CONSTRUCTION EQUIPMENT



[(340370)] LIEBHERR R945 050696-1866 - Swing Drive

Sample No: LH0278847

Oil Type: LIEBHERR GEAR BASIC 90 LS

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U SAM	PLE INF	ORMATION			
Sample Number		LH0278847	LH0247000	LH0222720	LH0202798
Sample Date		17 Jan 2024	27 Jun 2023	28 Apr 2022	10 Aug 2021
Machine Hours		4963	4010	2019	891
Oil Hours		0	0	0	0
Oil Changed		Changed	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL	NORMAL
OILC	ONDITIO	ON			
Visc @ 40°C	cSt	197	98.0	O 127	O 126
CON	TAMINA	ATION			
Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	8	O 5	O 2	O <1
o "		•	•	0 -	0 -

CONTAMINATION						
Water	%	NEG	NEG	NEG	NEG	
Silicon	ppm	8	O 5	02	O <1	
Sodium	ppm	1	O <1	3	02	
Potassium	ppm	() <1	O <1	O 1	O <1	

(O) WEAT					
WEA	R METALS				
Iron	ppm	257	O 179	O 275	O 24
Copper	ppm	0 <1	O <1	O <1	O <1
Lead	ppm	○ <1	0	O 0	O 0
Tin	ppm	0	O 0	0	O <1
Aluminum	ppm	○ <1	O <1	O <1	0
Chromium	ppm	3	O 2	O 5	O <1
Molybdenum	ppm	0	O <1	O <1	O 0
Nickel	ppm	O <1	O <1	O <1	O <1
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	0	<1
Manganese	ppm	2	O 2	4	O <1
Vanadium	ppm	0	0	0	0

Vanadium	ppm	0	0	0	0		
ADDITIVES							
Calcium	ppm	5	O 11	9	6		
Magnesium	ppm	0 1	O 2	O <1	O 2		
Zinc	ppm	8	O 12	9	9		
Phosphorus	ppm	1331	O 1293	O 1495	O 1375		
Barium	ppm	0	O <1	6	3		
Boron	ppm	191	180	174	60		



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Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval

to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Depot: CLOPEM Unique No: 5711778 Signed: Wes Davis **Report Date:** 23 Jan 2024

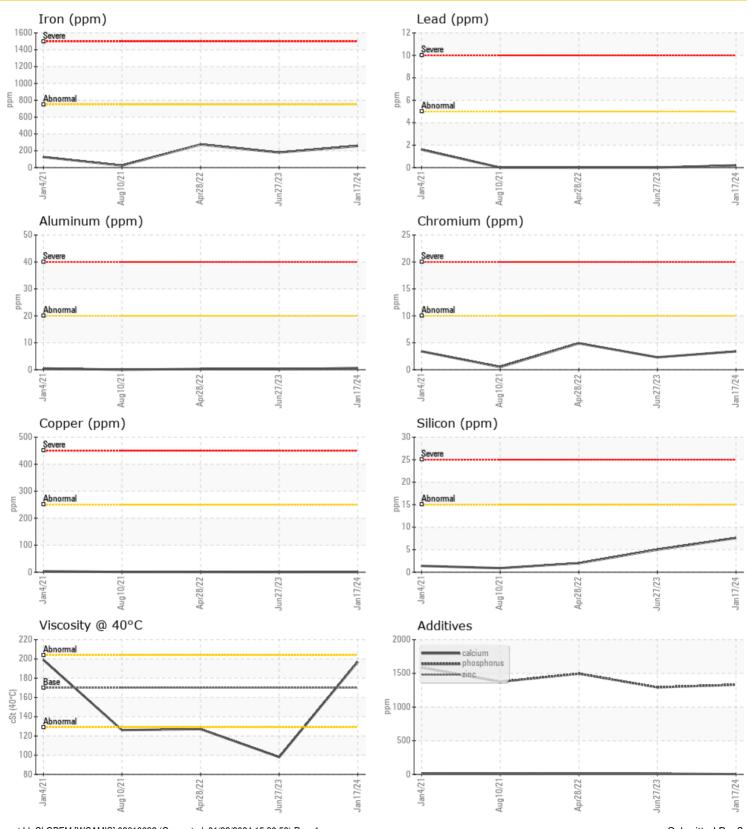
LIEBHERR







GRAPHS



Report Id: CLOPEM [WCAMIS] 02610692 (Generated: 01/23/2024 15:30:58) Rev: 1