



CONSTRUCTION EQUIPMENT

SPM661220 VOLVO L180H 5412 - HYDRAULIC SYSTEM



Sample No: VCP442820
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: SPM661220



SAMPLE INFORMATION

Sample Number	VCP442820	VCP396101	VCP374135	VCP342748
Sample Date	07 Feb 2024	01 Feb 2023	18 Jun 2022	08 Dec 2021
Machine Hours	7046	6657	4250	3605
Oil Hours	0	6657	0	3605
Oil Changed	N/A	Changed	Not Changd	Not Changd
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ABNORMAL

CALLANAN
 RT 32 677 FLATBUSH RD
 EAST KINGSTON, NY
 US 12401
 Contact:



OIL CONDITION

Visc @ 40°C	cSt	40.0	39.6	39.8	39.8
Acid Number (AN)	mg KOH/g	0.44	0.34	0.327	0.331

T:
F:



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		▲ 10944	▲ 12359	▲ 14058	▲ 10672
Particles >6µm		▲ 2482	▲ 2153	▲ 2606	▲ 2364
Particles >14µm		■ 114	■ 37	■ 89	■ 102
ISO 4406:1999 (c)		21/18/14	21/18/12	21/19/14	21/18/14
Silicon	ppm	■ 4	■ 4	■ 2	■ 2
Sodium	ppm	■ 0	■ 3	■ 2	■ 2
Potassium	ppm	■ 2	■ 0	■ <1	■ <1

Diagnosis

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.



WEAR METALS

Iron	ppm	■ 9	■ 9	■ 5	■ 4
Copper	ppm	■ 4	■ 5	■ 4	■ 4
Lead	ppm	■ 2	■ <1	■ 1	■ 1
Tin	ppm	■ <1	■ <1	■ <1	■ <1
Aluminum	ppm	■ 2	■ <1	■ 1	■ <1
Chromium	ppm	■ 1	■ 4	■ 3	■ 2
Molybdenum	ppm	■ 1	■ 0	■ 0	■ 0
Nickel	ppm	■ <1	■ 0	■ 0	■ 0
Titanium	ppm	<1	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	■ <1	■ <1	■ <1	■ 0
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 315	■ 39	■ 40	■ 39
Magnesium	ppm	■ 5	■ <1	■ <1	■ 0
Zinc	ppm	■ 485	■ 359	■ 406	■ 387
Phosphorus	ppm	■ 406	■ 294	■ 319	■ 294
Barium	ppm	■ 13	■ 0	■ 0	■ 0
Boron	ppm	■ 3	■ 0	■ 2	■ <1

Depot: CALEAS
Unique No: 10873459
Signed: Wes Davis
Report Date: 13 Feb 2024

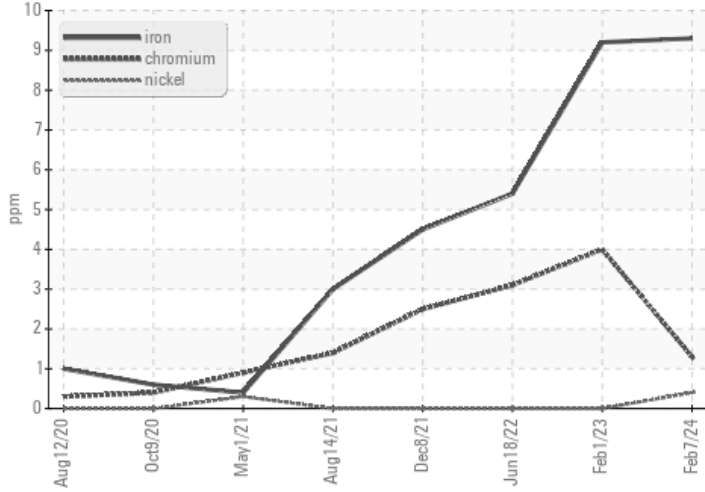


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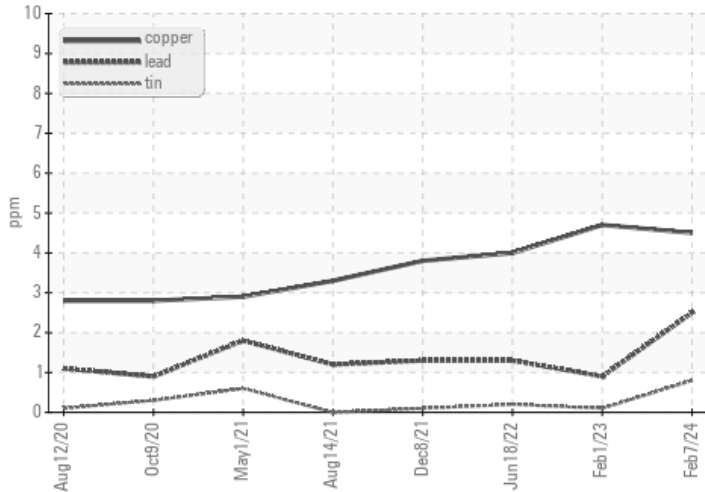


VOLVO GRAPHS

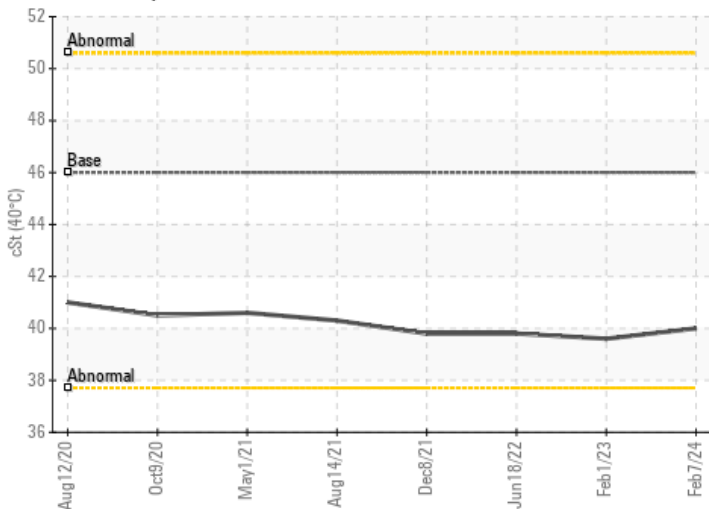
Ferrous Alloys



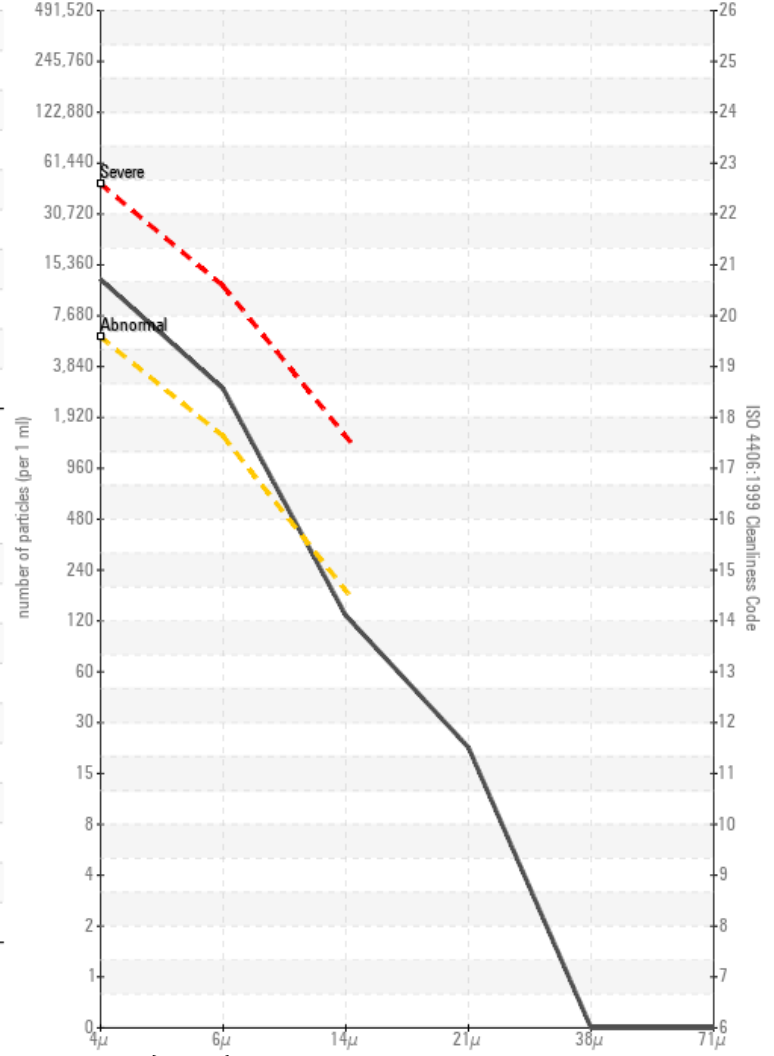
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

