

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### LIEBHERR LH50M 120556-1216 - Diesel Engine

Sample No: LH05808650

Oil Type: LIEBHERR MOTOROIL 5W-30 LOW ASH



RIVER METALS RECYCLING - DECATUR FACILITY  
 4301 IVERSON BLVD  
 TRINITY, AL  
 US 35673  
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#### SAMPLE INFORMATION

Sample Number	LH05808650	DJJ0010681	DJJ0015338	DJJ0015340
Sample Date	30 Mar 2023	16 Mar 2023	03 Feb 2023	04 Jan 2023
Machine Hours	7126	7046	6557	6270
Oil Hours	0	250	250	0
Oil Changed	N/A	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ABNORMAL



#### OIL CONDITION

Visc @ 100°C	cSt	11.3	11.4	11.5	11.4
Base Number (BN)	mg KOH/g	3.5	2.5	4.3	3.8
Oxidation (PA)	%	83	108	92	96



#### CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	49	76	70	70
Sulfation (PA)	%	62	61	60	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	12	13	21	10
Sodium	ppm	2	3	4	3
Potassium	ppm	332	427	448	385



#### WEAR METALS

Iron	ppm	2	2	4	2
Copper	ppm	<1	<1	2	1
Lead	ppm	0	0	<1	1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	2	2	1	2
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	1021	1133	1124	1074
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	<1



#### ADDITIVES

Calcium	ppm	501	526	511	570
Magnesium	ppm	101	113	108	147
Zinc	ppm	28	8	13	53
Phosphorus	ppm	40	12	21	69
Barium	ppm	0	0	2	0
Boron	ppm	688	566	760	700

#### Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. 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. All component wear rates are normal. Sodium and/or potassium levels are high. The BN level is low.

Depot: RIVTRI  
 Unique No: 10406179  
 Signed: Angela Borella  
 Report Date: 05 Apr 2023



### GRAPHS

