Tips & Tabs is a free news letter for Private circulation to all our esteemed customers and friends in the industries. Forward it to all those who are involved in machine maintenance, design and interested in technical matters.

Hymat Services

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Your Friendly Partner in:

1. *Oil Filtration with imported special filtration Trolley fitted with Laser Particle Counter & as per International standards like NAS / ISO.*
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Hydraulic and Lubrication Filter Types and Locations

Selecting the right filter can improve the reliability of a system and eliminate failure. With so many options available, we understand how difficult it can be to choose just the right one. Let's take a look at some of the types of filters and where/how they are generally used.

Suction Filter : This filter is located on a suction port of the pump or submerged in the reservoir and attached to the suction line leading to the pump. **High efficiency filters are usually NOT placed on the suction side** as high differential pressure can cause pump failure. A fine filter on a pump suction side would require the filter to be very high flow capacity which will handle the flow and have an extremely low pressure drop.

Pressure Filter : This filter is generally installed between the pump outlet and the rest of the components in a hydraulic system. The idea here is to protect all components in a given system. **High Pressure filters may be installed with or without a bypass valve.**

Return Filter: The term RETURN indicates that the entire flow from the system returning to the tank is handled by these types of the filters. Return filters may be installed either in-line or inside the reservoir (In-tank return filter). There are varieties of filters available for each style of assemblies. The designer of the system collects all flow from the system and directs it through the return line filter. Such an arrangement makes certain that the oil in the reservoir will be cleaned to desired ISO specification.

Pilot Line Pressure Filter: Some systems have very sensitive components like servo valves, that need only a fraction of the flow. Pilot Line Pressure Filters are selected to handle just that much flow which is required by such extra dirt sensitive components. It is very easy to filter the entire system to the required cleanliness level, or as an alternate a smaller filter with a fine filter media can be installed in the critical leg of a system and the balance of the system

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13. ***Elley Electricals.***
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15. ***Many Plastic Item Manufacturers(Injection & Blow Molding Machines).***

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can be fitted with an relatively coarser filter.

Duplex High Pressure Filter : When a single filter assembly is applied, the system must be shut down or bypassed whenever the filter element requires servicing. If such a condition is undesirable (power plant) then it would be wise decision to install a Duplex filter.

A duplex features at least two filter housings with a transfer valve separating the housings. The flow can be routed through one housing or both depending on the valve. When one of the filters is fully loaded the operator switches the valve to activate the standby filter and then services the dirty filter. This Duplex filter avoids the shutting down of a system during a filter change.

Duplex Low Pressure, High Flow Filter: High flow, low pressure applications, (lubrication, fuel oil) where shutting down the system to service a filter is not an option, requires the installation of a duplex. The Hy-Pro Duplex filters can handle high flow and high viscosity fluids typically used in lubrication applications.

Off-Line Filter (Dedicated): Some OEMS or the users of a hydraulic or lube system install an off-line filter system. This system is a self-contained filter system. It includes a pump-motor combination as a power source and a range of filtration flexibility to accomplish many desired results. It can easily be connected to a system reservoir.

Off-Line Filter (Mobile) : Mobile off-line filtration systems can offer the same impact and flexibility as dedicated off-line filters while performing multiple tasks. They include a pump-motor combination as a power source and filters that can be fitted with many different elements depending on the application. Commonly referred to as filter carts, they can be fitted with quick disconnect fittings and connected to a reservoir or tote for conditioning, used to filter fluids during transfer, and used for filtering oil during recovery. A filter cart fitted with two filters in series can have a rapid impact on fluid cleanliness and water content with the appropriate filter elements applied.

Filters are frequently considered as a necessary evil and are added to a system as an after thought instead of a valuable asset. **Proper filter selection and location can provide years of reliable equipment operation and save money that is commonly lost battling contamination related failures.**

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