel the system.

Automatic filtering mode

When the automatic filtering mode is selected, the days from Monday to Sunday and the filtration start time can be selected. The total filtering time per tank, can be adjusted up to 59 minutes per tank. At the scheduled time of each day selected, the suction and return solenoid valves of the line of the first tank will be opened. Once the filtration time has elapsed, continue with the next tank, opening and closing the corresponding solenoid valves. So with all the tanks the filtration is concluded. The protocol can be manually stopped at any time by pressing "Off" closing the solenoids and the system shutdown. Program is suspended.

Manual filtering mode

When the manual filtering mode is selected, the tank to be filtered can be manually selected through the PLC screen. By pressing "SAFA Start" the filtering system opens return and return electrovalves that give access to the preferred tank, and it will remain in operation for unlimited time. The protocol can be stopped manually at any time by pressing "SAFA Start" again, closing the line solenoid valves.

Automatic drain protocol

By means of the water detectors installed at each of the filters, the automatic drainage protocol will be activated towards the water decanter. Any filtering protocol is locked. The 3/8"NC solenoid valve of the drain is opened and the solenoid pump is activated for 30" The filtering system keeps blocked for the next 10 minutes. Each of the filters has a water presence gauge on the front of the filter housing. In the filters there is a differential pressure drop gauge, as clogged filter indicator.

Draining filters and cleaning or replacing filter cartridges

In order to empty the filters for cleaning or replacing the filter cartridges, the system must first be set to "Off", the main suction and pressure valves closed and the plug from the three-way drain valves located at the back of filters removed. A container should be placed to avoid that the drop of fuel to the collecting tray causes leak detection alarms, and open the drain valve until the total emptying of the filter. Remove the screws on the top cover, and replace the filter insert cartridge.

Security

The filtering protocol will be affected in the following cases:

1. If, for any reason, any of the pump supply to tank is started, filtration will be cancelled for ten minutes, prioritising the fuel supply to tanks.
   If the system is operating manually. The filtering process is stopped, switching to automatic mode.
   After that ten minutes of filtering cancellation, the system will resume the filtering protocol, only if it still remains within the programmed cycle time frame programmed (up to 59 minutes), as long as the start of fill pumps had ended.
2. If the pressure increases to 3 bars, it stops until descending to 2 bars. A local alarm is displayed at the screen and remotely by mod-bus.
3. The system detects a leak at its oil collecting tray infrared sensor. In this case, the system will be blocked and local alarm is displayed at the screen and remotely by mod-bus.
4. --In low level alarm at in main tanks or manhole leak detected.

The system, under automatic mode, will ignore any tank in alarm during the run cycle, until that alarm is solved. Under manual mode, it will also not allow the tank in alarm condition to start.








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