

# LIEBHERR

## CONSTRUCTION EQUIPMENT



### SENNEBOGEN 830E MS17 - Diesel Engine

Sample No: LH0244795  
 Oil Type: DIESEL ENGINE OIL SAE 15W40



#### Sample Information

Sample Number	LH0244795	LH0244788	LH0244785	LHMC79957
Sample Date	29 Jun 2024	08 Feb 2024	11 Dec 2023	23 Aug 2023
Machine Hours	8654	7932	7567	6878
Oil Hours	0	500	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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#### Oil Condition

Visc @ 100°C	cSt	13.6	13.4	13.4	13.6
Base Number (BN)	mg KOH/g	7.8	7.7	7.1	7.2
Oxidation (PA)	%	75	60	70	69



#### Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.6	0.3	0.7	0.3
Nitration (PA)	%	83	65	78	80
Sulfation (PA)	%	60	52	59	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	2	3	3	4
Sodium	ppm	<1	2	<1	3
Potassium	ppm	3	2	2	5



#### Wear Metals

Iron	ppm	17	11	18	13
Copper	ppm	<1	<1	1	<1
Lead	ppm	0	2	<1	<1
Tin	ppm	0	2	0	2
Aluminum	ppm	2	2	2	3
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	63	53	60	58
Nickel	ppm	0	<1	0	0
Titanium	ppm	<1	<1	0	3
Silver	ppm	0	<1	0	0
Manganese	ppm	0	1	<1	<1
Vanadium	ppm	<1	0	<1	<1



#### Additives

Calcium	ppm	1186	1248	1167	1154
Magnesium	ppm	961	974	975	943
Zinc	ppm	1285	1345	1351	1313
Phosphorus	ppm	1068	1130	1014	1012
Barium	ppm	0	0	0	<1
Boron	ppm	<1	4	9	10

#### Diagnosis

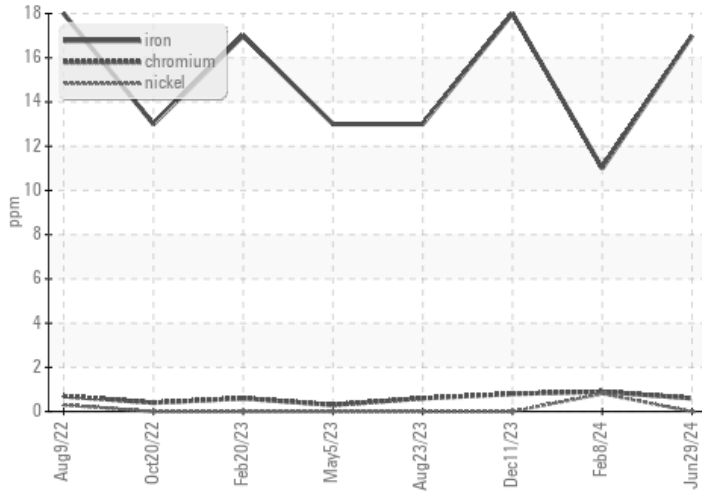
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: OSCLAF  
 Unique No: 11123536  
 Signed: Wes Davis  
 Report Date: 15 Jul 2024

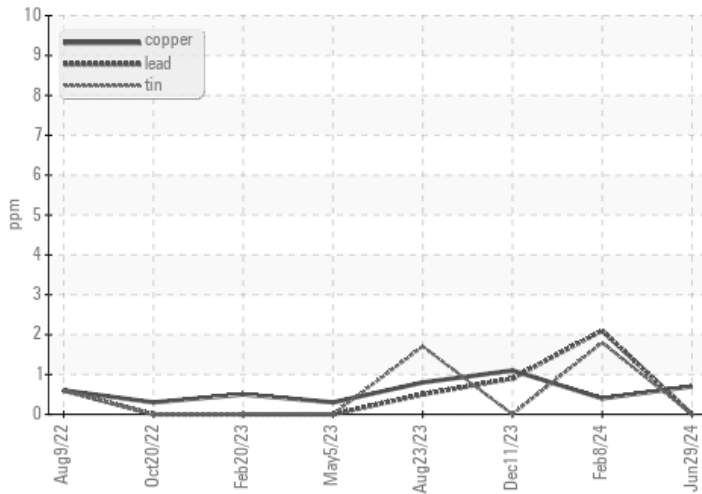


### Graphs

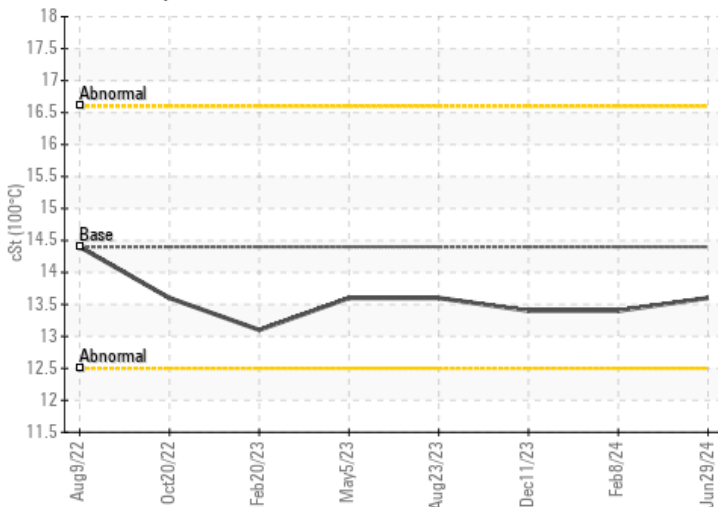
#### Ferrous Alloys



#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number

