McCLUNG-LOGAN EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO EC250E 310555
Component
Diesel Engine
Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

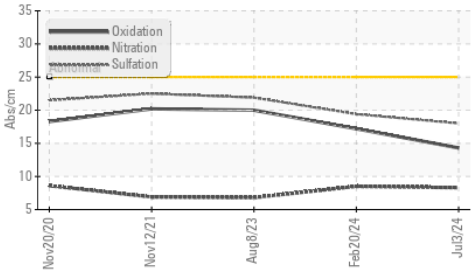
There is no indication of any contamination in the oil.

FLUID CONDITION

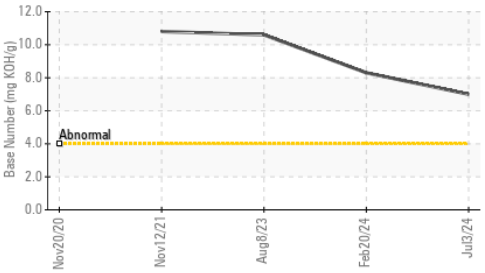
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0002681	ML0000647	VCP409398
Sample Date		Client Info		03 Jul 2024	20 Feb 2024	08 Aug 2023
Machine Age	hrs	Client Info		3191	0	1841
Oil Age	hrs	Client Info		500	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	4	7	11
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>10	2	4	11
Lead	ppm	ASTM D5185m	>20	0	<1	<1
Copper	ppm	ASTM D5185m	>15	1	3	3
Tin	ppm	ASTM D5185m	>10	0	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	4	5	12
Potassium	ppm	ASTM D5185m	>20	1	4	7
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.3	8.5	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	19.4	21.9
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		2	3	3
Boron	ppm	ASTM D5185m		46	41	55
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		79	51	47
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		125	636	543
Calcium	ppm	ASTM D5185m		2225	1465	1717
Phosphorus	ppm	ASTM D5185m		1002	768	930
Zinc	ppm	ASTM D5185m		1187	935	1123
Sulfur	ppm	ASTM D5185m		4132	2755	3509
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	17.2	20.0
Base Number (BN)	mg KOH/g	ASTM D2896		7.0	8.3	10.6
Visc @ 100°C	cSt	ASTM D445		13.8	13.4	12.8

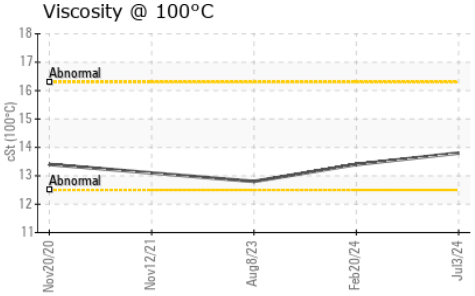
FT-IR (Direct Trend)



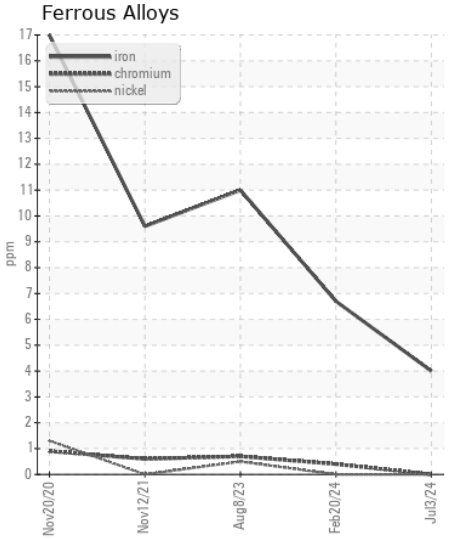
Base Number



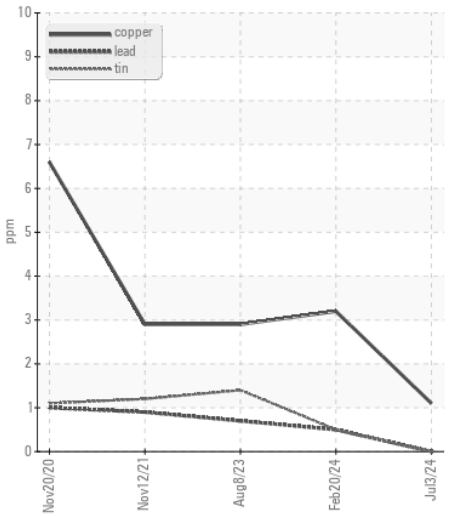
Viscosity @ 100°C



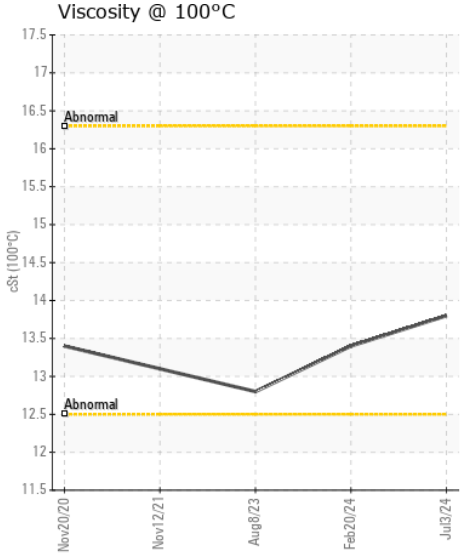
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



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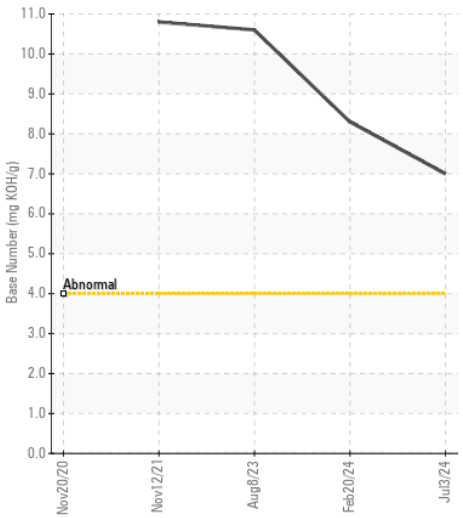

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0002681
Lab Number : 06229405
Unique Number : 11112898
Test Package : CONST (Additional Tests: TBN)

Received : 05 Jul 2024
Tested : 09 Jul 2024
Diagnosed : 09 Jul 2024 - Jonathan Hester

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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