



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
(347674)
Machine Id
LIEBHERR L586 062473-1761

Component
Hydraulic System

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

RECOMMENDATION

Check seals and/or filters for points of contaminant entry. 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281148	LH0260439	LH0226574
Sample Date		Client Info		09 Jan 2024	04 Aug 2023	17 Mar 2023
Machine Age	hrs	Client Info		3569	2963	2471
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	28	23	20
Chromium	ppm	ASTM D5185(m)	>5	2	2	2
Nickel	ppm	ASTM D5185(m)	>2	0	0	0
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>5	8	8	7
Lead	ppm	ASTM D5185(m)	>15	12	11	10
Copper	ppm	ASTM D5185(m)	>10	6	5	5
Tin	ppm	ASTM D5185(m)	>2	<1	<1	<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

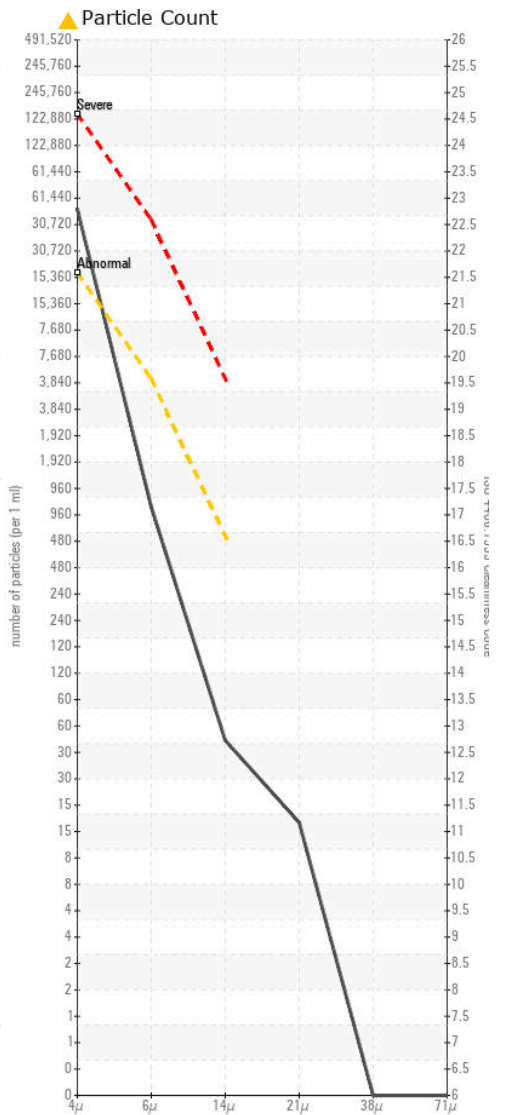
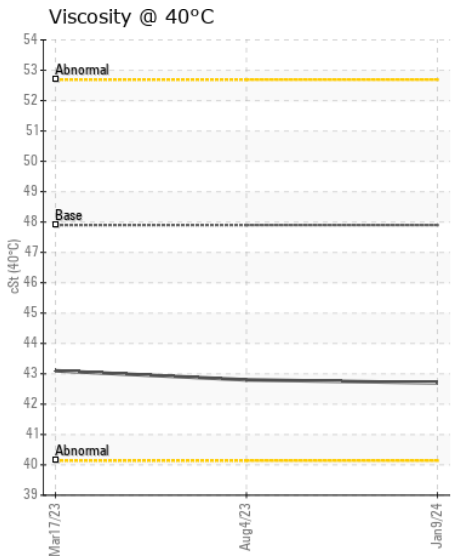
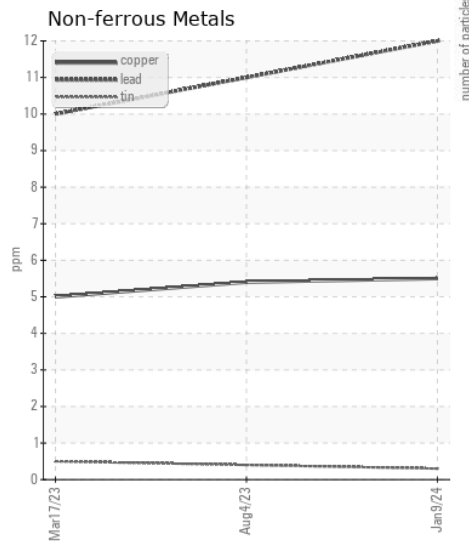
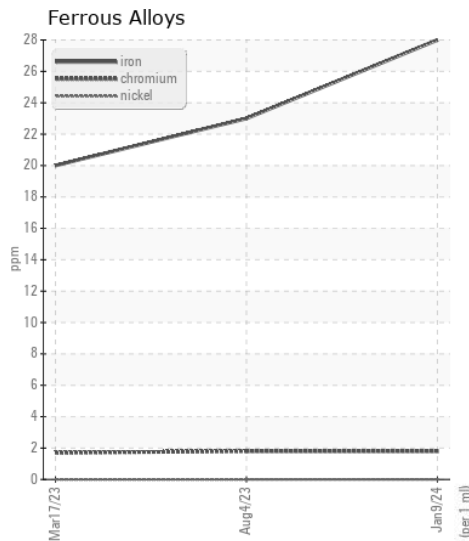
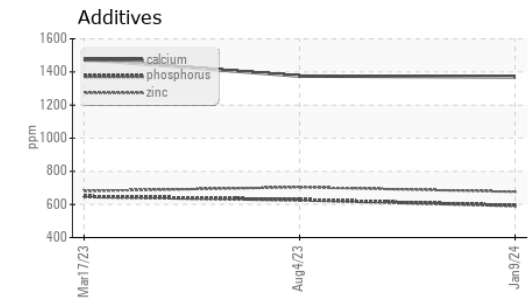
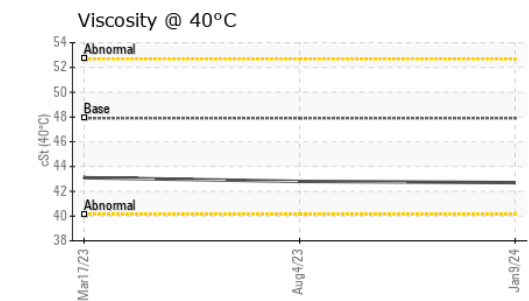
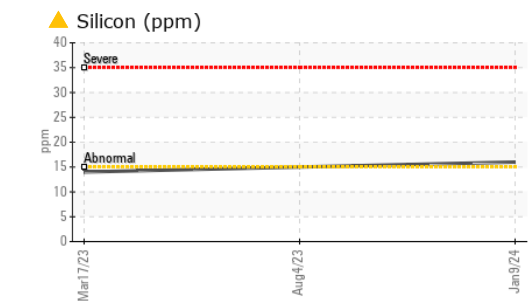
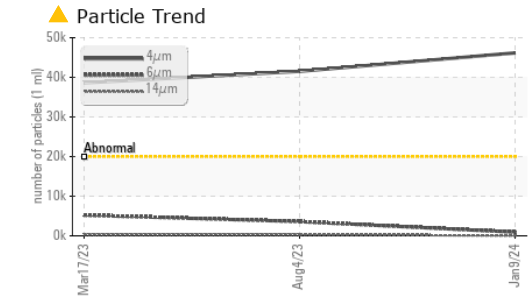
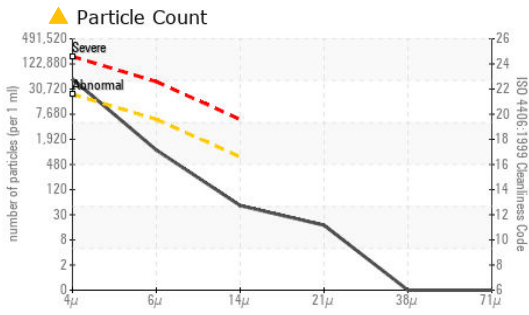
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Elemental level of silicon (Si) above normal indicating ingress of seal material.

Silicon	ppm	ASTM D5185(m)	>15	▲ 16	▲ 15	14
Potassium	ppm	ASTM D5185(m)	>20	2	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	▲ 46161	▲ 41519	▲ 38609
Particles >6µm		ASTM D7647	>5000	933	3593	▲ 5214
Particles >14µm		ASTM D7647	>640	44	307	289
Particles >21µm		ASTM D7647	>160	15	56	50
Particles >38µm		ASTM D7647	>40	0	1	1
Particles >71µm		ASTM D7647	>10	0	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/17/13	▲ 23/19/15	▲ 22/20/15
Silt	scalar	Visual*	NONE	NONE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	VLITE
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 oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		3	3	3
Boron	ppm	ASTM D5185(m)	0	<1	1	<1
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	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	8	8	7
Calcium	ppm	ASTM D5185(m)	100	1370	1375	1475
Phosphorus	ppm	ASTM D5185(m)	670	593	628	648
Zinc	ppm	ASTM D5185(m)	850	676	704	681
Sulfur	ppm	ASTM D5185(m)	1600	4298	4535	4338
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	42.7	42.8	43.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281148 **Received** : 15 Jan 2024
Lab Number : 02608739 **Diagnosed** : 16 Jan 2024
Unique Number : 5709825 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

POSCHNER CONSTRUCTION LTD.
 5400 72ND STREET
 DELTA, BC
 CA V4K 3N3
 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: