



# LIEBHERR

## OIL ANALYSIS REPORT



Area

(354956)

Machine Id

LIEBHERR A922 128674-1509

Component

Hydraulic System

Fluid

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

WEAR

NORMAL

CONTAMINATION

NORMAL

FLUID CONDITION

ABNORMAL

### 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		LH	LH0274095	LH0238909
Sample Date		Client Info		18 Apr 2024	01 Sep 2023	20 Jan 2023
Machine Age	hrs	Client Info		3800	2993	2095
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Chngd	Not Chngd	Not Chngd
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>60	9	8	6
Chromium	ppm	ASTM D5185(m)	>40	1	1	<1
Nickel	ppm	ASTM D5185(m)	>10	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>5	0	<1	<1
Lead	ppm	ASTM D5185(m)	>5	0	<1	<1
Copper	ppm	ASTM D5185(m)	>15	4	4	4
Tin	ppm	ASTM D5185(m)	>5	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

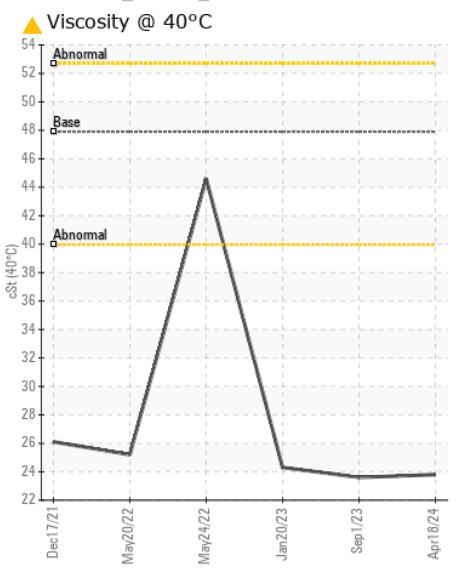
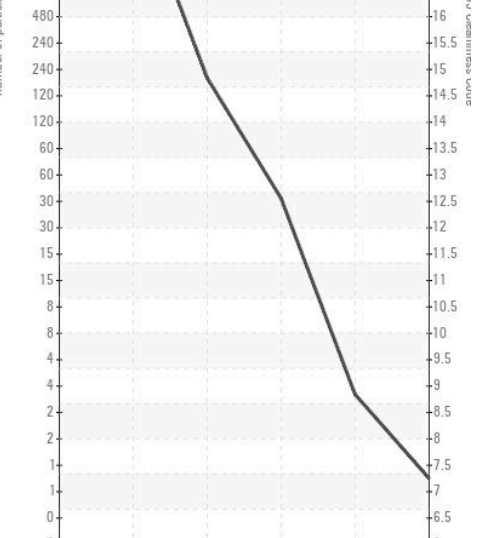
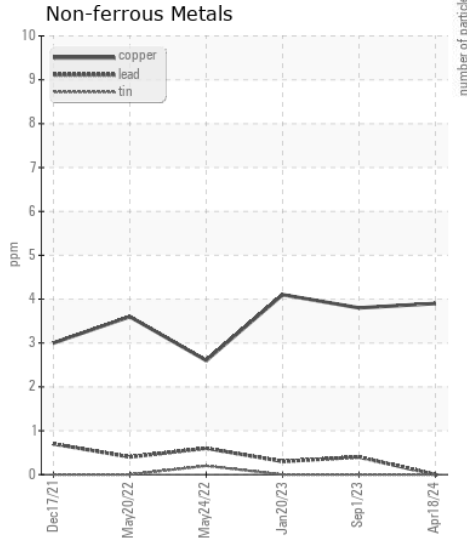
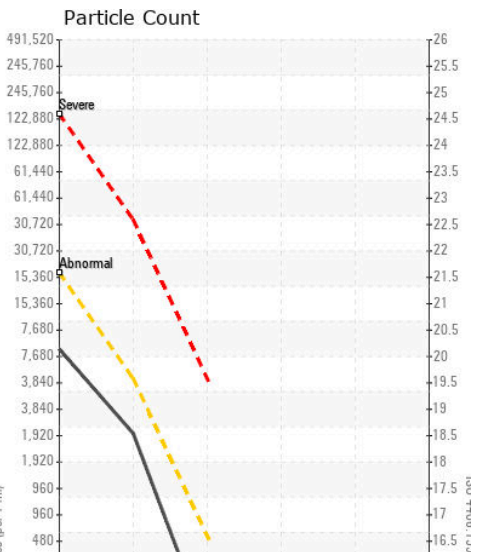
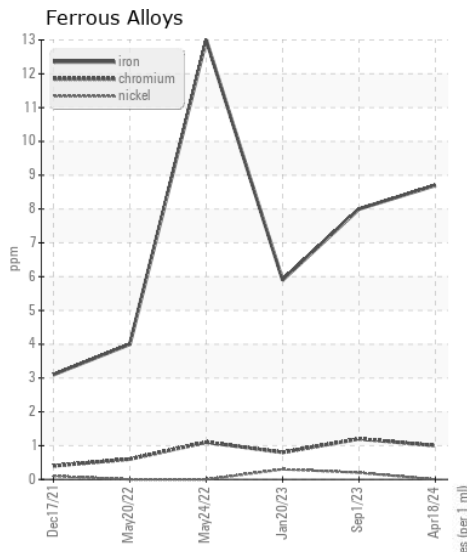
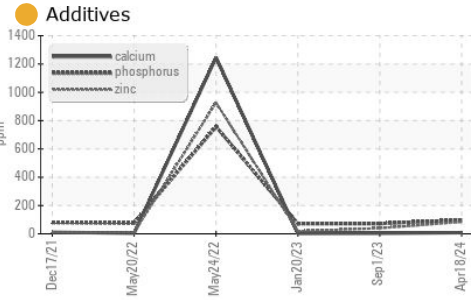
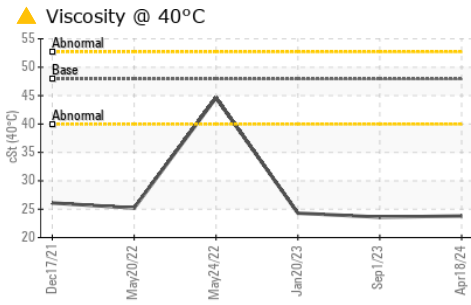
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	3	5	4
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	7372	6259	4866
Particles >6µm		ASTM D7647	>5000	2439	1070	987
Particles >14µm		ASTM D7647	>640	189	26	35
Particles >21µm		ASTM D7647	>160	39	11	5
Particles >38µm		ASTM D7647	>40	3	3	0
Particles >71µm		ASTM D7647	>10	1	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/15	20/17/12	19/17/12
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	NEG	NEG	.2%

### FLUID CONDITION

Viscosity of sample indicates oil is within ISO 22 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	<1	<1
Boron	ppm	ASTM D5185(m)	0	<1	<1	0
Barium	ppm	ASTM D5185(m)	0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	1	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	0
Calcium	ppm	ASTM D5185(m)	100	8	3	2
Phosphorus	ppm	ASTM D5185(m)	670	98	72	72
Zinc	ppm	ASTM D5185(m)	850	84	39	19
Sulfur	ppm	ASTM D5185(m)	1600	558	497	502
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	23.8	23.6	24.3



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH  
**Lab Number** : 02630976  
**Unique Number** : 5772129  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**Received** : 23 Apr 2024  
**Tested** : 23 Apr 2024  
**Diagnosed** : 24 Apr 2024 - Kevin Marson

**Transec Common Inc.**  
 2075 Boul. Fortin  
 Laval, QC  
 CA H7S 1P4  
 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: