



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A934C 057446-1007
Component
Diesel Engine
Fluid
KLONDIKE HEAVY DUTY 15W40 (35 LTR)

RECOMMENDATION

The oil change at the time of sampling has been noted.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281194	LH0213841	LH0213848
Sample Date		Client Info		22 Jan 2024	11 Jul 2023	24 Apr 2023
Machine Age	hrs	Client Info		26482	25673	25419
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				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>66	16	4	6
Chromium	ppm	ASTM D5185(m)	>4	<1	0	0
Nickel	ppm	ASTM D5185(m)	>4	0	0	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>8	2	1	1
Lead	ppm	ASTM D5185(m)	>10	8	<1	<1
Copper	ppm	ASTM D5185(m)	>74	3	1	<1
Tin	ppm	ASTM D5185(m)	>4	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

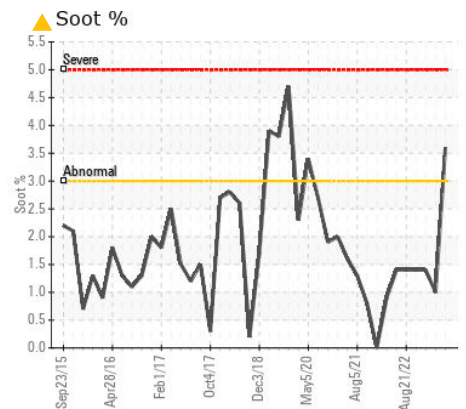
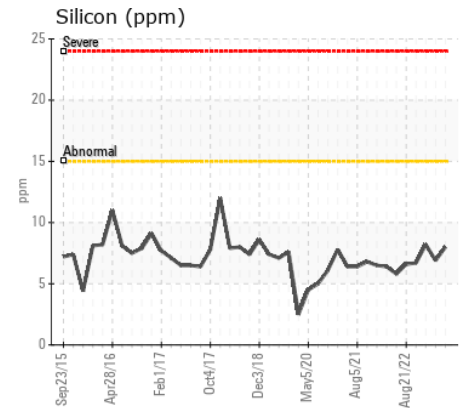
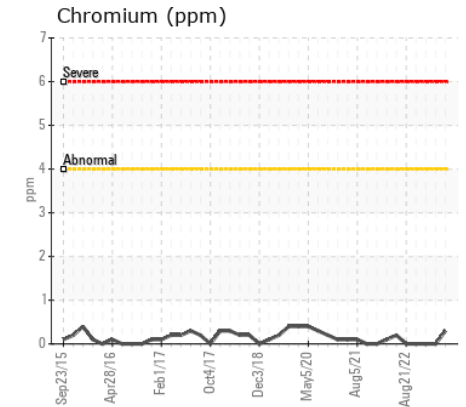
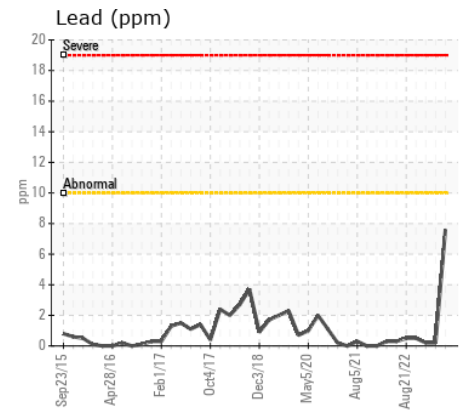
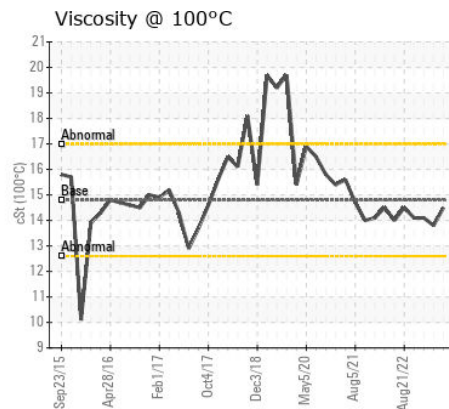
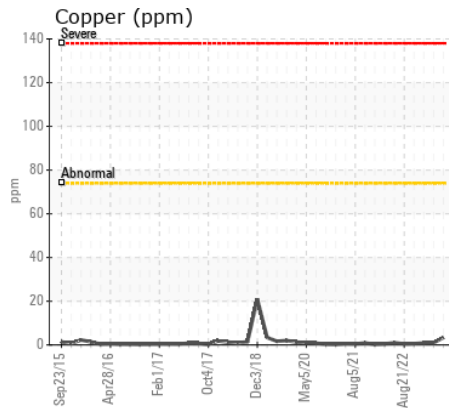
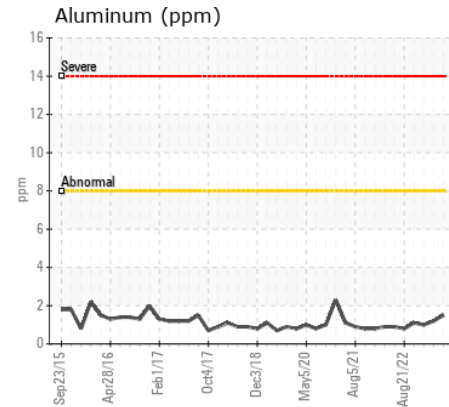
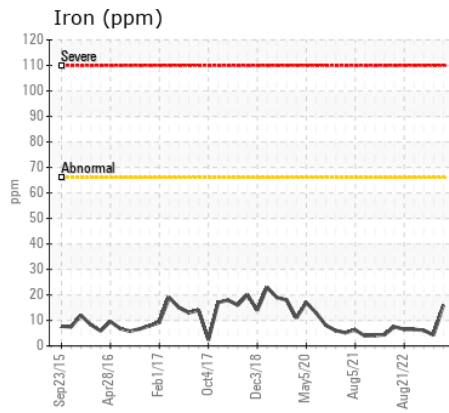
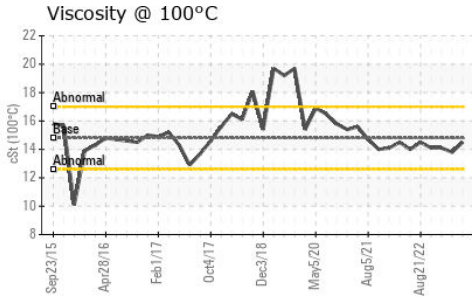
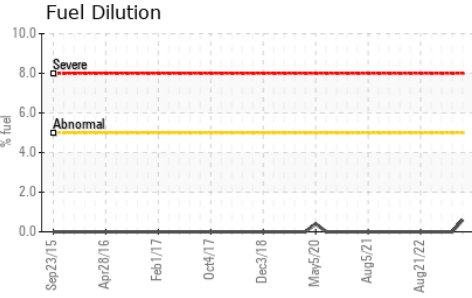
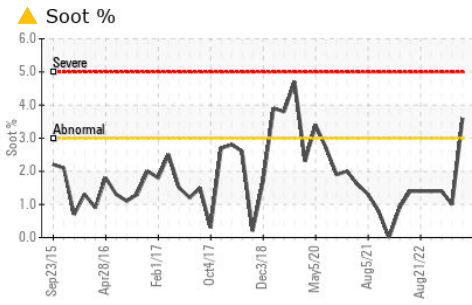
Fuel content negligible. Light concentration of carbon/soot present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	8	7	8
Potassium	ppm	ASTM D5185(m)	>20	2	<1	<1
Fuel	%	ASTM D7593*	>5	0.6	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	▲ 3.6	1	1.4
Nitration	Abs/cm	ASTM D7624*	>20	10.3	7.0	8.1
Sulfation	Abs/.1mm	ASTM D7415*	>30	29.3	18.6	20.5
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		2	2	2
Boron	ppm	ASTM D5185(m)	70	1	2	2
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		4	1	3
Manganese	ppm	ASTM D5185(m)		0	0	<1
Magnesium	ppm	ASTM D5185(m)	50	71	18	49
Calcium	ppm	ASTM D5185(m)	2000	2265	2287	2458
Phosphorus	ppm	ASTM D5185(m)	1000	851	902	963
Zinc	ppm	ASTM D5185(m)	1100	1011	990	1059
Sulfur	ppm	ASTM D5185(m)	3400	2842	2916	3065
Oxidation	Abs/.1mm	ASTM D7414*	>25	13.4	9.1	10.0
Visc @ 100°C	cSt	ASTM D7279(m)	14.8	14.5	13.8	14.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281194 **Received** : 16 Feb 2024
Lab Number : 02616134 **Tested** : 20 Feb 2024
Unique Number : 5733244 **Diagnosed** : 20 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel)

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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.