

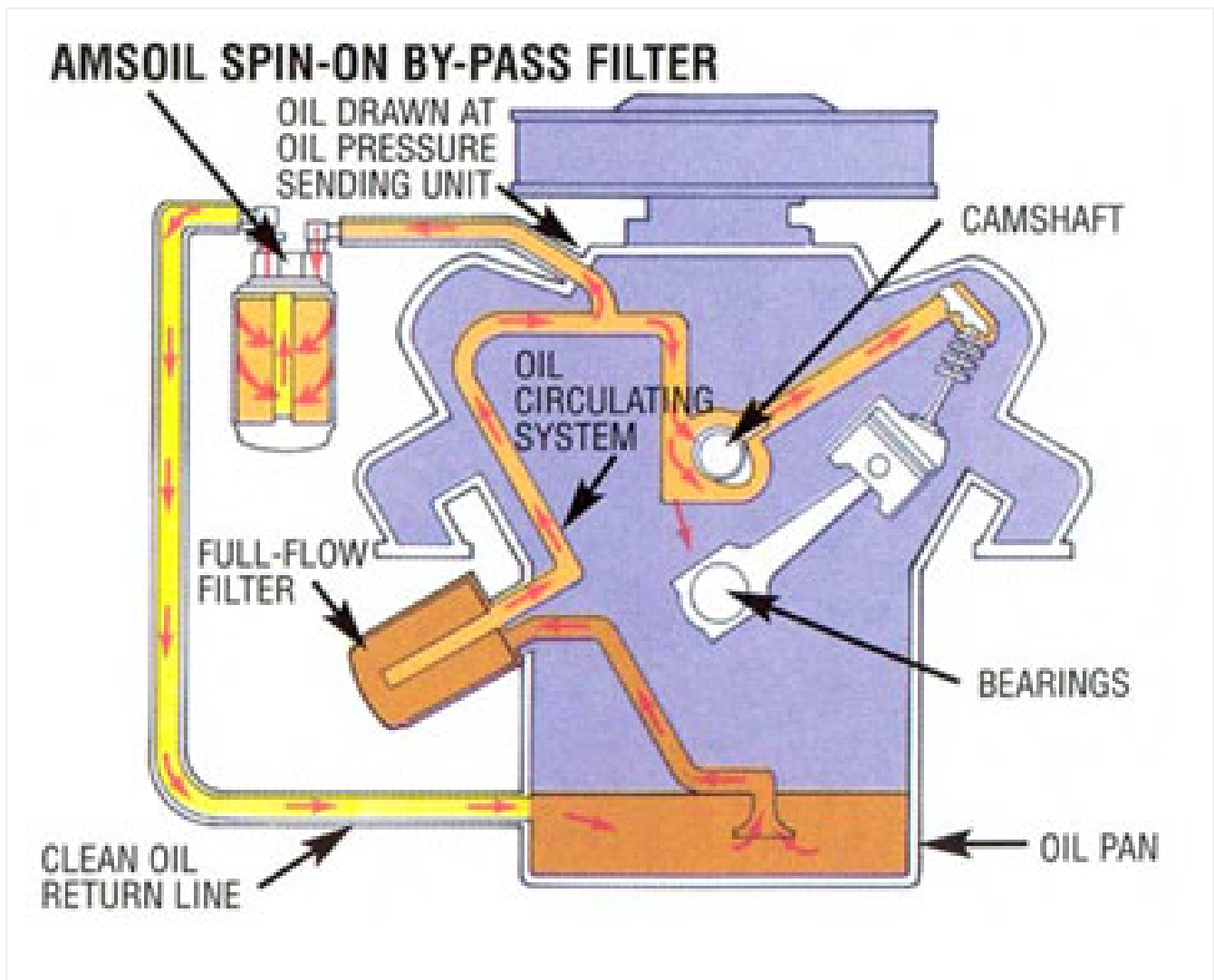
How it Works

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How Bypass Filtration Works

Bypass oil filtration features a secondary filter with the purpose of eliminating nearly all contaminants from motor oil. Bypass filters have high capacities and eliminate much smaller particles than full-flow filters, including soot. Bypass filters reduce engine wear and increase oil volume, but their high efficiencies mean they also have higher restriction and must be used in conjunction with a full-flow filter.

Bypass filters operate by filtering oil on a "partial-flow" basis. They draw approximately 10 percent of the oil pump's capacity at any one time and trap the extremely small, wear-causing contaminants that full-flow filters can't remove. Bypass filters have a high pressure differential, causing the oil to flow through them very slowly and allowing for the removal of smaller contaminants. It is called bypass filtration because the oil flows from the bypass filter back to the sump, bypassing the engine. This continual process eventually makes all the oil analytically clean, reduces long-term wear and can dramatically extend oil drain intervals.



Single Remote vs Dual Remote Systems

AMSOIL offers two types of bypass systems: single-remote and dual-remote. The systems are equally efficient, and the only real difference is the full-flow filter's location.

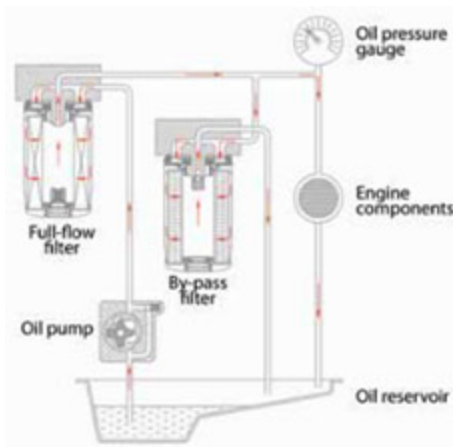
Single Remote System

The AMSOIL Single-Remote System is convenient to install; it does not require relocating the full-flow filter. It also takes up less space, which is often the biggest issue when installing any bypass system. With the Single-Remote System the oil is diverted from its normal circuit:

1. From a pressurized oil port
or
2. Through a filter adapter/oil filter cap (available for purchase for specific applications)

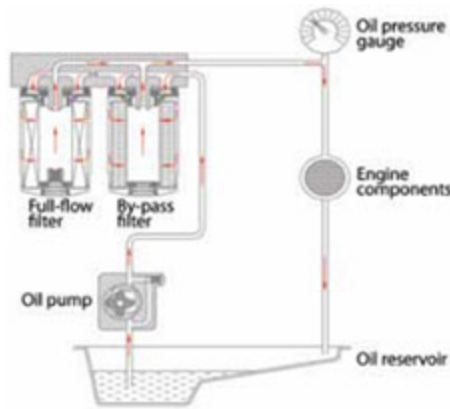
The oil is then pumped through the bypass filter and returned to the oil pan. There are two ways to return the oil to the pan:

1. Drill into either the oil pan or the rocker arm/valve cover to return the oil
or
2. Modify an oil filler cap/purchase a replacement oil filler cap from AMSOIL (available for purchase for specific applications)



Dual Remote System

The AMSOIL Dual-Remote System is convenient for servicing filters, placing both the full-flow filter and bypass filter on the same dual-mount. If you have the room in your engine compartment, this is a good option. A spin-on filter adapter fits onto the full-flow filter, through which the oil is both taken and returned. The oil flows through both filters, and the oil returns to the system through the filter adapter.



Full Flow Filter vs Bypass Filter

Full-flow filters are more open and free-flowing than bypass filters so they are able to support the flow of oil that lubricates the engine. Because they are freer-flowing, they are less efficient at removing small particles. AMSOIL Ea® Full-Flow Filters can efficiently remove particles down to 20 microns.

Bypass filters only filter a small percentage of the system's oil at any given time. Denser, more efficient filtration media provides improved small-particle removal. Ea Bypass Filters efficiently remove contaminants (98.7 percent efficiency) down to 2 microns.

Used together, full-flow and bypass filters provide comprehensive wear protection against both large and small particles, as well as both short-term and long-term wear. In addition, filter capacity is increased, and the life of the filters is extended.

Bypass System Benefits

- ⊕ Efficient Small Particle and Soot Removal

⊕ Significantly Extended Engine Life

⊕ Increased Filtration Capacity and Life

⊕ Improved Oil Cooling

⊕ Increased Fluid System Capacity

⊕ Reduced Maintenance Costs

⊕ Dramatically Extended Drain Intervals

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