



# CONSTRUCTION EQUIPMENT

## A12262 VOLVO L110H 632316 - HYDRAULIC SYSTEM



**Sample No:** VCP446196  
**Oil Type:** MOBIL HYDRAULIC OIL AW 46  
**Job No:** A12262



### SAMPLE INFORMATION

Sample Number	<b>VCP446196</b>	VCP413243	VCP406991	VCP386042
Sample Date	<b>15 Mar 2024</b>	04 Oct 2023	05 Apr 2023	02 Nov 2022
Machine Hours	<b>4670</b>	3650	2645	1270
Oil Hours	<b>4000</b>	3500	2645	1270
Oil Changed	<b>Changed</b>	N/A	Not Changd	Not Changd
Sample Status	<b>ABNORMAL</b>	NORMAL	ABNORMAL	NORMAL

**HMR ASSOCIATES**  
 PO BOX 485  
 TOUGHKENAMON, PA  
 US 19374  
 Contact: SERVICE MANAGER

### OIL CONDITION

Visc @ 40°C	cSt	<b>44.2</b>	41.2	41.8	41.9
Acid Number (AN)	mg KOH/g	<b>0.34</b>	0.44	0.42	0.37

T:  
 F: (610)268-2225

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Particles >4µm		<b>9159</b>	6957	25920	8529
Particles >6µm		<b>1663</b>	143	3681	603
Particles >14µm		<b>190</b>	6	182	30
ISO 4406:1999 (c)		<b>20/18/15</b>	20/14/10	22/19/15	20/16/12
Silicon	ppm	<b>2</b>	3	3	2
Sodium	ppm	<b>2</b>	3	0	0
Potassium	ppm	<b>4</b>	7	5	3

**Diagnosis**  
 The oil change at the time of sampling has been noted. 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>5</b>	11	10	7
Copper	ppm	<b>2</b>	4	4	3
Lead	ppm	<b>0</b>	0	<1	<1
Tin	ppm	<b>&lt;1</b>	0	0	0
Aluminum	ppm	<b>0</b>	0	0	0
Chromium	ppm	<b>1</b>	2	3	1
Molybdenum	ppm	<b>2</b>	<1	2	1
Nickel	ppm	<b>0</b>	0	<1	0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	0	<1	0
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>105</b>	105	101	88
Magnesium	ppm	<b>19</b>	8	8	7
Zinc	ppm	<b>436</b>	446	452	467
Phosphorus	ppm	<b>333</b>	355	332	336
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>2</b>	0	0	<1

**Depot:** HMRTOU  
**Unique No:** 10937723  
**Signed:** Wes Davis  
**Report Date:** 24 Mar 2024

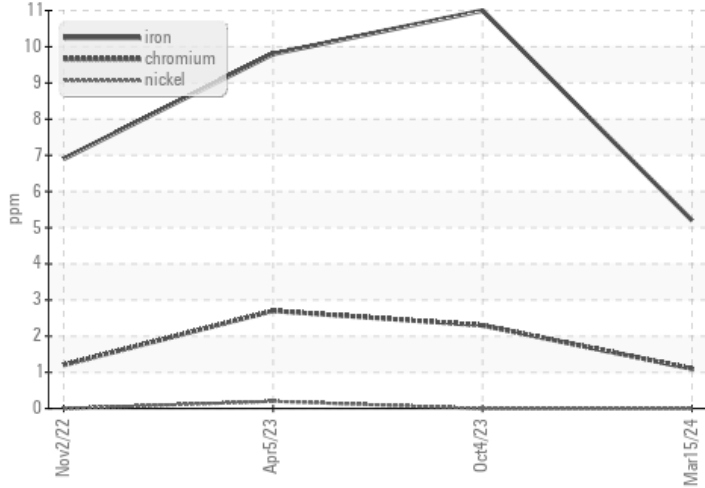


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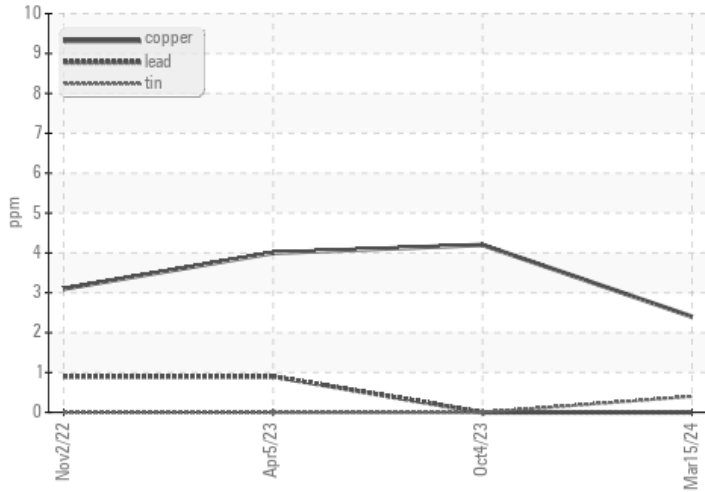


## GRAPHS

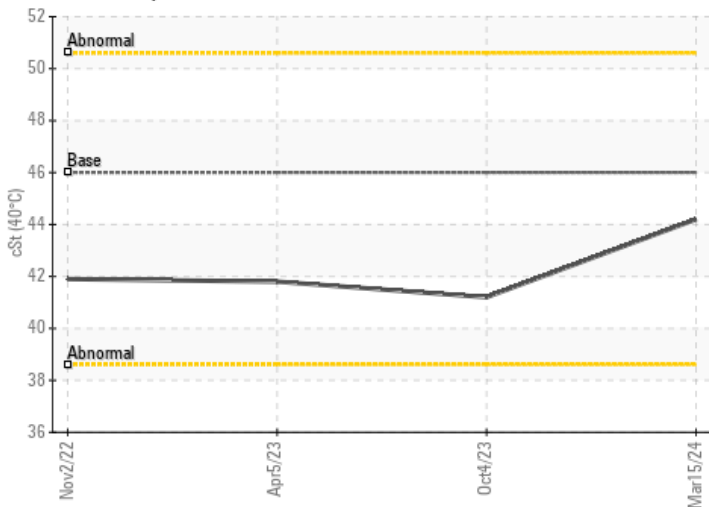
### Ferrous Alloys



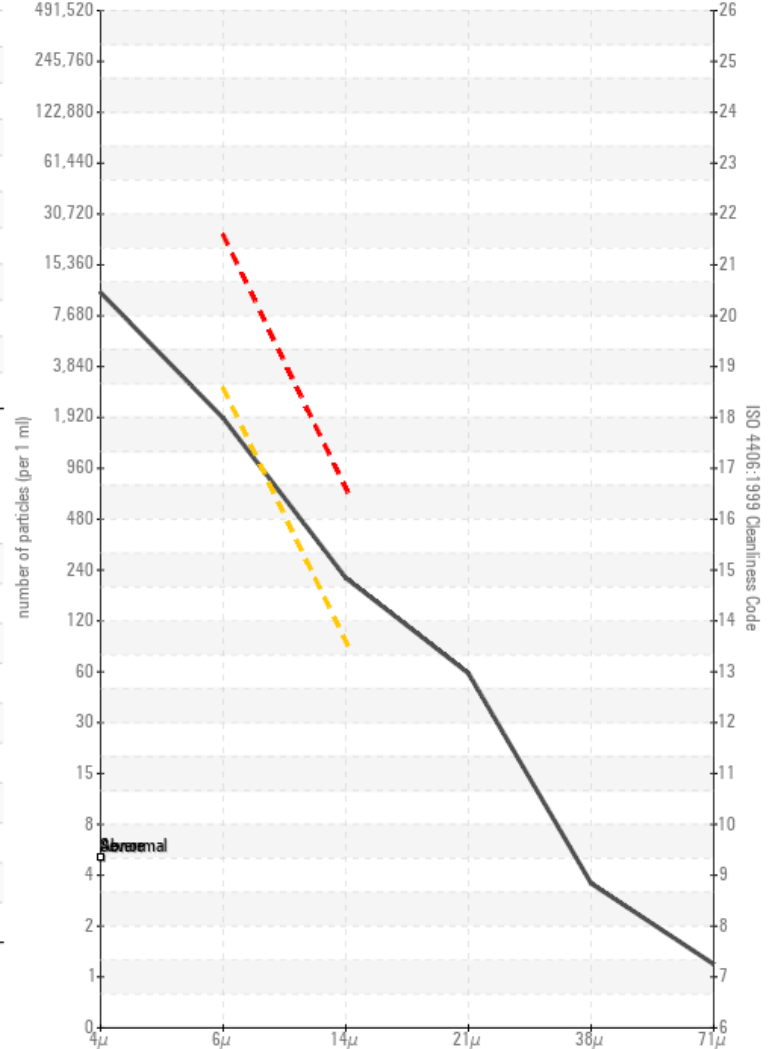
### Non-ferrous Metals



### Viscosity @ 40°C



### Particle Count



### Acid Number

