CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
LIEBHERR 22558
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

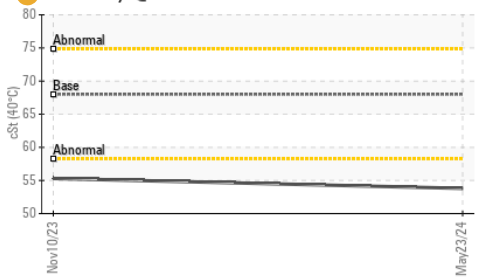
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

FLUID CONDITION

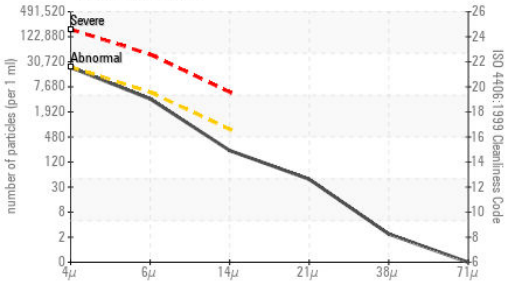
The oil viscosity is lower than normal. Confirm oil type. The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0924399	WC0810114	---
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	1000	---
Oil Changed		Client Info		Changed	Not Changd	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ATTENTION	ATTENTION	---
Iron	ppm	ASTM D5185m	>20	13	8	---
Chromium	ppm	ASTM D5185m	>10	<1	0	---
Nickel	ppm	ASTM D5185m	>10	0	<1	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>10	1	<1	---
Lead	ppm	ASTM D5185m	>10	0	0	---
Copper	ppm	ASTM D5185m	>75	5	4	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185m	>20	5	5	---
Potassium	ppm	ASTM D5185m	>20	<1	<1	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>20000	19547	6005	---
Particles >6µm		ASTM D7647	>5000	3442	1844	---
Particles >14µm		ASTM D7647	>640	200	114	---
Particles >21µm		ASTM D7647	>160	41	25	---
Particles >38µm		ASTM D7647	>40	2	1	---
Particles >71µm		ASTM D7647	>10	0	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/19/15	20/18/14	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	LIGHT	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	---
Sodium	ppm	ASTM D5185m		2	0	---
Boron	ppm	ASTM D5185m	5	0	0	---
Barium	ppm	ASTM D5185m	5	<1	0	---
Molybdenum	ppm	ASTM D5185m	5	<1	0	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m	25	2	2	---
Calcium	ppm	ASTM D5185m	200	98	88	---
Phosphorus	ppm	ASTM D5185m	300	624	663	---
Zinc	ppm	ASTM D5185m	370	817	885	---
Sulfur	ppm	ASTM D5185m	2500	1785	1688	---
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	0.70	0.62	---
Visc @ 40°C	cSt	ASTM D445	68	53.8	55.3	---

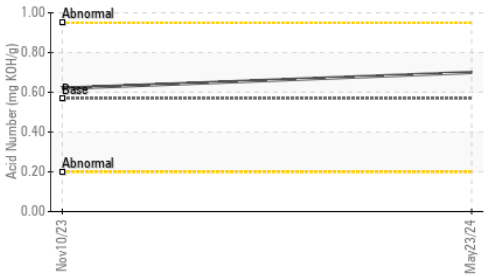
Viscosity @ 40°C



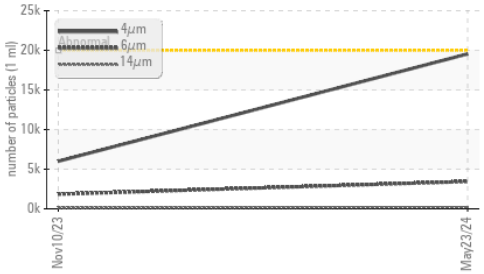
Particle Count



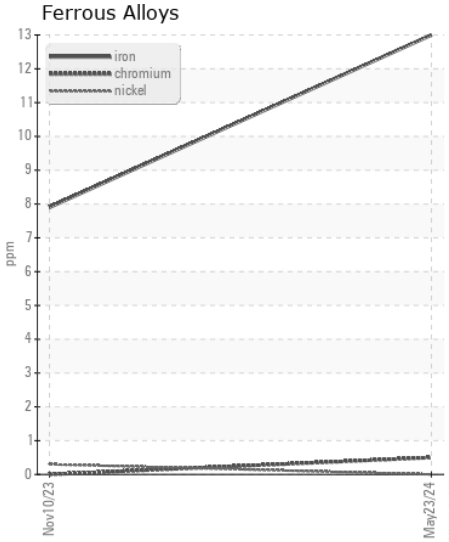
Acid Number



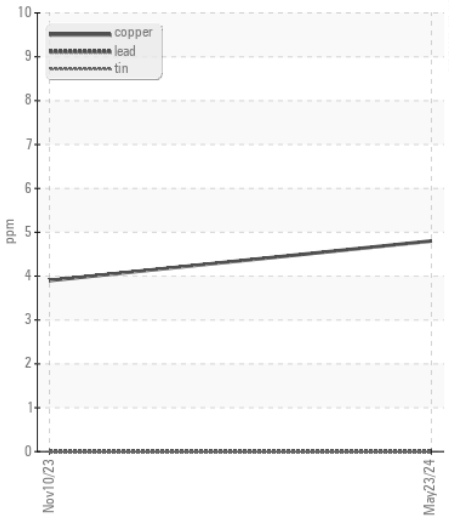
Particle Trend



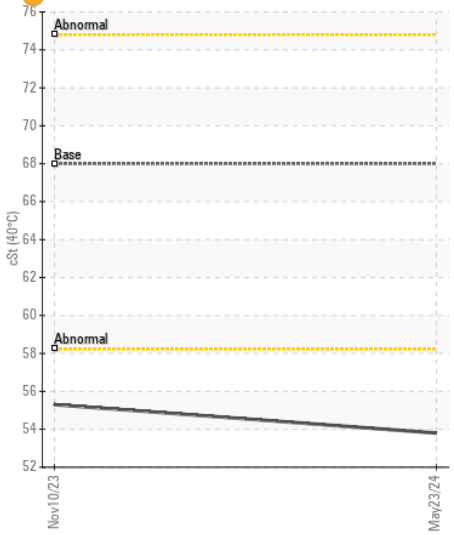
Ferrous Alloys



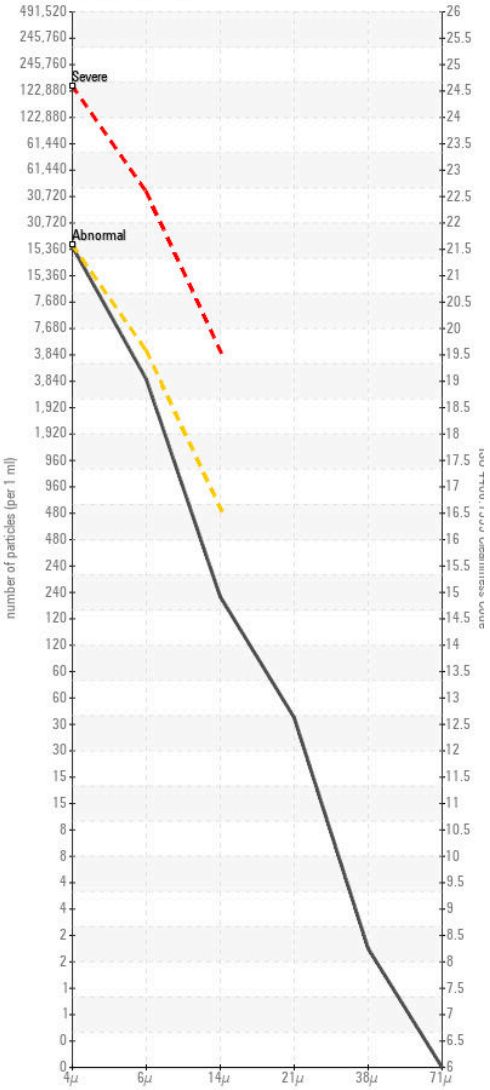
Non-ferrous Metals



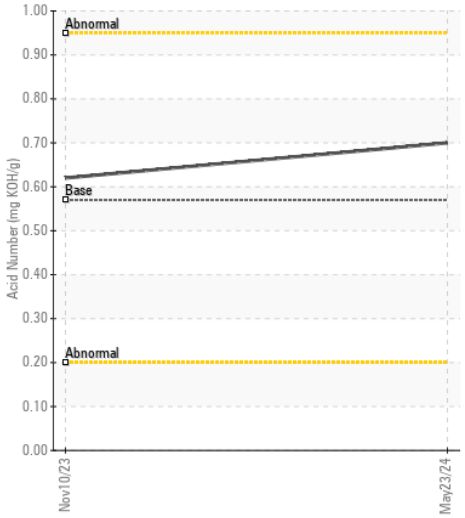
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0924399
Lab Number : 06195871
Unique Number : 11057994
Test Package : CONST

Received : 30 May 2024
Tested : 02 Jun 2024
Diagnosed : 02 Jun 2024 - Don Baldridge

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:
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