

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L566 054116-1484 - Front Differential

Sample No: LH0281153

Oil Type: LIEBHERR GEAR BASIC 90 LS



SAMPLE INFORMATION

Sample Number	LH0281153	LH0135641	LH0135639	---
Sample Date	04 Jan 2024	21 Jan 2021	10 Dec 2020	---
Machine Hours	9598	4000	3800	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Not Changd	Changed	---
Sample Status	SEVERE	NORMAL	ABNORMAL	---

Abbycel Substrate Ltd.
 3545 Ross Road
 Abbotsford, BC
 CA V4X 1M6
 Contact: Service Manager



OIL CONDITION

Visc @ 40°C	cSt	193	86.2	191	---
-------------	-----	-----	------	-----	-----

T:
F:



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	30	2	30	---
Sodium	ppm	6	1	6	---
Potassium	ppm	<1	<1	<1	---

Diagnosis

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. Nickel ppm levels are severe. Tin and copper ppm levels are abnormal. Thrust washer and/or bearing/bushing wear is indicated. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.



WEAR METALS

Iron	ppm	281	48	479	---
Copper	ppm	97	21	134	---
Lead	ppm	3	<1	4	---
Tin	ppm	7	<1	7	---
Aluminum	ppm	2	<1	2	---
Chromium	ppm	3	<1	4	---
Molybdenum	ppm	0	1	21	---
Nickel	ppm	13	<1	2	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	<1	<1	---
Manganese	ppm	44	2	43	---
Vanadium	ppm	0	0	<1	---



ADDITIVES

Calcium	ppm	5	19	11	---
Magnesium	ppm	4	2	4	---
Zinc	ppm	26	28	66	---
Phosphorus	ppm	2247	2473	2238	---
Barium	ppm	<1	0	<1	---
Boron	ppm	2	196	3	---

Depot: ABB354ABB
Unique No: 5709036
Signed: Kevin Marson
Report Date: 11 Jan 2024



GRAPHS

