



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ATTENTION

Machine Id
LIEBHERR 22558
Component
Right Final Drive
Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

Gear wear is indicated.

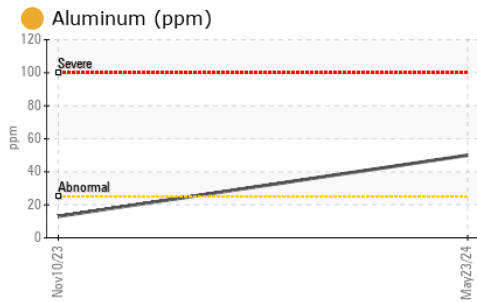
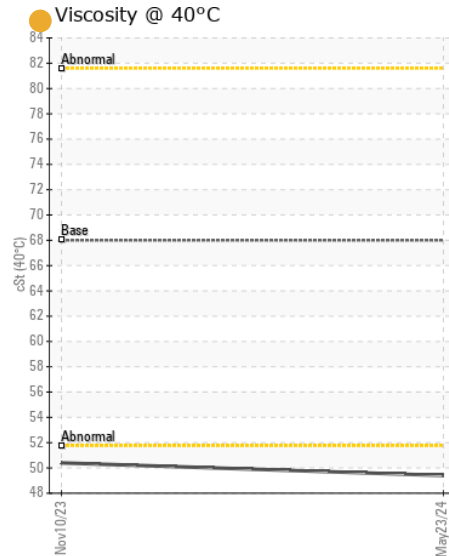
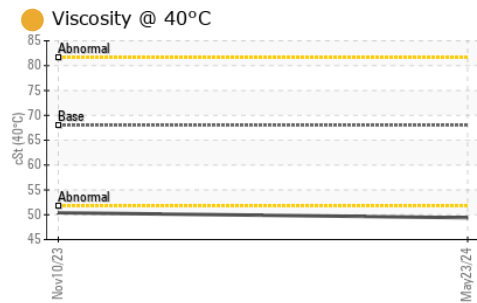
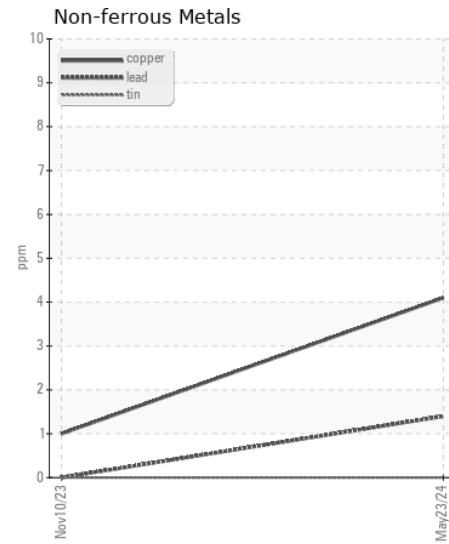
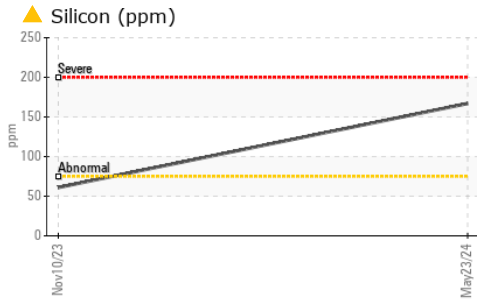
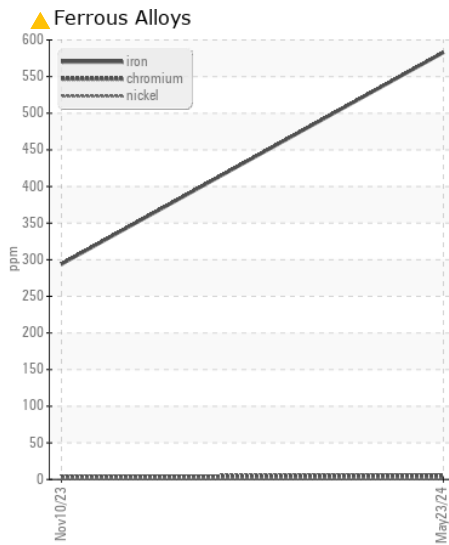
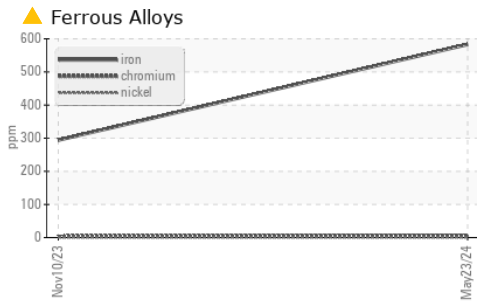
CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

The oil viscosity is lower than normal. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924397	WC0810113	---
Sample Date		Client Info		23 May 2024	10 Nov 2023	---
Machine Age	hrs	Client Info		2111	1152	---
Oil Age	hrs	Client Info		2000	1000	---
Filter Age	hrs	Client Info		2000	0	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ABNORMAL	NORMAL	---
<hr/>						
Iron	ppm	ASTM D5185m	>500	▲ 583	294	---
Chromium	ppm	ASTM D5185m	>10	6	4	---
Nickel	ppm	ASTM D5185m	>10	<1	<1	---
Titanium	ppm	ASTM D5185m		2	1	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>25	● 50	13	---
Lead	ppm	ASTM D5185m	>25	1	0	---
Copper	ppm	ASTM D5185m	>50	4	1	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
<hr/>						
Silicon	ppm	ASTM D5185m	>75	▲ 167	61	---
Potassium	ppm	ASTM D5185m	>20	13	9	---
Water		WC Method	>0.2	NEG	NEG	---
Silt	scalar	*Visual	NONE	MODER	LIGHT	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---
<hr/>						
Sodium	ppm	ASTM D5185m		5	0	---
Boron	ppm	ASTM D5185m	5	12	<1	---
Barium	ppm	ASTM D5185m	5	<1	5	---
Molybdenum	ppm	ASTM D5185m	5	3	2	---
Manganese	ppm	ASTM D5185m		8	5	---
Magnesium	ppm	ASTM D5185m	25	98	98	---
Calcium	ppm	ASTM D5185m	200	3194	3271	---
Phosphorus	ppm	ASTM D5185m	300	1018	1039	---
Zinc	ppm	ASTM D5185m	370	1155	1208	---
Sulfur	ppm	ASTM D5185m	2500	4255	4118	---
Visc @ 40°C	cSt	ASTM D445	68	● 49.4	50.4	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924397
Lab Number : 06196056
Unique Number : 11058179
Test Package : CONST

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