



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

Ascendum Machinery

Machine Id

VOLVO L180H 5676

Component

Diesel Engine

Fluid

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0009836	ASC0007058	---
Sample Date		Client Info		12 Jun 2024	09 Apr 2024	---
Machine Age	hrs	Client Info		967	453	---
Oil Age	hrs	Client Info		514	453	---
Filter Age	hrs	Client Info		0	453	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>200	6	14	---
Chromium	ppm	ASTM D5185m	>20	<1	0	---
Nickel	ppm	ASTM D5185m	>5	<1	2	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>30	2	2	---
Lead	ppm	ASTM D5185m	>40	<1	5	---
Copper	ppm	ASTM D5185m	>20	59	▲ 343	---
Tin	ppm	ASTM D5185m	>20	1	2	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

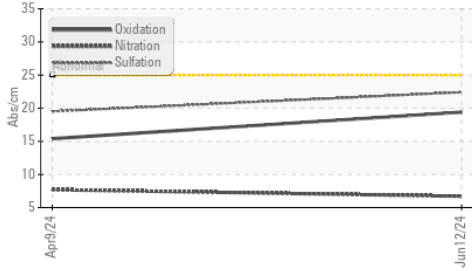
Silicon	ppm	ASTM D5185m	>20	9	23	---
Potassium	ppm	ASTM D5185m	>20	2	4	---
Fuel		WC Method	>6.0	<1.0	0.4	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.7	7.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.4	19.5	---
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	>0.2	NEG	NEG	---

FLUID CONDITION

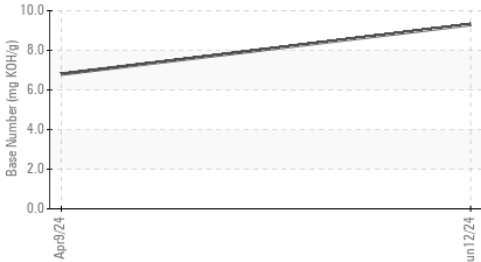
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	4	---
Boron	ppm	ASTM D5185m		47	80	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		43	72	---
Manganese	ppm	ASTM D5185m		<1	3	---
Magnesium	ppm	ASTM D5185m		434	181	---
Calcium	ppm	ASTM D5185m		1697	2042	---
Phosphorus	ppm	ASTM D5185m		868	1063	---
Zinc	ppm	ASTM D5185m		1127	1255	---
Sulfur	ppm	ASTM D5185m		3352	4441	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.4	15.4	---
Base Number (BN)	mg KOH/g	ASTM D2896		9.3	6.8	---
Visc @ 100°C	cSt	ASTM D445		12.9	● 11.0	---

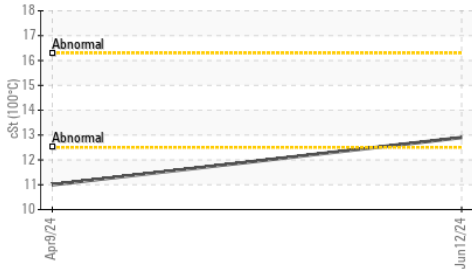
FT-IR (Direct Trend)



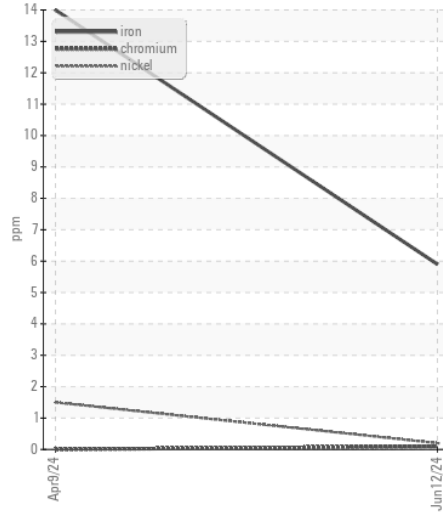
Base Number



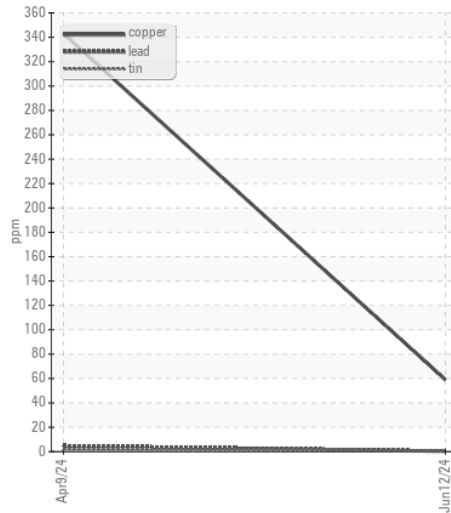
Viscosity @ 100°C



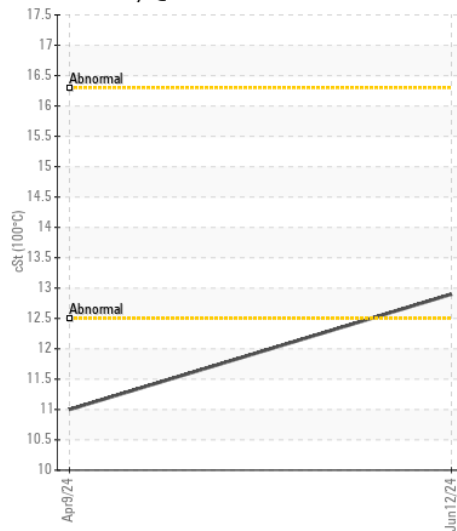
Ferrous Alloys



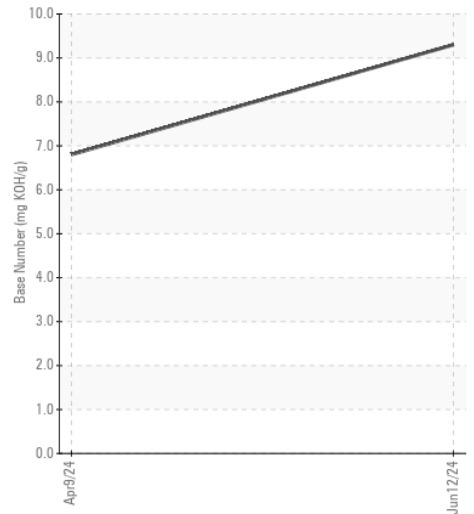
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009836 **Received** : 14 Jun 2024
Lab Number : 06209889 **Tested** : 17 Jun 2024
Unique Number : 11082753 **Diagnosed** : 17 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

METAL RECYCLING SERVICES - MONROE
 P.O. BOX 812
 MONROE, NC
 US 28111
 Contact: RYAN BOWDEN

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)

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