



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

(360376)

Machine Id

LIEBHERR LH40M 134365-1215

Component

Hydraulic System

Fluid

PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (300 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0288364	LH0276903	LH0193116
Sample Date		Client Info		31 May 2024	23 Sep 2023	30 May 2022
Machine Age	hrs	Client Info		4811	3785	1166
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	N/A	N/A
Sample Status				NORMAL	ATTENTION	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	17	0	14
Chromium	ppm	ASTM D5185(m)	>40	<1	0	<1
Nickel	ppm	ASTM D5185(m)	>10	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	<1	0	<1
Lead	ppm	ASTM D5185(m)	>5	0	0	<1
Copper	ppm	ASTM D5185(m)	>15	4	<1	2
Tin	ppm	ASTM D5185(m)	>5	0	0	<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

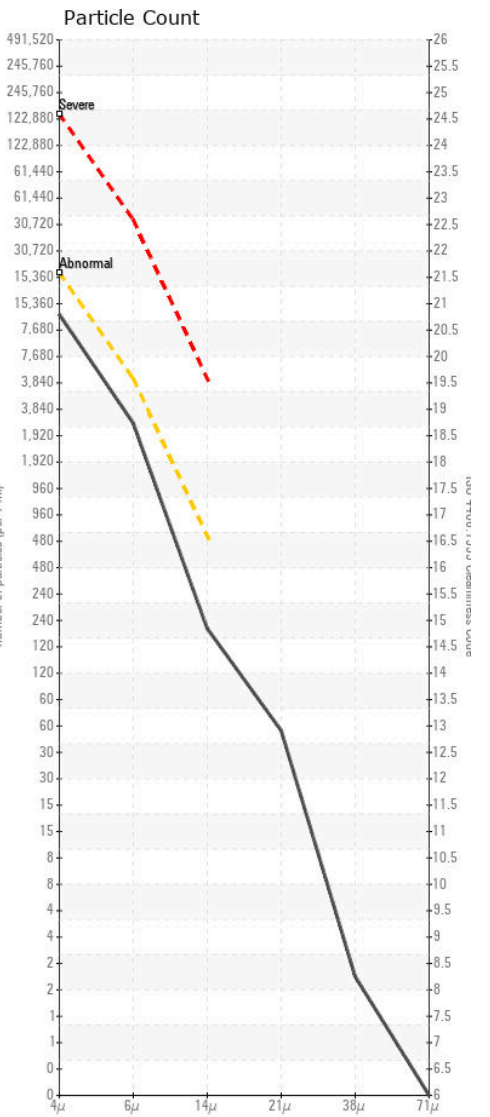
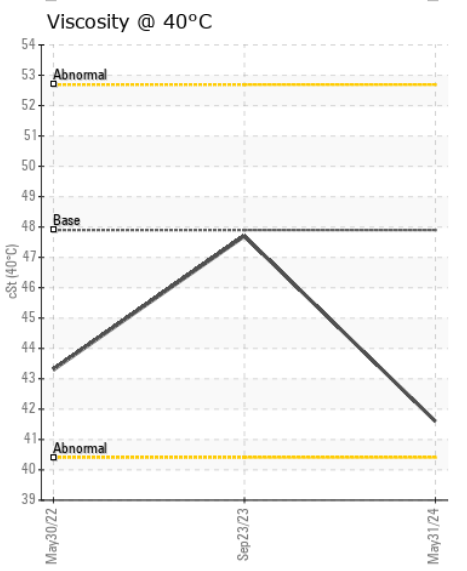
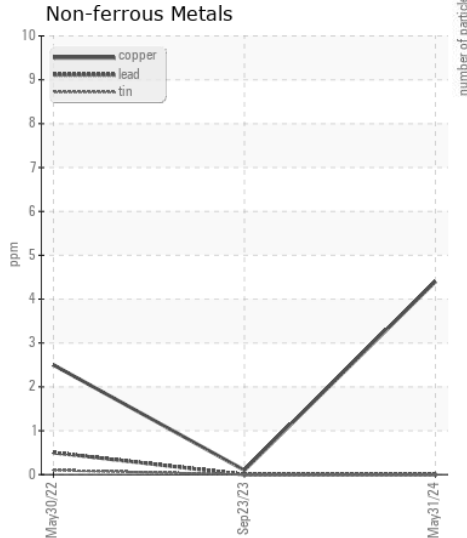
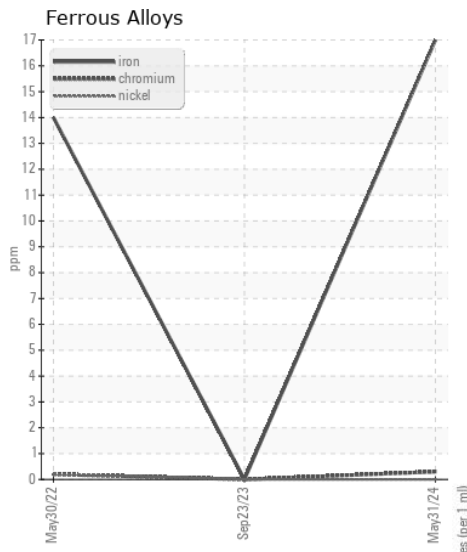
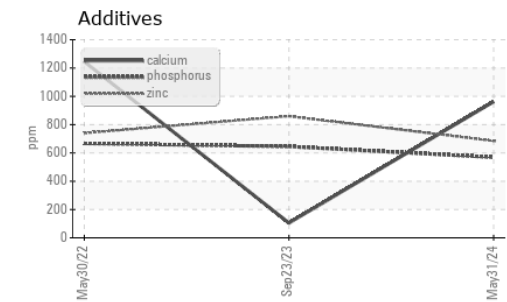
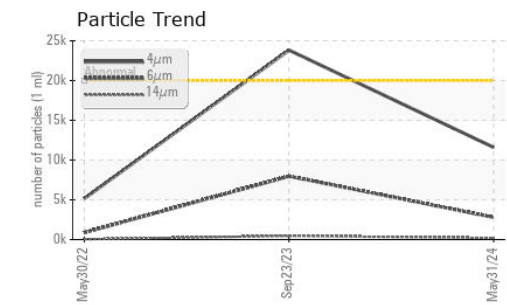
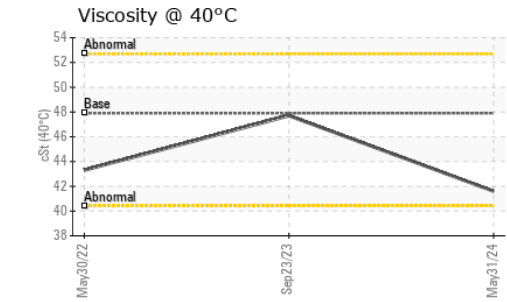
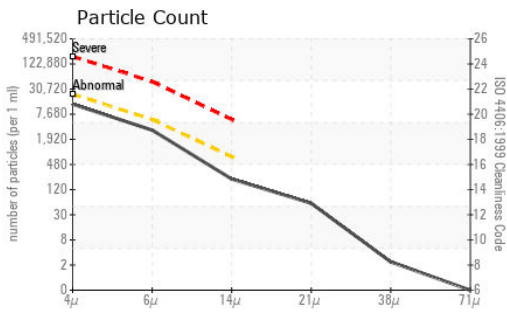
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	2	<1	2
Potassium	ppm	ASTM D5185(m)	>20	1	0	1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	11599	23829	5168
Particles >6µm		ASTM D7647	>5000	2790	7969	875
Particles >14µm		ASTM D7647	>640	190	467	32
Particles >21µm		ASTM D7647	>160	50	89	5
Particles >38µm		ASTM D7647	>40	2	6	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/19/15	22/20/16	20/17/12
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	VLITE	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

Additive levels indicate the addition of a different brand, or type of oil.
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		2	<1	1
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	<1	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	1	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	0	4	<1	4
Calcium	ppm	ASTM D5185(m)	100	962	105	1245
Phosphorus	ppm	ASTM D5185(m)	670	569	645	667
Zinc	ppm	ASTM D5185(m)	850	685	859	740
Sulfur	ppm	ASTM D5185(m)	1600	3367	1495	4073
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	41.6	47.7	43.3



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0288364 **Received** : 04 Jun 2024
Lab Number : 02639661 **Tested** : 05 Jun 2024
Unique Number : 5788823 **Diagnosed** : 06 Jun 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

American Iron and Metal
 997 CARPIN BEACH RD
 SAULT ST MARIE, ON
 CA P6A 6K4
 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.

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