



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R934 EXC 31218 (S/N 017895-924)
Component
Right Final Drive
Fluid
GEAR OIL SAE 80W90 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924658	WC0856749	WC0786492
Sample Date		Client Info		22 May 2024	17 Oct 2023	22 Aug 2023
Machine Age	hrs	Client Info		16230	15470	15500
Oil Age	hrs	Client Info		1500	1000	250
Filter Age	hrs	Client Info		1500	1000	0
Oil Changed		Client Info		Changed	Changed	Not Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1700	323	302	305
Chromium	ppm	ASTM D5185m	>30	5	4	5
Nickel	ppm	ASTM D5185m	>8	0	<1	<1
Titanium	ppm	ASTM D5185m	>10	1	<1	1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>100	14	8	8
Lead	ppm	ASTM D5185m	>10	0	0	0
Copper	ppm	ASTM D5185m	>100	33	59	33
Tin	ppm	ASTM D5185m	>8	1	3	2
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

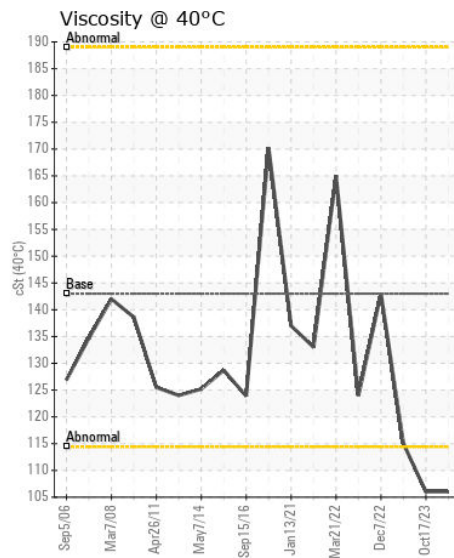
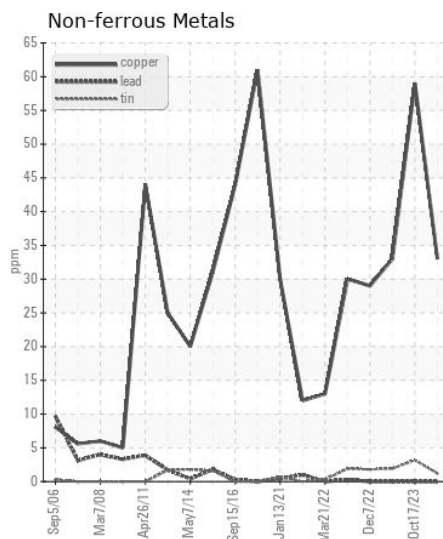
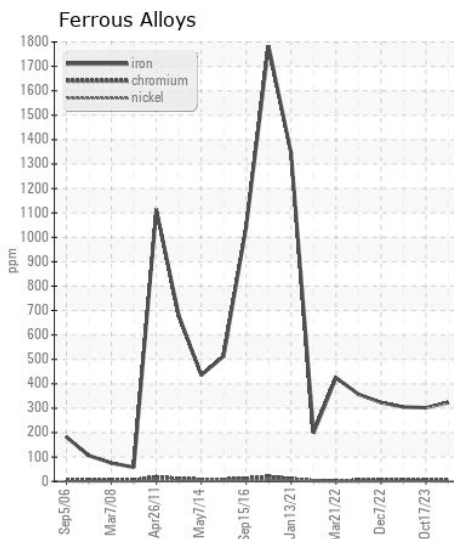
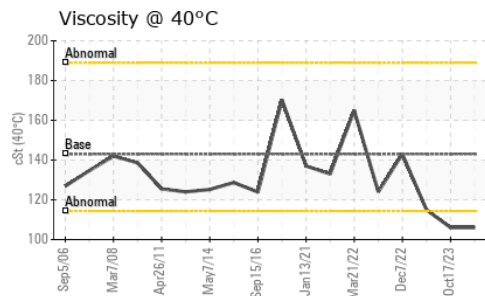
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>500	52	42	43
Potassium	ppm	ASTM D5185m	>20	3	2	0
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	LIGHT
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	4	3
Boron	ppm	ASTM D5185m	400	40	72	72
Barium	ppm	ASTM D5185m	200	0	0	0
Molybdenum	ppm	ASTM D5185m	12	6	6	7
Manganese	ppm	ASTM D5185m		2	2	2
Magnesium	ppm	ASTM D5185m	12	24	38	27
Calcium	ppm	ASTM D5185m	150	59	52	95
Phosphorus	ppm	ASTM D5185m	1650	1380	1351	1705
Zinc	ppm	ASTM D5185m	125	89	74	115
Sulfur	ppm	ASTM D5185m	22500	18735	16461	22112
Visc @ 40°C	cSt	ASTM D445	143	106	106	115



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924658
Lab Number : 06196062
Unique Number : 11058185
Test Package : CONST
Received : 30 May 2024
Tested : 02 Jun 2024
Diagnosed : 02 Jun 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)

T: (919)484-2136
F: (919)484-2136