



OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
VOLVO 310125

Component
Diesel Engine

Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

The aluminum level is abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	ML0001451	---	---
Sample Date	Client Info	05 Apr 2024	---	---
Machine Age	hrs	Client Info	2260	---
Oil Age	hrs	Client Info	532	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ABNORMAL	---	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >6.0	<1.0	---	---
Water	WC Method >0.2	NEG	---	---
Glycol	WC Method	NEG	---	---

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	41	---	---
Chromium	ppm ASTM D5185m >20	4	---	---
Nickel	ppm ASTM D5185m >2	3	---	---
Titanium	ppm ASTM D5185m	<1	---	---
Silver	ppm ASTM D5185m >2	0	---	---
Aluminum	ppm ASTM D5185m >25	▲ 37	---	---
Lead	ppm ASTM D5185m >40	<1	---	---
Copper	ppm ASTM D5185m >330	6	---	---
Tin	ppm ASTM D5185m >15	1	---	---
Vanadium	ppm ASTM D5185m	<1	---	---
Cadmium	ppm ASTM D5185m	<1	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	9	---	---
Barium	ppm ASTM D5185m	<1	---	---
Molybdenum	ppm ASTM D5185m	23	---	---
Manganese	ppm ASTM D5185m	1	---	---
Magnesium	ppm ASTM D5185m	120	---	---
Calcium	ppm ASTM D5185m	2159	---	---
Phosphorus	ppm ASTM D5185m	924	---	---
Zinc	ppm ASTM D5185m	1097	---	---
Sulfur	ppm ASTM D5185m	3578	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	8	---	---
Sodium	ppm ASTM D5185m	1	---	---
Potassium	ppm ASTM D5185m >20	3	---	---

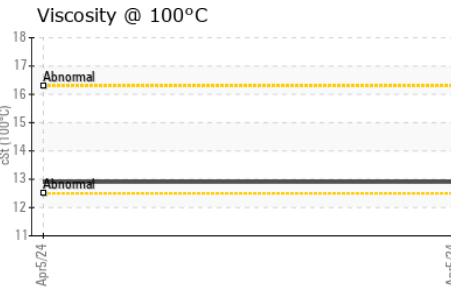
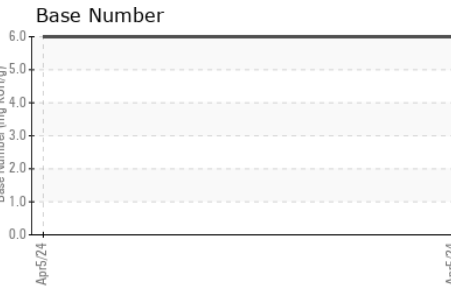
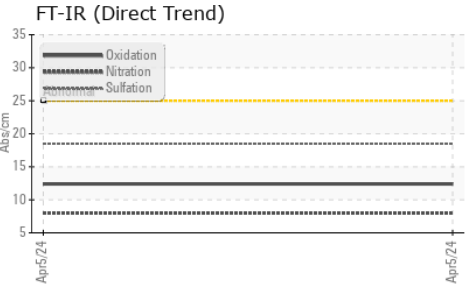
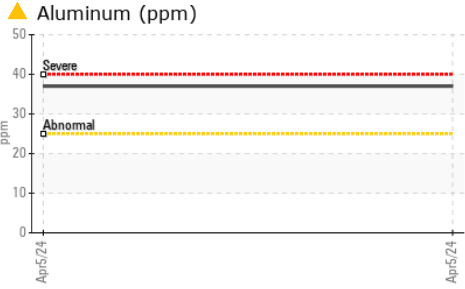
INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.4	---	---
Nitration	Abs/cm *ASTM D7624 >20	8.0	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	18.5	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	12.4	---	---
Base Number (BN)	mg KOH/g ASTM D2896	6.0	---	---

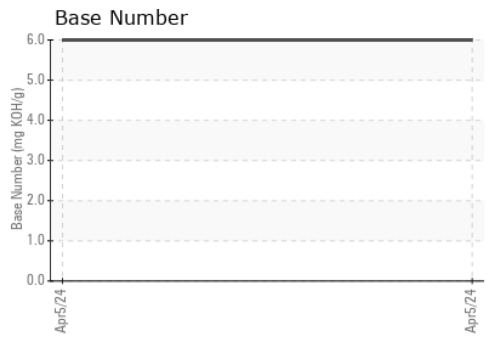
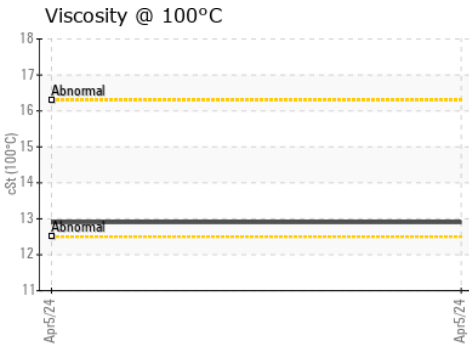
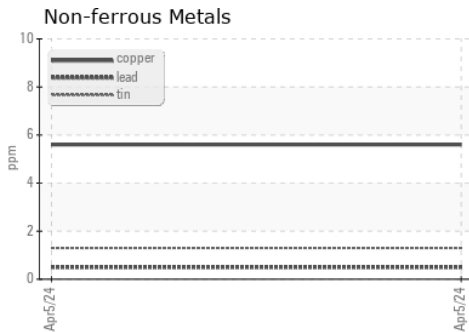
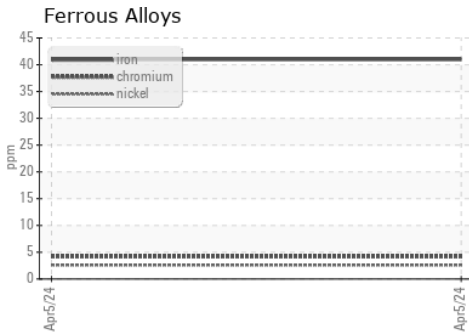
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VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.9	---	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001451 **Received** : 16 Apr 2024
Lab Number : **06149832** **Tested** : 17 Apr 2024
Unique Number : 10979910 **Diagnosed** : 18 Apr 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

McCLUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFF
 KRATLIFFE@McCLUNG-LOGAN.COM

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T: (804)266-1611