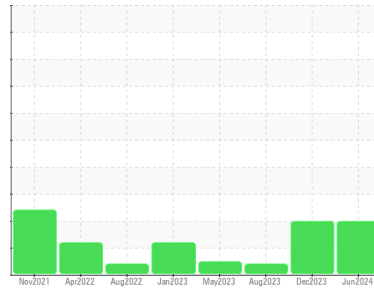




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

VOLVO 002374 (S/N 314224)

Component

Hydraulic System

Fluid

AW HYDRAULIC OIL ISO 46 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0856149	WC0800514	WC0724616
Sample Date	Client Info		03 Jun 2024	05 Dec 2023	08 Aug 2023
Machine Age	hrs	Client Info	4939	4262	3820
Oil Age	hrs	Client Info	677	1500	521
Oil Changed	Client Info		Not Chngd	Changed	Not Chngd
Sample Status			ABNORMAL	ABNORMAL	ABNORMAL

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>20	8	11	11
Chromium	ppm	ASTM D5185m	>10	2	2	1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	<1
Lead	ppm	ASTM D5185m	>10	1	<1	<1
Copper	ppm	ASTM D5185m	>75	25	44	39
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	5	0	0	0
Barium	ppm	ASTM D5185m	5	<1	0	2
Molybdenum	ppm	ASTM D5185m	5	2	<1	<1
Manganese	ppm	ASTM D5185m		0	0	0
Magnesium	ppm	ASTM D5185m	25	29	8	8
Calcium	ppm	ASTM D5185m	200	103	87	88
Phosphorus	ppm	ASTM D5185m	300	346	452	393
Zinc	ppm	ASTM D5185m	370	392	465	453
Sulfur	ppm	ASTM D5185m	2500	929	1156	1080

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>20	4	7	7
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	1	2	<1

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 14954	▲ 79093	---
Particles >6µm	ASTM D7647	>1300	▲ 6073	▲ 7914	---
Particles >14µm	ASTM D7647	>160	▲ 597	▲ 340	---
Particles >21µm	ASTM D7647	>40	▲ 85	▲ 81	---
Particles >38µm	ASTM D7647	>10	1	7	---
Particles >71µm	ASTM D7647	>3	0	2	---
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 21/20/16	▲ 23/20/16	---

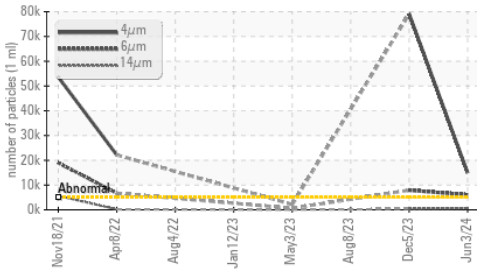
FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.49	0.40	0.44

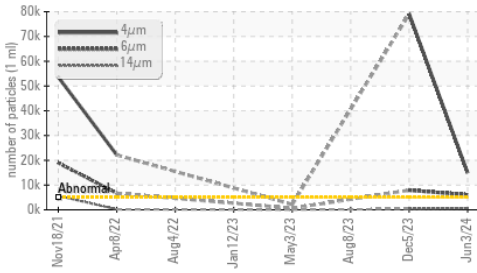


OIL ANALYSIS REPORT

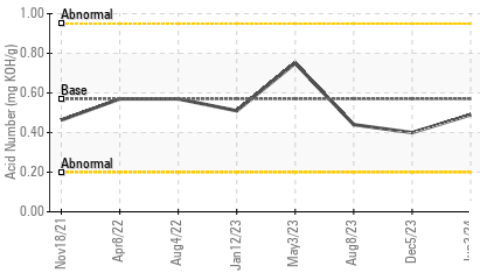
▲ Particle Trend



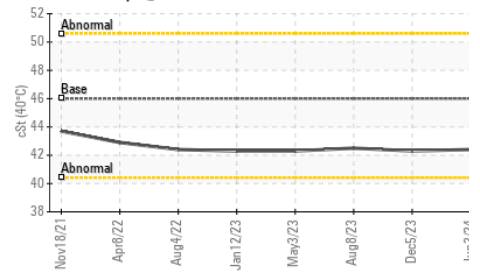
▲ Particle Trend



Acid Number



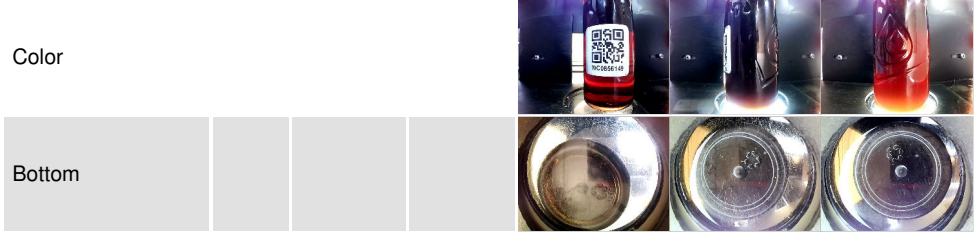
Viscosity @ 40°C



PARAMETER	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	▲ MODER
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

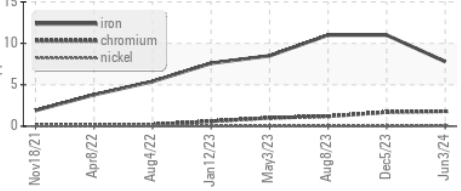
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	42.4	42.3	42.5

SAMPLE IMAGES	method	limit/base	current	history1	history2
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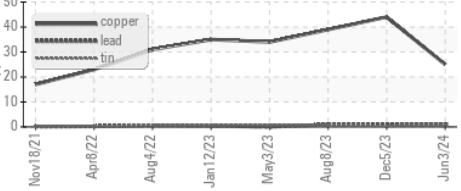


GRAPHS

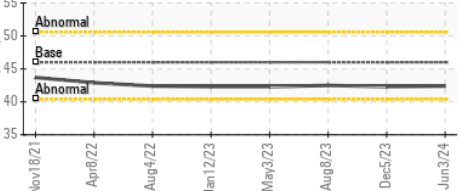
Ferrous Alloys



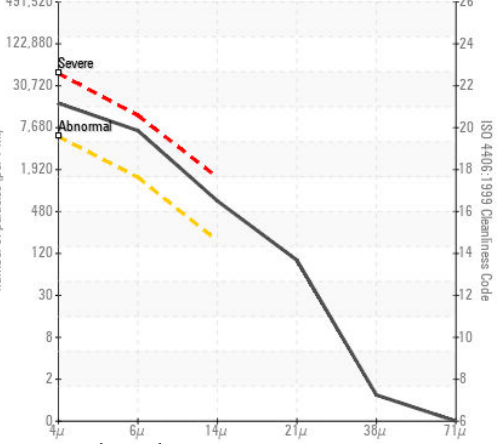
Non-ferrous Metals



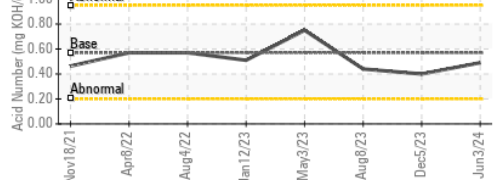
Viscosity @ 40°C



▲ Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0856149 **Received** : 06 Jun 2024
Lab Number : 06201450 **Tested** : 07 Jun 2024
Unique Number : 11063573 **Diagnosed** : 07 Jun 2024 - Wes Davis
Test Package : CONST

CJ MILLER LLC
 2903 DEDE RD
 FINKSBURG, MD
 US 21048
 Contact: JOE ROSS
 jross@cjmillerllc.com
 T: (410)239-8006
 F: (410)239-1051

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)