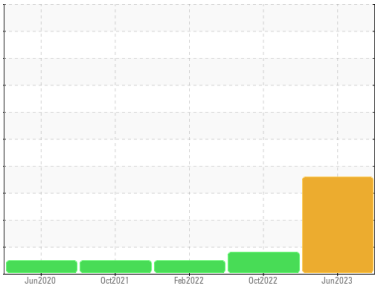
OIL ANALYSIS REPORT

Area
METRO
Machine Id
METRO 21034
Component
Rear Differential
Fluid
NOT GIVEN (--- GAL)

Sample Rating Trend



DIRT

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor. Please note that this is a corrected copy for laboratory data updates.

Wear
Gear wear is indicated.

Contamination
There is a high amount of particulates present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

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	history 1	history 2
Sample Number		Client Info		**WC0828798**	WC0751717	WC0666413
Sample Date		Client Info		**07 Jun 2023**	14 Oct 2022	25 Feb 2022
Machine Age	mls	Client Info		**305726**	253641	186451
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	history 1	history 2
Iron	ppm	ASTM D5185m	>500	▲ **544**	231	180
Chromium	ppm	ASTM D5185m	>10	**5**	2	2
Nickel	ppm	ASTM D5185m	>10	**4**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	<1
Aluminum	ppm	ASTM D5185m	>25	**7**	5	4
Lead	ppm	ASTM D5185m	>25	**0**	0	0
Copper	ppm	ASTM D5185m	>100	**4**	2	2
Tin	ppm	ASTM D5185m	>10	**<1**	0	0
Antimony	ppm	ASTM D5185m	>5	**---**	---	---
Vanadium	ppm	ASTM D5185m		**<1**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m		**246**	344	377
Barium	ppm	ASTM D5185m		**2**	0	0
Molybdenum	ppm	ASTM D5185m		**14**	<1	2
Manganese	ppm	ASTM D5185m		**24**	6	5
Magnesium	ppm	ASTM D5185m		**12**	14	15
Calcium	ppm	ASTM D5185m		**28**	17	16
Phosphorus	ppm	ASTM D5185m		**2106**	2015	2046
Zinc	ppm	ASTM D5185m		**13**	18	14
Sulfur	ppm	ASTM D5185m		**28490**	28361	20161

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	>75	▲ **84**	65	52
Sodium	ppm	ASTM D5185m		**11**	10	10
Potassium	ppm	ASTM D5185m	>20	**5**	4	1
Water	%	ASTM D6304	>.2	**0.048**	0.034	0.049
ppm Water	ppm	ASTM D6304	>2000	**485.8**	345.7	496.3

FLUID CLEANLINESS		method	limit/base	current	history 1	history 2
Particles >4µm		ASTM D7647	>20000	▲ **93765**	▲ 88854	---
Particles >6µm		ASTM D7647	>5000	▲ **5562**	2367	---
Particles >14µm		ASTM D7647	>640	**31**	35	---
Particles >21µm		ASTM D7647	>160	**6**	11	---
Particles >38µm		ASTM D7647	>40	**1**	1	---
Particles >71µm		ASTM D7647	>10	**1**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **24/20/12**	▲ 24/18/12	---

FLUID DEGRADATION		method	limit/base	current	history 1	history 2
Acid Number (AN)	mg KOH/g	ASTM D8045		**3.53**	2.80	3.34

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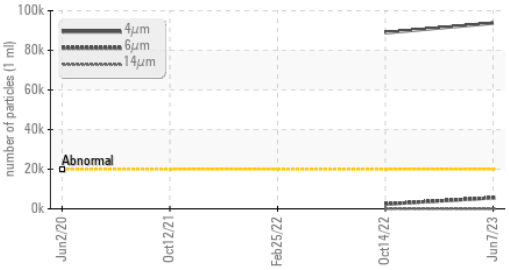
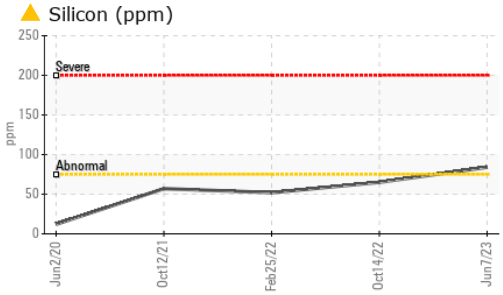
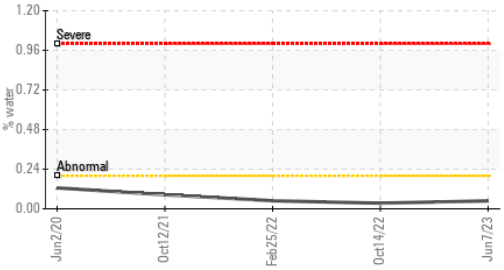
Particle Trend



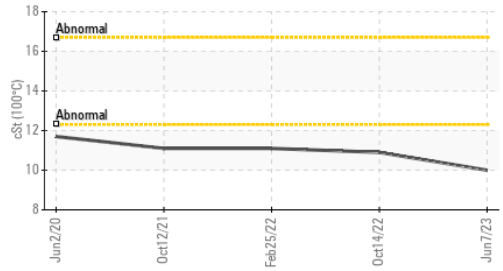
Silicon (ppm)



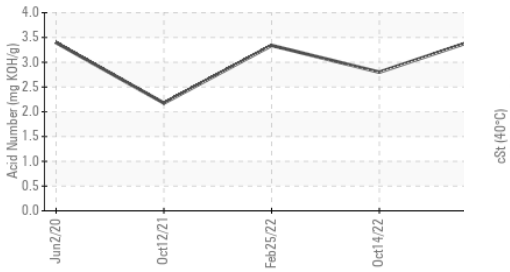
Water



Viscosity @ 100°C



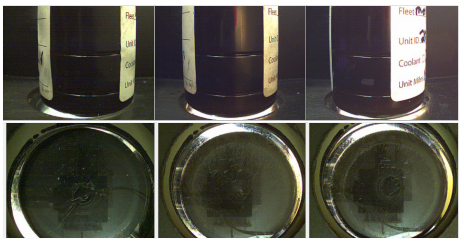
Acid Number



VISUAL		method	limit/base	current	history 1	history 2
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

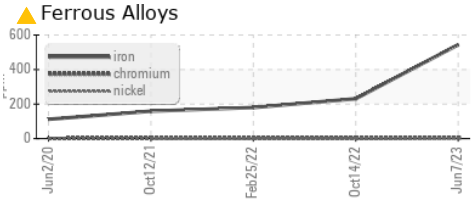
FLUID PROPERTIES		method	limit/base	current	history 1	history 2
Visc @ 40°C	cSt	ASTM D445		**59.5**	64.3	64.7
Visc @ 100°C	cSt	ASTM D445		**10.0**	10.9	11.1
Viscosity Index (VI)	Scale	ASTM D2270		**154**	161	165

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

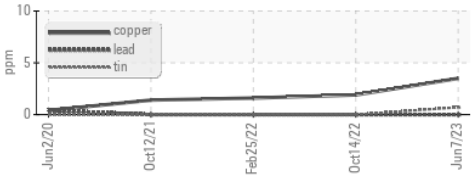


GRAPHS

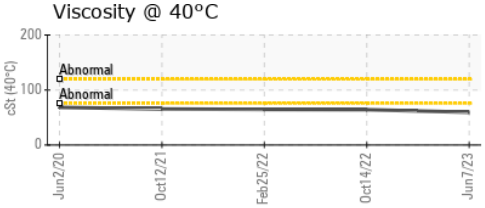
Ferrous Alloys



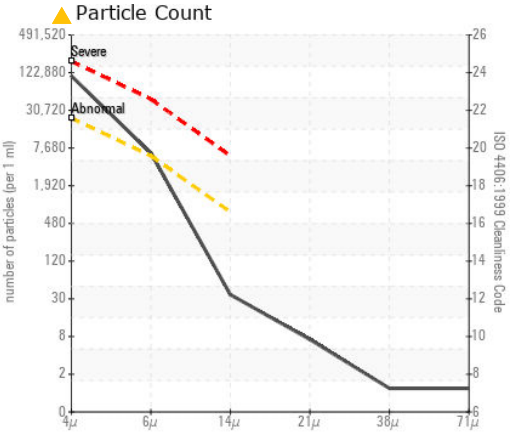
Non-ferrous Metals



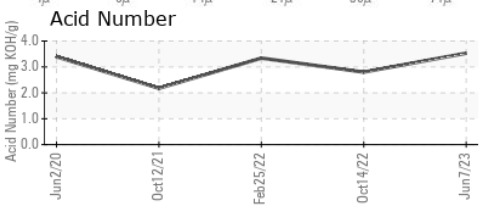
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0828798 **Received** : 22 Jun 2023
Lab Number : 05881462 **Diagnosed** : 30 Jun 2023
Unique Number : 10526565 **Diagnostician** : Doug Bogart
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)

BASF - GIANNA CREDAROLI
500 WHITE PLAINS RD
TARRYTOWN, NY
US 10591
Contact: GIANNA CREDAROLI
gianna.credaroli@basf.com
T:
F: