

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### 021388-783 LIEBHERR R954 021388-783 - Diesel Engine

Sample No: LH0258357

Oil Type: DIESEL ENGINE OIL SAE 15W40



#### SAMPLE INFORMATION

Sample Number	LH0258357	DJJ0018051	DJJ0017612	DJJ0016562
Sample Date	12 Mar 2024	26 Nov 2023	25 Oct 2023	15 Feb 2023
Machine Hours	0	0	4178	3842
Oil Hours	0	0	0	0
Oil Changed	N/A	N/A	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

RIVER METALS RECYCLING - NEWPORT  
P.O. BOX 72-220  
NEWPORT, KY  
US 41072  
Contact: RYAN BOWDEN



#### OIL CONDITION

Visc @ 100°C	cSt	13.4	14.3	14.7	13.9
Base Number (BN)	mg KOH/g	9.0	7.0	6.2	10.3
Oxidation (PA)	%	58	65	63	62

T:  
F: (859)291-0086



#### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.7	0.8	0.9	0.1
Nitration (PA)	%	58	92	82	53
Sulfation (PA)	%	53	59	59	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	7	6
Sodium	ppm	2	3	2	4
Potassium	ppm	2	1	<1	<1

#### Diagnosis

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. 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.



#### WEAR METALS

Iron	ppm	5	6	8	8
Copper	ppm	<1	<1	<1	<1
Lead	ppm	2	<1	0	<1
Tin	ppm	<1	0	0	<1
Aluminum	ppm	1	1	2	3
Chromium	ppm	<1	0	0	<1
Molybdenum	ppm	56	91	63	92
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	<1
Silver	ppm	<1	0	0	0
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	<1	0	0	0



#### ADDITIVES

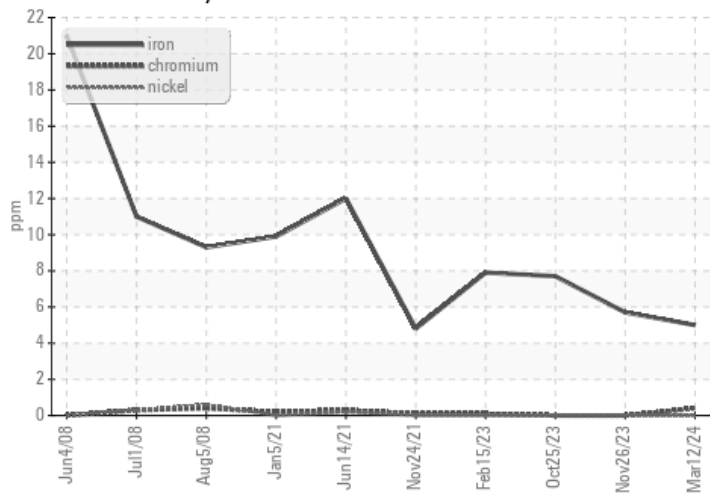
Calcium	ppm	1221	2176	2112	2208
Magnesium	ppm	850	45	84	40
Zinc	ppm	1230	1338	1123	1231
Phosphorus	ppm	1079	1009	1017	1026
Barium	ppm	0	0	4	0
Boron	ppm	13	47	33	54

Depot: RIVNEW  
Unique No: 10926872  
Signed: Wes Davis  
Report Date: 15 Mar 2024

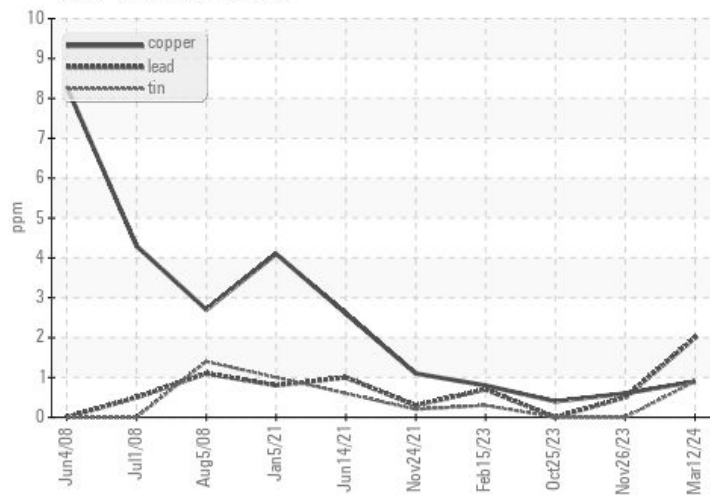


### GRAPHS

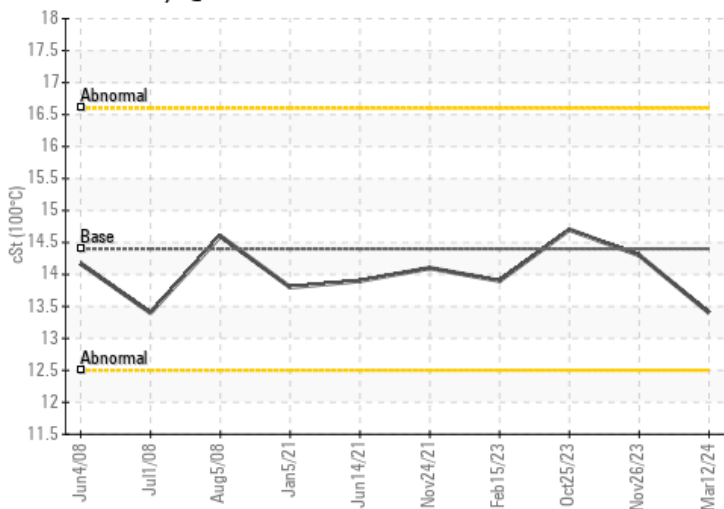
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

