



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Ascendum Machinery/500 Hour CSA
Machine Id
VOLVO A40G 2331 (S/N A40GV752021)
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0011353	ASC0008528	ASC0006114
Sample Date		Client Info		23 May 2024	29 Feb 2024	05 Oct 2023
Machine Age	hrs	Client Info		1984	1491	1019
Oil Age	hrs	Client Info		500	491	500
Filter Age	hrs	Client Info		500	491	500
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	8	10
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	2	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	1	<1
Lead	ppm	ASTM D5185m	>40	0	1	2
Copper	ppm	ASTM D5185m	>330	4	20	116
Tin	ppm	ASTM D5185m	>15	0	1	<1
Vanadium	ppm	ASTM D5185m		0	<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.

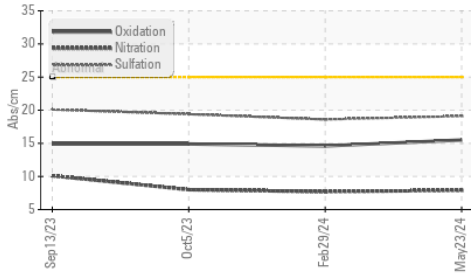
Silicon	ppm	ASTM D5185m	>25	4	4	7
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.2	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.7	8.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	18.6	19.4
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

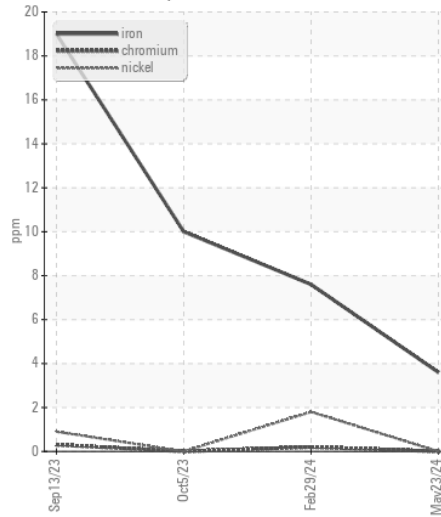
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>216	3	2	0
Boron	ppm	ASTM D5185m	250	4	2	5
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	58	56	60
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	450	903	882	913
Calcium	ppm	ASTM D5185m	3000	1064	1066	1237
Phosphorus	ppm	ASTM D5185m	1150	1005	1005	1053
Zinc	ppm	ASTM D5185m	1350	1200	1171	1236
Sulfur	ppm	ASTM D5185m	4250	3403	2964	3008
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.5	14.6	14.9
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	7.8	7.3	6.6
Visc @ 100°C	cSt	ASTM D445	14.4	12.5	12.6	12.2

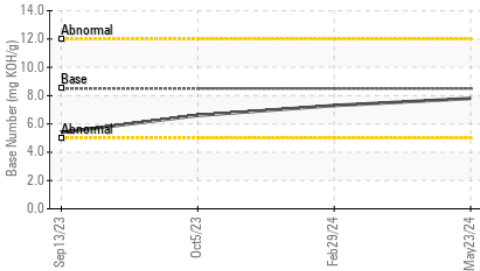
FT-IR (Direct Trend)



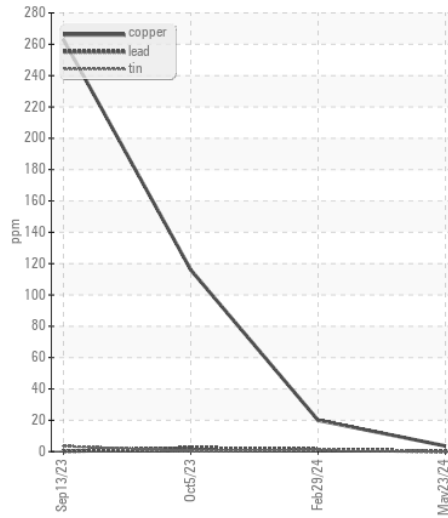
Ferrous Alloys



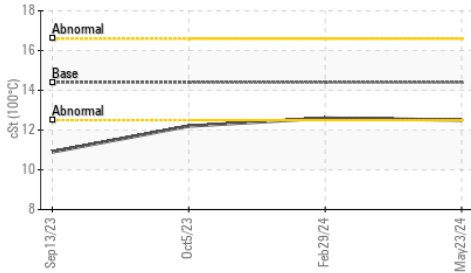
Base Number



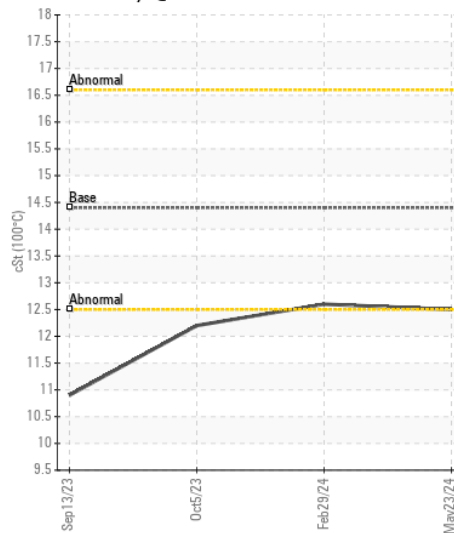
Non-ferrous Metals



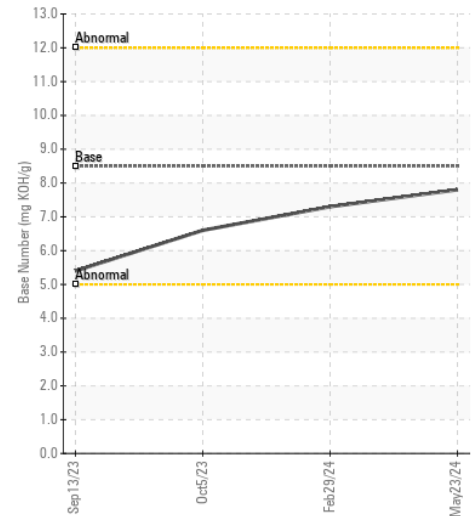
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0011353 **Received** : 30 May 2024
Lab Number : 06195187 **Tested** : 31 May 2024
Unique Number : 11057310 **Diagnosed** : 31 May 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

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

Contact: KAREN NEWPORT
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 F: (919)499-2097

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)