



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
VOLVO L220ELR 314360

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP0008473	VCP332963	---
Sample Date		Client Info		27 Jun 2024	05 May 2022	---
Machine Age	hrs	Client Info		1360	1346	---
Oil Age	hrs	Client Info		14	500	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	18	---
Chromium	ppm	ASTM D5185m	>10	<1	1	---
Nickel	ppm	ASTM D5185m	>10	0	<1	---
Titanium	ppm	ASTM D5185m		0	21	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>10	2	3	---
Lead	ppm	ASTM D5185m	>20	0	2	---
Copper	ppm	ASTM D5185m	>15	<1	2	---
Tin	ppm	ASTM D5185m	>10	0	1	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

There is no indication of any contamination in the oil.

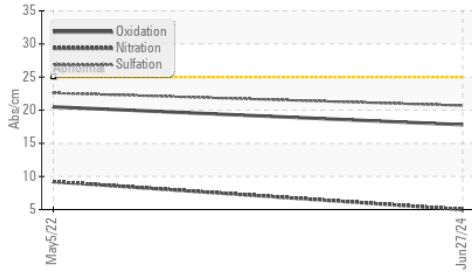
Silicon	ppm	ASTM D5185m	>20	10	7	---
Potassium	ppm	ASTM D5185m	>20	1	2	---
Fuel		WC Method	>6.0	<1.0	<1.0	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	5.0	9.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.7	22.6	---
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

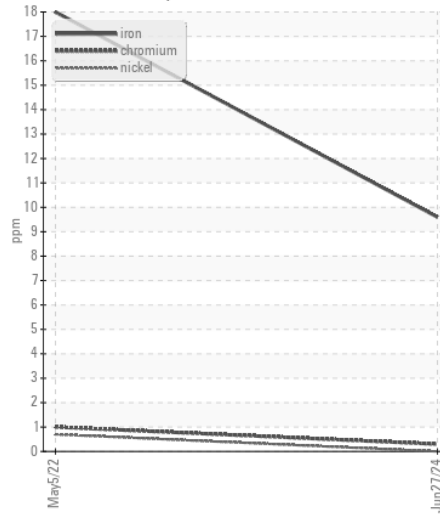
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	---
Boron	ppm	ASTM D5185m	2.5	75	53	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.7	43	31	---
Manganese	ppm	ASTM D5185m	0.0	0	<1	---
Magnesium	ppm	ASTM D5185m	256	459	477	---
Calcium	ppm	ASTM D5185m	2057	1506	1890	---
Phosphorus	ppm	ASTM D5185m	935	888	1035	---
Zinc	ppm	ASTM D5185m	1223	1052	1266	---
Sulfur	ppm	ASTM D5185m	4079	2611	3124	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.8	20.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.4	10.3	---
Visc @ 100°C	cSt	ASTM D445	15.0	12.4	13.5	---

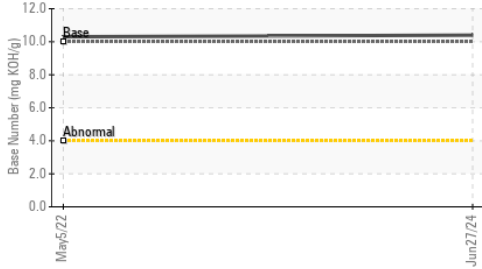
FT-IR (Direct Trend)



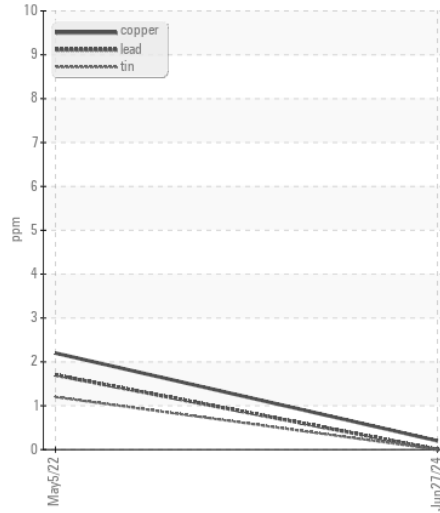
Ferrous Alloys



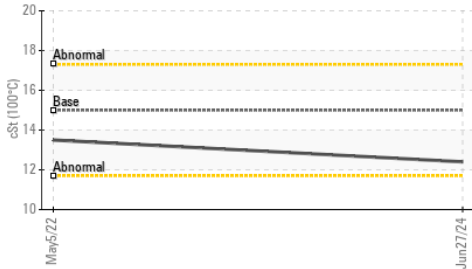
Base Number



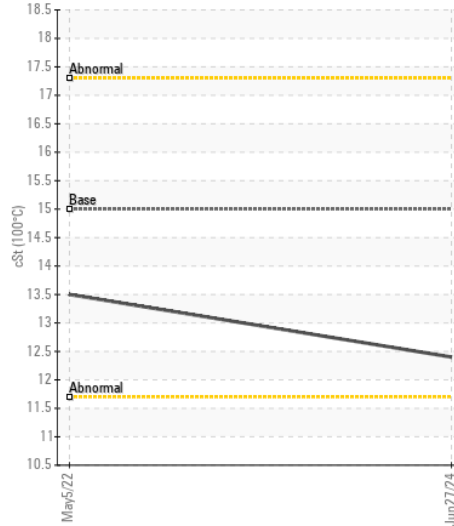
Non-ferrous Metals



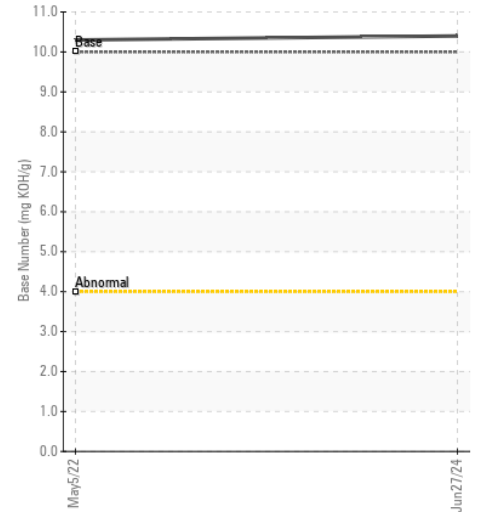
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP0008473 **Received** : 03 Jul 2024
Lab Number : 06226985 **Tested** : 03 Jul 2024
Unique Number : 11110478 **Diagnosed** : 03 Jul 2024 - Wes Davis
Test Package : CONST (Additional Tests: TBN)

ALTA EQUIPMENT COMPANY
 8750 PHILIPS HWY
 JACKSONVILLE, FL
 US 32256

Contact: SHAWN NORTHCRAFT
 shawn.northcraft@altg.com

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)

T: (904)737-6000
 F: (904)737-1260