



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH22M 142190-1250
Component
Swing Drive
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0291304	LH0285131	LH0256998
Sample Date		Client Info		02 May 2024	29 Jan 2024	19 Mar 2023
Machine Age	hrs	Client Info		2979	2241	754
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Not Changd
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)	>1450	64	168	13
Chromium	ppm	ASTM D5185(m)	>11	<1	1	0
Nickel	ppm	ASTM D5185(m)	>3	0	<1	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>4	<1	2	<1
Lead	ppm	ASTM D5185(m)	>4	<1	3	0
Copper	ppm	ASTM D5185(m)	>542	48	81	6
Tin	ppm	ASTM D5185(m)	>38	2	5	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

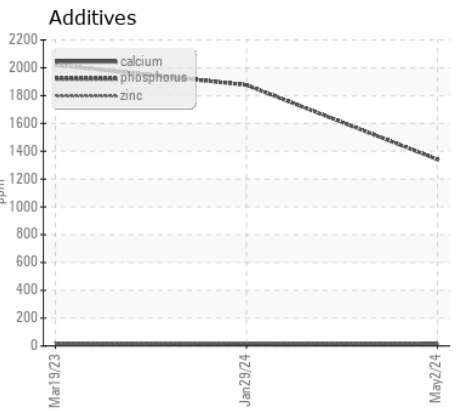
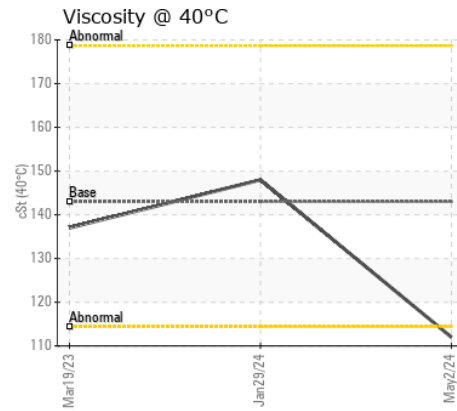
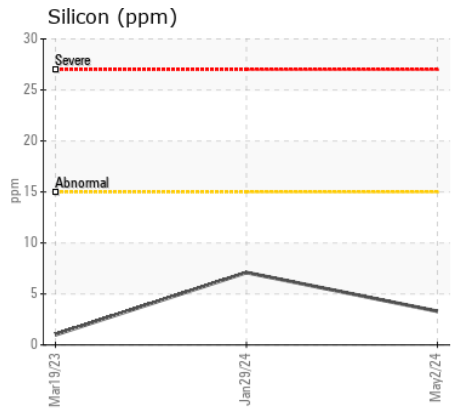
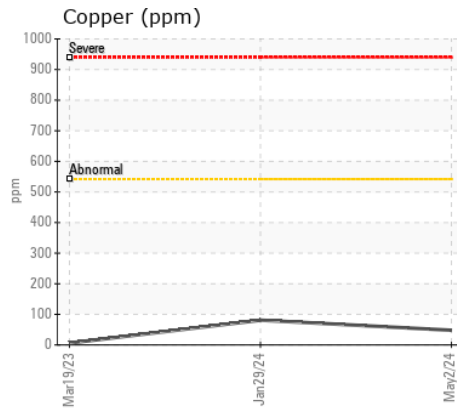
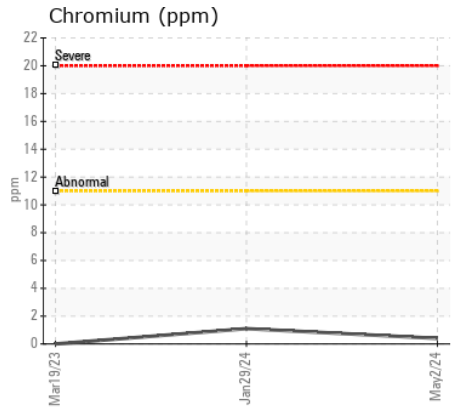
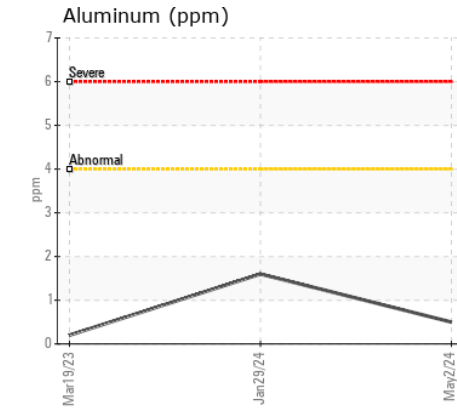
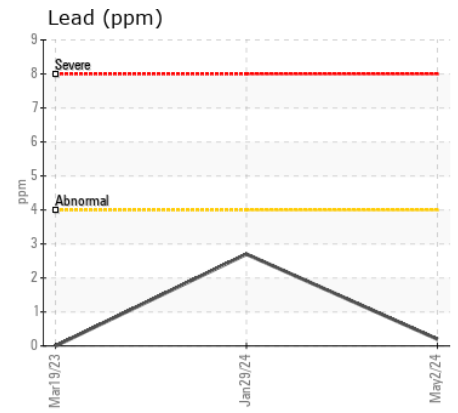
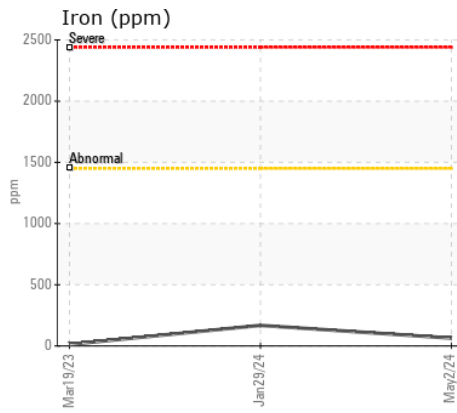
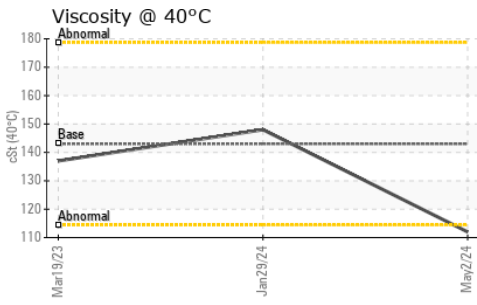
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>15	3	7	1
Potassium	ppm	ASTM D5185(m)	>20	<1	1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	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*	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)	>170	2	4	2
Boron	ppm	ASTM D5185(m)	400	268	82	112
Barium	ppm	ASTM D5185(m)	200	<1	2	0
Molybdenum	ppm	ASTM D5185(m)	12	0	0	0
Manganese	ppm	ASTM D5185(m)		<1	1	<1
Magnesium	ppm	ASTM D5185(m)	12	1	1	<1
Calcium	ppm	ASTM D5185(m)	150	19	17	15
Phosphorus	ppm	ASTM D5185(m)	1650	1341	1876	2020
Zinc	ppm	ASTM D5185(m)	125	14	23	16
Sulfur	ppm	ASTM D5185(m)	22500	21008	23457	24354
Visc @ 40°C	cSt	ASTM D7279(m)	143	112	148	137



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0291304 **Received** : 03 May 2024
Lab Number : 02633294 **Tested** : 03 May 2024
Unique Number : 5774447 **Diagnosed** : 03 May 2024 - Wes Davis
Test Package : MOB 1

Combined Metals Industries
 8470 Keele Street
 Concord, ON
 CA L4K 2S1
 Contact: Service Manager

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: