



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**LIEBHERR L556 046000-1332**

Component  
**Hydraulic System**

Fluid  
**PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (105 LTR)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0288102</b>	LH0242095	LH0226602
Sample Date		Client Info		<b>15 May 2024</b>	18 Oct 2023	12 Jul 2023
Machine Age	hrs	Client Info		<b>6994</b>	6011	5647
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>20	<b>12</b>	9	9
Chromium	ppm	ASTM D5185(m)	>10	<b>3</b>	2	2
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>10	<b>5</b>	6	5
Copper	ppm	ASTM D5185(m)	>75	<b>3</b>	3	3
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

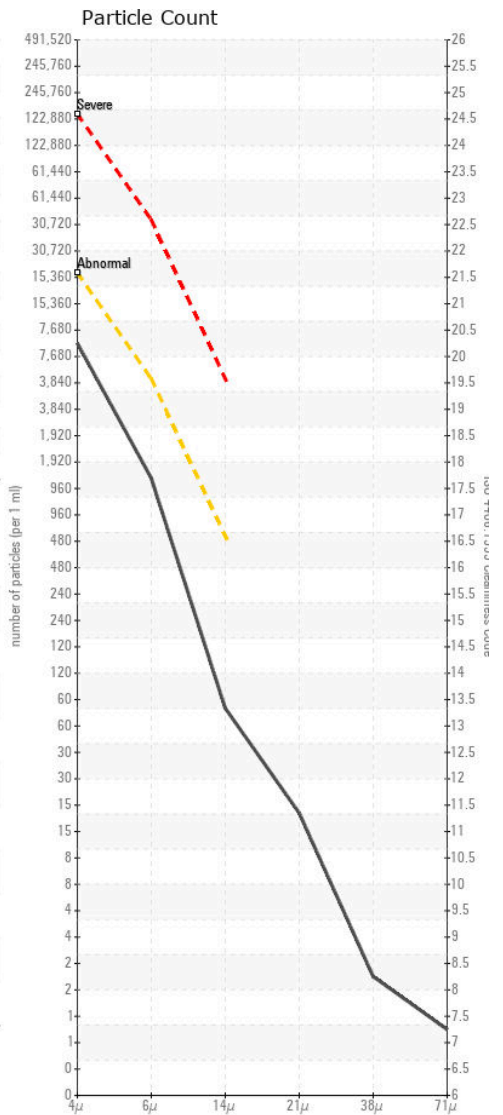
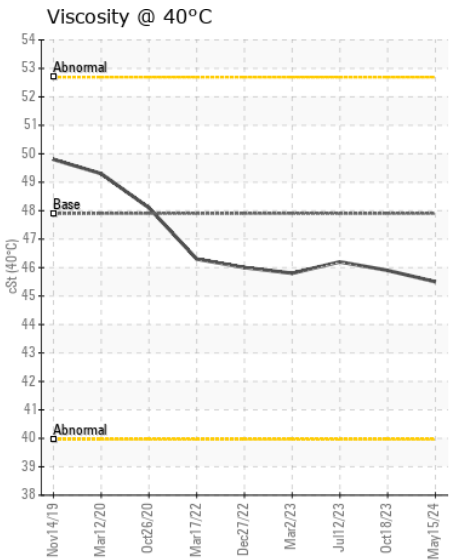
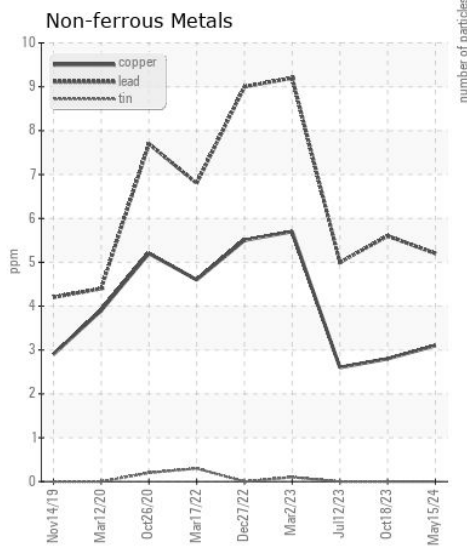
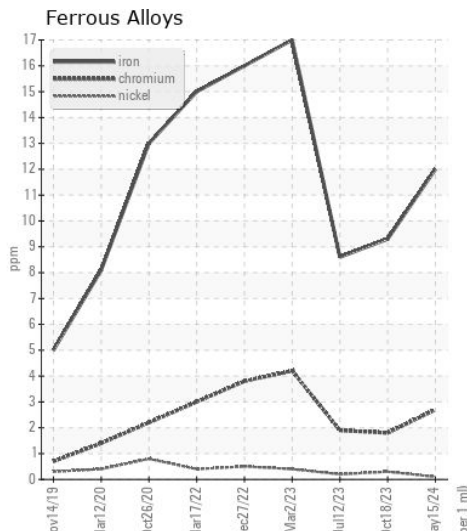
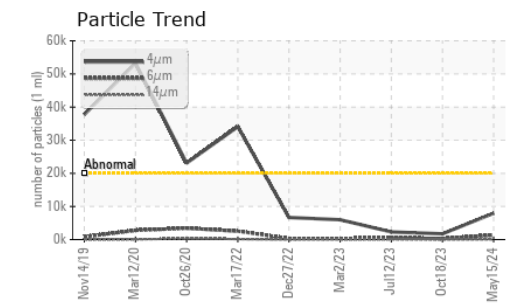
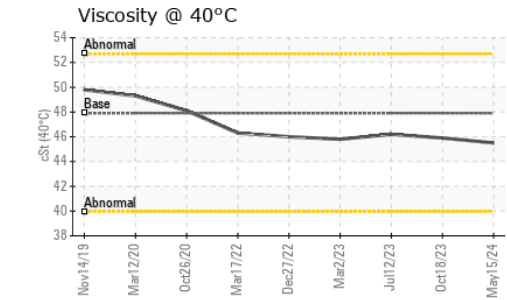
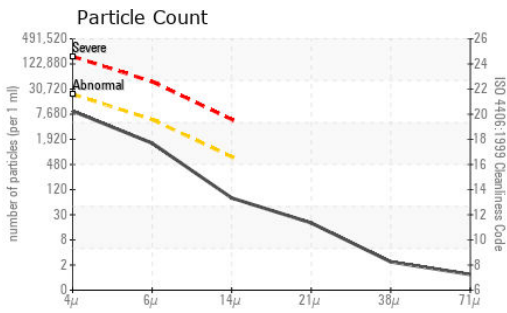
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	2	2
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>7957</b>	1735	2306
Particles >6µm		ASTM D7647	>5000	<b>1359</b>	284	489
Particles >14µm		ASTM D7647	>640	<b>67</b>	18	67
Particles >21µm		ASTM D7647	>160	<b>17</b>	4	17
Particles >38µm		ASTM D7647	>40	<b>2</b>	1	1
Particles >71µm		ASTM D7647	>10	<b>1</b>	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>20/18/13</b>	18/15/11	18/16/13
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Boron	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)	1	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	0	<b>3</b>	3	3
Calcium	ppm	ASTM D5185(m)	100	<b>413</b>	409	407
Phosphorus	ppm	ASTM D5185(m)	670	<b>594</b>	586	634
Zinc	ppm	ASTM D5185(m)	850	<b>741</b>	747	754
Sulfur	ppm	ASTM D5185(m)	1600	<b>2672</b>	2662	2732
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	<b>45.5</b>	45.9	46.2



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0288102 **Received** : 17 May 2024  
**Lab Number** : 02636376 **Tested** : 21 May 2024  
**Unique Number** : 5785538 **Diagnosed** : 21 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: PrtCount )

**ECOWASTE INDUSTRIES**  
 4 SPRUCE ST  
 NEW WESTMINSTER, BC  
 CA V3L 5G6  
 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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