

# Varnish Test Kits

Membrane Patch Colorimetric test kits for lube oil varnish potential (MPC ΔE) per ASTM D02.C0.01 WK13070



Monitor & trend varnish potential on-site

Portable field kit or permanent site lab kits available for varnish potential testing.

Reference manual includes details on sample patch preparation, spectrometer operation, sample result interpretation and varnish solutions.

## Lube Oil Varnish

Turbine lube oil is susceptible to fluid degradation from oxidation and thermal degradation leading to varnish deposit formation. Condition monitoring is critical in staying ahead of lube oil degradation issues and the Membrane Patch Colorimetric (MPC) testing method is one of the key pieces in predicting potential varnish problems before unit trip or fail to start conditions occur.

## New Oil Formulations (Group I vs Group II)

Group I base stocks are giving way to group II based turbine lube oils with greater antioxidant response and thermal stability. One compromise with group II base stocks is lower solubility which can lead to more rapid varnish deposit formation. That's one more reason that monitoring varnish potential is reliability critical.

## Varnish Potential Patch Test Kits

Include everything you need to properly prepare a filter patch and analyze it for varnish potential on site.

## The Proven Lube Oil Varnish Solution To Make Varnish Vanish

When combustion turbines fall casualty to unit trip or fail-to-start conditions, lube oil varnish is the usual suspect! The **SVR (Soluble Varnish Removal)** system featuring **ICB (ION Charge Bonding)** element technology attacks the root cause of varnish deposit formation by removing the by-products of oxidation while they are still in solution (dissolved). By removing the soluble (dissolved) oxidation by-products SVR takes away the feedstock for varnish deposit formation to stop varnish before it stops you!

Hy-Pro **NSD (Non-Spark) Filter Elements** prevent fluid thermal degradation related to element sparking and extend the life of anti-oxidant additive packages. NSD elements are available for all lube and hydraulic control applications in a variety of micron ratings.



Note: After drawing sample allow fluid to sit for 7 days prior to testing to prevent an artificially low MCP value

MPC ΔE Condition Scale

Normal	Monitor	Abnormal	Critical
<15	15-29	30-40	>40



# VARVISH TEST KIT ORDER GUIDE & SPECIFICATIONS

# V

Table 1  
Model

# TK -

Table 2  
Option

Table 1 Code	Model
F	Field test kit with hand vacuum pump and multi-use / disposable filter patch funnel assembly
L	Lab test kit with electrical piston type vacuum pump and glass filter patch funnel assembly

Table 2 Code	Model
E1	220 VAC 1P 50HZ vacuum pump electrical (VLTK only)
X	Excludes spectrometer to obtain sample patch MPC ΔE value

## WHAT'S INCLUDED?

Item	VFTK Spare Parts Description	Qty
1	Spectrometer calibrated for MPC ΔE	1
2	Membrane filter patches (disposable) box of 100	1
3	Glass filter funnel / filter holder top assembly	3
4	Glass filter funnel flask + vacuum pump tube port	1
5	Hand operated vacuum pump ( with tubing)	1
6	Glass mixing flask (sample oil & solvent) 150 ml	1
7	Solvent dispenser with cap and squirt nozzle	1
8	Solvent dispenser syringe filter	3
9	Forceps (metal tipped)	1
10	Instruction, reference and solutions manual	1

\*filter funnels (item 3) for VFTK are multi-use for mineral based oils. If used on phosphate ester they are only suitable for a single sample or concurrent batch samples (discard after batch). Base is polystyrene and not compatible for extended exposure to phosphate ester fluids.

Item	VLTK Spare Parts Description	Qty
1	Spectrometer calibrated for MPC ΔE	1
2	Membrane filter patches (disposable) box of 100	1
3	Glass filter funnel / filter holder top assembly	1
4	Glass filter funnel flask + vacuum pump tube port	1
5	Bench piston vacuum pump VLTK is 120 VAC 1P 60Hz VLTK-E1 is 220 VAC 1P 50HZ	1
6	Glass mixing flask (sample oil & solvent) 150 ml	1
7	Solvent dispenser with cap and squirt nozzle	1
8	Solvent dispenser syringe filter	3
9	Forceps (metal tipped)	1
10	Instruction, reference and solutions manual	1



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