



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50M 1203-88008

Component
Hydraulic System

Fluid
LIEBHERR HYDRAULIC HVI (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0272186	LH0229237	LH0217420
Sample Date		Client Info		01 Feb 2024	20 Jul 2022	05 Apr 2022
Machine Age	hrs	Client Info		7000	7000	6268
Oil Age	hrs	Client Info		1000	7000	5723
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Filtered	Filtered
Filter Changed		Client Info		N/A	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	13	11	12
Chromium	ppm	ASTM D5185m	>5	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>2	1	1	1
Lead	ppm	ASTM D5185m	>4	<1	1	<1
Copper	ppm	ASTM D5185m	>10	2	2	3
Tin	ppm	ASTM D5185m	>2	<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

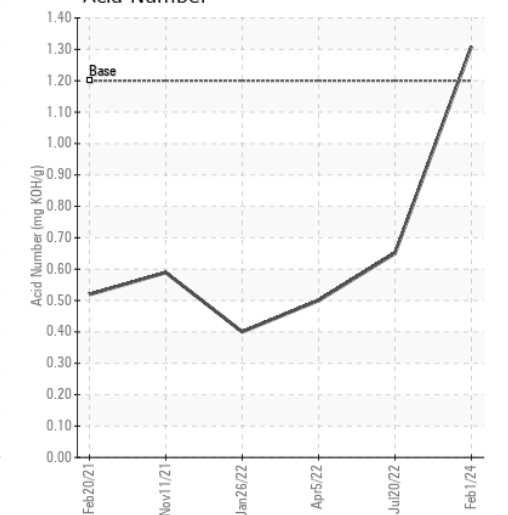
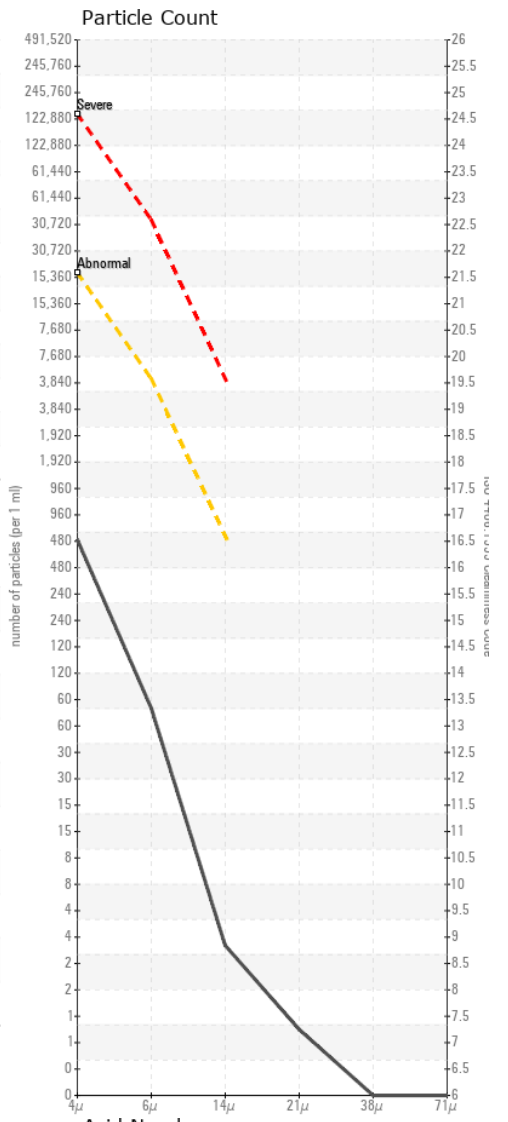
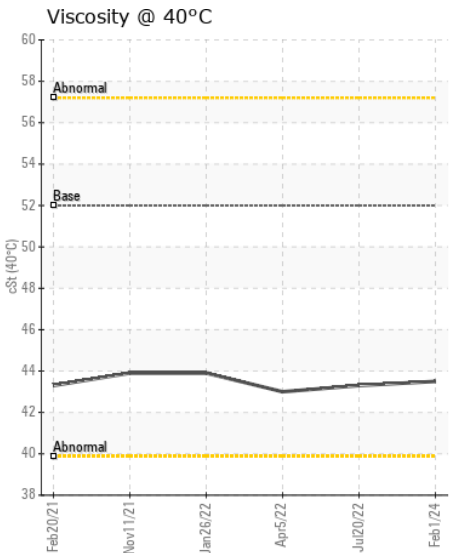
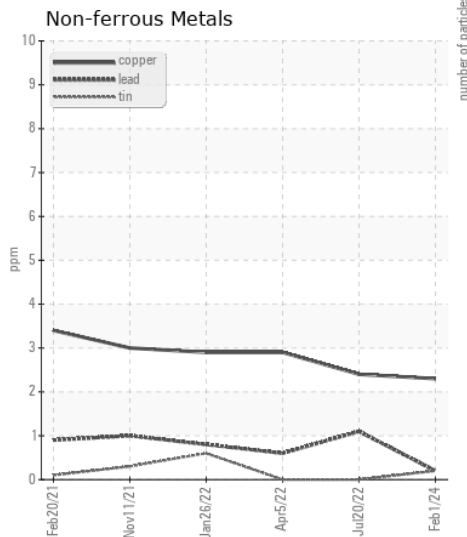
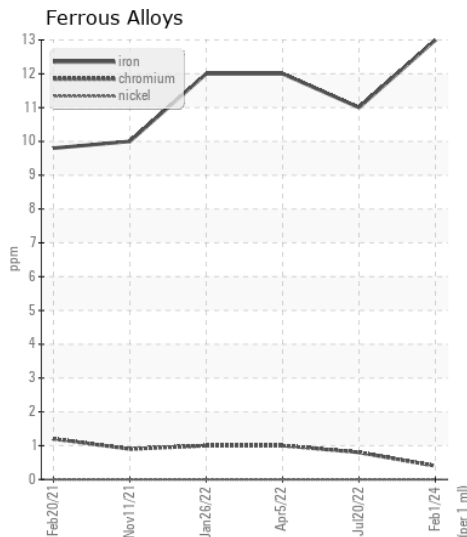
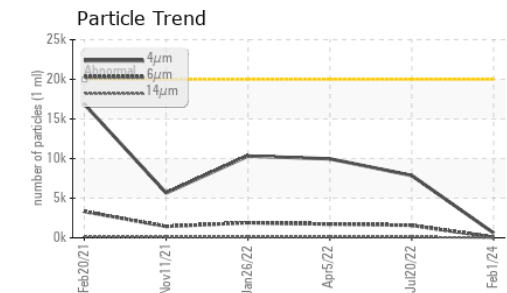
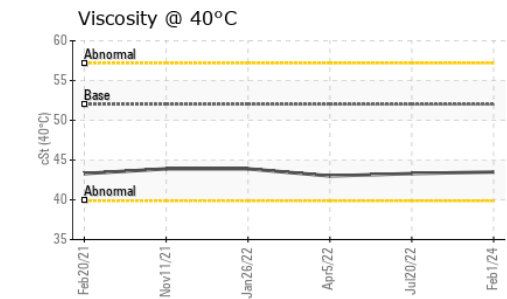
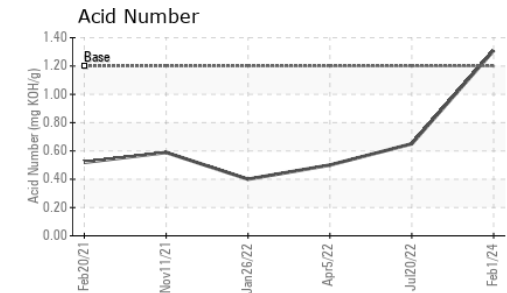
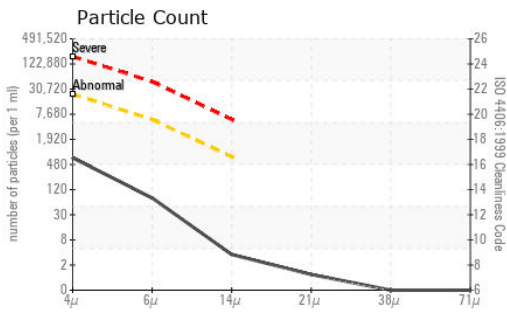
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>17	4	4	4
Potassium	ppm	ASTM D5185m	>20	0	0	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	609	7865	9967
Particles >6µm		ASTM D7647	>5000	67	1579	1726
Particles >14µm		ASTM D7647	>640	3	108	95
Particles >21µm		ASTM D7647	>160	1	25	23
Particles >38µm		ASTM D7647	>40	0	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	16/13/9	20/18/14	20/18/14
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	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

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		4	2	<1
Boron	ppm	ASTM D5185m		20	26	24
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		6	8	8
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	7	62	61	57
Calcium	ppm	ASTM D5185m	1500	2608	2582	2317
Phosphorus	ppm	ASTM D5185m	750	748	667	647
Zinc	ppm	ASTM D5185m	820	918	872	836
Sulfur	ppm	ASTM D5185m	4000	3569	4399	3224
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	1.309	0.65	0.50
Visc @ 40°C	cSt	ASTM D445	52	43.5	43.3	43.0



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0272186
Lab Number : 06084304
Unique Number : 10871749
Test Package : CONST
Received : 08 Feb 2024
Tested : 09 Feb 2024
Diagnosed : 12 Feb 2024 - Don Baldrige

JR VINAGRO
 2208 PLAINFIELD PIKE
 JOHNSTON, RI
 US 02919
 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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