



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area

Ascendum Machinery/500 Hour CSA

Machine Id

VOLVO EC350E 2130 (S/N 350E314011)

Component

Diesel Engine

Fluid

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

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0010336	ASC0010408	ASC0006405
Sample Date		Client Info		11 Jun 2024	20 Mar 2024	23 Jan 2024
Machine Age	hrs	Client Info		4498	4003	3532
Oil Age	hrs	Client Info		498	500	532
Filter Age	hrs	Client Info		498	500	532
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	8	4	3
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	2
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	2
Lead	ppm	ASTM D5185m	>20	<1	<1	1
Copper	ppm	ASTM D5185m	>15	3	6	10
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.

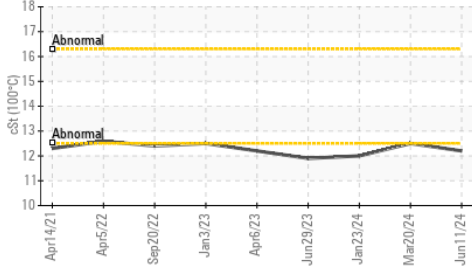
Silicon	ppm	ASTM D5185m	>20	5	4	6
Potassium	ppm	ASTM D5185m	>20	1	<1	2
Fuel	%	ASTM D3524	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.3	7.8	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	18.6	19.2
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

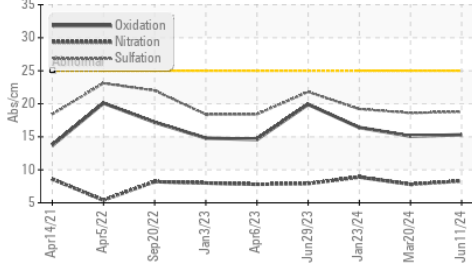
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		3	0	2
Boron	ppm	ASTM D5185m		5	2	4
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		63	66	57
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		963	946	880
Calcium	ppm	ASTM D5185m		1125	1147	1057
Phosphorus	ppm	ASTM D5185m		1110	1024	1011
Zinc	ppm	ASTM D5185m		1277	1241	1243
Sulfur	ppm	ASTM D5185m		3575	2780	2920
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.3	15.1	16.4
Base Number (BN)	mg KOH/g	ASTM D2896		7.2	8.0	6.6
Visc @ 100°C	cSt	ASTM D445		12.2	12.5	12.0

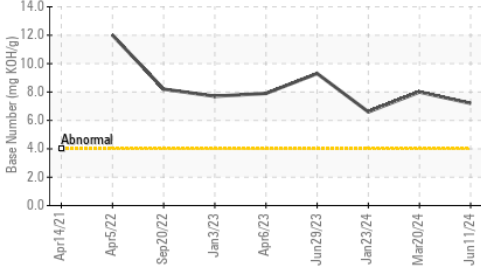
● Viscosity @ 100°C



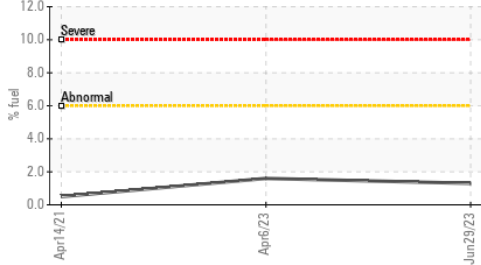
FT-IR (Direct Trend)



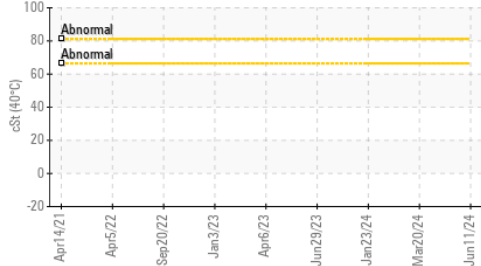
Base Number



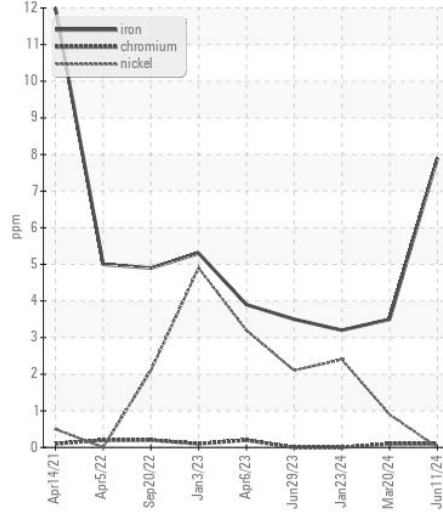
Fuel Dilution



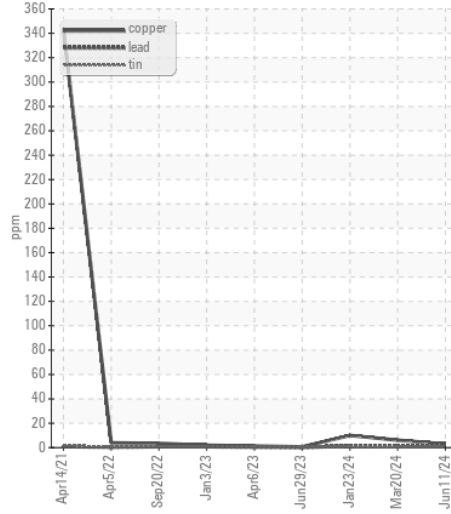
Viscosity @ 40°C



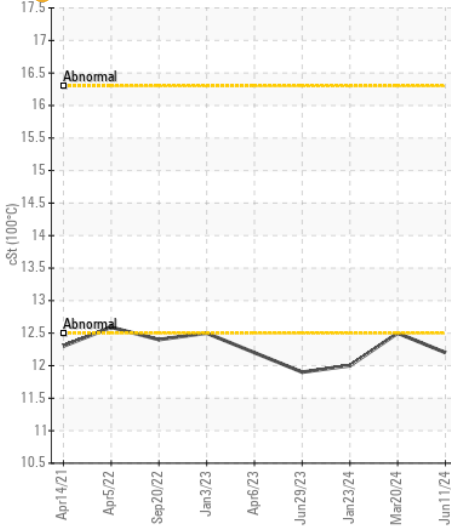
Ferrous Alloys



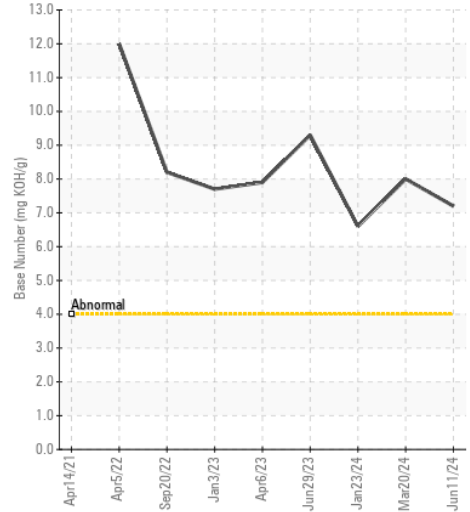
Non-ferrous Metals



● Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0010336 **Received** : 14 Jun 2024
Lab Number : 06209825 **Tested** : 17 Jun 2024
Unique Number : 11082689 **Diagnosed** : 17 Jun 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, KV40, 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)

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