



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 631294 - HYDRAULIC SYSTEM



**Sample No:** VCP451157  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP451157</b>	VCP425839	VCP386206	VCP363446
Sample Date	<b>01 May 2024</b>	30 May 2023	22 Nov 2022	03 May 2022
Machine Hours	<b>11432</b>	10414	9308	8089
Oil Hours	<b>0</b>	2000	500	4000
Oil Changed	<b>Not Chngd</b>	Not Chngd	Not Chngd	Changed
Sample Status	<b>ABNORMAL</b>	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	<b>44.3</b>	57.0	55.82	53.6
Acid Number (AN)	mg KOH/g	<b>0.34</b>	0.35	0.31	0.36

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Particles >4µm		<b>7626</b>	36773	25681	2894
Particles >6µm		<b>2030</b>	6998	7629	698
Particles >14µm		<b>213</b>	179	999	70
ISO 4406:1999 (c)		<b>20/18/15</b>	22/20/15	22/20/17	19/17/13
Silicon	ppm	<b>4</b>	2	3	2
Sodium	ppm	<b>1</b>	1	2	1
Potassium	ppm	<b>2</b>	0	<1	0

**Diagnosis**  
 We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate 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.

### WEAR METALS

Iron	ppm	<b>9</b>	4	3	6
Copper	ppm	<b>5</b>	1	1	2
Lead	ppm	<b>2</b>	0	<1	<1
Tin	ppm	<b>&lt;1</b>	0	0	0
Aluminum	ppm	<b>2</b>	0	<1	<1
Chromium	ppm	<b>&lt;1</b>	0	<1	<1
Molybdenum	ppm	<b>1</b>	2	3	<1
Nickel	ppm	<b>&lt;1</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	0	0	0
Silver	ppm	<b>&lt;1</b>	0	0	1
Manganese	ppm	<b>0</b>	0	0	0
Vanadium	ppm	<b>&lt;1</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>218</b>	98	110	84
Magnesium	ppm	<b>6</b>	5	8	5
Zinc	ppm	<b>484</b>	422	420	444
Phosphorus	ppm	<b>389</b>	349	330	372
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>1</b>	<1	3	2

**Depot:** RIPTAM  
**Unique No:** 11031428  
**Signed:** Wes Davis  
**Report Date:** 16 May 2024

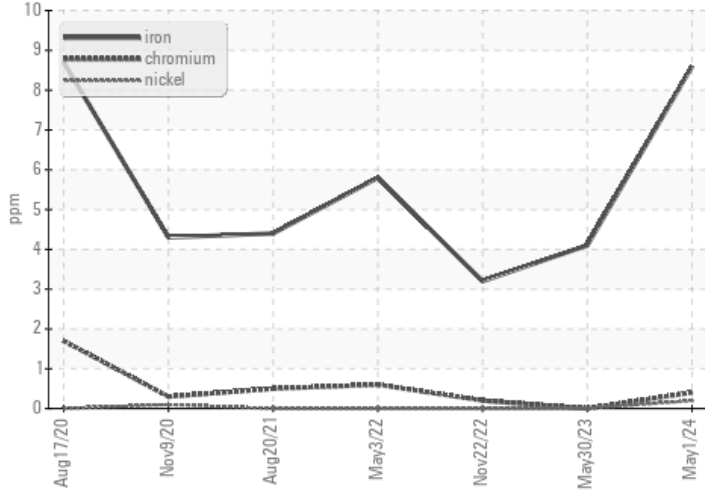


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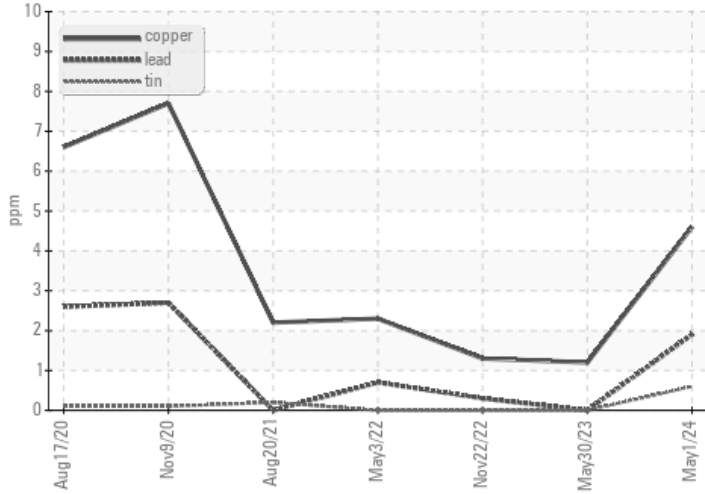


## GRAPHS

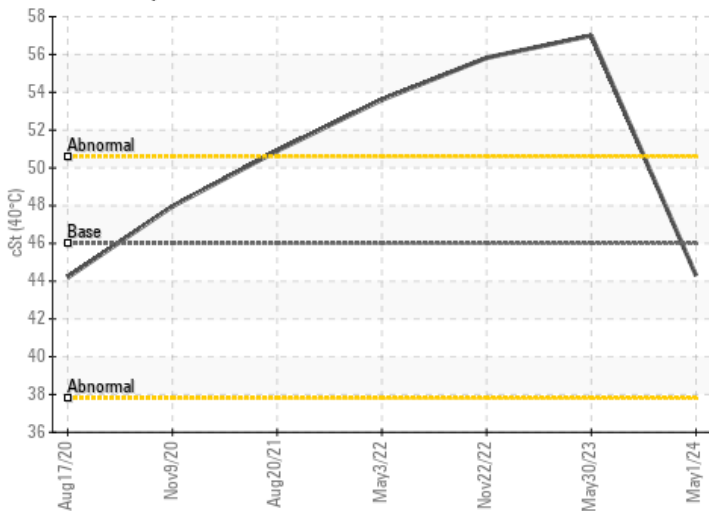
### Ferrous Alloys



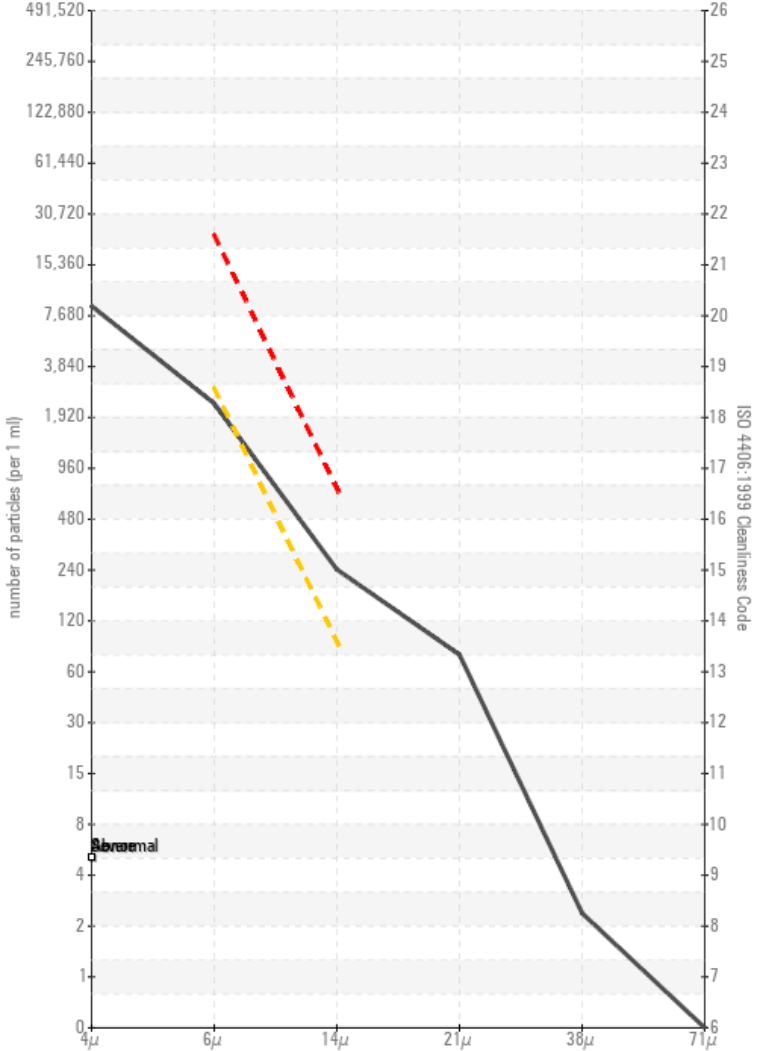
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

