

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR 145259 - Hydraulic System

Sample No: LH0183606

Oil Type: NOT GIVEN



SAMPLE INFORMATION

Sample Number	LH0183606	LH0183929	LH0087270	LH0132662
Sample Date	18 May 2023	03 Nov 2022	01 Jun 2022	21 Jul 2019
Machine Hours	8000	7000	6000	1068
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	N/A
Sample Status	ABNORMAL	ATTENTION	SEVERE	ABNORMAL

IRVING SHIPBUILDING (LIEBHERR CANADA)
3099 BARRINGTON ST
HALIFAX, NS
CA B3K 5M7
Contact: Service Manager



OIL CONDITION

Visc @ 40°C	cSt	23.3	23.6	23.3	25.1
Acid Number (AN)	mg KOH/g	---	---	---	0.209

T:
F:



CONTAMINATION

Particles >4µm		29769	8759	49350	17360
Particles >6µm		7895	1217	7434	2634
Particles >14µm		222	14	98	14
ISO 4406:1999 (c)		22/20/15	20/17/11	23/20/14	21/19/11
Silicon	ppm	10	9	10	7
Sodium	ppm	3	3	2	0
Potassium	ppm	2	2	2	<1

Diagnosis

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



WEAR METALS

Iron	ppm	10	8	8	2
Copper	ppm	10	10	9	3
Lead	ppm	2	2	1	1
Tin	ppm	0	0	0	0
Aluminum	ppm	3	2	2	<1
Chromium	ppm	<1	<1	1	<1
Molybdenum	ppm	0	0	0	0
Nickel	ppm	0	<1	<1	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

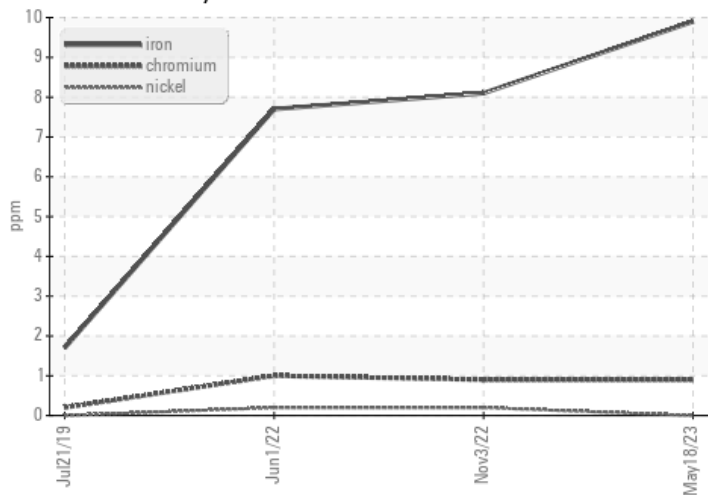
Calcium	ppm	15	18	15	13
Magnesium	ppm	2	2	2	1
Zinc	ppm	107	110	100	60
Phosphorus	ppm	153	155	140	121
Barium	ppm	0	0	0	0
Boron	ppm	<1	<1	0	0

Depot: IRVHAL
Unique No: 5579645
Signed: Wes Davis
Report Date: 23 May 2023

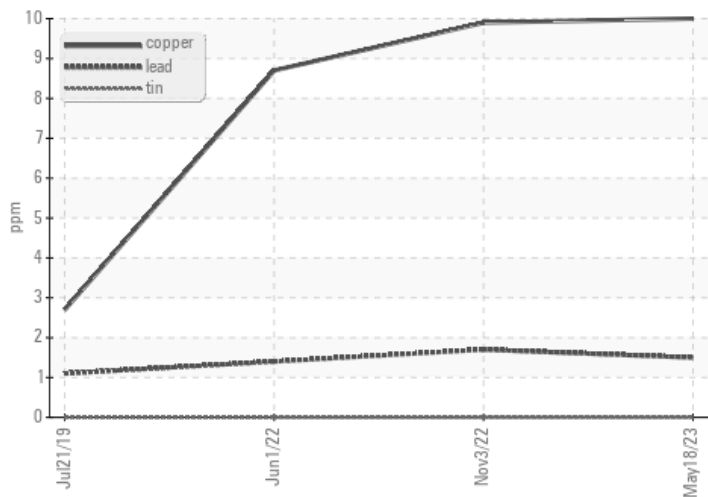


GRAPHS

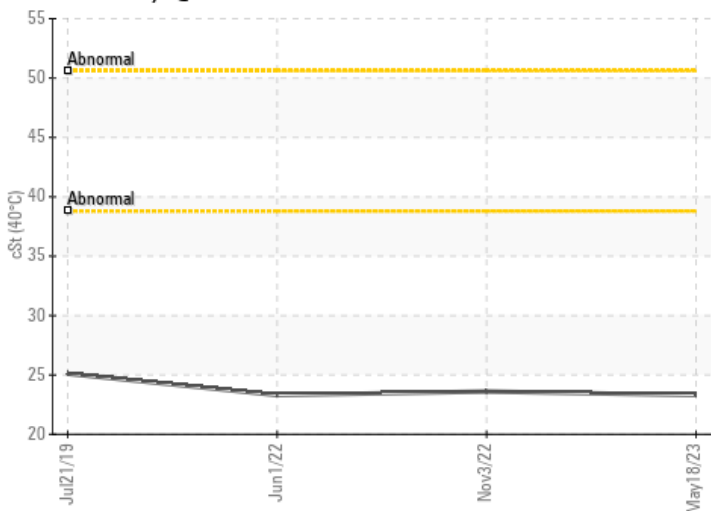
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count

