

LIEBHERR

CONSTRUCTION EQUIPMENT



053987-1650 - Left Final Drive

Sample No: LH0274271

Oil Type: GEAR OIL SAE 75W90



SAMPLE INFORMATION

Sample Number	LH0274271	LH0250890	LH0227226	---
Sample Date	02 Oct 2023	31 Jan 2023	19 Sep 2022	---
Machine Hours	2037	1076	540	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	SEVERE	NORMAL	NORMAL	---

Delsan - American Iron and Metal
 2187 Montee Masson
 Laval, QC
 CA H7B 0A6
 Contact: MANNY MARQUES
 mmarques@delsan-aim.com
 T:
 F:



OIL CONDITION

Visc @ 40°C	cSt	242	168	194	---
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CONTAMINATION

Silicon	ppm	2963	153	4	---
Sodium	ppm	162	8	6	---
Potassium	ppm	258	20	3	---



WEAR METALS

PQ		2281	---	---	---
Iron	ppm	5943	163	141	---
Copper	ppm	3	<1	<1	---
Lead	ppm	2	<1	0	---
Tin	ppm	0	0	0	---
Aluminum	ppm	719	51	1	---
Chromium	ppm	77	3	4	---
Molybdenum	ppm	3	<1	0	---
Nickel	ppm	10	1	1	---
Titanium	ppm	48	3	<1	---
Silver	ppm	<1	0	0	---
Manganese	ppm	57	3	2	---
Vanadium	ppm	2	<1	0	---



ADDITIVES

Calcium	ppm	1381	113	13	---
Magnesium	ppm	192	19	<1	---
Zinc	ppm	16	17	17	---
Phosphorus	ppm	2091	2125	1462	---
Barium	ppm	8	3	14	---
Boron	ppm	13	34	6	---

Diagnosis

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Chromium and iron ppm levels are severe. PQ levels are severe. Titanium and nickel ppm levels are abnormal. Aluminum ppm levels are noted. Gear wear is indicated. The very high ferrous density (PQ) index indicates that severe wear is occurring. 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 80W140 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: DEL782MON
Unique No: 5657760
Signed: Kevin Marson
Report Date: 12 Oct 2023



GRAPHS

