



ASCENDUM

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Machine Id
VOLVO A40G 352244
Component
Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0009018	ASC0008667	ASC0002818
Sample Date		Client Info		02 Jul 2024	13 Feb 2024	23 Oct 2023
Machine Age	hrs	Client Info		7655	6981	6609
Oil Age	hrs	Client Info		674	481	0
Filter Age	hrs	Client Info		0	481	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	11	10	5
Chromium	ppm	ASTM D5185m	>20	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	3	3	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	<1	0
Aluminum	ppm	ASTM D5185m	>30	7	3	2
Lead	ppm	ASTM D5185m	>40	<1	1	<1
Copper	ppm	ASTM D5185m	>20	7	8	7
Tin	ppm	ASTM D5185m	>20	<1	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

Sodium and/or potassium levels remain high.

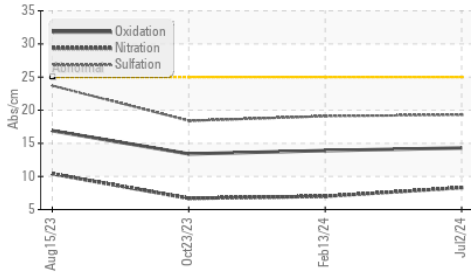
Silicon	ppm	ASTM D5185m	>20	7	7	6
Potassium	ppm	ASTM D5185m	>20	▲ 130	▲ 332	▲ 206
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	▲ 0.10	▲ 0.10
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.3	7.0	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.3	19.1	18.4
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

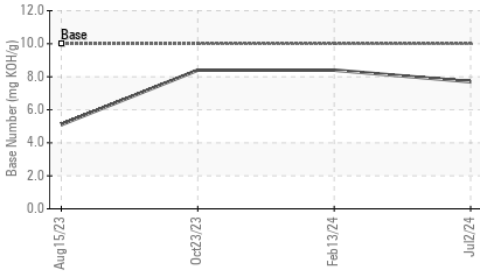
The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		▲ 119	● 200	● 149
Boron	ppm	ASTM D5185m	2.5	<1	8	4
Barium	ppm	ASTM D5185m	0.0	<1	0	0
Molybdenum	ppm	ASTM D5185m	0.7	70	75	69
Manganese	ppm	ASTM D5185m	0.0	<1	1	<1
Magnesium	ppm	ASTM D5185m	256	988	● 919	● 902
Calcium	ppm	ASTM D5185m	2057	1137	● 1058	● 1044
Phosphorus	ppm	ASTM D5185m	935	1166	969	998
Zinc	ppm	ASTM D5185m	1223	1299	1175	1206
Sulfur	ppm	ASTM D5185m	4079	3047	3664	3044
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	13.9	13.4
Base Number (BN)	mg KOH/g	ASTM D2896	10	7.7	8.4	8.4
Visc @ 100°C	cSt	ASTM D445	15.0	12.9	13.1	13.4

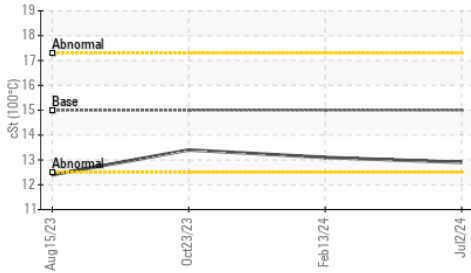
FT-IR (Direct Trend)



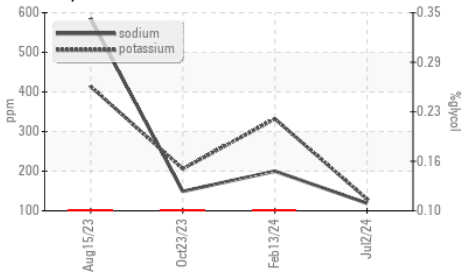
Base Number



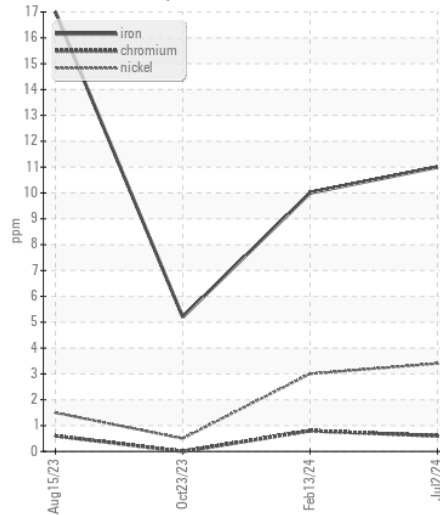
Viscosity @ 100°C



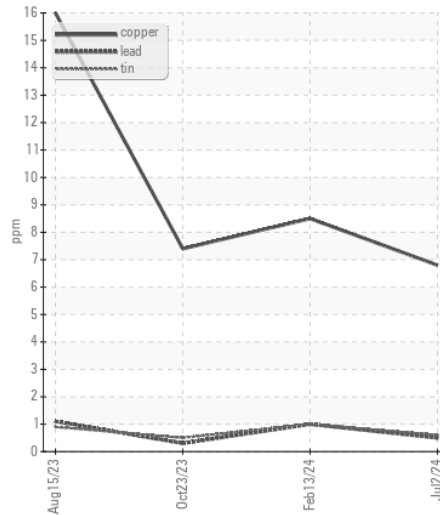
Glycol Contamination



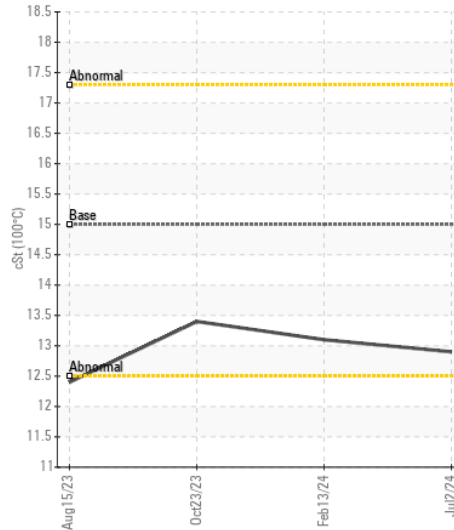
Ferrous Alloys



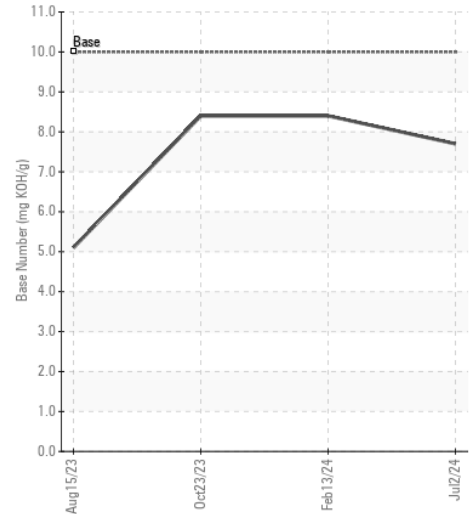
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009018 **Received** : 16 Jul 2024
Lab Number : 06238656 **Tested** : 19 Jul 2024
Unique Number : 11127490 **Diagnosed** : 19 Jul 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

113 - ASCENDUM MACHINERY INC - GARNER
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 Contact: TRENT BROADWELL
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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)