

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 155976-1227 - Hydraulic System

Sample No: LH0267255

Oil Type: TDH



KINDER MORGAN

4301 IVERSON

TRINITY, AL

US 35601

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Sample Information

Sample Number	LH0267255	LH0267554	LH0267537	LH0280573
Sample Date	08 Jun 2024	12 May 2024	18 Apr 2024	23 Feb 2024
Machine Hours	2430	1951	1623	995
Oil Hours	2430	1951	628	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	NORMAL	ATTENTION



Oil Condition

Visc @ 40°C	cSt	40.0	41.7	41.8	43.2
Acid Number (AN)	mg KOH/g	1.18	1.10	1.15	1.47



Contamination

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		3746	3142	1873	31382
Particles >6µm		1089	285	182	7078
Particles >14µm		34	5	5	536
ISO 4406:1999 (c)		19/17/12	19/15/10	18/15/10	22/20/16
Silicon	ppm	8	6	7	7
Sodium	ppm	4	<1	<1	<1
Potassium	ppm	4	<1	2	2



Wear Metals

Iron	ppm	8	6	10	12
Copper	ppm	2	1	3	2
Lead	ppm	<1	0	<1	<1
Tin	ppm	0	0	<1	<1
Aluminum	ppm	1	<1	2	1
Chromium	ppm	<1	<1	1	1
Molybdenum	ppm	1	3	2	2
Nickel	ppm	<1	0	<1	<1
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	<1	0



Additives

Calcium	ppm	1765	1598	1586	1503
Magnesium	ppm	24	21	16	15
Zinc	ppm	839	758	824	784
Phosphorus	ppm	732	648	742	669
Barium	ppm	0	0	0	0
Boron	ppm	7	4	3	4

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Depot: KINTRI

Unique No: 11088615

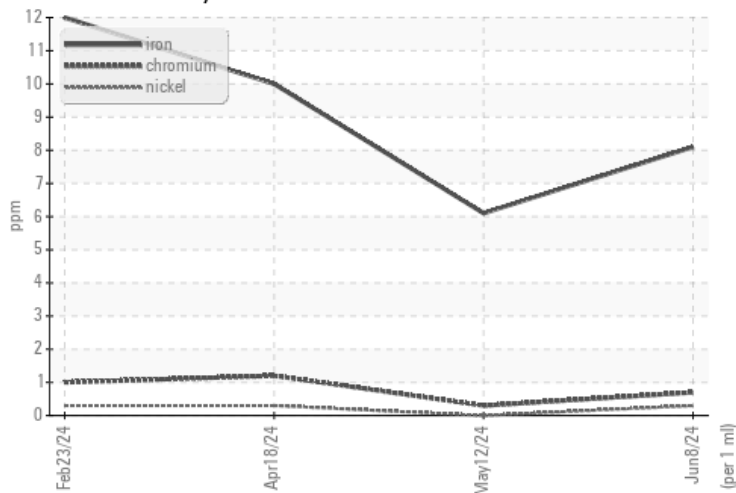
Signed: Wes Davis

Report Date: 21 Jun 2024

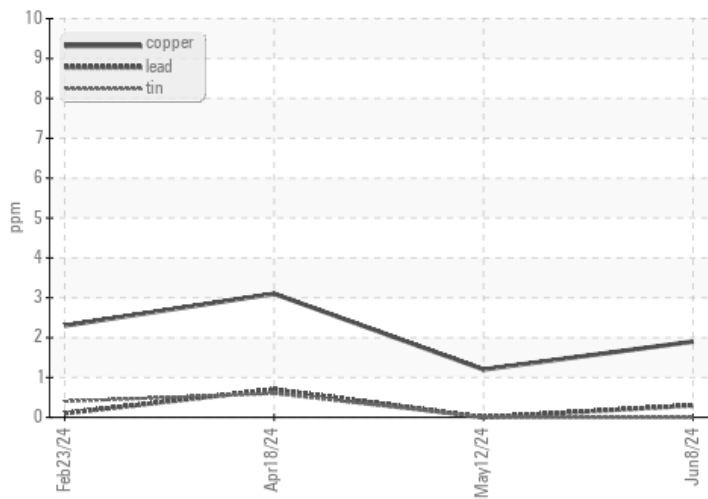


Graphs

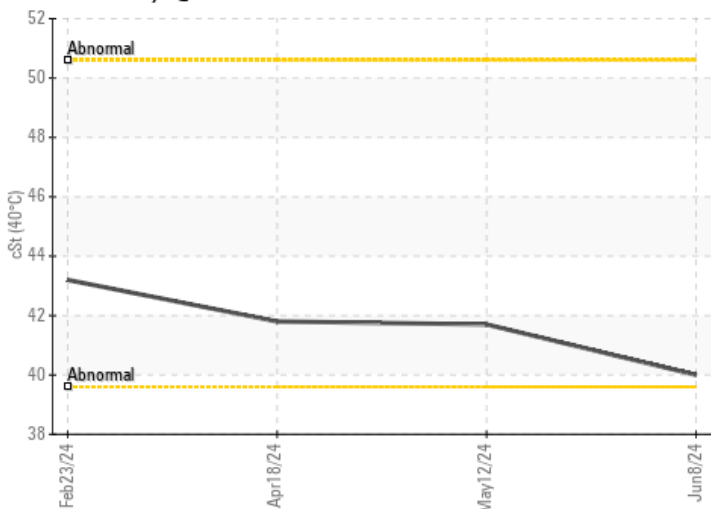
Ferrous Alloys



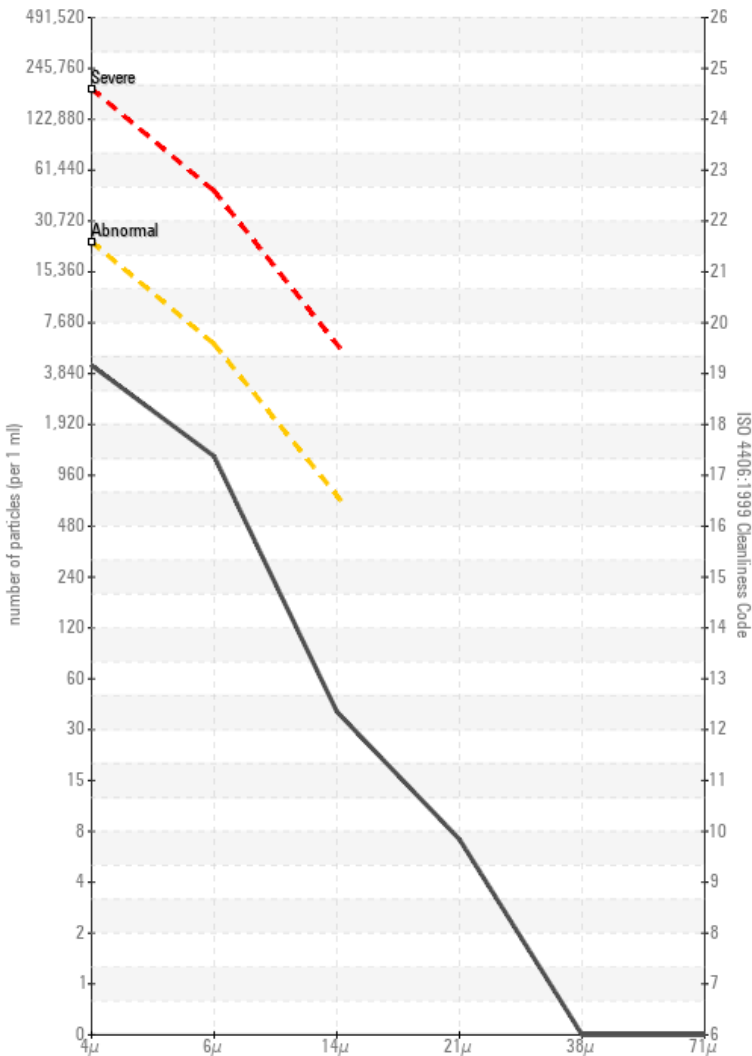
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

