LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR HS8130 185282 (S/N GFL286) - Hydraulic System

Sample No: LH0286602

Oil Type: LIEBHERR HYDRAULIC 37

Sample Information

Sample Number		**LH0286602**	LH0277817	LH0265750	LH0247065
Sample Date		**14 Jun 2024**	17 Nov 2023	02 Jun 2023	03 Feb 2023
Machine Hours		**9037**	8008	7105	6292
Oil Hours		**0**	0	0	0
Oil Changed		**Not Changd**	N/A	Not Changd	N/A
Sample Status		**ABNORMAL**	ABNORMAL	NORMAL	SEVERE

Oil Condition

Visc @ 40°C	cSt	**36.2**	36.2	37.2	34.9

Contamination

Water	%	**0.026**	NEG	NEG	NEG
Particles >4µm		**22764**	4934	5368	132511
Particles >6µm		**8496**	1872	1131	58678
Particles >14µm		**854**	155	80	5222
ISO 4406:1999 (c)		**22/20/17**	19/18/14	20/17/13	24/23/20
Silicon	ppm	**2**	3	4	4
Sodium	ppm	**1**	2	1	1
Potassium	ppm	**2**	<1	1	<1

Wear Metals

Iron	ppm	**5**	5	4	4
Copper	ppm	**5**	4	3	3
Lead	ppm	**<1**	1	<1	<1
Tin	ppm	**0**	0	0	0
Aluminum	ppm	**<1**	0	<1	<1
Chromium	ppm	**0**	0	0	0
Molybdenum	ppm	**4**	4	4	4
Nickel	ppm	**<1**	0	<1	0
Titanium	ppm	**0**	0	0	0
Silver	ppm	**0**	<1	0	0
Manganese	ppm	**0**	0	<1	0
Vanadium	ppm	**0**	0	0	0

Additives

Calcium	ppm	**268**	299	300	301
Magnesium	ppm	**62**	70	70	68
Zinc	ppm	**467**	496	467	473
Phosphorus	ppm	**384**	408	430	436
Barium	ppm	**0**	<1	0	0
Boron	ppm	**9**	10	10	10

HIGGS & HIGGS
RR # 4
ST THOMAS, ON
CA N5P 3S8
Contact: Bernie Higgs

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Diagnosis

We advise that you check for the source of water entry. We advise that you follow the water drain-off procedure for this component. We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Free water present. The oil is no longer serviceable due to the presence of contaminants.

Depot: HIGSTT
Unique No: 5800949
Signed: Kevin Marson
Report Date: 24 Jun 2024

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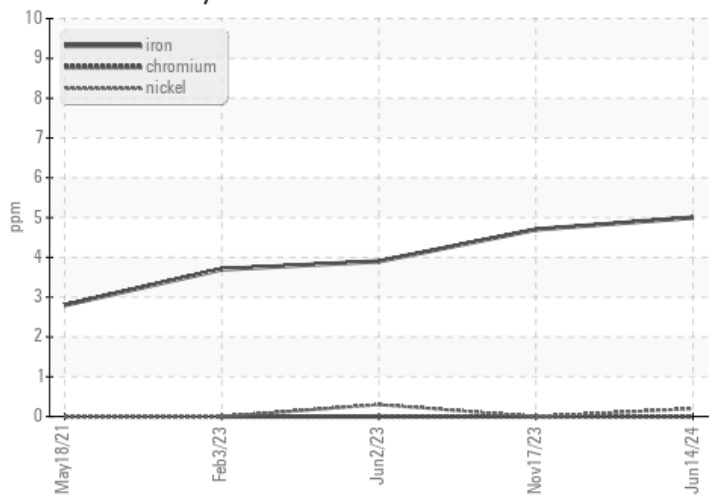
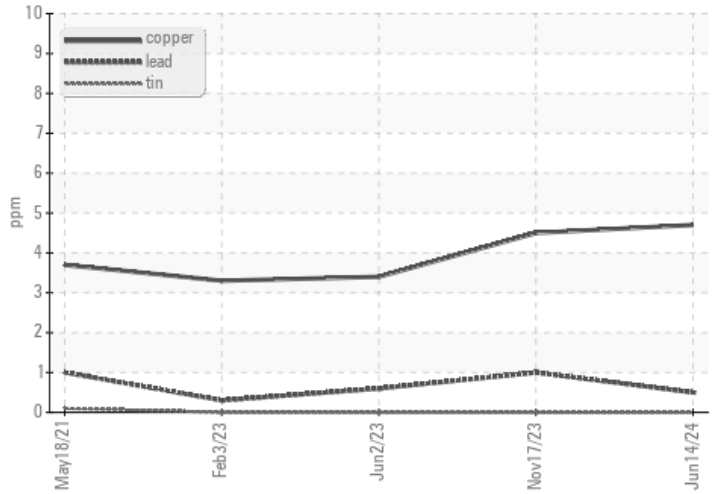
Graphs

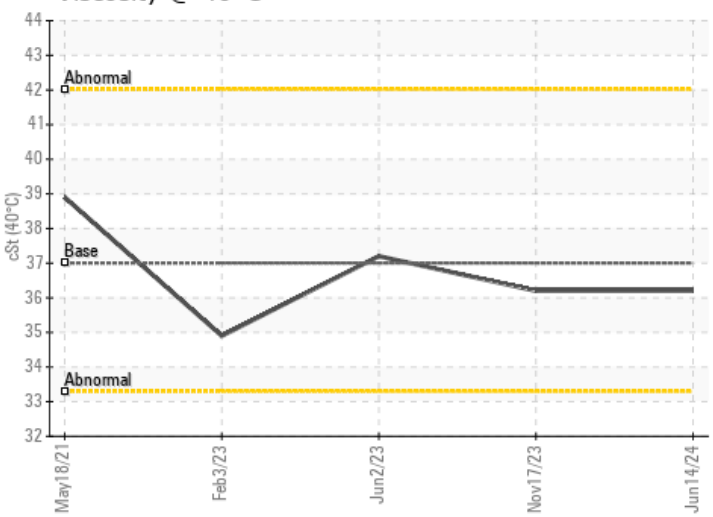
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count