LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR LH110 155976-1227 - Hydraulic System

Sample No: LH0267554

Oil Type: TDH

KINDER MORGAN
4301 IVERSON
TRINITY, AL
US 35601
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Sample Information

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

Oil Condition

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

Contamination

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

Wear Metals

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

Additives

Calcium	ppm	**1598**	1586	1503	---
Magnesium	ppm	**21**	16	15	---
Zinc	ppm	**758**	824	784	---
Phosphorus	ppm	**648**	742	669	---
Barium	ppm	**0**	0	0	---
Boron	ppm	**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: 11048881
Signed: Wes Davis
Report Date: 29 May 2024

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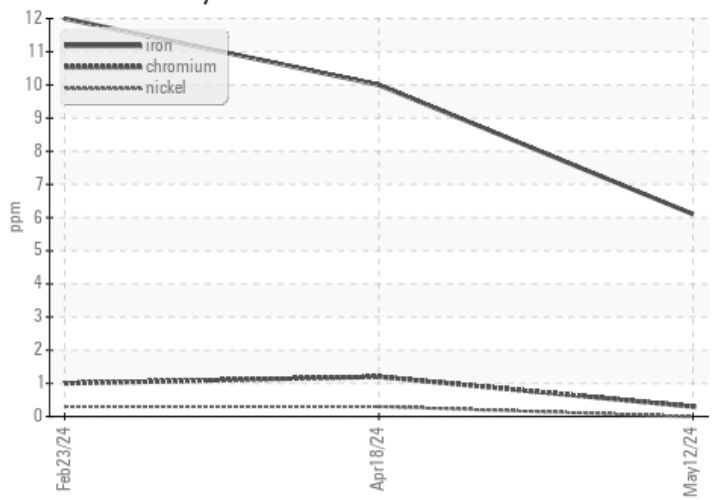
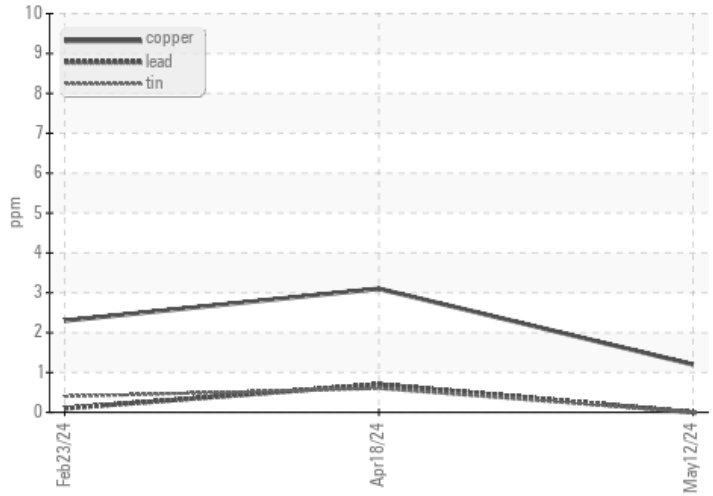
Graphs

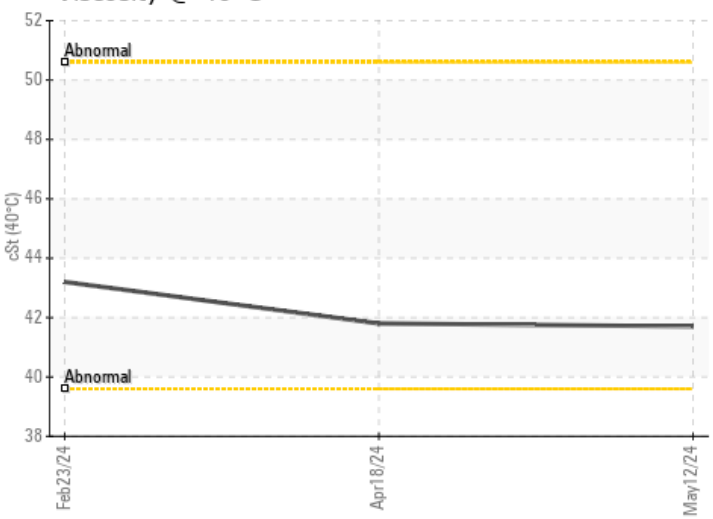
Ferrous Alloys



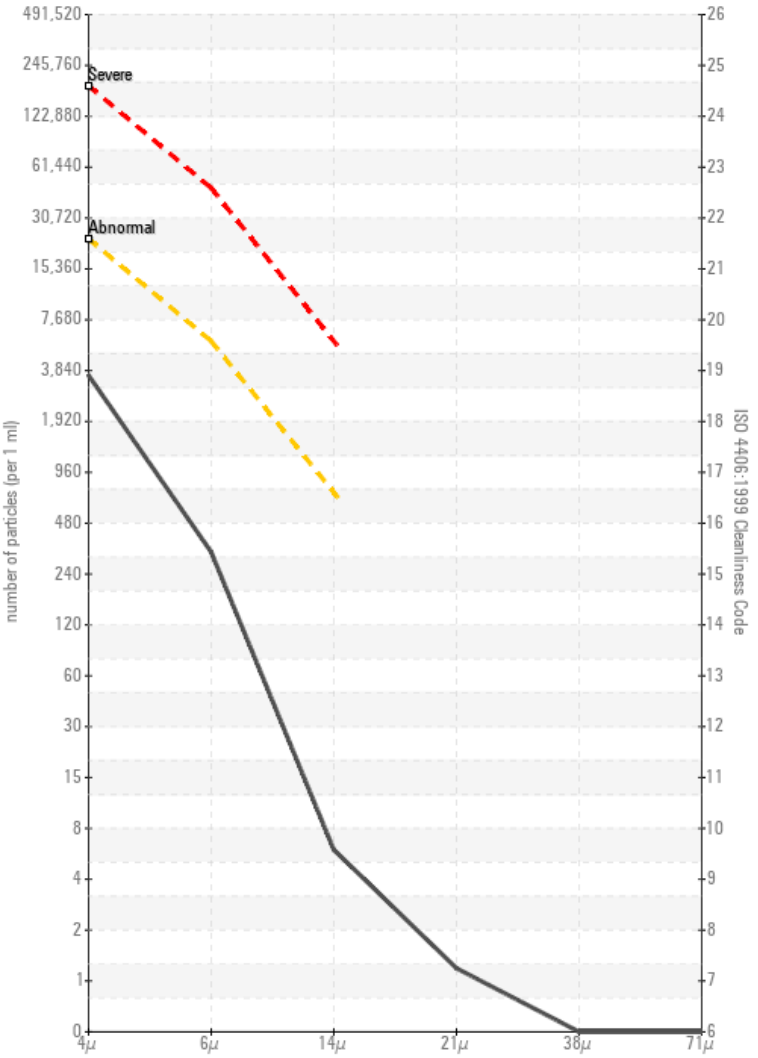
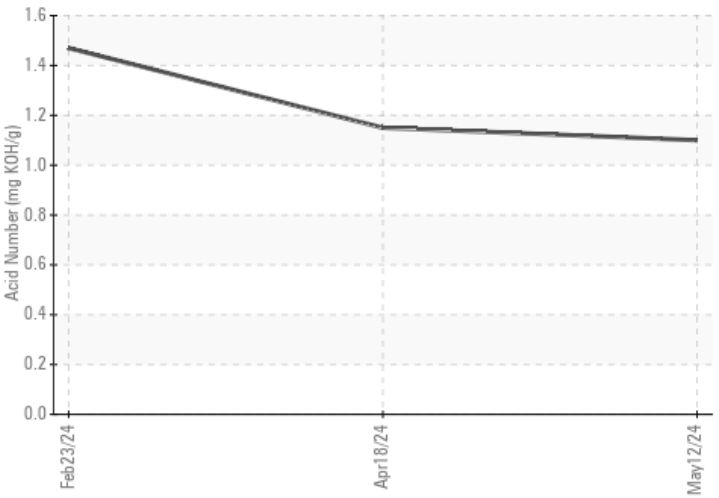
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number