



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**(360524)**  
Machine Id  
**LIEBHERR R926 053645-1827**  
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		<b>LH0216692</b>	LH0216691	LH0216685
Sample Date		Client Info		<b>12 Jun 2024</b>	04 Mar 2024	20 Nov 2023
Machine Age	hrs	Client Info		<b>4000</b>	3906	3000
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Changed	N/A
Filter Changed		Client Info		<b>N/A</b>	Changed	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	<b>9</b>	8	9
Chromium	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>3</b>	3	4
Lead	ppm	ASTM D5185(m)	>30	<b>0</b>	0	0
Copper	ppm	ASTM D5185(m)	>125	<b>2</b>	2	2
Tin	ppm	ASTM D5185(m)	>5	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

### CONTAMINATION

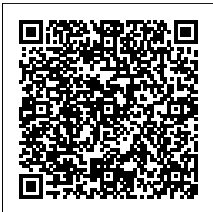
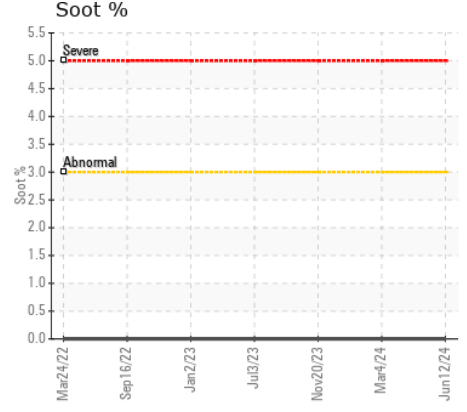
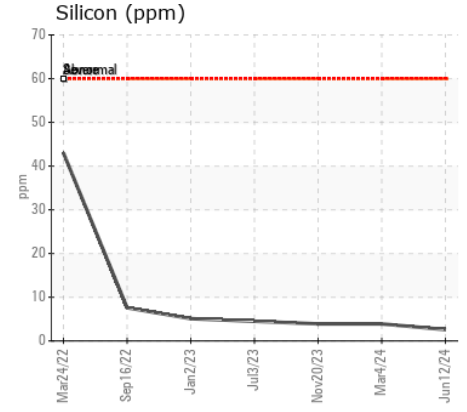
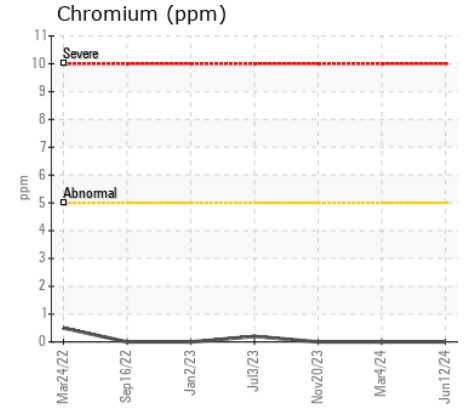
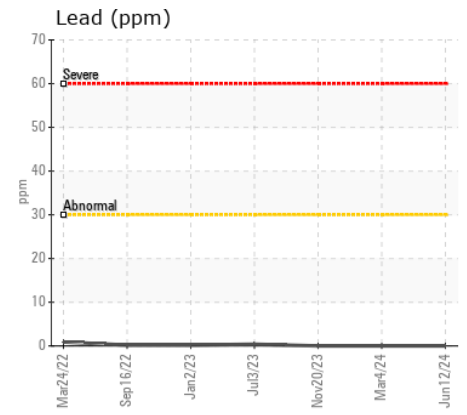
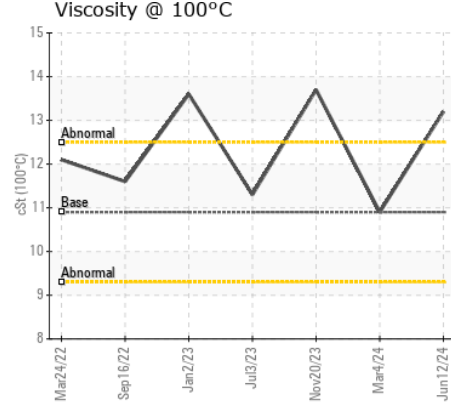
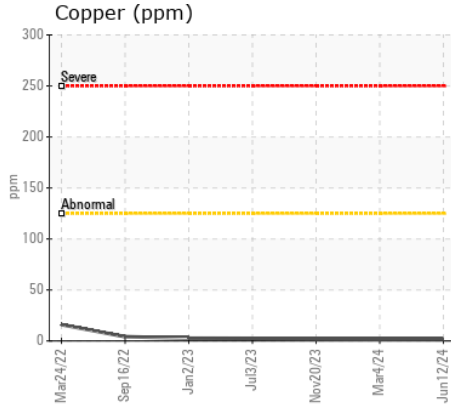
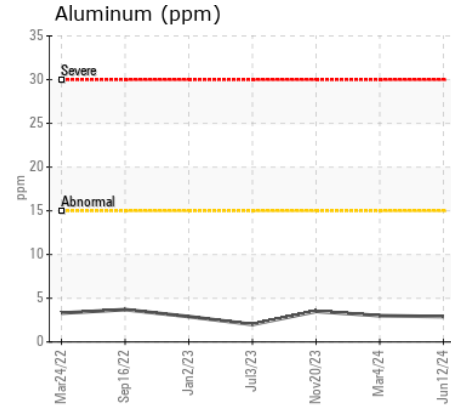
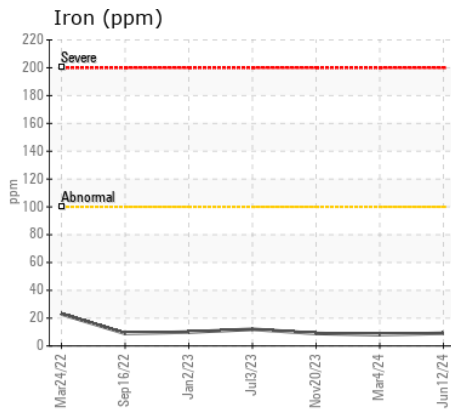
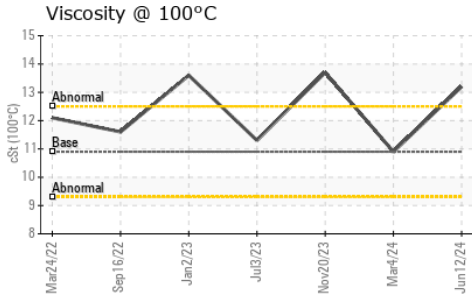
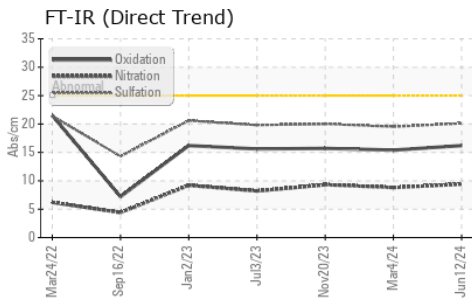
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	<b>3</b>	4	4
Potassium	ppm	ASTM D5185(m)	>20	<b>3</b>	2	0
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*	>3	<b>0</b>	0	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>9.4</b>	8.8	9.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.1</b>	19.5	20.0
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	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	<b>6</b>	2	3
Boron	ppm	ASTM D5185(m)	250	<b>39</b>	50	35
Barium	ppm	ASTM D5185(m)	10	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185(m)	100	<b>95</b>	87	93
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	0
Magnesium	ppm	ASTM D5185(m)	450	<b>99</b>	225	132
Calcium	ppm	ASTM D5185(m)	3000	<b>2227</b>	1985	2182
Phosphorus	ppm	ASTM D5185(m)	1150	<b>1004</b>	1000	1035
Zinc	ppm	ASTM D5185(m)	1350	<b>1220</b>	1159	1220
Sulfur	ppm	ASTM D5185(m)	4250	<b>2972</b>	3019	3023
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>16.2</b>	15.4	15.7
Visc @ 100°C	cSt	ASTM D7279(m)	10.9	<b>13.2</b>	10.9	13.7



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0216692  
**Lab Number** : 02641588  
**Unique Number** : 5799127  
**Test Package** : MOBCE

**HAWKESBURY TRANSPORT EXCAVATION**  
 668 MAIN STREET EAST, CP 715  
 HAWKESBURY, ON  
 CA K6A 1A9  
 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: