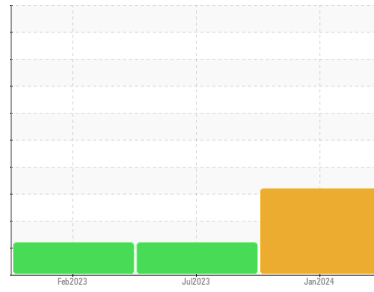




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area
TSI
 Machine Id
TSI 12860
 Component
Rear Differential
 Fluid
GEAR OIL SAE 80 (--- GAL)

DIAGNOSIS

▲ Recommendation

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation. Please specify the component make and model with your next sample.

Wear

All component wear rates are normal.

▲ Contamination

There is a high amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0934510	WC0843150	WC0771160
Sample Date	Client Info		06 Jan 2024	20 Jul 2023	08 Feb 2023
Machine Age	mls	Client Info	160514	71320	0
Oil Age	mls	Client Info	0	0	0
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			SEVERE	ABNORMAL	ABNORMAL

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >500	136	59	13
Chromium	ppm	ASTM D5185m >10	<1	<1	<1
Nickel	ppm	ASTM D5185m >10	<1	0	0
Titanium	ppm	ASTM D5185m	<1	0	0
Silver	ppm	ASTM D5185m	<1	0	0
Aluminum	ppm	ASTM D5185m >25	2	0	<1
Lead	ppm	ASTM D5185m >25	<1	0	0
Copper	ppm	ASTM D5185m >100	2	<1	<1
Tin	ppm	ASTM D5185m >10	<1	<1	0
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 400	278	292	283
Barium	ppm	ASTM D5185m 200	0	0	5
Molybdenum	ppm	ASTM D5185m 12	<1	0	0
Manganese	ppm	ASTM D5185m	5	7	8
Magnesium	ppm	ASTM D5185m 12	1	0	<1
Calcium	ppm	ASTM D5185m 150	6	0	6
Phosphorus	ppm	ASTM D5185m 1650	1607	1591	1374
Zinc	ppm	ASTM D5185m 125	9	<1	8
Sulfur	ppm	ASTM D5185m 22500	26965	27807	28004

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >75	32	9	13
Sodium	ppm	ASTM D5185m	3	5	4
Potassium	ppm	ASTM D5185m >20	2	<1	0
Water	%	ASTM D6304 >.2	0.025	0.062	0.044
ppm Water	ppm	ASTM D6304 >2000	257	624.9	448.2

FLUID CLEANLINESS

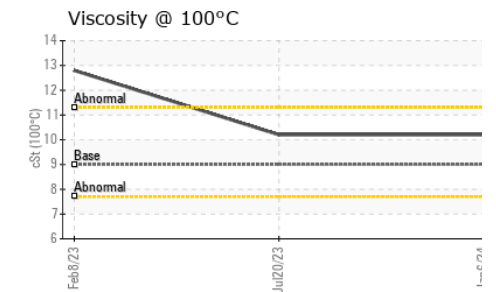
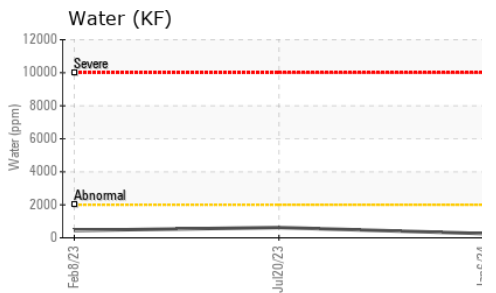
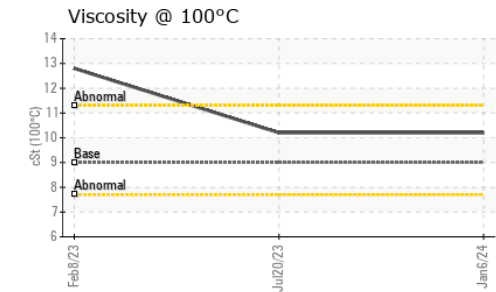
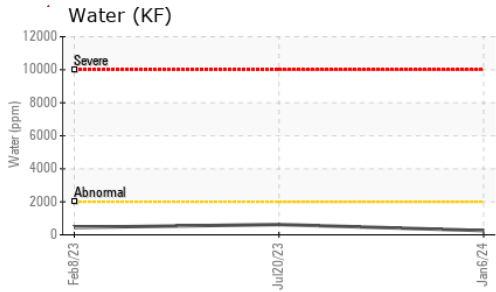
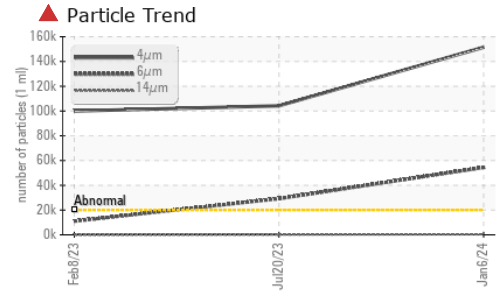
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	▲ 151493	▲ 104200	▲ 99982
Particles >6µm	ASTM D7647	>5000	▲ 54437	▲ 29225	▲ 11011
Particles >14µm	ASTM D7647	>640	447	210	38
Particles >21µm	ASTM D7647	>160	33	16	4
Particles >38µm	ASTM D7647	>40	0	2	0
Particles >71µm	ASTM D7647	>10	0	0	0
Oil Cleanliness	ISO 4406 (c)	>21/19/16	▲ 24/23/16	▲ 24/22/15	▲ 24/21/12

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 2.00	2.14	2.55	2.47



OIL ANALYSIS REPORT

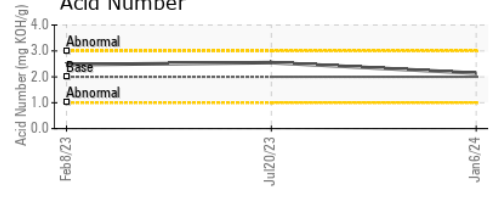
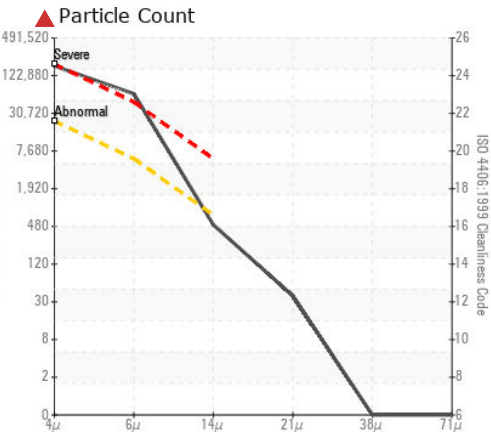
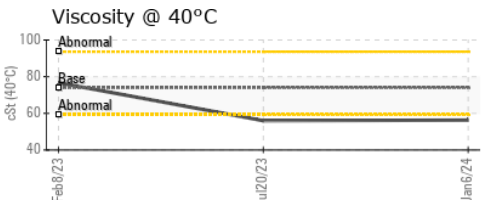
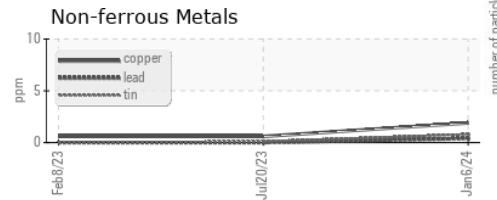
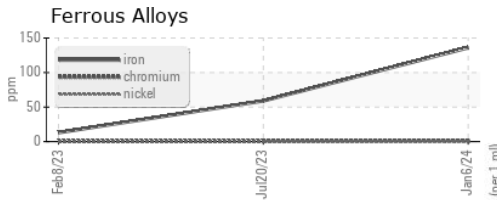


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	74	56.3	56.0	76.7
Visc @ 100°C	cSt	ASTM D445	9.0	10.2	10.2	12.8
Viscosity Index (VI)	Scale	ASTM D2270	94	171	172	167

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0934510 **Received** : 15 May 2024
Lab Number : 06180634 **Tested** : 17 May 2024
Unique Number : 11031960 **Diagnosed** : 17 May 2024 - Wes Davis
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

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)