

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### [[20230430]] LIEBHERR R934C 020477-027 - Left Final Drive

Sample No: LH0265896  
 Oil Type: GEAR OIL SAE 80W90



**Orloff Enterprises**  
 410 King Street  
 Winnipeg, MB  
 CA R2W 5H8  
 Contact: Service Manager



#### SAMPLE INFORMATION

Sample Number	LH0265896	LH0095233	---	---
Sample Date	16 Aug 2023	06 Oct 2015	---	---
Machine Hours	13977	8200	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Chngd	Changed	---	---
Sample Status	SEVERE	NORMAL	---	---



#### OIL CONDITION

Visc @ 40°C	cSt	98.8	● 151	---	---
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T:  
F:



#### CONTAMINATION

Silicon	ppm	● 602	● 4	---	---
Sodium	ppm	● 45	● <1	---	---
Potassium	ppm	● 53	● 2	---	---



#### WEAR METALS

Iron	ppm	● 1402	● 26	---	---
Copper	ppm	● 167	● 2	---	---
Lead	ppm	● 44	● <1	---	---
Tin	ppm	● 4	● <1	---	---
Aluminum	ppm	● 200	● <1	---	---
Chromium	ppm	● 26	● <1	---	---
Molybdenum	ppm	● <1	● <1	---	---
Nickel	ppm	● 6	● <1	---	---
Titanium	ppm	● 8	● 0	---	---
Silver	ppm	<1	0	---	---
Manganese	ppm	● 16	● <1	---	---
Vanadium	ppm	<1	0	---	---



#### ADDITIVES

Calcium	ppm	436	● 111	---	---
Magnesium	ppm	178	● 1	---	---
Zinc	ppm	● 138	● 13	---	---
Phosphorus	ppm	● 1359	● 1574	---	---
Barium	ppm	● 8	● <1	---	---
Boron	ppm	● 71	● 4	---	---

#### Diagnosis

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Lead ppm levels are severe. Copper ppm levels are abnormal. Aluminum ppm levels are noted. Bearing and/or bushing wear is indicated. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component. Viscosity of sample indicates oil is within SAE 75W90 range, advise investigate. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: ORLWIN  
 Unique No: 5630617  
 Signed: Kevin Marson  
 Report Date: 23 Aug 2023



### GRAPHS

