



WHY REPLACE OIL PUMP SCREENS?

The oil pump screen smoothes the flow of oil into the pump. It usually keeps out debris that can lock up the pump. It is the only thing in an engine that assists the pump in its function. The other engine parts rely on the pump to help them.

If we could take a screen apart, it would be easy to clean. Unfortunately, we can't. Therefore it is impossible to clean it completely. Any debris left inside has the potential of locking up the pump.

Close examination of a used screen assembly after attempts to clean it may reveal a dark brown stain, which is usually a varnish type coating. The most common screen mesh has a .040" square hole between the wires. Oil flow is directly proportional to the area of the hole. If the varnish coating is .0051 thick, our square hole is down to .0301 on a side. This is a 25% reduction on a side, and a 44% reduction in the total area and flow $[(.040")^2 - (.030")^2] / (.040")^2 = 43.75\%$.

The second statement references, "usually keeps out debris." There are two styles of screens that allow debris to enter an oil pump. The first has a valve in the center that opens if the oil is too thick or if the screen is restricted. The second type has eight gaps approximately $3/161 \times 1/2$ " which allows oil to flow if the mesh will not.

Oil pump screens should always be replaced. There is not a more economical way to reduce oil pump and engine failure from ingested foreign material.