



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50 14791
Component
Hydraulic System
Fluid
IRVING HYDRAULIC OIL LP 46 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0180268	LH	LH0269636
Sample Date		Client Info		09 Jan 2024	27 Dec 2023	16 Oct 2023
Machine Age	hrs	Client Info		16000	22000	21000
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	SEVERE	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	8	26	19
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>2	2	1	<1
Lead	ppm	ASTM D5185(m)	>4	<1	28	<1
Copper	ppm	ASTM D5185(m)	>10	2	2	1
Tin	ppm	ASTM D5185(m)	>2	0	0	0
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

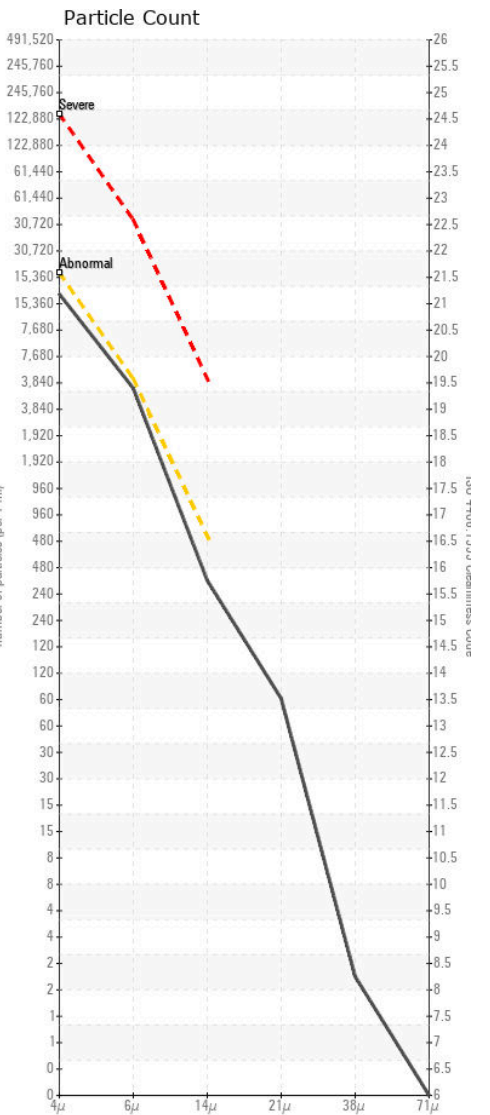
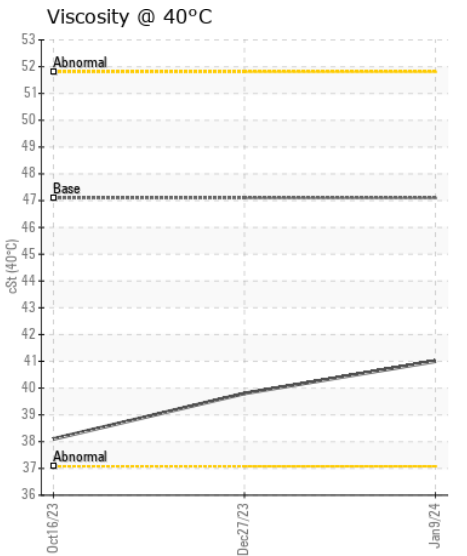
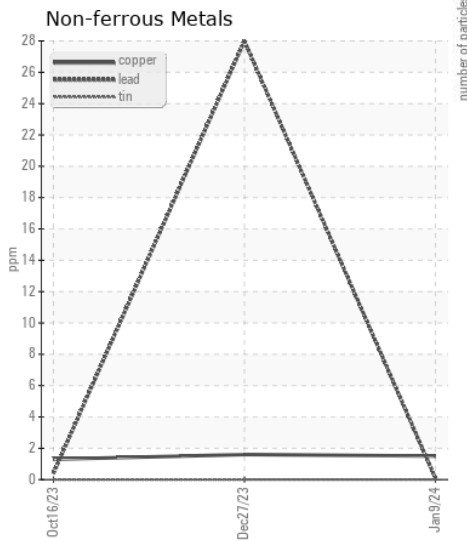
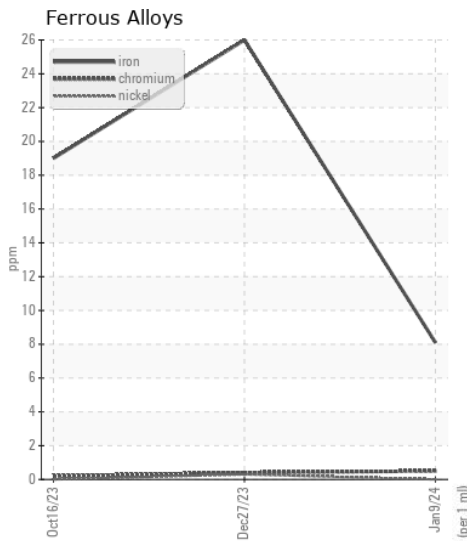
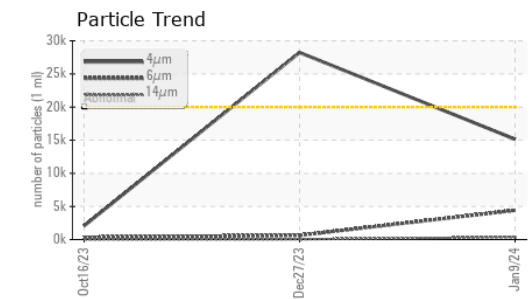
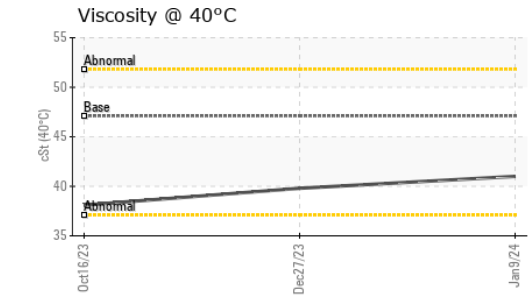
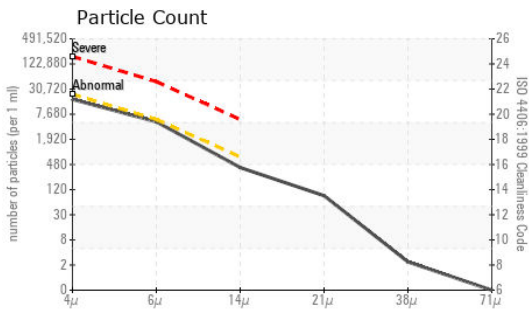
Free water present. The system cleanliness is acceptable for your target ISO 4406 cleanliness code.

Silicon	ppm	ASTM D5185(m)	>17	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	<1	1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	15145	28232	2067
Particles >6µm		ASTM D7647	>5000	4412	636	333
Particles >14µm		ASTM D7647	>640	357	38	18
Particles >21µm		ASTM D7647	>160	76	6	3
Particles >38µm		ASTM D7647	>40	2	0	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/19/16	22/16/12	18/16/11
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	WGOIL	WGOIL	WGOIL
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	.2%	.2%	.2%

FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)		6	8	8
Barium	ppm	ASTM D5185(m)		0	0	<1
Molybdenum	ppm	ASTM D5185(m)		1	2	2
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		13	16	15
Calcium	ppm	ASTM D5185(m)		176	180	179
Phosphorus	ppm	ASTM D5185(m)		377	390	374
Zinc	ppm	ASTM D5185(m)	400	455	437	459
Sulfur	ppm	ASTM D5185(m)		1122	1192	1099
Visc @ 40°C	cSt	ASTM D7279(m)	47.1	41.0	39.8	38.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0180268 **Received** : 15 Jan 2024
Lab Number : 02608741 **Diagnosed** : 16 Jan 2024
Unique Number : 5709827 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: 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.

INTERFOR CORP
 5060 RTE 430
 BRUNSWICK MINE, NB
 CA E2A 6W6
 Contact: Daniel Hachey
 daniel.hachey@interfor.com
 T: (506)547-8700
 F: (506)548-1892