

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR A924 024089-957 - Diesel Engine

Sample No: LH0243238

Oil Type: SHELL RIMULA SUPER SAE 15W40



SAMPLE INFORMATION

Sample Number	LH0243238	LH0157801	LHMC80569	LHMC52816
Sample Date	14 Jun 2023	12 Jan 2021	25 Apr 2016	01 Oct 2015
Machine Hours	1481	16915	14956	14645
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	N/A	N/A
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

DUMES INC

1640 NORTH 6TH ST

VINCENNES, IN

US 47591

Contact:



OIL CONDITION

Visc @ 100°C	cSt	12.6	12.4	13.00	12.55
Base Number (BN)	mg KOH/g	6.7	---	---	---
Oxidation (PA)	%	65	65	36	44

T:

F:



CONTAMINATION

Soot %	%	0.4	0.6	0	0.2
Nitration (PA)	%	78	79	42	50
Sulfation (PA)	%	57	58	39	44
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	6	5	7
Sodium	ppm	24	11	5	4
Potassium	ppm	<1	0	0	4

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.



WEAR METALS

Iron	ppm	18	27	6	13
Copper	ppm	1	8	2	2
Lead	ppm	1	4	0	4
Tin	ppm	<1	0	0	0
Aluminum	ppm	2	2	2	2
Chromium	ppm	<1	1	<1	1
Molybdenum	ppm	84	59	63	41
Nickel	ppm	0	<1	<1	<1
Titanium	ppm	0	<1	0	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	2206	1119	1150	1168
Magnesium	ppm	69	953	906	787
Zinc	ppm	1269	1185	1198	1170
Phosphorus	ppm	1051	958	923	942
Barium	ppm	0	<1	0	0
Boron	ppm	62	3	5	0

Depot: DUMVINLH

Unique No: 10536532

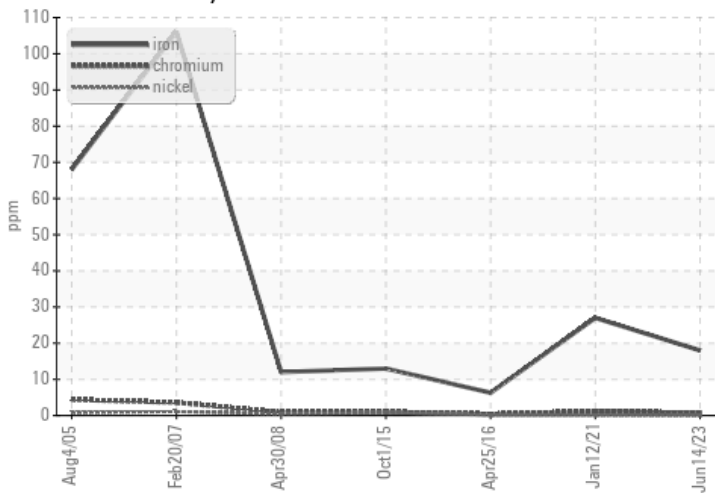
Signed: Wes Davis

Report Date: 02 Jul 2023

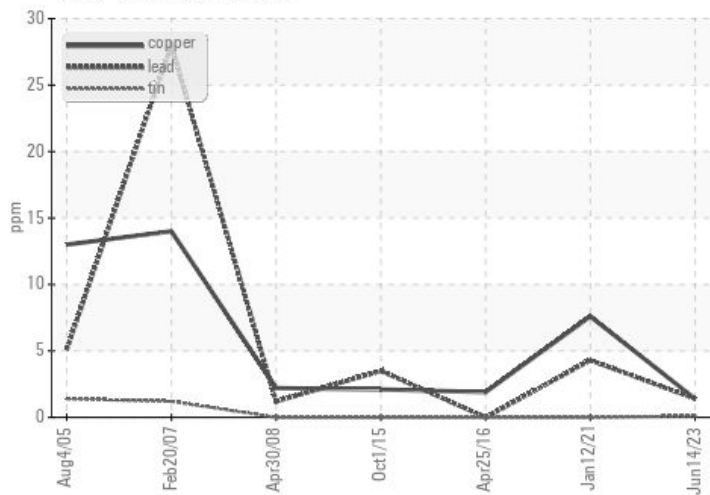


GRAPHS

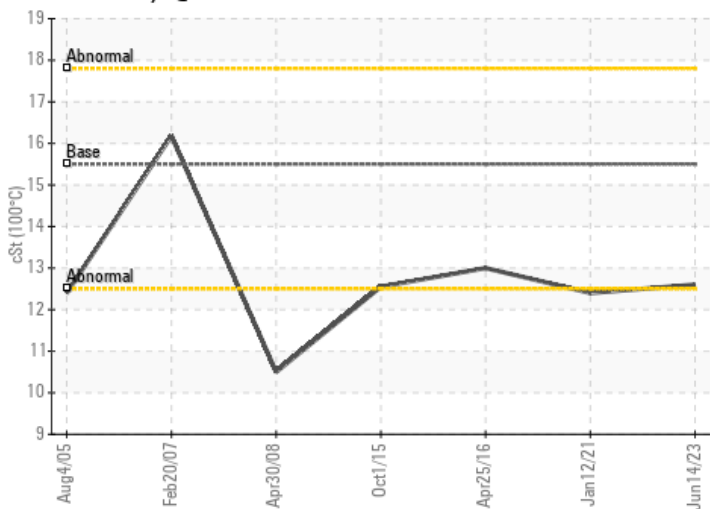
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

