LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR R954C 023859 - Hydraulic System

Sample No: LH0251352

Oil Type: AW HYDRAULIC OIL ISO 46

Gerdau Ameristeel
55A Fenmar Drive
Toronto, ON
CA M9L 1M3
Contact: Liebherr Maintenace

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F:

Diagnosis

We advise that you check for visible metal particles in the oil. We recommend an early resample to monitor this condition.Light concentration of visible metal present. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. NOTE: An increase in the particle count is noted. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION

Sample Number		**LH0251352**	LH0195777	LH0215816	LH
Sample Date		**14 Mar 2023**	13 Apr 2022	03 Dec 2021	28 Jul 2021
Machine Hours		**21061**	20026	19606	19098
Oil Hours		**0**	0	0	0
Oil Changed		**Not Changd**	Not Changd	Not Changd	Not Changd
Sample Status		**ABNORMAL**	ABNORMAL	ABNORMAL	ABNORMAL

OIL CONDITION

Visc @ 40°C	cSt	**39.9**	35.8	35.8	35.5

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Particles >4µm		**11362**	8290	9335	2806
Particles >6µm		**1966**	1498	1075	318
Particles >14µm		**63**	82	29	19
ISO 4406:1999 (c)		**21/18/13**	20/18/14	20/17/12	19/15/11
Silicon	ppm	**<1**	<1	<1	<1
Sodium	ppm	**<1**	<1	<1	<1
Potassium	ppm	**<1**	<1	0	<1

WEAR METALS

Iron	ppm	**4**	6	7	6
Copper	ppm	**1**	2	2	2
Lead	ppm	**<1**	0	0	2
Tin	ppm	**0**	<1	<1	<1
Aluminum	ppm	**0**	<1	<1	<1
Chromium	ppm	**2**	2	2	2
Molybdenum	ppm	**2**	<1	<1	<1
Nickel	ppm	**<1**	<1	<1	<1
Titanium	ppm	**0**	0	0	0
Silver	ppm	**0**	<1	0	0
Manganese	ppm	**0**	0	<1	<1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**118**	57	60	62
Magnesium	ppm	**5**	2	1	1
Zinc	ppm	**475**	506	525	535
Phosphorus	ppm	**427**	424	444	447
Barium	ppm	**0**	0	0	0
Boron	ppm	**1**	<1	<1	<1

Depot: GERTOR
Unique No: 5552674
Signed: Kevin Marson
Report Date: 28 Mar 2023

Report Id: GERTOR [WCAMIS] 02547664 (Generated: 12/01/2023 14:48:51) Rev: 1

Submitted By: Rick Cule

Particle Filter (Magn: 100 x)

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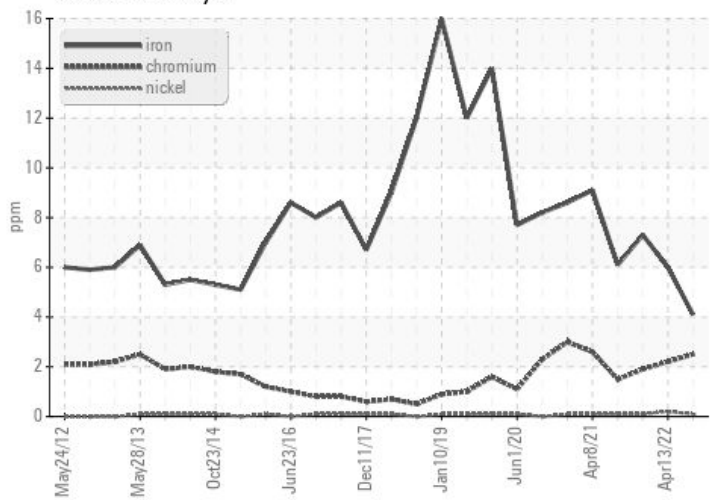
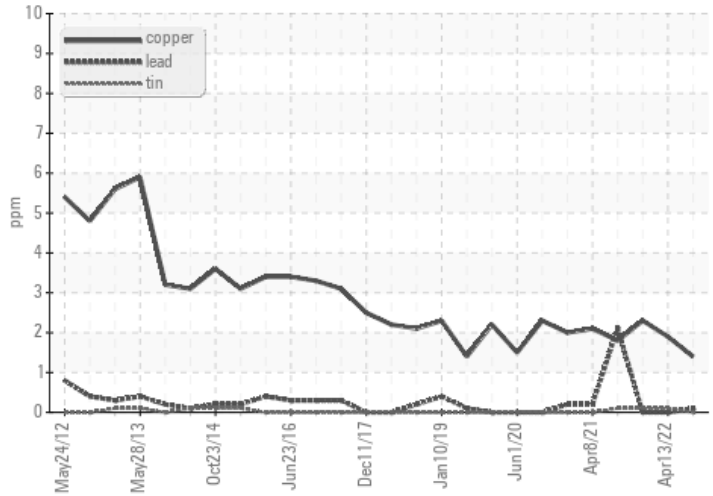
GRAPHS

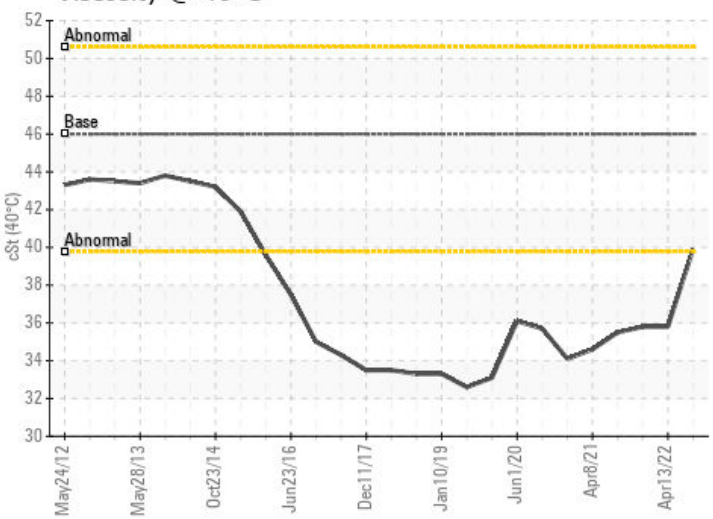
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Filter (Magn: 100 x)