



ASCENDUM

OIL ANALYSIS REPORT



Area
Ascendum Machinery/500 Hour CSA
Machine Id
VOLVO EC350E 2130 (S/N 314011)
Component
Diesel Engine
Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

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		ASC0006405	VCP418376	VCP0006711
Sample Date		Client Info		23 Jan 2024	29 Jun 2023	06 Apr 2023
Machine Age	hrs	Client Info		3532	2924	2530
Oil Age	hrs	Client Info		532	0	489
Filter Age	hrs	Client Info		532	0	489
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	3	4	4
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	2	2	3
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	<1	0
Lead	ppm	ASTM D5185m	>20	1	0	<1
Copper	ppm	ASTM D5185m	>15	10	<1	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.

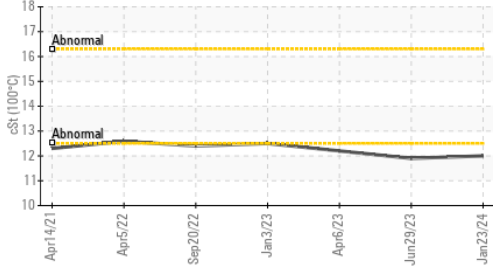
Silicon	ppm	ASTM D5185m	>20	6	5	5
Potassium	ppm	ASTM D5185m	>20	2	0	1
Fuel	%	ASTM D3524	>6.0	<1.0	1.3	1.6
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	8.9	7.9	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	21.8	18.4
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

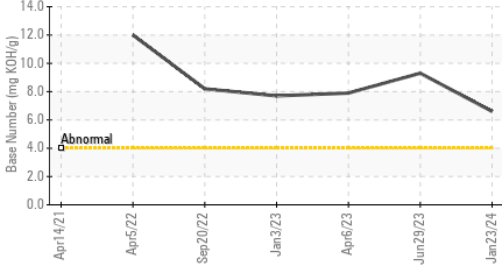
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		2	2	<1
Boron	ppm	ASTM D5185m		4	40	5
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		57	42	58
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		880	534	845
Calcium	ppm	ASTM D5185m		1057	1631	1078
Phosphorus	ppm	ASTM D5185m		1011	890	974
Zinc	ppm	ASTM D5185m		1243	1057	1159
Sulfur	ppm	ASTM D5185m		2920	3243	2690
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	19.9	14.6
Base Number (BN)	mg KOH/g	ASTM D2896		6.6	9.3	7.9
Visc @ 100°C	cSt	ASTM D445		▲ 12.0	11.9	▲ 12.2

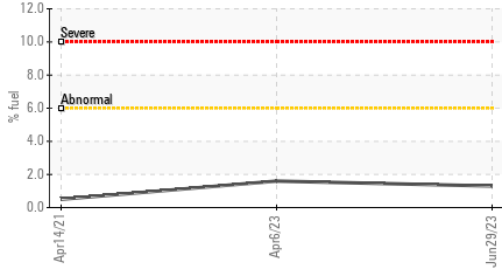
▲ Viscosity @ 100°C



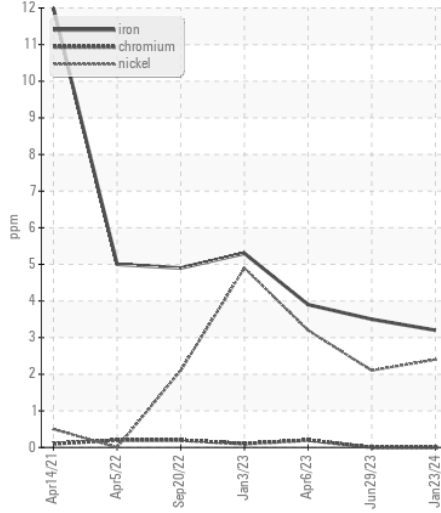
Base Number



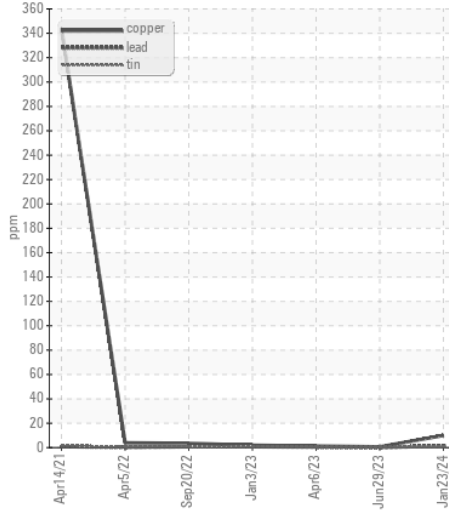
Fuel Dilution



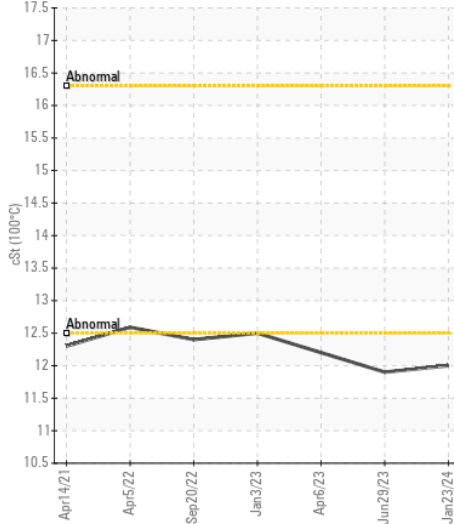
Ferrous Alloys



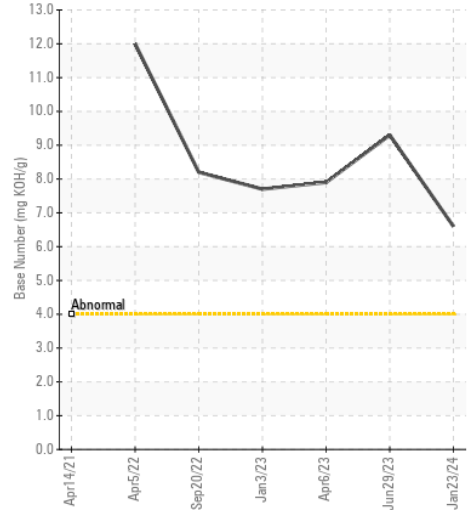
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0006405 **Received** : 31 Jan 2024
Lab Number : 06075517 **Diagnosed** : 01 Feb 2024
Unique Number : 10857608 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, 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)

G S MATERIALS INC
 PO BOX 1335
 BURLINGTON, NC
 US 27216

Contact: KAREN NEWPORT
 Gsmaterials@windstream.net
 T: (919)499-9322
 F: (919)499-2097