



LIEBHERR

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
LH80
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 46 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0227628	---	---
Sample Date		Client Info		09 May 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changd	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				SEVERE	---	---

WEAR

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

PQ		ASTM D8184*		6	---	---
Iron	ppm	ASTM D5185(m)	>20	▲ 94	---	---
Chromium	ppm	ASTM D5185(m)	>10	3	---	---
Nickel	ppm	ASTM D5185(m)	>10	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>10	<1	---	---
Lead	ppm	ASTM D5185(m)	>10	0	---	---
Copper	ppm	ASTM D5185(m)	>75	4	---	---
Tin	ppm	ASTM D5185(m)	>10	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

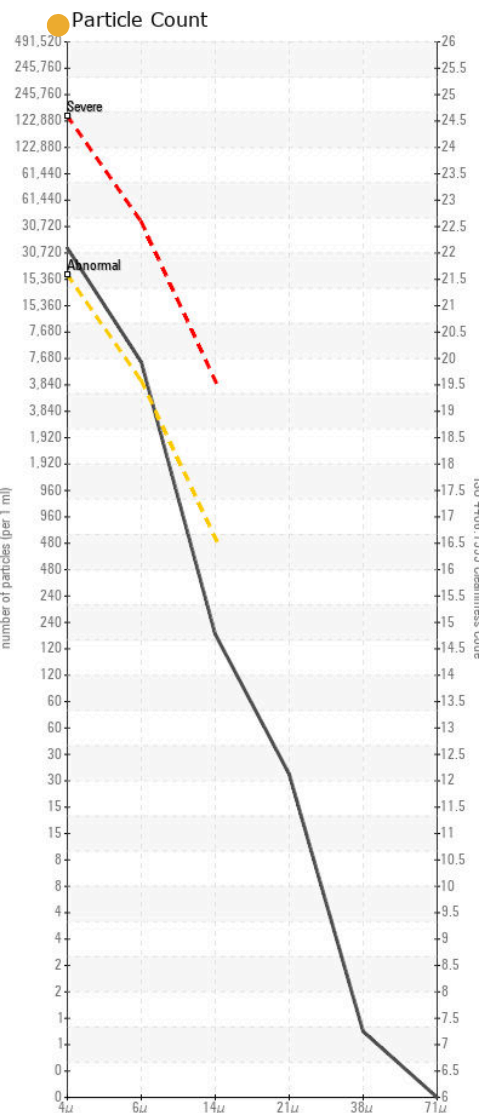
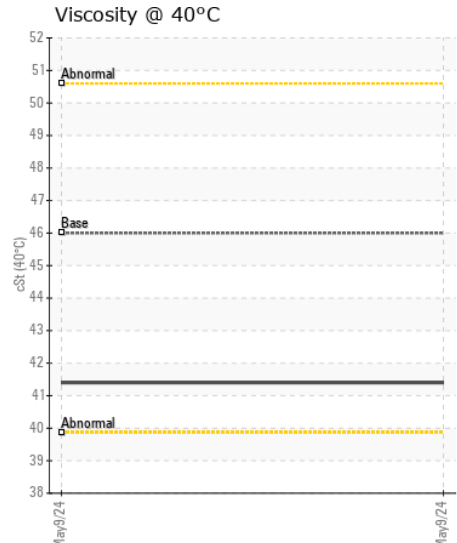
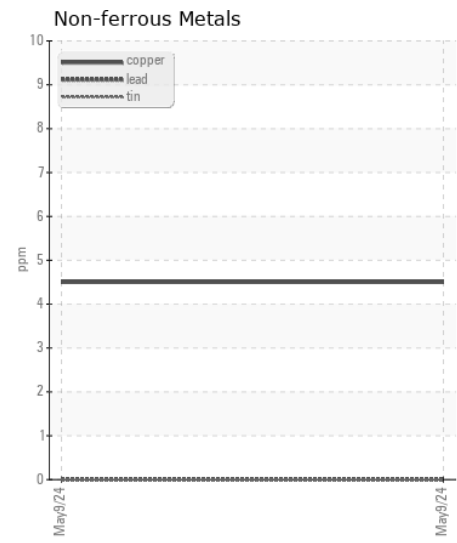
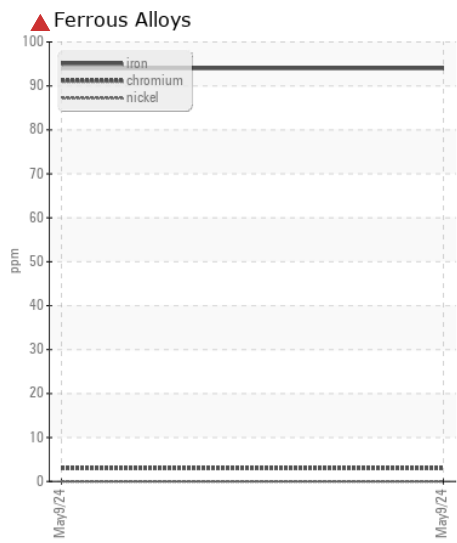
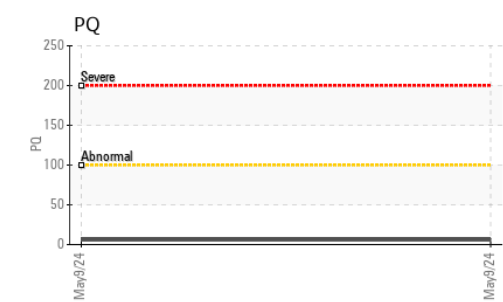
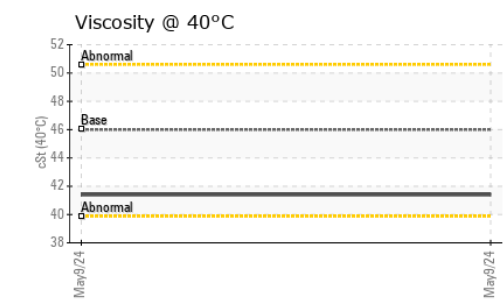
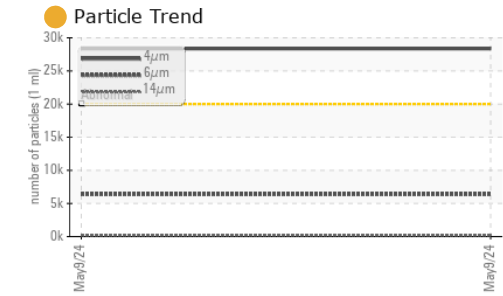
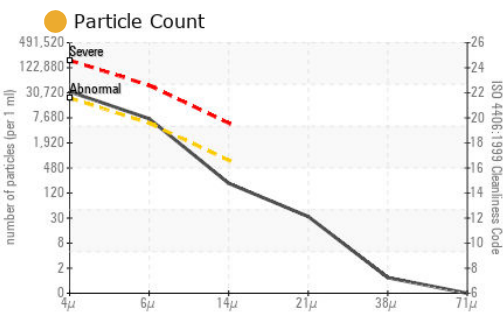
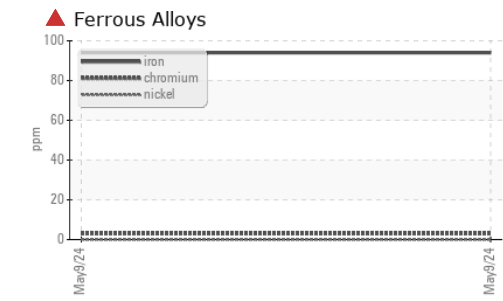
There is a light amount of silt (particulates < 14 microns in size) present in the oil. There is a moderate concentration of water present in the oil. Free water present.

Silicon	ppm	ASTM D5185(m)	>20	2	---	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>20000	● 28358	---	---
Particles >6µm		ASTM D7647	>5000	● 6387	---	---
Particles >14µm		ASTM D7647	>640	181	---	---
Particles >21µm		ASTM D7647	>160	29	---	---
Particles >38µm		ASTM D7647	>40	1	---	---
Particles >71µm		ASTM D7647	>10	0	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	● 22/20/15	---	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	▲ WGOIL	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.1	.2%	---	---

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		2	---	---
Boron	ppm	ASTM D5185(m)	5	2	---	---
Barium	ppm	ASTM D5185(m)	5	0	---	---
Molybdenum	ppm	ASTM D5185(m)	5	0	---	---
Manganese	ppm	ASTM D5185(m)		2	---	---
Magnesium	ppm	ASTM D5185(m)	25	8	---	---
Calcium	ppm	ASTM D5185(m)	200	336	---	---
Phosphorus	ppm	ASTM D5185(m)	300	395	---	---
Zinc	ppm	ASTM D5185(m)	370	493	---	---
Sulfur	ppm	ASTM D5185(m)	2500	1824	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	46	41.4	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0227628 **Received** : 10 May 2024
Lab Number : 02634637 **Tested** : 13 May 2024
Unique Number : 5775790 **Diagnosed** : 13 May 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PQ, PrtCount)

American Iron and Metal
 75 Steel City Court
 Hamilton, ON
 CA L8H 3Y2
 Contact: Heavy Equipment
 hamiltonmobileassetmaintenance@aim-recycling.com
 T: (905)547-5533
 F: (905)544-5671

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.