



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH80M 122402-1218

Component
Diesel Engine

Fluid
CHEVRON DELO 400 XSP 5W30 (42 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0279416	LH0274208	LH0269945
Sample Date		Client Info		23 Dec 2023	21 Oct 2023	19 Aug 2023
Machine Age	hrs	Client Info		9463	8989	8585
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

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

Iron	ppm	ASTM D5185(m)	>100	4	5	7
Chromium	ppm	ASTM D5185(m)	>5	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>15	3	2	3
Lead	ppm	ASTM D5185(m)	>30	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>125	<1	2	2
Tin	ppm	ASTM D5185(m)	>5	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

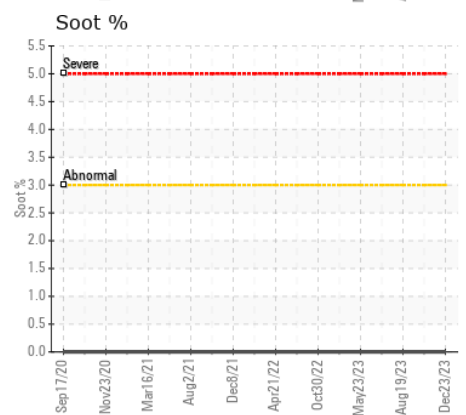
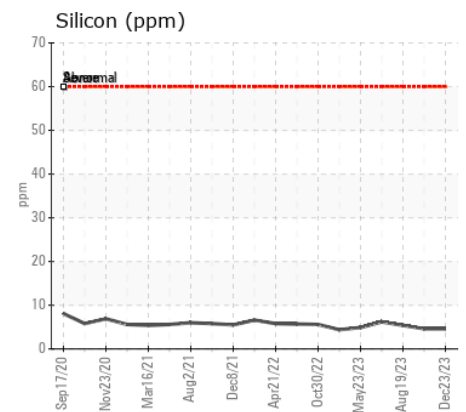
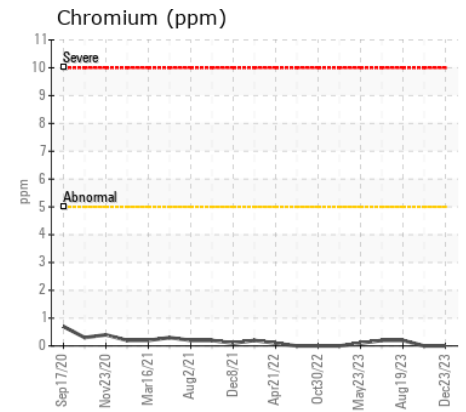
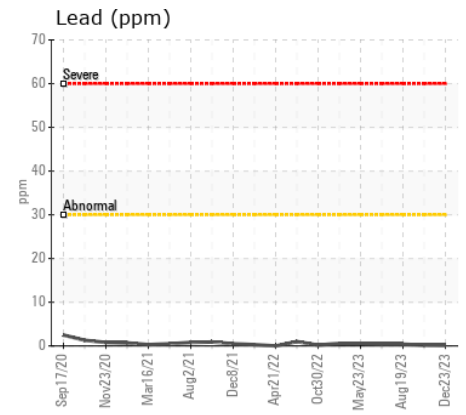
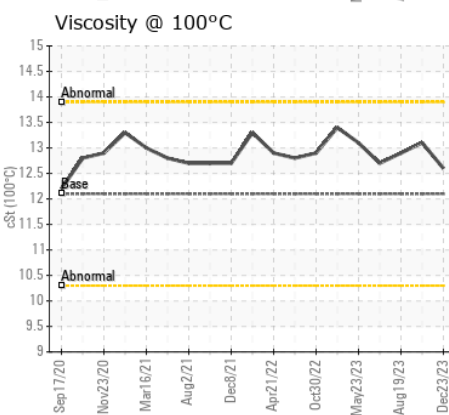
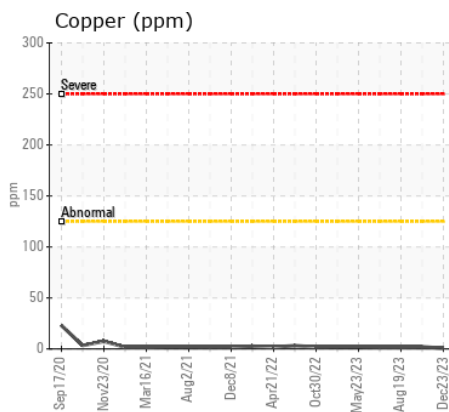
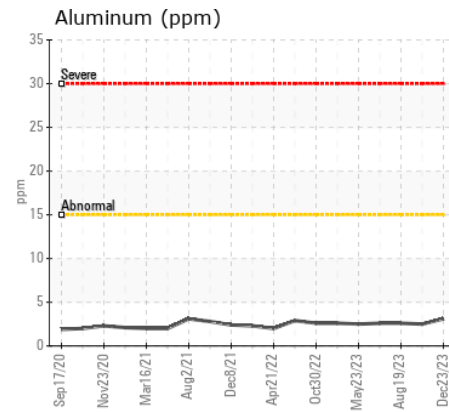
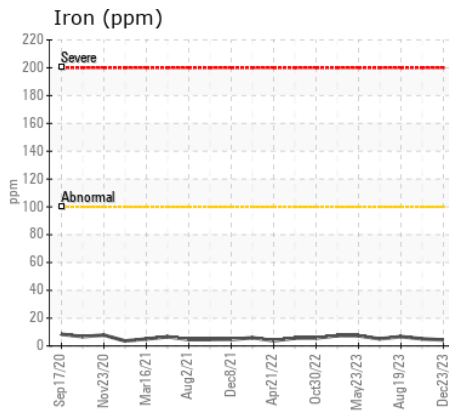
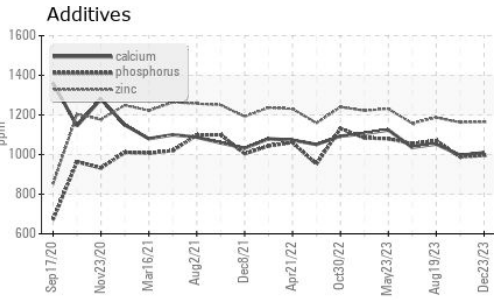
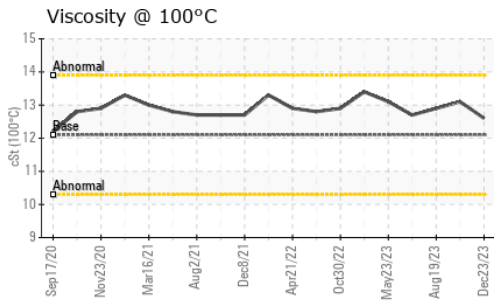
Il n'y a aucun indice de contamination dans l'huile.

Silicon	ppm	ASTM D5185(m)	>60	5	5	5
Potassium	ppm	ASTM D5185(m)	>20	3	3	8
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0	0	0
Nitration	Abs/cm	ASTM D7624*	>20	12.1	11.0	12.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	39.0	38.7	39.7
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Les niveaux d'additifs indiquent l'ajout d'une autre marque ou d'un autre type d'huile. L'état de l'huile est acceptable pour la durée de service.

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)		60	58	47
Barium	ppm	ASTM D5185(m)		0	<1	0
Molybdenum	ppm	ASTM D5185(m)		47	45	49
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)		854	839	882
Calcium	ppm	ASTM D5185(m)		1010	996	1053
Phosphorus	ppm	ASTM D5185(m)	800	996	988	1071
Zinc	ppm	ASTM D5185(m)	800	1164	1162	1187
Sulfur	ppm	ASTM D5185(m)	3000	2646	2516	2583
Oxidation	Abs/.1mm	ASTM D7414*	>25	47.9	46.2	46.4
Visc @ 100°C	cSt	ASTM D7279(m)	12.1	12.6	13.1	12.9



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 ARCELORMITTAL LONG PRODUITS CANADA
Sample No. : LH0279416 **Received** : 10 Jan 2024 3185 ROUTE MARIE-VICTORIN
Lab Number : 02607708 **Diagnosed** : 10 Jan 2024 CONTRECOEUR, QC
Unique Number : 5708794 **Diagnostician** : Kevin Marson CA J0L 1C0
Test Package : MOB 1 (Additional Tests: Visual) Contact: Danny Drouin
 danny.drouin@arcelormittal.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.