



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Ascendum Machinery
Machine Id
VOLVO L180H 5319
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		ASC0009839	ASC0000667	ASC0007352
Sample Date		Client Info		12 Jun 2024	06 May 2024	15 Feb 2024
Machine Age	hrs	Client Info		11250	11005	10435
Oil Age	hrs	Client Info		245	570	447
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	3	2	4
Chromium	ppm	ASTM D5185m	>10	<1	0	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	1	<1
Lead	ppm	ASTM D5185m	>20	<1	0	<1
Copper	ppm	ASTM D5185m	>15	<1	3	<1
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

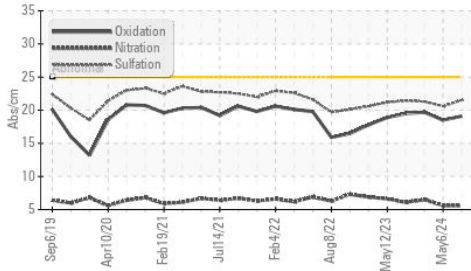
Silicon	ppm	ASTM D5185m	>20	4	3	4
Potassium	ppm	ASTM D5185m	>20	1	0	0
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	5.6	5.6	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	20.6	21.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

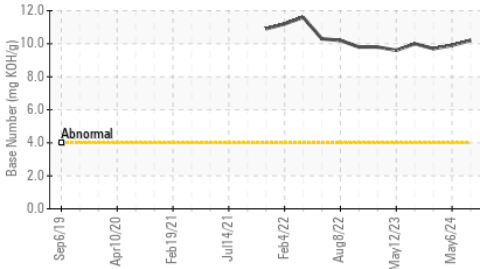
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<1	3	2
Boron	ppm	ASTM D5185m		51	64	62
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		38	41	37
Manganese	ppm	ASTM D5185m		0	1	<1
Magnesium	ppm	ASTM D5185m		475	479	428
Calcium	ppm	ASTM D5185m		1639	1686	1596
Phosphorus	ppm	ASTM D5185m		845	938	906
Zinc	ppm	ASTM D5185m		1107	1121	1044
Sulfur	ppm	ASTM D5185m		3246	3437	2851
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.1	18.5	19.7
Base Number (BN)	mg KOH/g	ASTM D2896		10.2	9.9	9.7
Visc @ 100°C	cSt	ASTM D445		13.0	13.0	13.0

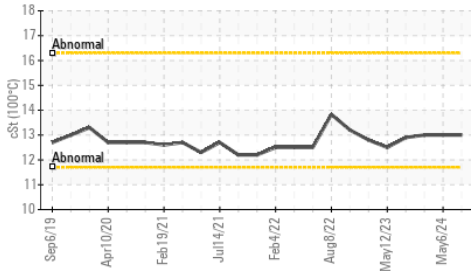
FT-IR (Direct Trend)



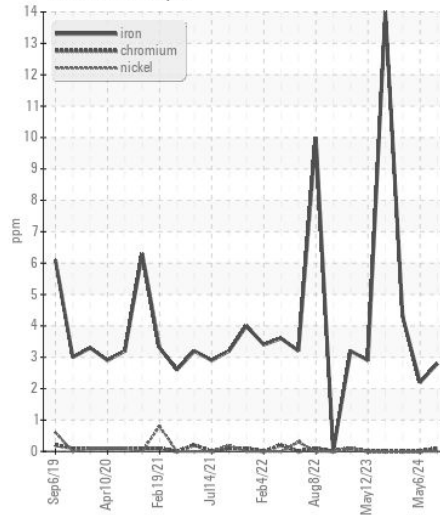
Base Number



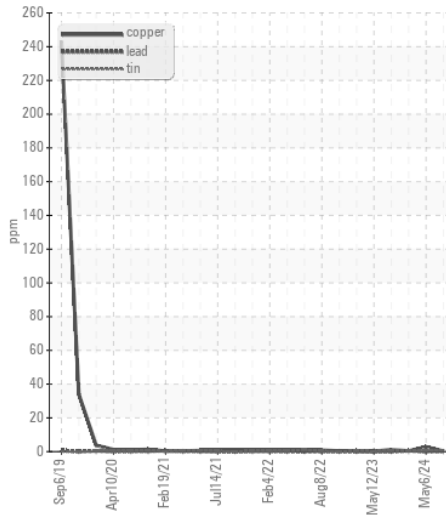
Viscosity @ 100°C



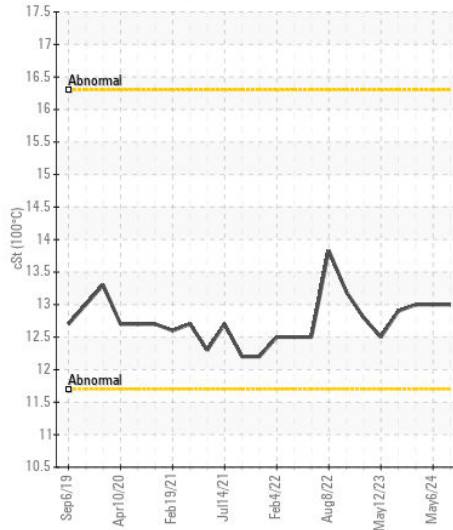
Ferrous Alloys



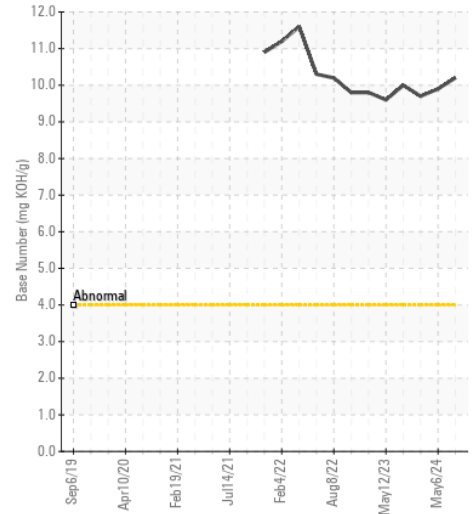
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009839 **Received** : 14 Jun 2024
Lab Number : 06209892 **Tested** : 17 Jun 2024
Unique Number : 11082756 **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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