



CONSTRUCTION EQUIPMENT

687744 VOLVO L110H 631322 - HYDRAULIC SYSTEM



Sample No: VCP444174
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No: 687744



SAMPLE INFORMATION

Sample Number	VCP444174	VCP398043	VCP366404	VCP326791
Sample Date	16 Mar 2024	01 Aug 2023	30 Sep 2022	03 Sep 2021
Machine Hours	11137	9947	8782	0
Oil Hours	3137	8000	4000	1500
Oil Changed	Not Chngd	N/A	Changed	Not Chngd
Sample Status	ABNORMAL	ABNORMAL	ATTENTION	ABNORMAL

RIPA AND ASSOCIATES
 10149 FISHER AVENUE
 TAMPA, FL
 US 33619
 Contact: PM Services
 PMServices@ripaconstruction.com
 T:
 F:

OIL CONDITION

Visc @ 40°C	cSt	59.2	52.5	53.3	53.1
Acid Number (AN)	mg KOH/g	0.36	0.47	0.32	0.516

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		19886	11934	17585	---
Particles >6µm		▲ 3908	● 2752	■ 1392	---
Particles >14µm		▲ 238	▲ 419	● 82	---
ISO 4406:1999 (c)		21/19/15	21/19/16	21/18/14	---
Silicon	ppm	■ 1	■ 4	■ 8	■ 10
Sodium	ppm	■ 1	■ 2	■ <1	■ 2
Potassium	ppm	■ <1	■ 0	■ 0	■ 3

Diagnosis
 We recommend you service the filters on this component. Resample at the next service interval to monitor. All component wear rates are normal. There is a high amount of particulates present in the oil. Viscosity of sample indicates oil is within ISO 68 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

WEAR METALS

Iron	ppm	■ 3	■ 6	■ 7	■ 4
Copper	ppm	■ 0	■ 2	■ 2	■ 2
Lead	ppm	■ 0	■ 0	■ 1	■ 2
Tin	ppm	■ 0	■ 0	■ 0	■ 0
Aluminum	ppm	■ 0	■ 2	■ <1	■ <1
Chromium	ppm	■ <1	■ 1	■ 2	■ 1
Molybdenum	ppm	■ 3	■ 9	■ 3	■ 3
Nickel	ppm	■ 0	■ 0	■ 0	■ <1
Titanium	ppm	0	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	■ 0	■ <1	■ <1	■ 0
Vanadium	ppm	0	<1	0	0

ADDITIVES

Calcium	ppm	■ 107	■ 181	■ 363	■ 153
Magnesium	ppm	■ 15	■ 16	■ 14	■ 17
Zinc	ppm	■ 411	■ 450	■ 511	■ 420
Phosphorus	ppm	■ 333	■ 382	■ 421	■ 373
Barium	ppm	■ <1	■ 0	■ 0	■ 0
Boron	ppm	■ 2	■ 6	■ 0	■ 10

Depot: RIPTAM
Unique No: 10975874
Signed: Jonathan Hester
Report Date: 18 Apr 2024

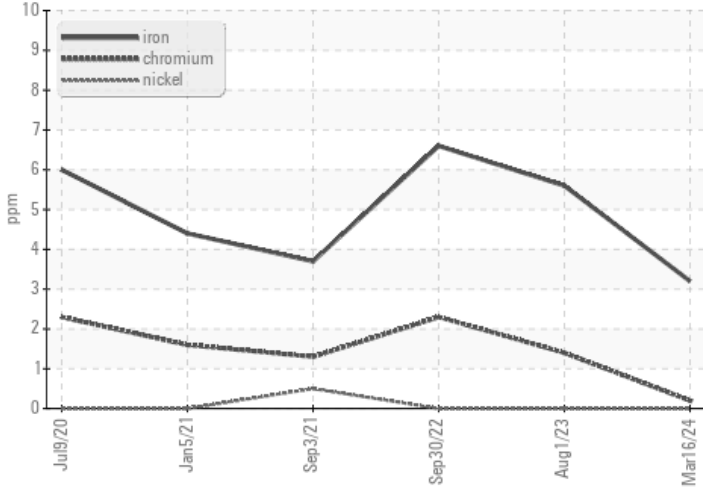


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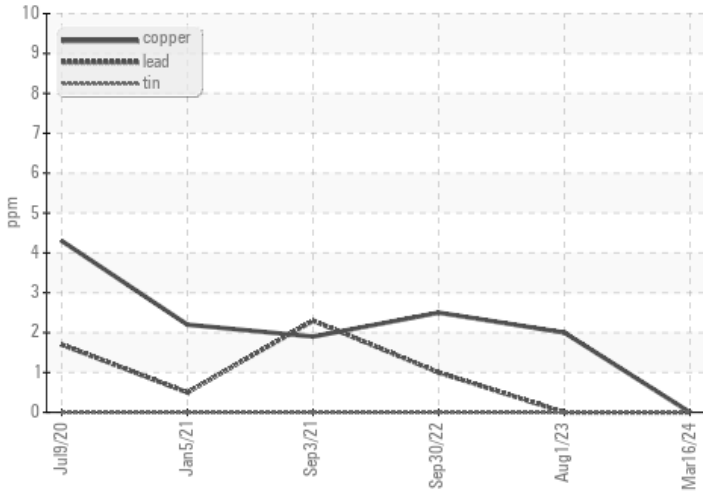


GRAPHS

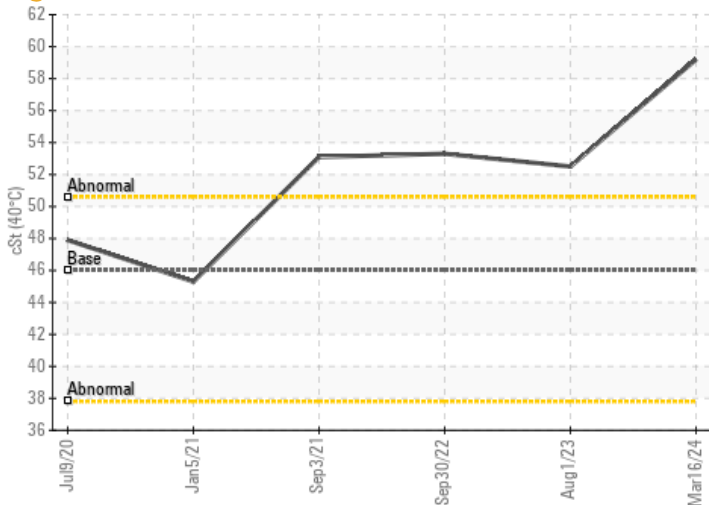
Ferrous Alloys



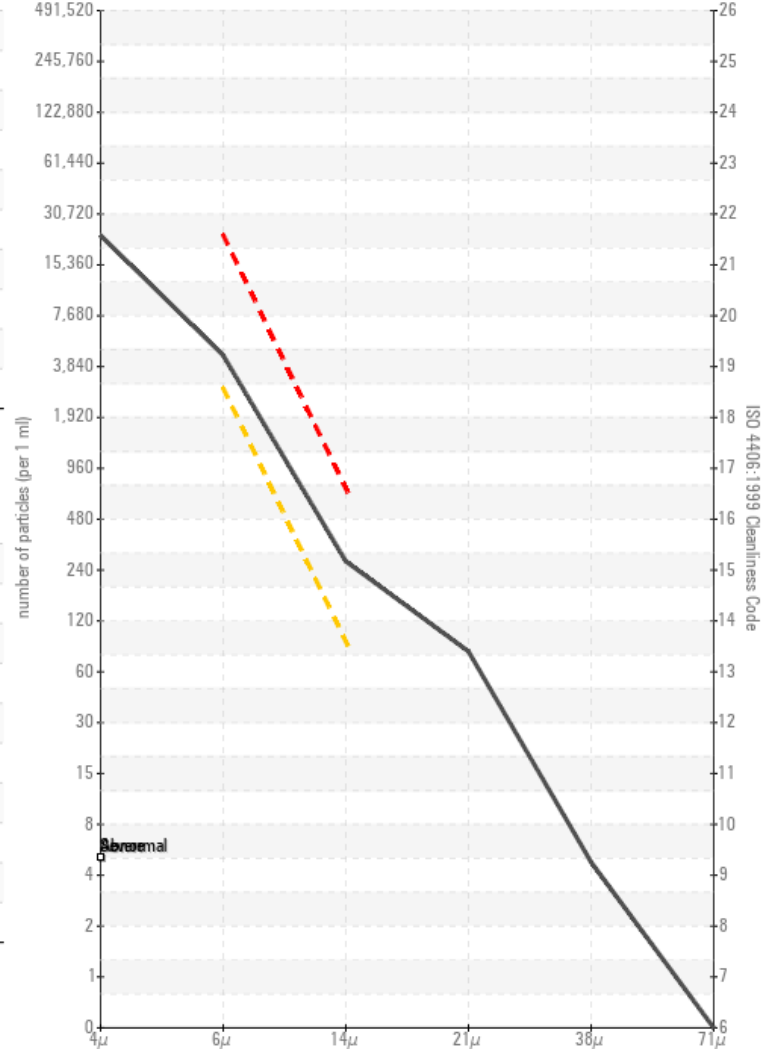
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

