



# VOLVO

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

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



Area

[42174 US SILICA]

Machine Id

VOLVO L350H 1186

Component

Diesel Engine

Fluid

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

### 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. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP453823	VCP368315	---
Sample Date		Client Info		21 May 2024	13 Apr 2023	---
Machine Age	hrs	Client Info		8532	4739	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

### WEAR

All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	6	---
Chromium	ppm	ASTM D5185m	>10	<1	<1	---
Nickel	ppm	ASTM D5185m	>10	1	0	---
Titanium	ppm	ASTM D5185m		1	0	---
Silver	ppm	ASTM D5185m	>2	<1	0	---
Aluminum	ppm	ASTM D5185m	>10	10	1	---
Lead	ppm	ASTM D5185m	>20	2	0	---
Copper	ppm	ASTM D5185m	>15	2	2	---
Tin	ppm	ASTM D5185m	>10	1	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

### CONTAMINATION

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

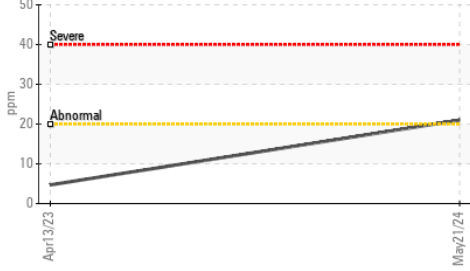
Silicon	ppm	ASTM D5185m	>20	21	5	---
Potassium	ppm	ASTM D5185m	>20	3	0	---
Fuel		WC Method	>6.0	<1.0	<1.0	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.3	0.3	---
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.1	22.6	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	---

### FLUID CONDITION

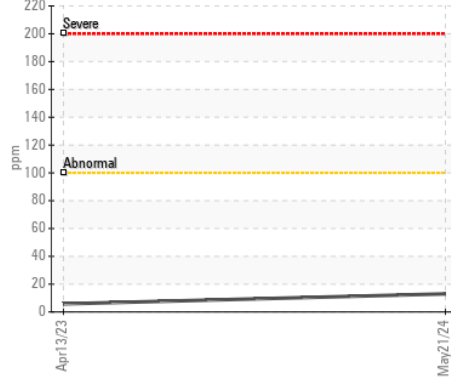
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		2	3	---
Boron	ppm	ASTM D5185m	2.5	49	48	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.7	45	45	---
Manganese	ppm	ASTM D5185m	0.0	<1	<1	---
Magnesium	ppm	ASTM D5185m	256	507	520	---
Calcium	ppm	ASTM D5185m	2057	1616	1819	---
Phosphorus	ppm	ASTM D5185m	935	886	939	---
Zinc	ppm	ASTM D5185m	1223	1116	1141	---
Sulfur	ppm	ASTM D5185m	4079	3031	3483	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	20.7	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.5	10.0	---
Visc @ 100°C	cSt	ASTM D445	15.0	12.9	12.9	---

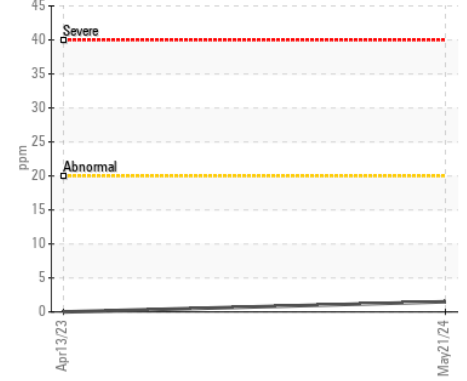
▲ Silicon (ppm)



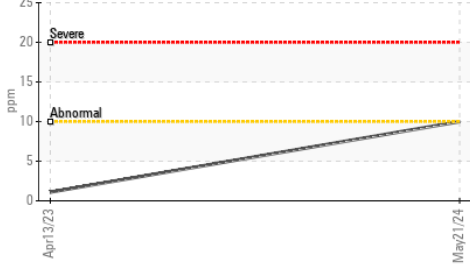
Iron (ppm)



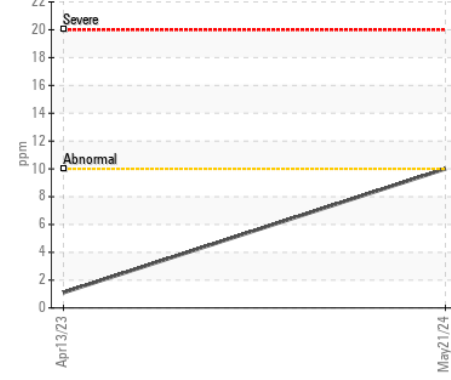
Lead (ppm)



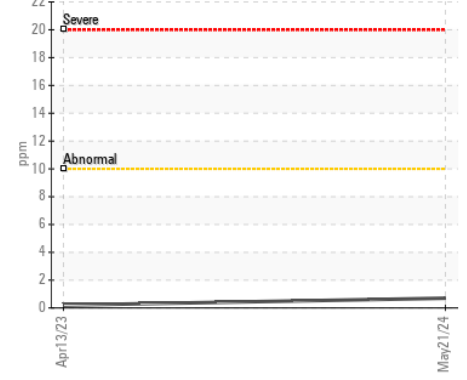
● Aluminum (ppm)



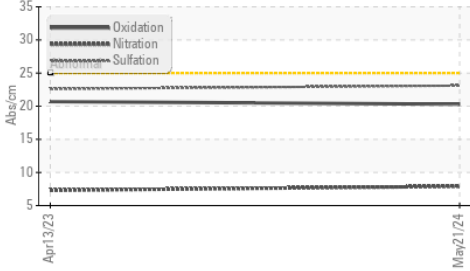
● Aluminum (ppm)



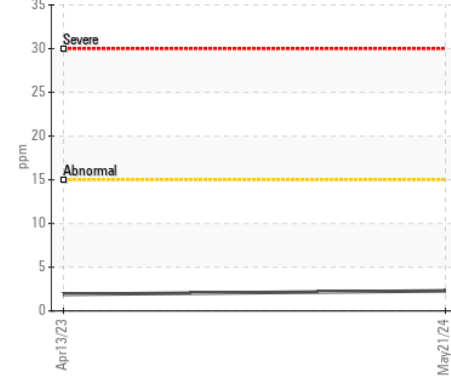
Chromium (ppm)



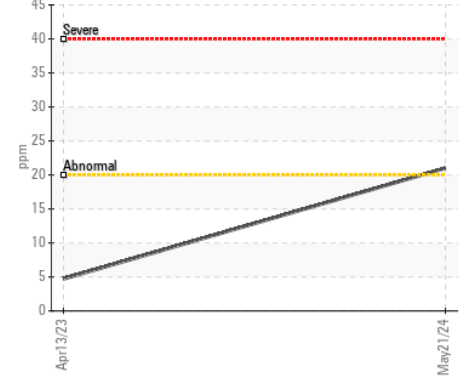
FT-IR (Direct Trend)



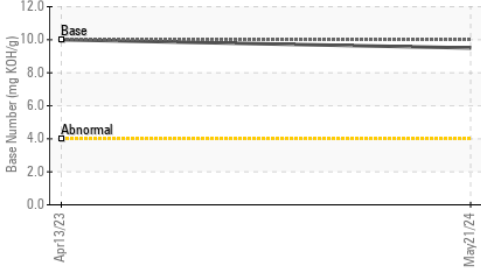
Copper (ppm)



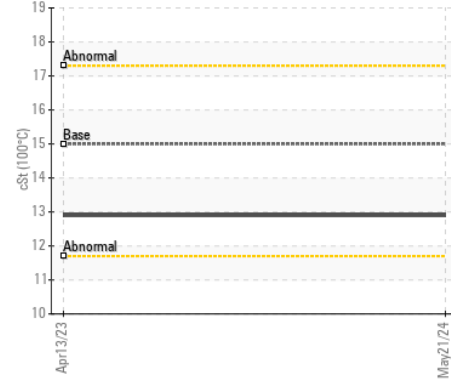
▲ Silicon (ppm)



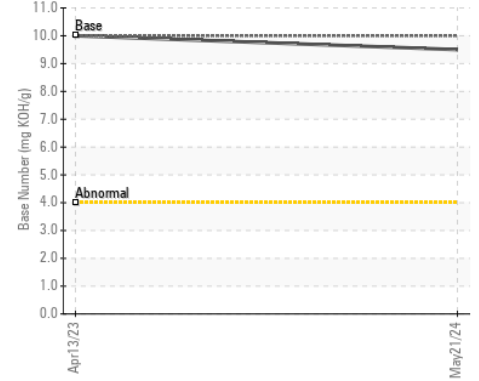
Base Number



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : VCP453823  
 Lab Number : 06188757  
 Unique Number : 11045509  
 Test Package : MOB 1 ( Additional Tests: TBN )

215 - ASCENDUM MACHINERY INC - CAYCE  
 2303 AIRPORT BLVD  
 CAYCE, SC  
 US 29033  
 Contact: TAMI BROWDER

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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