



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L586 068511-1761
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0291007	LH0282263	LH0274786
Sample Date		Client Info		10 Jun 2024	21 Jan 2024	29 Aug 2023
Machine Age	hrs	Client Info		3246	2595	1877
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

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

CONTAMINATION

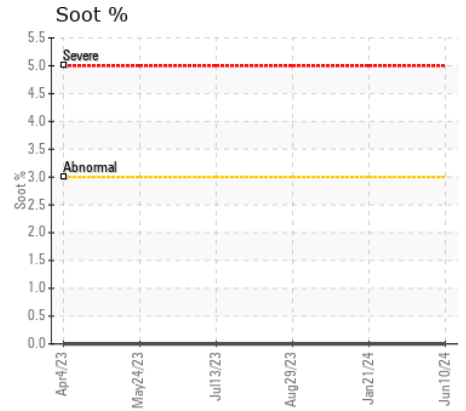
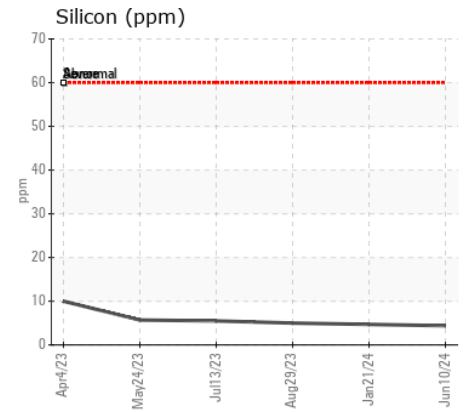
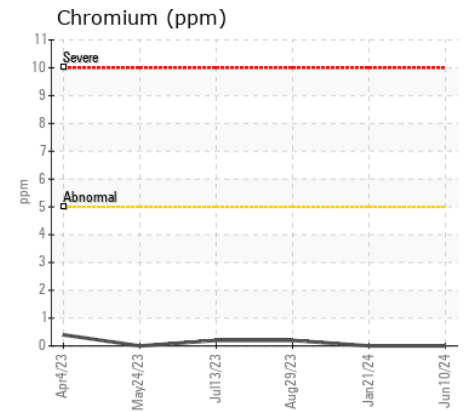
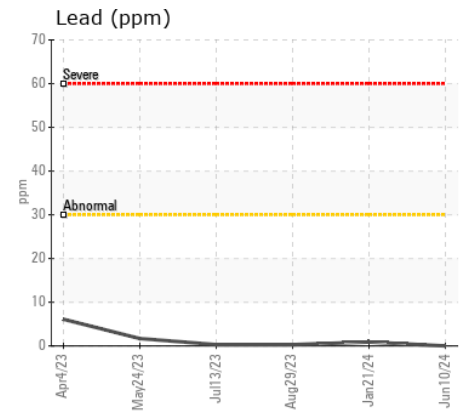
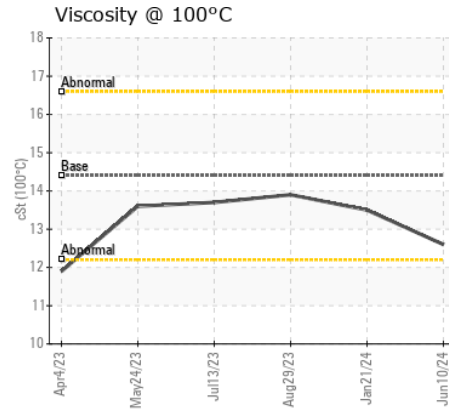
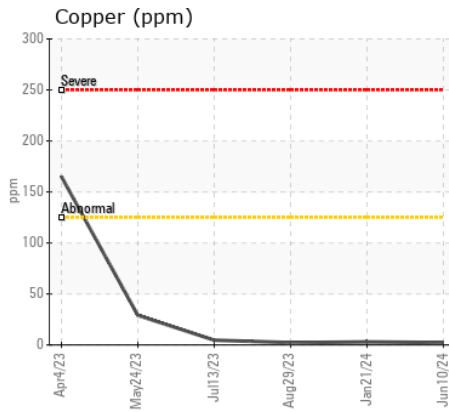
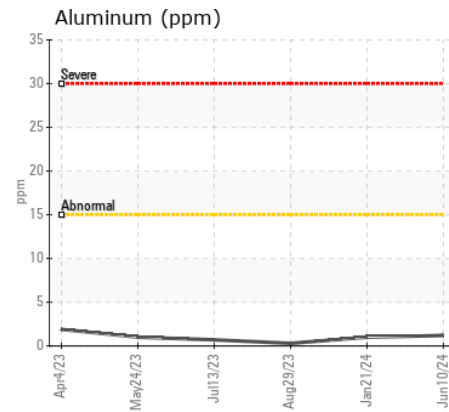
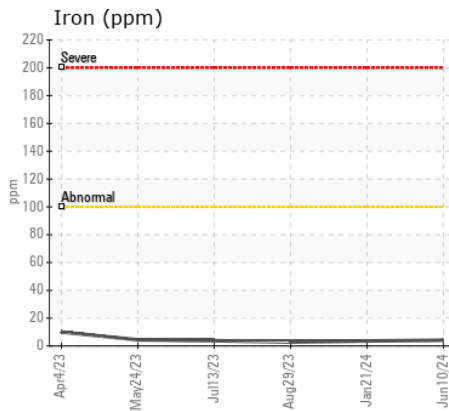
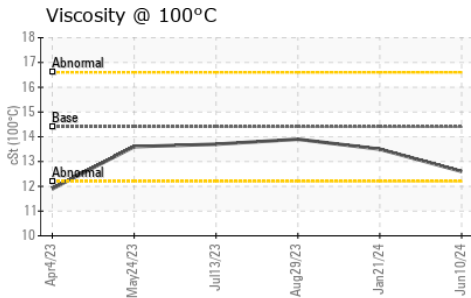
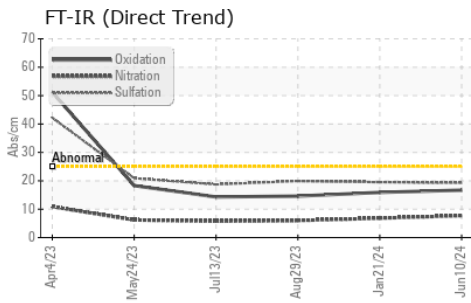
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	4	5	5
Potassium	ppm	ASTM D5185(m)	>20	2	<1	<1
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	7.7	6.8	6.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.2	19.5	19.9
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	VLITE	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

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

Sodium	ppm	ASTM D5185(m)	>216	2	1	1
Boron	ppm	ASTM D5185(m)	250	19	4	1
Barium	ppm	ASTM D5185(m)	10	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	59	58	57
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	450	1040	945	972
Calcium	ppm	ASTM D5185(m)	3000	954	1032	1051
Phosphorus	ppm	ASTM D5185(m)	1150	990	997	1035
Zinc	ppm	ASTM D5185(m)	1350	1189	1148	1178
Sulfur	ppm	ASTM D5185(m)	4250	2628	2893	2586
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.7	15.9	14.6
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	12.6	13.5	13.9



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0291007 **Received** : 11 Jun 2024
Lab Number : 02640996 **Tested** : 12 Jun 2024
Unique Number : 5798535 **Diagnosed** : 12 Jun 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: VISUAL)

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.

MILLER PAVING LTD.
 P.O BOX 4080, 505 MILLER AVE.
 MARKHAM, ON
 CA L6G 1B2
 Contact: Rob Graham
 rob.graham@millergroup.ca
 T: (905)475-6660
 F: (905)475-1086