



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
22702
Component
Right Final Drive
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924555	WC0846620	WC0786688
Sample Date		Client Info		17 Apr 2024	19 Dec 2023	12 May 2023
Machine Age	hrs	Client Info		2519	2035	1014
Oil Age	hrs	Client Info		500	250	1000
Filter Age	hrs	Client Info		500	0	1000
Oil Changed		Client Info		Not Changed	Changed	Not Changed
Filter Changed		Client Info		Not Changed	N/A	Not Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The copper level has decreased, but is still abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	142	248	122
Chromium	ppm	ASTM D5185m	>10	2	3	<1
Nickel	ppm	ASTM D5185m	>10	<1	1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	2	2	3
Lead	ppm	ASTM D5185m	>25	1	0	0
Copper	ppm	ASTM D5185m	>50	▲ 95	▲ 170	▲ 119
Tin	ppm	ASTM D5185m	>10	5	7	4
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

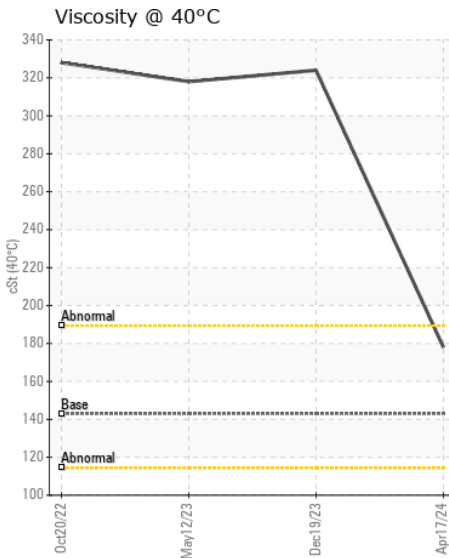
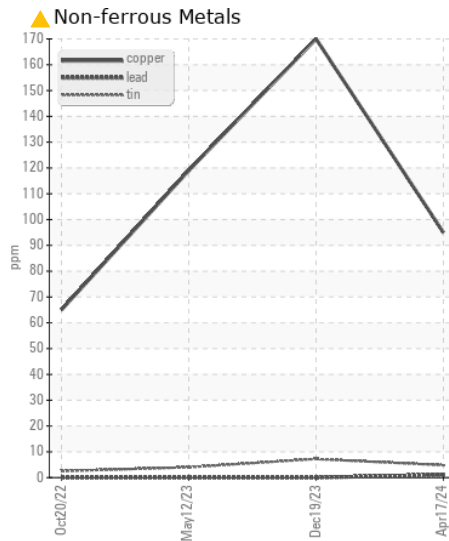
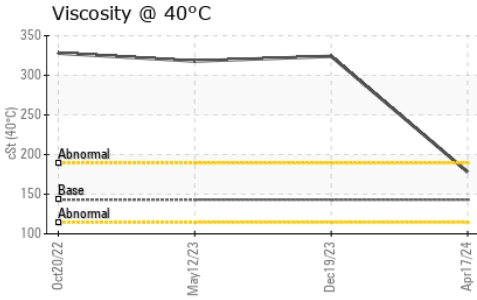
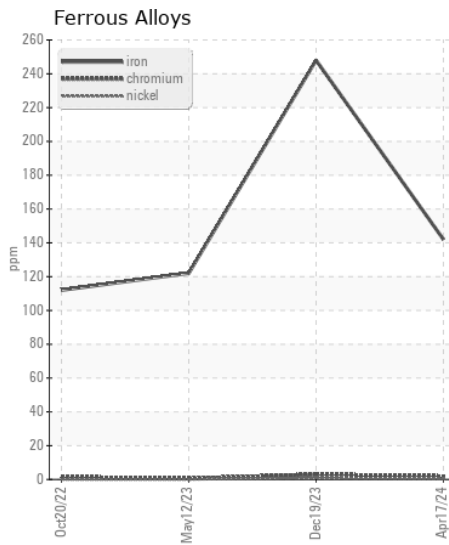
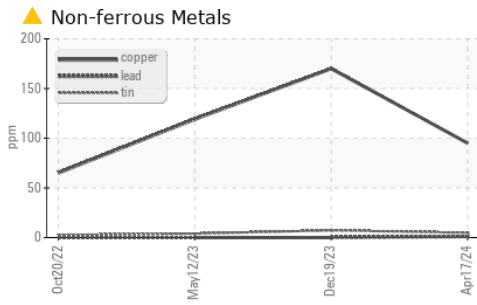
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	7	10	8
Potassium	ppm	ASTM D5185m	>20	3	2	2
Water		WC Method	>0.2	NEG	NEG	NEG
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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>170	4	5	5
Boron	ppm	ASTM D5185m	400	80	3	9
Barium	ppm	ASTM D5185m	200	23	54	49
Molybdenum	ppm	ASTM D5185m	12	8	0	0
Manganese	ppm	ASTM D5185m		2	4	2
Magnesium	ppm	ASTM D5185m	12	10	2	0
Calcium	ppm	ASTM D5185m	150	43	29	20
Phosphorus	ppm	ASTM D5185m	1650	1423	1189	1114
Zinc	ppm	ASTM D5185m	125	49	60	40
Sulfur	ppm	ASTM D5185m	22500	25231	26462	25056
Visc @ 40°C	cSt	ASTM D445	143	178	324	318



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924555
Lab Number : 06156444
Unique Number : 10991867
Test Package : CONST

Received : 22 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 24 Apr 2024 - Don Baldrige

SULLIVAN EASTERN INC-LIEBHERR
 2860 C SLATER RD
 MORRISVILLE, NC
 US 27560
 Contact: CHRIS CALTON

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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