

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR LH110 1227-155752 - Hydraulic System

Sample No: LH0267277

Oil Type: TDH



KINDER MORGAN
 4301 IVERSON
 TRINITY, AL
 US 35601
 Contact: RICKY JOHNSON
 ricky_johnson@kindermorgan.com
 T:
 F: (256)355-5250



Sample Information

Sample Number	LH0267277	LH0267548	LH0280584	LH0280584
Sample Date	10 Jun 2024	20 May 2024	18 Apr 2024	19 Mar 2024
Machine Hours	2998	2578	1980	1544
Oil Hours	2998	2578	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL



Oil Condition

Visc @ 40°C	cSt	39.8	40.5	46.8	43.3
Acid Number (AN)	mg KOH/g	1.10	1.10	1.53	1.18



Contamination

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		12944	17733	---	6586
Particles >6µm		3677	3745	---	1485
Particles >14µm		116	249	---	50
ISO 4406:1999 (c)		21/19/14	21/19/15	---	20/18/13
Silicon	ppm	7	6	7	6
Sodium	ppm	4	<1	<1	2
Potassium	ppm	4	<1	2	0



Wear Metals

Iron	ppm	7	6	27	9
Copper	ppm	2	2	16	3
Lead	ppm	0	0	<1	0
Tin	ppm	0	0	2	0
Aluminum	ppm	<1	<1	2	0
Chromium	ppm	1	<1	1	<1
Molybdenum	ppm	<1	2	1	0
Nickel	ppm	<1	0	<1	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	0
Vanadium	ppm	0	0	<1	0



Additives

Calcium	ppm	1685	1624	1343	1416
Magnesium	ppm	22	23	12	<1
Zinc	ppm	816	781	730	683
Phosphorus	ppm	714	682	868	614
Barium	ppm	0	0	0	0
Boron	ppm	4	5	<1	0

Diagnosis

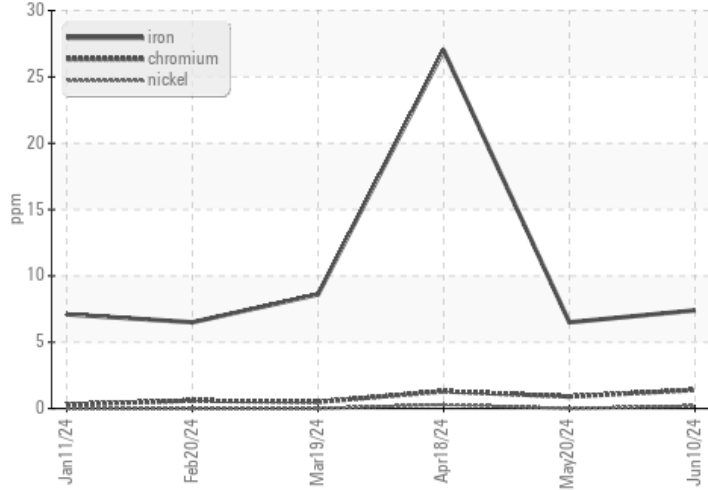
Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further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

Depot: KINTRI
 Unique No: 11088616
 Signed: Wes Davis
 Report Date: 21 Jun 2024

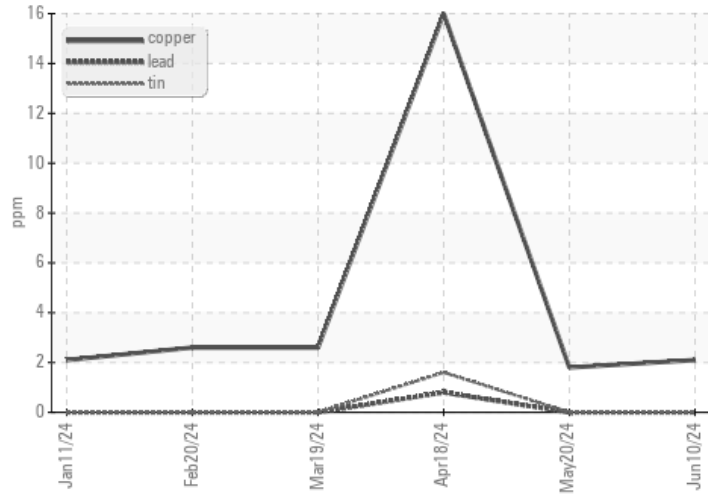


Graphs

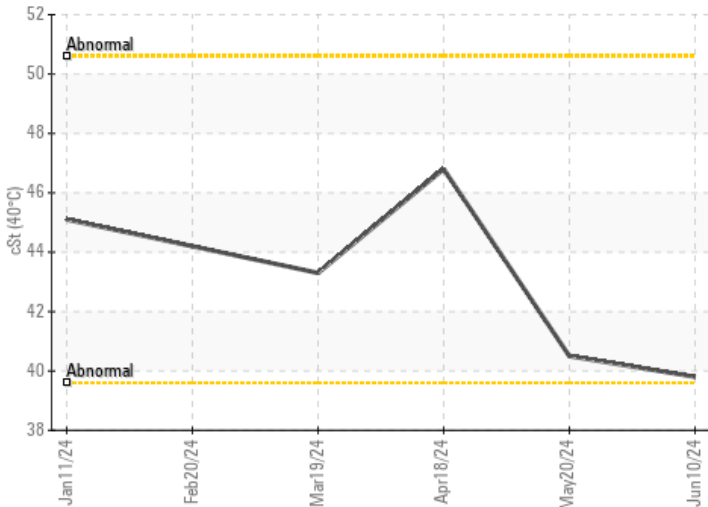
Ferrous Alloys



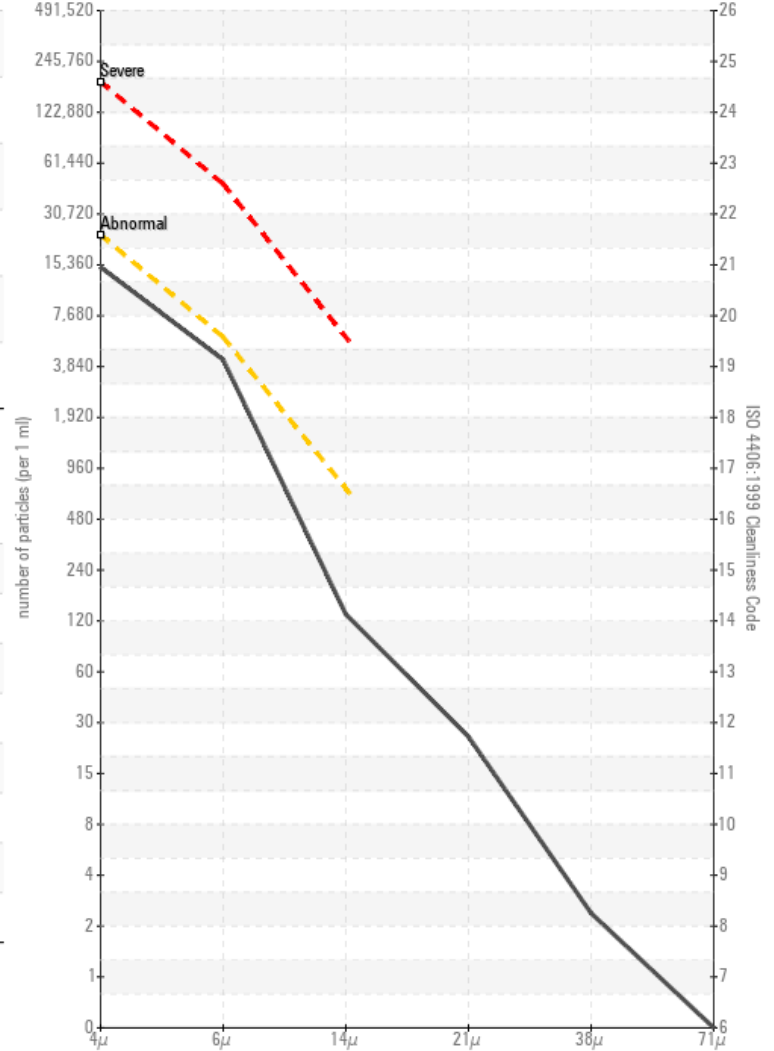
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

