



ASCENDUM

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO SD15B 236487
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- 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		ASC0003352	VCP299567	---
Sample Date		Client Info		17 May 2024	18 Jan 2021	---
Machine Age	hrs	Client Info		1449	489	---
Oil Age	hrs	Client Info		1449	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	53	91	---
Chromium	ppm	ASTM D5185m	>20	6	14	---
Nickel	ppm	ASTM D5185m	>2	0	2	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>25	▲ 37	72	---
Lead	ppm	ASTM D5185m	>40	<1	2	---
Copper	ppm	ASTM D5185m	>330	3	35	---
Tin	ppm	ASTM D5185m	>15	2	2	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

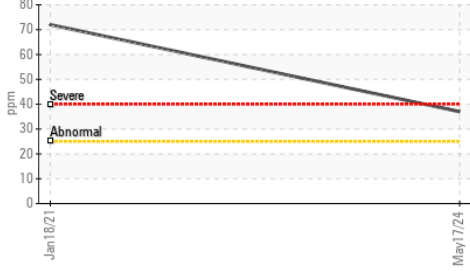
Silicon	ppm	ASTM D5185m	>25	13	27	---
Potassium	ppm	ASTM D5185m	>20	0	8	---
Fuel		WC Method	>6.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.5	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	7.4	7.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.7	22.2	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

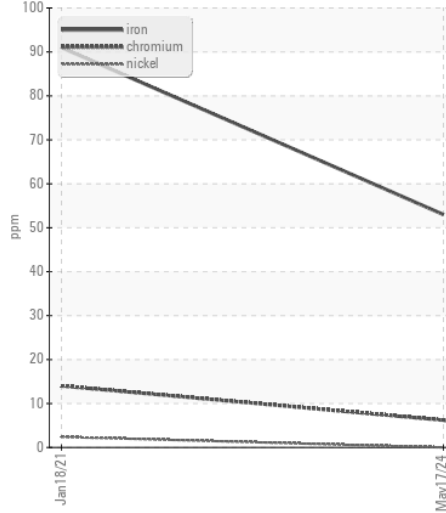
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>158	4	7	---
Boron	ppm	ASTM D5185m	250	45	43	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	41	40	---
Manganese	ppm	ASTM D5185m		1	7	---
Magnesium	ppm	ASTM D5185m	450	533	569	---
Calcium	ppm	ASTM D5185m	3000	1692	1791	---
Phosphorus	ppm	ASTM D5185m	1150	970	811	---
Zinc	ppm	ASTM D5185m	1350	1137	903	---
Sulfur	ppm	ASTM D5185m	4250	3365	2531	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.6	20.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	10.9	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.1	12.4	---

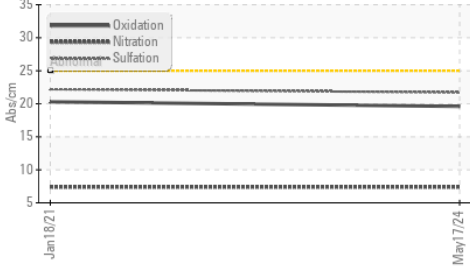
▲ Aluminum (ppm)



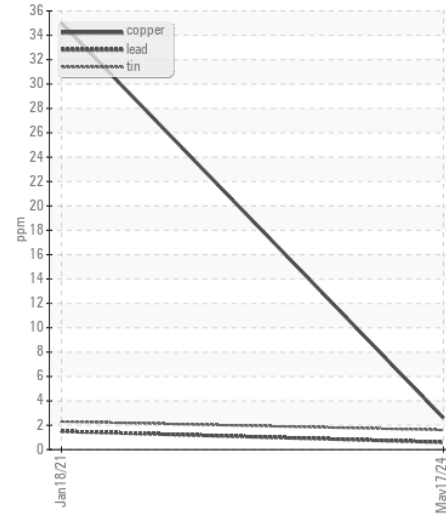
Ferrous Alloys



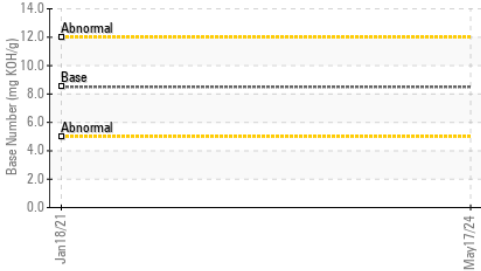
FT-IR (Direct Trend)



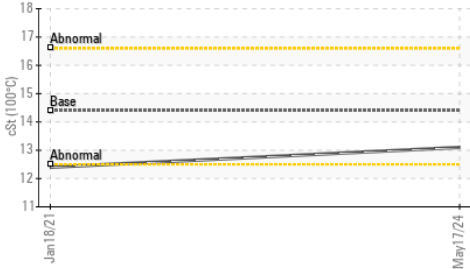
Non-ferrous Metals



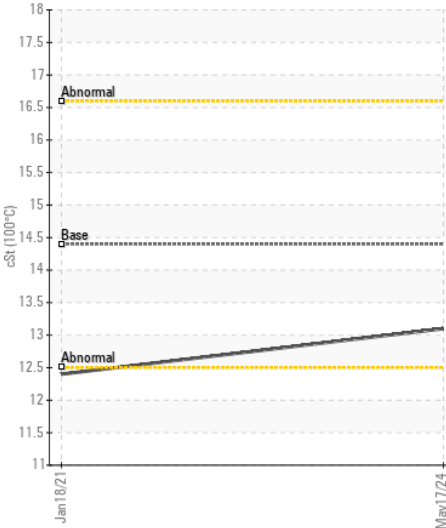
Base Number



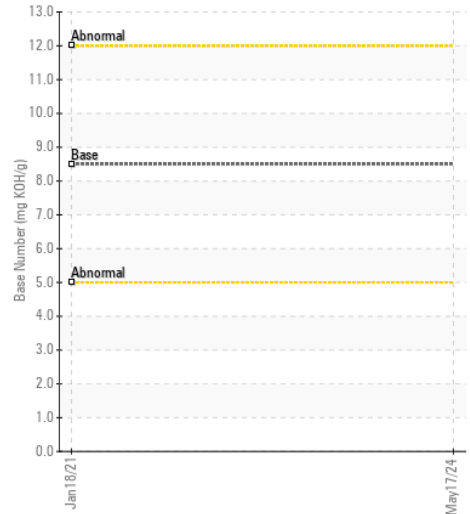
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : ASC0003352

Lab Number : 06187044

Unique Number : 11043796

Test Package : CONST (Additional Tests: TBN)

Received : 21 May 2024

Tested : 23 May 2024

Diagnosed : 23 May 2024 - Sean Felton

160 - ASCENDUM MACHINERY INC - MILLS RIVER

215 FANNING FIELDS RD

MILLS RIVER, NC

US 28759

Contact: BRANDON DRAKE

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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)