



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR 22668
Component
Left Final Drive
Fluid
GEAR OIL SAE 80W90 (8 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0905370	WC0846641	WC0810121
Sample Date		Client Info		22 Feb 2024	19 Sep 2023	01 Jun 2023
Machine Age	hrs	Client Info		6986	6490	5994
Oil Age	hrs	Client Info		500	500	2000
Filter Age	hrs	Client Info		0	500	2000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	28	15	35
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	2	<1
Lead	ppm	ASTM D5185m	>25	1	0	0
Copper	ppm	ASTM D5185m	>50	12	8	20
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

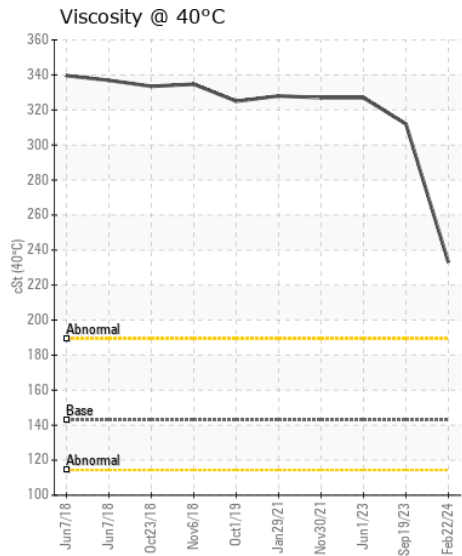
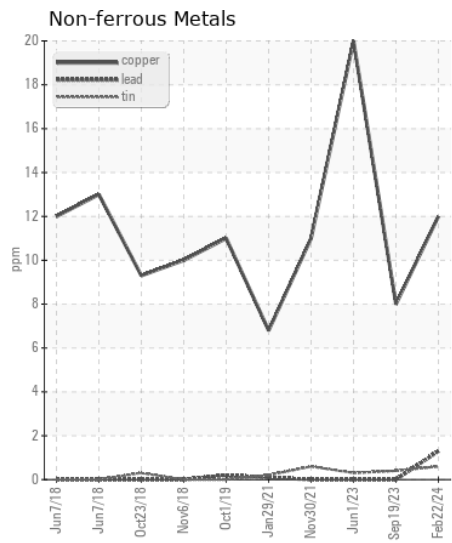
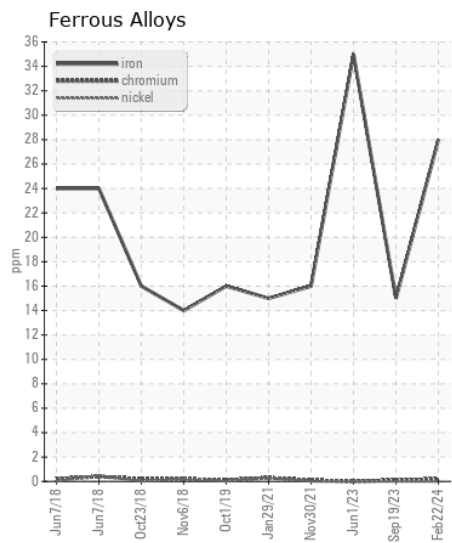
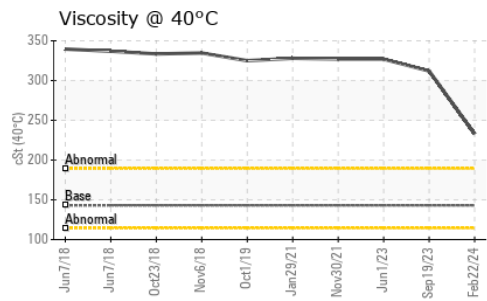
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>75	3	6	13
Potassium	ppm	ASTM D5185m	>20	3	1	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

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

Sodium	ppm	ASTM D5185m	>170	2	3	2
Boron	ppm	ASTM D5185m	400	137	157	126
Barium	ppm	ASTM D5185m	200	1	0	0
Molybdenum	ppm	ASTM D5185m	12	3	<1	0
Manganese	ppm	ASTM D5185m		<1	1	<1
Magnesium	ppm	ASTM D5185m	12	11	3	0
Calcium	ppm	ASTM D5185m	150	47	43	22
Phosphorus	ppm	ASTM D5185m	1650	1059	976	907
Zinc	ppm	ASTM D5185m	125	40	20	17
Sulfur	ppm	ASTM D5185m	22500	19485	25230	24003
Visc @ 40°C	cSt	ASTM D445	143	233	312	327



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0905370
Lab Number : 06100466
Unique Number : 10898696
Test Package : CONST
Received : 26 Feb 2024
Tested : 27 Feb 2024
Diagnosed : 28 Feb 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)