



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH60M 112212-1217
Component
Hydraulic System
Fluid
PETRO CANADA HYDREX AW 22 (--- LTR)

RECOMMENDATION

Nous vous recommandons de vérifier la source de l'infiltration d'eau. Nous recommandons le remplacement des filtres de ce composant. Confirm the source of the lubricant being utilized for top-up/fill. Nous vous recommandons d'échantillonner de nouveau dès que possible afin de contrôler la situation.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0279406	LH0260984	LH0269831
Sample Date		Client Info		13 Jan 2024	05 Nov 2023	26 Aug 2023
Machine Age	hrs	Client Info		11086	10681	10300
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	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Les taux d'usure de tous les composants sont normaux.

Iron	ppm	ASTM D5185(m)	>60	7	6	8
Chromium	ppm	ASTM D5185(m)	>40	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>10	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	0
Aluminum	ppm	ASTM D5185(m)	>5	1	<1	<1
Lead	ppm	ASTM D5185(m)	>5	0	<1	<1
Copper	ppm	ASTM D5185(m)	>15	2	2	2
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	VLITE	NONE	NONE

CONTAMINATION

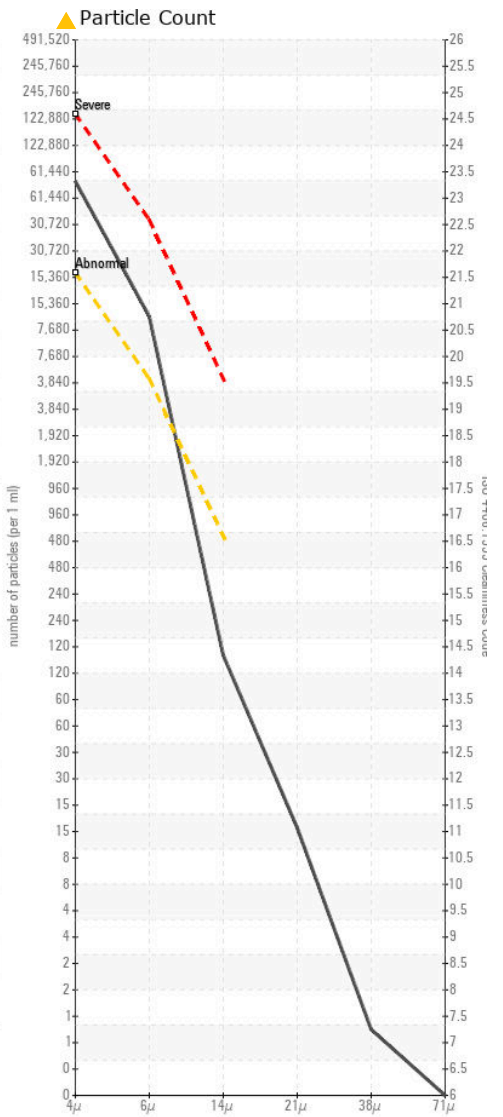
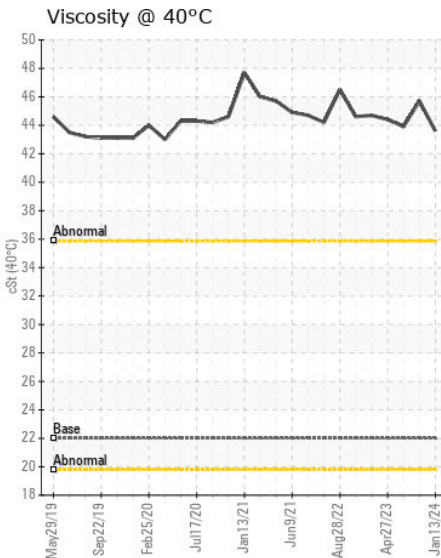
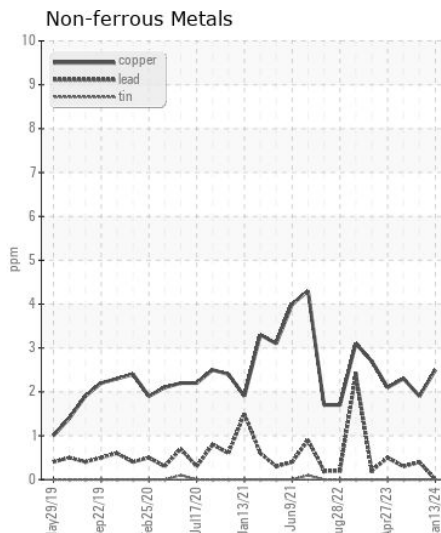
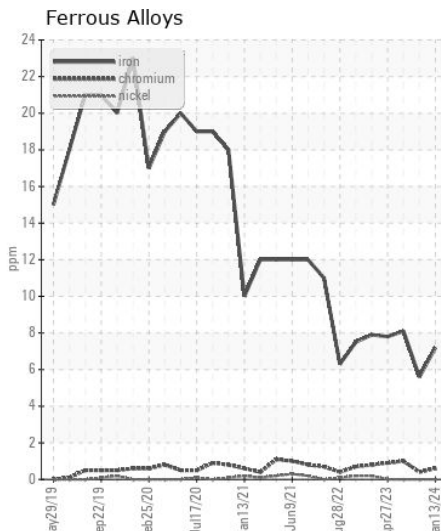
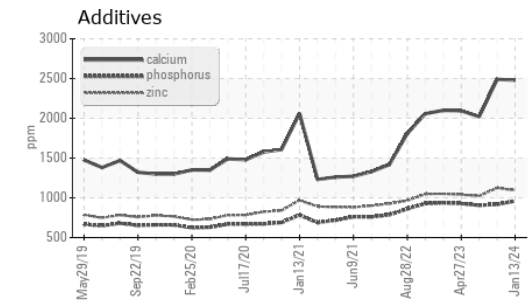
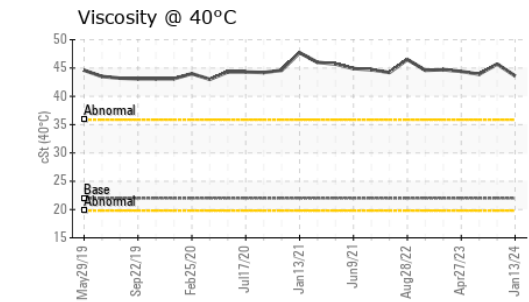
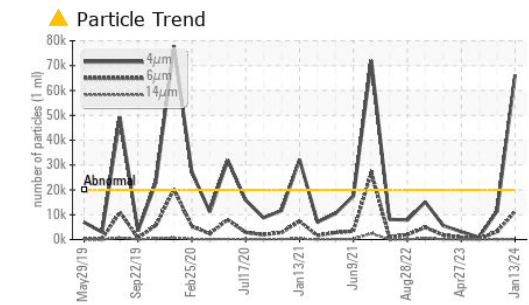
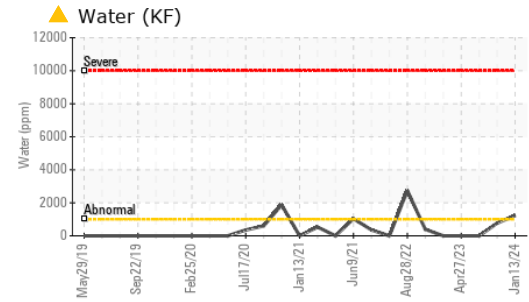
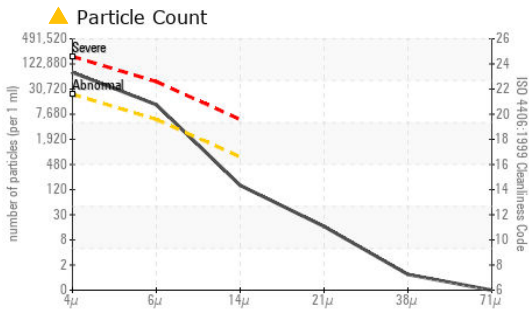
Il y a une quantité modérée de particules (de 4 à 14 microns) dans l'huile. Concentration modérée d'eau dans l'huile.

Silicon	ppm	ASTM D5185(m)	>15	3	3	2
Potassium	ppm	ASTM D5185(m)	>20	1	<1	<1
Water	%	ASTM D6304*	>0.1	▲ 0.123	0.077	---
ppm Water	ppm	ASTM D6304*	>1000	▲ 1232	771.0	---
Particles >4µm		ASTM D7647	>20000	▲ 66275	11443	935
Particles >6µm		ASTM D7647	>5000	▲ 11286	3249	316
Particles >14µm		ASTM D7647	>640	134	104	27
Particles >21µm		ASTM D7647	>160	14	17	7
Particles >38µm		ASTM D7647	>40	1	1	0
Particles >71µm		ASTM D7647	>10	0	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/21/14	21/19/14	17/15/12
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	▲ .2%	.5%	NEG

FLUID CONDITION

Les niveaux d'additifs indiquent l'ajout d'une autre marque ou d'un autre type d'huile. La viscosité de l'échantillon se situe dans la portée de l'ISO 46; nous vous conseillons de vérifier. l'huile peut encore servir si la contamination peut être réduite à un niveau acceptable.

Sodium	ppm	ASTM D5185(m)		3	4	3
Boron	ppm	ASTM D5185(m)	0	4	4	3
Barium	ppm	ASTM D5185(m)	0	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	2	2	2
Manganese	ppm	ASTM D5185(m)	1	0	0	<1
Magnesium	ppm	ASTM D5185(m)	0	32	31	27
Calcium	ppm	ASTM D5185(m)	50	2479	2490	2020
Phosphorus	ppm	ASTM D5185(m)	330	960	918	906
Zinc	ppm	ASTM D5185(m)	430	1094	1124	1022
Sulfur	ppm	ASTM D5185(m)	760	3605	3348	3088
Visc @ 40°C	cSt	ASTM D7279(m)	22.0	43.6	45.7	43.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 ARCELORMITTAL LONG PRODUITS CANADA
Sample No. : LH0279406 **Received** : 17 Jan 2024
Lab Number : 02609436 **Diagnosed** : 22 Jan 2024
Unique Number : 5710522 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: KF, PrtCount)

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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