

LIEBHERR

CONSTRUCTION EQUIPMENT



[TMR-Pinellas Park] 248143 LIEBHERR LH50M 1203-79288 - Diesel

Sample No: LH06113973
 Oil Type: DIESEL ENGINE OIL SAE 10W30



TRADEMARK METALS RECYCLING - ACRE
 P.O. BOX 767
 PINELLAS PARK, FL
 US 33782
 Contact: RYAN BOWDEN



SAMPLE INFORMATION

Sample Number	LH06113973	DJJ0008249	DJJ0008350	DJJ007954
Sample Date	06 Mar 2024	09 Dec 2022	12 Oct 2022	03 May 2021
Machine Hours	0	12289	12060	9495
Oil Hours	0	0	250	250
Oil Changed	N/A	N/A	Changed	Changed
Sample Status	NORMAL	ABNORMAL	SEVERE	ABNORMAL



OIL CONDITION

Visc @ 100°C	cSt	14.0	12.2	12.2	11.9
Base Number (BN)	mg KOH/g	9.1	11.0	12.2	---
Oxidation (PA)	%	50	61	65	66

T:
 F: (727)547-9298



CONTAMINATION

Water	%	NEG	NEG	NEG	0.162
Soot %	%	0.1	1.6	2.3	0.8
Nitration (PA)	%	43	78	106	94
Sulfation (PA)	%	46	64	71	58
Glycol	%	NEG	NEG	0.10	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	8	10	14	7
Sodium	ppm	0	273	580	569
Potassium	ppm	2	44	94	85

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 oil viscosity is higher than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.



WEAR METALS

Iron	ppm	6	34	43	22
Copper	ppm	6	12	13	12
Lead	ppm	<1	1	3	2
Tin	ppm	<1	1	1	1
Aluminum	ppm	3	24	35	22
Chromium	ppm	<1	1	2	<1
Molybdenum	ppm	58	58	51	62
Nickel	ppm	<1	0	0	<1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	<1	0	0	2
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	1075	1088	1151	997
Magnesium	ppm	901	904	899	918
Zinc	ppm	1146	1195	1164	1185
Phosphorus	ppm	1035	987	965	973
Barium	ppm	0	0	0	<1
Boron	ppm	5	3	11	8

Depot: TRAPINFL
 Unique No: 10922806
 Signed: Don Baldrige
 Report Date: 12 Mar 2024

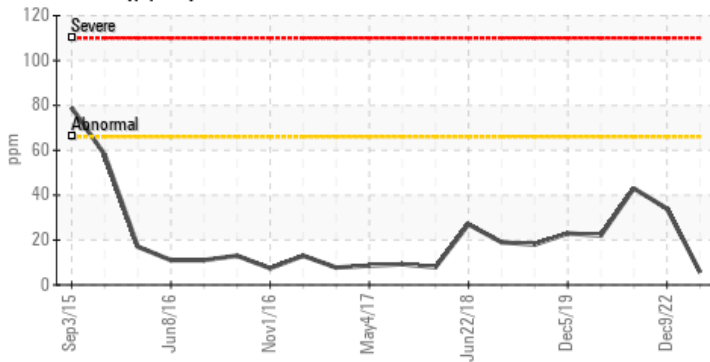
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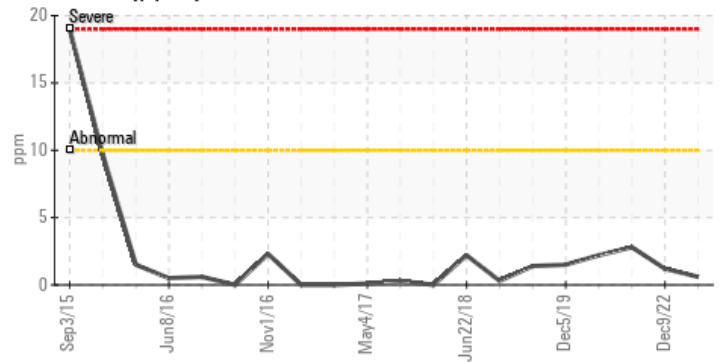


GRAPHS

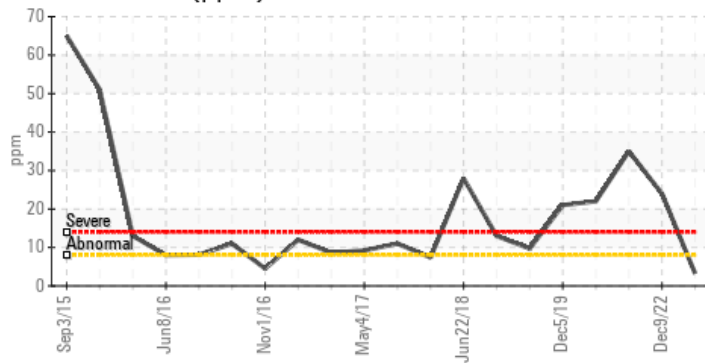
Iron (ppm)



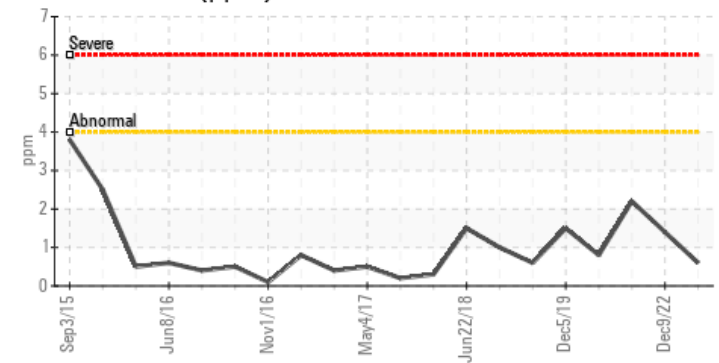
Lead (ppm)



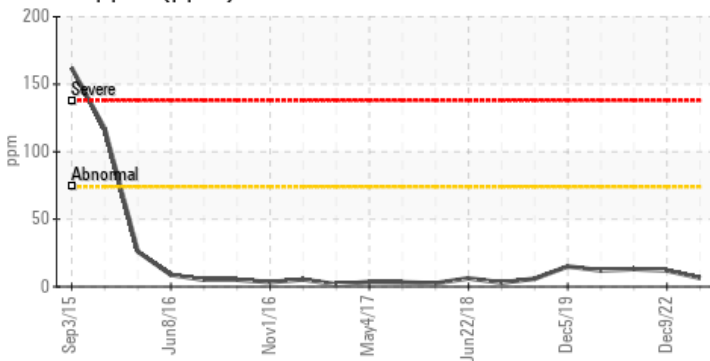
Aluminum (ppm)



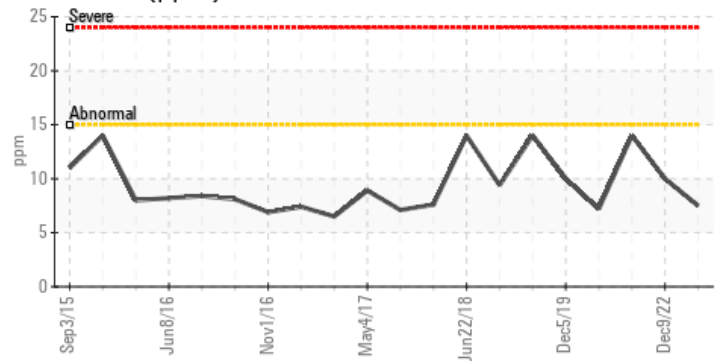
Chromium (ppm)



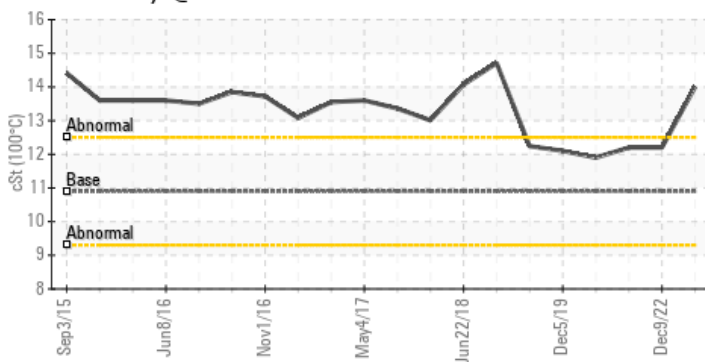
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

