

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L556 046708-1332 - Diesel Engine

Sample No: LH0268186

Oil Type: DIESEL ENGINE OIL SAE 5W40



SAMPLE INFORMATION

Sample Number	LH0268186	LH0243722	LH0245005	LH0207735
Sample Date	09 Feb 2024	29 Sep 2023	09 Feb 2023	23 Nov 2021
Machine Hours	10214	9547	9080	7922
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ATTENTION	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.0	13.2	11.6	11.5
Base Number (BN)	mg KOH/g	6.9	5.8	6.0	---
Oxidation (PA)	%	65	60	76	68



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	80	74	86	83
Sulfation (PA)	%	57	53	63	59
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	1.2	<1.0
Silicon	ppm	12	8	10	7
Sodium	ppm	0	1	3	2
Potassium	ppm	8	1	4	2

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	6	3	7	6
Copper	ppm	2	3	5	2
Lead	ppm	0	0	3	2
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	2	<1	1	1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	8	21	2	4
Nickel	ppm	0	0	0	0
Titanium	ppm	87	48	6	1
Silver	ppm	0	0	0	<1
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	1	<1	<1	<1



ADDITIVES

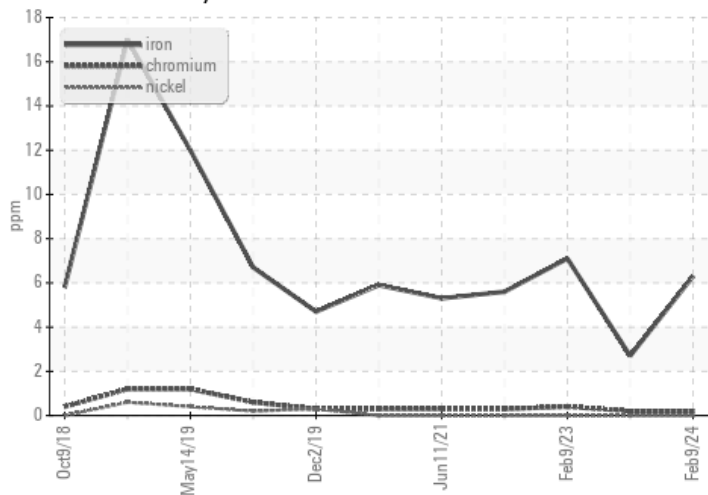
Calcium	ppm	1284	1246	1488	1443
Magnesium	ppm	692	837	707	712
Zinc	ppm	1143	1219	939	780
Phosphorus	ppm	1054	986	764	762
Barium	ppm	12	0	0	0
Boron	ppm	77	49	39	35

Depot: LEC0007
 Unique No: 10876050
 Signed: Wes Davis
 Report Date: 15 Feb 2024

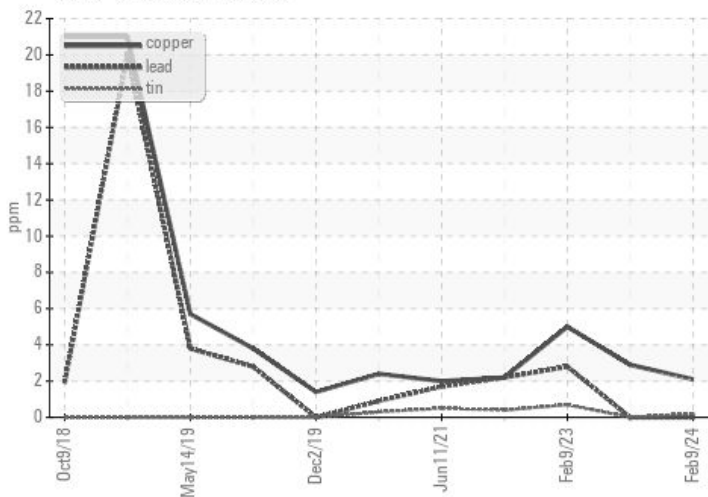


GRAPHS

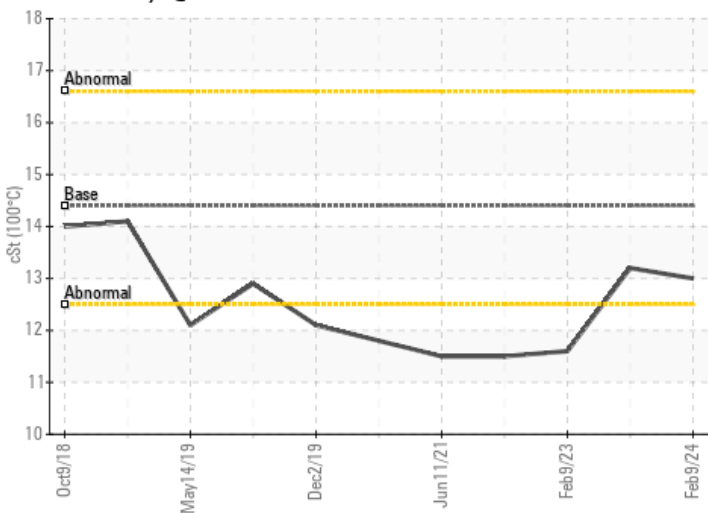
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

