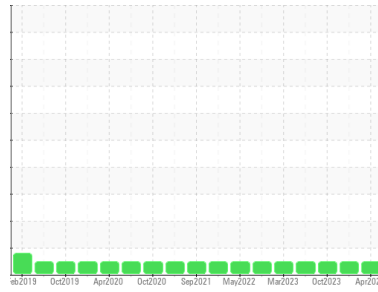




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
[W/O10619]
 Machine Id
VOLVO L180H 5100
 Component
Diesel Engine
 Fluid
CHEVRON 15W40 (13 GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		ML0001170	ML0000128	VCP426364
Sample Date	Client Info		09 Apr 2024	23 Jan 2024	20 Oct 2023
Machine Age	hrs	Client Info	13489	13139	12624
Oil Age	hrs	Client Info	500	515	0
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	<1.0	<1.0
Water	WC Method	>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	5	4	2
Chromium	ppm	ASTM D5185m >10	<1	0	0
Nickel	ppm	ASTM D5185m >10	1	0	0
Titanium	ppm	ASTM D5185m	1	2	2
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >10	2	2	2
Lead	ppm	ASTM D5185m >20	1	<1	0
Copper	ppm	ASTM D5185m >15	<1	<1	0
Tin	ppm	ASTM D5185m >10	1	<1	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	314	418	356
Barium	ppm	ASTM D5185m	<1	0	0
Molybdenum	ppm	ASTM D5185m	91	84	85
Manganese	ppm	ASTM D5185m	1	<1	<1
Magnesium	ppm	ASTM D5185m	511	413	415
Calcium	ppm	ASTM D5185m	1444	1450	1389
Phosphorus	ppm	ASTM D5185m	870	994	968
Zinc	ppm	ASTM D5185m	944	1262	1297
Sulfur	ppm	ASTM D5185m	2817	3295	3362

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	5	5	5
Sodium	ppm	ASTM D5185m >50	0	2	2
Potassium	ppm	ASTM D5185m >20	2	<1	0

INFRA-RED

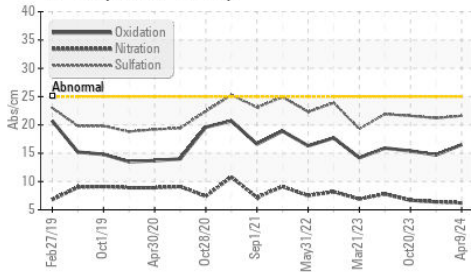
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	6.2	6.4	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	21.6	21.2	21.6

FLUID DEGRADATION

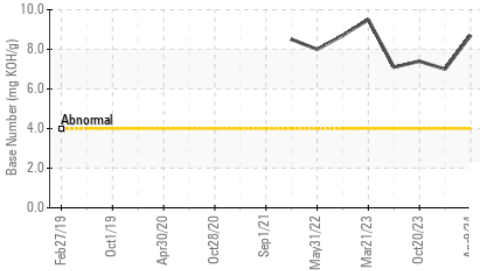
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.5	14.7	15.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.7	7.0	7.4

OIL ANALYSIS REPORT

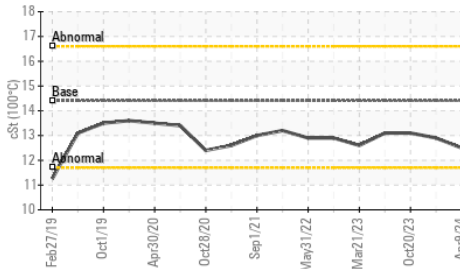
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

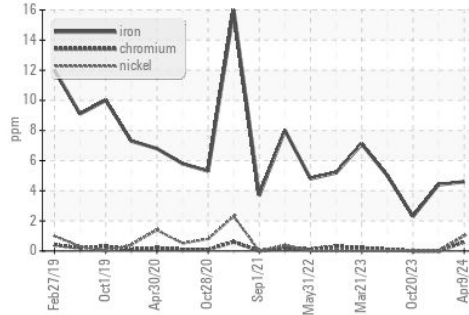


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

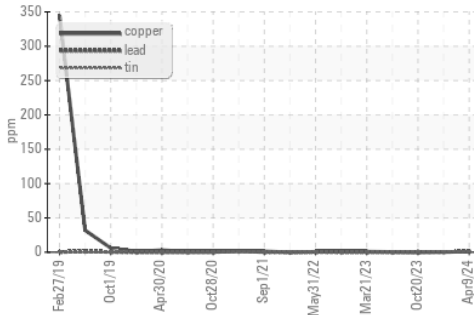
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.5	12.9

GRAPHS

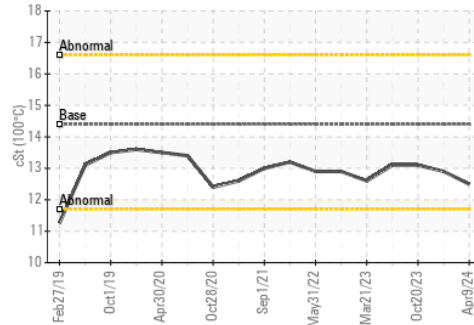
Ferrous Alloys



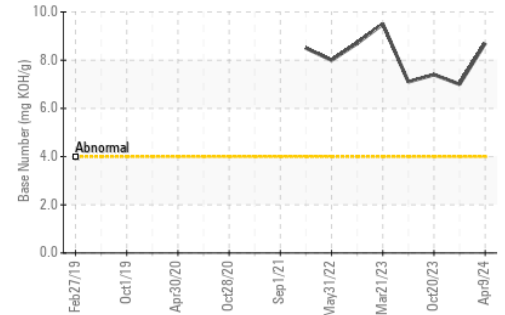
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : ML0001170

Lab Number : 06146897

Unique Number : 10976975

Test Package : CONST (Additional Tests: TBN)

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)

Received : 12 Apr 2024

Tested : 15 Apr 2024

Diagnosed : 15 Apr 2024 - Sean Felton

RELIABLE CONTRACTING

2410 EVERGREEN RD SUITE 200

GAMBRILLS, MD

US 21054

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