



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(347725)
Machine Id
LIEBHERR T60-9 022086-1709
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 30 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0270169	LH0270430	LH0251362
Sample Date		Client Info		01 Apr 2024	14 Sep 2023	11 Jan 2023
Machine Age	hrs	Client Info		2528	2083	1528
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	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	15	23	40
Chromium	ppm	ASTM D5185(m)	>5	1	2	3
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>15	17	18	18
Lead	ppm	ASTM D5185(m)	>30	0	<1	<1
Copper	ppm	ASTM D5185(m)	>125	4	5	7
Tin	ppm	ASTM D5185(m)	>5	<1	2	4
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

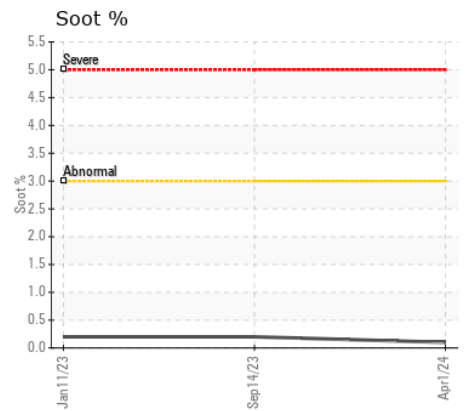
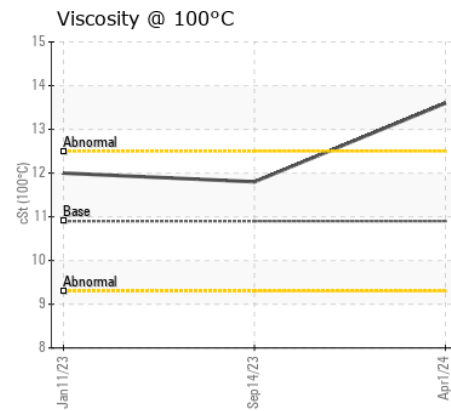
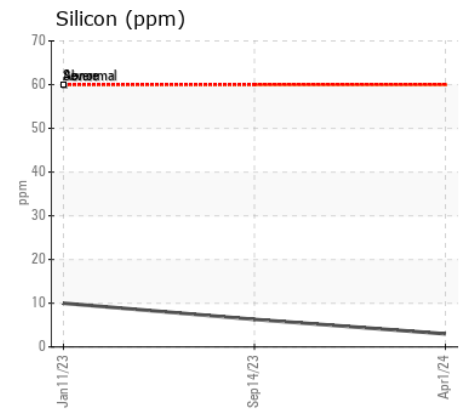
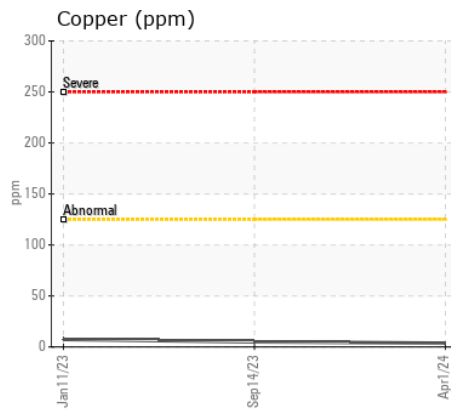
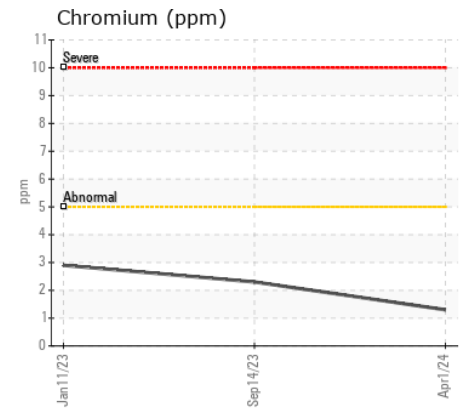
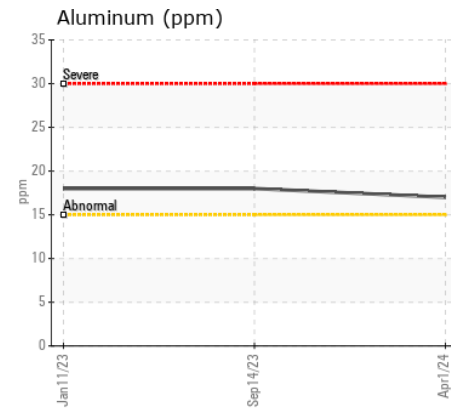
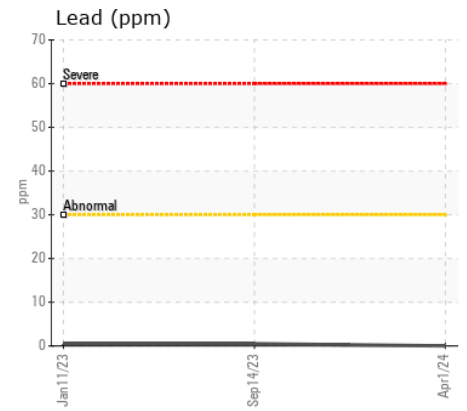
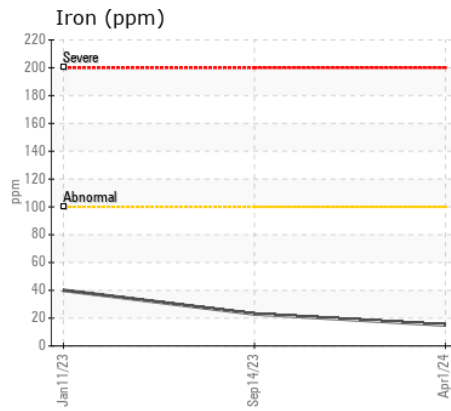
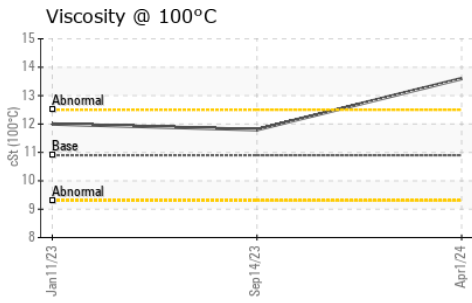
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	3	6	10
Potassium	ppm	ASTM D5185(m)	>20	10	10	7
Fuel		WC Method	>5	<1.0	<1.0	0.9
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	0.0
Soot %	%	ASTM D7844*	>3	0.1	0.2	0.2
Nitration	Abs/cm	ASTM D7624*	>20	8.1	9.8	10.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.4	20.4	21.0
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

Viscosity of sample indicates oil is within SAE 40 range, advise investigate. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)	>75	2	4	5
Boron	ppm	ASTM D5185(m)	250	8	29	51
Barium	ppm	ASTM D5185(m)	10	0	0	0
Molybdenum	ppm	ASTM D5185(m)	100	57	59	45
Manganese	ppm	ASTM D5185(m)		0	<1	2
Magnesium	ppm	ASTM D5185(m)	450	968	1074	898
Calcium	ppm	ASTM D5185(m)	3000	1021	942	1548
Phosphorus	ppm	ASTM D5185(m)	1150	958	1046	1052
Zinc	ppm	ASTM D5185(m)	1350	1157	1178	1201
Sulfur	ppm	ASTM D5185(m)	4250	2509	2775	2839
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.9	18.0	16.7
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	13.6	11.8	12.0



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0270169 **Received** : 02 Apr 2024
Lab Number : 02626043 **Tested** : 02 Apr 2024
Unique Number : 5759175 **Diagnosed** : 02 Apr 2024 - Kevin Marson
Test Package : MOB 1

A.M.I ATTACHMENTS INC.
 1270 GEDDES STREET
 HAWKESVILLE, ON
 CA N0B 1X0
 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: