



CONSTRUCTION EQUIPMENT

660149 VOLVO L110H 631695 - HYDRAULIC SYSTEM



Sample No: VCP449224
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 660149



SAMPLE INFORMATION

Sample Number	VCP449224	VCP424440	VCP386170	VCP364290
Sample Date	15 Jan 2024	26 May 2023	07 Nov 2022	19 Aug 2022
Machine Hours	19534	18421	17370	16204
Oil Hours	6000	2000	500	500
Oil Changed	Changed	Not Changd	Not Changd	Not Changd
Sample Status	ATTENTION	ATTENTION	ABNORMAL	ATTENTION

COVANTA
 350 FLAKENBURG ROAD
 TAMPA, FL
 US 33619
 Contact: SERVICE MANAGER

OIL CONDITION

Visc @ 40°C	cSt	▲ 60.0	▲ 57.3	▲ 59.3	▲ 56.8
Acid Number (AN)	mg KOH/g	■ 0.33	■ 0.34	■ 0.35	■ 0.52

T: (813)684-5688
 F:

CONTAMINATION

Water	%	NEG	NEG	■ 0.061	NEG
Particles >4µm		■ 12384	15113	---	5755
Particles >6µm		■ 349	■ 2149	---	■ 1188
Particles >14µm		■ 20	■ 48	---	■ 77
ISO 4406:1999 (c)		21/16/11	21/18/13	---	20/17/13
Silicon	ppm	■ 2	■ 2	■ 2	■ 1
Sodium	ppm	■ 3	■ 1	■ 2	■ 1
Potassium	ppm	■ 3	■ <1	■ 0	■ 0

Diagnosis
 Oil and filter change at the time of sampling has been noted. 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 oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

WEAR METALS

Iron	ppm	■ 1	■ 4	■ 4	■ 4
Copper	ppm	■ <1	■ 1	■ 2	■ <1
Lead	ppm	■ 1	■ 0	■ <1	■ <1
Tin	ppm	■ <1	■ 0	■ 0	■ 0
Aluminum	ppm	■ <1	■ 0	■ <1	■ <1
Chromium	ppm	■ 2	■ 0	■ 4	■ 4
Molybdenum	ppm	■ 2	■ 2	■ 3	■ 2
Nickel	ppm	■ <1	■ 0	■ 0	■ 0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	■ 0	■ 0	■ 0	■ 0
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	■ 153	■ 98	■ 101	■ 80
Magnesium	ppm	■ 17	■ 4	■ 8	■ 7
Zinc	ppm	■ 391	■ 420	■ 341	■ 286
Phosphorus	ppm	■ 330	■ 349	■ 289	■ 241
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 5	■ <1	■ 2	■ 0

Depot: COVTAM
Unique No: 10886437
Signed: Don Baldrige
Report Date: 21 Feb 2024

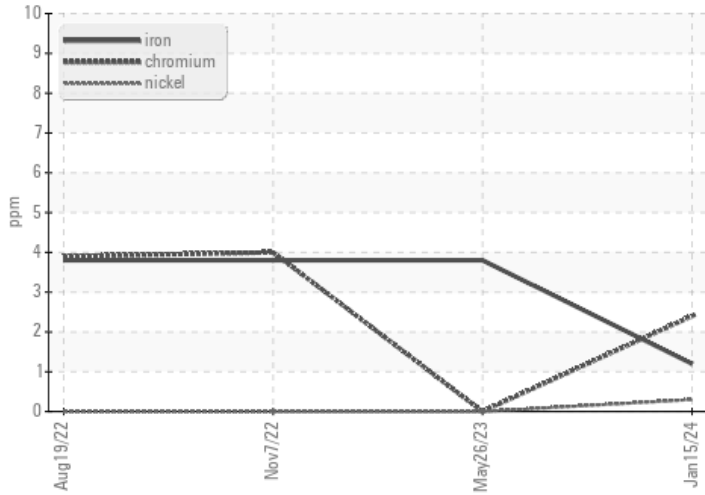


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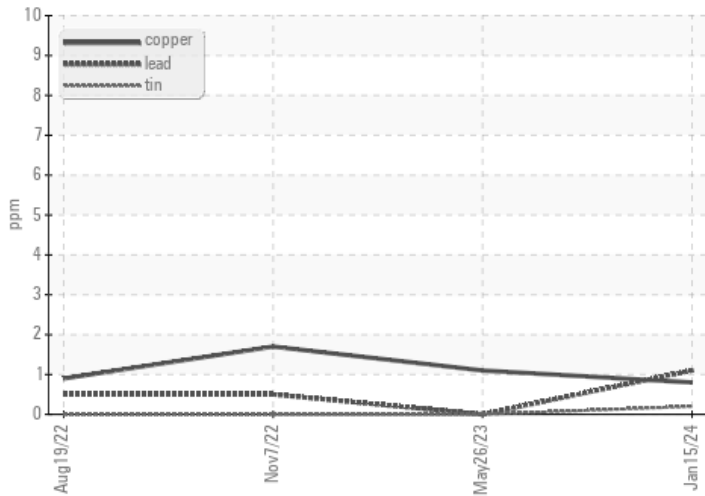


GRAPHS

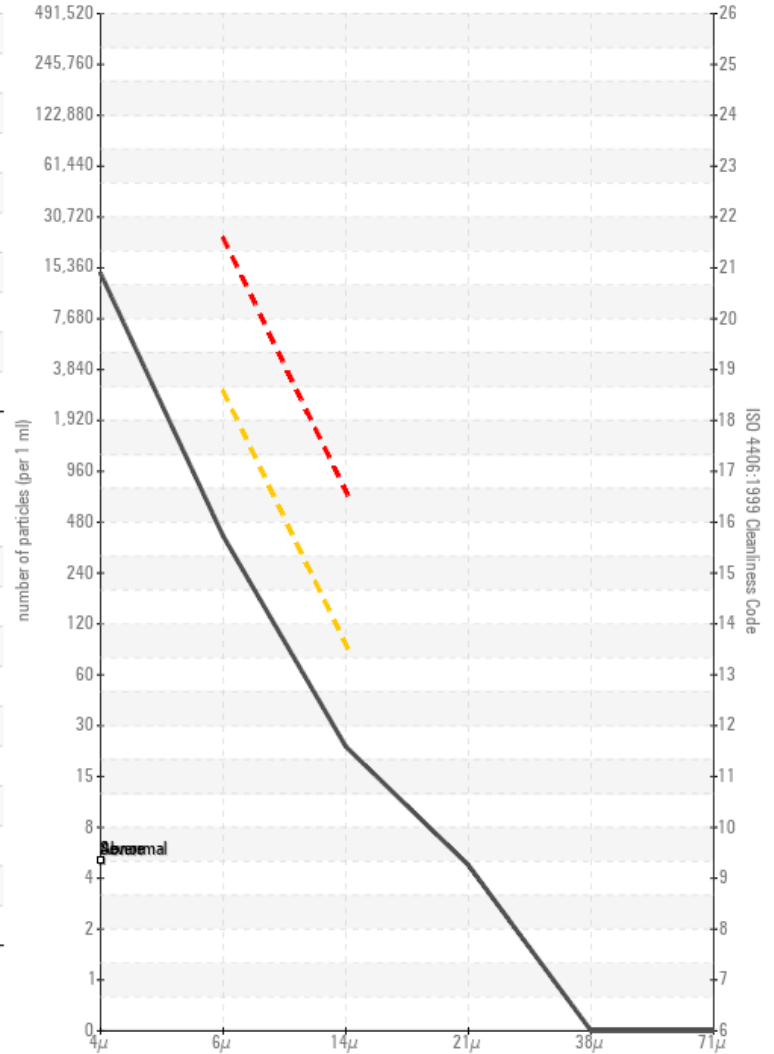
Ferrous Alloys



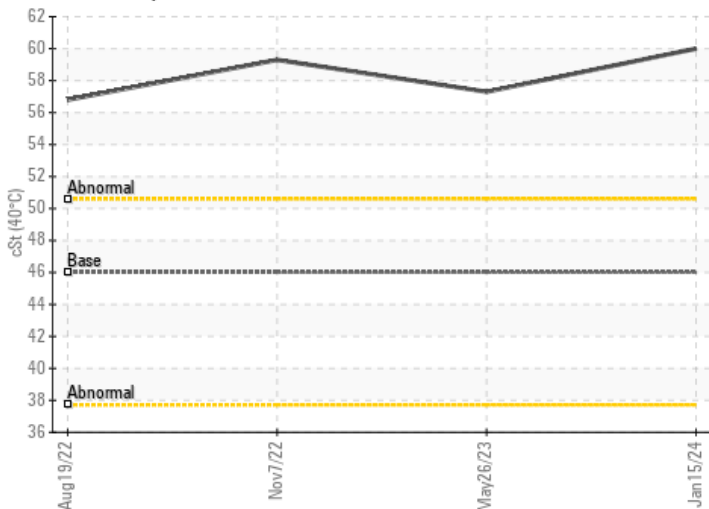
Non-ferrous Metals



Particle Count



Viscosity @ 40°C



Acid Number

