



McCLUNG-LOGAN
EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[W/O 10608]
Machine Id
VOLVO EC480E 310061
Component
Diesel Engine
Fluid
CHEVRON 15W40 (14 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		ML0001162	VCP367860	VCP371197
Sample Date		Client Info		15 Apr 2024	18 Jul 2023	26 Jan 2023
Machine Age	hrs	Client Info		11663	11112	10460
Oil Age	hrs	Client Info		551	0	0
Filter Age	hrs	Client Info		551	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The copper level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	26	6	6
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m	>10	7	<1	0
Titanium	ppm	ASTM D5185m		<1	2	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	4	1	2
Lead	ppm	ASTM D5185m	>20	2	<1	0
Copper	ppm	ASTM D5185m	>15	▲ 50	1	1
Tin	ppm	ASTM D5185m	>10	2	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

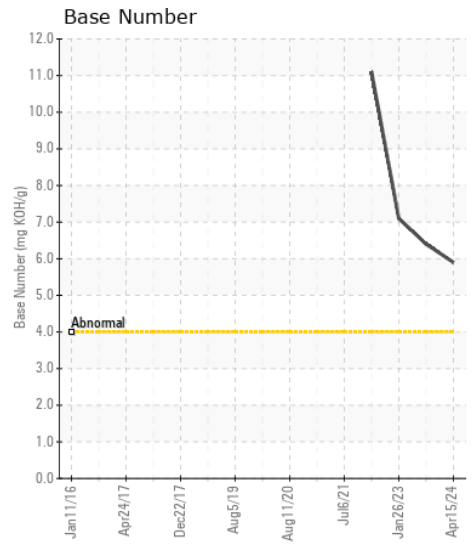
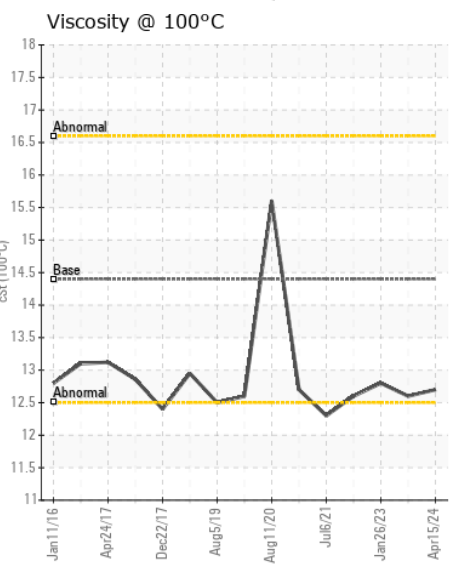
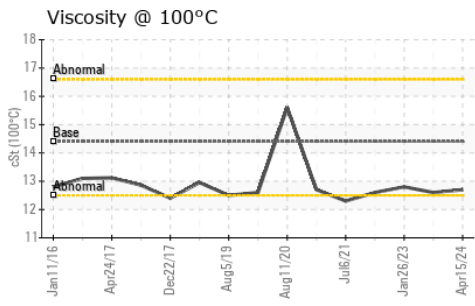
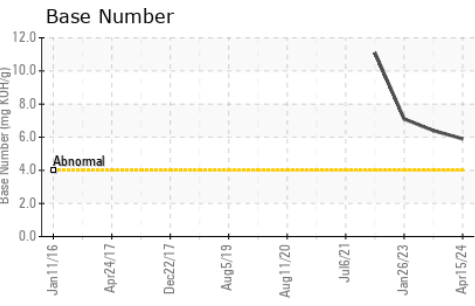
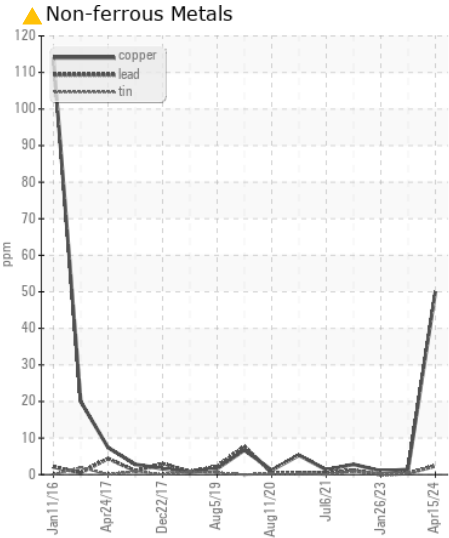
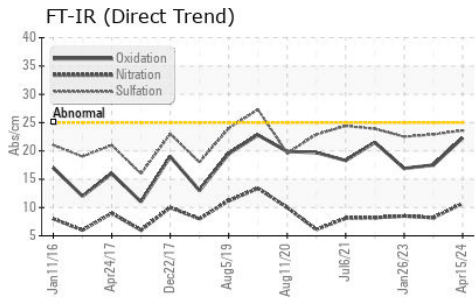
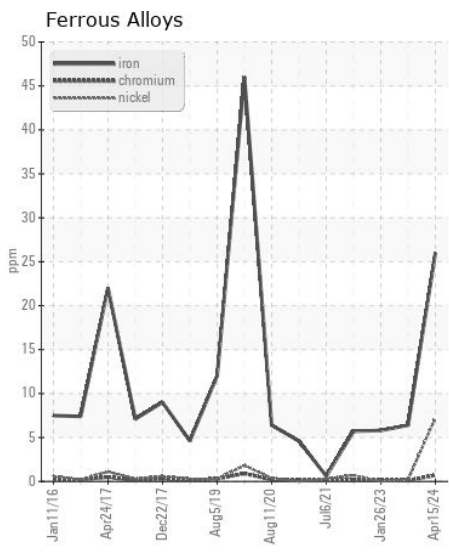
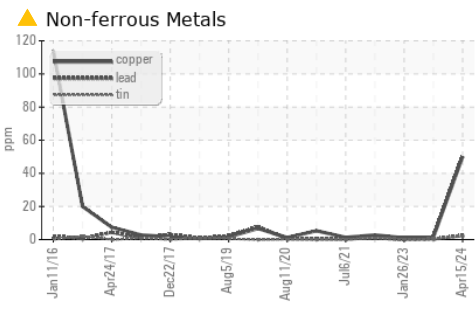
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	14	7	5
Potassium	ppm	ASTM D5185m	>20	4	<1	<1
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	0.2	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	10.7	8.2	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.6	22.9	22.5
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

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	>50	3	24	40
Boron	ppm	ASTM D5185m		23	263	267
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		45	93	105
Manganese	ppm	ASTM D5185m		2	<1	<1
Magnesium	ppm	ASTM D5185m		400	479	502
Calcium	ppm	ASTM D5185m		1851	1482	1436
Phosphorus	ppm	ASTM D5185m		875	933	801
Zinc	ppm	ASTM D5185m		1122	1154	975
Sulfur	ppm	ASTM D5185m		2979	3608	3220
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.3	17.5	16.9
Base Number (BN)	mg KOH/g	ASTM D2896		5.9	6.4	7.1
Visc @ 100°C	cSt	ASTM D445	14.4	12.7	12.6	12.8



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001162 **Received** : 19 Apr 2024
Lab Number : 06155079 **Tested** : 24 Apr 2024
Unique Number : 10990502 **Diagnosed** : 24 Apr 2024 - Jonathan Hester
Test Package : CONST (Additional Tests: TBN)

CLEAN EARTH - UPPER MARLBORO
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 UPPER MARLBORO, MD
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Certificate L2367
 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)