



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR R944C 025727
Component
Diesel Engine
Fluid
PETRO CANADA 10W30 (42 LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH0144579	---
Sample Date		Client Info		05 Jun 2024	20 Aug 2019	---
Machine Age	hrs	Client Info		18843	14374	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	7	10	---
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>5	0	0	---
Titanium	ppm	ASTM D5185(m)		0	<1	---
Silver	ppm	ASTM D5185(m)	>3	0	0	---
Aluminum	ppm	ASTM D5185(m)	>15	<1	<1	---
Lead	ppm	ASTM D5185(m)	>30	0	<1	---
Copper	ppm	ASTM D5185(m)	>125	1	8	---
Tin	ppm	ASTM D5185(m)	>5	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---

CONTAMINATION

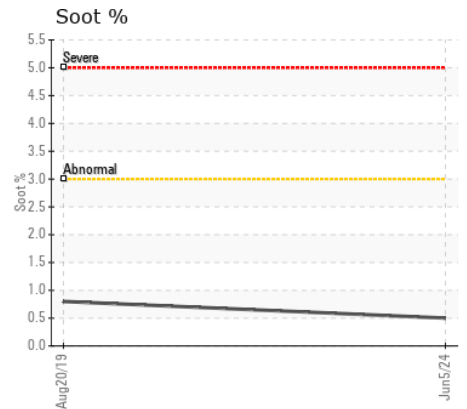
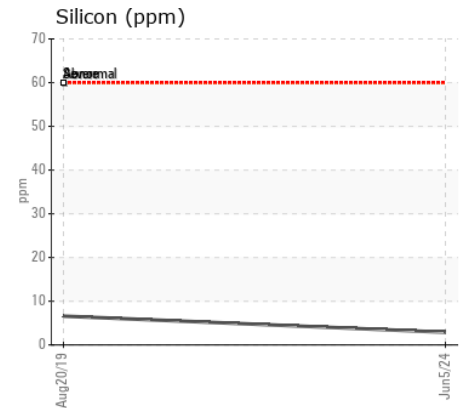
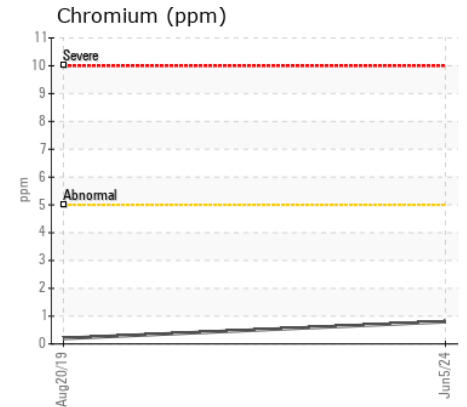
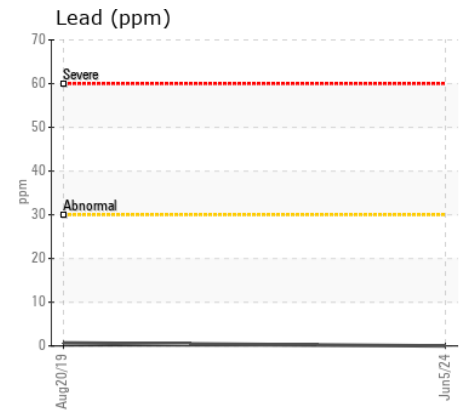
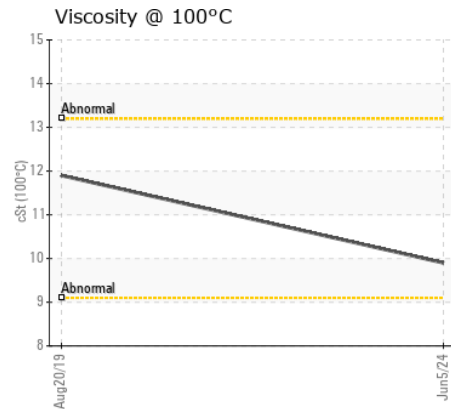
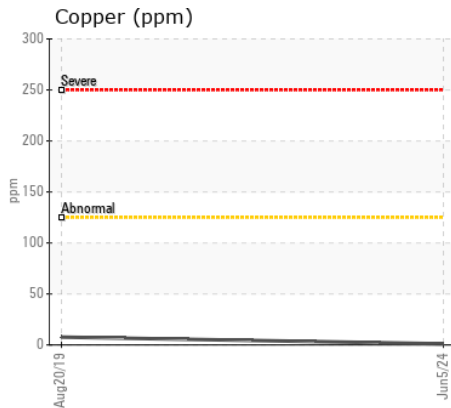
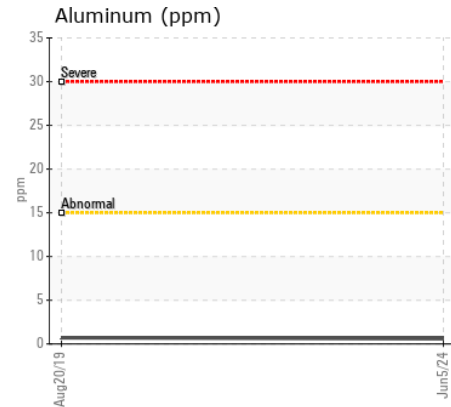
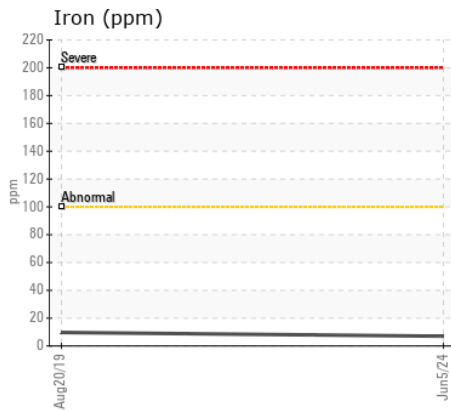
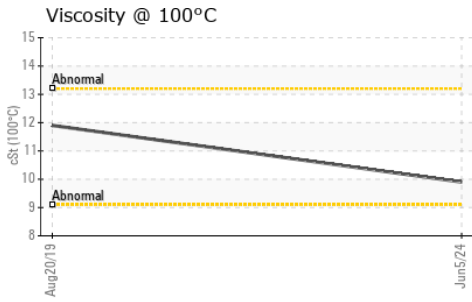
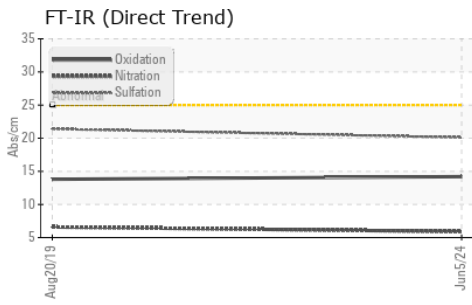
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	3	7	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Fuel		WC Method	>5	<1.0	0.3	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	ASTM D7844*	>3	0.5	0.8	---
Nitration	Abs/cm	ASTM D7624*	>20	5.9	6.6	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.1	21.4	---
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		1	<1	---
Boron	ppm	ASTM D5185(m)		2	2	---
Barium	ppm	ASTM D5185(m)		0	<1	---
Molybdenum	ppm	ASTM D5185(m)		48	61	---
Manganese	ppm	ASTM D5185(m)		0	<1	---
Magnesium	ppm	ASTM D5185(m)		775	1010	---
Calcium	ppm	ASTM D5185(m)		848	1065	---
Phosphorus	ppm	ASTM D5185(m)		903	1042	---
Zinc	ppm	ASTM D5185(m)		1078	1266	---
Sulfur	ppm	ASTM D5185(m)		2254	2618	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.2	13.8	---
Visc @ 100°C	cSt	ASTM D7279(m)		9.9	11.9	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH
Lab Number : 02641663
Unique Number : 5799202
Test Package : MOB 1
Received : 13 Jun 2024
Tested : 13 Jun 2024
Diagnosed : 13 Jun 2024 - Kevin Marson

Gerdau - Mandak Metal Processors Ltd.,
 1 Railway St., P.O. Box 334
 Selkirk, MB
 CA R1A 2B3
 Contact: Santiago Giraldo
 santiago.giraldo@gerdau.com
 T:
 F: (204)482-8241

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.