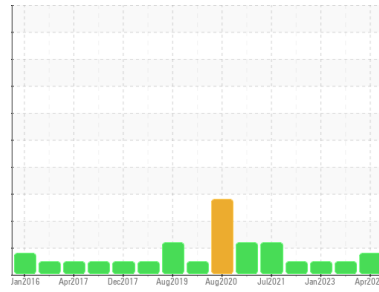


OIL ANALYSIS REPORT



Area
[W/O 10608]
 Machine Id
VOLVO EC480E 310061
 Component
Diesel Engine
 Fluid
CHEVRON 15W40 (14 GAL)

Sample Rating Trend



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. All other 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.

SAMPLE INFORMATION

	method	limit/base	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
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			ABNORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
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

WEAR METALS

	method	limit/base	current	history1	history2
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
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
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

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	14	7	5
Sodium	ppm	ASTM D5185m >50	3	24	40
Potassium	ppm	ASTM D5185m >20	4	<1	<1

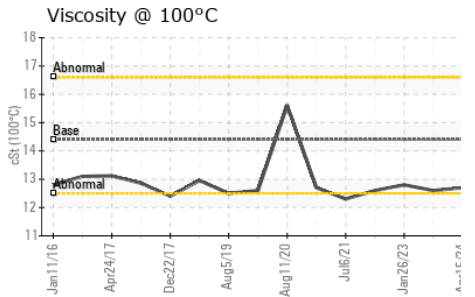
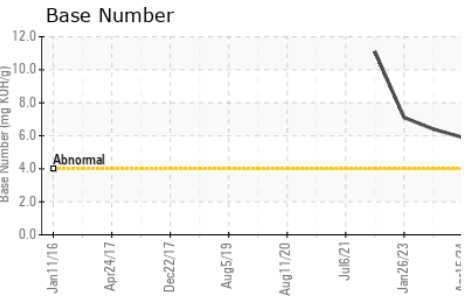
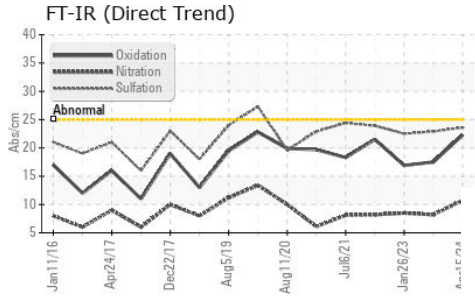
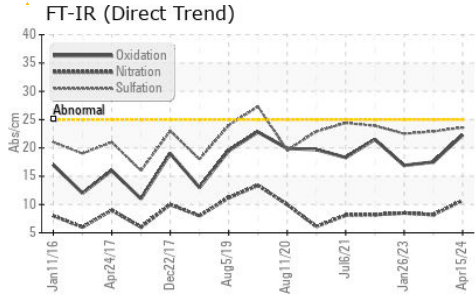
INFRA-RED

	method	limit/base	current	history1	history2
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

FLUID DEGRADATION

	method	limit/base	current	history1	history2
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

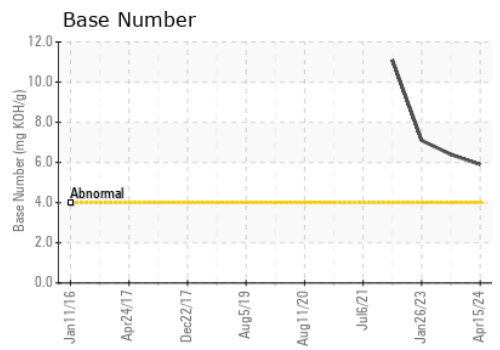
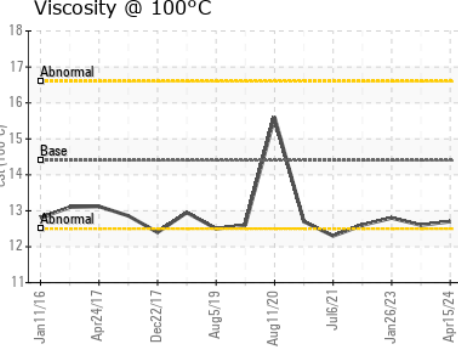
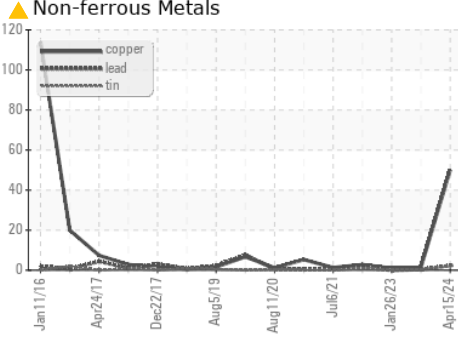
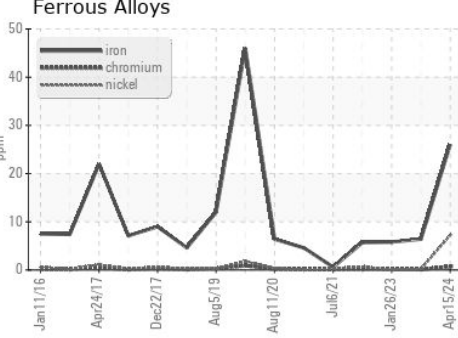
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.4	12.7	12.6	12.8

GRAPHS



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
 6250 DOWER HOUSE RD
 UPPER MARLBORO, MD
 US 20772
 Contact: TIMMY GOVER
 tgover@harsco.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)