

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L556 055501-1332 - Diesel Engine

Sample No: LH0254713

Oil Type: LIEBHERR MOTOROIL 5W30



SAMPLE INFORMATION

Sample Number	LH0254713	LH0207997	LH0220830	LH0207907
Sample Date	24 Sep 2023	22 Feb 2023	12 Aug 2022	27 Jan 2022
Machine Hours	6554	5381	4360	3121
Oil Hours	0	0	0	0
Oil Changed	N/A	Not Changd	Changed	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

INTERSTATE POWER SYSTEMS

407 ADVENTURLAND DR NE
ALTOONA, IA

US 50009

Contact: DALTON JOHNSON

dalton.johnson@istate.com

T: (515)957-3300

F:



OIL CONDITION

Visc @ 100°C	cSt	11.9	11.4	11.6	11.2
Base Number (BN)	mg KOH/g	6.9	11.2	9.0	11.9
Oxidation (PA)	%	119	66	103	78



CONTAMINATION

Soot %	%	0.2	0.1	0.2	0.1
Nitration (PA)	%	184	122	151	131
Sulfation (PA)	%	72	53	71	59
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	19	12	10	12
Sodium	ppm	4	3	1	4
Potassium	ppm	7	4	2	0



WEAR METALS

Iron	ppm	30	12	27	17
Copper	ppm	8	3	10	5
Lead	ppm	15	3	15	1
Tin	ppm	2	1	<1	1
Aluminum	ppm	4	4	2	2
Chromium	ppm	2	<1	1	<1
Molybdenum	ppm	5	2	18	5
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	<1	<1
Manganese	ppm	1	1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	4168	4307	3178	4392
Magnesium	ppm	74	38	153	58
Zinc	ppm	1239	1229	1092	1200
Phosphorus	ppm	1000	957	908	1089
Barium	ppm	0	0	0	0
Boron	ppm	154	204	112	207

Diagnosis

Resample at the next service interval to monitor. 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: INTALT

Unique No: 10661550

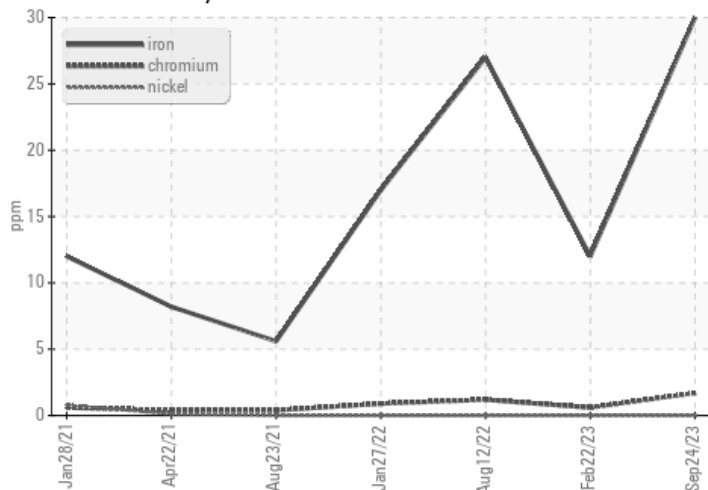
Signed: Doug Bogart

Report Date: 26 Sep 2023

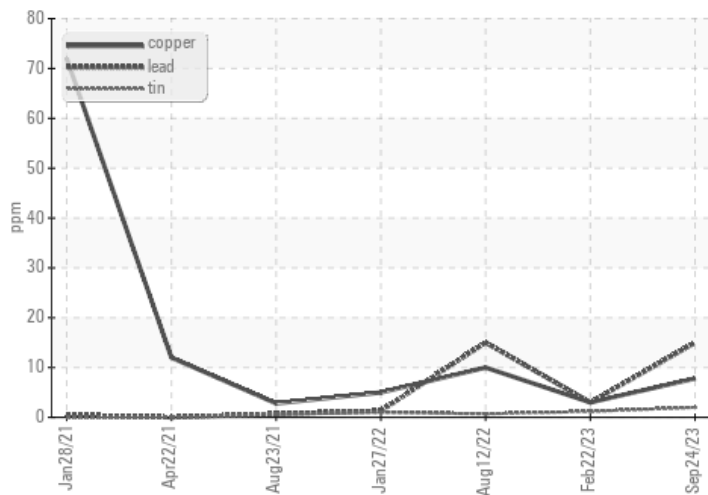


GRAPHS

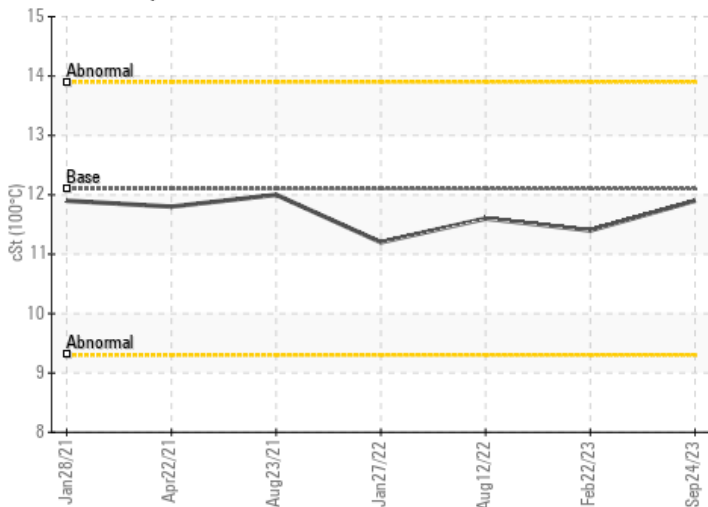
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

