# CONSTRUCTION EQUIPMENT



LIEBHERR MOTOROIL 5W-30 LOW ASH

Sample No: LH0243138

Oil Type:

# SAMPLE INFORMATION

JAM							
Sample Number		LH0243138	LH0243139	LH0207890			
Sample Date		11 Apr 2023	13 Dec 2022	08 Apr 2022			
Machine Hours		1453	939	476			
Oil Hours		514	939	476			
Oil Changed		Not Changd	Changed	Changed			
Sample Status		NORMAL	NORMAL	NORMAL			
<b>OIL CONDITION</b>							
Visc @ 100°C	cSt	0 11.3	0 10.8	0 11.7			
Base Number (BN)	mg KOH/g	<b>6.2</b>	5.8	5.4			
Oxidation (PA)	%	59	64	178			
	AMINATIO	N					
Water	%	NEG	NEG	NEG			
Soot %	%	0.1	0.1	0.1			
Nitration (PA)	%	75	68	88			
Sulfation (PA)	%	56	58	104			
Glycol	%	NEG	NEG	NEG			
Fuel	%	<1.0	<1.0	<1.0			
Silicon	ppm	07	8	0 11			
Sodium	ppm	<b>3</b>	03	03			
Potassium	ppm	06	22	8			
	METALS						

WEA	AR META	LS			
Iron	ppm	◯ 5	5	0 11	
Copper	ppm	<b>61</b>	0 136	0 185	
Lead	ppm	<b>○</b> <1	◯ <1	5	
Tin	ppm	<b>○</b> <1	○ <1	2	
Aluminum	ppm	01	03	2	
Chromium	ppm	0	0 0	○ <1	
Molybdenum	ppm	01	0 14	0 42	
Nickel	ppm	0	0 (	○ <1	
Titanium	ppm	<1	<1	◯ <1	
Silver	ppm	0	0 0	1	
Manganese	ppm	<b>○</b> <1	◯ <1	2	
Vanadium	ppm	0	0	0	

Calcium	ppm	1216	1173	0 1386			
Magnesium	ppm	<b>630</b>	○ 590	0 876			
Zinc	ppm	684	662	0 862			
Phosphorus	ppm	664	○ 655	○ 714			
Barium	ppm	<b></b> <1	5	31			
Boron	ppm	64	○ 76	0 114			





### TIMBER PRODUCTS

11256 E STATE HWY M28 MUNISING, MI US 49862 Contact: RICH ALDRICH raldrich@timberproducts.com T: (906)452-7013 F:

## Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot:TIMMUNUnique No:10896466Signed:Wes DavisReport Date:26 Feb 2024

Report Id: TIMMUN [WUSCAR] 06098236 (Generated: 02/29/2024 08:48:04) Rev: 1

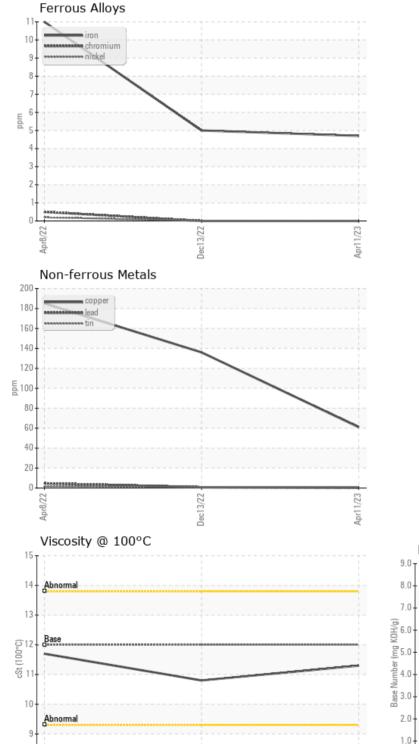
Contact/Location: RICH ALDRICH - TIMMUN

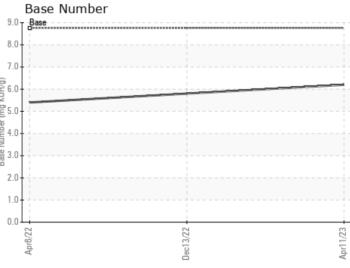






GRAPHS





Dec13/22 -

Apr11/23-

8

Apr8/22.

Contact/Location: RICH ALDRICH - TIMMUN