



LIEBHERR

OIL ANALYSIS REPORT

WEAR	MARGINAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
096750-1204
Component
Hydraulic System

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

RECOMMENDATION

We advise that you check for visible metal particles in the oil. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0285140	LH0274879	LH0270241
Sample Date		Client Info		05 Feb 2024	31 Oct 2023	17 Oct 2023
Machine Age	hrs	Client Info		10945	10469	10394
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				MARGINAL	NORMAL	NORMAL

WEAR

Light concentration of visible metal present.

Iron	ppm	ASTM D5185(m)	>60	8	7	3
Chromium	ppm	ASTM D5185(m)	>40	<1	<1	0
Nickel	ppm	ASTM D5185(m)	>10	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>5	<1	<1	0
Lead	ppm	ASTM D5185(m)	>5	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>15	2	2	1
Tin	ppm	ASTM D5185(m)	>5	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	▲ VLITE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

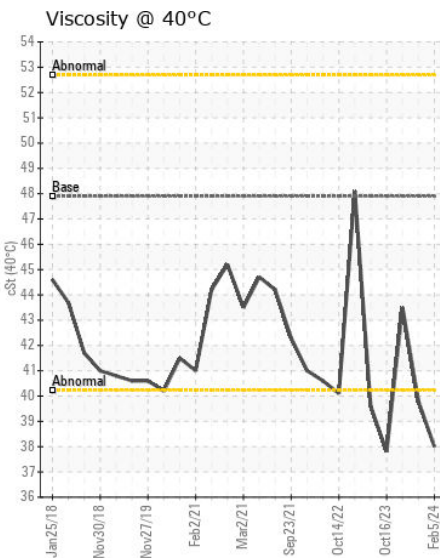
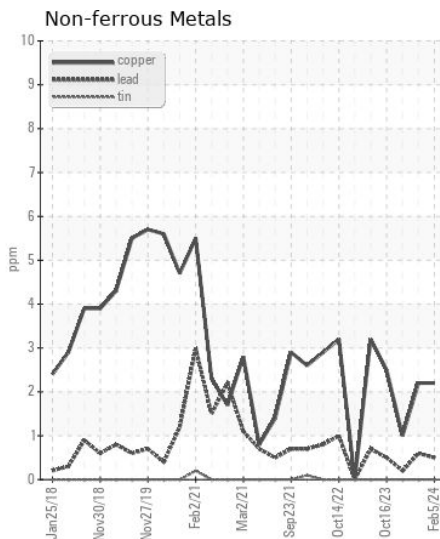
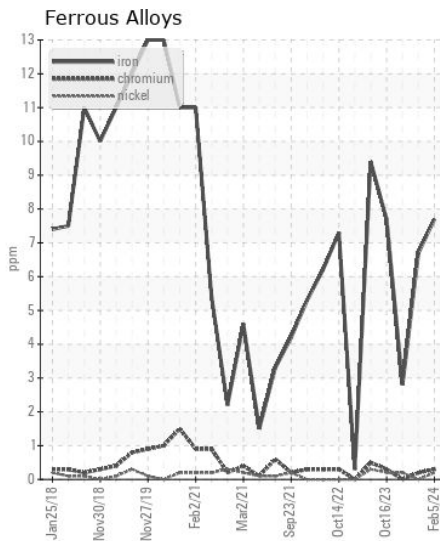
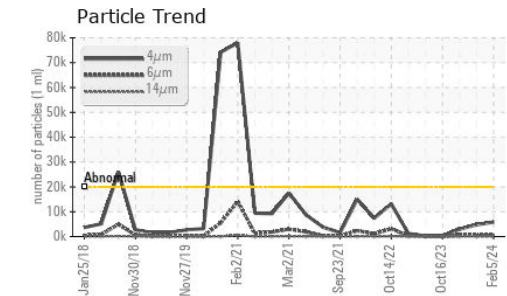
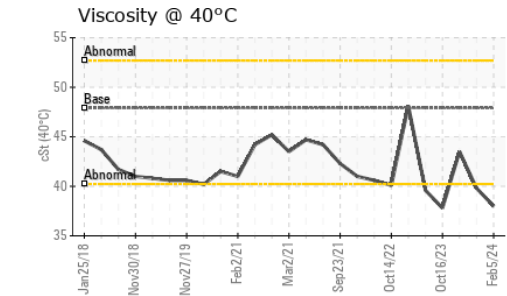
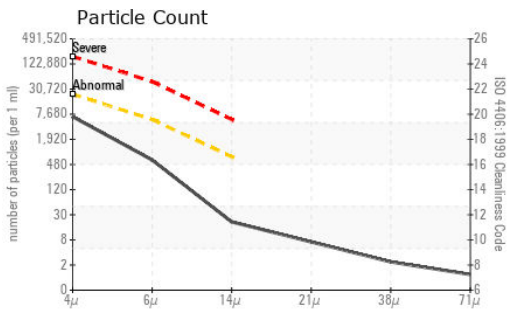
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>15	<1	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	5844	4761	2975
Particles >6µm		ASTM D7647	>5000	541	469	641
Particles >14µm		ASTM D7647	>640	18	12	19
Particles >21µm		ASTM D7647	>160	6	3	3
Particles >38µm		ASTM D7647	>40	2	1	1
Particles >71µm		ASTM D7647	>10	1	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/16/11	19/16/11	19/17/11
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	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 32 range, advise investigate.

Sodium	ppm	ASTM D5185(m)		1	1	<1
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	2	2	<1
Manganese	ppm	ASTM D5185(m)	1	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	4	3	2
Calcium	ppm	ASTM D5185(m)	100	366	213	154
Phosphorus	ppm	ASTM D5185(m)	670	596	612	628
Zinc	ppm	ASTM D5185(m)	850	710	762	811
Sulfur	ppm	ASTM D5185(m)	1600	1950	1870	1652
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	38.0	39.8	43.5



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0285140
Lab Number : 02617434
Unique Number : 5734544
Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, PrtCount, PrtFilter)

American Iron and Metal
 120 Bentley Avenue
 Ottawa, ON
 CA K2E 6T9
 Contact: Yvon Lalonde

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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