CONST

McCLUNG-LOGAN EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
[W/O 10820]
Machine Id
VOLVO EC300EL 317131
Component
Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (13 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The copper level has decreased, but is still abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

CONTAMINATION

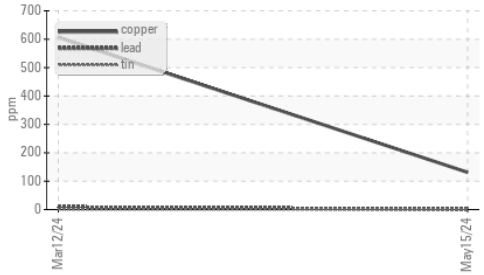
There is no indication of any contamination in the oil.

FLUID CONDITION

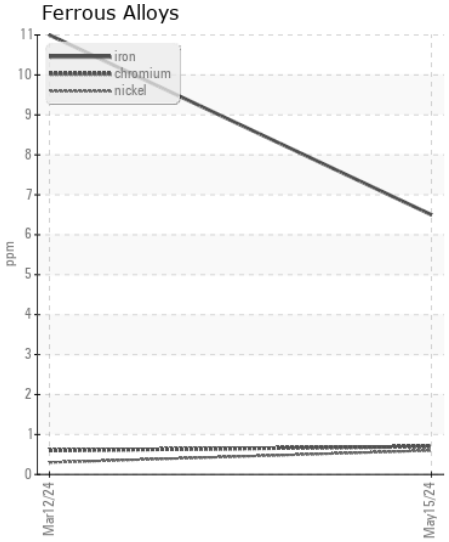
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0001272	ML0000095	---
Sample Date		Client Info		15 May 2024	12 Mar 2024	---
Machine Age	hrs	Client Info		818	472	---
Oil Age	hrs	Client Info		346	472	---
Filter Age	hrs	Client Info		346	472	---
Oil Changed		Client Info		Not Changd	Changed	---
Filter Changed		Client Info		Not Changd	Changed	---
Sample Status				SEVERE	ABNORMAL	---
Iron	ppm	ASTM D5185m	>100	6	11	---
Chromium	ppm	ASTM D5185m	>10	<1	<1	---
Nickel	ppm	ASTM D5185m	>10	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	2	1	---
Aluminum	ppm	ASTM D5185m	>10	6	5	---
Lead	ppm	ASTM D5185m	>20	<1	9	---
Copper	ppm	ASTM D5185m	>15	▲ 131	▲ 606	---
Tin	ppm	ASTM D5185m	>10	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>20	7	13	---
Potassium	ppm	ASTM D5185m	>20	6	7	---
Fuel	%	ASTM D3524	>6.0	<1.0	0.2	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.8	8.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.8	18.4	---
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	---
Sodium	ppm	ASTM D5185m		6	4	---
Boron	ppm	ASTM D5185m	2.5	152	39	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.7	84	66	---
Manganese	ppm	ASTM D5185m	0.0	<1	1	---
Magnesium	ppm	ASTM D5185m	256	522	48	---
Calcium	ppm	ASTM D5185m	2057	1531	2317	---
Phosphorus	ppm	ASTM D5185m	935	714	1020	---
Zinc	ppm	ASTM D5185m	1223	1001	1233	---
Sulfur	ppm	ASTM D5185m	4079	2699	4684	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	17.0	14.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.7	6.3	---
Visc @ 100°C	cSt	ASTM D445	15.0	● 11.5	● 11.1	---

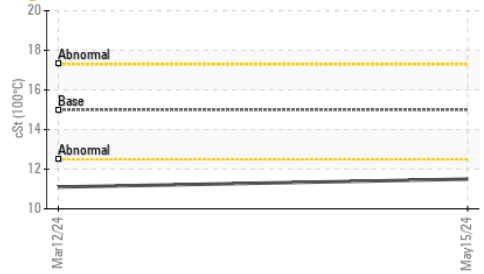
Non-ferrous Metals



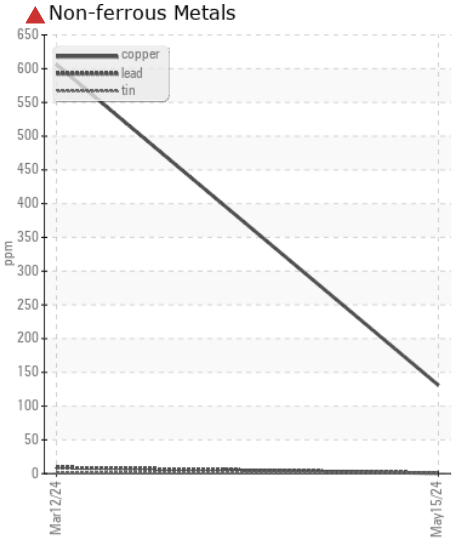
Ferrous Alloys



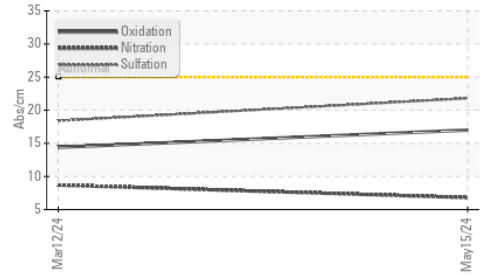
Viscosity @ 100°C



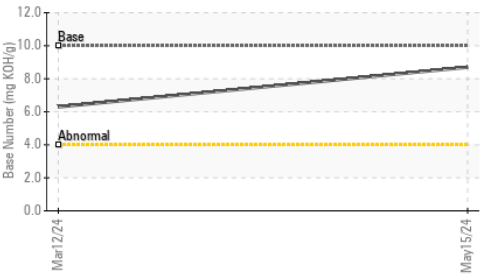
Non-ferrous Metals



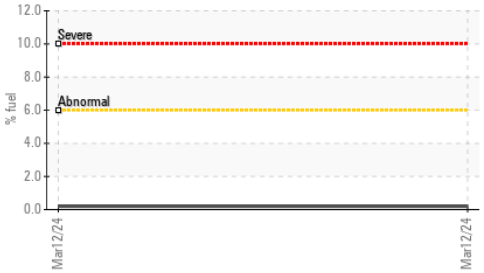
FT-IR (Direct Trend)



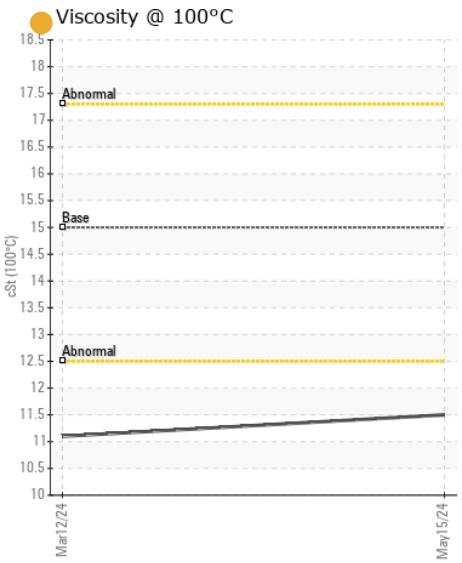
Base Number



Fuel Dilution



Viscosity @ 100°C



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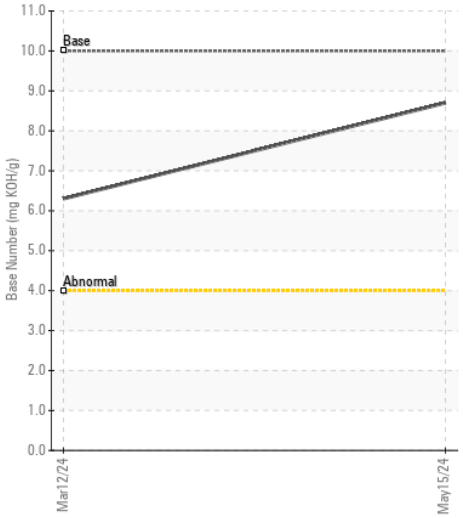

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001272 **Received** : 24 May 2024
Lab Number : 06190336 **Tested** : 29 May 2024
Unique Number : 11047088 **Diagnosed** : 29 May 2024 - Don Baldridge
Test Package : CONST (Additional Tests: FuelDilution, TBN)

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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