



# OIL ANALYSIS REPORT

WEAR	<b>SEVERE</b>
CONTAMINATION	<b>SEVERE</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**VOLVO EC160EL 310125**  
Component  
**Rear Left Final Drive**  
Fluid  
**VOLVO SUPER GEAR OIL 75W-80-GO102 (--- GAL)**

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0001800</b>	ML0001450	VCP293407
Sample Date		Client Info		<b>12 Jun 2024</b>	05 Apr 2024	24 Sep 2020
Machine Age	hrs	Client Info		<b>2347</b>	2260	1019
Oil Age	hrs	Client Info		<b>87</b>	1000	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>SEVERE</b>	SEVERE	NORMAL

## WEAR

Gear wear is indicated.

Iron	ppm	ASTM D5185m	>500	<b>▲ 649</b>	▲ 807	312
Chromium	ppm	ASTM D5185m	>10	<b>▲ 13</b>	▲ 23	3
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	5	0
Titanium	ppm	ASTM D5185m		<b>10</b>	14	0
Silver	ppm	ASTM D5185m		<b>0</b>	1	0
Aluminum	ppm	ASTM D5185m	>25	<b>● 134</b>	● 211	<1
Lead	ppm	ASTM D5185m	>25	<b>&lt;1</b>	4	0
Copper	ppm	ASTM D5185m	>50	<b>2</b>	3	<1
Tin	ppm	ASTM D5185m	>10	<b>0</b>	3	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

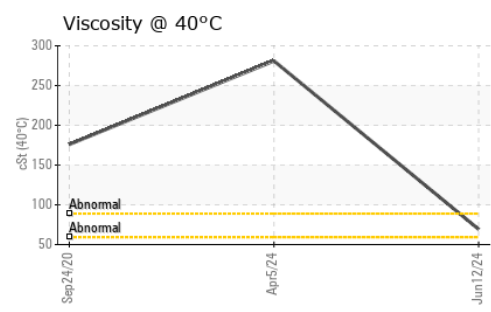
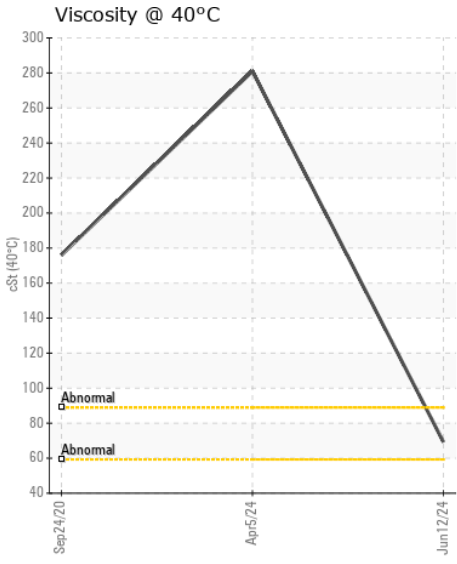
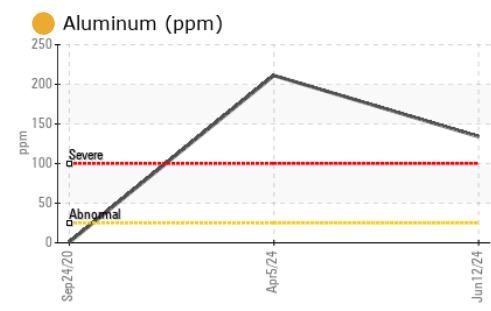
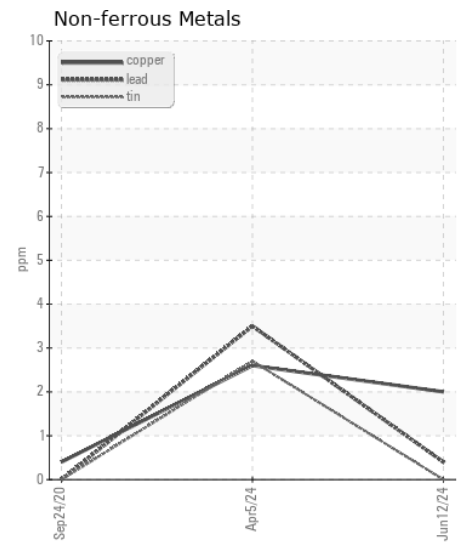
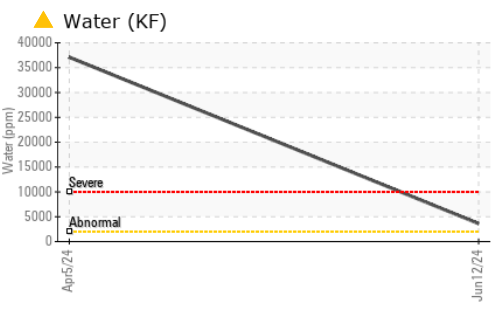
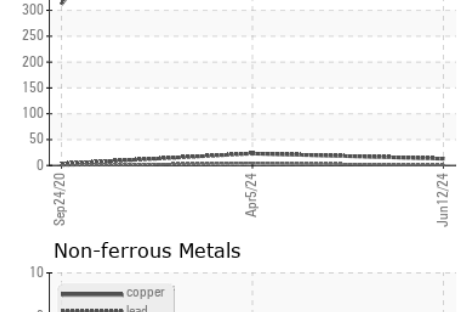
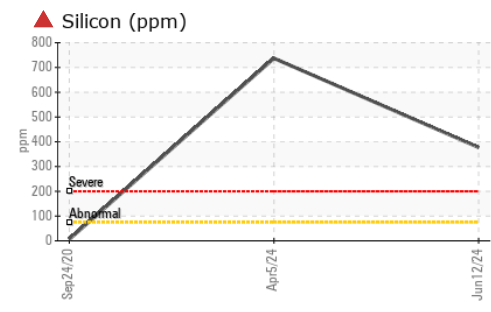
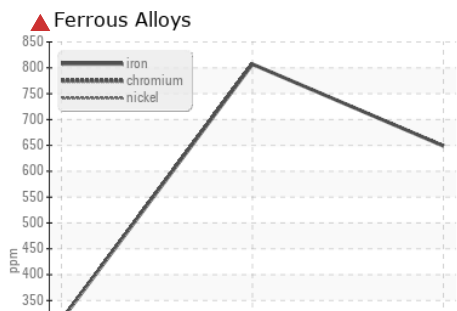
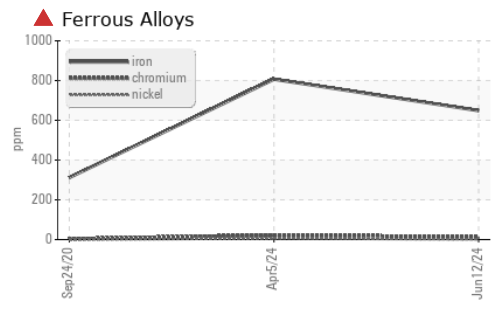
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>75	<b>▲ 377</b>	▲ 737	6
Potassium	ppm	ASTM D5185m	>20	<b>28</b>	41	2
Water	%	ASTM D6304	>0.2	<b>▲ 0.362</b>	▲ 3.71	---
ppm Water	ppm	ASTM D6304	>2000	<b>▲ 3620</b>	▲ 37100	---
Silt	scalar	*Visual	NONE	<b>MODER</b>	MODER	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>HAZY</b>	● MILKY	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>▲ 0.2%</b>	▲ 0.2%	NEG

## FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>9</b>	25	2
Boron	ppm	ASTM D5185m		<b>80</b>	111	12
Barium	ppm	ASTM D5185m		<b>0</b>	4	0
Molybdenum	ppm	ASTM D5185m		<b>1</b>	2	<1
Manganese	ppm	ASTM D5185m		<b>7</b>	12	3
Magnesium	ppm	ASTM D5185m		<b>7</b>	36	2
Calcium	ppm	ASTM D5185m		<b>31</b>	179	7
Phosphorus	ppm	ASTM D5185m		<b>1996</b>	1215	397
Zinc	ppm	ASTM D5185m		<b>55</b>	65	15
Sulfur	ppm	ASTM D5185m		<b>28387</b>	32785	15360
Visc @ 40°C	cSt	ASTM D445		<b>69.3</b>	● 281	176



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0001800 **Received** : 14 Jun 2024  
**Lab Number** : 06210970 **Tested** : 18 Jun 2024  
**Unique Number** : 11083834 **Diagnosed** : 18 Jun 2024 - Sean Felton  
**Test Package** : CONST ( Additional Tests: KF )

**MCCLUNG-LOGAN EQUIPMENT CO - RICHMOND**  
 1345 MOUNTAIN ROAD  
 GLEN ALLEN, VA  
 US 23060  
 Contact: Alex Anderson  
 aanderson@mcclung-logan.com

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) F: (804)266-1611