



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 631123 - HYDRAULIC SYSTEM



**Sample No:** VCP438536  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP438536	VCP431769	VCP410372	VCP367280
Sample Date	10 Jul 2024	06 Oct 2023	11 Apr 2023	09 Sep 2022
Machine Hours	9296	8299	7290	6136
Oil Hours	0	0	3290	500
Oil Changed	Not Changd	N/A	Not Changd	Not Changd
Sample Status	ABNORMAL	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	55.0	55.0	49.26	44.9
Acid Number (AN)	mg KOH/g	0.42	0.897	0.48	0.37

### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Particles >4µm		979	45386	13334	3114
Particles >6µm		141	14021	3807	449
Particles >14µm		9	974	345	14
ISO 4406:1999 (c)		17/14/10	23/21/17	21/19/16	19/16/11
Silicon	ppm	35	44	1	2
Sodium	ppm	1	2	0	1
Potassium	ppm	2	<1	<1	0

**Diagnosis**  
 No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Elemental level of silicon (Si) above normal. The amount and size of particulates present in the system are acceptable. Confirm oil type. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

### WEAR METALS

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

### ADDITIVES

Calcium	ppm	212	213	122	58
Magnesium	ppm	24	25	13	2
Zinc	ppm	452	418	429	393
Phosphorus	ppm	366	340	337	328
Barium	ppm	0	0	0	0
Boron	ppm	8	6	<1	0

**Depot:** RIPTAM  
**Unique No:** 11124685  
**Signed:** Don Baldrige  
**Report Date:** 16 Jul 2024

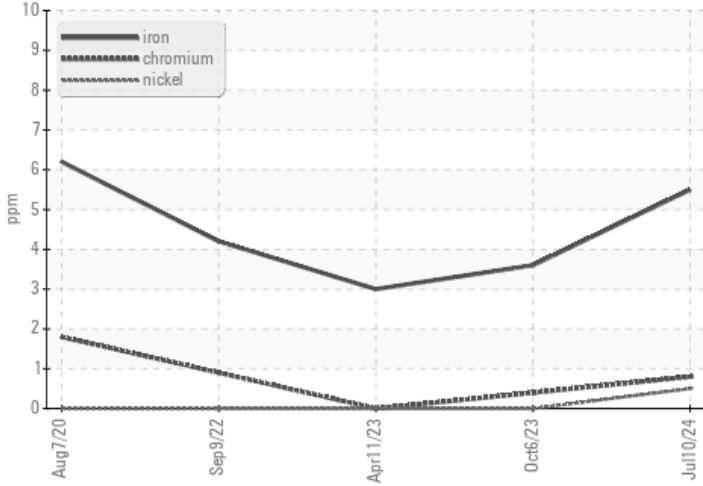


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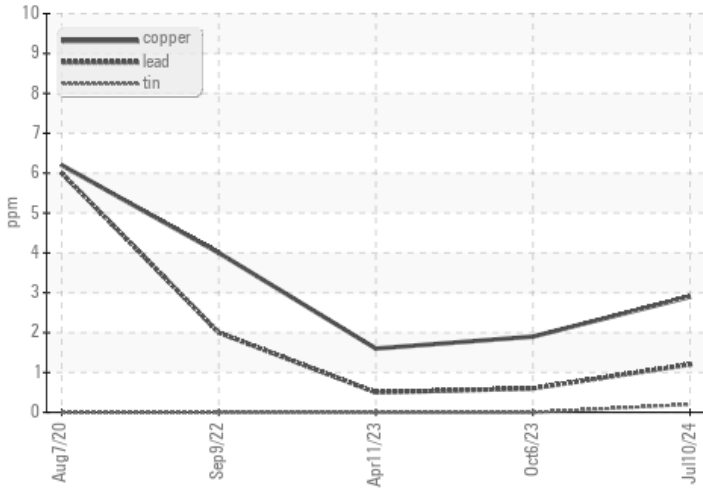


## GRAPHS

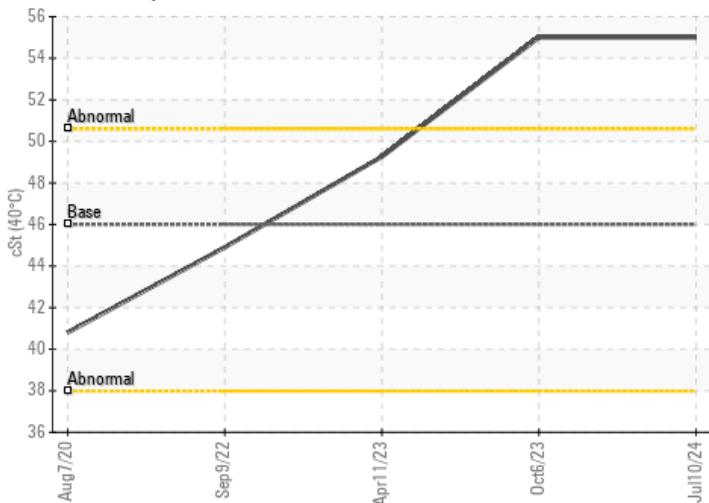
### Ferrous Alloys



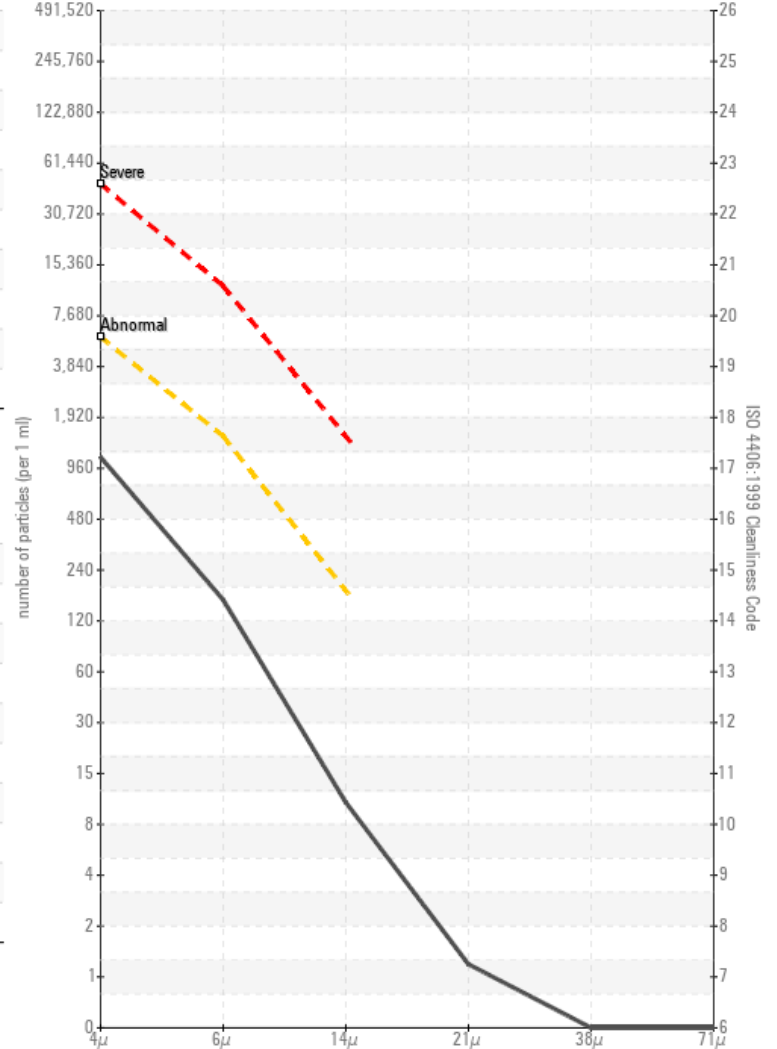
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

