



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**ATTENTION**  
**ABNORMAL**  
**NORMAL**



Area

**Ascendum Machinery/250 Hour CSA**

Machine Id

**VOLVO L120E 955 (S/N L120V64393)**

Component

**Diesel Engine**

Fluid

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

### RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### WEAR

All component wear rates are normal.

### CONTAMINATION

There is a moderate amount of fuel present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

### FLUID CONDITION

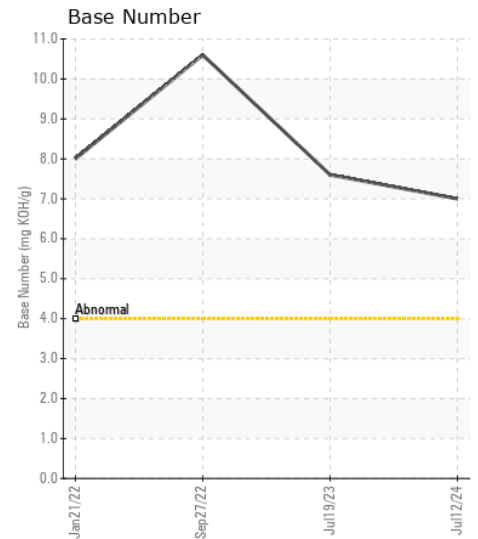
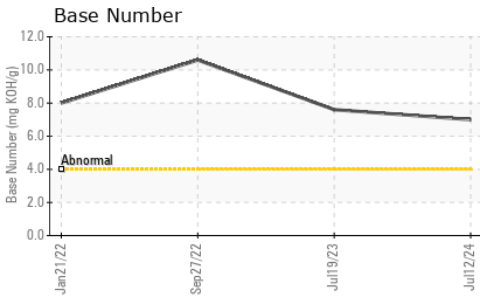
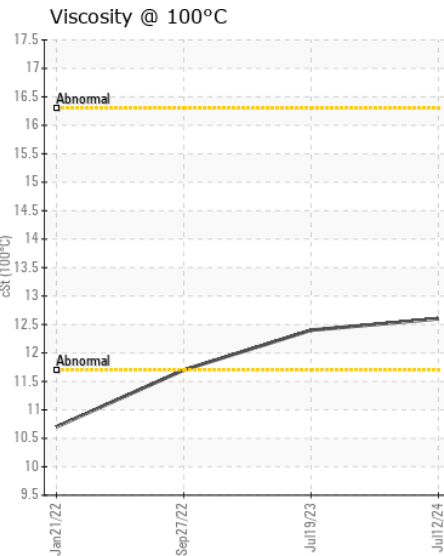
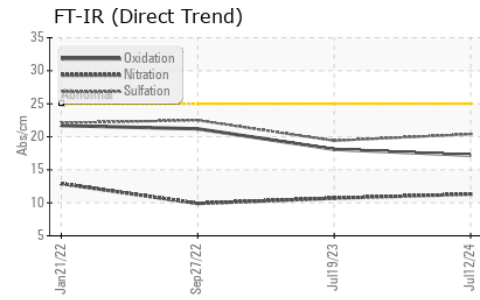
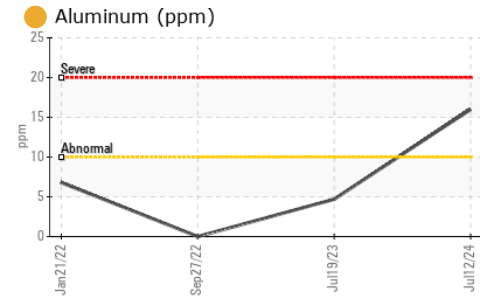
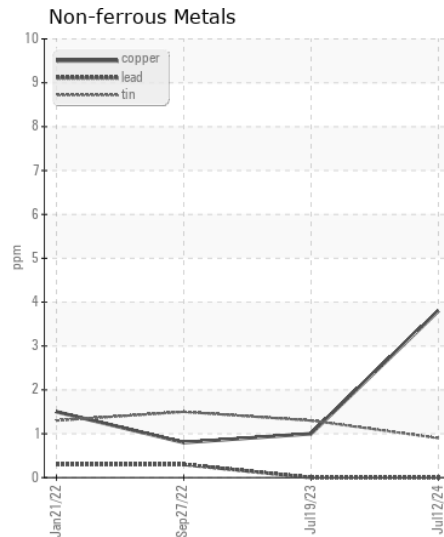
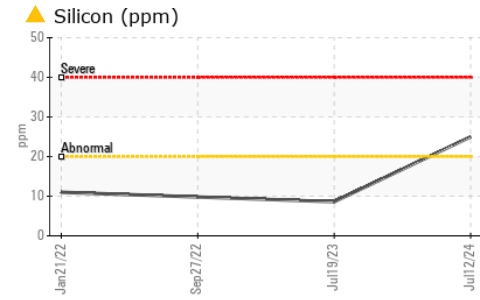
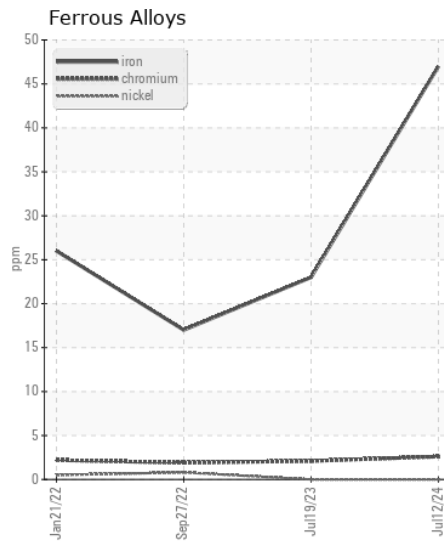
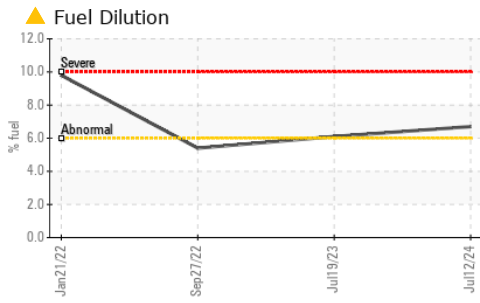
The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0008479</b>	VCP418454	VCP0004159
Sample Date		Client Info		<b>12 Jul 2024</b>	19 Jul 2023	27 Sep 2022
Machine Age	hrs	Client Info		<b>7410</b>	6612	6067
Oil Age	hrs	Client Info		<b>798</b>	0	304
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

Iron	ppm	ASTM D5185m	>100	<b>47</b>	23	17
Chromium	ppm	ASTM D5185m	>10	<b>3</b>	2	2
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>16</b>	5	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>15	<b>4</b>	1	<1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185m	>20	<b>▲ 25</b>	9	10
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	5	1
Fuel	%	ASTM D3524	>6.0	<b>▲ 6.7</b>	▲ 6.1	▲ 5.4
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.7</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.3</b>	10.7	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.4</b>	19.4	22.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

Sodium	ppm	ASTM D5185m		<b>3</b>	1	2
Boron	ppm	ASTM D5185m		<b>9</b>	11	37
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>64</b>	64	40
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>872</b>	984	530
Calcium	ppm	ASTM D5185m		<b>1322</b>	1210	1567
Phosphorus	ppm	ASTM D5185m		<b>1047</b>	1080	940
Zinc	ppm	ASTM D5185m		<b>1232</b>	1315	1074
Sulfur	ppm	ASTM D5185m		<b>3467</b>	3776	3274
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.2</b>	18.1	21.2
Base Number (BN)	mg KOH/g	ASTM D2896		<b>7.0</b>	7.6	10.6
Visc @ 100°C	cSt	ASTM D445		<b>12.6</b>	12.4	▲ 11.7



Certificate L2367

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

Sample No. : ASC0008479

Lab Number : 06235459

Unique Number : 11124293

Test Package : CONST ( Additional Tests: PercentFuel, TBN )

Received : 15 Jul 2024

Tested : 16 Jul 2024

Diagnosed : 16 Jul 2024 - Don Baldrige

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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)