

LIEBHERR

CONSTRUCTION EQUIPMENT



[THOMPSON BROTHERS] L11 - Hydraulic System

Sample No: LH0265032

Oil Type: PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL



SAMPLE INFORMATION

Sample Number	LH0265032	LH	LH0146293	LH0135048
Sample Date	13 Feb 2024	28 Feb 2020	05 Feb 2020	08 May 2019
Machine Hours	9027	2641	2259	1732
Oil Hours	0	0	0	0
Oil Changed	Not Changd	N/A	N/A	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

Liebherr-Canada Ltd.

Fort McKay Industrial Park, Lot No. 12 and 13
 Fort McMurray, AB
 CA T9H 5N3
 Contact: Corey Ekroth
 corey.ekroth@liebherr.com
 T: (780)791-2967
 F:



OIL CONDITION

Visc @ 40°C	cSt	66.3	22.6	25.1	22.8
-------------	-----	------	------	------	------



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		65612	8393	10424	19108
Particles >6µm		6646	1112	2445	1483
Particles >14µm		310	35	102	16
ISO 4406:1999 (c)		23/20/15	20/17/12	21/18/14	21/18/11
Silicon	ppm	8	8	6	9
Sodium	ppm	2	<1	<1	3
Potassium	ppm	2	<1	<1	<1



WEAR METALS

Iron	ppm	7	6	3	10
Copper	ppm	6	5	4	10
Lead	ppm	0	3	2	2
Tin	ppm	0	0	0	0
Aluminum	ppm	2	<1	<1	<1
Chromium	ppm	0	<1	<1	<1
Molybdenum	ppm	<1	0	0	0
Nickel	ppm	<1	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	<1	<1	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	2078	20	19	68
Magnesium	ppm	77	1	1	4
Zinc	ppm	1014	41	40	188
Phosphorus	ppm	912	488	470	255
Barium	ppm	0	<1	<1	0
Boron	ppm	157	<1	<1	1

Diagnosis

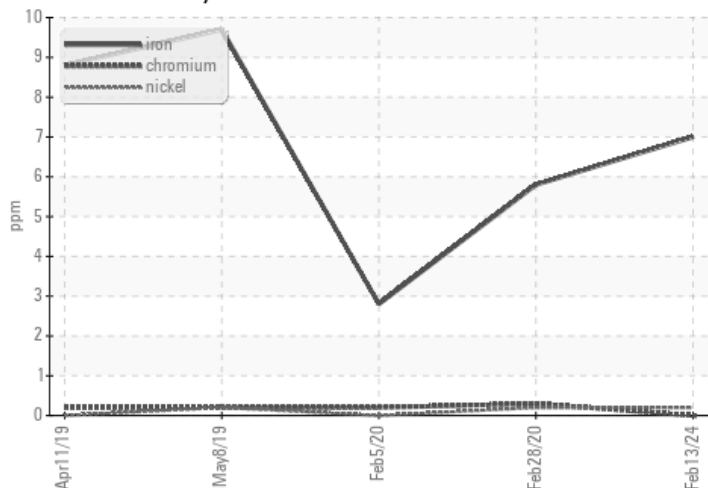
We recommend you service the filters on this component. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The viscosity of the oil is higher than normal, possibly indicating the addition of a heavier grade of oil. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Depot: LIEFTM
 Unique No: 5734236
 Signed: Kevin Marson
 Report Date: 22 Feb 2024

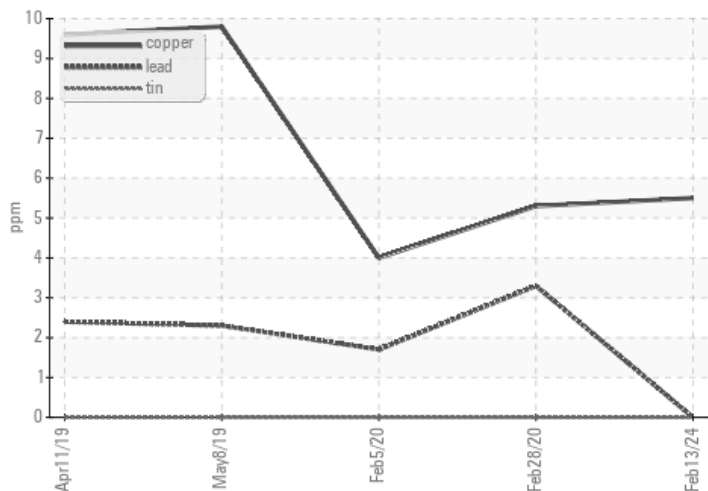


GRAPHS

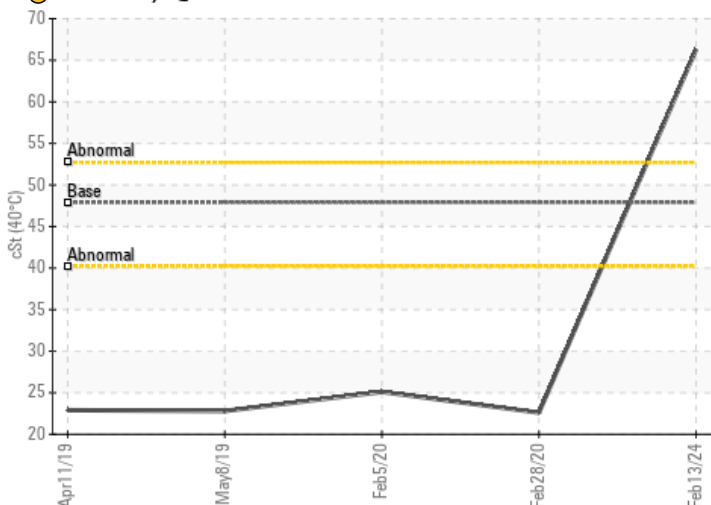
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count

