

LIEBHERR

CONSTRUCTION EQUIPMENT



042296-1491 - Hydraulic System

Sample No: LH0261397

Oil Type: AW HYDRAULIC OIL ISO 46



SAMPLE INFORMATION

Sample Number	LH0261397	LH0251737	LH	LH
Sample Date	26 Jun 2023	15 Feb 2023	16 Jul 2021	18 Mar 2021
Machine Hours	7046	6563	0	0
Oil Hours	0	0	0	0
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	SEVERE	ABNORMAL	ABNORMAL	ABNORMAL

Delsan - American Iron and Metal
 2187 Montee Masson
 Laval, QC
 CA H7B 0A6
 Contact: MANNY MARQUES
 mmarques@delsan-aim.com
 T:
 F:



OIL CONDITION

Visc @ 40°C	cSt	43.3	44.0	43.6	42.2
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CONTAMINATION

Particles >4µm		5835	3174	1727	100191
Particles >6µm		1526	652	391	14930
Particles >14µm		109	46	21	147
ISO 4406:1999 (c)		20/18/14	19/17/13	18/16/12	24/21/14
Silicon	ppm	3	3	3	5
Sodium	ppm	2	2	2	2
Potassium	ppm	<1	<1	<1	1



WEAR METALS

PQ		0	0	0	7
Iron	ppm	133	114	94	118
Copper	ppm	7	7	5	7
Lead	ppm	3	3	1	1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	1	1	<1	1
Chromium	ppm	12	11	2	2
Molybdenum	ppm	1	1	2	3
Nickel	ppm	0	0	<1	<1
Titanium	ppm	<1	<1	0	<1
Silver	ppm	0	0	<1	<1
Manganese	ppm	2	2	2	2
Vanadium	ppm	<1	0	<1	<1



ADDITIVES

Calcium	ppm	363	393	469	697
Magnesium	ppm	5	5	6	9
Zinc	ppm	354	358	446	670
Phosphorus	ppm	423	444	483	570
Barium	ppm	0	0	0	0
Boron	ppm	4	3	5	5

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. Iron ppm levels are severe. 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. NOTE: An increase in the particle count is noted. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: DEL782MON
 Unique No: 5604433
 Signed: Kevin Marson
 Report Date: 30 Jun 2023

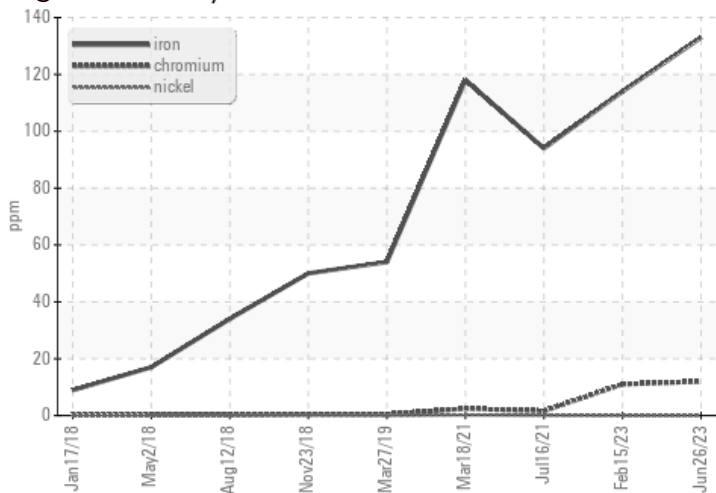
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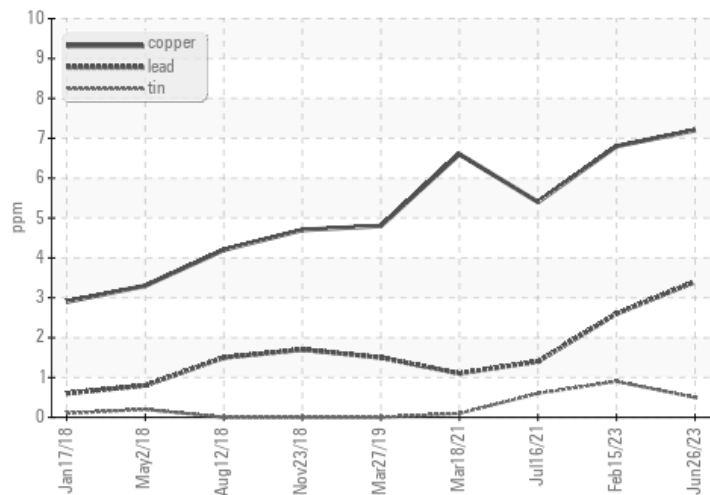


GRAPHS

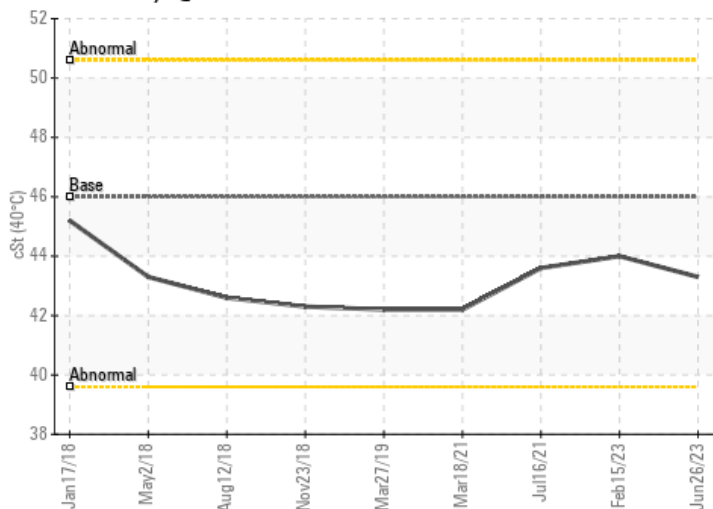
● Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count

