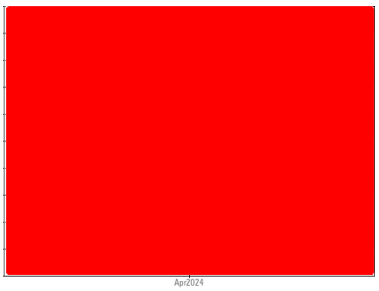
McCLUNG LOGAN EQUIPMENT COMPANY

PROBLEM SUMMARY

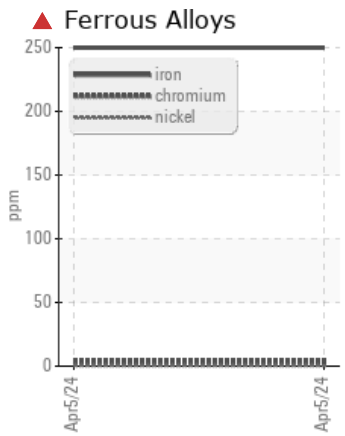
Sample Rating Trend

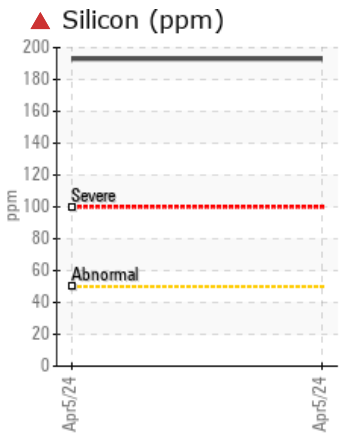


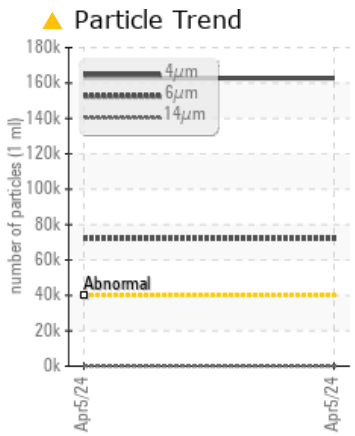
WEAR

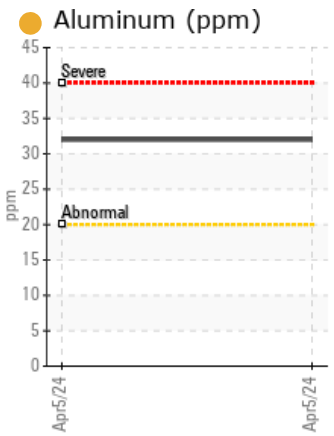
Machine Id
VOLVO EC210C 140029
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- QTS)

COMPONENT CONDITION SUMMARY









RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. 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**	---	---
Iron	ppm	ASTM D5185m	>25	▲ **250**	---	---
Silicon	ppm	ASTM D5185m	>50	▲ **193**	---	---
Particles >4µm		ASTM D7647	>40000	▲ **162704**	---	---
Particles >6µm		ASTM D7647	>10000	▲ **72060**	---	---
Oil Cleanliness		ISO 4406 (c)	>22/20/18	▲ **25/23/14**	---	---

Customer Id: VOLVO1023
Sample No.: ML0000214
Lab Number: 06142179
Test Package: CONST

To manage this report scan the QR code

To discuss the diagnosis or test data:
Don Baldridge +1
don.b505@comcast.net

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

RECOMMENDED ACTIONS

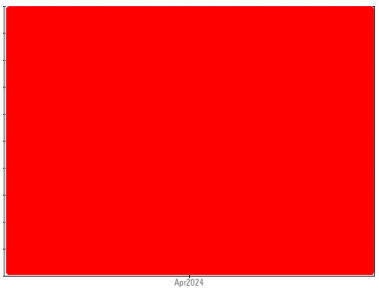
Action	Status	Date	Done By	Description
Inspect Wear Source	---	---	?	We advise that you inspect for the source(s) of wear.
Change Fluid	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
Change Filter	---	---	?	We recommend that you drain the oil and perform a filter service on this component if not already done.
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.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

McCLUNG LOGAN EQUIPMENT COMPANY

Sample Rating Trend



WEAR

Machine Id
VOLVO EC210C 140029
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- QTS)

DIAGNOSIS

▲ Recommendation
We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

▲ Wear
The iron level is severe.

▲ Contamination
There is a high amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Fluid Condition
The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**ML0000214**	---	---
Sample Date		Client Info		**05 Apr 2024**	---	---
Machine Age	hrs	Client Info		**9633**	---	---
Oil Age	hrs	Client Info		**327**	---	---
Oil Changed		Client Info		**Not Changd**	---	---
Sample Status				**SEVERE**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.1	**NEG**	---	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>25	▲ **250**	---	---
Chromium	ppm	ASTM D5185m	>10	**4**	---	---
Nickel	ppm	ASTM D5185m	>10	**<1**	---	---
Titanium	ppm	ASTM D5185m		**4**	---	---
Silver	ppm	ASTM D5185m		**<1**	---	---
Aluminum	ppm	ASTM D5185m	>20	● **32**	---	---
Lead	ppm	ASTM D5185m	>20	**3**	---	---
Copper	ppm	ASTM D5185m	>150	**48**	---	---
Tin	ppm	ASTM D5185m	>10	**2**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	---	---
Cadmium	ppm	ASTM D5185m		**0**	---	---

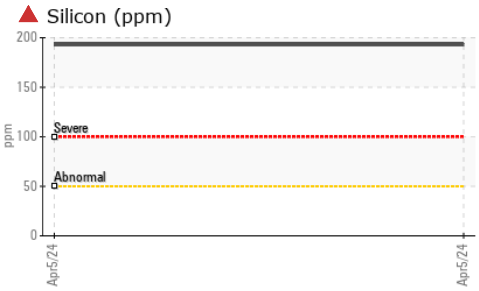
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	5	**<1**	---	---
Barium	ppm	ASTM D5185m	5	**<1**	---	---
Molybdenum	ppm	ASTM D5185m	5	**2**	---	---
Manganese	ppm	ASTM D5185m		**2**	---	---
Magnesium	ppm	ASTM D5185m	25	**11**	---	---
Calcium	ppm	ASTM D5185m	200	**187**	---	---
Phosphorus	ppm	ASTM D5185m	300	**504**	---	---
Zinc	ppm	ASTM D5185m	370	**595**	---	---
Sulfur	ppm	ASTM D5185m	2500	**2030**	---	---

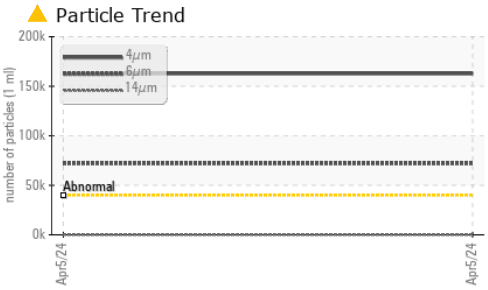
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	▲ **193**	---	---
Sodium	ppm	ASTM D5185m		**2**	---	---
Potassium	ppm	ASTM D5185m	>20	**11**	---	---

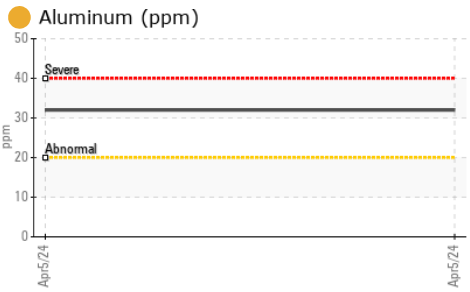
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>40000	▲ **162704**	---	---
Particles >6µm		ASTM D7647	>10000	▲ **72060**	---	---
Particles >14µm		ASTM D7647	>2500	**117**	---	---
Particles >21µm		ASTM D7647	>640	**12**	---	---
Particles >38µm		ASTM D7647	>160	**0**	---	---
Particles >71µm		ASTM D7647	>40	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>22/20/18	▲ **25/23/14**	---	---

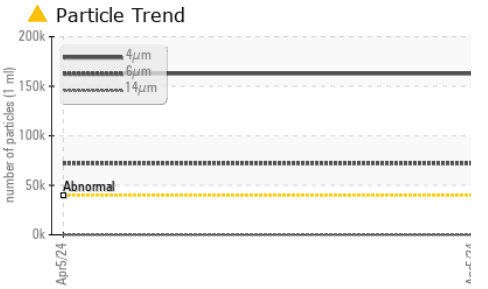
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.28**	---	---

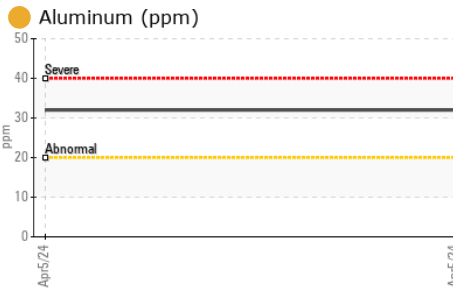
OIL ANALYSIS REPORT





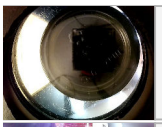




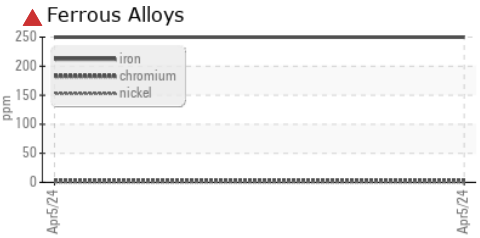


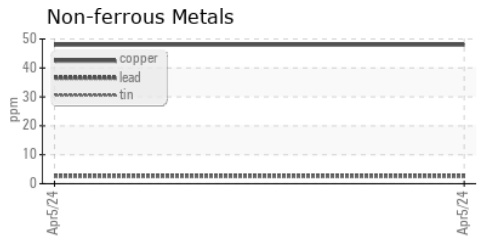
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	---	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	---	---
Precipitate	scalar	*Visual	NONE	**NONE**	---	---
Silt	scalar	*Visual	NONE	**NONE**	---	---
Debris	scalar	*Visual	NONE	**NONE**	---	---
Sand/Dirt	scalar	*Visual	NONE	**NONE**	---	---
Appearance	scalar	*Visual	NORML	**NORML**	---	---
Odor	scalar	*Visual	NORML	**NORML**	---	---
Emulsified Water	scalar	*Visual	>0.1	**NEG**	---	---
Free Water	scalar	*Visual		**NEG**	---	---

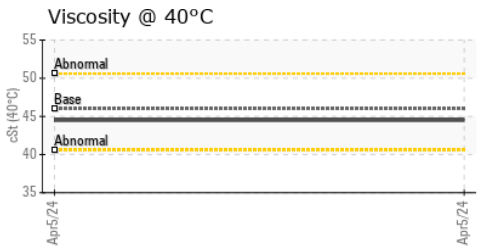
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	**44.5**	---	---

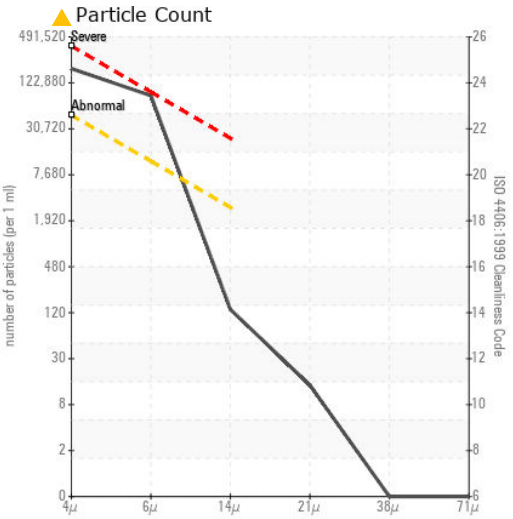
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

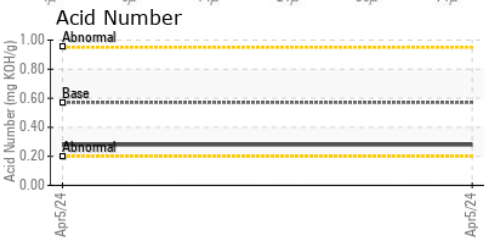
GRAPHS











Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0000214
Lab Number : 06142179
Unique Number : 10966987
Test Package : CONST

Received : 08 Apr 2024
Tested : 11 Apr 2024
Diagnosed : 11 Apr 2024 - Don Baldridge

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)

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