



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH80C 1529-156494
Component
Hydraulic System
Fluid
LIEBHERR HYDRAULIC HVI (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286311	---	---
Sample Date		Client Info		05 Mar 2024	---	---
Machine Age	hrs	Client Info		1000	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	8	---	---
Chromium	ppm	ASTM D5185m	>15	<1	---	---
Nickel	ppm	ASTM D5185m	>5	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>8	<1	---	---
Lead	ppm	ASTM D5185m	>5	0	---	---
Copper	ppm	ASTM D5185m	>15	2	---	---
Tin	ppm	ASTM D5185m	>5	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

Elemental level of silicon (Si) above normal indicating ingress of seal material. The amount and size of particulates present in the system are acceptable.

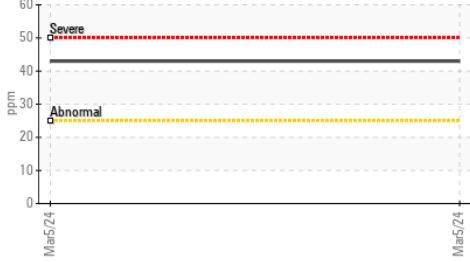
Silicon	ppm	ASTM D5185m	>25	▲ 43	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>20000	17840	---	---
Particles >6µm		ASTM D7647	>5000	3678	---	---
Particles >14µm		ASTM D7647	>640	155	---	---
Particles >21µm		ASTM D7647	>160	37	---	---
Particles >38µm		ASTM D7647	>40	3	---	---
Particles >71µm		ASTM D7647	>10	0	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/19/14	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---

FLUID CONDITION

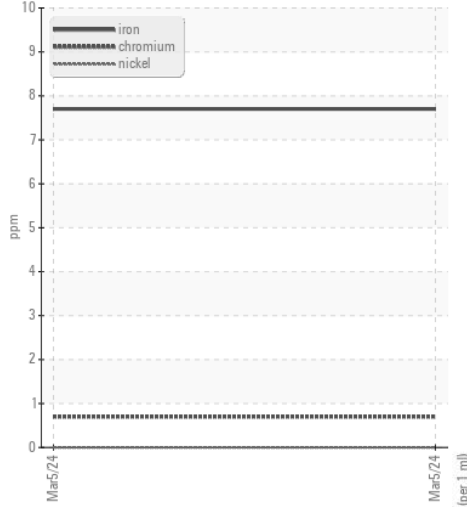
The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	---	---
Boron	ppm	ASTM D5185m		0	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m	7	7	---	---
Calcium	ppm	ASTM D5185m	1500	1209	---	---
Phosphorus	ppm	ASTM D5185m	750	626	---	---
Zinc	ppm	ASTM D5185m	820	725	---	---
Sulfur	ppm	ASTM D5185m	4000	5228	---	---
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.27	---	---
Visc @ 40°C	cSt	ASTM D445	52	43.3	---	---

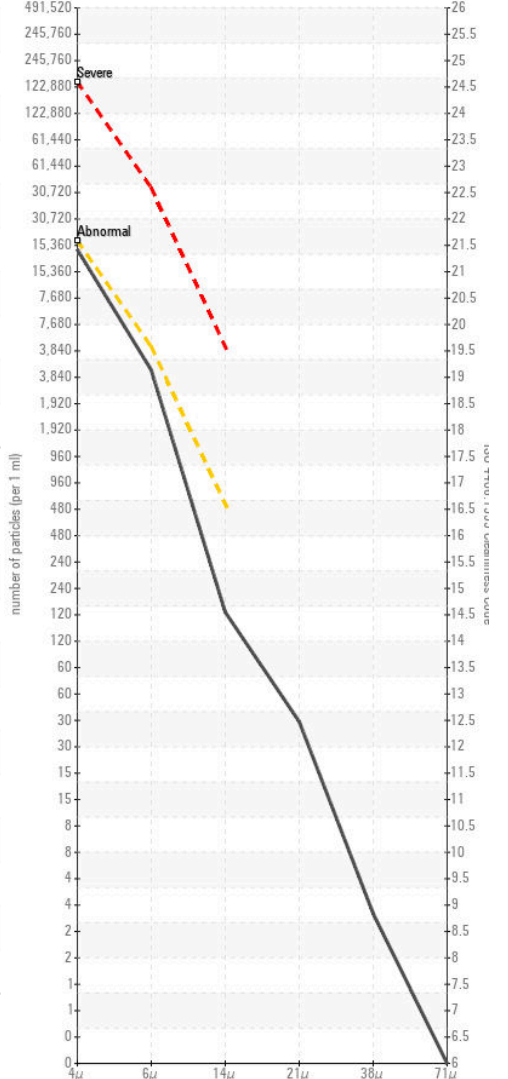
▲ Silicon (ppm)



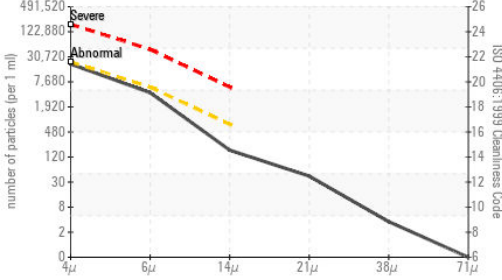
Ferrous Alloys



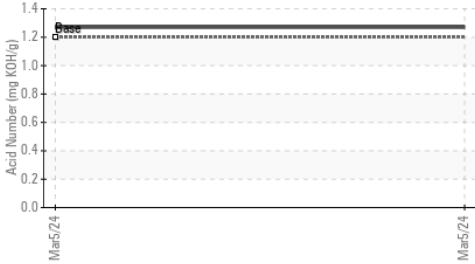
Particle Count



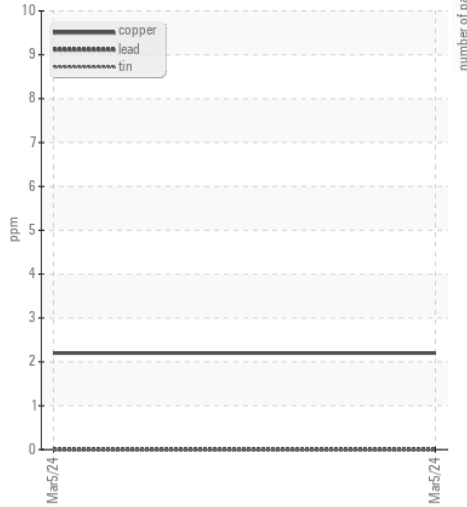
Particle Count



Acid Number



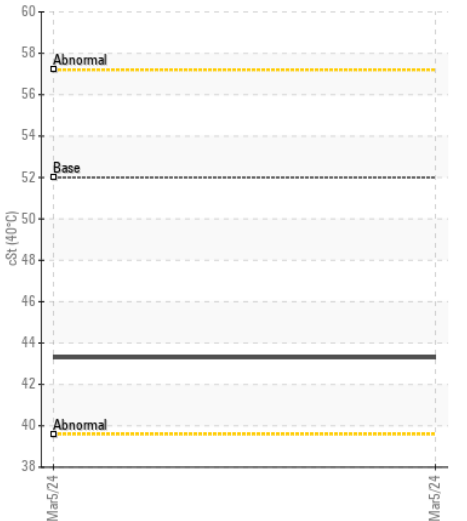
Non-ferrous Metals



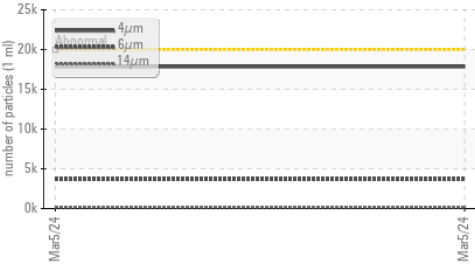
Viscosity @ 40°C



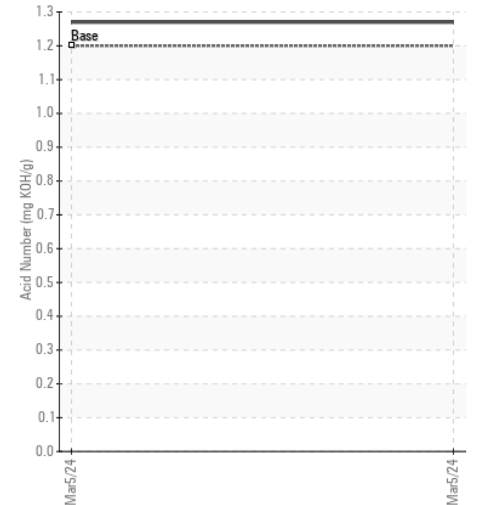
Viscosity @ 40°C



Particle Trend



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0286311
Lab Number : 06121529
Unique Number : 10930362
Test Package : MOBCE

Received : 18 Mar 2024
Tested : 19 Mar 2024
Diagnosed : 21 Mar 2024 - Jonathan Hester

C AND B EQUIPMENT, LLC
 4831 US-42
 GHENT, KY
 US 41045
 Contact: Service Manager

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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F: