



CONSTRUCTION EQUIPMENT

3022 VOLVO EC380EL 311273 - HYDRAULIC SYSTEM



Sample No: VCP432788
Oil Type: CASTROL HD AW ISO 46
Job No: 3022



SAMPLE INFORMATION

Sample Number	VCP432788	VCP383148	VCP358381	VCP379113
Sample Date	25 Mar 2024	16 Sep 2023	06 Feb 2023	10 Aug 2022
Machine Hours	6130	6600	5125	4625
Oil Hours	0	0	0	1000
Oil Changed	Not Chngd	Not Chngd	Not Chngd	Not Chngd
Sample Status	NORMAL	ABNORMAL	NORMAL	NORMAL

LEONARDS CONTRACTING
 30850 STEPHENSON HWY
 MADISON HEIGHTS, MI
 US 48071
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OIL CONDITION

Visc @ 40°C	cSt	41.7	41.7	42.0	41.9
Acid Number (AN)	mg KOH/g	0.41	0.40	0.41	0.48

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		2763	---	6981	722
Particles >6µm		472	---	290	214
Particles >14µm		33	---	5	38
ISO 4406:1999 (c)		19/16/12	---	20/15/10	17/15/12
Silicon	ppm	2	2	2	<1
Sodium	ppm	0	1	0	0
Potassium	ppm	2	<1	1	0

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

WEAR METALS

Iron	ppm	4	4	4	3
Copper	ppm	39	35	38	37
Lead	ppm	0	0	<1	0
Tin	ppm	<1	0	0	0
Aluminum	ppm	2	0	0	<1
Chromium	ppm	2	3	3	3
Molybdenum	ppm	0	0	0	0
Nickel	ppm	0	0	0	0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	0	0
Vanadium	ppm	0	<1	0	0

ADDITIVES

Calcium	ppm	42	35	41	48
Magnesium	ppm	1	0	<1	<1
Zinc	ppm	309	362	392	413
Phosphorus	ppm	333	377	355	367
Barium	ppm	0	0	0	0
Boron	ppm	0	0	0	0

Depot: LEOMAD
Unique No: 10963290
Signed: Don Baldrige
Report Date: 06 Apr 2024

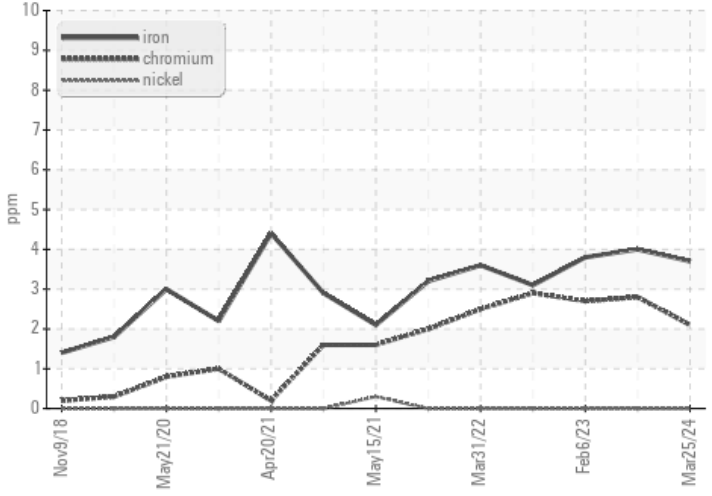


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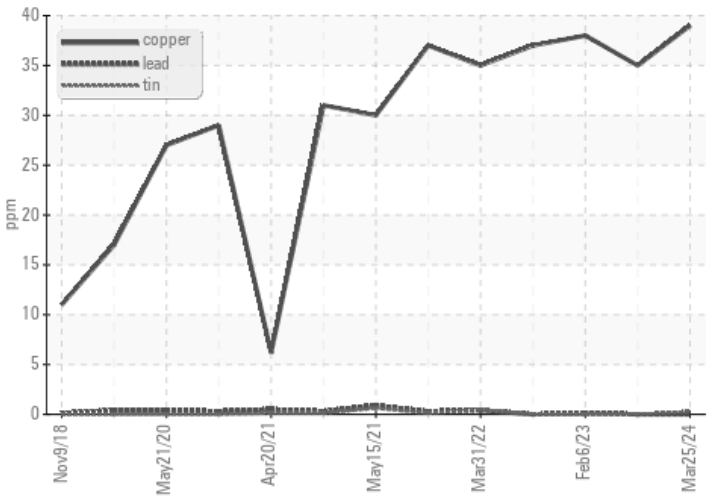


GRAPHS

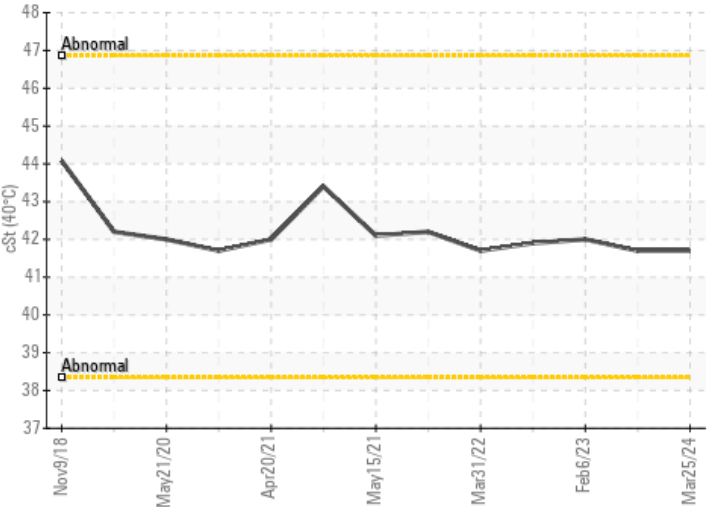
Ferrous Alloys



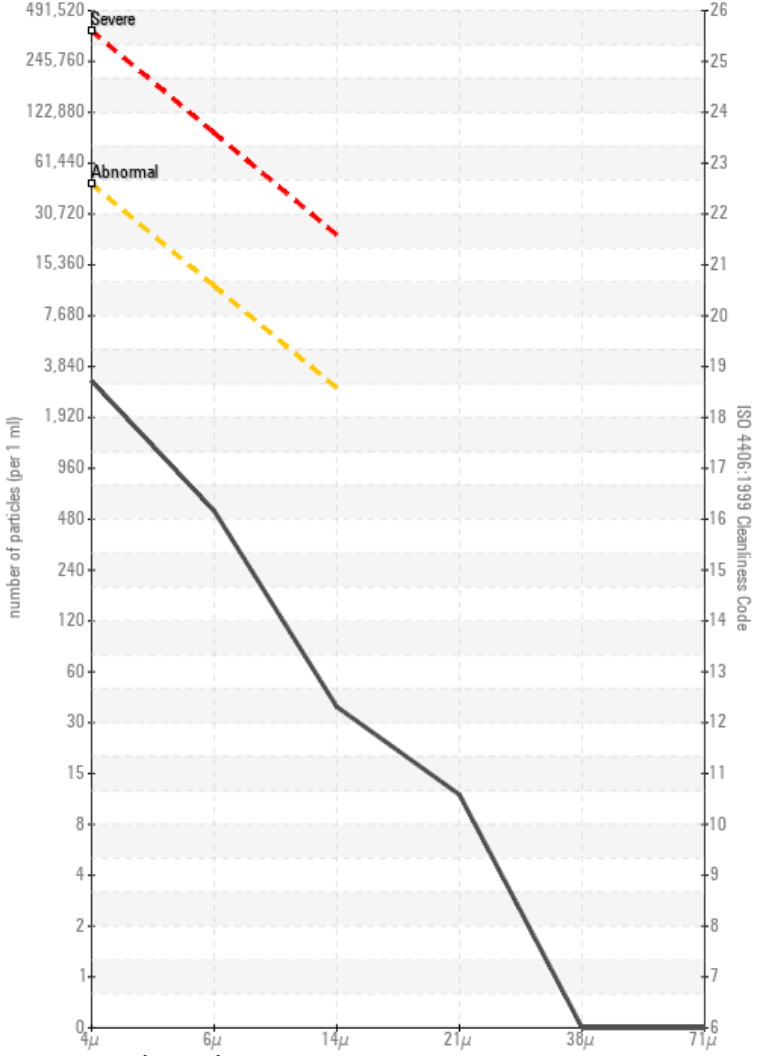
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

