



# ASCENDUM

## OIL ANALYSIS REPORT

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



Machine Id  
**VOLVO A45G 353428**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0003059</b>	ASC0003402	VCP425103
Sample Date		Client Info		<b>10 May 2024</b>	16 Jan 2024	15 Jun 2023
Machine Age	hrs	Client Info		<b>2511</b>	2008	979
Oil Age	hrs	Client Info		<b>503</b>	979	0
Filter Age	hrs	Client Info		<b>0</b>	979	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>9</b>	10	12
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>2</b>	5	3
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	<1	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	3	25
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

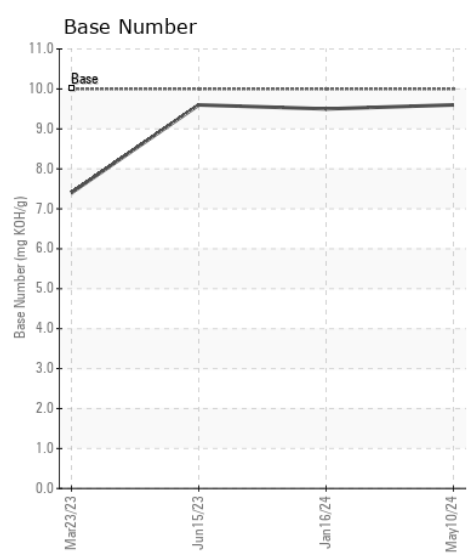
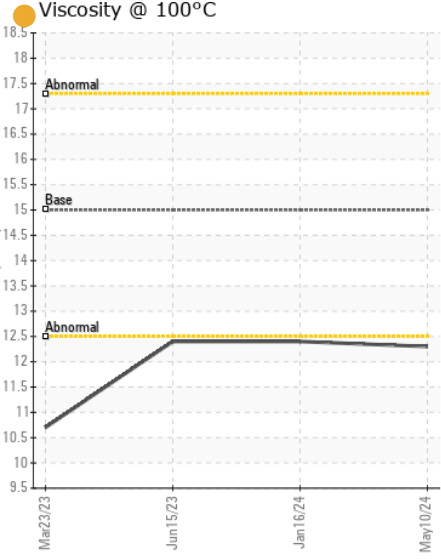
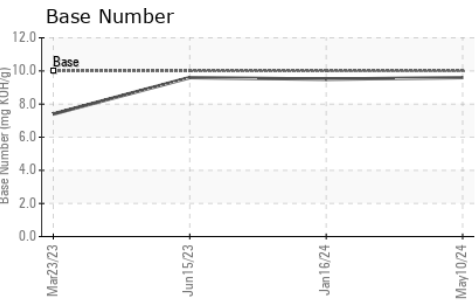
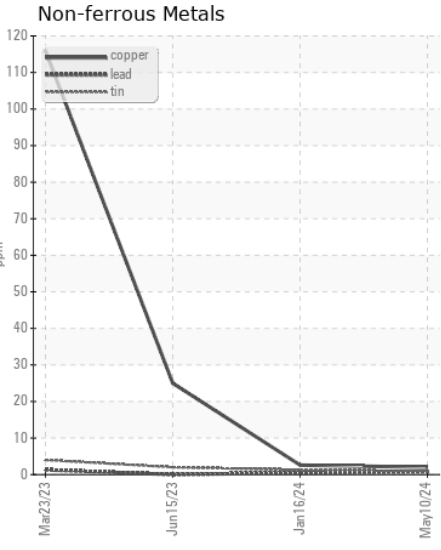
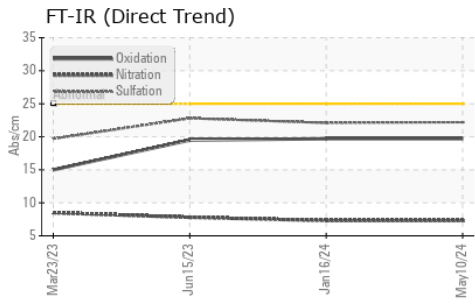
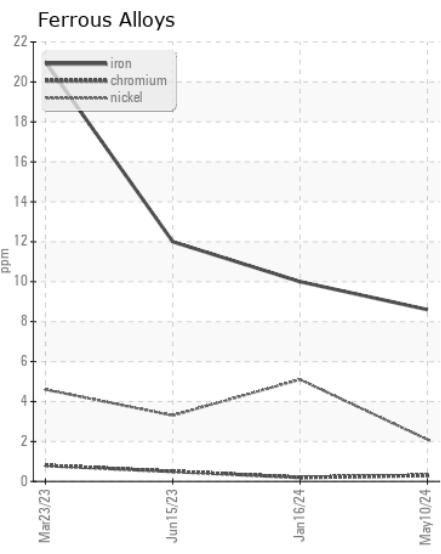
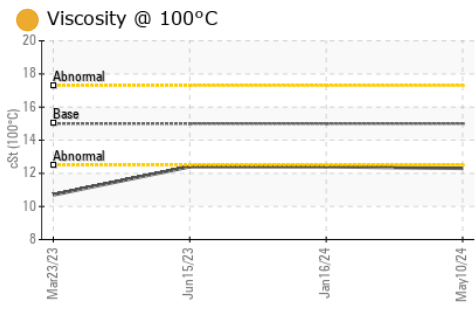
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	11
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	7.3	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	22.1	22.8
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	>0.2	<b>NEG</b>	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		<b>3</b>	3	2
Boron	ppm	ASTM D5185m	2.5	<b>54</b>	60	58
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>38</b>	39	49
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185m	256	<b>464</b>	505	510
Calcium	ppm	ASTM D5185m	2057	<b>1784</b>	1725	1961
Phosphorus	ppm	ASTM D5185m	935	<b>963</b>	1025	974
Zinc	ppm	ASTM D5185m	1223	<b>1101</b>	1181	1195
Sulfur	ppm	ASTM D5185m	4079	<b>3365</b>	3137	3581
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	19.7	19.5
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.6</b>	9.5	9.6
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.3</b>	12.4	12.4



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0003059 **Received** : 13 May 2024  
**Lab Number** : 06176954 **Tested** : 14 May 2024  
**Unique Number** : 11023007 **Diagnosed** : 14 May 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**160 - ASCENDUM MACHINERY INC - MILLS RIVER**  
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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)