

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR PR776 021879-1860 - Hydraulic System

Sample No: LH0174050

Oil Type: IMPERIAL MOBIL AST 30



LIEBHERR MINING EQUIPMENT CO
 5800 S DOUGLAS HWY
 GILLETTE, WY
 US 82718
 Contact: TED PILZ
 ted.pilz@liebherr.com
 T: (775)388-0663
 F:



SAMPLE INFORMATION

Sample Number	LH0174050	LHMC129579	LH05725781	LHMC129575
Sample Date	10 Oct 2023	01 Feb 2023	26 Dec 2022	27 Sep 2022
Machine Hours	2436	1470	1000	492
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	N/A	N/A	N/A
Sample Status	ATTENTION	ABNORMAL	ATTENTION	ABNORMAL



OIL CONDITION

Visc @ 40°C	cSt	48.8	44.4	44.6	45.7
Acid Number (AN)	mg KOH/g	1.50	1.18	1.30	1.31



CONTAMINATION

Particles >4µm		36357	---	31317	42527
Particles >6µm		3772	---	2436	1903
Particles >14µm		60	---	110	15
ISO 4406:1999 (c)		22/19/13	---	22/18/14	23/18/11
Silicon	ppm	6	5	4	4
Sodium	ppm	10	5	3	2
Potassium	ppm	3	<1	0	2



WEAR METALS

Iron	ppm	20	31	20	15
Copper	ppm	9	9	8	6
Lead	ppm	1	2	2	<1
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	3	1	1	<1
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	0	<1	<1	<1
Nickel	ppm	<1	<1	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	<1	<1	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	2602	1860	1646	1608
Magnesium	ppm	14	7	7	5
Zinc	ppm	1194	849	762	828
Phosphorus	ppm	989	686	673	678
Barium	ppm	0	0	0	1
Boron	ppm	1	0	0	<1

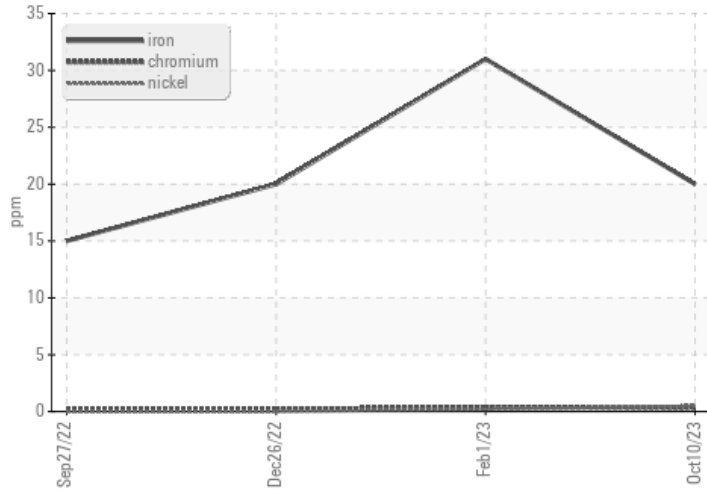
Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of silt (particulates < 6 microns in size) present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

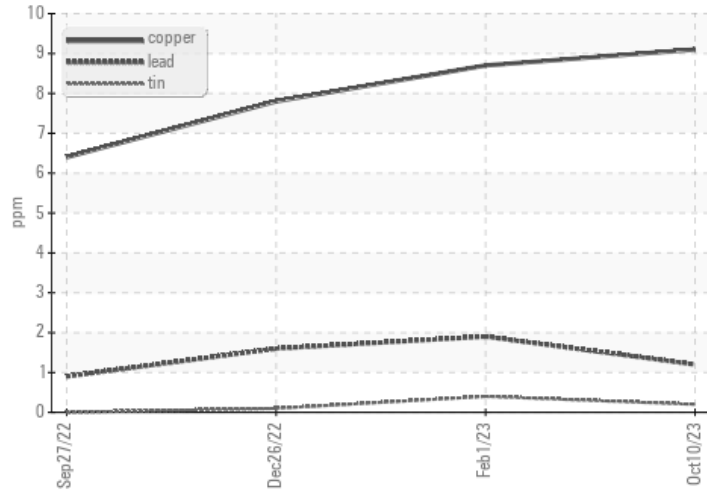


GRAPHS

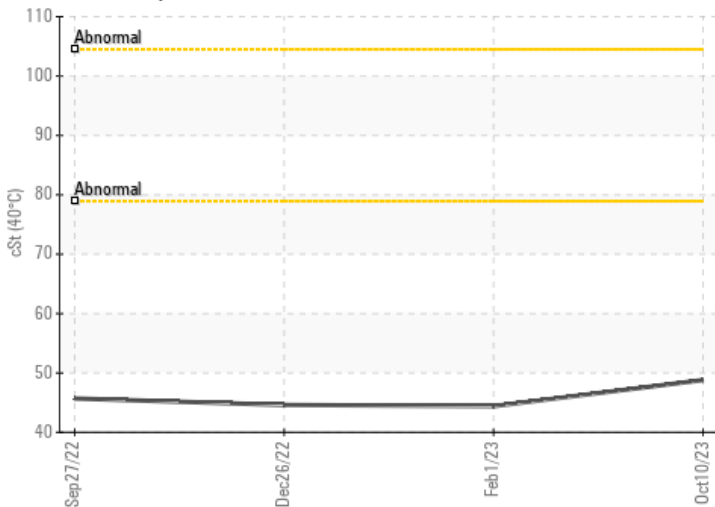
Ferrous Alloys



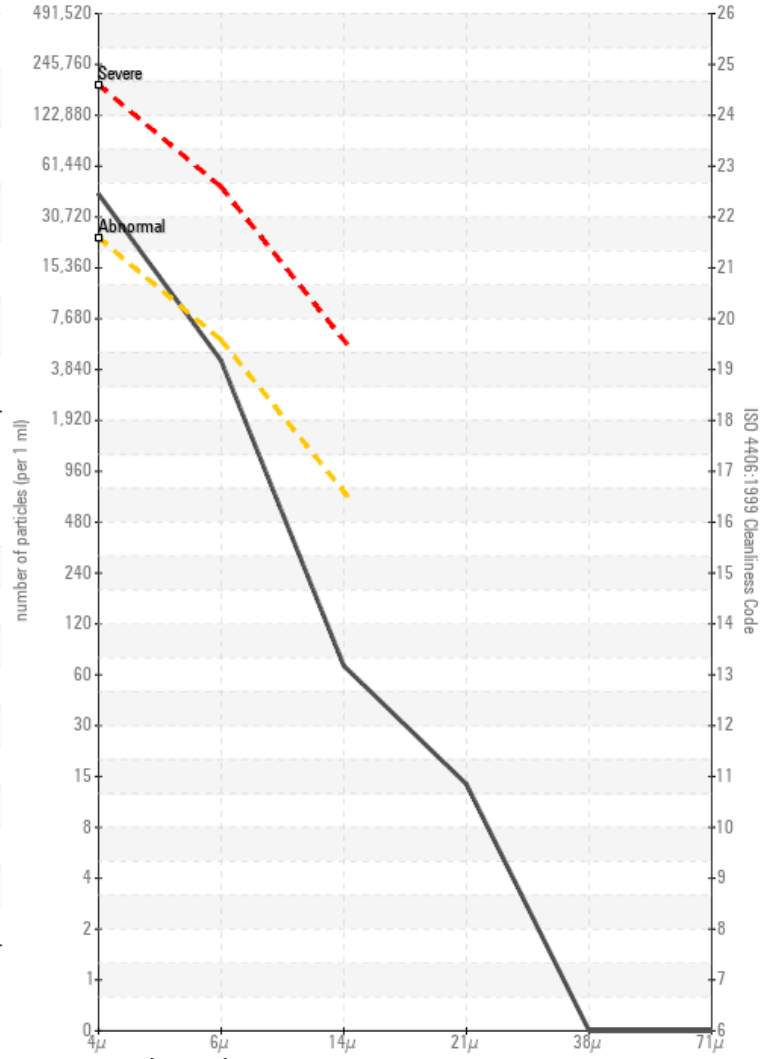
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

