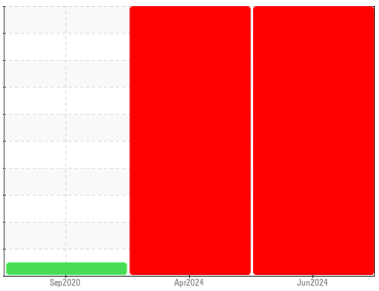
McCLUNG LOGAN EQUIPMENT COMPANY

PROBLEM SUMMARY

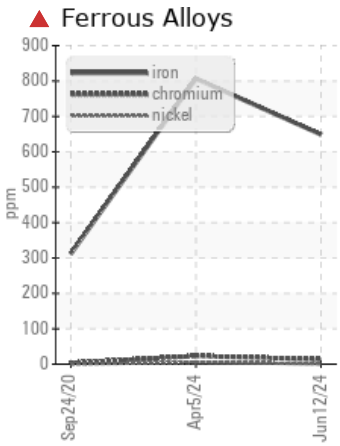
Sample Rating Trend

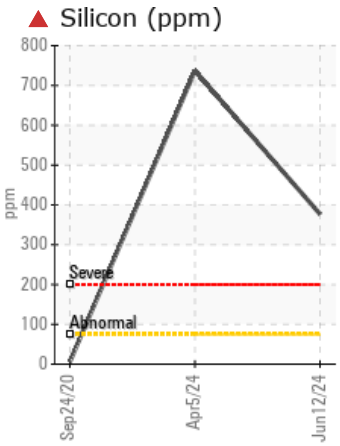


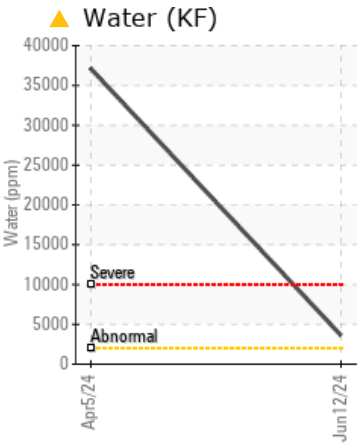
WEAR

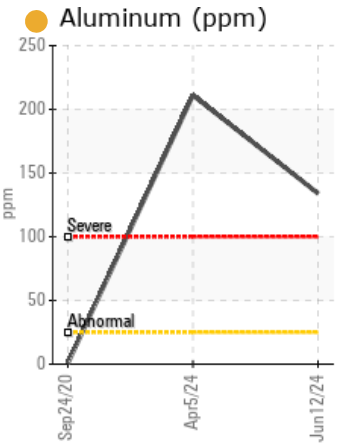
Machine Id
VOLVO EC160EL 310125
Component
Rear Left Final Drive
Fluid
VOLVO SUPER GEAR OIL 75W-80-GO102 (--- GAL)

COMPONENT CONDITION SUMMARY









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.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	SEVERE	NORMAL
Iron	ppm	ASTM D5185m	>500	▲ **649**	▲ 807	312
Chromium	ppm	ASTM D5185m	>10	▲ **13**	▲ 23	3
Silicon	ppm	ASTM D5185m	>75	▲ **377**	▲ 737	6
Water	%	ASTM D6304	>0.2	▲ **0.362**	▲ 3.71	---
ppm Water	ppm	ASTM D6304	>2000	▲ **3620**	▲ 37100	---
Emulsified Water	scalar	*Visual	>0.2	▲ **0.2%**	▲ 0.2%	NEG

Customer Id: VOLVO8882
Sample No.: ML0001800
Lab Number: 06210970
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@wearcheckusa.com

To change component or sample information:
Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check all areas where dirt can enter the system.
Check Water Access	---	---	?	We advise that you check for the source of water entry.

HISTORICAL DIAGNOSIS

DIRT

05 Apr 2024 Diag: Sean Felton

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 recommend an early resample to monitor this condition.Gear wear is indicated. Appearance is milky. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. There is a high concentration of water present in the oil. The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

view report

NORMAL

24 Sep 2020 Diag: Don Baldridge

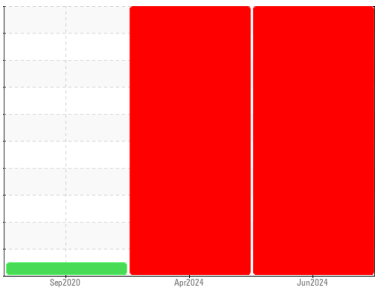
Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

view report

McCLUNG LOGAN EQUIPMENT COMPANY

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

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

DIAGNOSIS

▲ 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.

▲ Wear
Gear wear is indicated.

▲ 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.

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

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**ML0001800**	ML0001450	VCP293407
Sample Date		Client Info		**12 Jun 2024**	05 Apr 2024	24 Sep 2020
Machine Age	hrs	Client Info		**2347**	2260	1019
Oil Age	hrs	Client Info		**87**	1000	0
Oil Changed		Client Info		**Changed**	Changed	N/A
Sample Status				**SEVERE**	SEVERE	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	▲ **649**	▲ 807	312
Chromium	ppm	ASTM D5185m	>10	▲ **13**	▲ 23	3
Nickel	ppm	ASTM D5185m	>10	**<1**	5	0
Titanium	ppm	ASTM D5185m		**10**	14	0
Silver	ppm	ASTM D5185m		**0**	1	0
Aluminum	ppm	ASTM D5185m	>25	● **134**	● 211	<1
Lead	ppm	ASTM D5185m	>25	**<1**	4	0
Copper	ppm	ASTM D5185m	>50	**2**	3	<1
Tin	ppm	ASTM D5185m	>10	**0**	3	0
Antimony	ppm	ASTM D5185m	>5	**---**	---	0
Vanadium	ppm	ASTM D5185m		**<1**	<1	0
Cadmium	ppm	ASTM D5185m		**<1**	1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**80**	111	12
Barium	ppm	ASTM D5185m		**0**	4	0
Molybdenum	ppm	ASTM D5185m		**1**	2	<1
Manganese	ppm	ASTM D5185m		**7**	12	3
Magnesium	ppm	ASTM D5185m		**7**	36	2
Calcium	ppm	ASTM D5185m		**31**	179	7
Phosphorus	ppm	ASTM D5185m		**1996**	1215	397
Zinc	ppm	ASTM D5185m		**55**	65	15
Sulfur	ppm	ASTM D5185m		**28387**	32785	15360

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	▲ **377**	▲ 737	6
Sodium	ppm	ASTM D5185m		**9**	25	2
Potassium	ppm	ASTM D5185m	>20	**28**	41	2
Water	%	ASTM D6304	>0.2	▲ **0.362**	▲ 3.71	---
ppm Water	ppm	ASTM D6304	>2000	▲ **3620**	▲ 37100	---

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**MODER**	MODER	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**HAZY**	● MILKY	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	▲ **0.2%**	▲ 0.2%	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

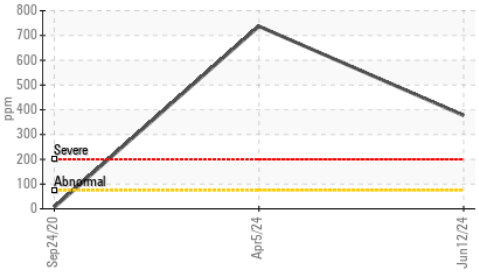
OIL ANALYSIS REPORT

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**69.3**	281	176

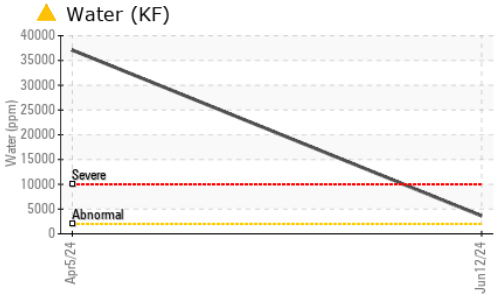
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					no image
Bottom					no image

GRAPHS

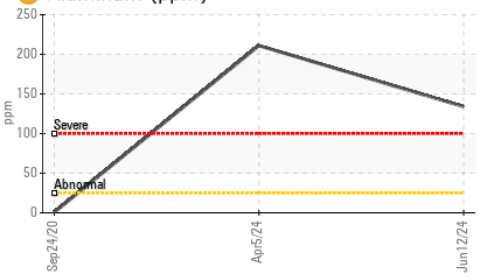
Silicon (ppm)



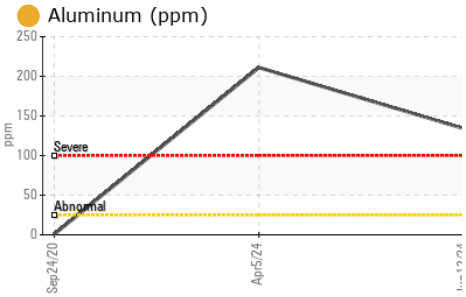
Water (KF)



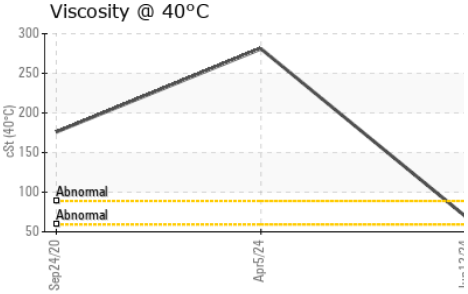
Aluminum (ppm)



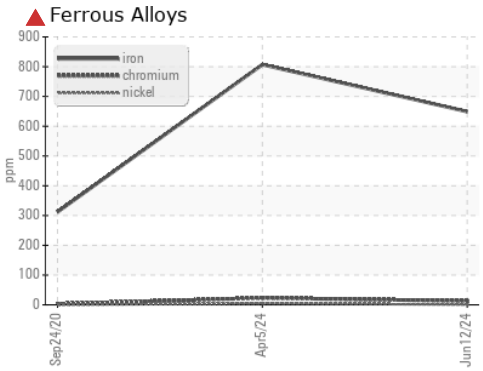
Aluminum (ppm)



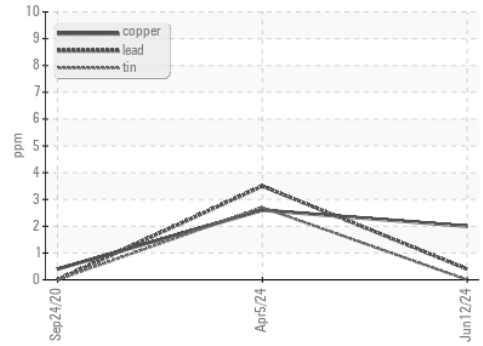
Viscosity @ 40°C



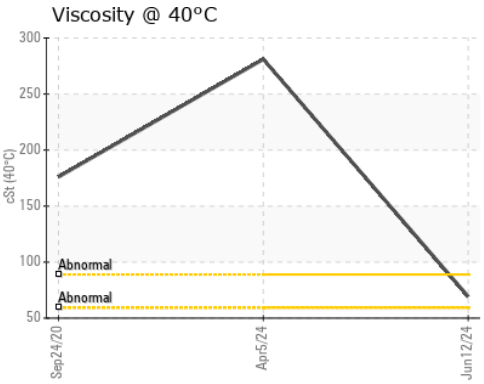
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001800
Lab Number : 06210970
Unique Number : 11083834
Test Package : CONST (Additional Tests: KF)

Received : 14 Jun 2024
Tested : 18 Jun 2024
Diagnosed : 18 Jun 2024 - Sean Felton

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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