



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH60C 106512-1528

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		LH0278464	LH0278577	LH0265768
Sample Date		Client Info		21 Mar 2024	05 Jan 2024	28 Sep 2023
Machine Age	hrs	Client Info		22529	21976	20758
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	N/A	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

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

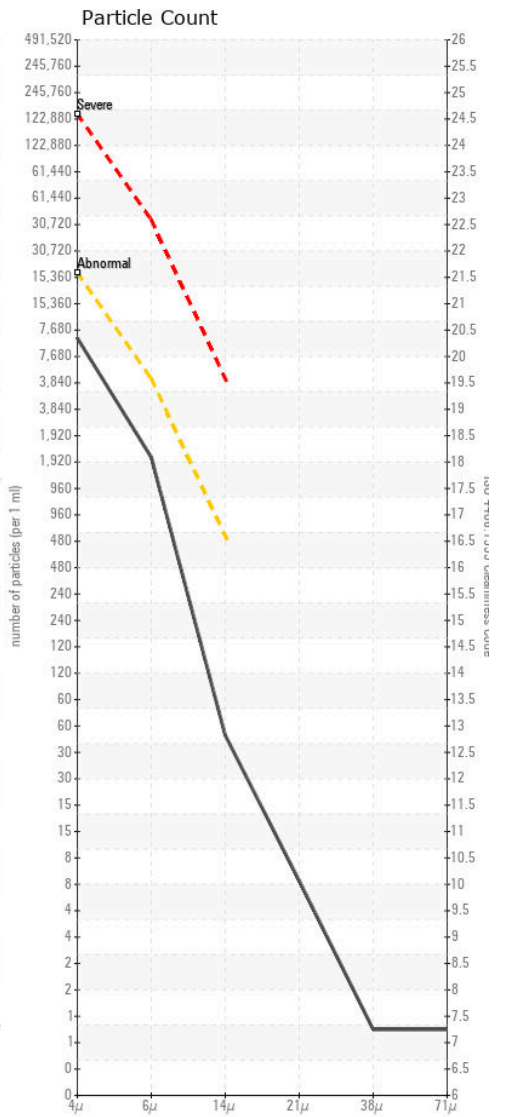
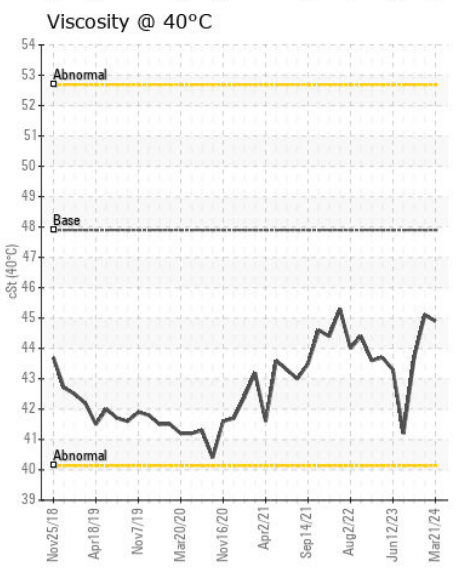
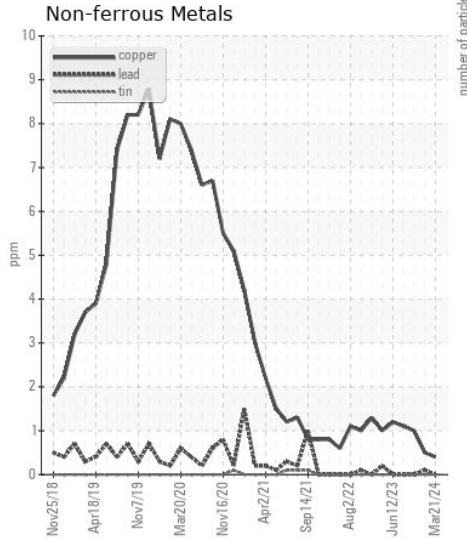
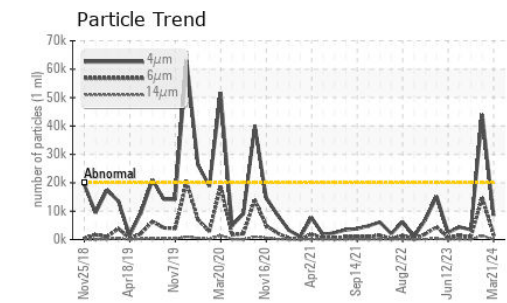
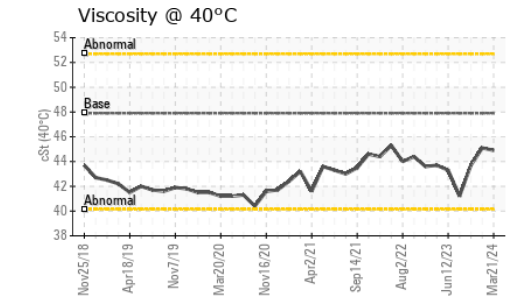
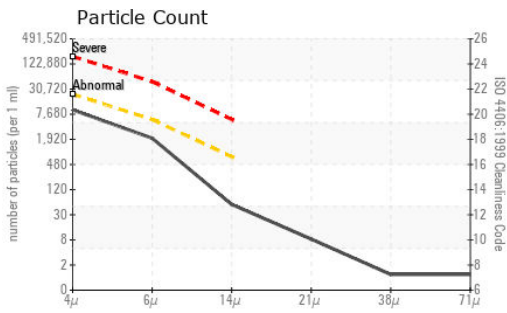
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185(m)	>25	0	<1	<1
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	8500	▲ 44052	3430
Particles >6µm		ASTM D7647	>5000	1787	▲ 14766	940
Particles >14µm		ASTM D7647	>640	47	▲ 1338	34
Particles >21µm		ASTM D7647	>160	7	▲ 330	6
Particles >38µm		ASTM D7647	>40	1	19	0
Particles >71µm		ASTM D7647	>10	1	3	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/13	▲ 23/21/18	19/17/12
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	VLITE	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)		0	0	<1
Boron	ppm	ASTM D5185(m)	0	0	0	<1
Barium	ppm	ASTM D5185(m)	0	0	0	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)	1	0	0	0
Magnesium	ppm	ASTM D5185(m)	0	3	6	24
Calcium	ppm	ASTM D5185(m)	100	100	102	85
Phosphorus	ppm	ASTM D5185(m)	670	644	655	558
Zinc	ppm	ASTM D5185(m)	850	854	829	730
Sulfur	ppm	ASTM D5185(m)	1600	1510	1600	1324
Visc @ 40°C	cSt	ASTM D7279(m)	47.9	44.9	45.1	43.7



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0278464
Lab Number : 02627393
Unique Number : 5760525
Test Package : MOB 1 (Additional Tests: PrtCount)

Gerdau - Mandak Metal Processors Ltd.,
 1 Railway St., P.O. Box 334
 Selkirk, MB
 CA R1A 2B3
 Contact: Santiago Giraldo
 santiago.giraldo@gerdau.com

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: (204)482-8241