



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R924C 028643-1069
Component
Hydraulic System
Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281208	LH0185817	LHMC161420
Sample Date		Client Info		01 Feb 2024	20 Jan 2021	10 Oct 2019
Machine Age	hrs	Client Info		18438	11574	11497
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	11	11	11
Chromium	ppm	ASTM D5185(m)	>15	2	4	3
Nickel	ppm	ASTM D5185(m)	>5	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>8	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>5	<1	1	<1
Copper	ppm	ASTM D5185(m)	>15	2	12	12
Tin	ppm	ASTM D5185(m)	>5	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

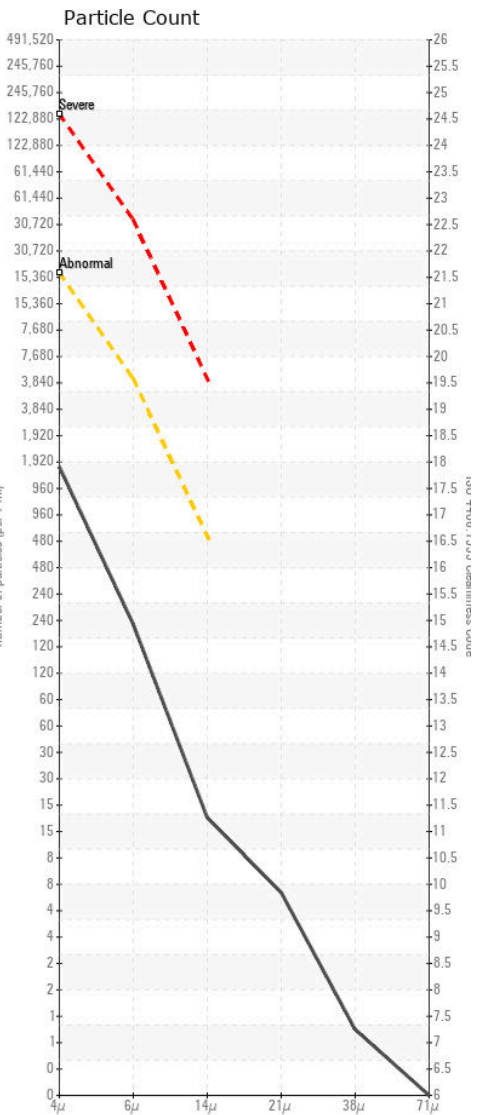
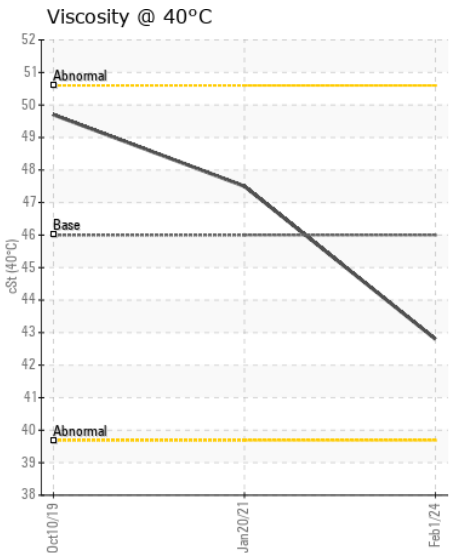
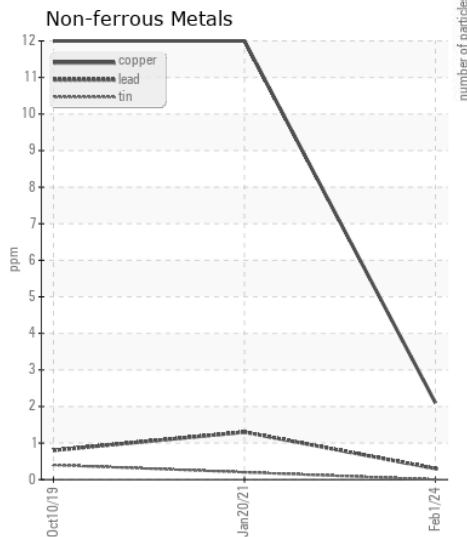
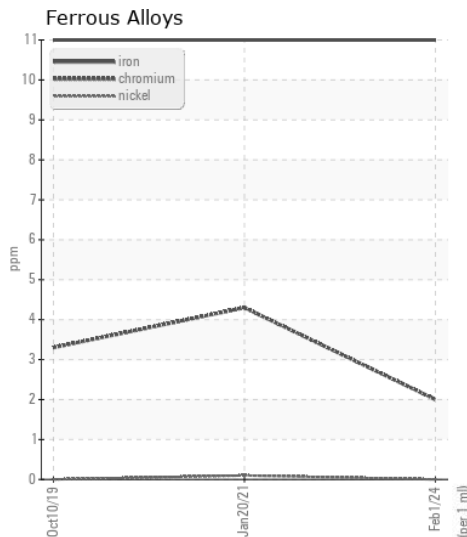
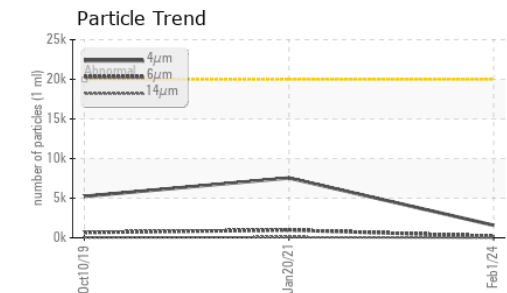
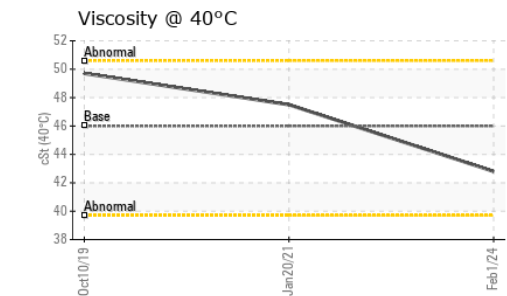
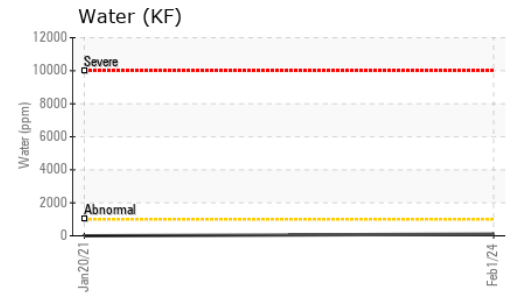
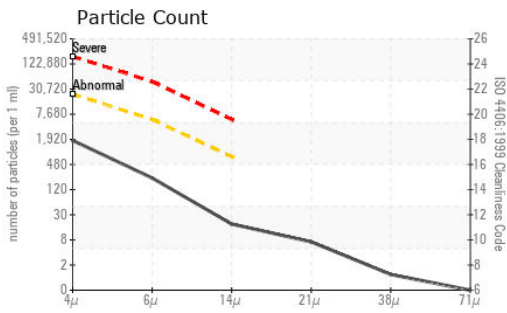
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>25	<1	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1
Water	%	ASTM D6304*	>0.1	0.010	---	---
ppm Water	ppm	ASTM D6304*	>1000	105	---	---
Particles >4µm		ASTM D7647	>20000	1581	7553	5236
Particles >6µm		ASTM D7647	>5000	201	978	674
Particles >14µm		ASTM D7647	>640	16	80	43
Particles >21µm		ASTM D7647	>160	6	23	12
Particles >38µm		ASTM D7647	>40	1	0	2
Particles >71µm		ASTM D7647	>10	0	0	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	18/15/11	20/17/13	20/17/13
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	.2%	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		0	2	2
Boron	ppm	ASTM D5185(m)	5	<1	9	10
Barium	ppm	ASTM D5185(m)	5	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	5	0	6	6
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	25	2	63	65
Calcium	ppm	ASTM D5185(m)	200	25	716	727
Phosphorus	ppm	ASTM D5185(m)	300	321	472	493
Zinc	ppm	ASTM D5185(m)	370	376	592	616
Sulfur	ppm	ASTM D5185(m)	2500	1243	4129	3920
Visc @ 40°C	cSt	ASTM D7279(m)	46	42.8	47.5	49.7



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281208 **Received** : 16 Feb 2024
Lab Number : 02616286 **Tested** : 20 Feb 2024
Unique Number : 5733396 **Diagnosed** : 20 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: KF, PrtCount)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

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