



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LB28 115690
Component
Diesel Engine
Fluid
PETRO CANADA SUPREME 5W30 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0289426	LH0195293	---
Sample Date		Client Info		12 Jun 2024	05 Jun 2021	---
Machine Age	hrs	Client Info		4035	506	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	11	13	---
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>5	0	<1	---
Titanium	ppm	ASTM D5185(m)		<1	<1	---
Silver	ppm	ASTM D5185(m)	>3	0	<1	---
Aluminum	ppm	ASTM D5185(m)	>15	5	2	---
Lead	ppm	ASTM D5185(m)	>30	0	6	---
Copper	ppm	ASTM D5185(m)	>125	3	133	---
Tin	ppm	ASTM D5185(m)	>5	<1	1	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

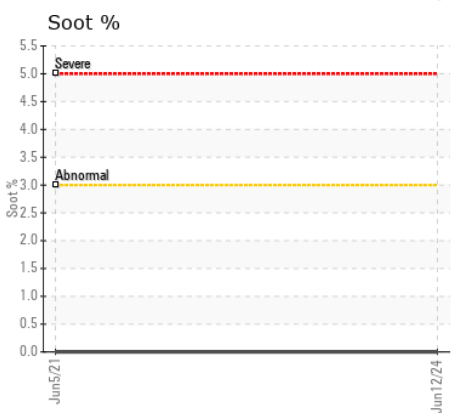
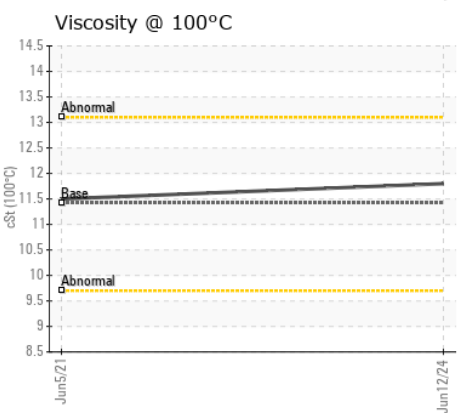
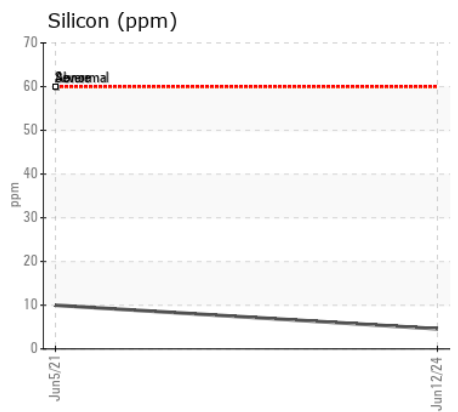
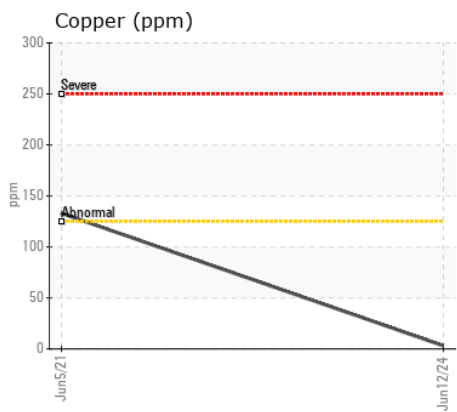
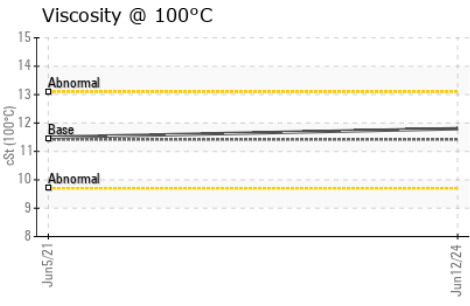
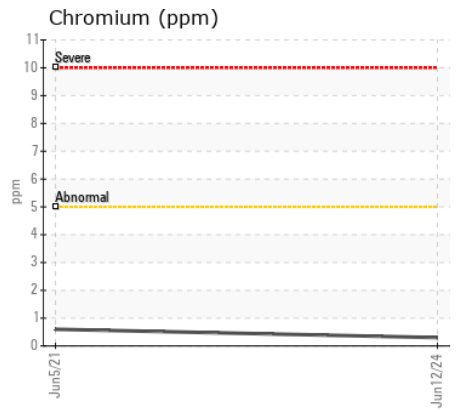
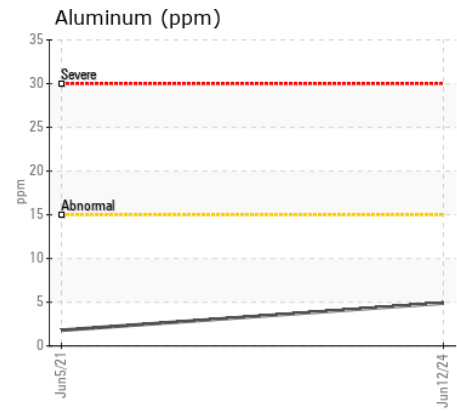
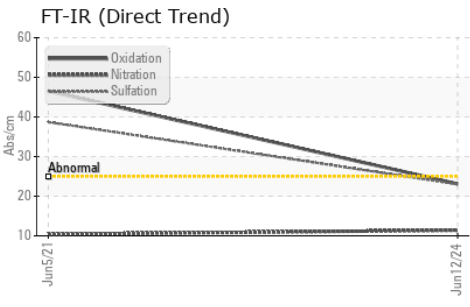
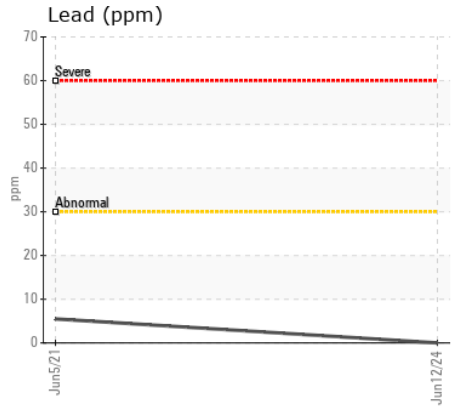
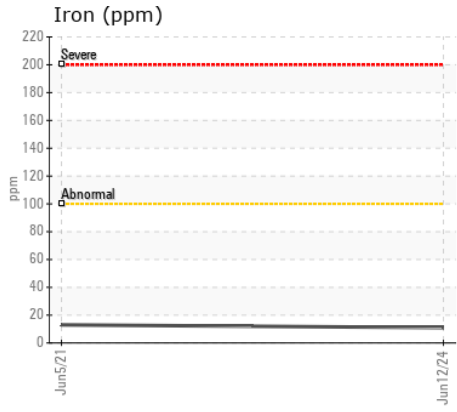
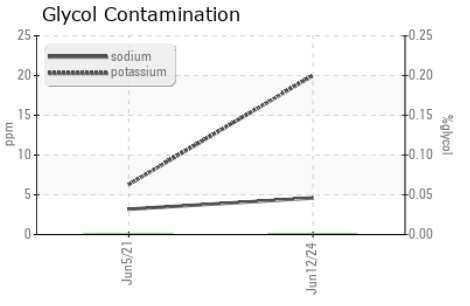
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	5	10	---
Potassium	ppm	ASTM D5185(m)	>20	20	6	---
Fuel		WC Method	>5	<1.0	1.6	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol	%	ASTM D7922*		0.0	0.0	---
Soot %	%	ASTM D7844*	>3	0	0	---
Nitration	Abs/cm	ASTM D7624*	>20	11.4	10.4	---
Sulfation	Abs/.1mm	ASTM D7415*	>30	23.0	38.7	---
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
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)		5	3	---
Boron	ppm	ASTM D5185(m)	186	18	92	---
Barium	ppm	ASTM D5185(m)	<1	<1	45	---
Molybdenum	ppm	ASTM D5185(m)	79	59	45	---
Manganese	ppm	ASTM D5185(m)	0	<1	3	---
Magnesium	ppm	ASTM D5185(m)	578	1046	903	---
Calcium	ppm	ASTM D5185(m)	1002	920	1353	---
Phosphorus	ppm	ASTM D5185(m)	745	968	689	---
Zinc	ppm	ASTM D5185(m)	837	1182	862	---
Sulfur	ppm	ASTM D5185(m)	2502	2593	1949	---
Oxidation	Abs/.1mm	ASTM D7414*	>25	23.1	46.5	---
Visc @ 100°C	cSt	ASTM D7279(m)	11.42	11.8	11.5	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289426 **Received** : 14 Jun 2024
Lab Number : 02641907 **Tested** : 17 Jun 2024
Unique Number : 5799446 **Diagnosed** : 17 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Glycol, Visual)

RONI
 69 MAPLECRETE ROAD
 CONCORD, ON
 CA L4K 1A5
 Contact: RONI

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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F: