

LIEBHERR

CONSTRUCTION EQUIPMENT



SENNEBOGEN 830E MS17 - Diesel Engine

Sample No: LH0244788
 Oil Type: DIESEL ENGINE OIL SAE 15W40



OSCAR WINSKI CO. INC
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Sample Information

Sample Number	LH0244788	LH0244785	LHMC79957	LHMC103187
Sample Date	08 Feb 2024	11 Dec 2023	23 Aug 2023	05 May 2023
Machine Hours	7932	7567	6878	6853
Oil Hours	500	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



Oil Condition

Visc @ 100°C	cSt	13.4	13.4	13.6	13.6
Base Number (BN)	mg KOH/g	7.7	7.1	7.2	7.8
Oxidation (PA)	%	60	70	69	64



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.7	0.3	0.3
Nitration (PA)	%	65	78	80	69
Sulfation (PA)	%	52	59	57	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	3	4	3
Sodium	ppm	2	<1	3	2
Potassium	ppm	2	2	5	1



Wear Metals

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



Additives

Calcium	ppm	1248	1167	1154	1223
Magnesium	ppm	974	975	943	948
Zinc	ppm	1345	1351	1313	1308
Phosphorus	ppm	1130	1014	1012	1028
Barium	ppm	0	0	<1	0
Boron	ppm	4	9	10	8

Diagnosis

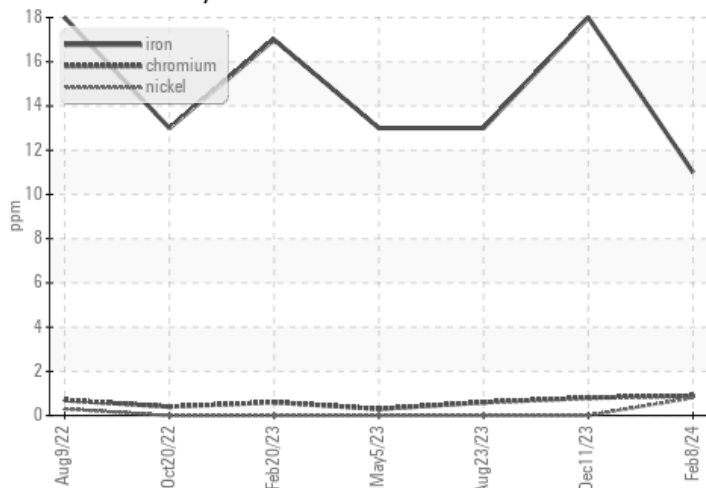
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil.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

Depot: OSCLAF
 Unique No: 11016730
 Signed: Wes Davis
 Report Date: 07 May 2024

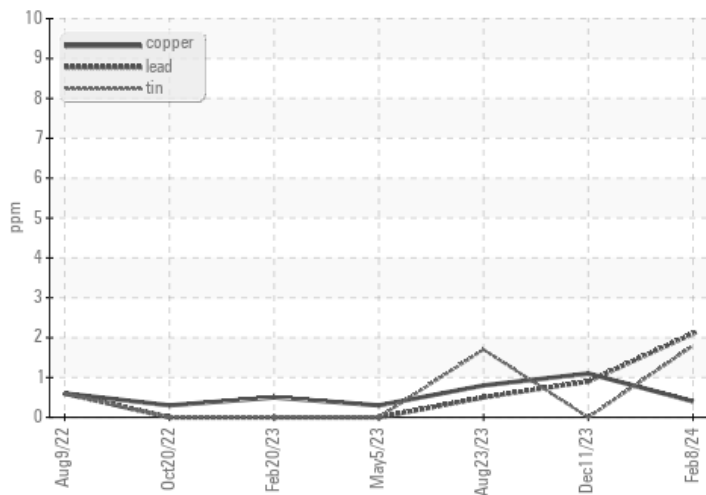


Graphs

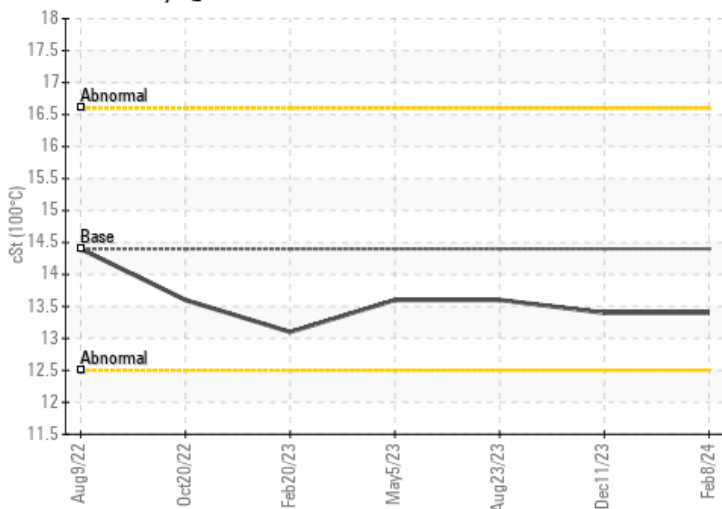
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

