

Genuine oil filter

> High quality technologies to ensure the proper operation of your machine

Oil filter principles

It prevents pollution and abnormal wear and tear by retaining impurities of external origin (dust, sand, etc.) and internal origin (scale, etc.). Our filtration specifications are very demanding concerning the volumetric capacity, the size of the fine particles admitted and the quality of the media, essential elements to guarantee the quality of a filter.

> There are many models on the market. With Manitou Group Parts filters, you can be assured of the highest quality and performance. In particular, the Bypass Valve, specific to Manitou Group Parts requirements, plays a crucial role in engine safety and operation.



Bypass valve

Manitou Group Parts oil filters are equipped with a bypass valve to ensure proper engine lubrication.

It opens when the oil is too thick or the filter is clogged. The opening pressure of this valve must be precise. If it does not open properly, unfiltered oil will flow into the lubrication system and cause the filter to burst and the oil to leak.



- If the valve opens too early, contaminated oil can flow into the engine and affect engine operation.
- If the valve opens too late, the oil flow may be blocked, causing poor lubrication of the components.



**QUALITY &
TOUGHNESS**



**PERFORMANCE
& SAFETY**



**CERTIFICATION
& WARRANTY**

Genuine oil filter



> High quality technologies to ensure the proper operation of your machine

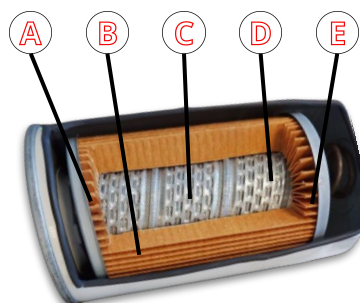
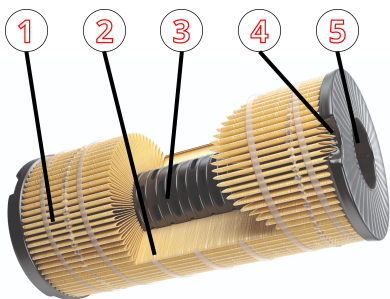
Comparative test on Manitou Group Parts oil filter - PN : 476954



It can be difficult to evaluate the filter quality which can be often integrated in a metal cartridge.

We take the example of a Genuine filter from Manitou Group Parts : 476954. We can appreciate the different advantages comparing to another adaptable filter :

 Certified Genuine parts Manitou Group Parts Genuine filter	 Adaptable filter tested
1 Filter using the latest media technology with a large filter surface.	A 10% shorter filter element : lower filtration capacity.
2 Large number of folds. Filter media fills the canister from the top bottom, maximizing filter surface area.	B 30% fewer media folds on this filter means less media and reduced filtration.
3 Robust nylon center tube resistant to high oil pressure.	C Metal center tube can damage the filter media. The tube can collapse under high start-up oil pressures.
4 Strong glue attaches media to metal end cap, to prevent leaks past the filter media.	D Weak glue between the media and the end-cap.. This can cause unfiltered oil to leak into the engine.
5 Effective bypass valve ensures oil bypasses only at heavy loads and engine start-up.	E Weak bypass spring. More liable to open too often allowing oil to bypass the filter, so oil is filtered less frequently.



 **QUALITY & TOUGHNESS**

 **PERFORMANCE & SAFETY**

 **CERTIFICATION & WARRANTY**