MOB I

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[610306-10241772]
Machine Id
076507-1204
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL 10W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

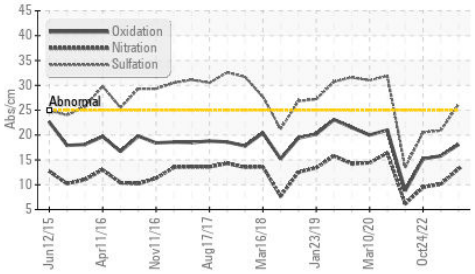
There is no indication of any contamination in the oil.

FLUID CONDITION

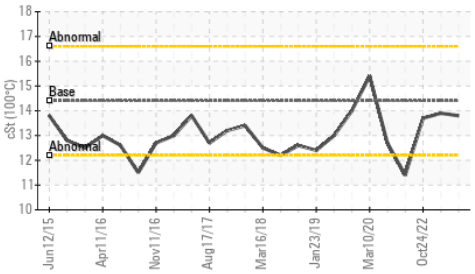
The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**LH0289631**	LH0274772	LH
Sample Date		Client Info		**15 May 2024**	12 Oct 2023	24 Oct 2022
Machine Age	hrs	Client Info		**0**	17007	15399
Oil Age	hrs	Client Info		**0**	0	0
Filter Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	Changed	Changed
Filter Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**NORMAL**	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>100	**31**	15	12
Chromium	ppm	ASTM D5185(m)	>5	**1**	<1	<1
Nickel	ppm	ASTM D5185(m)	>5	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	<1
Silver	ppm	ASTM D5185(m)	>3	**0**	<1	0
Aluminum	ppm	ASTM D5185(m)	>15	**3**	2	3
Lead	ppm	ASTM D5185(m)	>30	**0**	<1	<1
Copper	ppm	ASTM D5185(m)	>125	**6**	4	14
Tin	ppm	ASTM D5185(m)	>5	**<1**	<1	<1
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Silicon	ppm	ASTM D5185(m)	>60	**5**	5	6
Potassium	ppm	ASTM D5185(m)	>20	**<1**	<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	**2.5**	1.2	0.8
Nitration	Abs/cm	ASTM D7624*	>20	**13.2**	10.1	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	**26.2**	20.9	20.5
Emulsified Water	scalar	Visual*	>0.2	**NEG**	NEG	NEG
Sodium	ppm	ASTM D5185(m)		**4**	3	5
Boron	ppm	ASTM D5185(m)	250	**2**	2	2
Barium	ppm	ASTM D5185(m)	10	**<1**	<1	<1
Molybdenum	ppm	ASTM D5185(m)	100	**54**	61	61
Manganese	ppm	ASTM D5185(m)		**<1**	0	<1
Magnesium	ppm	ASTM D5185(m)	450	**835**	974	808
Calcium	ppm	ASTM D5185(m)	3000	**1349**	1069	1298
Phosphorus	ppm	ASTM D5185(m)	1150	**967**	979	1025
Zinc	ppm	ASTM D5185(m)	1350	**1197**	1198	1136
Sulfur	ppm	ASTM D5185(m)	4250	**2392**	2499	2550
Oxidation	Abs/.1mm	ASTM D7414*	>25	**18.1**	15.8	15.2
Visc @ 100°C	cSt	ASTM D7279(m)	14.4	**13.8**	13.9	13.7

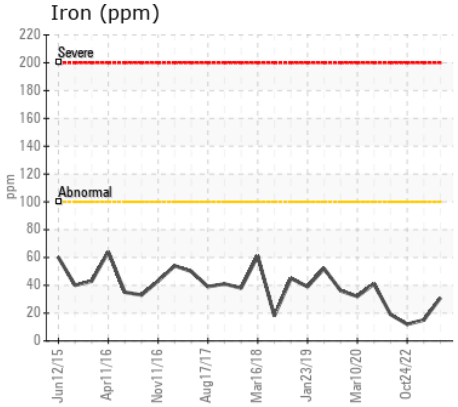
FT-IR (Direct Trend)



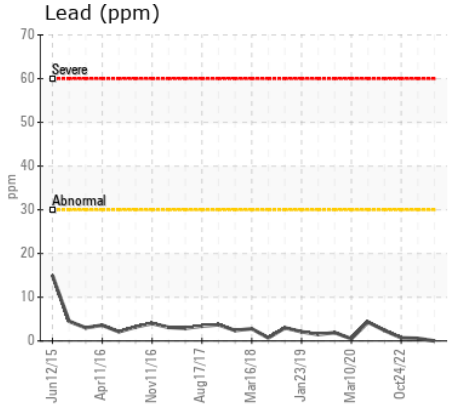
Viscosity @ 100°C



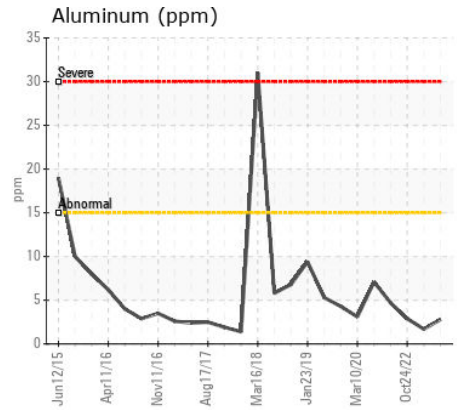
Iron (ppm)



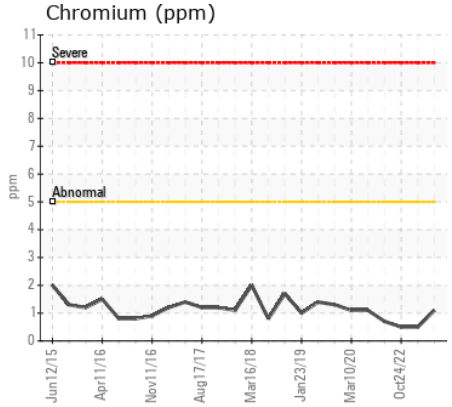
Lead (ppm)



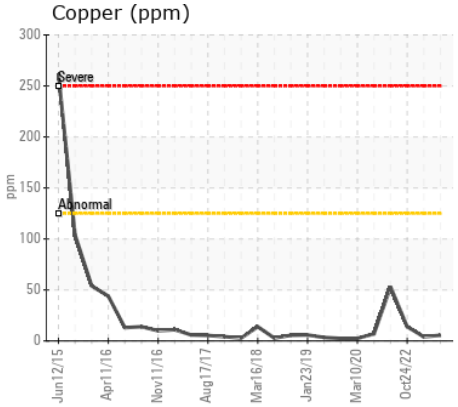
Aluminum (ppm)



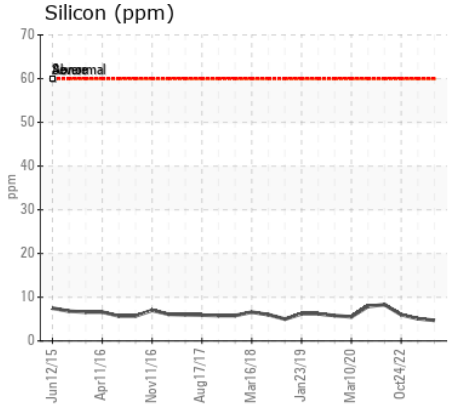
Chromium (ppm)



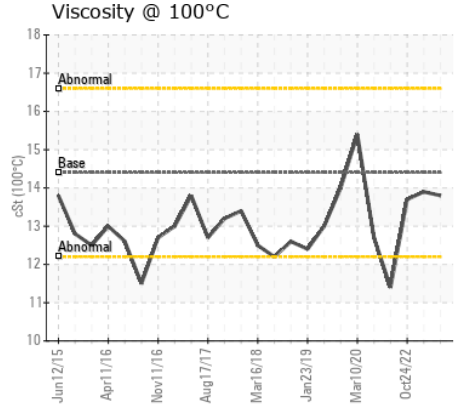
Copper (ppm)



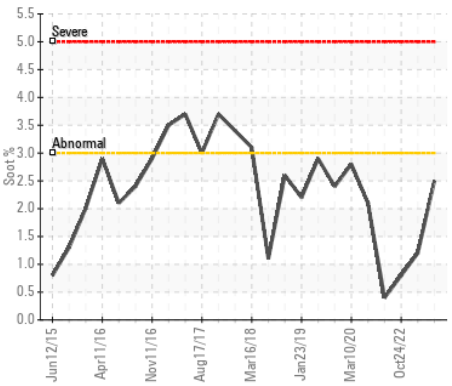
Silicon (ppm)



Viscosity @ 100°C



Soot %



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0289631
Lab Number : 02636556
Unique Number : 5785718
Test Package : MOB 1

Received : 21 May 2024
Tested : 21 May 2024
Diagnosed : 21 May 2024 - Wes Davis

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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