LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR L566 1484-60217
Component
Hydraulic System
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

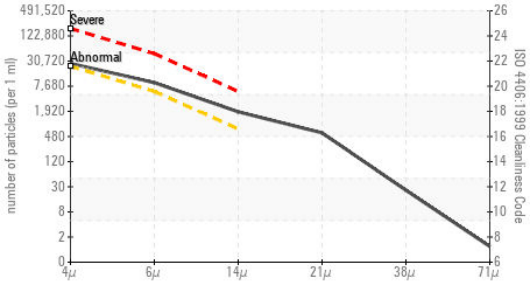
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

FLUID CONDITION

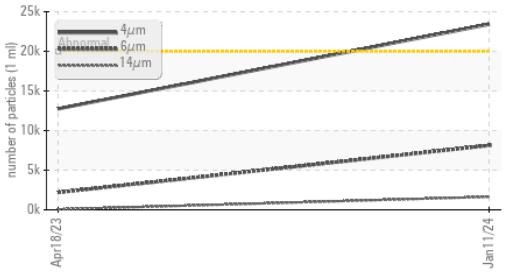
The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**LH0263747**	LH0263725	---
Sample Date		Client Info		**11 Jan 2024**	18 Apr 2023	---
Machine Age	hrs	Client Info		**5070**	3000	---
Oil Age	hrs	Client Info		**0**	0	---
Filter Age	hrs	Client Info		**0**	0	---
Oil Changed		Client Info		**N/A**	N/A	---
Filter Changed		Client Info		**N/A**	N/A	---
Sample Status				**ABNORMAL**	NORMAL	---
Iron	ppm	ASTM D5185m	>20	**15**	12	---
Chromium	ppm	ASTM D5185m	>10	**6**	4	---
Nickel	ppm	ASTM D5185m	>10	**0**	0	---
Titanium	ppm	ASTM D5185m		**0**	0	---
Silver	ppm	ASTM D5185m		**0**	<1	---
Aluminum	ppm	ASTM D5185m	>10	**0**	<1	---
Lead	ppm	ASTM D5185m	>10	**5**	5	---
Copper	ppm	ASTM D5185m	>75	**3**	3	---
Tin	ppm	ASTM D5185m	>10	**0**	<1	---
Vanadium	ppm	ASTM D5185m		**0**	0	---
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Silicon	ppm	ASTM D5185m	>20	**2**	2	---
Potassium	ppm	ASTM D5185m	>20	**<1**	4	---
Water		WC Method	>0.1	**NEG**	NEG	---
Particles >4µm		ASTM D7647	>20000	▲ **23416**	12748	---
Particles >6µm		ASTM D7647	>5000	▲ **8124**	2183	---
Particles >14µm		ASTM D7647	>640	▲ **1636**	52	---
Particles >21µm		ASTM D7647	>160	▲ **515**	6	---
Particles >38µm		ASTM D7647	>40	**22**	0	---
Particles >71µm		ASTM D7647	>10	**1**	0	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ **22/20/18**	21/18/13	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
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	>0.1	**NEG**	NEG	---
Sodium	ppm	ASTM D5185m		**2**	3	---
Boron	ppm	ASTM D5185m		**0**	0	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**0**	<1	---
Manganese	ppm	ASTM D5185m		**0**	<1	---
Magnesium	ppm	ASTM D5185m		**4**	10	---
Calcium	ppm	ASTM D5185m		**927**	984	---
Phosphorus	ppm	ASTM D5185m		**344**	369	---
Zinc	ppm	ASTM D5185m		**409**	439	---
Sulfur	ppm	ASTM D5185m		**3624**	4462	---
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.51**	0.66	---
Visc @ 40°C	cSt	ASTM D445		**52.5**	53.0	---

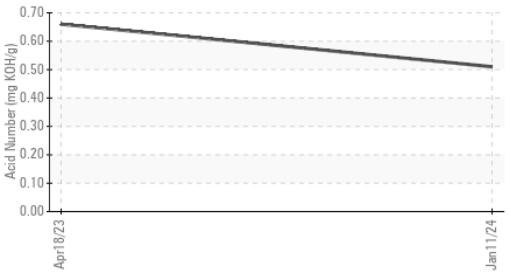
Particle Count



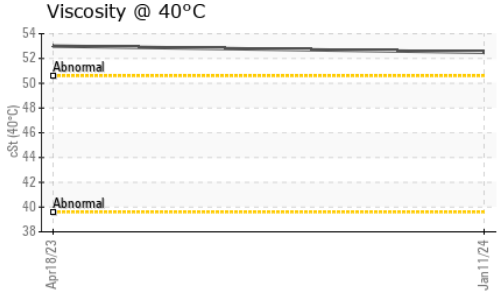
Particle Trend



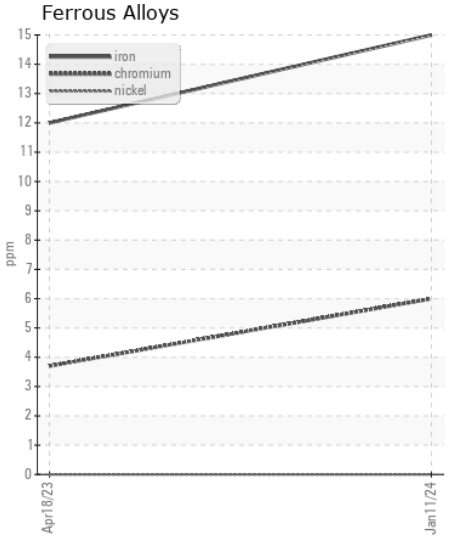
Acid Number



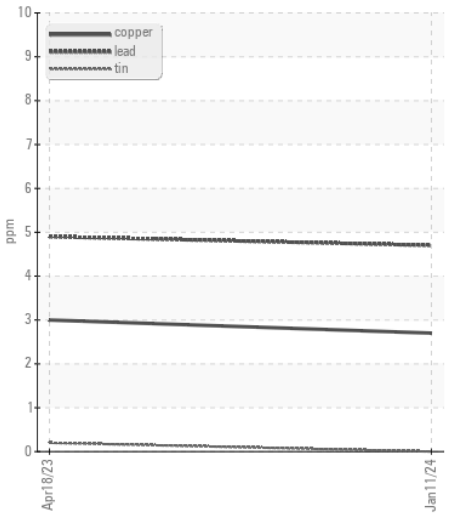
Viscosity @ 40°C



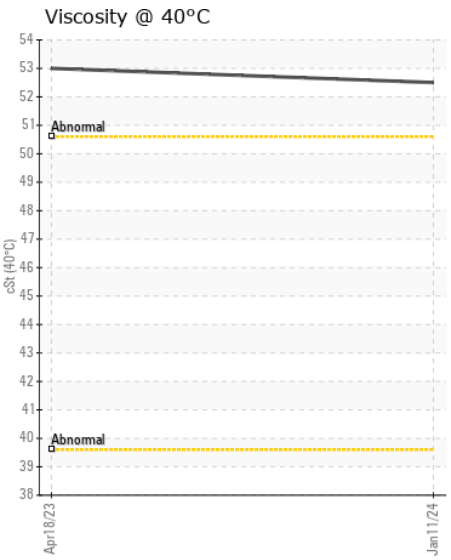
Ferrous Alloys



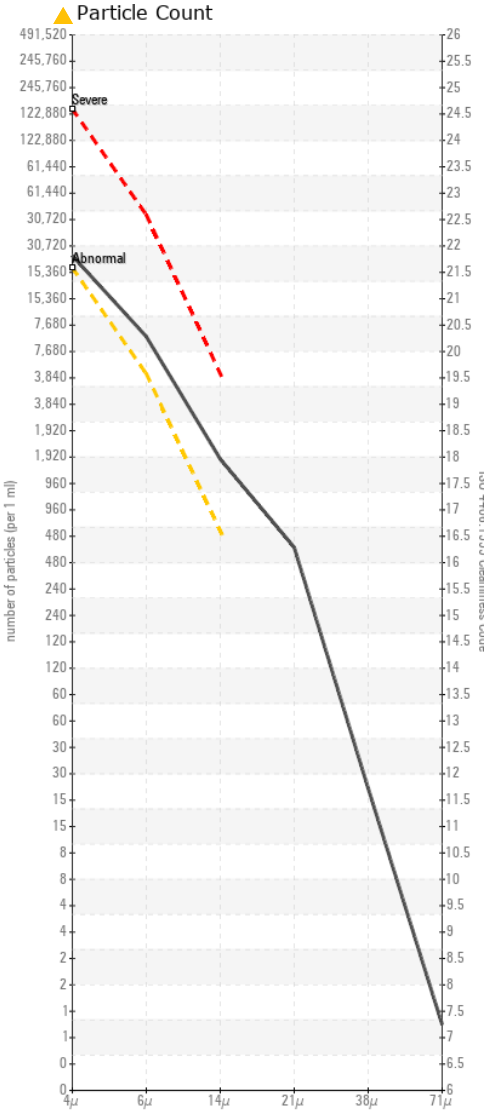
Non-ferrous Metals



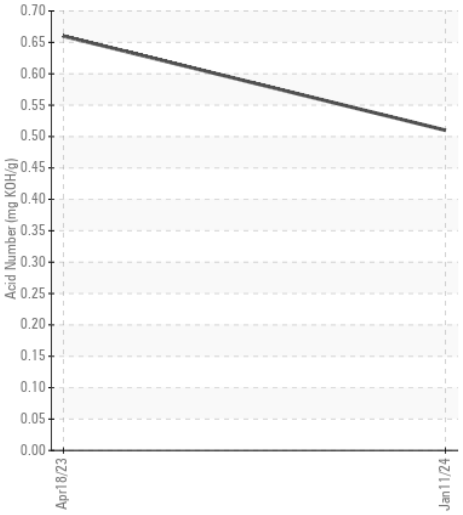
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory	: WearCheck USA - 501 Madison Ave., Cary, NC 27513		
Sample No.	: LH0263747	**Recieved**	: 12 Jan 2024
Lab Number	: 06059240	**Diagnosed**	: 15 Jan 2024
Unique Number	: 10830622	**Diagnostician**	: Wes Davis
Test Package	: MOBCE		

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)

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