



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR 31221
 Component
Left Final Drive
 Fluid
GEAR OIL SAE 80W90 (--- QTS)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

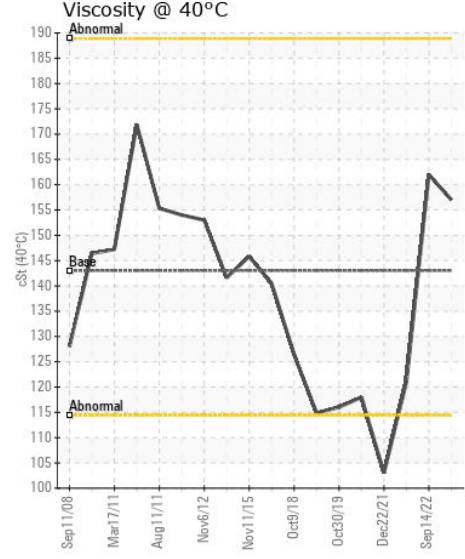
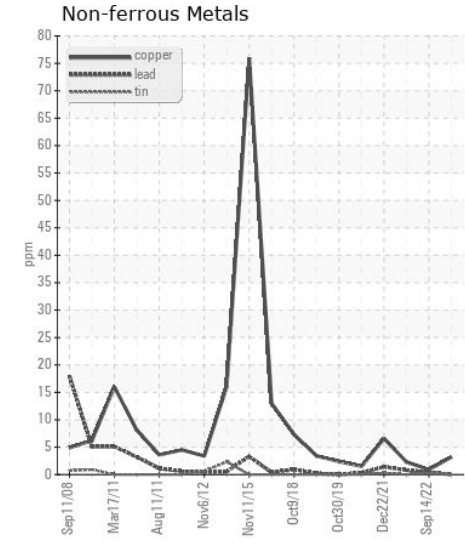
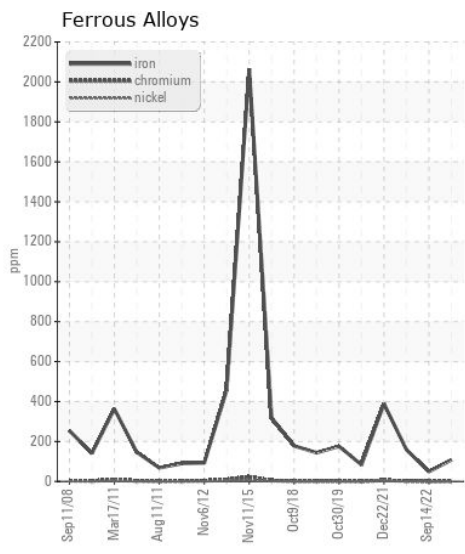
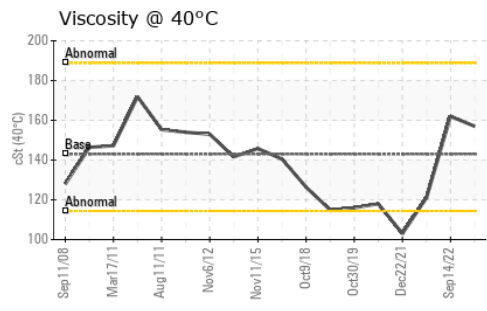
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0950510	WC0689060	WC0716140
Sample Date		Client Info		08 Jul 2024	14 Sep 2022	21 Jul 2022
Machine Age	hrs	Client Info		11858	11527	11496
Oil Age	hrs	Client Info		1000	500	500
Filter Age	hrs	Client Info		1000	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

Iron	ppm	ASTM D5185m	>500	108	49	159
Chromium	ppm	ASTM D5185m	>10	2	<1	3
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	5	3	10
Lead	ppm	ASTM D5185m	>25	0	<1	<1
Copper	ppm	ASTM D5185m	>50	3	<1	2
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>75	14	5	24
Potassium	ppm	ASTM D5185m	>20	<1	0	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

Sodium	ppm	ASTM D5185m	>170	3	1	2
Boron	ppm	ASTM D5185m	400	60	36	150
Barium	ppm	ASTM D5185m	200	0	0	0
Molybdenum	ppm	ASTM D5185m	12	1	1	5
Manganese	ppm	ASTM D5185m		1	<1	2
Magnesium	ppm	ASTM D5185m	12	1	4	15
Calcium	ppm	ASTM D5185m	150	34	28	72
Phosphorus	ppm	ASTM D5185m	1650	2213	2113	2216
Zinc	ppm	ASTM D5185m	125	16	18	67
Sulfur	ppm	ASTM D5185m	22500	28288	25056	22068
Visc @ 40°C	cSt	ASTM D445	143	157	162	121



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0950510
Lab Number : 06233619
Unique Number : 11117112
Test Package : CONST
Received : 11 Jul 2024
Tested : 12 Jul 2024
Diagnosed : 12 Jul 2024 - Wes Davis

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