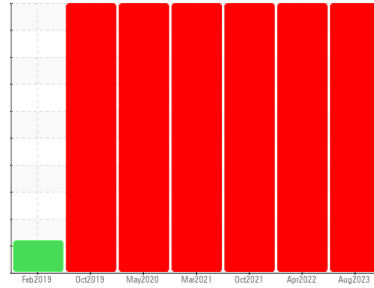




# OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area  
**METRO**  
 Machine Id  
**METRO 20002**  
 Component  
**Transmission (Manual)**  
 Fluid  
**NOT GIVEN (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component if applicable. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. We were unable to perform a particle count due to a high concentration of particles present in this sample.

### Wear

Bearing and/or gear wear is indicated.

### Contamination

There is a moderate amount of visible silt present in the sample.

### Fluid Condition

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

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0853872</b>	WC0692904	WC0642304
Sample Date	Client Info		<b>29 Aug 2023</b>	06 Apr 2022	13 Oct 2021
Machine Age	mls	Client Info	<b>432565</b>	327816	289220
Oil Age	mls	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>SEVERE</b>	SEVERE	SEVERE

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>▲ 225</b>	163	139
Chromium	ppm	ASTM D5185m >5	<b>2</b>	1	1
Nickel	ppm	ASTM D5185m >5	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m >7	<b>0</b>	1	<1
Aluminum	ppm	ASTM D5185m >25	<b>● 332</b>	● 317	● 322
Lead	ppm	ASTM D5185m >45	<b>&lt;1</b>	1	<1
Copper	ppm	ASTM D5185m >225	<b>24</b>	21	21
Tin	ppm	ASTM D5185m >10	<b>● 59</b>	● 48	● 42
Antimony	ppm	ASTM D5185m	<b>---</b>	---	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	<1
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>254</b>	282	271
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m	<b>4</b>	4	3
Magnesium	ppm	ASTM D5185m	<b>3</b>	4	3
Calcium	ppm	ASTM D5185m	<b>49</b>	53	52
Phosphorus	ppm	ASTM D5185m	<b>1079</b>	1121	1119
Zinc	ppm	ASTM D5185m	<b>15</b>	10	12
Sulfur	ppm	ASTM D5185m	<b>1220</b>	1196	1178

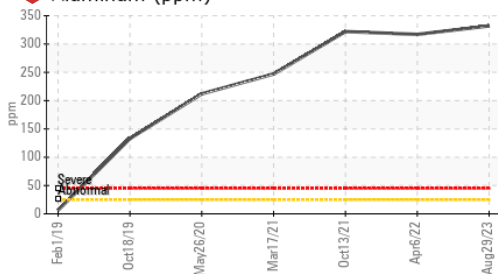
## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >125	<b>23</b>	21	19
Sodium	ppm	ASTM D5185m	<b>2</b>	3	2
Potassium	ppm	ASTM D5185m >20	<b>6</b>	5	5
Water	%	ASTM D6304 >0.1	<b>0.056</b>	0.036	0.057
ppm Water	ppm	ASTM D6304 >1000	<b>568.2</b>	367.9	574.4

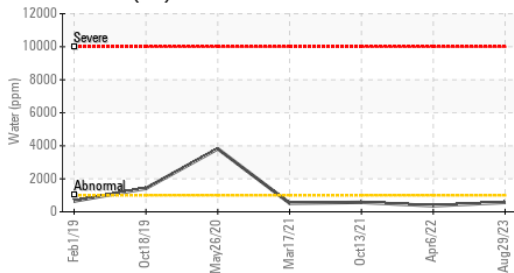
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	<b>3.07</b>	3.34	3.204

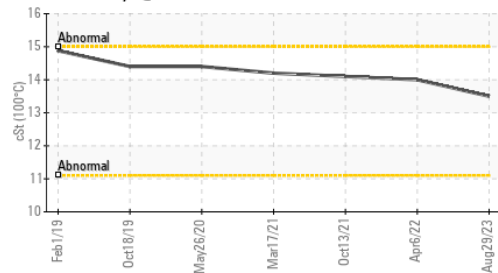
## Aluminum (ppm)



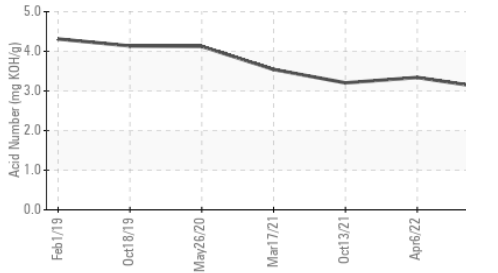
## Water (KF)



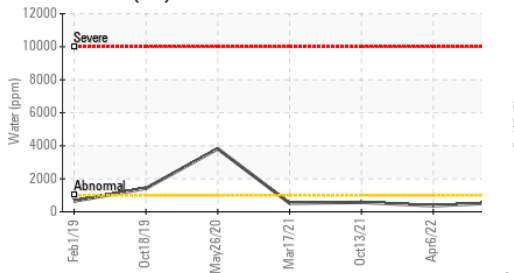
## Viscosity @ 100°C



## Acid Number



## Water (KF)

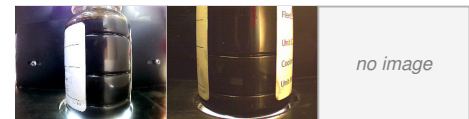


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	▲ MODER	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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

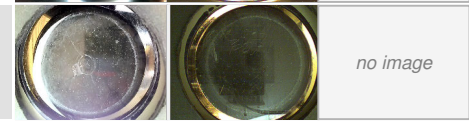
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	88.6	89.6	91.2
Visc @ 100°C	cSt	ASTM D445	13.5	14.0	14.1
Viscosity Index (VI)	Scale	ASTM D2270	154	160	159

SAMPLE IMAGES	method	limit/base	current	history1	history2
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### Color

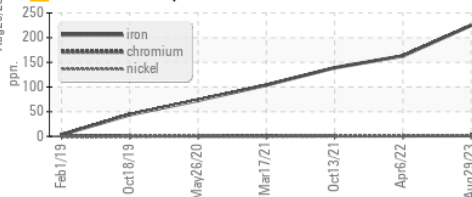


### Bottom

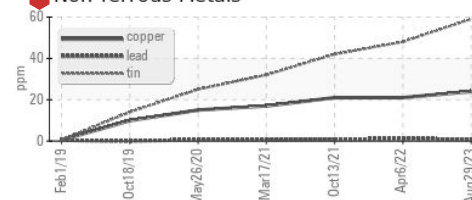


## GRAPHS

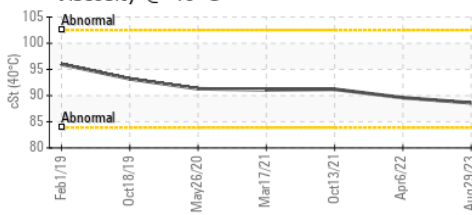
### ▲ Ferrous Alloys



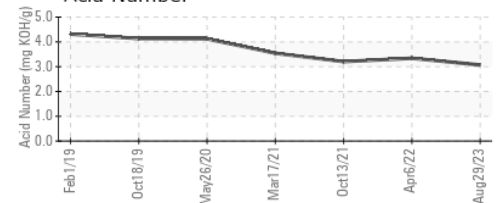
### ● Non-ferrous Metals



### Viscosity @ 40°C



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0853872 **Received** : 22 Sep 2023  
**Lab Number** : 05959074 **Diagnosed** : 26 Sep 2023  
**Unique Number** : 10660287 **Diagnostician** : Jonathan Hester  
**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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