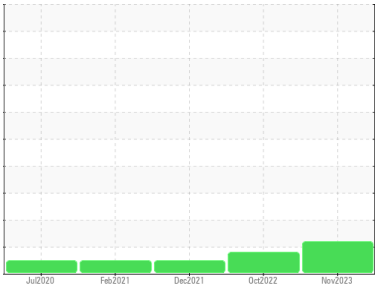
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
METRO
Machine Id
METRO 21036
Component
Rear Differential
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		**WC0843125**	WC0765884	WC0661184
Sample Date	Client Info		**02 Nov 2023**	11 Oct 2022	30 Dec 2021
Machine Age mls	Client Info		**258361**	177858	118342
Oil Age mls	Client Info		**0**	0	0
Oil Changed	Client Info		**N/A**	N/A	N/A
Sample Status			**ABNORMAL**	ABNORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>500	**234**	173	149
Chromium	ppm	ASTM D5185m	>10	**1**	2	1
Nickel	ppm	ASTM D5185m	>10	**<1**	1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**4**	4	3
Lead	ppm	ASTM D5185m	>25	**0**	<1	0
Copper	ppm	ASTM D5185m	>100	**<1**	1	<1
Tin	ppm	ASTM D5185m	>10	**0**	<1	0
Antimony	ppm	ASTM D5185m	>5	**---**	---	0
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		**116**	120	128
Barium	ppm	ASTM D5185m		**<1**	<1	2
Molybdenum	ppm	ASTM D5185m		**0**	<1	<1
Manganese	ppm	ASTM D5185m		**4**	4	3
Magnesium	ppm	ASTM D5185m		**147**	148	145
Calcium	ppm	ASTM D5185m		**8**	8	8
Phosphorus	ppm	ASTM D5185m		**1737**	1639	1676
Zinc	ppm	ASTM D5185m		**11**	10	7
Sulfur	ppm	ASTM D5185m		**22870**	25056	21244

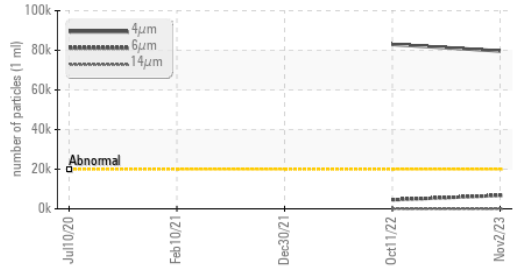
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>75	**50**	42	30
Sodium	ppm	ASTM D5185m		**8**	8	5
Potassium	ppm	ASTM D5185m	>20	**1**	<1	0
Water	%	ASTM D6304	>.2	**0.030**	0.044	0.026
ppm Water	ppm	ASTM D6304	>2000	**302.2**	441.5	263.2

FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ **79653**	▲ 82964	---
Particles >6µm	ASTM D7647	>5000	▲ **6728**	4525	---
Particles >14µm	ASTM D7647	>640	**45**	33	---
Particles >21µm	ASTM D7647	>160	**13**	5	---
Particles >38µm	ASTM D7647	>40	**1**	1	---
Particles >71µm	ASTM D7647	>10	**1**	1	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ **23/20/13**	▲ 24/19/12	---

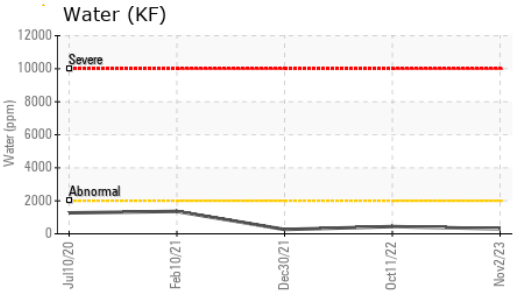
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**1.23**	1.10	1.37

OIL ANALYSIS REPORT

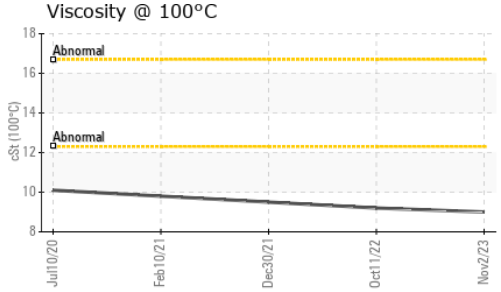
Particle Trend



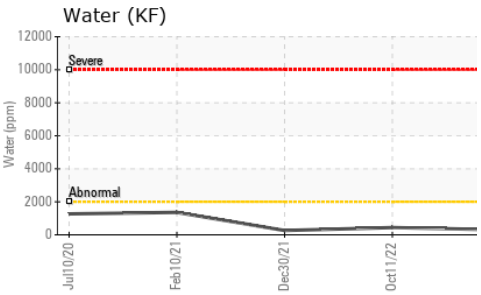
Water (KF)



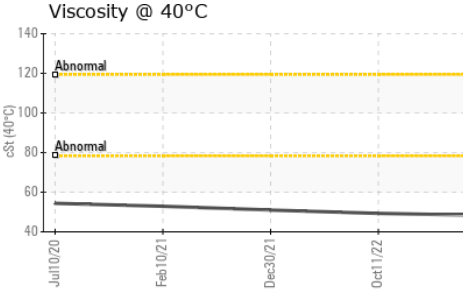
Viscosity @ 100°C



Water (KF)

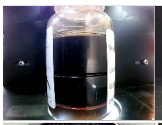


Viscosity @ 40°C



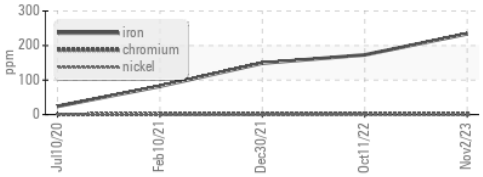
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Appearance	scalar	*Visual	NORML	**NORML**	NORML	NORML
Odor	scalar	*Visual	NORML	**NORML**	NORML	NORML
Emulsified Water	scalar	*Visual	>.2	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**48.3**	49.3	51.0
Visc @ 100°C	cSt	ASTM D445		**9**	9.2	9.5
Viscosity Index (VI)	Scale	ASTM D2270		**169**	171	173

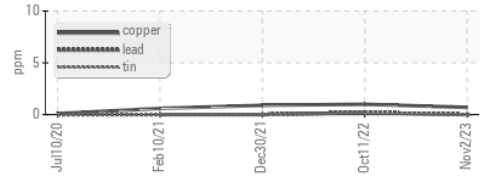
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

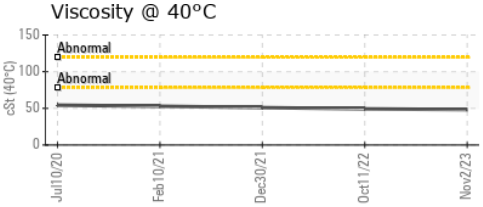
Ferrous Alloys



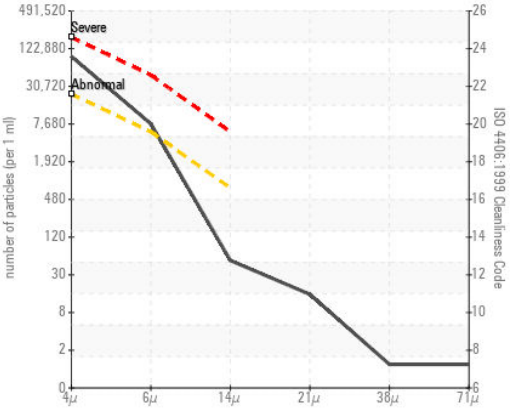
Non-ferrous Metals



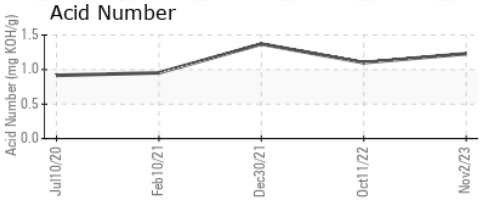
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0843125 **Received** : 14 Nov 2023
Lab Number : 06007680 **Diagnosed** : 16 Nov 2023
Unique Number : 10741442 **Diagnostician** : Don Baldridge
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

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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