



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 631239 - HYDRAULIC SYSTEM



**Sample No:** VCP415941  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP415941</b>	VCP390712	VCP343075	VCP320511
Sample Date	<b>22 Jun 2023</b>	25 Oct 2022	18 Nov 2021	07 Oct 2021
Machine Hours	<b>9267</b>	8302	7089	6658
Oil Hours	<b>0</b>	4000	1500	1500
Oil Changed	<b>Not Chngd</b>	Changed	Not Chngd	Changed
Sample Status	<b>SEVERE</b>	NORMAL	ABNORMAL	ABNORMAL

### RIPA AND ASSOCIATES

10149 FISHER AVENUE  
 TAMPA, FL  
 US 33619  
 Contact: ROBERT TURNER  
 rturner@ripatampa.com  
 T:  
 F:

### OIL CONDITION

Visc @ 40°C	cSt	<b>45.4</b>	44.0	44.1	42.8
Acid Number (AN)	mg KOH/g	<b>0.35</b>	0.33	0.435	0.345

### CONTAMINATION

Particles >4µm		<b>21423</b>	1271	21710	---
Particles >6µm		<b>7315</b>	73	6516	---
Particles >14µm		<b>916</b>	9	723	---
ISO 4406:1999 (c)		<b>22/20/17</b>	17/13/10	22/20/17	---
Silicon	ppm	<b>2</b>	2	3	4
Sodium	ppm	<b>2</b>	<1	1	2
Potassium	ppm	<b>0</b>	0	<1	<1

### WEAR METALS

Iron	ppm	<b>3</b>	4	2	8
Copper	ppm	<b>1</b>	1	4	4
Lead	ppm	<b>0</b>	<1	2	2
Tin	ppm	<b>0</b>	0	0	<1
Aluminum	ppm	<b>&lt;1</b>	<1	<1	1
Chromium	ppm	<b>0</b>	<1	<1	<1
Molybdenum	ppm	<b>18</b>	<1	<1	<1
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	<1	0
Manganese	ppm	<b>0</b>	0	0	0
Vanadium	ppm	<b>&lt;1</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>98</b>	36	101	61
Magnesium	ppm	<b>16</b>	0	2	4
Zinc	ppm	<b>444</b>	384	429	422
Phosphorus	ppm	<b>364</b>	319	316	345
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>3</b>	0	0	4

### 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:** 10551883  
**Signed:** Wes Davis  
**Report Date:** 13 Jul 2023

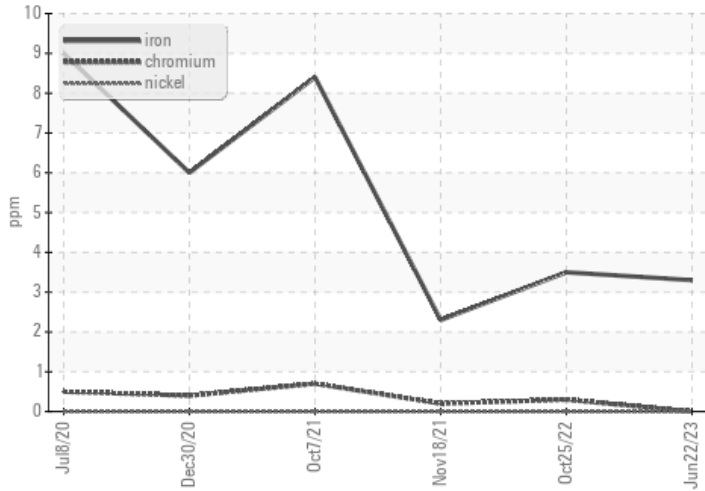


# CONSTRUCTION EQUIPMENT

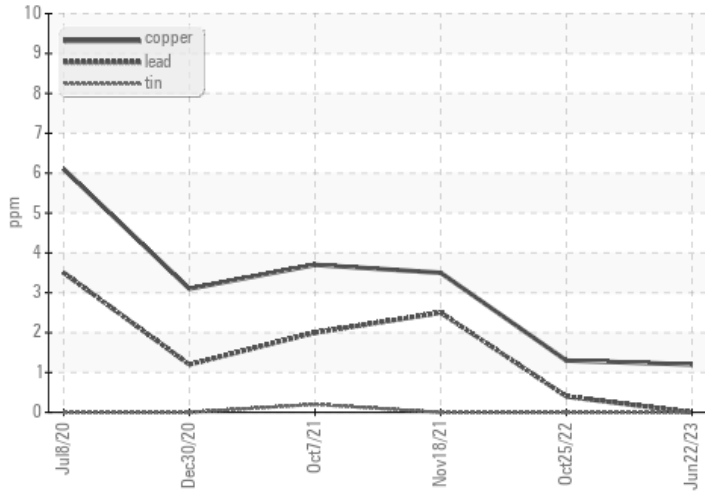


## GRAPHS

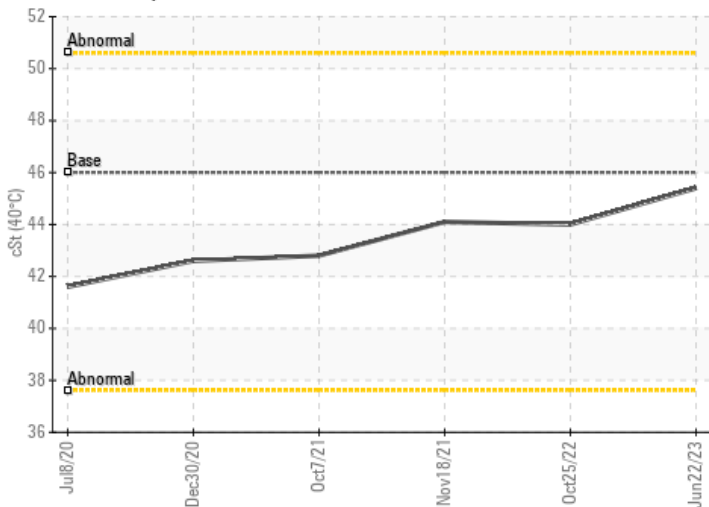
### Ferrous Alloys



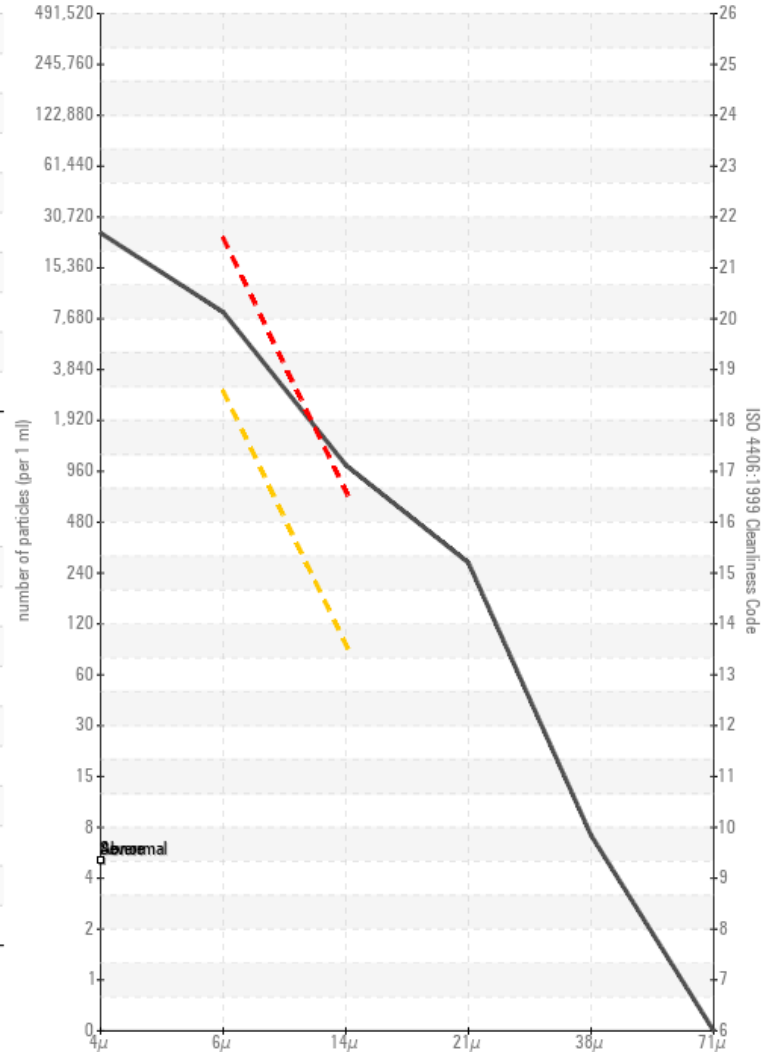
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

