



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L580 069442-1762

Component
Diesel Engine

Fluid
SHELL ROTELLA T6 5W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0247596	LH0247598	LH0247595
Sample Date		Client Info		11 Mar 2024	03 Jan 2024	04 Sep 2023
Machine Age	hrs	Client Info		4154	3567	2545
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	3	3	9
Chromium	ppm	ASTM D5185(m)	>5	0	0	<1
Nickel	ppm	ASTM D5185(m)	>5	0	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	0
Silver	ppm	ASTM D5185(m)	>3	0	0	<1
Aluminum	ppm	ASTM D5185(m)	>15	1	2	2
Lead	ppm	ASTM D5185(m)	>30	0	<1	6
Copper	ppm	ASTM D5185(m)	>125	1	2	63
Tin	ppm	ASTM D5185(m)	>5	0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	VLITE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

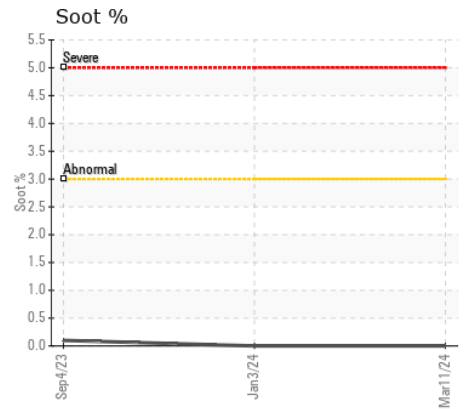
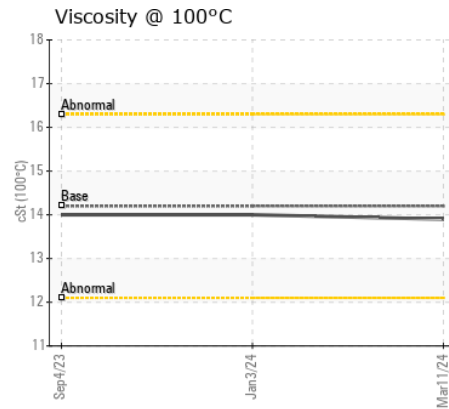
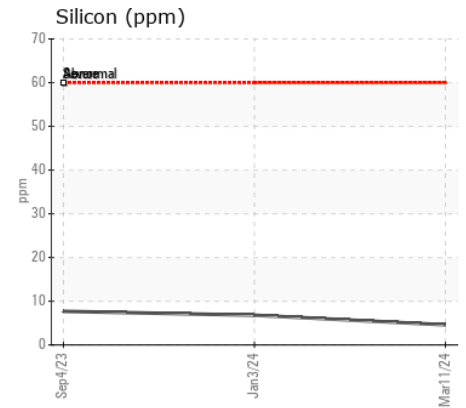
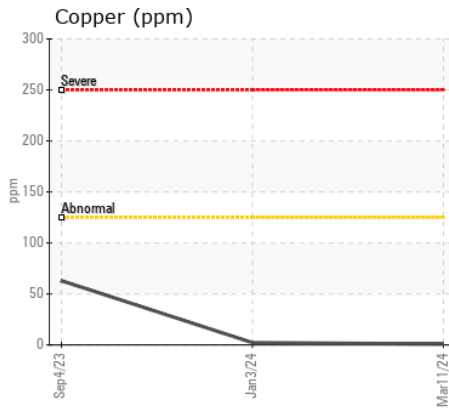
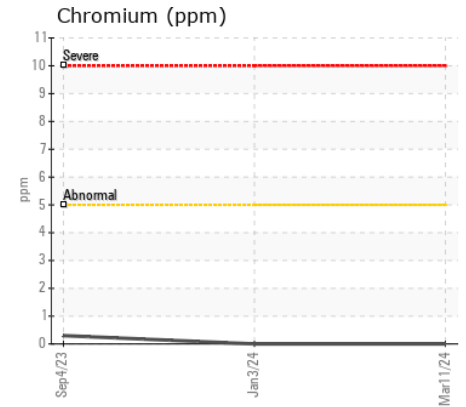
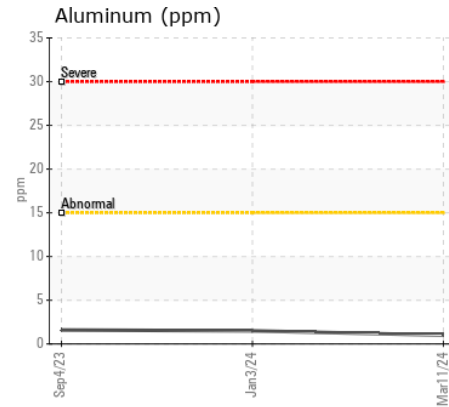
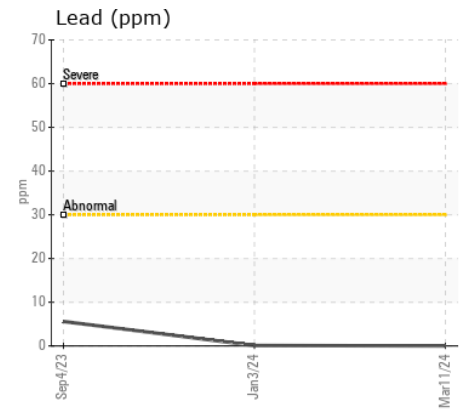
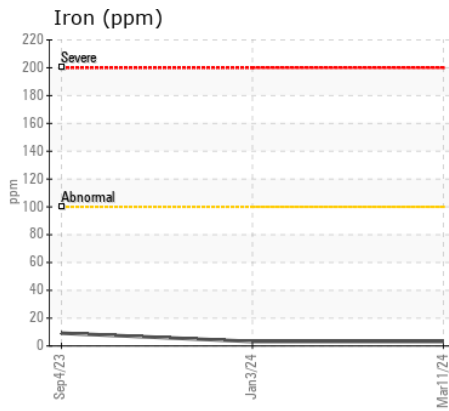
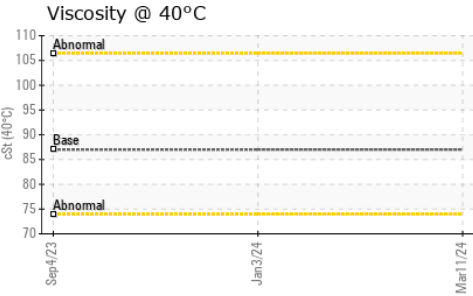
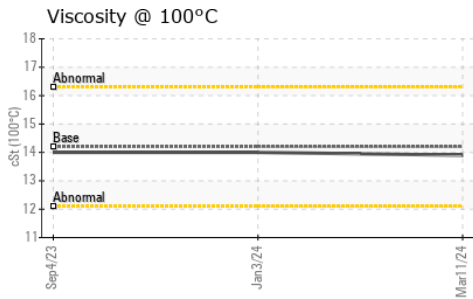
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	5	7	8
Potassium	ppm	ASTM D5185(m)	>20	3	6	6
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	0.1
Nitration	Abs/cm	ASTM D7624*	>20	7.6	7.5	9.5
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.9	21.1	23.5
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	VLITE	NONE	---
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	---
Appearance	scalar	Visual*	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)		2	2	4
Boron	ppm	ASTM D5185(m)		131	138	55
Barium	ppm	ASTM D5185(m)		0	0	2
Molybdenum	ppm	ASTM D5185(m)		3	<1	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)		83	17	34
Calcium	ppm	ASTM D5185(m)		2058	2191	2234
Phosphorus	ppm	ASTM D5185(m)		916	963	897
Zinc	ppm	ASTM D5185(m)		1099	1124	1147
Sulfur	ppm	ASTM D5185(m)		2721	3064	2596
Oxidation	Abs/.1mm	ASTM D7414*	>25	17.1	17.0	20.4
Visc @ 40°C	cSt	ASTM D7279(m)	87	87.8	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	14.2	13.9	14.0	14.0
Viscosity Index (VI)	Scale	ASTM D2270*		162	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0247596 **Received** : 28 Mar 2024
Lab Number : 02625176 **Tested** : 28 Mar 2024
Unique Number : 5750295 **Diagnosed** : 28 Mar 2024 - Kevin Marson
Test Package : MOBCE (Additional Tests: KV40, VI, Visual)

HUBERT ET FILS INC
 1012 CHEMIN DE PARC INDUSTRIEL
 BOIS-FRANC, QC
 CA J9E 3A9
 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: