



# ASCENDUM

## OIL ANALYSIS REPORT



Area  
**NEW SOUTH LUMBER**  
Machine Id  
**VOLVO L220H L220HV3584**  
Component  
**Hydraulic System**  
Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ATTENTION</b>

### RECOMMENDATION

We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0007651	---	---
Sample Date		Client Info		26 Feb 2024	---	---
Machine Age	hrs	Client Info		470	---	---
Oil Age	hrs	Client Info		470	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Chngd	---	---
Filter Changed		Client Info		Not Chngd	---	---
Sample Status				SEVERE	---	---

### WEAR

The tin level is severe.

Iron	ppm	ASTM D5185m	>50	0	---	---
Chromium	ppm	ASTM D5185m	>20	0	---	---
Nickel	ppm	ASTM D5185m	>10	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>20	0	---	---
Lead	ppm	ASTM D5185m	>20	<1	---	---
Copper	ppm	ASTM D5185m	>20	2	---	---
Tin	ppm	ASTM D5185m	>20	▲ 284	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

### CONTAMINATION

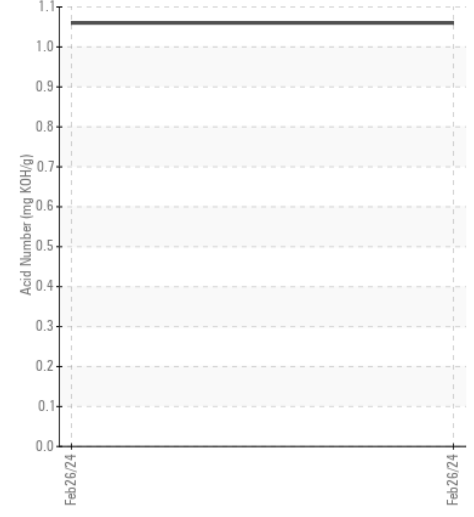
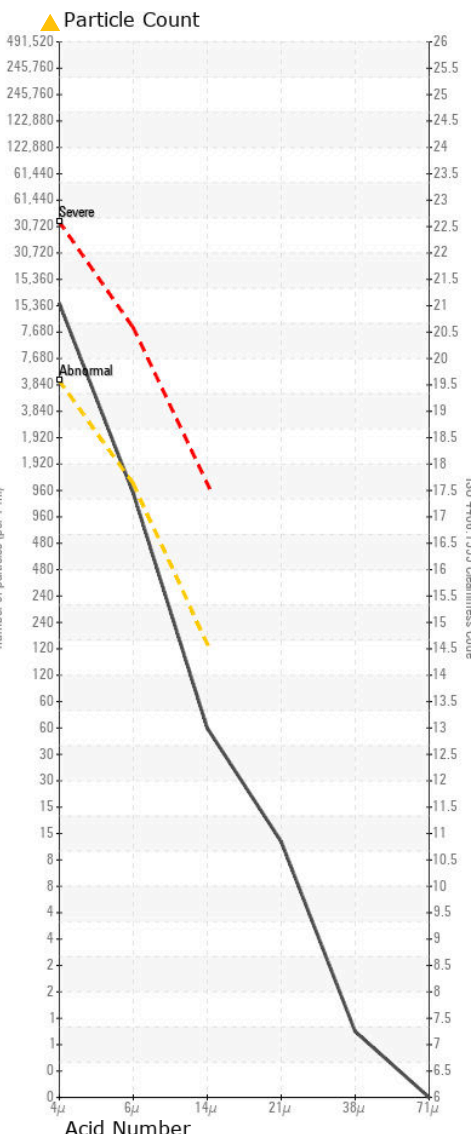
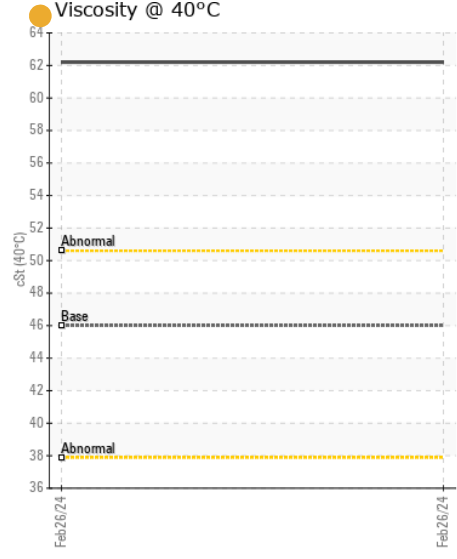
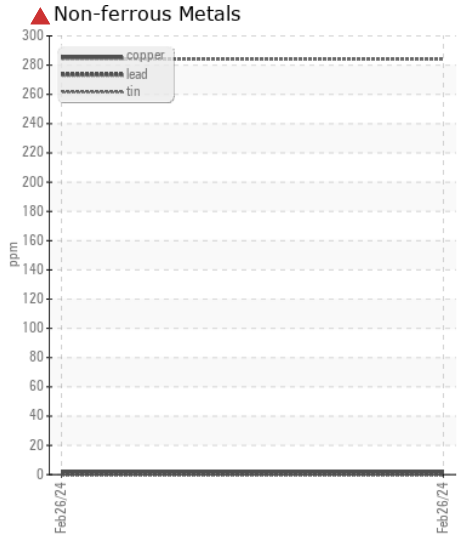
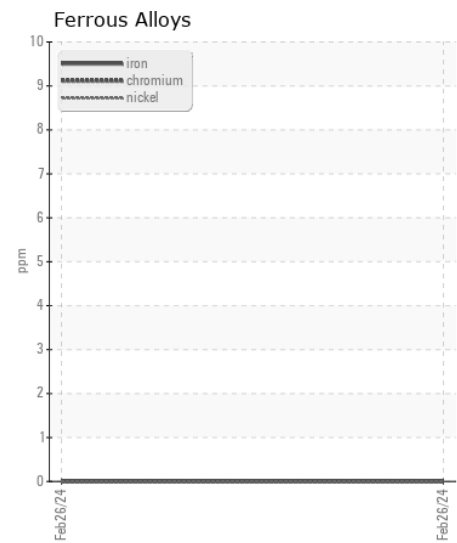
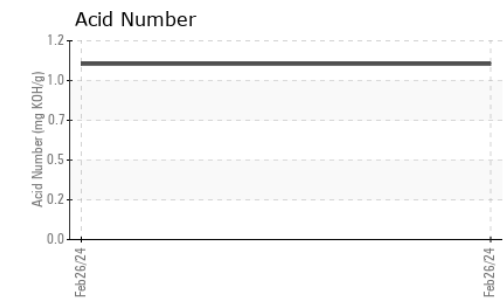
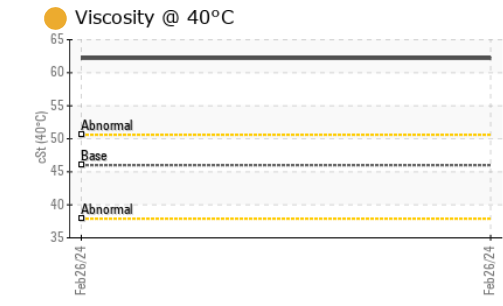
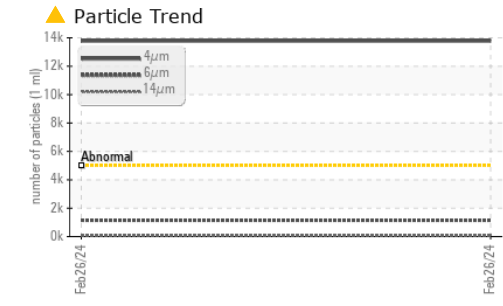
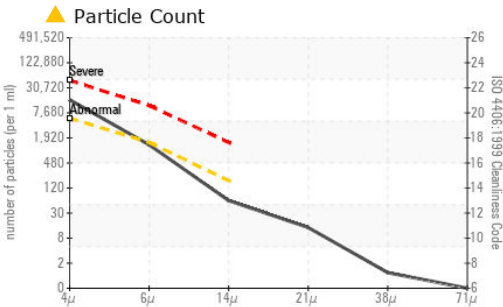
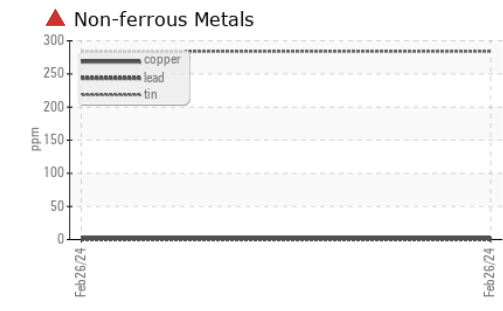
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	2	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Water		WC Method	>0.2	NEG	---	---
Particles >4µm		ASTM D7647	>5000	▲ 13780	---	---
Particles >6µm		ASTM D7647	>1300	1148	---	---
Particles >14µm		ASTM D7647	>160	53	---	---
Particles >21µm		ASTM D7647	>40	12	---	---
Particles >38µm		ASTM D7647	>10	1	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ 21/17/13	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

### FLUID CONDITION

Viscosity of sample indicates oil is within ISO 68 range, advise investigate. The AN level is acceptable for this fluid.

Sodium	ppm	ASTM D5185m		<1	---	---
Boron	ppm	ASTM D5185m	14	0	---	---
Barium	ppm	ASTM D5185m	0.0	0	---	---
Molybdenum	ppm	ASTM D5185m	0.0	0	---	---
Manganese	ppm	ASTM D5185m	0.0	0	---	---
Magnesium	ppm	ASTM D5185m	2.6	<1	---	---
Calcium	ppm	ASTM D5185m	49	7	---	---
Phosphorus	ppm	ASTM D5185m	354	188	---	---
Zinc	ppm	ASTM D5185m	419	81	---	---
Sulfur	ppm	ASTM D5185m	3719	689	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045		1.06	---	---
Visc @ 40°C	cSt	ASTM D445	46	● 62.2	---	---



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0007651  
**Lab Number** : 06105137  
**Unique Number** : 10903367  
**Test Package** : CONST

**114 - ASCENDUM MACHINERY INC - CONCORD**  
 1025 INTERNATIONAL DR NW  
 CONCORD, NC  
 US 28027

**Received** : 29 Feb 2024  
**Tested** : 06 Mar 2024  
**Diagnosed** : 06 Mar 2024 - Jonathan Hester

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