LIEBHERR
CONSTRUCTION EQUIPMENT

[[KIMMER SCRAP IRON]] LIEBHERR LH50 145582-1216 - Diesel

Sample No: LH0273656

Oil Type: DIESEL ENGINE OIL SAE 5W30

Sample Information

Sample Number		**LH0273656**	LH0272942	LH0268523	LH0243269
Sample Date		**06 Jun 2024**	20 Nov 2023	14 Sep 2023	15 Jun 2023
Machine Hours		**3371**	2062	1633	1005
Oil Hours		**1000**	0	0	0
Oil Changed		**Not Changd**	Changed	Not Changd	Changed
Sample Status		**NORMAL**	ABNORMAL	ABNORMAL	ABNORMAL

Oil Condition

Visc @ 100°C	cSt	**12.0**	13.3	12.3	12.4
Base Number (BN)	mg KOH/g	**8.2**	1.6	2.7	5.8
Oxidation (PA)	%	**99**	222	198	186

Contamination

Water	%	**NEG**	NEG	NEG	NEG
Soot %	%	**0.1**	0.2	0.1	0.1
Nitration (PA)	%	**143**	159	128	112
Sulfation (PA)	%	**65**	107	102	100
Glycol	%	**NEG**	NEG	0.0	NEG
Fuel	%	**<1.0**	<1.0	1.3	<1.0
Silicon	ppm	**8**	10	9	7
Sodium	ppm	**3**	3	3	2
Potassium	ppm	**4**	6	4	3

Wear Metals

Iron	ppm	**15**	23	19	14
Copper	ppm	**19**	162	160	153
Lead	ppm	**1**	7	7	4
Tin	ppm	**1**	2	2	1
Aluminum	ppm	**3**	4	5	3
Chromium	ppm	**<1**	1	1	<1
Molybdenum	ppm	**4**	32	33	34
Nickel	ppm	**0**	0	0	0
Titanium	ppm	**<1**	0	<1	0
Silver	ppm	**0**	0	0	0
Manganese	ppm	**<1**	2	2	1
Vanadium	ppm	**0**	0	0	0

Additives

Calcium	ppm	**3733**	1815	1839	1761
Magnesium	ppm	**109**	640	706	694
Zinc	ppm	**1222**	1039	1060	1025
Phosphorus	ppm	**1050**	845	833	818
Barium	ppm	**2**	29	29	23
Boron	ppm	**169**	85	81	116

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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: RECBRILH
Unique No: 11087308
Signed: Wes Davis
Report Date: 20 Jun 2024

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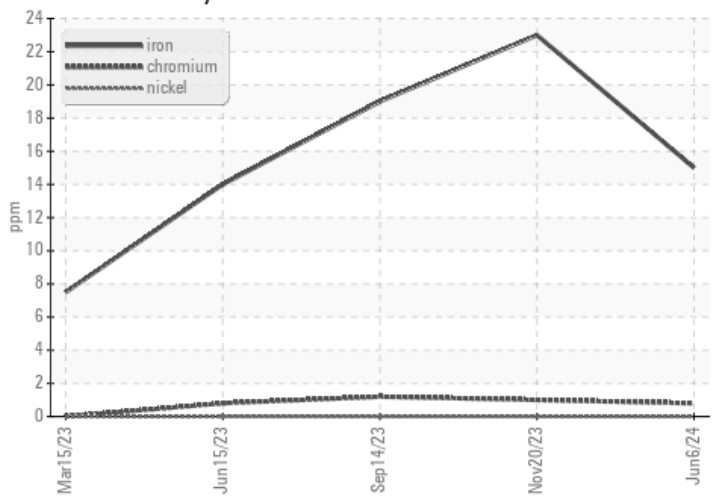
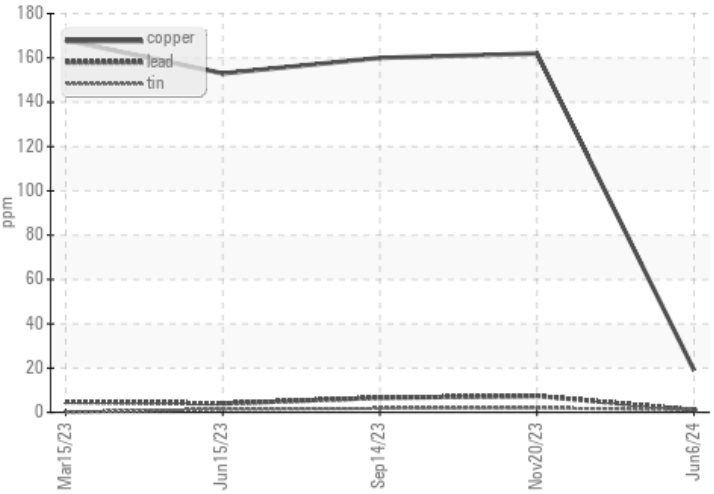
Graphs

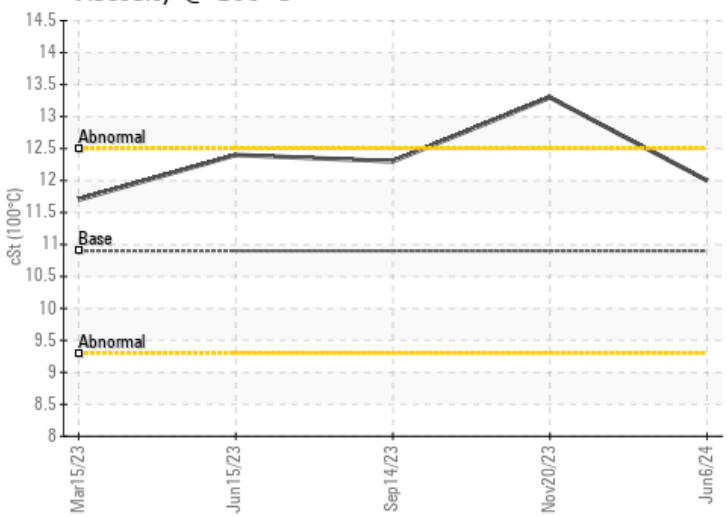
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number