



CONSTRUCTION EQUIPMENT

VOLVO L110H 631231 - HYDRAULIC SYSTEM



Sample No: VCP441671
Oil Type: VOLVO SUPER HYDRAULIC OIL 46
Job No:



SAMPLE INFORMATION

Sample Number	VCP441671	VCP393515	VCP385370	VCP332753
Sample Date	20 Feb 2024	28 Apr 2023	15 Sep 2022	22 Feb 2022
Machine Hours	12527	10851	9792	8577
Oil Hours	0	2800	1700	4000
Oil Changed	N/A	Not Changd	Not Changd	Changed
Sample Status	SEVERE	ABNORMAL	ABNORMAL	NORMAL

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

OIL CONDITION

Visc @ 40°C	cSt	47.9	46.4	43.02	41.2
Acid Number (AN)	mg KOH/g	0.34	0.29	0.32	0.304

CONTAMINATION

Water	%	NEG	NEG	▲ 0.171	NEG
Particles >4µm		42904	7744	1175	6663
Particles >6µm		▲ 11343	2212	640	738
Particles >14µm		▲ 1048	▲ 219	● 109	66
ISO 4406:1999 (c)		23/21/17	20/18/15	17/16/14	20/17/13
Silicon	ppm	5	2	5	4
Sodium	ppm	<1	2	2	2
Potassium	ppm	<1	2	<1	0

WEAR METALS

Iron	ppm	11	9	9	17
Copper	ppm	2	2	3	5
Lead	ppm	<1	2	<1	2
Tin	ppm	<1	<1	0	<1
Aluminum	ppm	1	2	3	1
Chromium	ppm	<1	<1	<1	2
Molybdenum	ppm	<1	<1	1	1
Nickel	ppm	0	<1	<1	0
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	0	<1	<1	0
Vanadium	ppm	<1	0	1	0

ADDITIVES

Calcium	ppm	86	78	61	85
Magnesium	ppm	3	4	0	5
Zinc	ppm	451	470	433	435
Phosphorus	ppm	350	343	338	394
Barium	ppm	0	0	0	0
Boron	ppm	2	0	0	3

Diagnosis

We advise that you check all areas where contaminants can enter the system. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. Resample in 30-45 days to monitor this situation. All component wear rates are normal. There is a high amount of particulates (2 to 100 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.

Depot: RIPTAM
Unique No: 10900654
Signed: Wes Davis
Report Date: 29 Feb 2024

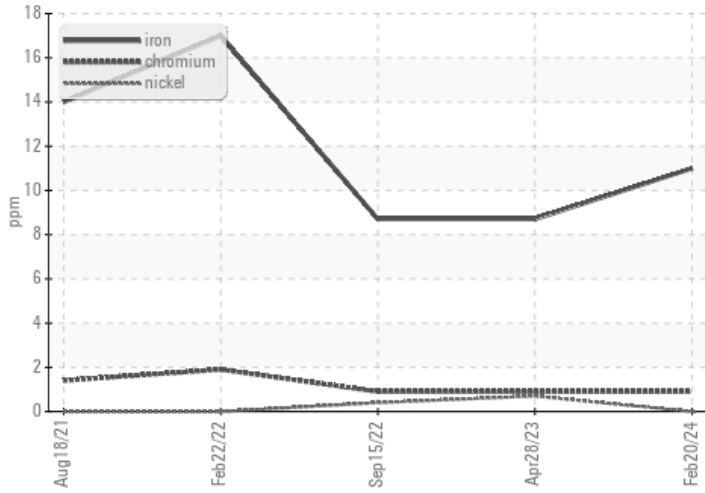


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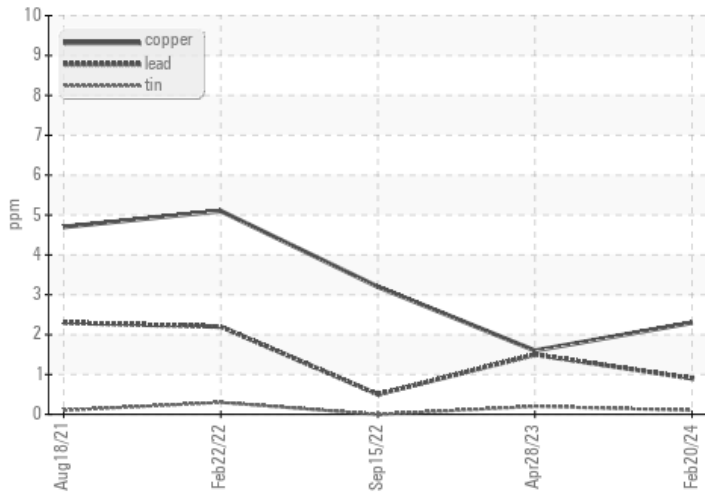


VOLVO GRAPHS

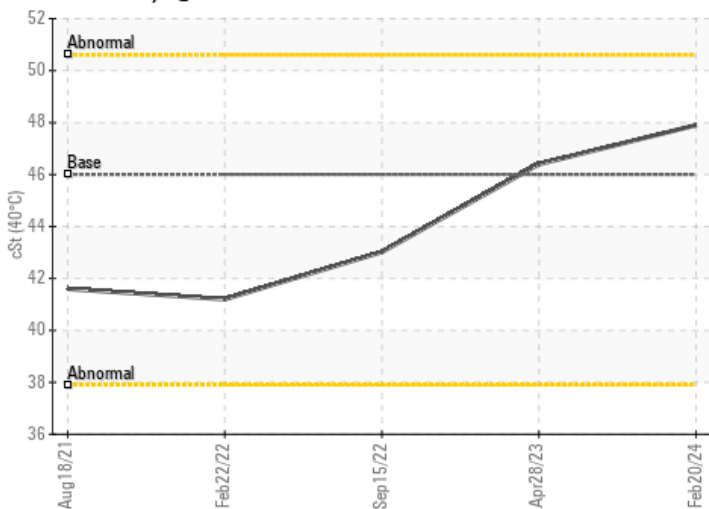
Ferrous Alloys



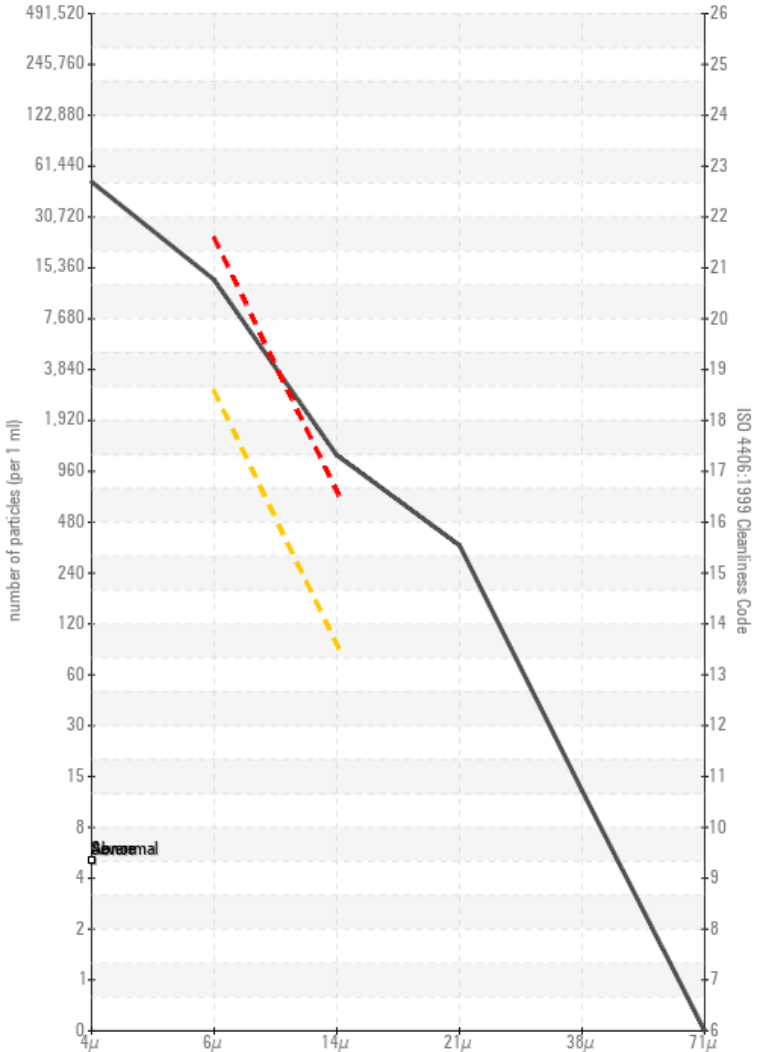
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



Acid Number

