



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A934C 063551
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 46 (350 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286389	LH0284062	LH0260522
Sample Date		Client Info		14 Jun 2024	18 Mar 2024	15 Nov 2023
Machine Age	hrs	Client Info		19528	19058	18492
Oil Age	hrs	Client Info		1591	500	1824
Filter Age	hrs	Client Info		470	566	703
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>70	18	17	29
Chromium	ppm	ASTM D5185(m)	>5	5	5	▲ 8
Nickel	ppm	ASTM D5185(m)	>2	<1	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	<1
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>5	<1	0	1
Copper	ppm	ASTM D5185(m)	>15	3	2	4
Tin	ppm	ASTM D5185(m)	>2	0	0	0
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

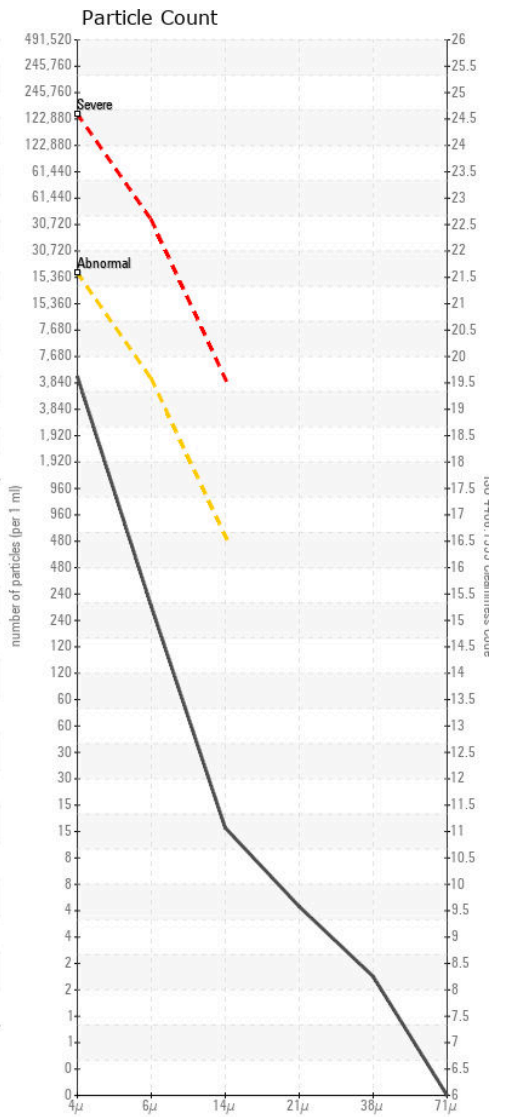
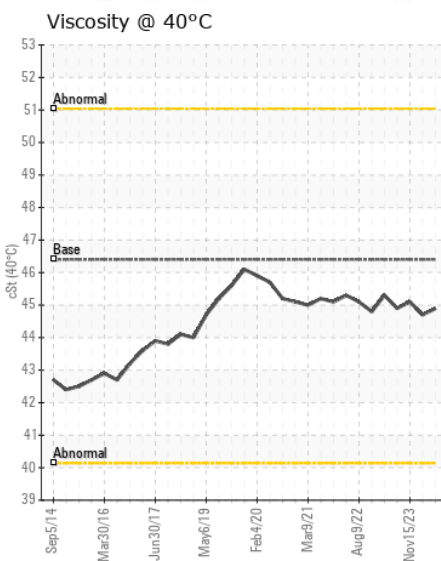
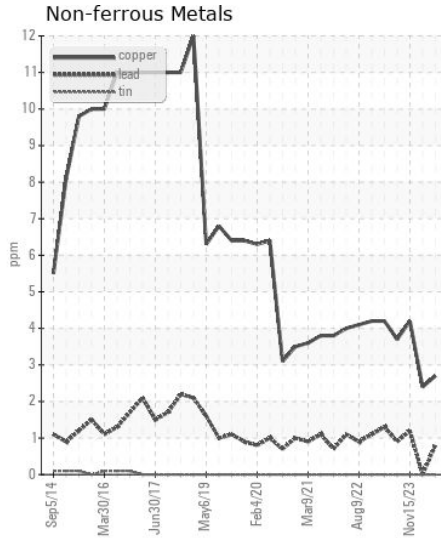
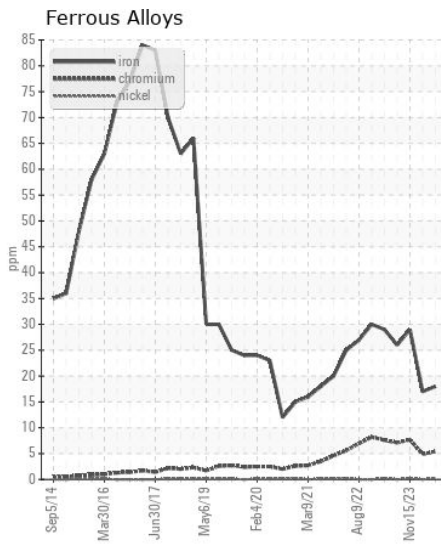
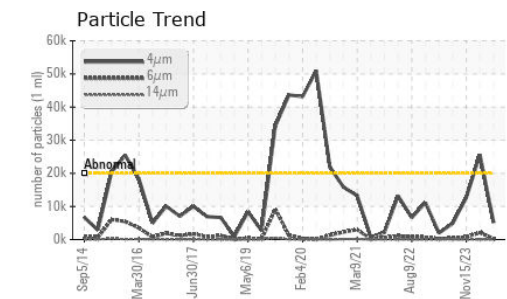
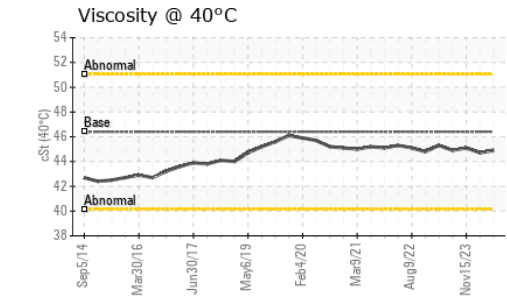
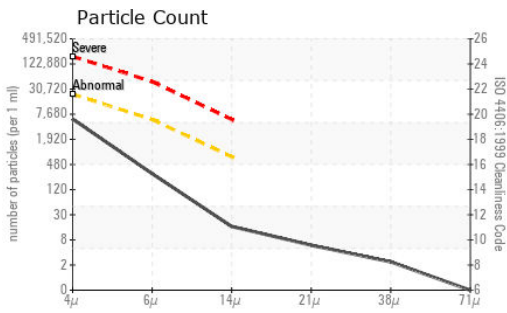
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>20	<1	0	2
Potassium	ppm	ASTM D5185(m)	>20	4	1	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	5160	● 25590	12736
Particles >6µm		ASTM D7647	>5000	255	2088	805
Particles >14µm		ASTM D7647	>640	14	31	18
Particles >21µm		ASTM D7647	>160	5	8	5
Particles >38µm		ASTM D7647	>40	2	2	1
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/15/11	● 22/18/12	21/17/11
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	VLITE
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)		3	1	3
Boron	ppm	ASTM D5185(m)	0	<1	<1	<1
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	<1	0	0
Manganese	ppm	ASTM D5185(m)	0	<1	0	0
Magnesium	ppm	ASTM D5185(m)	0	12	13	6
Calcium	ppm	ASTM D5185(m)	50	76	78	82
Phosphorus	ppm	ASTM D5185(m)	330	336	341	341
Zinc	ppm	ASTM D5185(m)	430	388	410	364
Sulfur	ppm	ASTM D5185(m)	760	762	749	704
Visc @ 40°C	cSt	ASTM D7279(m)	46.4	44.9	44.7	45.1



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0286389
Lab Number : 02643430
Unique Number : 5800969
Test Package : MOB 1 (Additional Tests: PrtCount)

Received : 21 Jun 2024
Tested : 24 Jun 2024
Diagnosed : 24 Jun 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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