



ASCENDUM

OIL ANALYSIS REPORT



Area

Ascendum Machinery

Machine Id

VOLVO L90H 623470

Component

Diesel Engine

Fluid

VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

WEAR
CONTAMINATION
FLUID CONDITION

ATTENTION

ABNORMAL

NORMAL

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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		ASC0009655	VCP0006587	VCP0007141
Sample Date		Client Info		20 May 2024	19 May 2023	03 Apr 2023
Machine Age	hrs	Client Info		12412	11489	11407
Oil Age	hrs	Client Info		923	500	400
Filter Age	hrs	Client Info		0	500	0
Oil Changed		Client Info		Changed	Changed	Not Changd
Filter Changed		Client Info		Changed	Changed	Not Changd
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	64	36	21
Chromium	ppm	ASTM D5185m	>20	8	4	1
Nickel	ppm	ASTM D5185m	>5	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	27	15	4
Lead	ppm	ASTM D5185m	>40	2	<1	0
Copper	ppm	ASTM D5185m	>20	12	6	<1
Tin	ppm	ASTM D5185m	>20	10	3	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

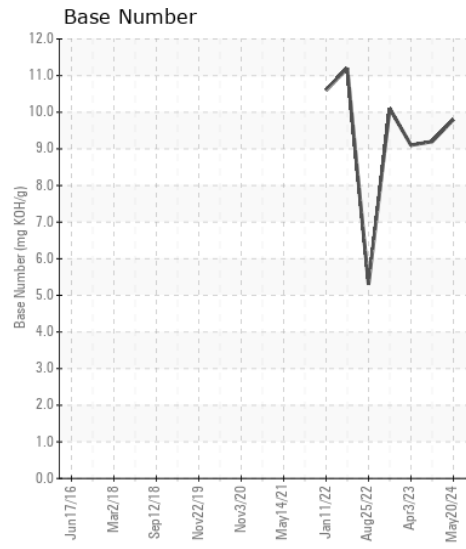
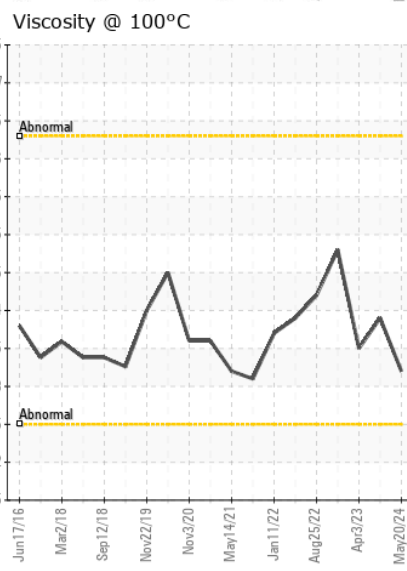
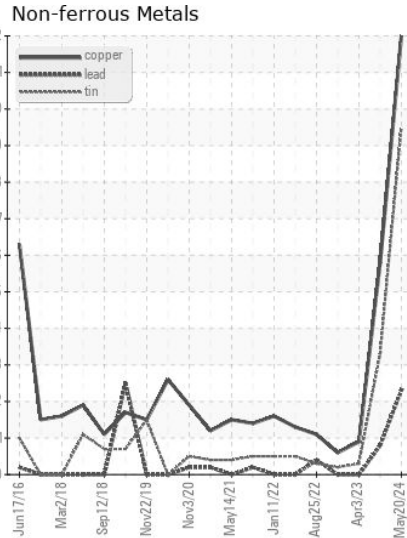
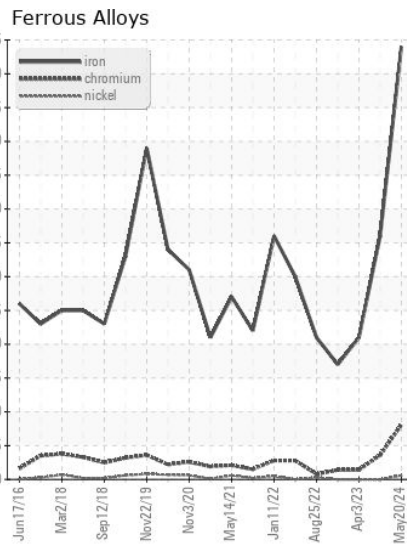
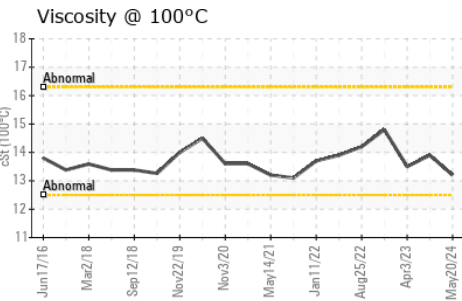
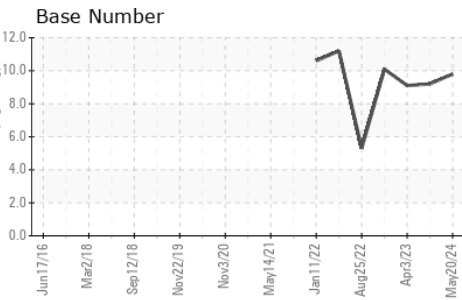
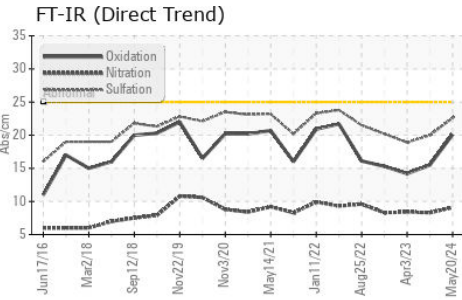
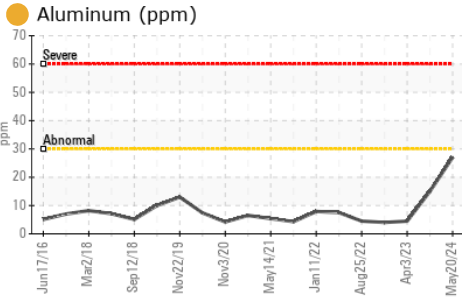
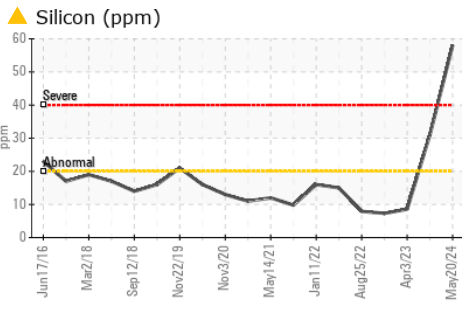
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>20	58	31	9
Potassium	ppm	ASTM D5185m	>20	6	3	<1
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	1.1	1	1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	8.3	8.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.6	20.0	18.9
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		7	3	2
Boron	ppm	ASTM D5185m		38	12	2
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		41	60	59
Manganese	ppm	ASTM D5185m		1	<1	<1
Magnesium	ppm	ASTM D5185m		502	836	867
Calcium	ppm	ASTM D5185m		1814	1201	1102
Phosphorus	ppm	ASTM D5185m		995	997	973
Zinc	ppm	ASTM D5185m		1147	1206	1196
Sulfur	ppm	ASTM D5185m		3619	3171	3083
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.1	15.5	14.2
Base Number (BN)	mg KOH/g	ASTM D2896		9.8	9.2	9.1
Visc @ 100°C	cSt	ASTM D445		13.2	13.9	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0009655 **Received** : 24 May 2024
Lab Number : 06191580 **Tested** : 29 May 2024
Unique Number : 11048332 **Diagnosed** : 30 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

IAA - INSURANCE AUTO AUCTIONS - OAK BROOK
 701 HARGER RD, SUITE 201
 OAK BROOK, IL
 US 60523
 Contact: Service Manager

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)

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