

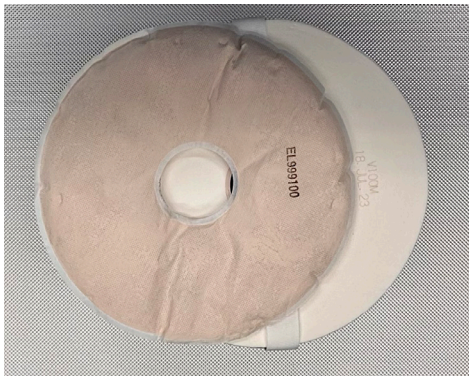
V100 - VARNISH REMOVAL oil filter



Triple R

Introducing the worlds first
VARNISH REMOVER!

- 1 The first oil filter engineered for removing **VARNISH** and **OXIDATION BY-PRODUCTS**
- 2 **ACCELERATES THE PURIFICATION EFFECT**
- 3 Available as **V100-M, V100-E, V100-X**



V100 varnish removal element

- Accelerates the elimination of varnish and oxidation byproducts enormously.
- The V100-M enhances the micron rating to **1 micron**.
- The dual-layer configuration ensures utmost filter efficiency while expediting varnish absorption.
- The V-series is available as an M-element, E-element, or X-element, enabling it to accommodate diverse oil types and a wide range of oil viscosities.

DESIGNED FOR VARNISH REMOVAL

- The V100 represents TRIPLE R's latest innovation, meticulously engineered to address the industry's expanding need for an effective solution in eliminating **VARNISH** from turbine oil or hydraulic systems.
- The V100 element comprises two distinct layers. First, a **VARNISH**-absorbing pouch containing a meticulously engineered organic powder that's both environmentally friendly and designed for sustainable disposal. Directly beneath lies the unique Triple R filter elements, available in M-, E- or X-type configurations.
- The V100 seamlessly fits into all 100-size filter housing units, such as AL100, BU100E, as well as the SE100E, SE200E, SE400E, and the larger SE and OSCA systems.

- > Did you ever experience **sticky valves**?
That's always due to Varnish, creating a sticky coating that glues the valves into their position.
TRIPLE R resolves this problem with our brand new V100 filter element!



- > The brown deposit is known as **VARNISH** and is responsible for causing the valve to become clogged.

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V100 series - TECHNICAL SPECIFICATIONS

MODELS	Article nr.	Viscosity range	Height	Diameter	Weight	Max pressure
V100-M	EL999201	2 - 100 cSt	114 mm	179 mm	0,75 kg	5 bar
V100-E	EL999202	32 - 180 cSt	114 mm	179 mm	0,68 kg	5 bar
V100-X	EL999203	46 - 320 cSt	114 mm	179 mm	0,61 kg	5 bar

The VARNISH problem

Oil degradation lies at the heart of VARNISH build-up. Oil degradation presents a common challenge in both lubrication and hydraulic systems. This degradation primarily arises from oxidation due to oxygen exposure and metal particles acting as catalysts (accelerating the oxidation process), hydrolysis resulting from water contact, and thermal degradation triggered by high temperatures. In many instances, it's a combination of these three factors.

The Oxidation Process

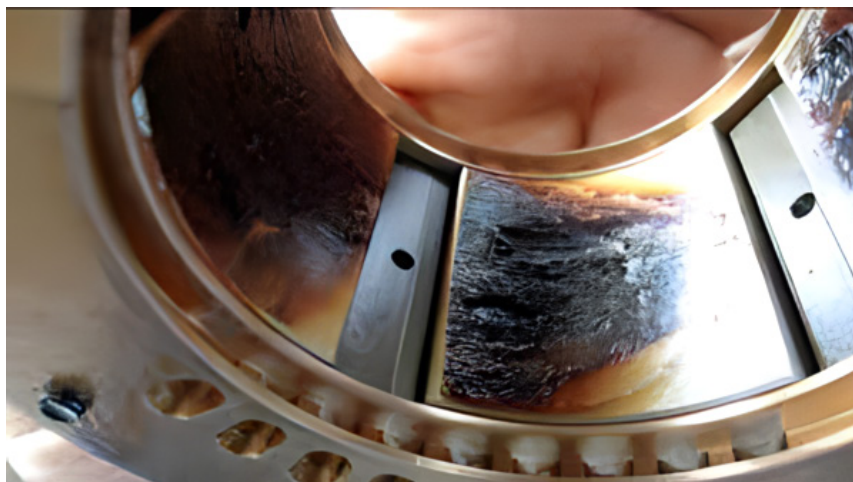
Oxidation signifies the oil's breakdown through its interaction with oxygen. This process involves a series of reactions that leads to the formation of acidic and polymerized compounds, VARNISH. Oxidation results in the creation of insoluble products (referred to as VARNISH) that can deposit as a thin film. This film can give an increase of varnish deposits on both hot and cold metal surfaces.

The Hydrolysis Process: Hydrolysis involves the oil's breakdown through its interaction with water. Similar to oxidation, hydrolysis can generate acidic compounds and VARNISH.

The Thermal Degradation Process: Thermal degradation occurs when the oil breaks down due to elevated temperatures. This commonly takes place in the system's hot spots. Thermal degradation can also result in the formation of polymers and insoluble compounds, leading to VARNISH creation.

In summary, oil degradation stems from a complex interplay of oxidation, hydrolysis, and thermal degradation processes, all of which lead to the formation of undesirable byproducts such as sludge and VARNISH. Understanding these processes is essential for effective maintenance and optimization of lubrication and hydraulic systems.

Thanks to **TRIPLE R** Industry is now having a very cost effective and easy to apply solution that can be installed on almost every system running on oil. Gass and steam turbines, wind mill gearboxes, all sorts of hydraulic machinery, engines and generators, and so many more.



Did you ever experience this kind of breakdown before? It's due to the **Varnish**.

Contact your local TRIPLE R distributor to select the best solution for your application.