



# LIEBHERR

## OIL ANALYSIS REPORT

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

Area  
**IRON SHORING**  
Machine Id  
**100-028**  
Component  
**Swing Drive**  
Fluid  
**{not provided} (--- GAL)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 80W90 Gear Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample.

### WEAR

Copper and tin ppm levels are abnormal. Bearing and/or bushing wear is indicated.

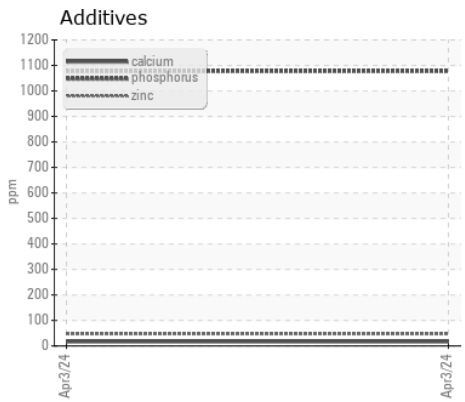
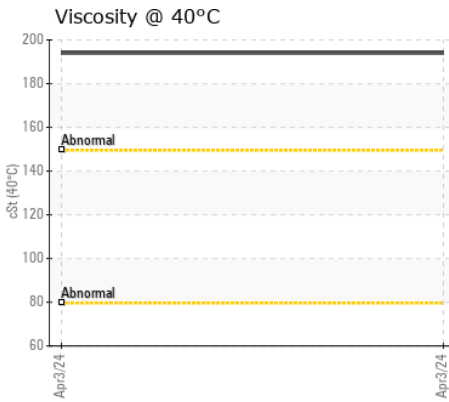
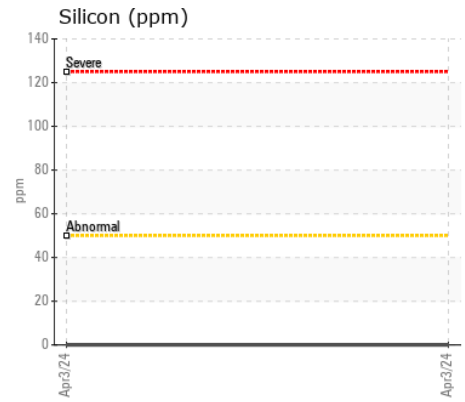
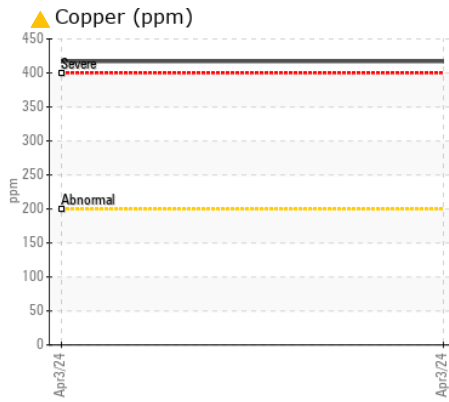
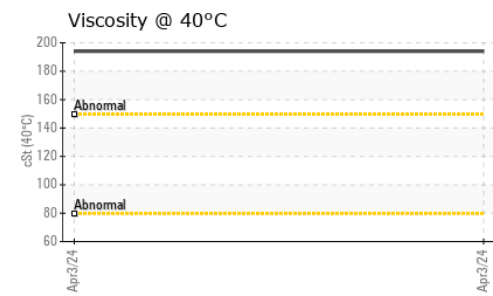
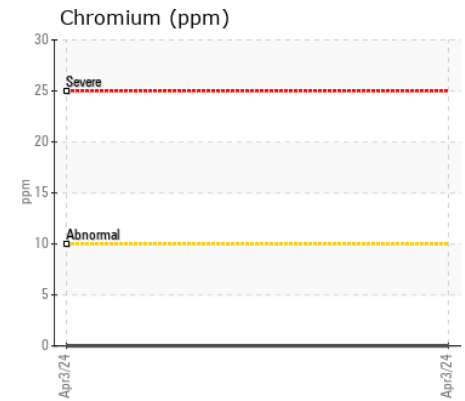
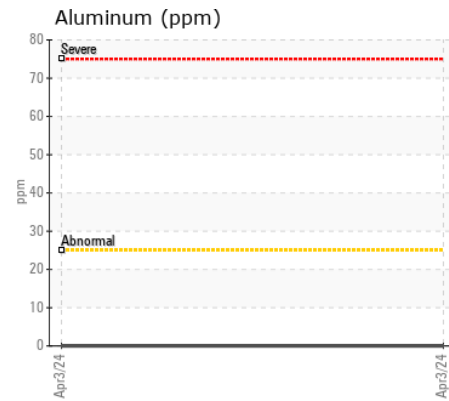
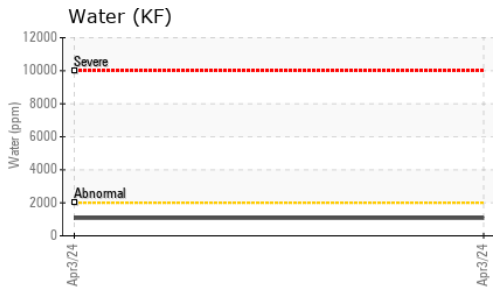
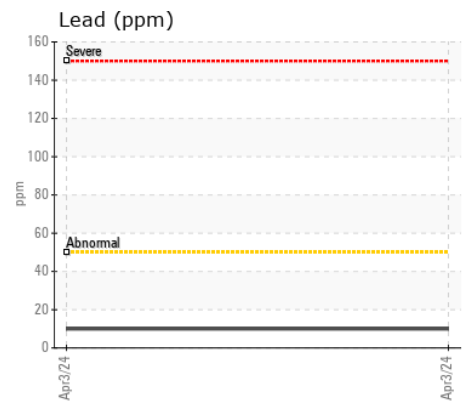
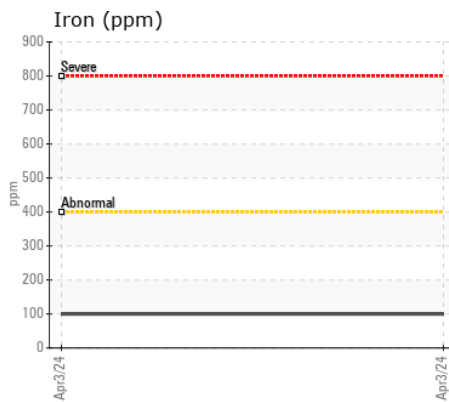
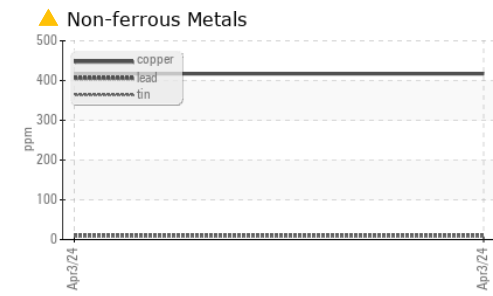
### CONTAMINATION

The water content is negligible. There is no indication of any contamination in the oil.

### FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286940	---	---
Sample Date		Client Info		03 Apr 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185(m)	>400	100	---	---
Chromium	ppm	ASTM D5185(m)	>10	0	---	---
Nickel	ppm	ASTM D5185(m)	>10	0	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)	>25	0	---	---
Lead	ppm	ASTM D5185(m)	>50	10	---	---
Copper	ppm	ASTM D5185(m)	>200	▲ 417	---	---
Tin	ppm	ASTM D5185(m)	>10	▲ 10	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Silicon	ppm	ASTM D5185(m)	>50	0	---	---
Potassium	ppm	ASTM D5185(m)	>20	1	---	---
Water	%	ASTM D6304*	>0.2	0.107	---	---
ppm Water	ppm	ASTM D6304*	>2000	1074	---	---
Silt	scalar	Visual*	NONE	VLITE	---	---
Debris	scalar	Visual*	NONE	VLITE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	NORML	NORML	---	---
Odor	scalar	Visual*	NORML	NORML	---	---
Emulsified Water	scalar	Visual*	>0.2	.2%	---	---
Sodium	ppm	ASTM D5185(m)		<1	---	---
Boron	ppm	ASTM D5185(m)		2	---	---
Barium	ppm	ASTM D5185(m)		3	---	---
Molybdenum	ppm	ASTM D5185(m)		0	---	---
Manganese	ppm	ASTM D5185(m)		3	---	---
Magnesium	ppm	ASTM D5185(m)		1	---	---
Calcium	ppm	ASTM D5185(m)		17	---	---
Phosphorus	ppm	ASTM D5185(m)		1078	---	---
Zinc	ppm	ASTM D5185(m)		47	---	---
Sulfur	ppm	ASTM D5185(m)		23854	---	---
Visc @ 40°C	cSt	ASTM D7279(m)		194	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : LH0286940  
**Lab Number** : 02626713  
**Unique Number** : 5759845  
**Test Package** : MOB 1 ( Additional Tests: KF )

**RONI/IRON SHORE EXCAVATING LTD.**  
 100 MACINTOSH BLVD  
 VAUGHAN, ON  
 CA L4K 4P3  
 Contact: Nathan Fernandes  
 nfernandes@roni.ca

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.