

LIEBHERR

CONSTRUCTION EQUIPMENT



LIEBHERR 134249 - Hydraulic System

Sample No: LH0286441

Oil Type: PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL



Sample Information

Sample Number	LH0286441	---	---	---
Sample Date	23 Apr 2024	---	---	---
Machine Hours	4909	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	ABNORMAL	---	---	---

WARD AND BURKE MICROTUNNELLING LTD
 9279 BARLOW TRAIL SE
 CALGARY, AB
 CA T2C 2N8
 Contact: Service Manager
 canadainfo@wardandburke.com
 T:
 F:



Oil Condition

Visc @ 40°C	cSt	35.5	---	---	---
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Contamination

Water	%	NEG	---	---	---
Particles >4µm		549	---	---	---
Particles >6µm		179	---	---	---
Particles >14µm		23	---	---	---
ISO 4406:1999 (c)		16/15/12	---	---	---
Silicon	ppm	3	---	---	---
Sodium	ppm	<1	---	---	---
Potassium	ppm	<1	---	---	---



Wear Metals

Iron	ppm	2	---	---	---
Copper	ppm	3	---	---	---
Lead	ppm	0	---	---	---
Tin	ppm	0	---	---	---
Aluminum	ppm	0	---	---	---
Chromium	ppm	0	---	---	---
Molybdenum	ppm	0	---	---	---
Nickel	ppm	0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	0	---	---	---
Vanadium	ppm	0	---	---	---



Additives

Calcium	ppm	51	---	---	---
Magnesium	ppm	2	---	---	---
Zinc	ppm	307	---	---	---
Phosphorus	ppm	244	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	0	---	---	---

Diagnosis

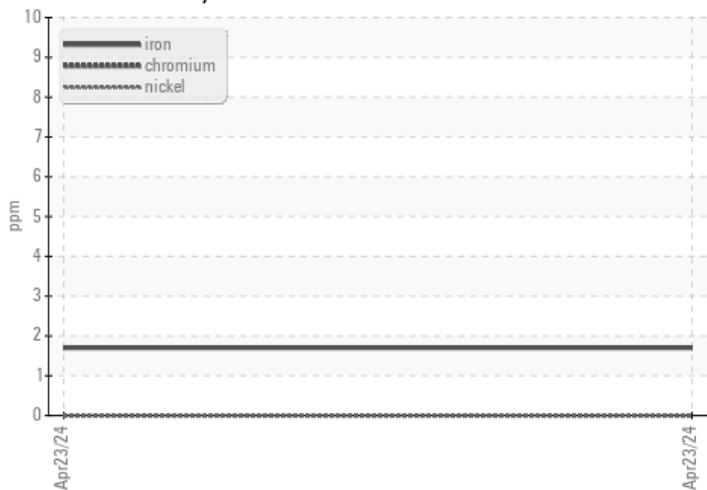
Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. The fluid was specified as PETRO CANADA HYDREX XV ALL SEASON HYDRAULIC OIL, however, a fluid match indicates that this fluid is ISO 32 AW Hydraulic Oil. Please confirm the oil type and grade on your next sample. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The oil viscosity is lower than typical, possibly indicating the addition of lighter grade oil. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Depot: WARCAL
 Unique No: 5776474
 Signed: Kevin Marson
 Report Date: 15 May 2024

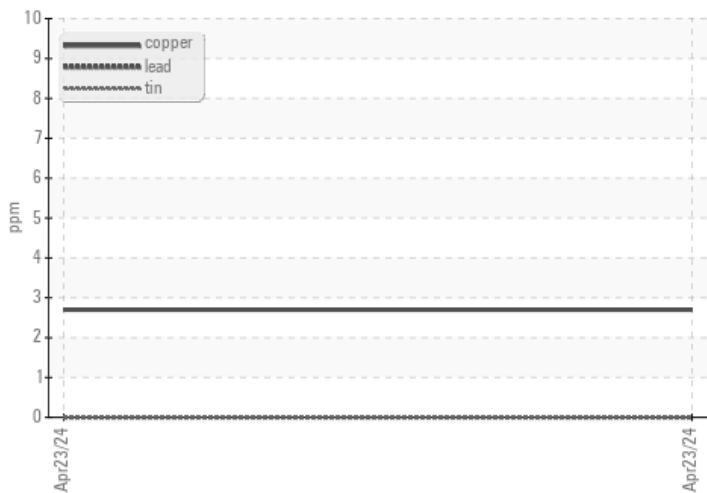


Graphs

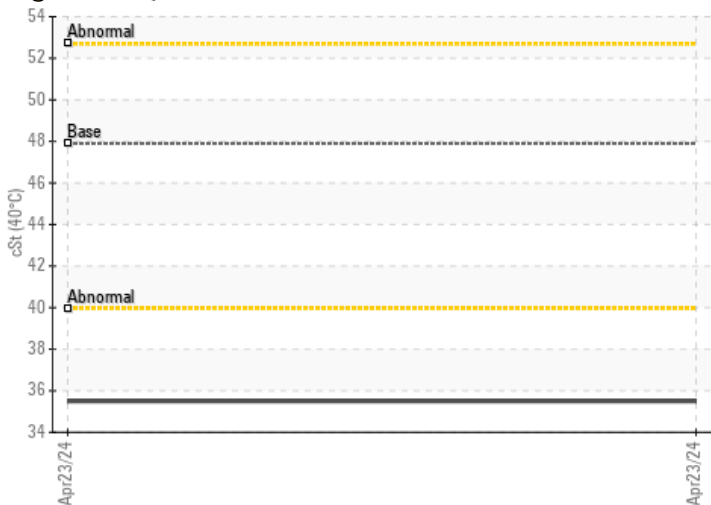
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count

