



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Ascendum Machinery

Machine Id

310511 VOLVO EC220E 310511

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		ASC0007047	ASC0005456	VCP0006599
Sample Date		Client Info		07 Jun 2024	05 Oct 2023	23 May 2023
Machine Age	hrs	Client Info		5967	4852	4852
Oil Age	hrs	Client Info		1115	4852	520
Filter Age	hrs	Client Info		0	0	520
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	20	15	19
Chromium	ppm	ASTM D5185m	>10	1	<1	<1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	5	4	6
Lead	ppm	ASTM D5185m	>20	<1	0	0
Copper	ppm	ASTM D5185m	>15	1	2	<1
Tin	ppm	ASTM D5185m	>10	<1	0	<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.

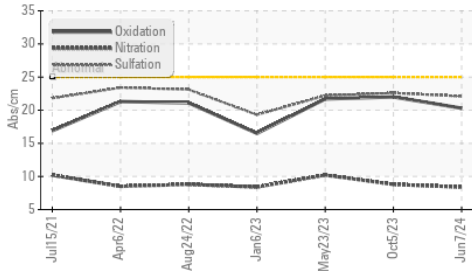
Silicon	ppm	ASTM D5185m	>20	10	9	9
Potassium	ppm	ASTM D5185m	>20	3	<1	1
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.4	8.8	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	22.6	22.2
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

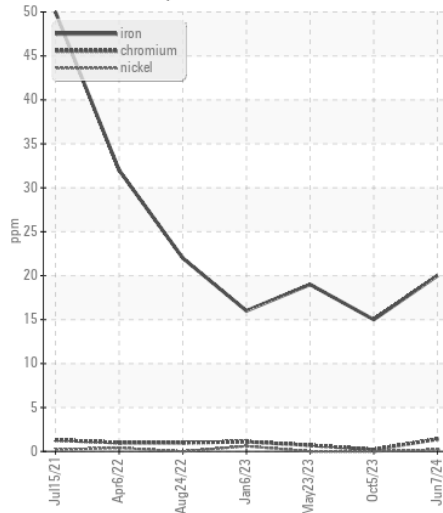
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		3	4	1
Boron	ppm	ASTM D5185m		36	22	21
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		44	46	50
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		641	602	636
Calcium	ppm	ASTM D5185m		1845	1802	1697
Phosphorus	ppm	ASTM D5185m		959	1065	995
Zinc	ppm	ASTM D5185m		1285	1308	1227
Sulfur	ppm	ASTM D5185m		3516	3249	3590
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	22.0	21.7
Base Number (BN)	mg KOH/g	ASTM D2896		10.0	10.2	9.7
Visc @ 100°C	cSt	ASTM D445		13.7	13.5	13.9

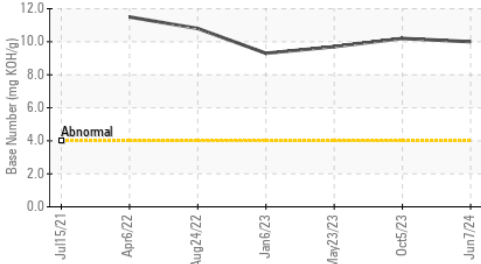
FT-IR (Direct Trend)



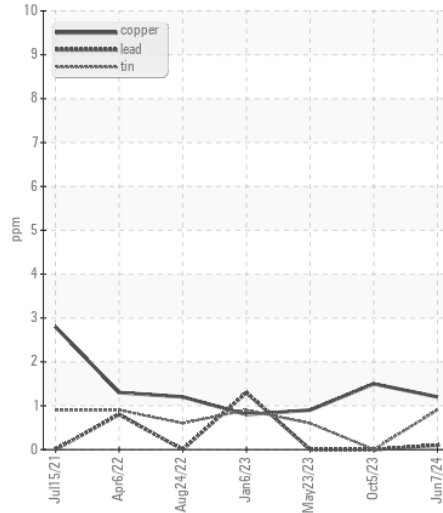
Ferrous Alloys



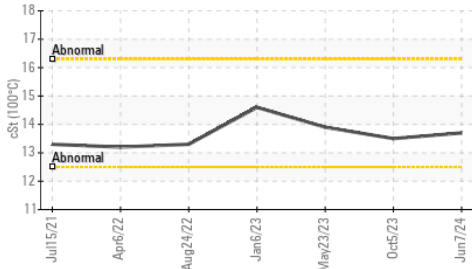
Base Number



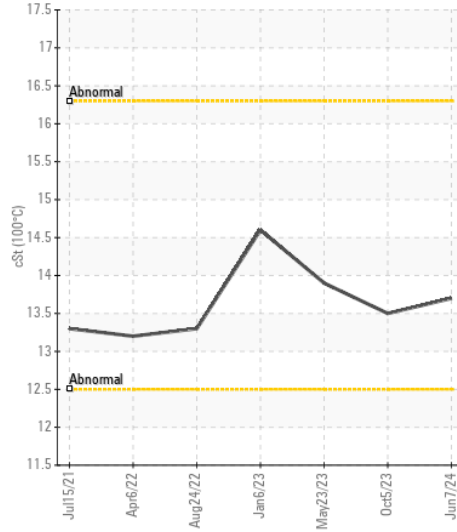
Non-ferrous Metals



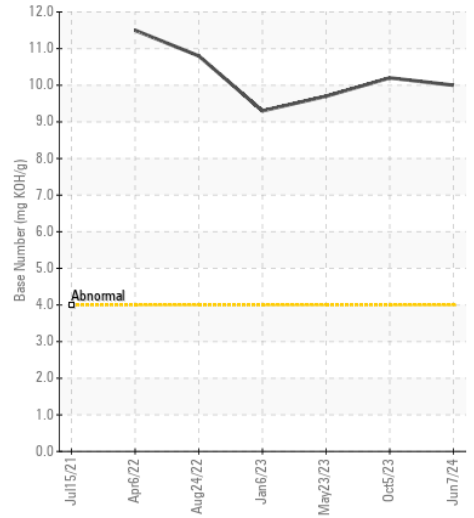
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0007047 **Received** : 14 Jun 2024
Lab Number : 06209891 **Tested** : 17 Jun 2024
Unique Number : 11082755 **Diagnosed** : 17 Jun 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

METAL RECYCLING SERVICES - GASTONIA
 5401 S YORK HWY
 GASTONIA, NC
 US 28052
 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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