

LIEBHERR

CONSTRUCTION EQUIPMENT



[[CURTIS EXCAVATING]] LIEBHERR R922 003029-480 - Diese

Sample No: LH0268160

Oil Type: NAPA Motor Oil 15W40



CURTIS EXCAVATING
 N8701 HWY EE
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 US 53901
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Sample Information

Sample Number	LH0268160	LH0244239	LH0207660	LH0217652
Sample Date	13 Jun 2024	08 Jul 2023	22 May 2023	12 Jan 2023
Machine Hours	1269	740	7652	7407
Oil Hours	285	228	232	260
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	ATTENTION



Oil Condition

Visc @ 100°C	cSt	15.4	14.6	14.5	11.2
Base Number (BN)	mg KOH/g	5.9	6.2	8.9	7.5
Oxidation (PA)	%	122	69	80	71



Contamination

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	113	82	84	94
Sulfation (PA)	%	78	60	59	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	1.4
Silicon	ppm	6	8	4	10
Sodium	ppm	4	2	4	11
Potassium	ppm	4	4	0	1



Wear Metals

Iron	ppm	22	20	9	21
Copper	ppm	2	2	2	4
Lead	ppm	29	3	<1	2
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	2	3	<1	2
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	13	8	48	12
Nickel	ppm	<1	<1	0	0
Titanium	ppm	0	0	<1	2
Silver	ppm	0	0	0	0
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	0	0	0	0



Additives

Calcium	ppm	3028	2648	1844	1949
Magnesium	ppm	113	70	586	665
Zinc	ppm	1414	1209	1316	889
Phosphorus	ppm	1123	1005	1041	768
Barium	ppm	0	6	0	10
Boron	ppm	13	3	30	103

Diagnosis

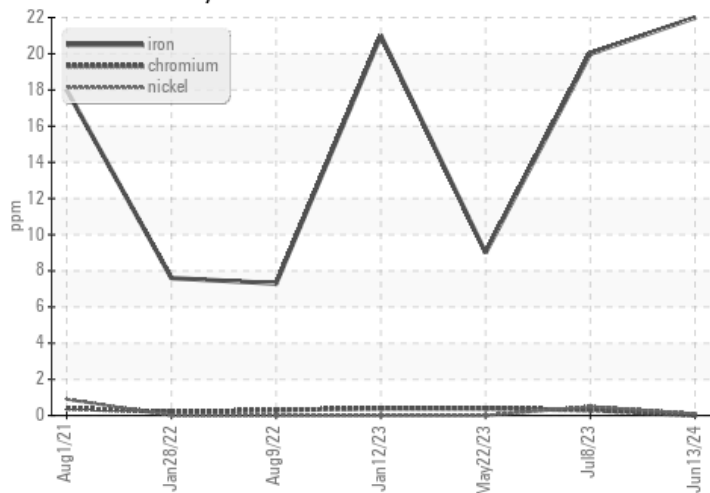
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. An increase in the lead level is noted. All other component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: CURPORLH
 Unique No: 11090364
 Signed: Sean Felton
 Report Date: 25 Jun 2024

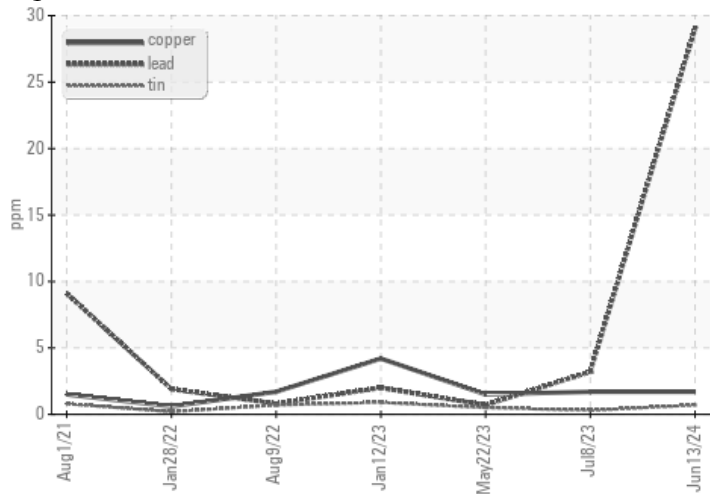


Graphs

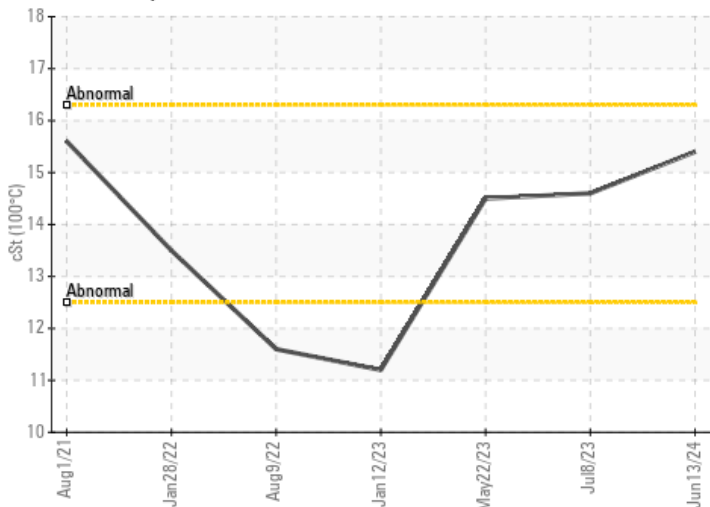
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 100°C



Base Number

