



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR 31248
 Component
Right Final Drive
 Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924551	WC0882768	WC0846463
Sample Date		Client Info		17 Apr 2024	14 Dec 2023	20 Sep 2023
Machine Age	hrs	Client Info		5968	5481	4986
Oil Age	hrs	Client Info		2000	1500	500
Filter Age	hrs	Client Info		2000	1500	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	85	120	94
Chromium	ppm	ASTM D5185m	>10	1	1	1
Nickel	ppm	ASTM D5185m	>10	<1	<1	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	14	3	6
Lead	ppm	ASTM D5185m	>25	<1	0	0
Copper	ppm	ASTM D5185m	>50	2	2	1
Tin	ppm	ASTM D5185m	>10	<1	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

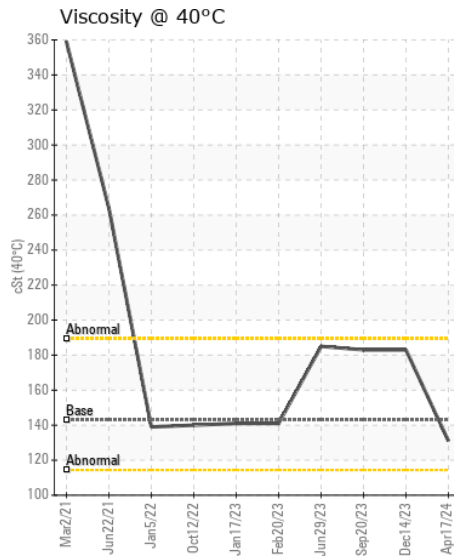
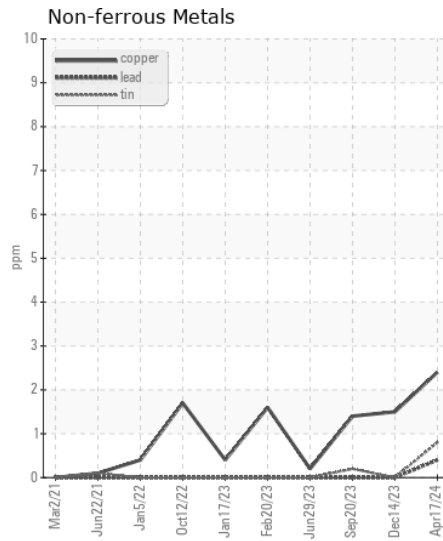
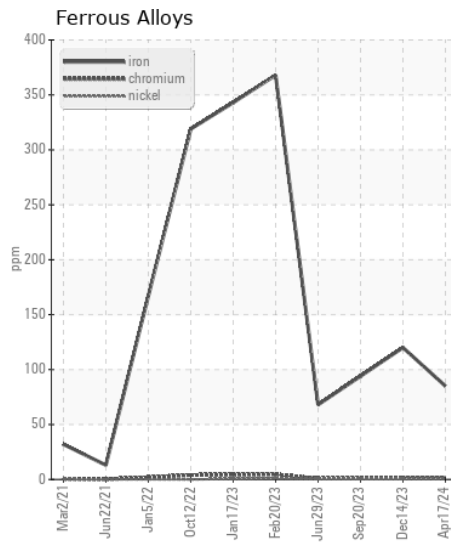
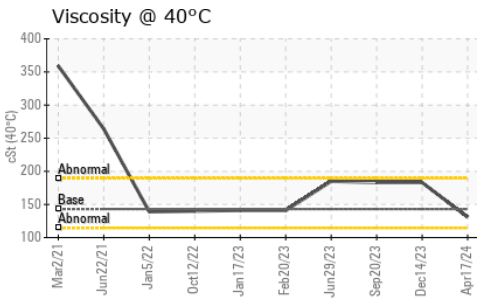
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	51	16	16
Potassium	ppm	ASTM D5185m	>20	5	0	0
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	2	<1	4
Boron	ppm	ASTM D5185m	400	117	20	20
Barium	ppm	ASTM D5185m	200	18	0	0
Molybdenum	ppm	ASTM D5185m	12	11	0	<1
Manganese	ppm	ASTM D5185m		1	2	2
Magnesium	ppm	ASTM D5185m	12	18	0	1
Calcium	ppm	ASTM D5185m	150	72	12	20
Phosphorus	ppm	ASTM D5185m	1650	1870	2228	2408
Zinc	ppm	ASTM D5185m	125	60	26	22
Sulfur	ppm	ASTM D5185m	22500	22977	27696	28903
Visc @ 40°C	cSt	ASTM D445	143	131	183	183



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924551
Lab Number : 06156445
Unique Number : 10991868
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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