



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Machine Id
LIEBHERR LH60 096587

Component
Hydraulic System

Fluid
PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. The fluid was specified as PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL, however, a fluid match indicates that this fluid is ISO 32 AW Hydraulic Oil. Please confirm the oil type and grade on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0284795	---	---
Sample Date		Client Info		24 Feb 2024	---	---
Machine Age	hrs	Client Info		11676	---	---
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				ABNORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	22	---	---
Chromium	ppm	ASTM D5185(m)	>40	1	---	---
Nickel	ppm	ASTM D5185(m)	>10	<1	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>5	<1	---	---
Lead	ppm	ASTM D5185(m)	>5	0	---	---
Copper	ppm	ASTM D5185(m)	>15	1	---	---
Tin	ppm	ASTM D5185(m)	>5	0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

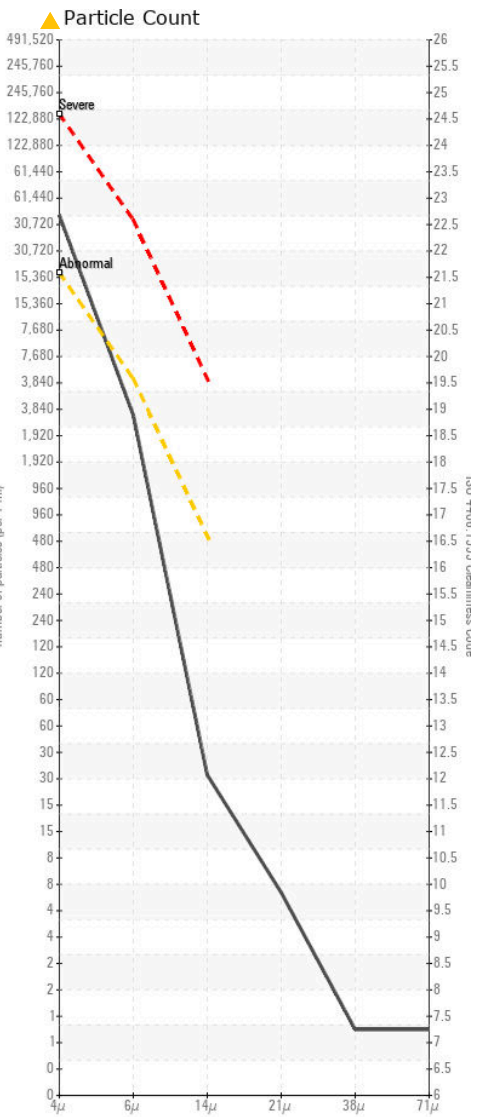
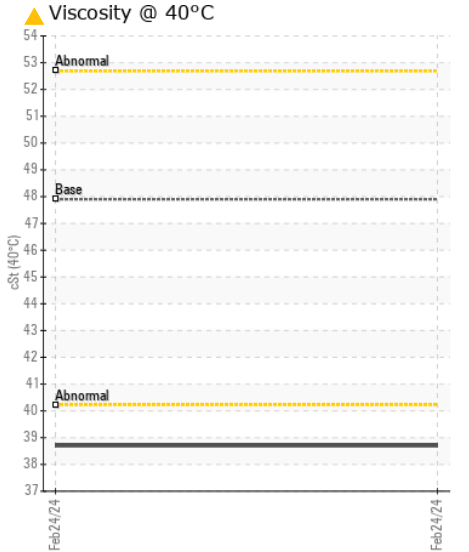
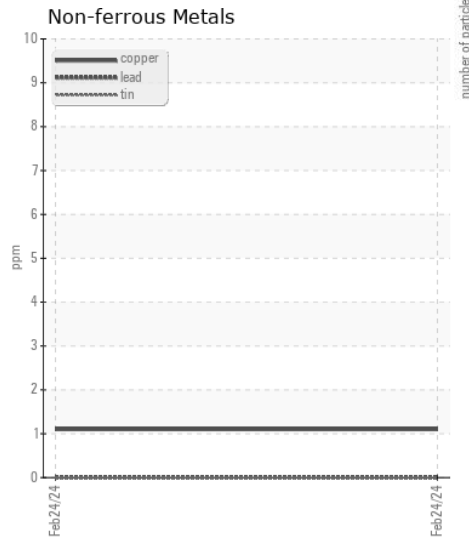
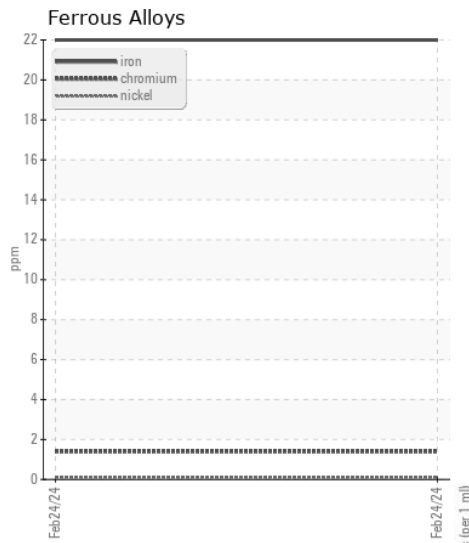
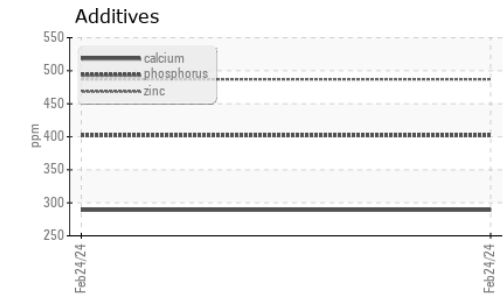
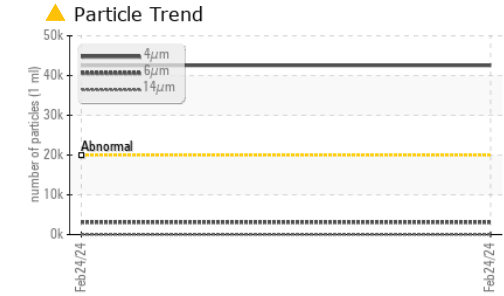
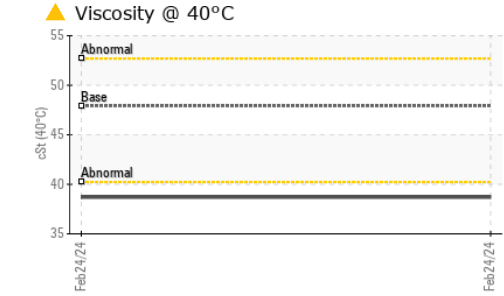
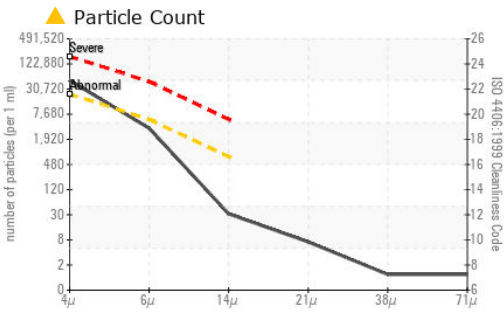
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	1	---	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---	---
Water		WC Method	>0.1	NEG	---	---
Particles >4µm		ASTM D7647	>20000	▲ 42556	---	---
Particles >6µm		ASTM D7647	>5000	3105	---	---
Particles >14µm		ASTM D7647	>640	28	---	---
Particles >21µm		ASTM D7647	>160	6	---	---
Particles >38µm		ASTM D7647	>40	1	---	---
Particles >71µm		ASTM D7647	>10	1	---	---
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/19/12	---	---
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

Viscosity of sample indicates oil is within ISO 32 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		<1	---	---
Boron	ppm	ASTM D5185(m)	0	2	---	---
Barium	ppm	ASTM D5185(m)	0	0	---	---
Molybdenum	ppm	ASTM D5185(m)	0	<1	---	---
Manganese	ppm	ASTM D5185(m)	1	0	---	---
Magnesium	ppm	ASTM D5185(m)	0	11	---	---
Calcium	ppm	ASTM D5185(m)	100	289	---	---
Phosphorus	ppm	ASTM D5185(m)	670	402	---	---
Zinc	ppm	ASTM D5185(m)	850	487	---	---
Sulfur	ppm	ASTM D5185(m)	1600	1084	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	▲ 38.7	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0284795 **Received** : 05 Mar 2024
Lab Number : 02619948 **Tested** : 05 Mar 2024
Unique Number : 5737058 **Diagnosed** : 06 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

American Iron and Metal
 131 Toombs St
 Moncton, NB
 CA E1A 3A5
 Contact: Service Manager

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.

T:
F: