



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

ATTENTION  
ATTENTION  
NORMAL



Machine Id  
**045705-1491**  
Component  
**Hydraulic System**  
Fluid

**PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL (200 LTR)**

### RECOMMENDATION

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		<b>LH0281287</b>	LH0265686	LH0186921
Sample Date		Client Info		<b>05 May 2024</b>	01 Aug 2023	02 Dec 2022
Machine Age	hrs	Client Info		<b>5888</b>	4919	3979
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>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ATTENTION</b>	ATTENTION	NORMAL

### WEAR

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
PQ		ASTM D8184*		<b>1</b>	17	0
Iron	ppm	ASTM D5185(m)	>50	<b>71</b>	62	54
Chromium	ppm	ASTM D5185(m)	>15	<b>2</b>	2	1
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>8	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>5	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185(m)	>15	<b>3</b>	3	3
Tin	ppm	ASTM D5185(m)	>5	<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

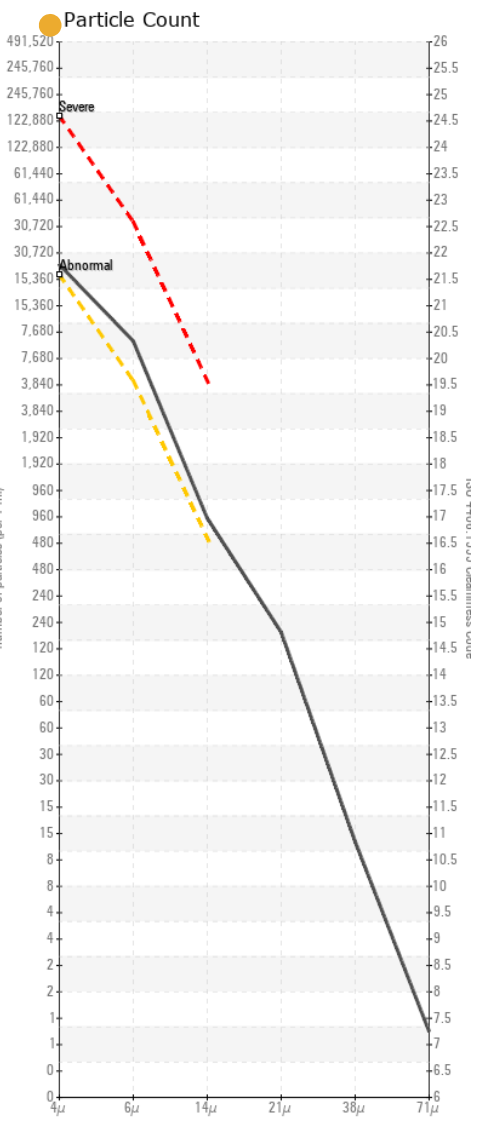
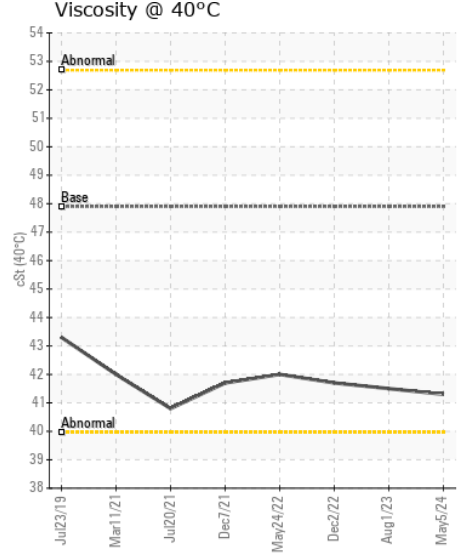
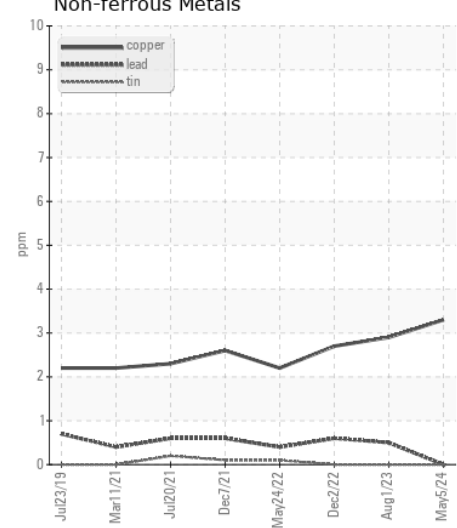
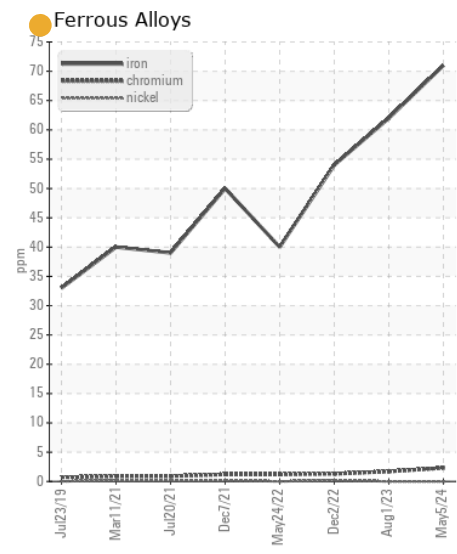
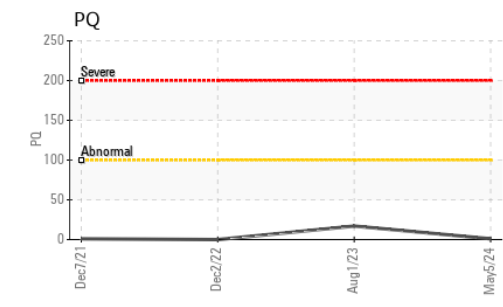
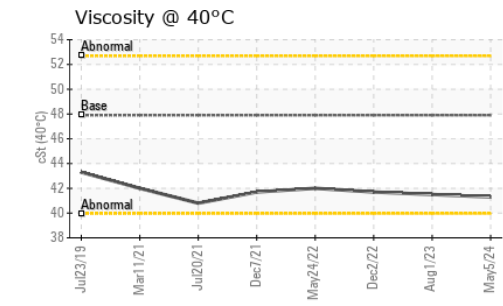
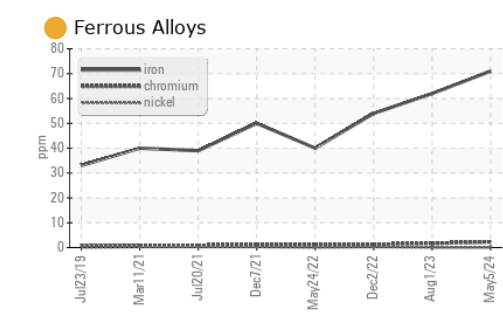
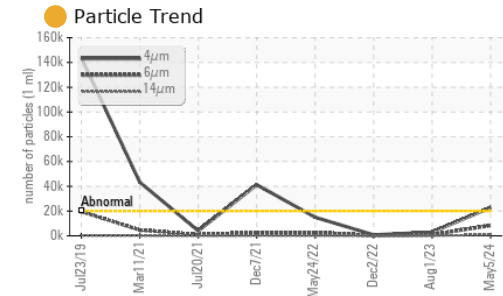
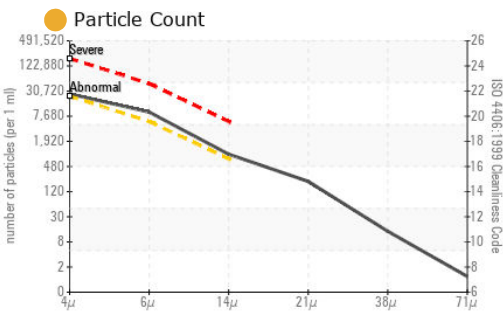
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Silicon	ppm	ASTM D5185(m)	>25	<b>1</b>	2	2
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>22832</b>	2973	756
Particles >6µm		ASTM D7647	>5000	<b>8393</b>	923	183
Particles >14µm		ASTM D7647	>640	<b>827</b>	61	16
Particles >21µm		ASTM D7647	>160	<b>186</b>	15	4
Particles >38µm		ASTM D7647	>40	<b>12</b>	1	0
Particles >71µm		ASTM D7647	>10	<b>1</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>22/20/17</b>	19/17/13	17/15/11
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>VLITE</b>	VLITE	NONE
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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sodium	ppm	ASTM D5185(m)		<b>1</b>	1	1
Boron	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	1	1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	<1	<1
Manganese	ppm	ASTM D5185(m)	1	<b>1</b>	1	1
Magnesium	ppm	ASTM D5185(m)	0	<b>4</b>	4	5
Calcium	ppm	ASTM D5185(m)	100	<b>245</b>	255	315
Phosphorus	ppm	ASTM D5185(m)	670	<b>551</b>	578	558
Zinc	ppm	ASTM D5185(m)	850	<b>701</b>	663	637
Sulfur	ppm	ASTM D5185(m)	1600	<b>1584</b>	1593	1649
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	<b>41.3</b>	41.5	41.7



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0281287 **Received** : 13 May 2024  
**Lab Number** : 02634953 **Tested** : 14 May 2024  
**Unique Number** : 5776106 **Diagnosed** : 14 May 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ, PrtCount )

**American Iron and Metal**  
 1273 Kelly Lake Rd.  
 Sudbury, ON  
 CA P3E 5P5  
 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: