



CONSTRUCTION EQUIPMENT

3026 VOLVO EC220EL 311050 - HYDRAULIC SYSTEM



Sample No: VCP383172
Oil Type: CASTROL HD AW ISO 46
Job No: 3026



SAMPLE INFORMATION

Sample Number	VCP383172	VCP383195	VCP343948	VCP314540
Sample Date	10 Nov 2023	25 May 2023	06 Jun 2022	10 May 2021
Machine Hours	4780	4300	3110	1690
Oil Hours	0	0	1000	0
Oil Changed	Not Chngd	Not Chngd	Not Chngd	Not Chngd
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

LEONARDS CONTRACTING
 30850 STEPHENSON HWY
 MADISON HEIGHTS, MI
 US 48071
 Contact: LARRY SCHRADER
 larry.schrade@sdevelop.com
 T: (810)499-1953
 F: x:

OIL CONDITION

Visc @ 40°C	cSt	43.0	43.2	43.3	43.3
Acid Number (AN)	mg KOH/g	0.40	0.42	0.47	0.460

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		3593	9756	13714	8713
Particles >6µm		417	1760	1199	1461
Particles >14µm		33	108	117	65
ISO 4406:1999 (c)		19/16/12	20/18/14	21/17/14	20/18/13
Silicon	ppm	6	4	5	2
Sodium	ppm	2	2	<1	1
Potassium	ppm	2	2	0	1

Diagnosis

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

WEAR METALS

Iron	ppm	11	10	6	1
Copper	ppm	34	34	32	38
Lead	ppm	0	<1	<1	1
Tin	ppm	0	<1	0	<1
Aluminum	ppm	1	2	<1	<1
Chromium	ppm	0	<1	0	<1
Molybdenum	ppm	0	<1	<1	0
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	<1	<1
Manganese	ppm	<1	<1	<1	0
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	45	57	53	80
Magnesium	ppm	2	1	<1	<1
Zinc	ppm	375	448	417	537
Phosphorus	ppm	308	365	359	429
Barium	ppm	0	0	0	0
Boron	ppm	0	0	<1	<1

Depot: LEOMAD
Unique No: 10791976
Signed: Jonathan Hester
Report Date: 20 Dec 2023

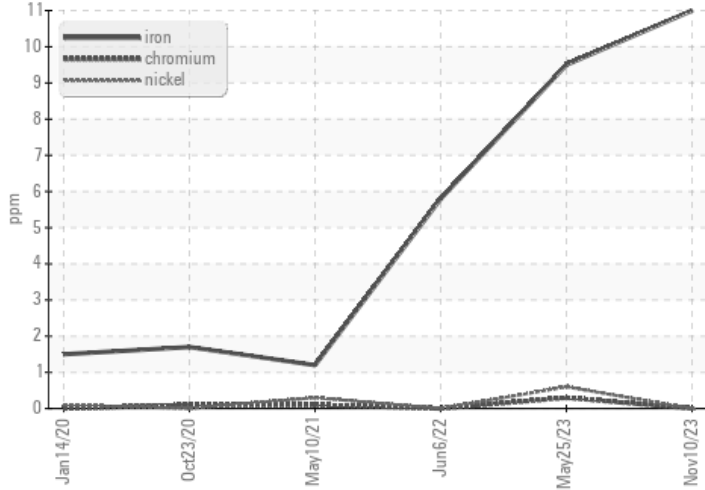


CONSTRUCTION EQUIPMENT

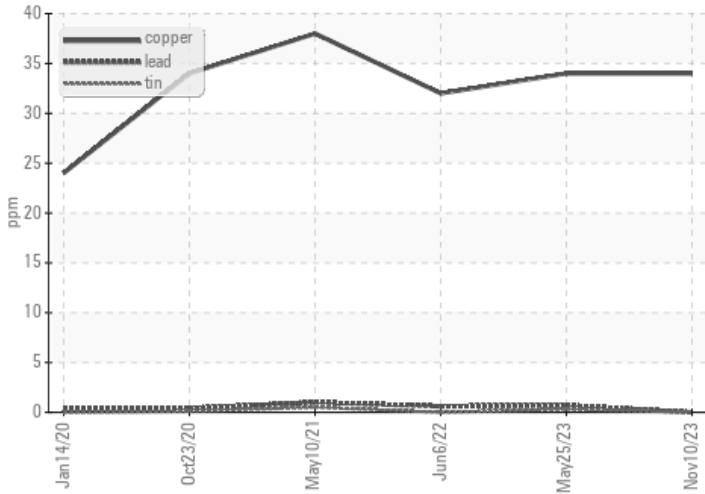


VOLVO GRAPHS

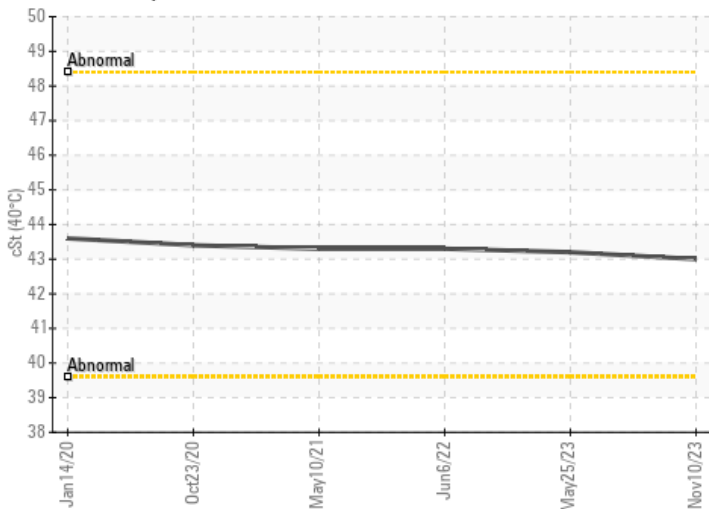
Ferrous Alloys



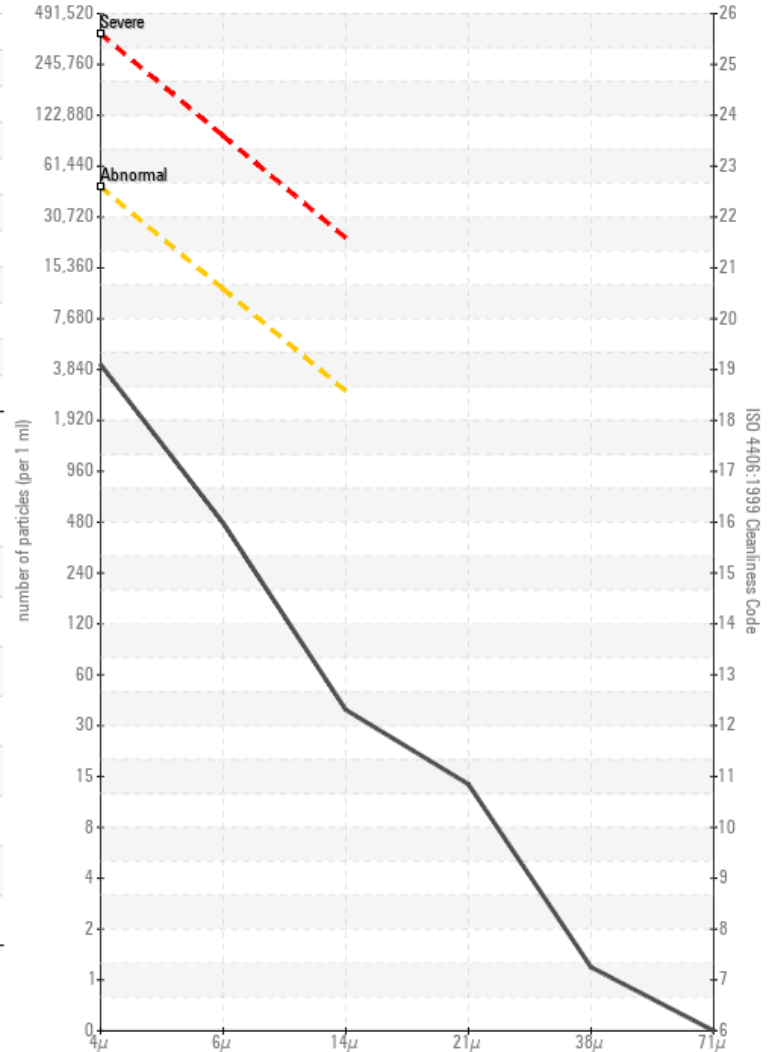
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

