



CONSTRUCTION EQUIPMENT

661396 VOLVO L110H 631024 - HYDRAULIC SYSTEM



Sample No: VCP438084
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 661396



SAMPLE INFORMATION

Sample Number	VCP438084	VCP405126	VCP381301	VCP360965
Sample Date	10 Feb 2024	18 Apr 2023	02 Nov 2022	18 Apr 2022
Machine Hours	10869	9834	9345	8655
Oil Hours	0	0	0	0
Oil Changed	Not Chngd	Not Chngd	Not Chngd	Not Chngd
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

HUBBARD CONSTRUCTION
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OIL CONDITION

Visc @ 40°C	cSt	43.5	43.3	43.3	43.6
Acid Number (AN)	mg KOH/g	0.30	0.31	0.35	1.05



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		---	11980	3418	4803
Particles >6µm		---	▲ 2930	576	543
Particles >14µm		---	▲ 179	29	13
ISO 4406:1999 (c)		---	21/19/15	19/16/12	19/16/11
Silicon	ppm	4	4	3	4
Sodium	ppm	4	4	3	4
Potassium	ppm	0	0	0	0

Diagnosis

The filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. Moderate concentration of visible dirt/debris present 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	13	12	12	11
Copper	ppm	3	3	3	4
Lead	ppm	3	0	2	2
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	1	<1	<1	<1
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	0	<1	<1	<1
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	0	<1	0	0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	124	135	124	135
Magnesium	ppm	14	15	11	13
Zinc	ppm	468	421	424	422
Phosphorus	ppm	352	354	351	374
Barium	ppm	0	0	0	0
Boron	ppm	<1	0	1	3

Depot: HUBORL
Unique No: 10876162
Signed: Jonathan Hester
Report Date: 15 Feb 2024

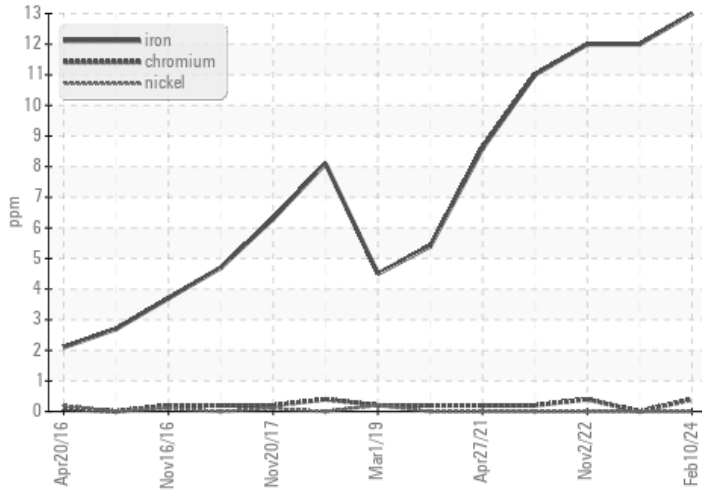


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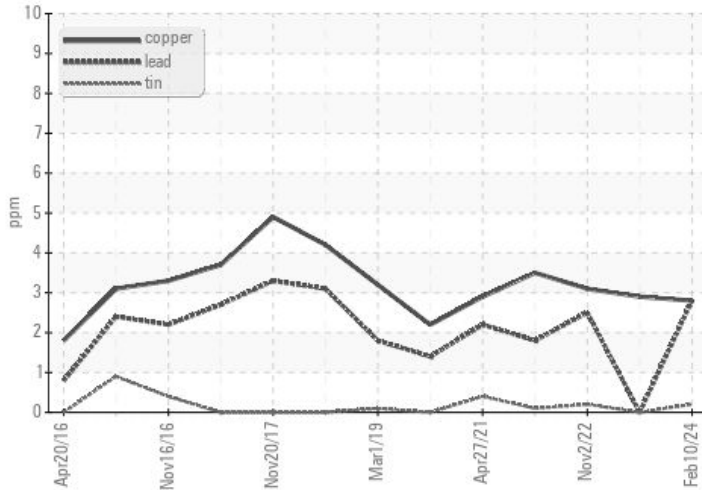


GRAPHS

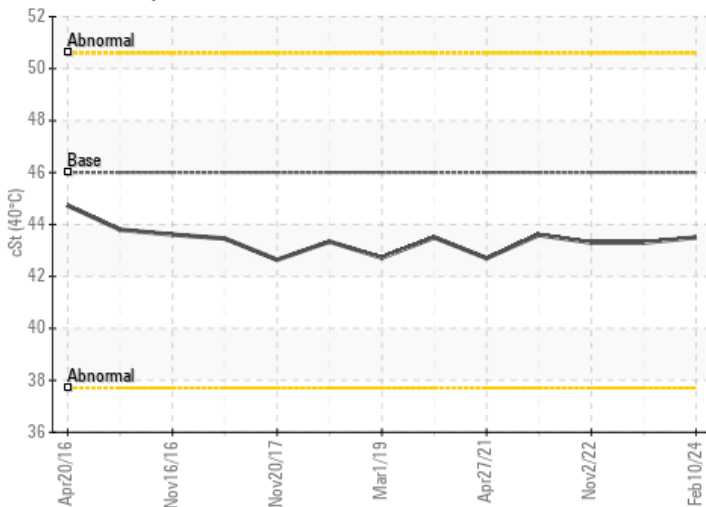
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Acid Number

