



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



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		ASC0003402	VCP425103	VCP382781
Sample Date		Client Info		16 Jan 2024	15 Jun 2023	23 Mar 2023
Machine Age	hrs	Client Info		2008	979	505
Oil Age	hrs	Client Info		979	0	0
Filter Age	hrs	Client Info		979	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	12	21
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	5	3	5
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	3
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	3	25	116
Tin	ppm	ASTM D5185m	>15	1	2	4
Vanadium	ppm	ASTM D5185m		<1	<1	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.

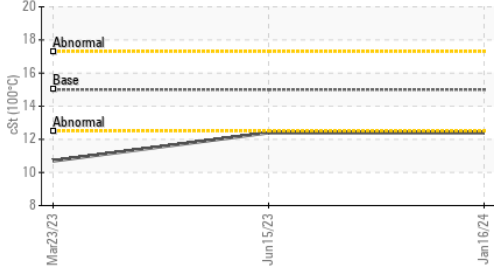
Silicon	ppm	ASTM D5185m	>25	6	11	31
Potassium	ppm	ASTM D5185m	>20	<1	0	3
Fuel		WC Method	>6.0	<1.0	<1.0	0.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.3	7.8	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	22.8	19.7
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	>0.2	NEG	NEG	NEG

### FLUID CONDITION

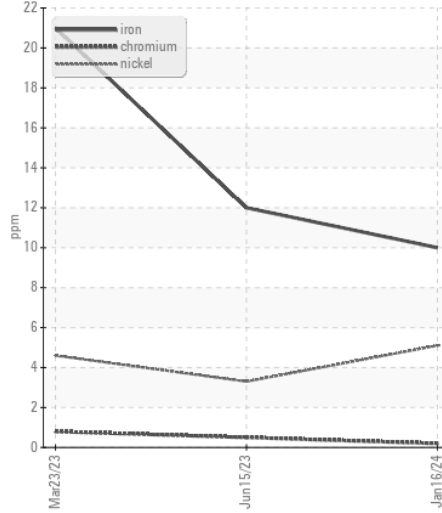
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		3	2	4
Boron	ppm	ASTM D5185m	2.5	60	58	88
Barium	ppm	ASTM D5185m	0.0	0	0	2
Molybdenum	ppm	ASTM D5185m	0.7	39	49	71
Manganese	ppm	ASTM D5185m	0.0	<1	1	2
Magnesium	ppm	ASTM D5185m	256	505	510	182
Calcium	ppm	ASTM D5185m	2057	1725	1961	1910
Phosphorus	ppm	ASTM D5185m	935	1025	974	983
Zinc	ppm	ASTM D5185m	1223	1181	1195	1146
Sulfur	ppm	ASTM D5185m	4079	3137	3581	3403
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.7	19.5	15.0
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.5	9.6	7.4
Visc @ 100°C	cSt	ASTM D445	15.0	▲ 12.4	▲ 12.4	10.7

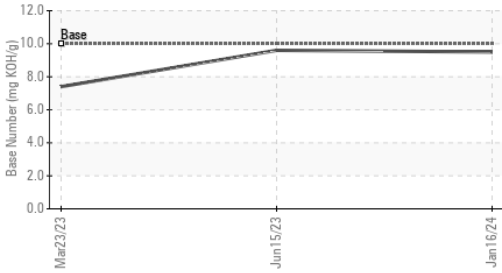
▲ Viscosity @ 100°C



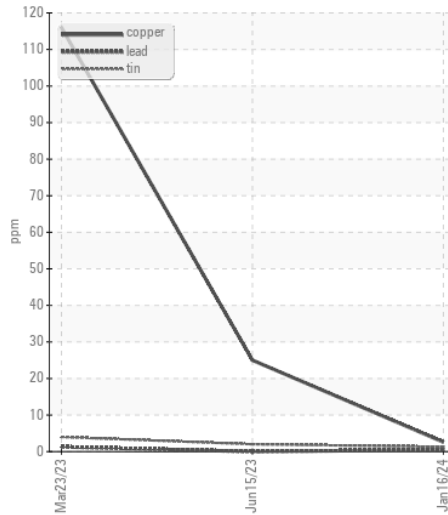
Ferrous Alloys



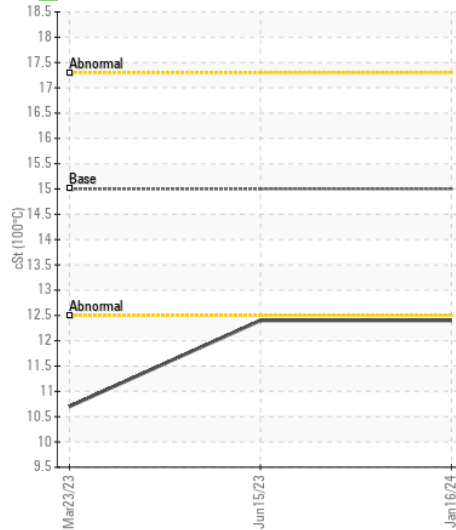
Base Number



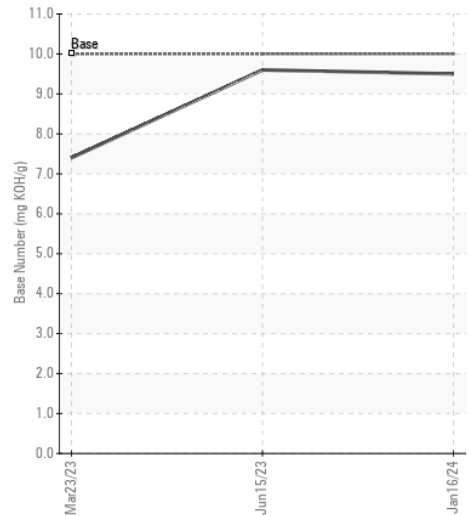
Non-ferrous Metals



▲ Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0003402 **Received** : 19 Jan 2024  
**Lab Number** : 06065290 **Diagnosed** : 22 Jan 2024  
**Unique Number** : 10836672 **Diagnostician** : Sean Felton  
**Test Package** : CONST ( Additional Tests: TBN )

**160 - ASCENDUM MACHINERY INC - MILLS RIVER**  
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 MILLS RIVER, NC  
 US 28759  
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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)