



Mining Excavators and Shovels



FTA Hydraulic onboard by-pass filtration systems have been in operation within the mining industry for many years now with end users enjoying multiple oil and component life extensions. Cost savings in maintenance, downtime, new lubricant and waste disposal run into the hundreds of thousands of dollars.

Advantages of FTA – Depth Filtration Systems:-

- Common cartridge style element for all systems.
- Greater surface area.
- Removes moisture.
- Reduced downtime.
- Extends oil life.
- Extends component life.
- Reduces waste disposal costs.
- Extends original equipment hydraulic filter life from 100% to 500% !

System Operation

FTA on board filtration is designed to provide a minimum oil flow rate of 20% of the system capacity per hour. (e.g. 20 Litres per 100 Litres / per hour)

Filter Technology filter elements remove particulate contamination down to 2 micron in size and water contamination of up to 2%.

A non-return check valve is located on the discharge of the return manifold and serves two purposes:-

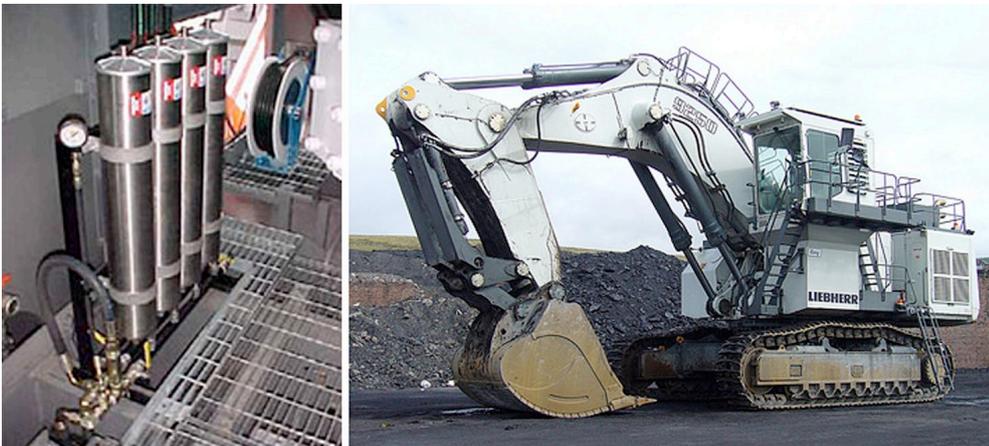
- Prevents any system back pressure from entering the filter housings.
- Prevents any oil back flow, from head pressure in the tank, from entering the housings when the lids are removed to service the elements.

Effectively, the system does not require any operational attention other than the normal daily inspection, for leaks or damage as is applied to the rest of the machine to which it is installed.

Operating pressure should be monitored routinely by maintenance personnel. Pressures observed indicate as follows:-

Pressure		Action
PSI	BAR	
45-50	3.0-3.5	Normal operating pressure with clean elements. Continue in service.
50-65	3.5-4.5	Indicates contamination loading in elements is increasing. Plan to change elements at 4.5 bar.
65-75	4.5-5.0	Maximum contamination loading - change elements at next service opportunity. System will go into by-pass at 5.0 bar.

A 5 bar pressure relief valve is located on the inlet to the filter housings. This limits housing pressure to 5 bar. Any excess pressure causes the relief valve to open and allow surplus oil flow to bypass the filter housings and return directly to tank.



Dual Filtration System

The Dual Filtration System utilizes the benefits of the OEM standard factory fitted full-flow filter and the added benefit of the FTA by-pass filter.

The full flow filter screens out the larger particles before they reach the critical components. The FTA by-pass filter removes minute solid contaminants which would normally pass through the full-flow filter and maintains a constant controlled flow of CLEAN OIL to the critical areas.

The Dual Filtration System is the ultimate in component protection.