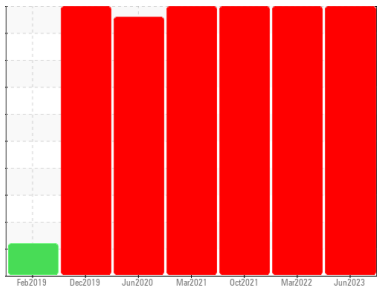
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Area
METRO
Machine Id
METRO 20001
Component
Transmission (Manual)
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation
We recommend that you drain the fluid 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 aluminum level is severe. The tin level is severe.

Contamination
There is a high amount of particulates present in the fluid.

Fluid Condition
The AN level is at the top-end of the recommended limit.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0828733**	WC0682395	WC0631747
Sample Date		Client Info		**26 Jun 2023**	11 Mar 2022	27 Oct 2021
Machine Age	mls	Client Info		**355229**	265136	231052
Oil Age	mls	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**SEVERE**	SEVERE	SEVERE

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**148**	126	101
Chromium	ppm	ASTM D5185m	>5	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>5	**<1**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m	>7	**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**348**	283	250
Lead	ppm	ASTM D5185m	>45	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>225	**27**	24	21
Tin	ppm	ASTM D5185m	>10	**57**	46	41
Antimony	ppm	ASTM D5185m		**---**	---	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		**317**	308	279
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**<1**	<1	<1
Manganese	ppm	ASTM D5185m		**4**	4	3
Magnesium	ppm	ASTM D5185m		**3**	3	3
Calcium	ppm	ASTM D5185m		**50**	54	50
Phosphorus	ppm	ASTM D5185m		**1129**	1200	1079
Zinc	ppm	ASTM D5185m		**16**	13	12
Sulfur	ppm	ASTM D5185m		**1222**	1006	1183

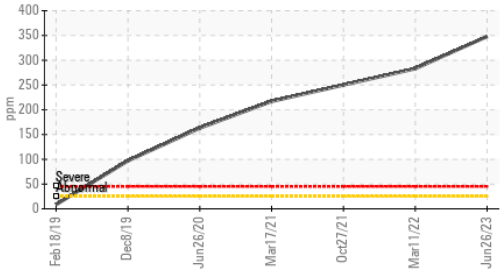
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>125	**20**	20	15
Sodium	ppm	ASTM D5185m		**0**	1	3
Potassium	ppm	ASTM D5185m	>20	**7**	8	5
Water	%	ASTM D6304	>0.1	**0.058**	0.043	0.073
ppm Water	ppm	ASTM D6304	>1000	**585.3**	437.5	739.2

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>10000	**262257**	---	---
Particles >6µm		ASTM D7647	>2500	**173292**	---	---
Particles >14µm		ASTM D7647	>320	**929**	---	---
Particles >21µm		ASTM D7647	>80	**20**	---	---
Particles >38µm		ASTM D7647	>20	**0**	---	---
Particles >71µm		ASTM D7647	>4	**0**	---	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	**25/25/17**	---	---

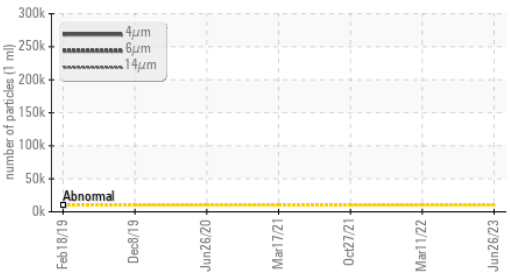
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**3.74**	3.422	3.475

OIL ANALYSIS REPORT

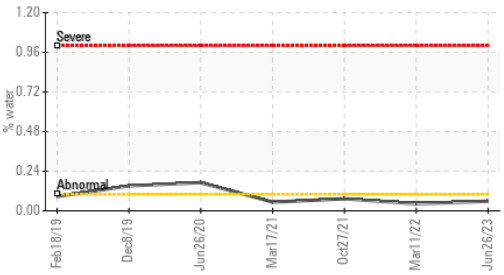
Aluminum (ppm)



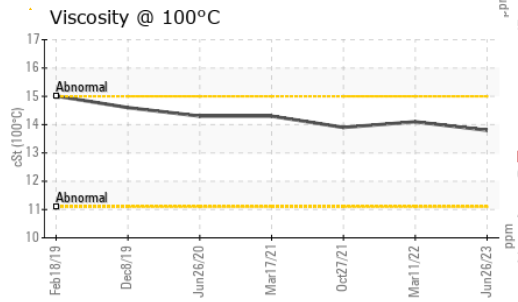
Particle Trend



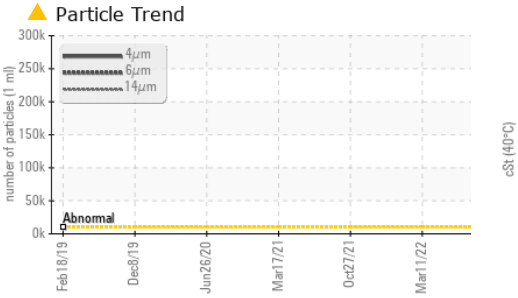
Water



Viscosity @ 100°C

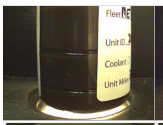
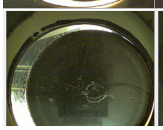
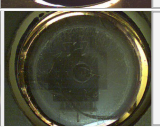


Particle Trend



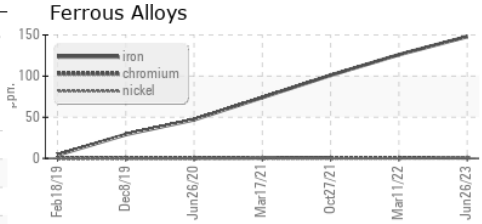
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt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

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		**88.2**	89.7	89.5
Visc @ 100°C	cSt	ASTM D445		**13.8**	14.1	13.9
Viscosity Index (VI)	Scale	ASTM D2270		**160**	162	159

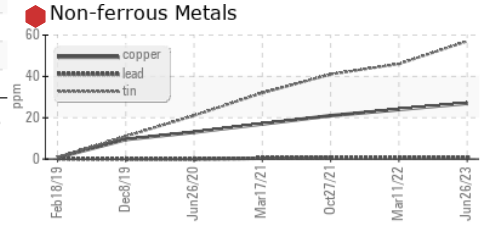
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					*no image*
Bottom					*no image*

GRAPHS

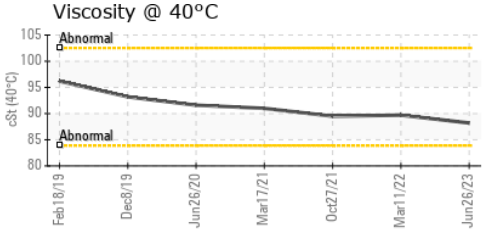
Ferrous Alloys



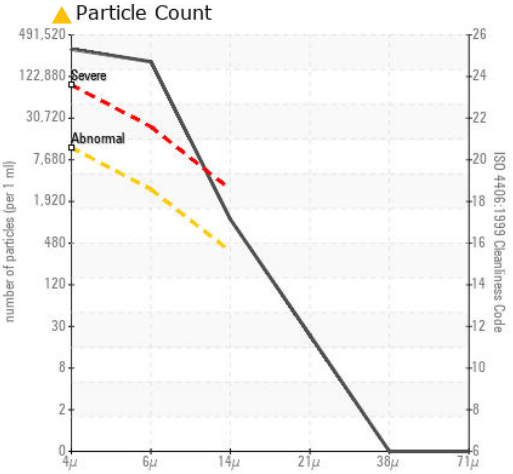
Non-ferrous Metals



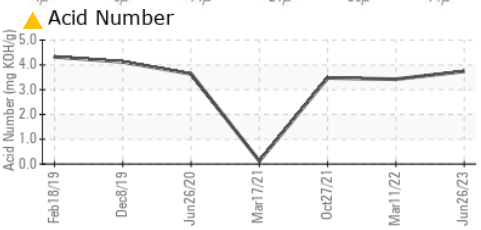
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0828733 **Received** : 19 Jul 2023
Lab Number : 05902279 **Diagnosed** : 21 Jul 2023
Unique Number : 10563635 **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)

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