



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id  
**LIEBHERR A924C 064060-1049**  
Component  
**Transmission**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

### RECOMMENDATION

The fluid change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LHMC144414	LHMC142189	LHMC144418
Sample Date		Client Info		07 Oct 2020	17 Feb 2020	07 Nov 2018
Machine Age	hrs	Client Info		16690	15294	12500
Oil Age	hrs	Client Info		1350	0	1350
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
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 D5185m	>200	16	20	17
Chromium	ppm	ASTM D5185m	>10	<1	<1	<1
Nickel	ppm	ASTM D5185m		<1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>50	1	1	1
Lead	ppm	ASTM D5185m	>50	0	<1	0
Copper	ppm	ASTM D5185m	>200	12	16	12
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

### CONTAMINATION

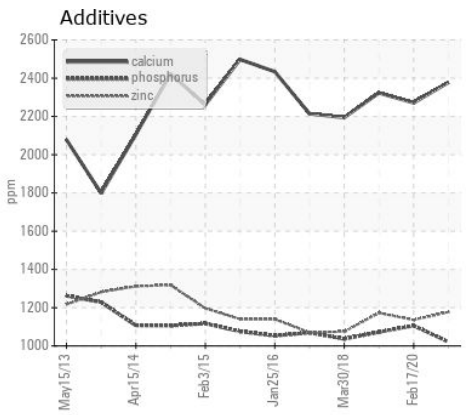
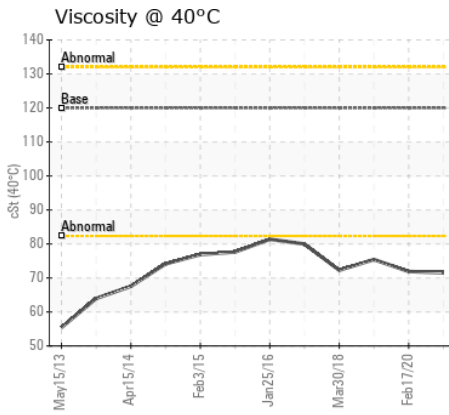
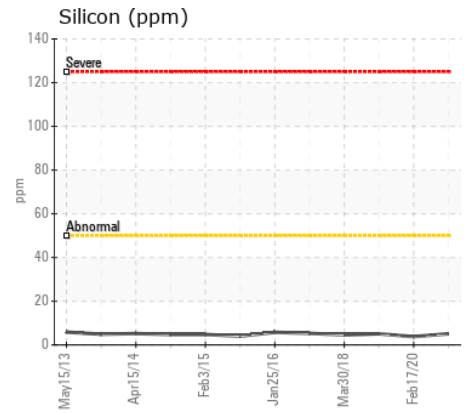
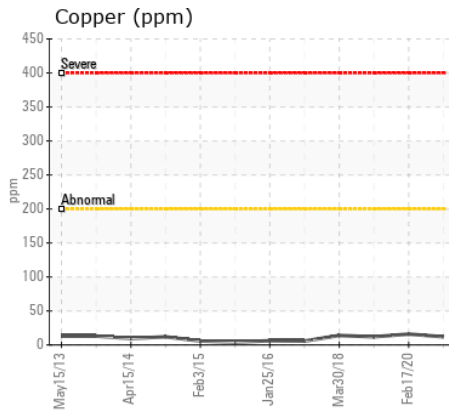
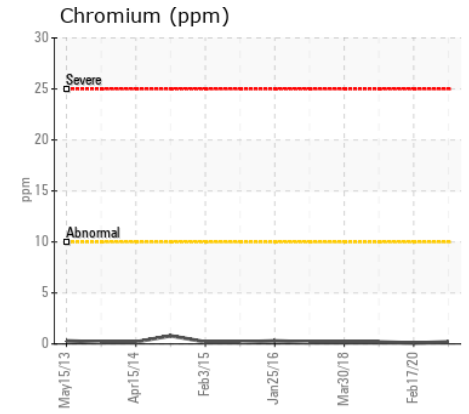
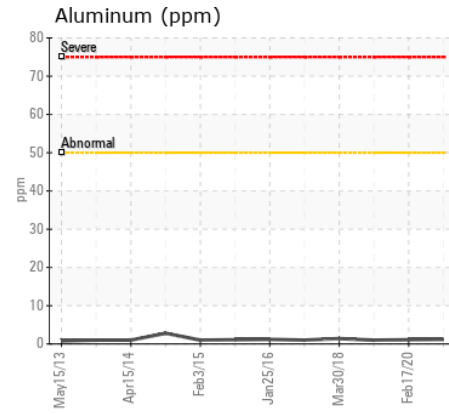
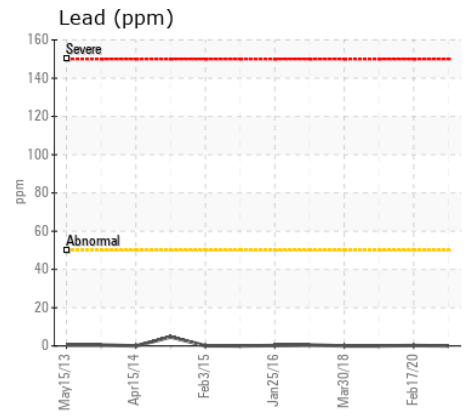
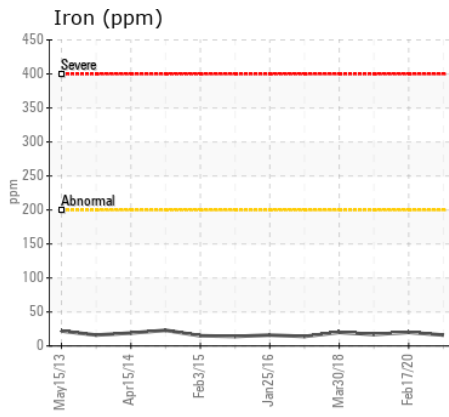
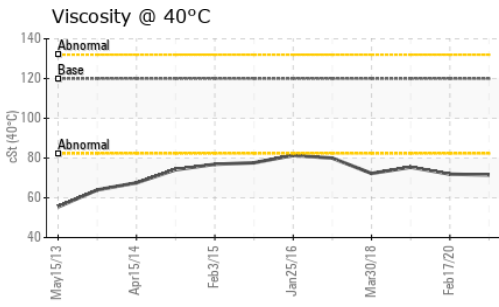
Moderate concentration of visible dirt/debris present in the fluid.

Silicon	ppm	ASTM D5185m	>50	5	4	5
Potassium	ppm	ASTM D5185m	>20	9	8	10
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	▲ MODER	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		4	4	4
Boron	ppm	ASTM D5185m	316	200	171	155
Barium	ppm	ASTM D5185m	0.0	0	0	<1
Molybdenum	ppm	ASTM D5185m	1.2	<1	<1	0
Manganese	ppm	ASTM D5185m		<1	2	2
Magnesium	ppm	ASTM D5185m	24	12	8	11
Calcium	ppm	ASTM D5185m	2292	2378	2271	2323
Phosphorus	ppm	ASTM D5185m	1064	1021	1106	1072
Zinc	ppm	ASTM D5185m	1160	1177	1136	1172
Sulfur	ppm	ASTM D5185m	4996	3360	3808	3252
Visc @ 40°C	cSt	ASTM D445	120.	71.5	71.9	75.41



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LHMC144414 **Received** : 26 Oct 2020  
**Lab Number** : 05099196 **Diagnosed** : 27 Oct 2020  
**Unique Number** : 9229450 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 1

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)