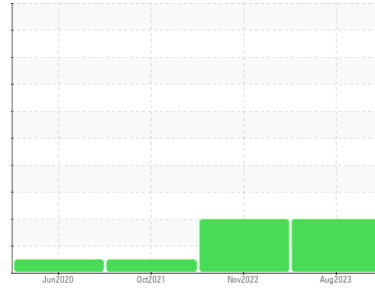




OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Area
METRO
 Machine Id
METRO 21032
 Component
Transmission (Manual)
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

▲ Recommendation

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

▲ Wear

The aluminum level is abnormal. All other component wear rates are normal.

▲ Contamination

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

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		WC0843163	WC0765842	WC0631729
Sample Date	Client Info		10 Aug 2023	02 Nov 2022	11 Oct 2021
Machine Age	mls	Client Info	326717	271568	151794
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	>200	91	82	62
Chromium	ppm	ASTM D5185m	>5	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>7	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	▲ 32	▲ 29	20
Lead	ppm	ASTM D5185m	>45	0	0	<1
Copper	ppm	ASTM D5185m	>225	12	18	8
Tin	ppm	ASTM D5185m	>10	11	10	8
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		31	32	33
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		370	397	379
Manganese	ppm	ASTM D5185m		7	6	5
Magnesium	ppm	ASTM D5185m		2	3	4
Calcium	ppm	ASTM D5185m		13	21	13
Phosphorus	ppm	ASTM D5185m		844	904	867
Zinc	ppm	ASTM D5185m		22	20	6
Sulfur	ppm	ASTM D5185m		13347	15252	10943

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>125	21	23	21
Sodium	ppm	ASTM D5185m		2	0	2
Potassium	ppm	ASTM D5185m	>20	4	5	3
Water	%	ASTM D6304	>0.1	0.018	0.020	0.020
ppm Water	ppm	ASTM D6304	>1000	185.4	207.1	205.7

FLUID CLEANLINESS

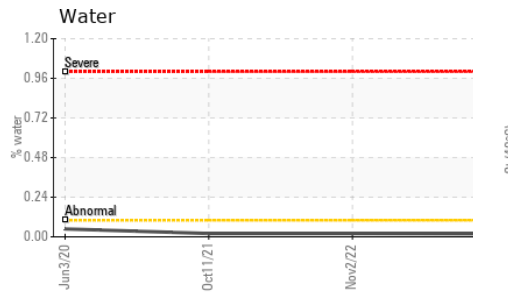
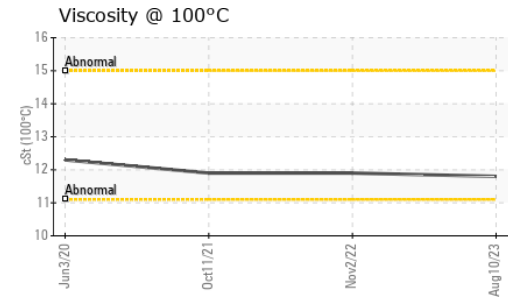
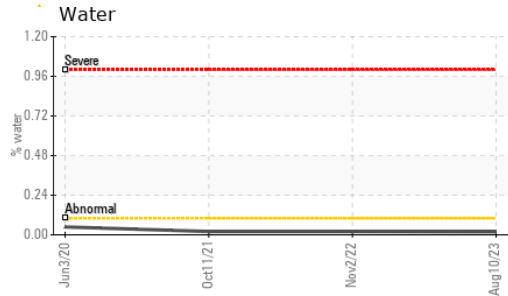
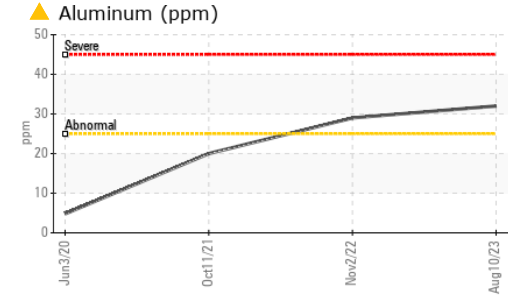
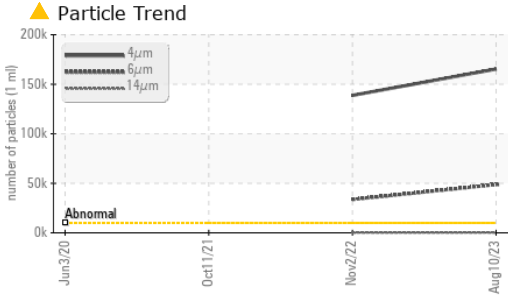
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>10000	▲ 165381	▲ 138730	---
Particles >6µm	ASTM D7647	>2500	▲ 48759	▲ 33629	---
Particles >14µm	ASTM D7647	>320	269	224	---
Particles >21µm	ASTM D7647	>80	30	30	---
Particles >38µm	ASTM D7647	>20	1	1	---
Particles >71µm	ASTM D7647	>4	0	0	---
Oil Cleanliness	ISO 4406 (c)	>20/18/15	▲ 25/23/15	▲ 24/22/15	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045		1.74	1.67	1.743



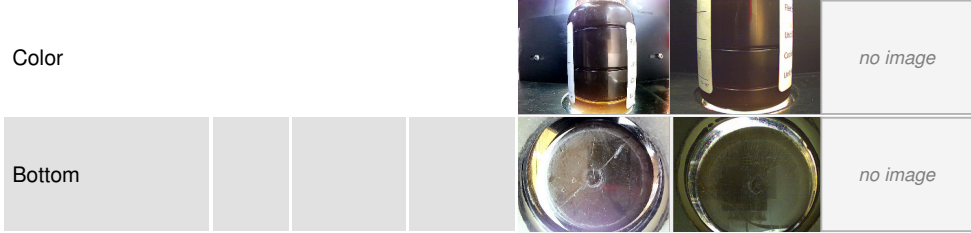
OIL ANALYSIS REPORT



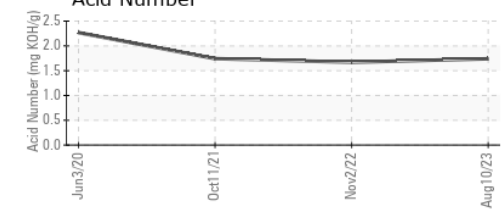
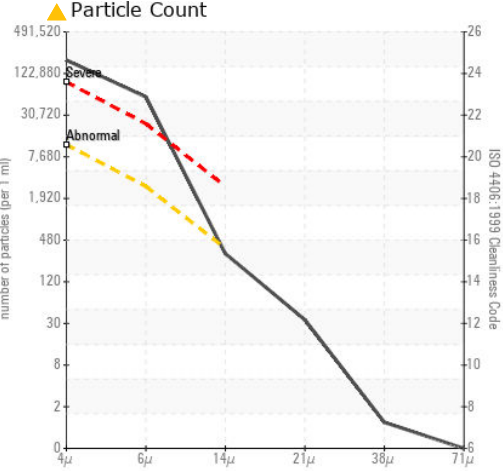
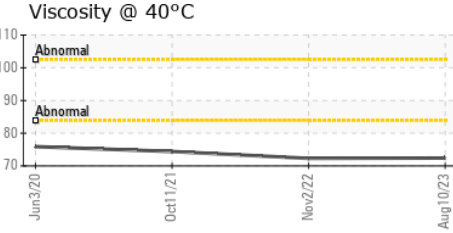
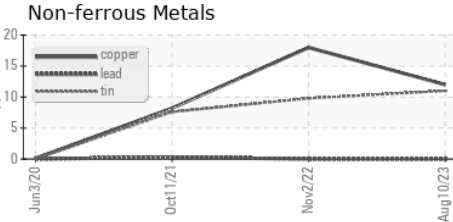
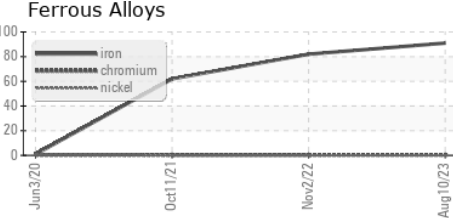
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	VLITE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	VLITE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	72.4	72.3	74.4
Visc @ 100°C	cSt	ASTM D445	11.8	11.9	11.9
Viscosity Index (VI)	Scale	ASTM D2270	158	160	155

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0843163 **Received** : 22 Aug 2023
Lab Number : 05931529 **Diagnosed** : 24 Aug 2023
Unique Number : 10616800 **Diagnostician** : Jonathan Hester
Test Package : MOB 2 (Additional Tests: KF, KV100, PrtCount, VI)

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

Certificate L2367
 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)