



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id
VOLVO EC480 311142

Component
Diesel Engine

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

RECOMMENDATION

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		VCP443762	VCP406886	---
Sample Date		Client Info		23 Apr 2024	19 Apr 2023	---
Machine Age	hrs	Client Info		6042	5432	---
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	ABNORMAL	---

WEAR

Moderate concentration of visible metal present. Valve wear is indicated.

Iron	ppm	ASTM D5185m	>100	12	10	---
Chromium	ppm	ASTM D5185m	>10	0	<1	---
Nickel	ppm	ASTM D5185m	>10	▲ 14	2	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>10	<1	2	---
Lead	ppm	ASTM D5185m	>20	0	0	---
Copper	ppm	ASTM D5185m	>15	1	2	---
Tin	ppm	ASTM D5185m	>10	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	▲ MODER	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

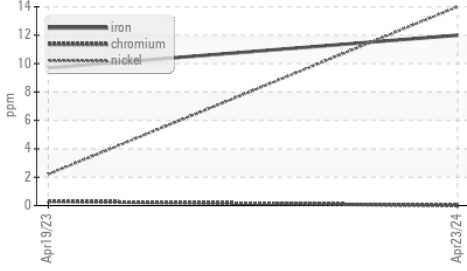
Silicon	ppm	ASTM D5185m	>20	9	8	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Fuel	%	ASTM D3524	>6.0	<1.0	▲ 2.2	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	8.5	7.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	20.0	---
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

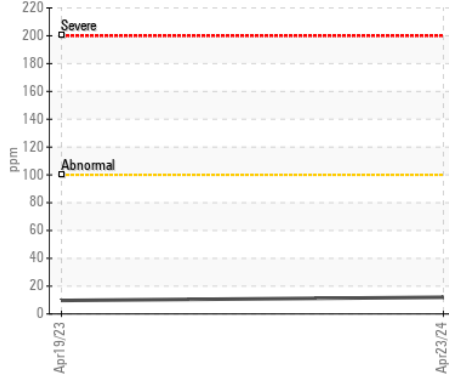
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		2	2	---
Boron	ppm	ASTM D5185m	2.5	21	25	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.7	43	42	---
Manganese	ppm	ASTM D5185m	0.0	0	<1	---
Magnesium	ppm	ASTM D5185m	256	507	473	---
Calcium	ppm	ASTM D5185m	2057	1862	1437	---
Phosphorus	ppm	ASTM D5185m	935	971	824	---
Zinc	ppm	ASTM D5185m	1223	1169	957	---
Sulfur	ppm	ASTM D5185m	4079	3421	3080	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.0	19.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.2	8.0	---
Visc @ 100°C	cSt	ASTM D445	15.0	● 12.1	▲ 11.8	---

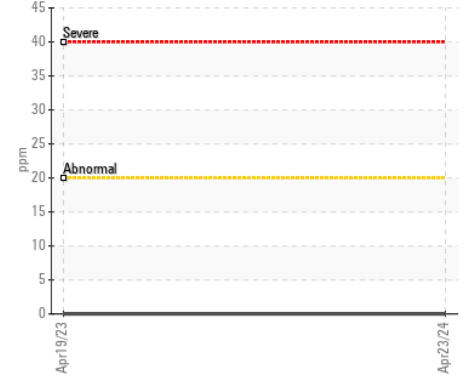
▲ Ferrous Alloys



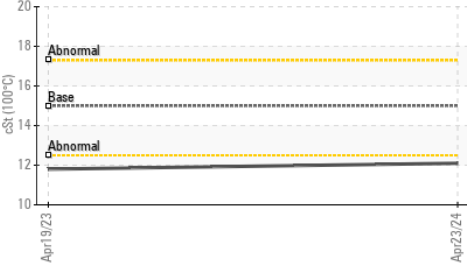
Iron (ppm)



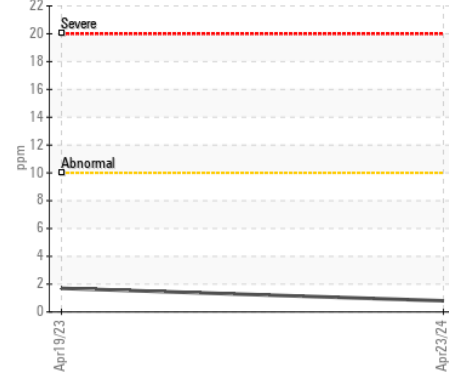
Lead (ppm)



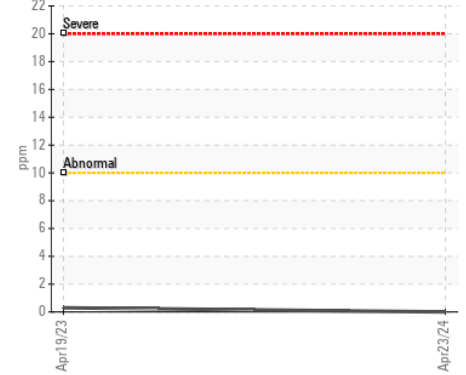
● Viscosity @ 100°C



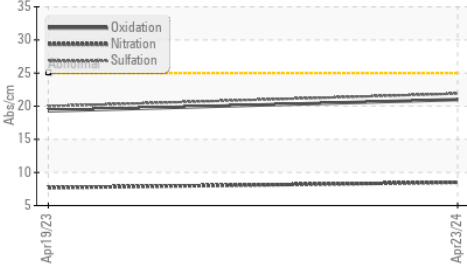
Aluminum (ppm)



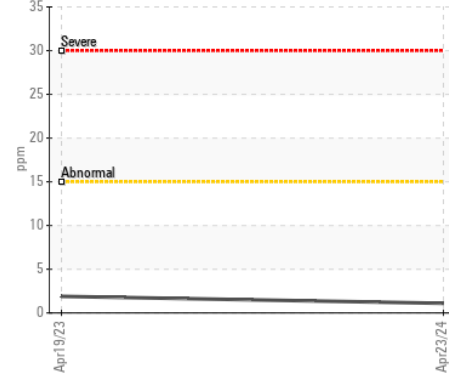
Chromium (ppm)



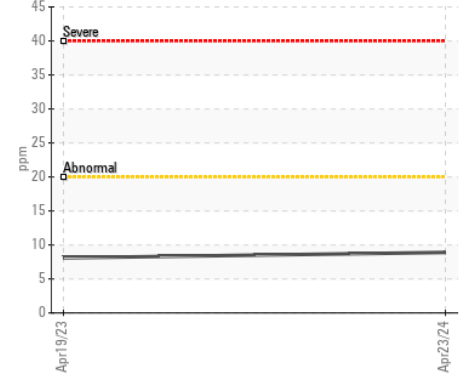
FT-IR (Direct Trend)



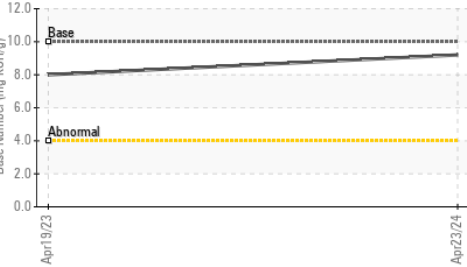
Copper (ppm)



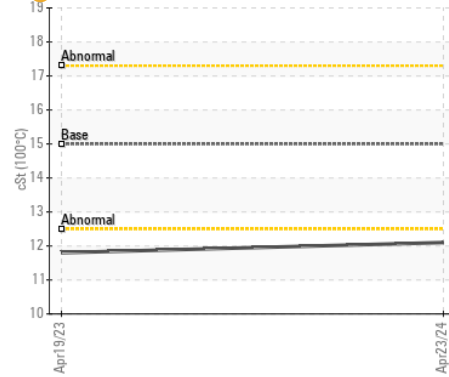
Silicon (ppm)



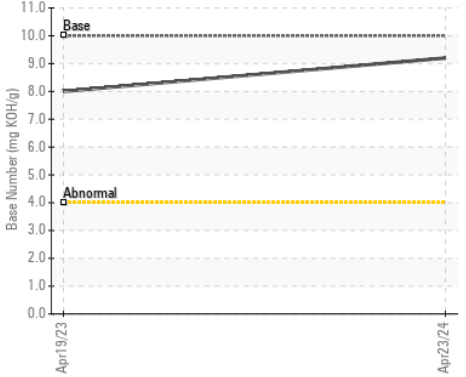
Base Number



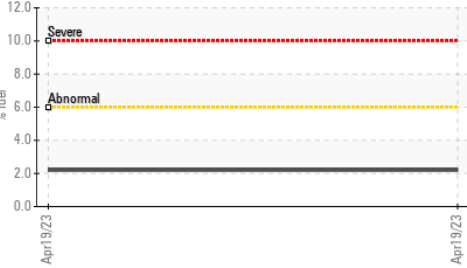
● Viscosity @ 100°C



Base Number



Fuel Dilution



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP443762 **Received** : 24 Apr 2024
Lab Number : 06158704 **Tested** : 25 Apr 2024
Unique Number : 10994127 **Diagnosed** : 26 Apr 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

ALTA EQUIPMENT/FLAGLER EQUIPMENT LLC
 9601 BOGGY CREEK RD
 ORLANDO, FL
 US 32824
 Contact: BRAD BYRO
 bradley.byro@altg.com
 T: (407)850-9614
 F: (407)659-8720

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)