

Commercial Filter Equivalents for Military 6x6's

Roscommon Equipment Center
National Association of State Foresters
in Cooperation with
Michigan's Forest Fire Experiment Station

Fire agencies prefer the convenience and cost savings of obtaining parts from everyday sources for their vehicles, including those built on a military chassis. To assist, Roscommon Equipment Center (REC) has identified commercial filter substitutes commonly available for several 6x6 engines discussed below. WIX makes the filters and we show the WIX part number for each. Since NAPA part stores are common, we also show the NAPA Gold filter number. The NAPA Gold filters are made by WIX. WIX has an easy to use part number look-up system at its web page, listed in the "Contact Information" below. Their website also has photos of the filters, dimensional data and a list of gaskets that come with the part.

Multi-Fuel Engines

The 2.5-ton and 5-ton 6x6 multi-fuel models use the same oil and fuel filters (Figure 1). There are two oil filters mounted side-by-side within removable housings. The WIX 51133 oil filter fits this engine without any adaptation.



Figure 1 ~ Multi-fuel filters, from left to right: A military fuel filter, NAPA Gold 3512 replacement fuel filter, NAPA Gold 1133 replacement oil filter, and a military oil filter.

Two side-by-side fuel filters are located near the oil filters along the side of the engine. WIX also

makes a filter that fits the fuel filter housing (WIX 33512). Unfortunately, the seal that comes with the filter has a slightly smaller diameter than the filter mount flange of this engine. A proper size seal can be purchased from Memphis Equipment at the contact point listed below. The required seal is approximately 4"OD x 3.75"ID x 0.125" thick.

The mounting nut for installing the fuel filter housing also has a seal. The original seal is an O-ring style (Figure 2). The WIX filter comes with a washer-style seal instead. Either type works well. If the housing mounting nut seal needs replacement, use the washer-style seal that comes with the filter or find a Buna-N or Viton O-ring replacement with the correct diameter from another source.

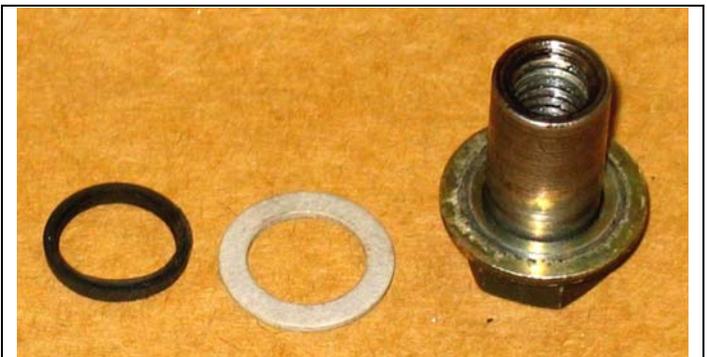


Figure 2 ~ A multi-fuel engine's fuel filter housing mounting nut (right) requires a seal. The NAPA 3512 filter comes with a washer-style seal (center) that can replace the original o-ring seal (left).

The WIX 42837 air filter will fit the 2.5-ton multi-fuel filter housing. This filter has a smaller outside diameter than the military filter but its height is the same and the flow and filtration capacity is adequate for the engine. Memphis Equipment is the only source we found for the 5-ton engine air filter.

Mack Diesel 5-Ton

These engines also use two oil filters, but in this case, they are two different sizes; use one WIX 51133 and one WIX 51503 or their equivalent. There are two different fuel filters as well. One is mounted on the engine and can be replaced with a WIX 33234. The other is located on the left frame at the rear of the front wheel-well and is replaceable by a WIX 33080 or equivalent.

Cummins Diesel 5-Ton

The WIX 51954 oil filter fits this military engine. Only one is required. The fuel filter is a Kaydon C220086 or the WIX 33401 equivalent.

Summary

This should provide a good start in finding readily available sources for these important maintenance parts. Because of the variety of military 6x6 engines used through the years and the number of years that they were produced, make sure that these filters are matching well to your unit. It is possible that some units might be different or have been retrofitted to accept something different. You can also go to “FEPP Links,” found at REC’s website, www.RoscommonEquipmentCenter.com, for a list of companies that sell military parts.

	General Model Category			
	Multi-Fuel 2.5-Ton Engines	Multi-Fuel 5-Ton Engines	Mack Diesel 5-Ton	Cummins Diesel
Oil Filter	WIX 51133 or NAPA 1133 2 required	WIX 51133 or NAPA 1133 2 required	WIX 51133 or NAPA 1133 WIX 51503 or NAPA 1503	WIX 51954 or NAPA 1954
Fuel Filter	WIX 33512 or NAPA 3512 2 required Requires a different size seal than what comes with the filter; see text	WIX 33512 or NAPA 3512 2 required Requires a different size seal than what comes with the filter; see text	WIX 33234 or NAPA 3234 (engine mounted) WIX 33080 or NAPA 3080 (frame mounted)	Kaydon C220086, WIX 33401 or NAPA 3401
Air Filter	WIX 42837 or NAPA 2837	Use military part	Use military part	Use military part

Disclaimer

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Acknowledgements: Thank you to Ed Moore, Michigan Department of Natural Resources, Gaylord Repair Shop.

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