

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR L586 058216-1334 - Hydraulic System

Sample No: LH0269548

Oil Type: PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL

MODERN CONSTRUCTION (1983) LTD.
364 BRIGGS CROSS ROAD
STILESVILLE, NB
CA E1G 3G3
Contact: Blaine Cail
blaine.cail@moderngroup.ca
T:
F:

Diagnosis

We advise that you check for visible metal particles in the oil. We advise that you check all areas where dirt can enter the system. We advise that you flush the component thoroughly before re-filling with oil. We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. Chromium and iron ppm levels are abnormal. Aluminum ppm levels are noted. Light concentration of visible metal present. Cylinder wear is indicated. Ring wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The water content is negligible. High amount of ingressed dirt has caused abrasive wear to the component. Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable as a result of the abnormal and/or severe wear.



SAMPLE INFORMATION

Sample Number		LH0269548	LH0238507	LH0224249	LH0194960
Sample Date		19 Jul 2023	27 Aug 2022	21 Mar 2022	17 Jun 2021
Machine Hours		7908	0	4963	3025
Oil Hours		0	0	0	0
Oil Changed		Not Changd	Changed	Not Changd	Not Changd
Sample Status		SEVERE	SEVERE	SEVERE	ABNORMAL



OIL CONDITION

Visc @ 40°C	cSt	● 41.7	● 42.0	● 43.0	● 42.1
-------------	-----	--------	--------	--------	--------



CONTAMINATION

Particles >4µm		● 52703	● 26105	● 59541	● 38011
Particles >6µm		● 5877	● 378	● 2206	● 4403
Particles >14µm		● 113	● 8	● 79	● 197
ISO 4406:1999 (c)		23/20/14	22/16/10	23/18/13	22/19/15
Silicon	ppm	● 53	● 46	● 39	● 22
Sodium	ppm	● 4	● 4	● 3	● 3
Potassium	ppm	● 6	● 5	● 4	● 3



WEAR METALS

PQ		● 0	● 0	---	---
Iron	ppm	● 71	● 58	● 51	● 31
Copper	ppm	● 8	● 7	● 6	● 5
Lead	ppm	● 14	● 15	● 12	● 11
Tin	ppm	● <1	● <1	● <1	● <1
Aluminum	ppm	● 26	● 23	● 18	● 10
Chromium	ppm	● 6	● 4	● 4	● 3
Molybdenum	ppm	● 0	● 0	● 0	● <1
Nickel	ppm	● <1	● 0	● <1	● <1
Titanium	ppm	1	1	<1	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	● 1	● 1	● <1	● <1
Vanadium	ppm	<1	<1	0	<1



ADDITIVES

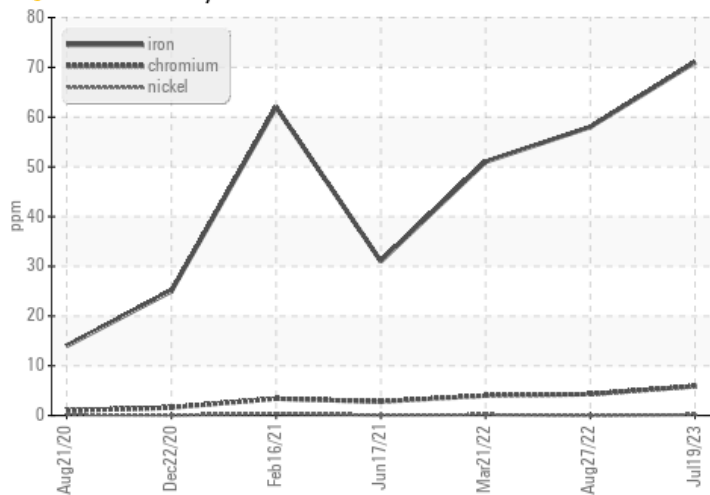
Calcium	ppm	1331	1355	1352	1371
Magnesium	ppm	● 27	● 24	● 21	● 15
Zinc	ppm	● 732	● 682	● 698	● 719
Phosphorus	ppm	● 639	● 564	● 623	● 587
Barium	ppm	● <1	● 0	● 0	● <1
Boron	ppm	● 3	● <1	● <1	● <1

Depot: MODSTI
 Unique No: 5619595
 Signed: Kevin Marson
 Report Date: 09 Aug 2023

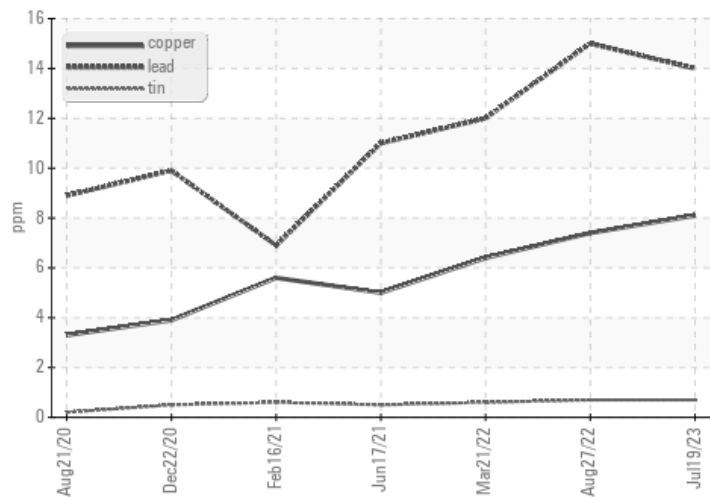


GRAPHS

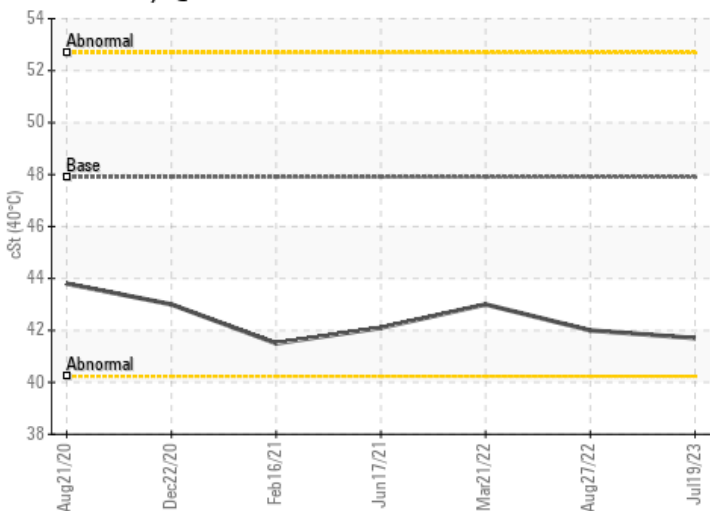
● Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Filter (Magn: 100 x)

