



# CONSTRUCTION EQUIPMENT

## 578187 VOLVO L220H 3 197 - HYDRAULIC SYSTEM



**Sample No:** VCP430328  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** 578187



### SAMPLE INFORMATION

Sample Number	<b>VCP430328</b>	VCP405634	VCP359859	VCP336127
Sample Date	<b>20 Jun 2024</b>	28 Mar 2023	20 Jun 2022	03 Sep 2021
Machine Hours	<b>9053</b>	6366	4933	3905
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Not Chngd</b>	Not Chngd	Not Chngd	Not Chngd
Sample Status	<b>ABNORMAL</b>	ATTENTION	ABNORMAL	ABNORMAL

**CALLANAN**  
 RT 32 677 FLATBUSH RD  
 EAST KINGSTON, NY  
 US 12401  
 Contact:

### OIL CONDITION

Visc @ 40°C	cSt	<b>33.1</b>	38.8	37.0	37.4
Acid Number (AN)	mg KOH/g	<b>0.42</b>	0.46	0.41	0.384

T:  
F:

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Particles >4µm		<b>27289</b>	11796	18878	77861
Particles >6µm		<b>▲ 5788</b>	● 2764	▲ 3473	▲ 16231
Particles >14µm		<b>▲ 305</b>	● 152	▲ 214	▲ 1578
ISO 4406:1999 (c)		<b>22/20/15</b>	21/19/14	21/19/15	23/21/18
Silicon	ppm	<b>10</b>	8	4	3
Sodium	ppm	<b>4</b>	3	0	<1
Potassium	ppm	<b>4</b>	2	2	<1

### Diagnosis

No corrective action is recommended at this time. The filter change at the time of sampling has been noted. 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 32 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

### WEAR METALS

Iron	ppm	<b>14</b>	11	9	8
Copper	ppm	<b>4</b>	4	4	4
Lead	ppm	<b>&lt;1</b>	2	2	1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>4</b>	3	2	0
Chromium	ppm	<b>2</b>	1	<1	<1
Molybdenum	ppm	<b>0</b>	<1	<1	<1
Nickel	ppm	<b>&lt;1</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	0	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>177</b>	143	126	140
Magnesium	ppm	<b>10</b>	4	3	6
Zinc	ppm	<b>473</b>	468	429	495
Phosphorus	ppm	<b>379</b>	386	324	366
Barium	ppm	<b>0</b>	<1	0	0
Boron	ppm	<b>2</b>	1	4	4

**Depot:** CALEAS  
**Unique No:** 11096295  
**Signed:** Don Baldrige  
**Report Date:** 25 Jun 2024

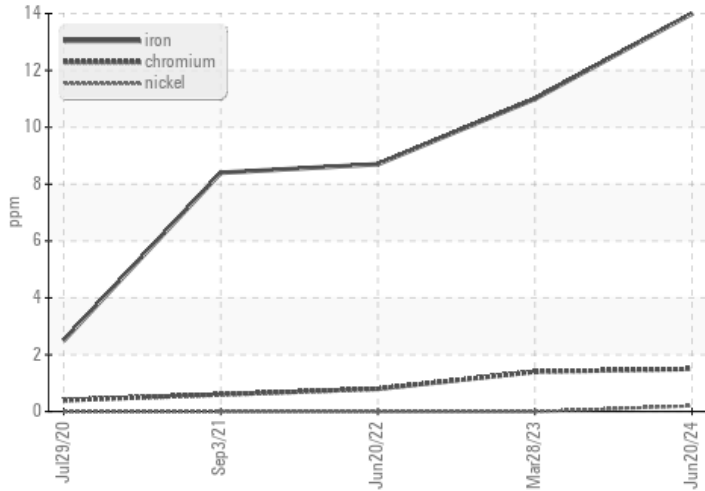


# CONSTRUCTION EQUIPMENT

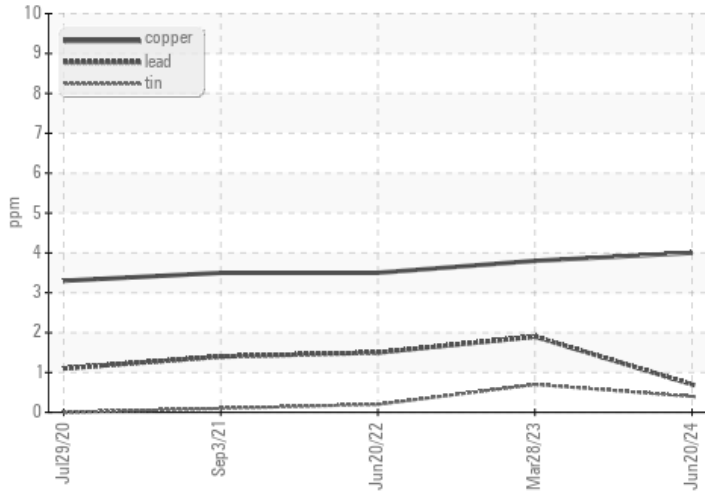


## VOLVO GRAPHS

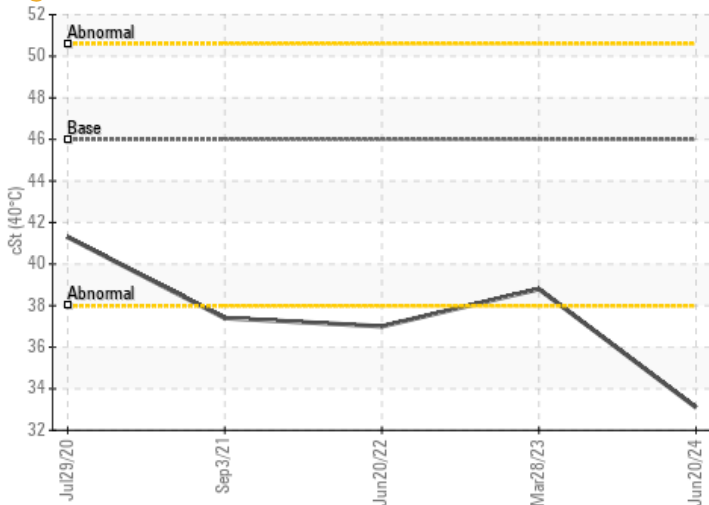
### Ferrous Alloys



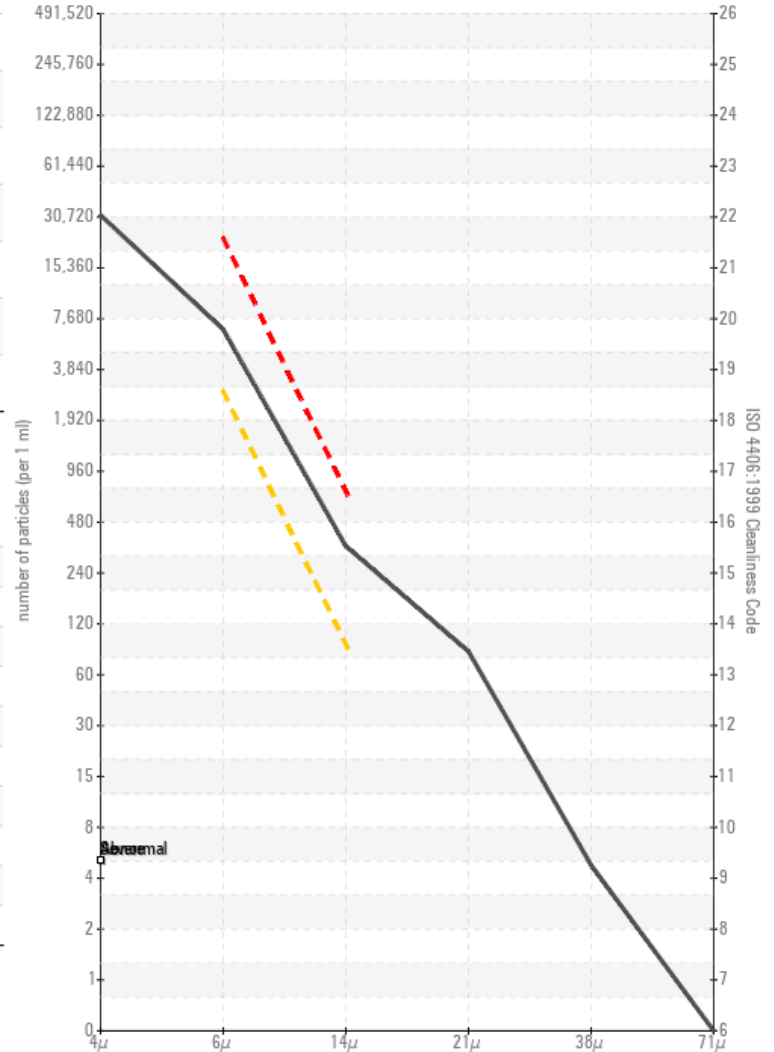
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

