

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH30 124150 - Diesel Engine

Sample No: LH0229816

Oil Type: LIEBHERR MOTOROIL 5W-30 LOW ASH



ORION EQUIPMENT

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SAMPLE INFORMATION

Sample Number	LH0229816	LH0208115	LH0190591	---
Sample Date	05 Aug 2022	28 Mar 2022	05 Jun 2021	---
Machine Hours	3000	2500	500	---
Oil Hours	500	500	500	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	ABNORMAL	---



OIL CONDITION

Visc @ 100°C	cSt	11.1	11.5	11.7	---
Base Number (BN)	mg KOH/g	5.7	6.6	---	---
Oxidation (PA)	%	82	76	184	---



CONTAMINATION

Water	%	NEG	NEG	0.126	---
Soot %	%	0.1	0.1	0.1	---
Nitration (PA)	%	90	86	90	---
Sulfation (PA)	%	65	62	103	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	7	7	9	---
Sodium	ppm	3	3	1	---
Potassium	ppm	2	3	0	---



WEAR METALS

Iron	ppm	6	5	14	---
Copper	ppm	4	9	325	---
Lead	ppm	2	2	19	---
Tin	ppm	<1	2	1	---
Aluminum	ppm	2	1	2	---
Chromium	ppm	<1	<1	2	---
Molybdenum	ppm	<1	<1	40	---
Nickel	ppm	<1	1	0	---
Titanium	ppm	<1	<1	<1	---
Silver	ppm	<1	0	0	---
Manganese	ppm	<1	<1	1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	1239	1381	1440	---
Magnesium	ppm	648	712	821	---
Zinc	ppm	775	796	816	---
Phosphorus	ppm	640	705	779	---
Barium	ppm	0	0	27	---
Boron	ppm	46	62	101	---

Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with 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.

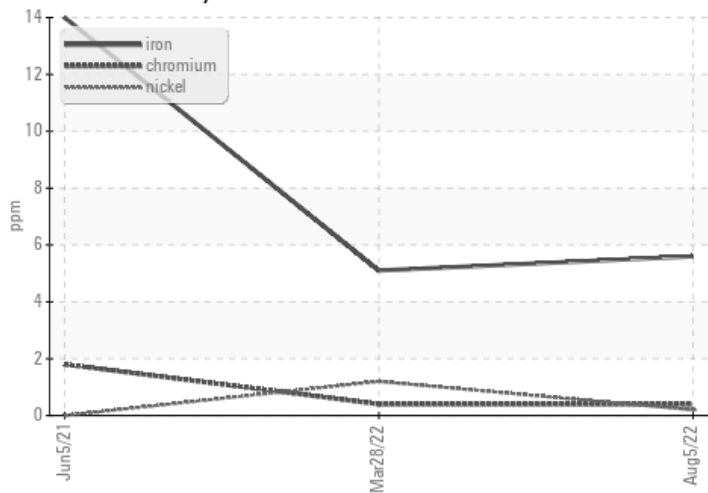
Diagnosis

Depot: ORIVAN
Unique No: 10099390
Signed: Wes Davis
Report Date: 18 Aug 2022

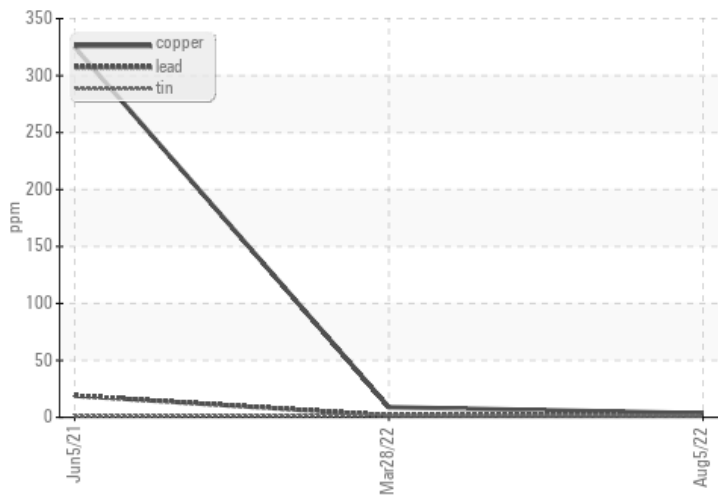


GRAPHS

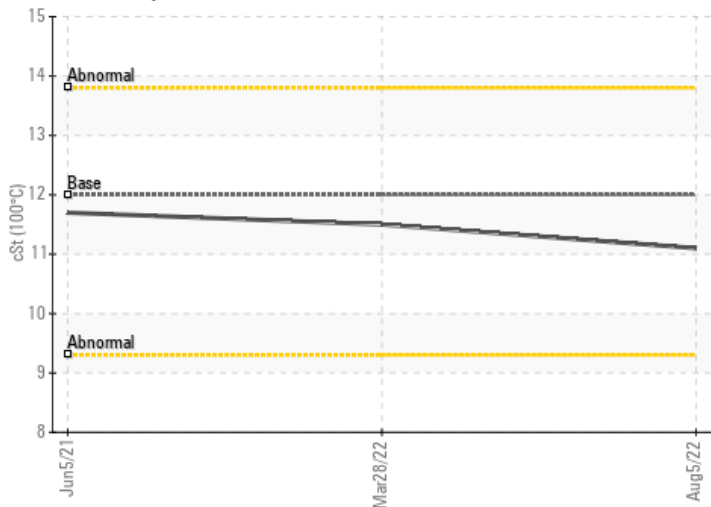
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

