LIEBHERR
CONSTRUCTION EQUIPMENT

CATERPILLAR ET0417 - Hydraulic System

Sample No: LH0260504

Oil Type: PETRO CANADA 30W

Radius Recycling Canada Ltd.
12195 Musqueam Dr.
Surrey, BC
CA V3V 3T2
Contact: Chris Trinkunas
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SAMPLE INFORMATION

Sample Number		**LH0260504**	LH0240804	LH0192045	LH0191925
Sample Date		**06 Nov 2023**	26 Oct 2022	19 Mar 2022	22 Jun 2021
Machine Hours		**11574**	10181	9424	8330
Oil Hours		**0**	0	0	0
Oil Changed		**N/A**	Not Changd	Not Changd	Not Changd
Sample Status		**ABNORMAL**	ABNORMAL	ABNORMAL	ABNORMAL

OIL CONDITION

Visc @ 40°C	cSt	**39.7**	38.5	38.5	38.1

CONTAMINATION

Water	%	**NEG**	NEG	NEG	NEG
Particles >4µm		**8179**	2105	3301	3795
Particles >6µm		**125**	517	488	671
Particles >14µm		**7**	57	43	69
ISO 4406:1999 (c)		**20/14/10**	18/16/13	19/16/13	19/17/13
Silicon	ppm	**2**	2	1	1
Sodium	ppm	**1**	2	<1	<1
Potassium	ppm	**<1**	<1	1	1

WEAR METALS

PQ		**0**	0	0	---
Iron	ppm	**37**	26	21	18
Copper	ppm	**2**	3	3	3
Lead	ppm	**<1**	<1	<1	<1
Tin	ppm	**0**	0	0	<1
Aluminum	ppm	**2**	<1	<1	<1
Chromium	ppm	**25**	29	20	14
Molybdenum	ppm	**0**	<1	<1	<1
Nickel	ppm	**<1**	<1	0	<1
Titanium	ppm	**0**	<1	0	0
Silver	ppm	**<1**	0	<1	<1
Manganese	ppm	**<1**	<1	<1	<1
Vanadium	ppm	**0**	0	0	0

ADDITIVES

Calcium	ppm	**148**	173	169	218
Magnesium	ppm	**4**	6	6	6
Zinc	ppm	**212**	385	397	517
Phosphorus	ppm	**624**	710	685	738
Barium	ppm	**<1**	0	<1	<1
Boron	ppm	**1**	1	1	1

Diagnosis

We recommend that you drain the oil from the component if this has not already been done. 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. Ring wear is indicated. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. There is a light amount of silt (particulates < 14 microns in size) present in the oil. Viscosity of sample indicates oil is within ISO 46 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Depot: AMISUR
Unique No: 5696942
Signed: Kevin Marson
Report Date: 19 Dec 2023

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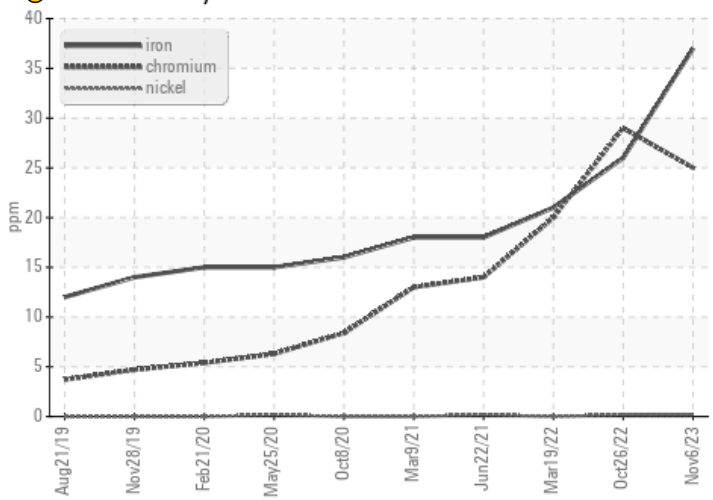
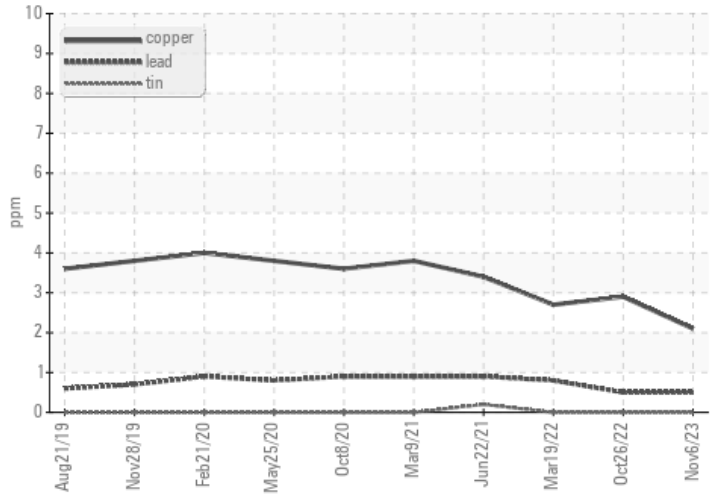
GRAPHS

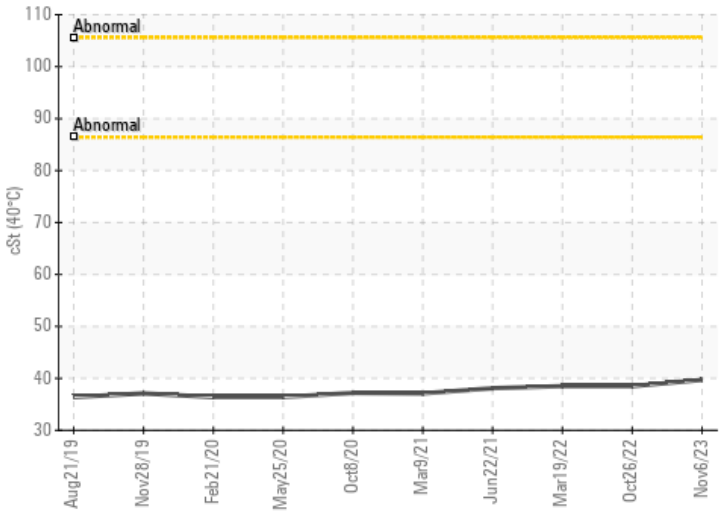
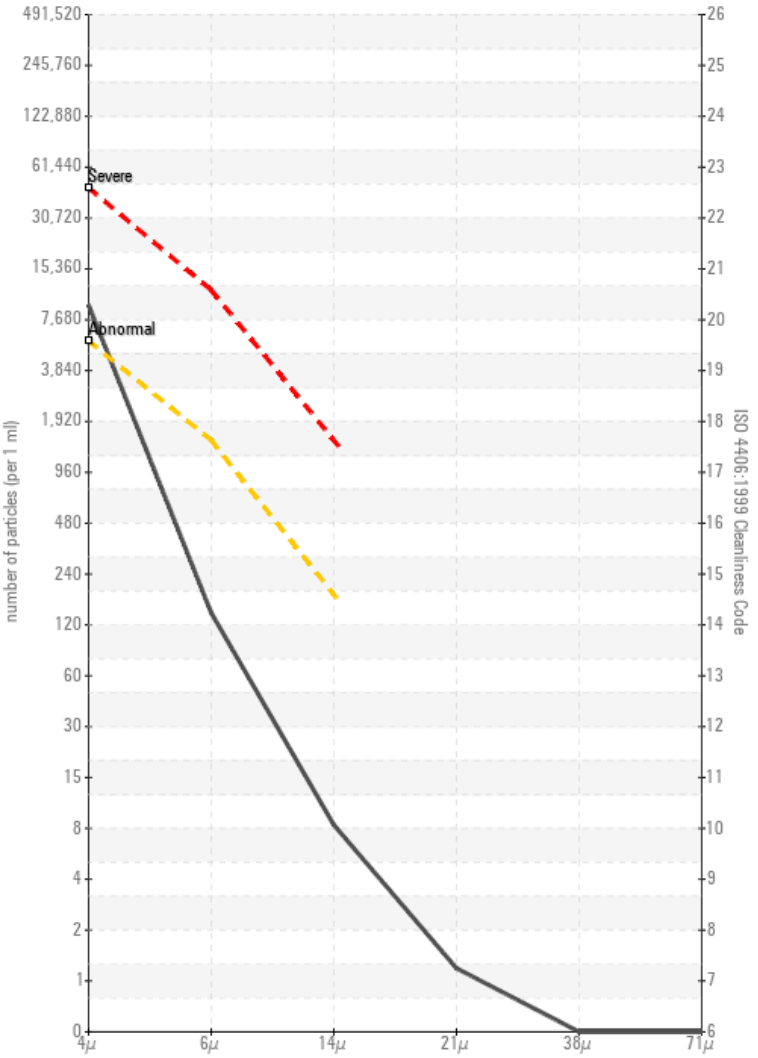
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Particle Count