



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
031629-793
Component
Hydraulic System
Fluid

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0289503	LH0285002	LH
Sample Date		Client Info		24 May 2024	01 Mar 2024	09 Jan 2022
Machine Age	hrs	Client Info		16113	15574	12577
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	7	5	8
Chromium	ppm	ASTM D5185(m)	>15	2	2	2
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)		1	<1	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>8	0	<1	<1
Lead	ppm	ASTM D5185(m)	>5	0	<1	<1
Copper	ppm	ASTM D5185(m)	>15	4	3	3
Tin	ppm	ASTM D5185(m)	>5	0	0	<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

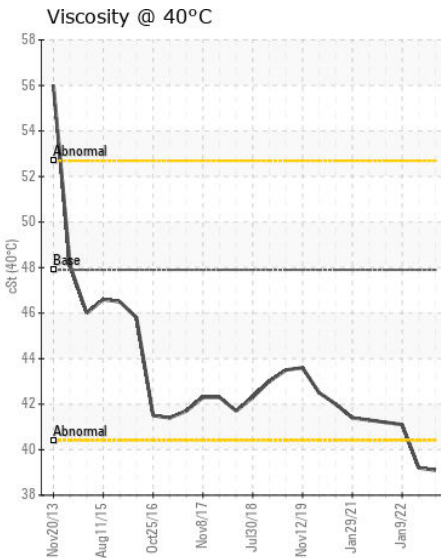
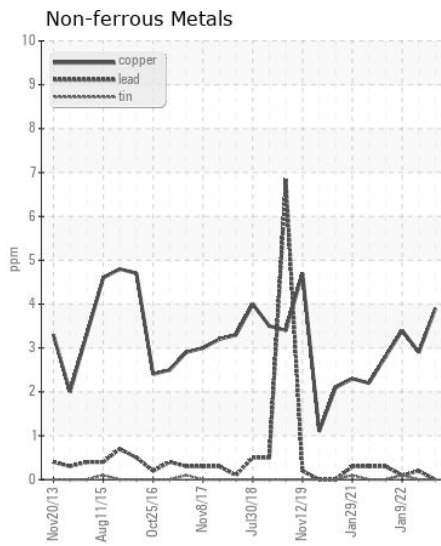
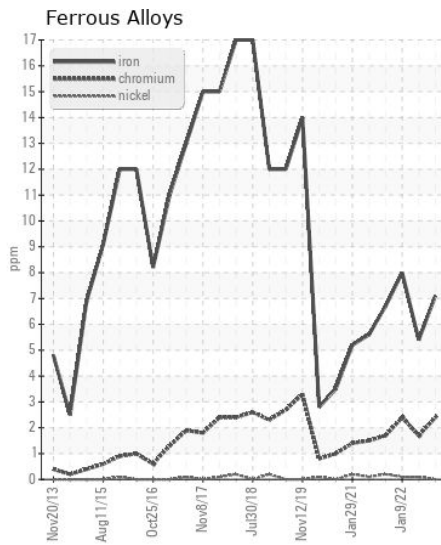
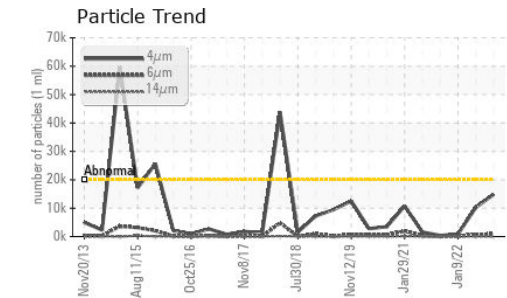
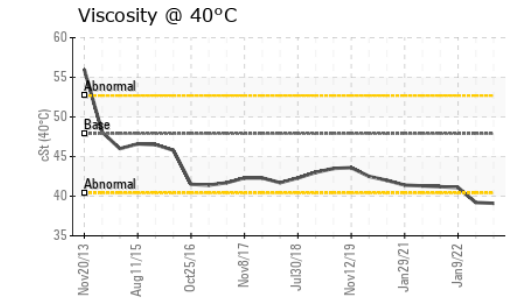
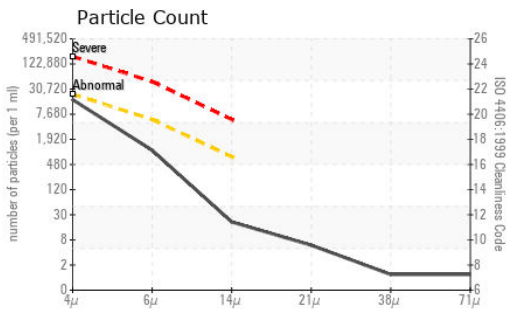
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>25	1	2	1
Potassium	ppm	ASTM D5185(m)	>20	2	1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	14856	10247	862
Particles >6µm		ASTM D7647	>5000	924	704	197
Particles >14µm		ASTM D7647	>640	18	46	10
Particles >21µm		ASTM D7647	>160	5	11	2
Particles >38µm		ASTM D7647	>40	1	1	0
Particles >71µm		ASTM D7647	>10	1	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	21/17/11	21/17/13	17/15/10
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	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

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	4	4	<1
Barium	ppm	ASTM D5185(m)	0	1	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	0	<1	0
Manganese	ppm	ASTM D5185(m)	1	0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	27	29	<1
Calcium	ppm	ASTM D5185(m)	100	144	156	97
Phosphorus	ppm	ASTM D5185(m)	670	538	569	654
Zinc	ppm	ASTM D5185(m)	850	663	698	797
Sulfur	ppm	ASTM D5185(m)	1600	1343	1529	1476
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	39.1	39.2	41.1



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289503
Lab Number : 02638524
Unique Number : 5787686
Test Package : MOB 1 (Additional Tests: Bottom, BottomAnalysis, FilterPatch, PrtCount, PrtFilter)

Received : 29 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 2024 - Kevin Marson

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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