



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**Ascendum Machinery/500 Hour CSA**  
Machine Id  
**VOLVO L150H 2183 (S/N L150HV6951)**  
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		<b>ASC0011248</b>	ASC0010487	ASC0008881
Sample Date		Client Info		<b>11 Jun 2024</b>	04 Apr 2024	01 Feb 2024
Machine Age	hrs	Client Info		<b>8052</b>	7526	6984
Oil Age	hrs	Client Info		<b>500</b>	500	500
Filter Age	hrs	Client Info		<b>500</b>	500	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

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

### CONTAMINATION

There is no indication of any contamination in the oil.

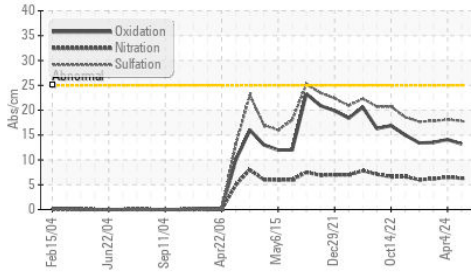
Silicon	ppm	ASTM D5185m	>20	<b>3</b>	4	2
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.3</b>	6.5	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	18.1	17.8
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

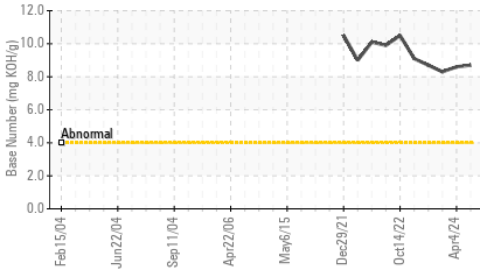
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>0</b>	0	0
Boron	ppm	ASTM D5185m		<b>5</b>	1	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	5
Molybdenum	ppm	ASTM D5185m		<b>57</b>	65	61
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>888</b>	981	943
Calcium	ppm	ASTM D5185m		<b>1080</b>	1138	1083
Phosphorus	ppm	ASTM D5185m		<b>878</b>	1010	937
Zinc	ppm	ASTM D5185m		<b>1193</b>	1252	1194
Sulfur	ppm	ASTM D5185m		<b>3137</b>	3137	3197
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.2</b>	14.1	13.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.7</b>	8.6	8.3
Visc @ 100°C	cSt	ASTM D445		<b>13.2</b>	13.4	13.3

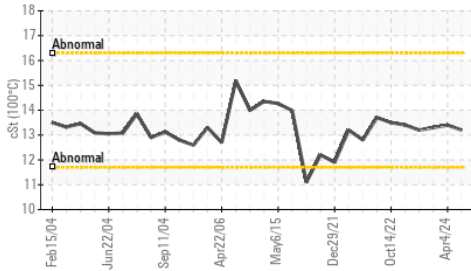
**FT-IR (Direct Trend)**



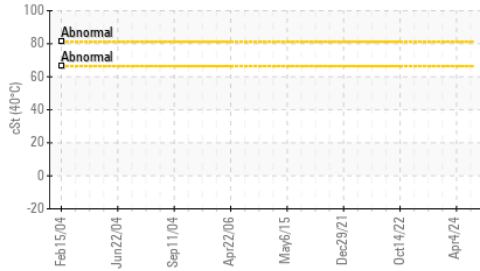
**Base Number**



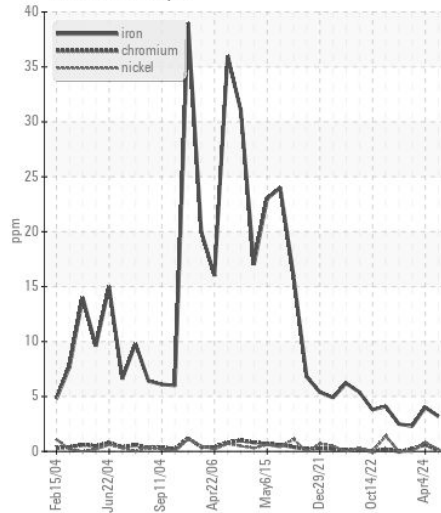
**Viscosity @ 100°C**



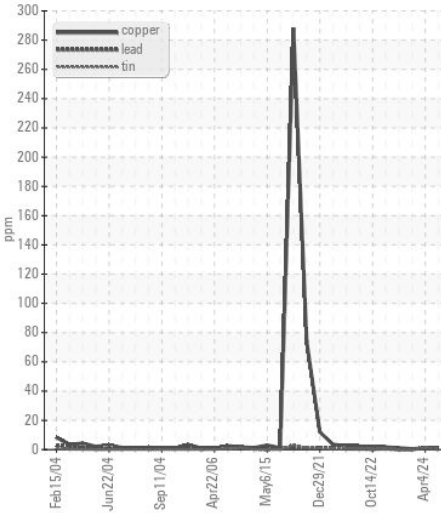
**Viscosity @ 40°C**



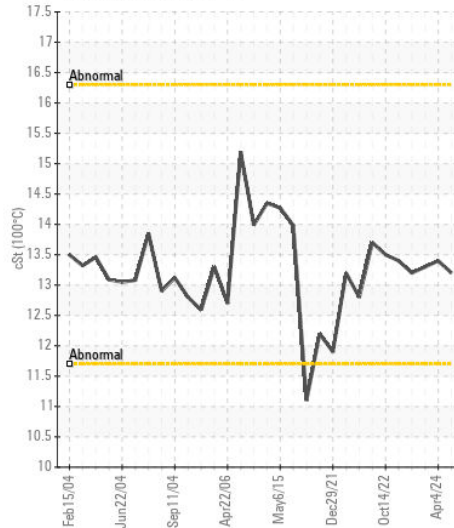
**Ferrous Alloys**



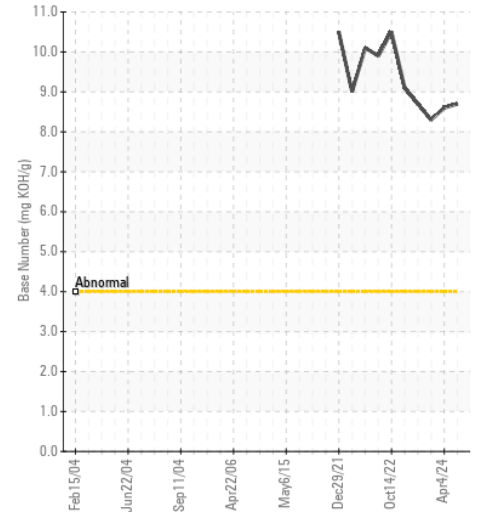
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0011248 **Received** : 14 Jun 2024  
**Lab Number** : 06209894 **Tested** : 17 Jun 2024  
**Unique Number** : 11082758 **Diagnosed** : 17 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: KV40, TBN )

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

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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)