CONST

WEAR CHECK

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR 31241
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 68 (125 GAL)

RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

The iron level is abnormal. All other component wear rates are normal.

CONTAMINATION

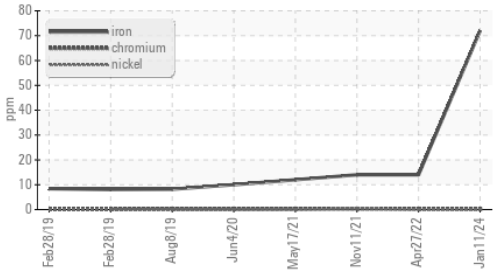
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

FLUID CONDITION

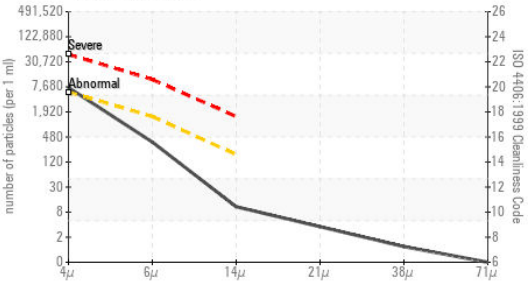
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**WC0882632**	WC0671617	WC0639482
Sample Date		Client Info		**11 Jan 2024**	27 Apr 2022	11 Nov 2021
Machine Age	hrs	Client Info		**6311**	4211	3629
Oil Age	hrs	Client Info		**2000**	4211	3629
Filter Age	hrs	Client Info		**1000**	1082	533
Oil Changed		Client Info		**Changed**	Not Changd	Not Changd
Filter Changed		Client Info		**Changed**	Changed	Not Changd
Sample Status				**ABNORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>20	▲ **72**	14	14
Chromium	ppm	ASTM D5185m	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**0**	0	<1
Titanium	ppm	ASTM D5185m		**0**	0	<1
Silver	ppm	ASTM D5185m		**0**	<1	0
Aluminum	ppm	ASTM D5185m	>10	**<1**	1	<1
Lead	ppm	ASTM D5185m	>10	**<1**	<1	<1
Copper	ppm	ASTM D5185m	>75	**8**	6	6
Tin	ppm	ASTM D5185m	>10	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**<1**	0	0
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	**5**	4	6
Potassium	ppm	ASTM D5185m	>20	**0**	0	5
Water		WC Method	>0.1	**NEG**	NEG	NEG
Particles >4µm		ASTM D7647	>5000	▲ **6430**	4645	540
Particles >6µm		ASTM D7647	>1300	**319**	273	79
Particles >14µm		ASTM D7647	>160	**9**	13	8
Particles >21µm		ASTM D7647	>40	**3**	2	2
Particles >38µm		ASTM D7647	>10	**1**	0	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/15/10**	19/15/11	16/13/10
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	>0.1	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185m		**3**	2	3
Boron	ppm	ASTM D5185m	5	**<1**	2	3
Barium	ppm	ASTM D5185m	5	**0**	0	0
Molybdenum	ppm	ASTM D5185m	5	**0**	<1	0
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m	25	**0**	7	7
Calcium	ppm	ASTM D5185m	200	**1133**	1301	1539
Phosphorus	ppm	ASTM D5185m	300	**543**	583	660
Zinc	ppm	ASTM D5185m	370	**648**	641	751
Sulfur	ppm	ASTM D5185m	2500	**3184**	3044	5001
Acid Number (AN)	mg KOH/g	ASTM D8045	0.57	**0.95**	0.20	1.054
Visc @ 40°C	cSt	ASTM D445	68	**43.4**	42.2	42.2

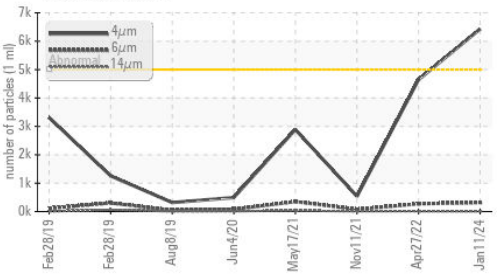
Ferrous Alloys



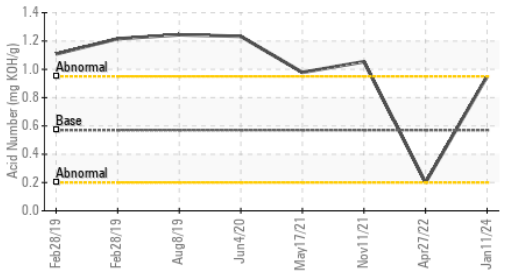
Particle Count



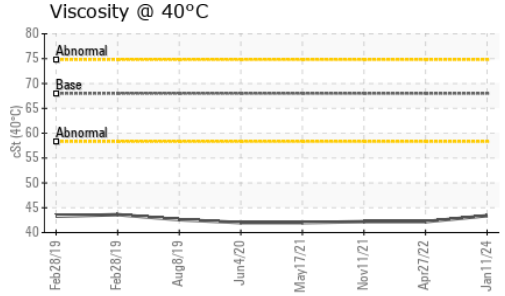
Particle Trend



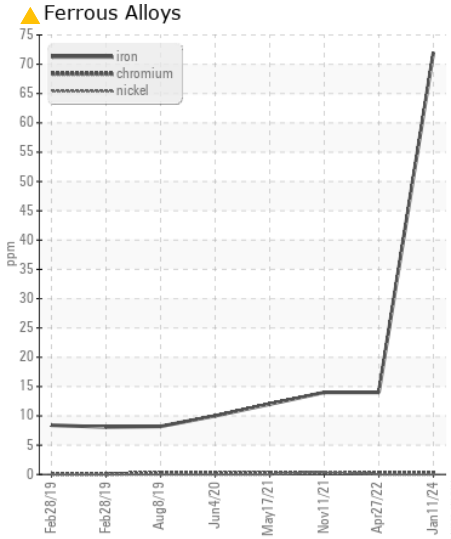
Acid Number



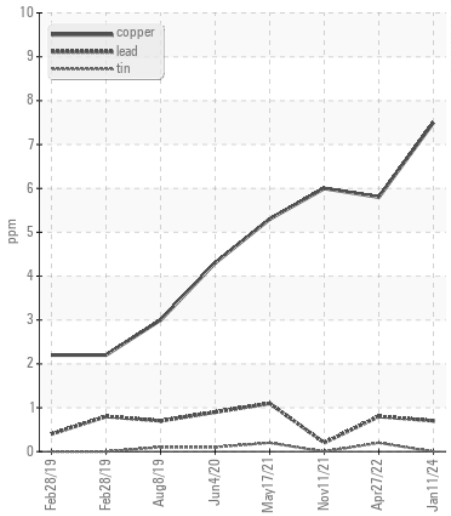
Viscosity @ 40°C



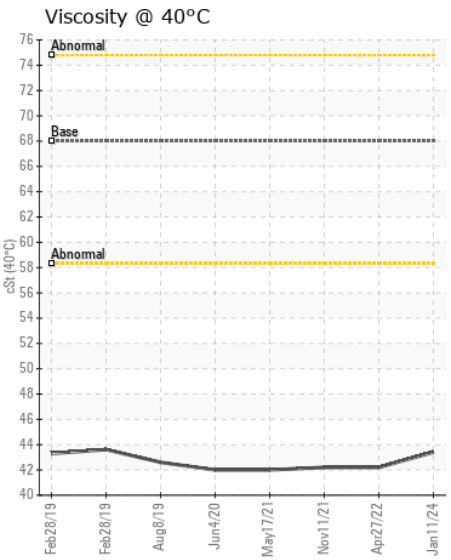
Ferrous Alloys



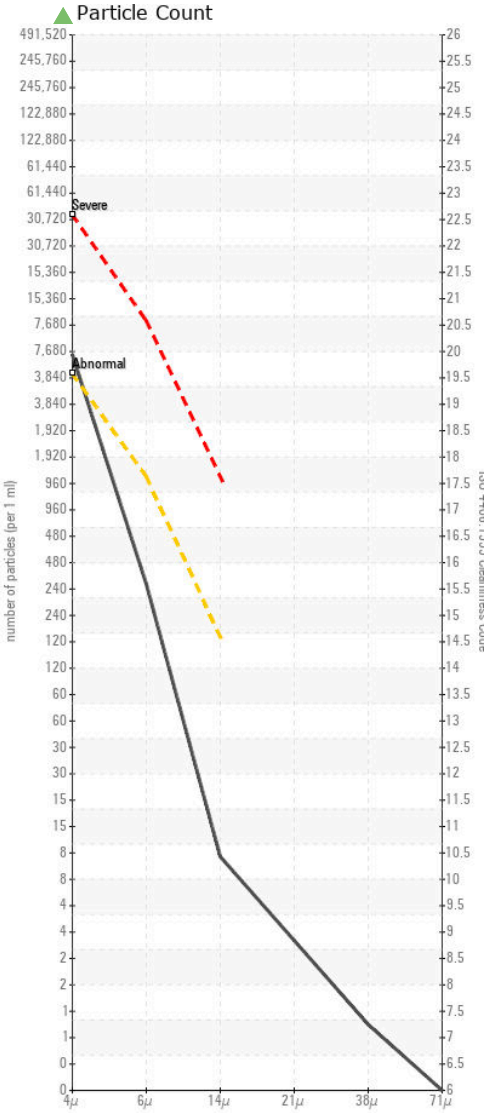
Non-ferrous Metals



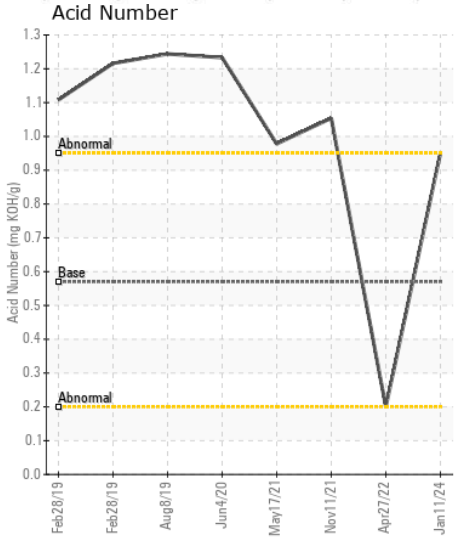
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0882632
Lab Number : 06060985
Unique Number : 10832367
Test Package : CONST

Recieved : 16 Jan 2024
Diagnosed : 17 Jan 2024
Diagnostician : Jonathan Hester

Certificate L2367

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)

SULLIVAN EASTERN INC-LIEBHERR
2860 C SLATER RD
MORRISVILLE, NC
US 27560
Contact: CHRIS CALTON

T:
F: (919)484-2136