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LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LH22M 142190-1250
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

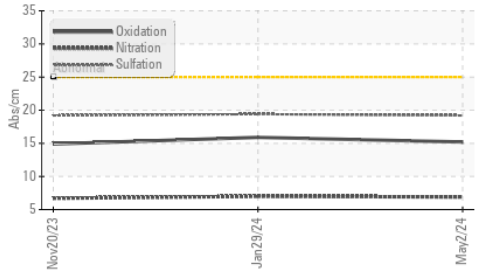
There is no indication of any contamination in the oil.

FLUID CONDITION

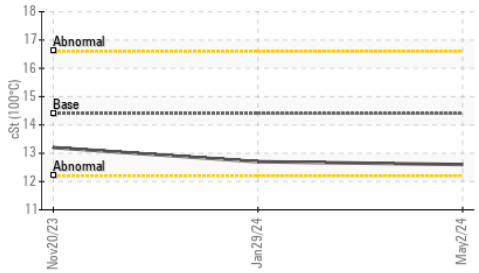
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0291303	LH0285132	LH0278910
Sample Date		Client Info		02 May 2024	29 Jan 2024	20 Nov 2023
Machine Age	hrs	Client Info		2979	2241	1772
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
Iron	ppm	ASTM D5185(m)	>66	13	11	14
Chromium	ppm	ASTM D5185(m)	>4	0	0	0
Nickel	ppm	ASTM D5185(m)	>4	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)	>8	1	1	1
Lead	ppm	ASTM D5185(m)	>10	0	<1	<1
Copper	ppm	ASTM D5185(m)	>74	3	2	3
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185(m)	>15	5	6	7
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
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	6.9	7.0	6.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	19.2	19.4	19.2
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	VLITE	---
Sand/Dirt	scalar	Visual*	NONE	LIGHT	NONE	---
Appearance	scalar	Visual*	NORML	NORML	NORML	---
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185(m)	>216	1	3	2
Boron	ppm	ASTM D5185(m)	250	4	19	6
Barium	ppm	ASTM D5185(m)	10	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	60	58	60
Manganese	ppm	ASTM D5185(m)		<1	0	0
Magnesium	ppm	ASTM D5185(m)	450	996	1011	988
Calcium	ppm	ASTM D5185(m)	3000	1094	1029	1056
Phosphorus	ppm	ASTM D5185(m)	1150	994	986	998
Zinc	ppm	ASTM D5185(m)	1350	1205	1183	1192
Sulfur	ppm	ASTM D5185(m)	4250	2486	2913	2499
Oxidation	Abs/.1mm	ASTM D7414*	>25	15.2	15.9	14.9
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	12.6	12.7	13.2

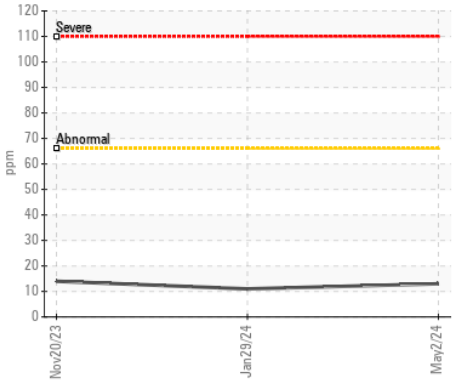
FT-IR (Direct Trend)



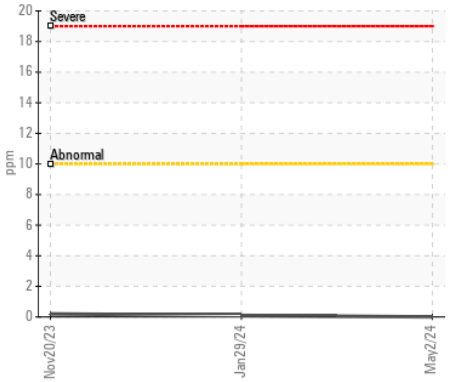
Viscosity @ 100°C



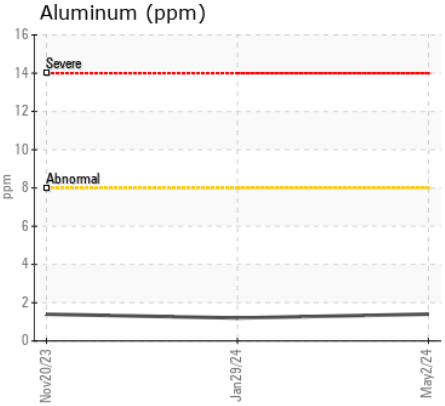
Iron (ppm)



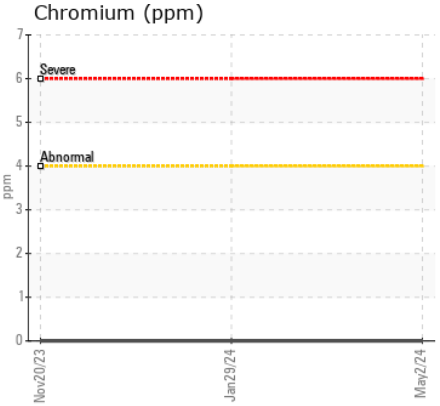
Lead (ppm)



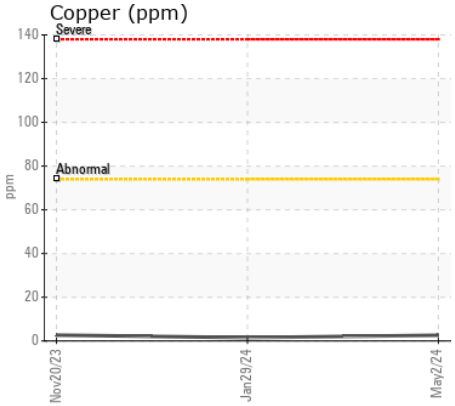
Aluminum (ppm)



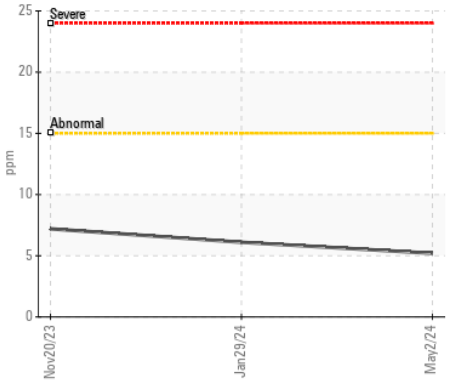
Chromium (ppm)



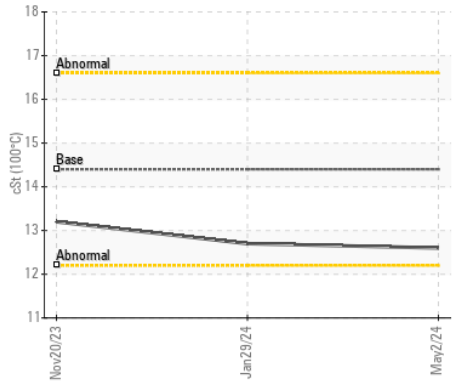
Copper (ppm)



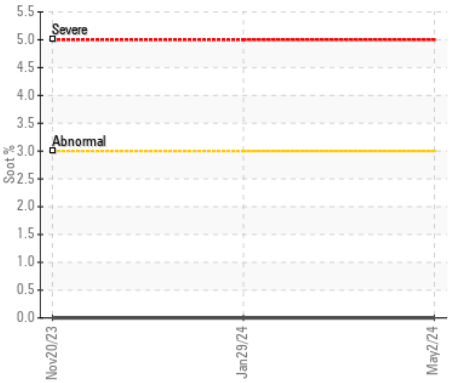
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0291303 **Received** : 03 May 2024
Lab Number : 02633092 **Tested** : 03 May 2024
Unique Number : 5774245 **Diagnosed** : 03 May 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.

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