



ASCENDUM

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

Ascendum Machinery

Machine Id

623187 VOLVO L90H 623187

Component

Diesel Engine

Fluid

VOLVO VDS-4.5 Premium Motor Oil 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		ASC0005078	VCP306642	VCP245155
Sample Date		Client Info		21 Nov 2023	11 Feb 2021	01 Apr 2020
Machine Age	hrs	Client Info		16274	14435	13061
Oil Age	hrs	Client Info		1839	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

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

Iron	ppm	ASTM D5185m	>100	27	19	13
Chromium	ppm	ASTM D5185m	>10	3	3	<1
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	▲ 43	▲ 64	8
Lead	ppm	ASTM D5185m	>20	0	<1	0
Copper	ppm	ASTM D5185m	>15	2	1	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

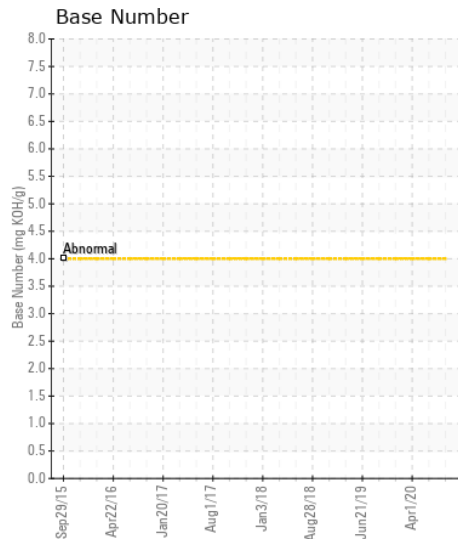
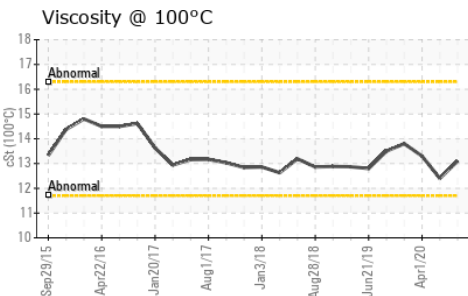
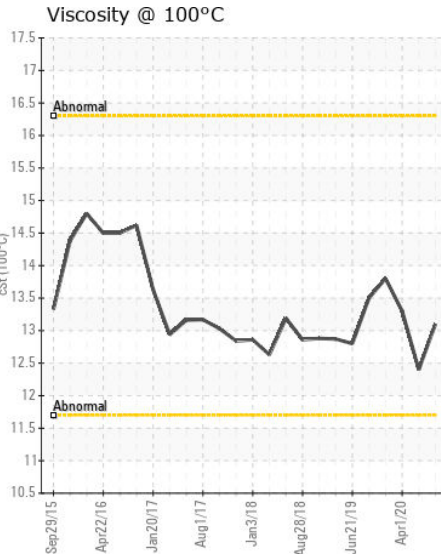
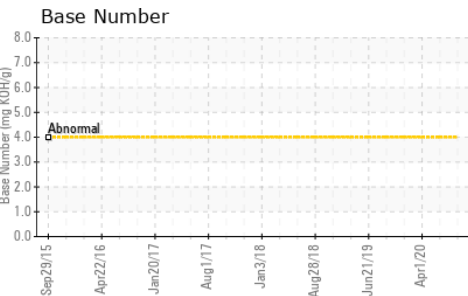
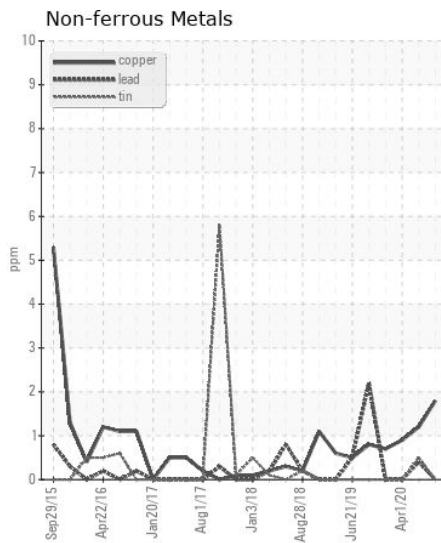
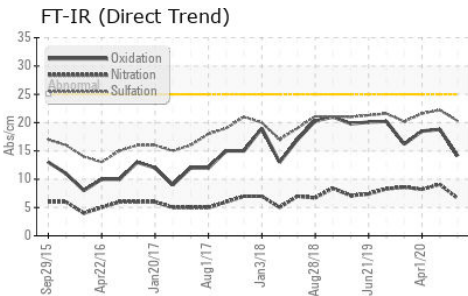
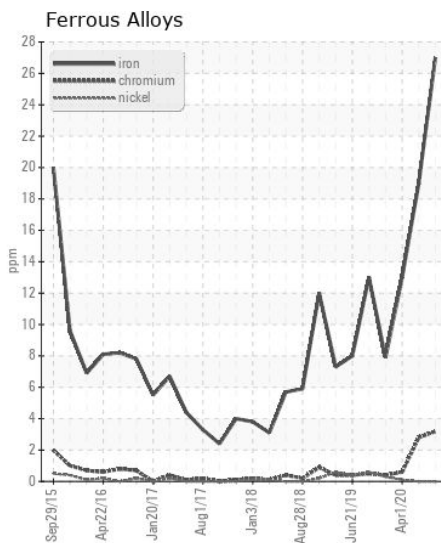
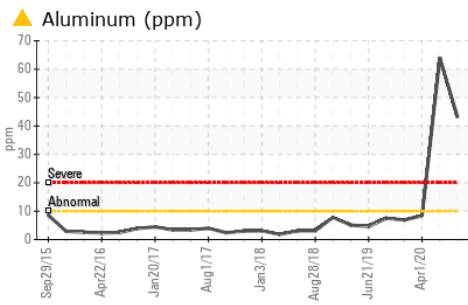
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	11	6	5
Potassium	ppm	ASTM D5185m	>20	2	2	<1
Fuel		WC Method	>6.0	<1.0	1.3	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	1.1	0.7
Nitration	Abs/cm	*ASTM D7624	>20	6.6	9.1	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	22.2	21.6
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	>0.1	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	5	4
Boron	ppm	ASTM D5185m		331	26	30
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		87	44	44
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		439	465	671
Calcium	ppm	ASTM D5185m		1339	1556	1859
Phosphorus	ppm	ASTM D5185m		1040	870	1080
Zinc	ppm	ASTM D5185m		1243	986	1182
Sulfur	ppm	ASTM D5185m		3190	2382	2028
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.1	18.8	18.5
Base Number (BN)	mg KOH/g	ASTM D2896		7.7	---	---
Visc @ 100°C	cSt	ASTM D445		13.1	12.4	13.3



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0005078 **Received** : 22 Nov 2023
Lab Number : 06014879 **Tested** : 24 Nov 2023
Unique Number : 10754023 **Diagnosed** : 25 Nov 2023 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

METAL RECYCLING SERVICES - GASTONIA
 5401 S YORK HWY
 GASTONIA, NC
 US 28052
 Contact: RYAN BOWDEN

Certificate L2367
 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)