LIEBHERR
CONSTRUCTION EQUIPMENT

LIEBHERR LH30M 90077 - Hydraulic System

Sample No: LH0276293

Oil Type: AW HYDRAULIC OIL ISO 46

ELG Canada
4375 CORPORATE DRIVE
BURLINGTON, ON
CA L7L 5P7
Contact: Service Manager

T:
F: (905)335-9687

Sample Information

Sample Number		**LH0276293**	LH0162789	LH	LH0136855
Sample Date		**16 Apr 2024**	12 Mar 2020	16 Jul 2019	12 Mar 2019
Machine Hours		**6756**	4019	4019	3529
Oil Hours		**0**	0	0	0
Oil Changed		**Not Changd**	Not Changd	Not Changd	Not Changd
Sample Status		**ABNORMAL**	NORMAL	ABNORMAL	NORMAL

Oil Condition

Visc @ 40°C	cSt	**43.4**	43.2	42.8	43.2

Contamination

Water	%	**NEG**	NEG	NEG	NEG
Particles >4µm		**2009**	801	85179	933
Particles >6µm		**476**	156	16203	170
Particles >14µm		**34**	9	236	6
ISO 4406:1999 (c)		**18/16/12**	17/14/10	24/21/15	17/15/10
Silicon	ppm	**0**	<1	2	1
Sodium	ppm	**2**	<1	2	2
Potassium	ppm	**<1**	<1	<1	<1

Wear Metals

PQ		**0**	---	---	---
Iron	ppm	**50**	21	19	17
Copper	ppm	**6**	6	5	5
Lead	ppm	**<1**	1	1	1
Tin	ppm	**0**	0	0	0
Aluminum	ppm	**0**	<1	<1	<1
Chromium	ppm	**6**	3	3	2
Molybdenum	ppm	**0**	0	0	0
Nickel	ppm	**0**	<1	<1	0
Titanium	ppm	**0**	<1	0	0
Silver	ppm	**0**	<1	0	0
Manganese	ppm	**<1**	<1	<1	<1
Vanadium	ppm	**0**	0	0	0

Additives

Calcium	ppm	**400**	754	719	827
Magnesium	ppm	**3**	4	4	4
Zinc	ppm	**459**	436	465	452
Phosphorus	ppm	**361**	351	355	351
Barium	ppm	**0**	<1	0	0
Boron	ppm	**<1**	<1	<1	0

Diagnosis

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) AW HYDRAULIC OIL ISO 46. Please confirm.Chromium ppm levels are abnormal. Iron ppm levels are marginal. Ring wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: STR437BUR
Unique No: 5762803
Signed: Kevin Marson
Report Date: 18 Apr 2024

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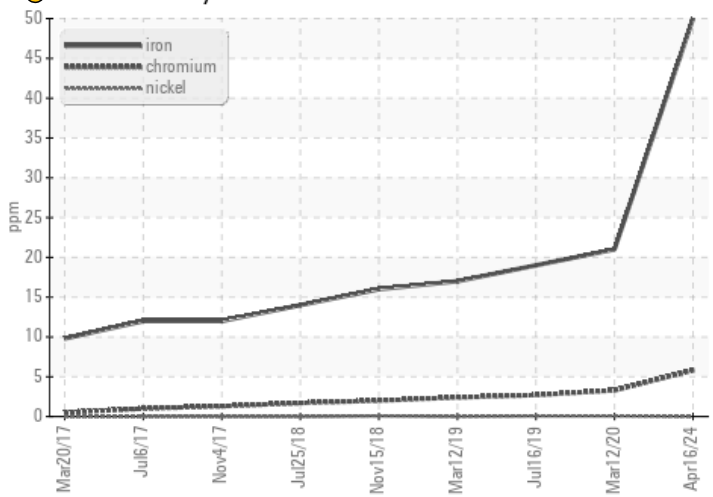
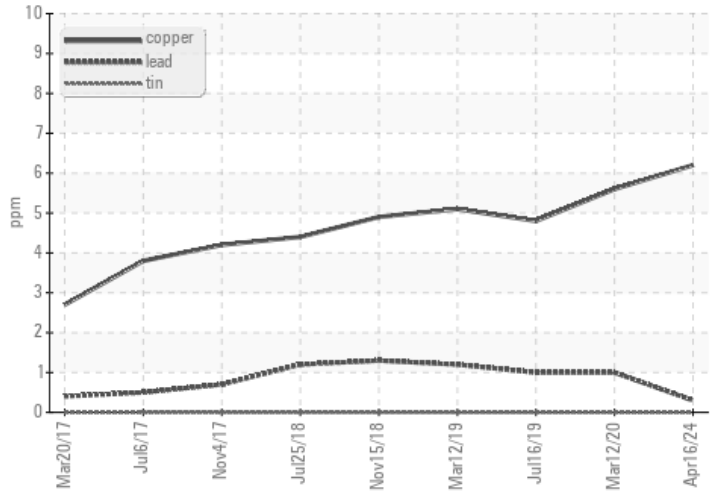
Graphs

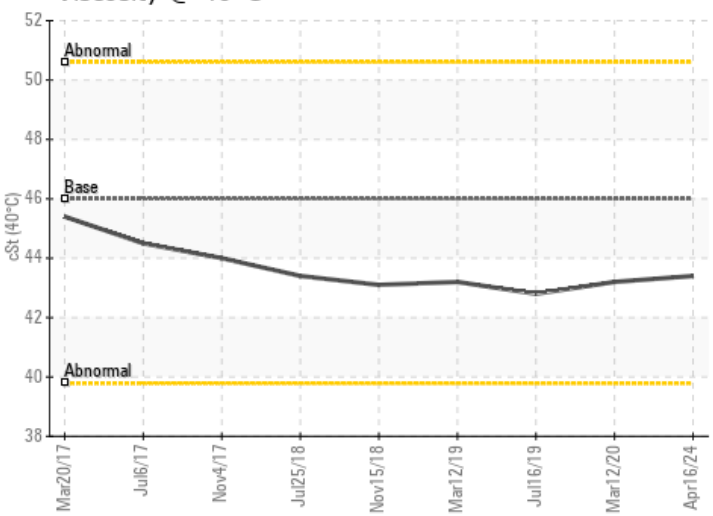
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count