



CONSTRUCTION EQUIPMENT

13900 AM HARDWOOD VOLVO L110H 631365 - HYDRAULIC SYSTEM



Sample No: VCP411513
Oil Type: COMPASS AW 46
Job No: 13900 AM HARDWOOD



SAMPLE INFORMATION

Sample Number	VCP411513	VCP250142	VCP274584	VCP252640
Sample Date	01 Dec 2023	18 Mar 2021	05 Jun 2020	27 Sep 2019
Machine Hours	15261	8011	6006	4116
Oil Hours	4000	0	0	0
Oil Changed	Not Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	ABNORMAL	ATTENTION

MCCLUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
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OIL CONDITION

Visc @ 40°C	cSt	▲ 30.9	■ 41.3	▲ 38.0	▲ 37.3
Acid Number (AN)	mg KOH/g	■ 0.41	■ 0.357	■ 0.364	■ 0.410



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		1822	3613	6802	3376
Particles >6µm		■ 648	■ 296	■ 2043	■ 883
Particles >14µm		▲ 132	■ 19	▲ 206	▲ 127
ISO 4406:1999 (c)		18/17/14	19/15/11	20/18/15	19/17/14
Silicon	ppm	■ 6	■ 0	■ 2	■ 3
Sodium	ppm	■ 2	■ 1	■ <1	■ 1
Potassium	ppm	■ 2	■ 0	■ <1	■ <1

Diagnosis

The 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 a moderate amount of particulates present in the oil. The oil viscosity is lower than normal. The AN level is acceptable for this fluid.



WEAR METALS

Iron	ppm	■ 3	■ 6	■ 6	■ 11
Copper	ppm	■ <1	■ <1	■ <1	■ 1
Lead	ppm	■ 0	■ <1	■ <1	■ 1
Tin	ppm	■ 0	■ <1	■ 0	■ 0
Aluminum	ppm	■ 2	■ <1	■ 0	■ <1
Chromium	ppm	■ <1	■ 1	■ <1	■ 1
Molybdenum	ppm	0	■ 3	■ 2	■ <1
Nickel	ppm	■ 0	■ 0	■ 0	■ 0
Titanium	ppm	0	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	■ 0	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	56	■ 129	■ 105	■ 103
Magnesium	ppm	5	■ 24	■ 15	■ 6
Zinc	ppm	309	■ 418	■ 427	■ 426
Phosphorus	ppm	206	■ 335	■ 344	■ 335
Barium	ppm	3	■ 0	■ 0	■ 0
Boron	ppm	0	■ 10	■ 5	■ 1

Depot: VOLVO8882
Unique No: 10779116
Signed: Don Baldrige
Report Date: 11 Dec 2023

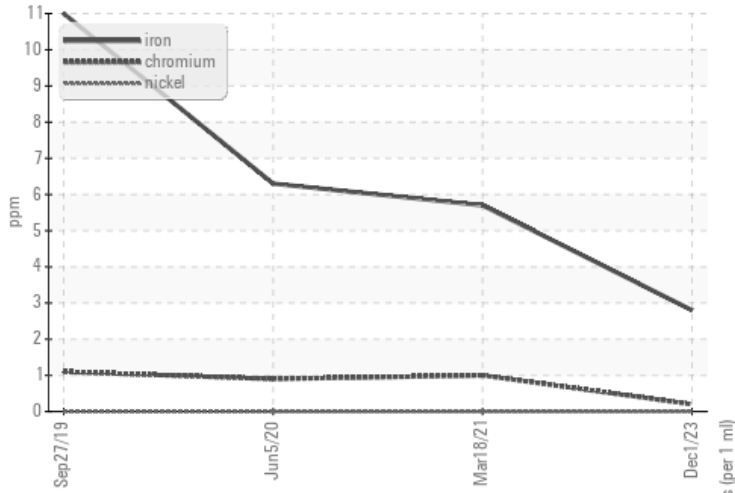


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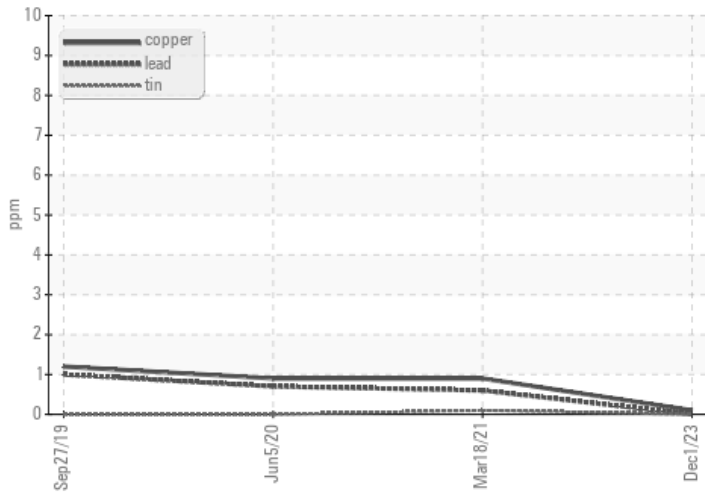


GRAPHS

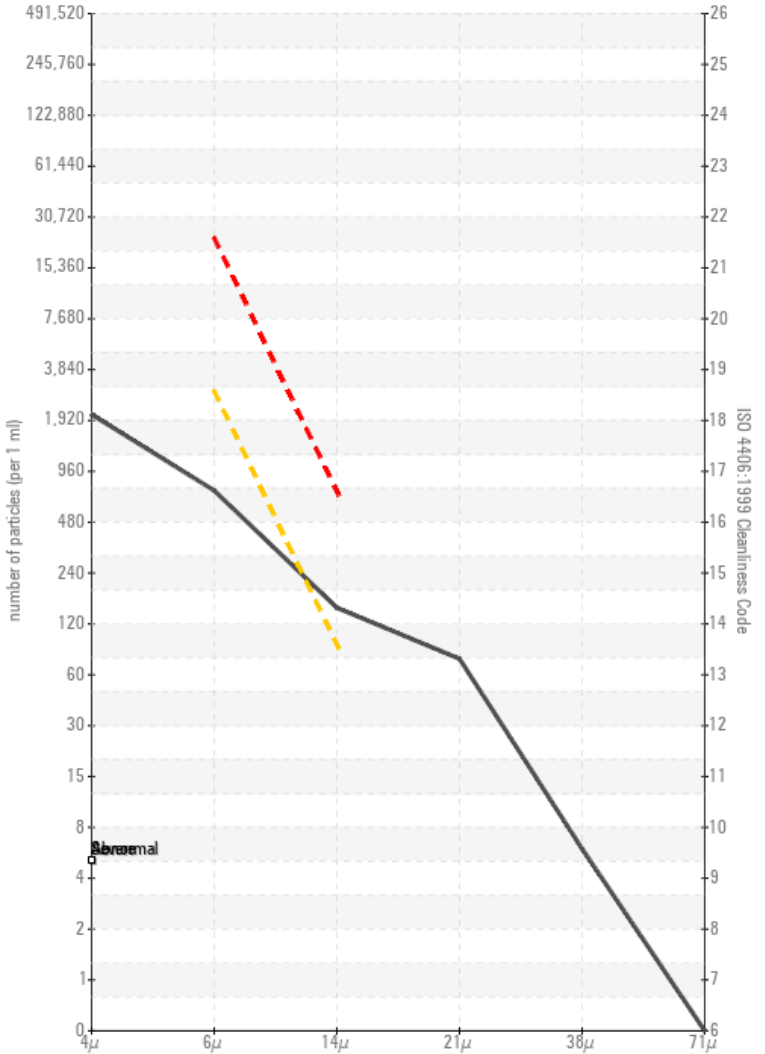
Ferrous Alloys



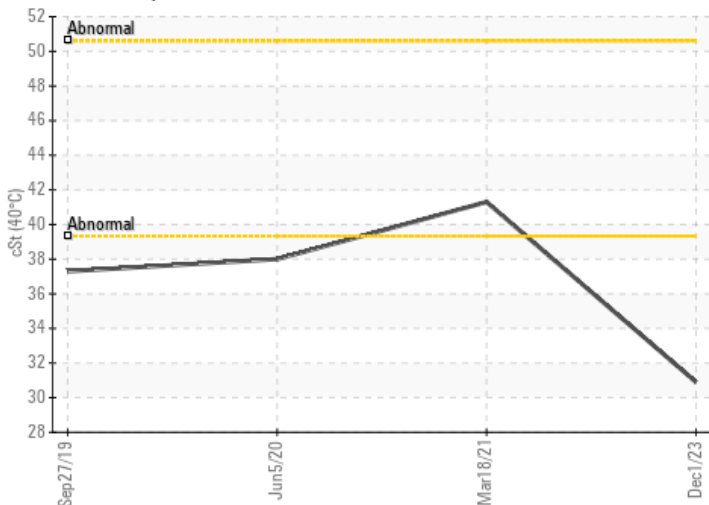
Non-ferrous Metals



Particle Count



Viscosity @ 40°C



Acid Number

