



# CONSTRUCTION EQUIPMENT

## VOLVO A40G 353267 - DIESEL ENGINE



**Sample No:** VCP447745  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP447745	VCP445620	---	---
Sample Date	04 Jun 2024	25 Apr 2024	---	---
Machine Hours	2719	2215	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ATTENTION	ABNORMAL	---	---

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### OIL CONDITION

Visc @ 100°C	cSt	● 11.9	● 12.2	---	---
Base Number (BN)	mg KOH/g	■ 9.5	■ 4.7	---	---
Oxidation (PA)	%	78	92	---	---

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	■ 0.3	■ 0.6	---	---
Nitration (PA)	%	62	94	---	---
Sulfation (PA)	%	61	71	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	■ 2.0	---	---
Silicon	ppm	■ 4	■ 12	---	---
Sodium	ppm	■ <1	■ 2	---	---
Potassium	ppm	■ 1	■ 2	---	---



### WEAR METALS

Iron	ppm	■ 7	■ 26	---	---
Copper	ppm	■ 9	■ 50	---	---
Lead	ppm	■ <1	■ <1	---	---
Tin	ppm	■ 1	■ 2	---	---
Aluminum	ppm	■ 2	■ 3	---	---
Chromium	ppm	■ <1	■ <1	---	---
Molybdenum	ppm	■ 44	■ 43	---	---
Nickel	ppm	■ 3	▲ 6	---	---
Titanium	ppm	<1	<1	---	---
Silver	ppm	■ 0	■ 0	---	---
Manganese	ppm	■ <1	■ 1	---	---
Vanadium	ppm	0	0	---	---



### ADDITIVES

Calcium	ppm	■ 1575	■ 1660	---	---
Magnesium	ppm	■ 469	■ 447	---	---
Zinc	ppm	■ 1015	■ 1045	---	---
Phosphorus	ppm	■ 825	■ 824	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 34	■ 5	---	---

**Depot:** VOLVO0090  
**Unique No:** 11073568  
**Signed:** Sean Felton  
**Report Date:** 13 Jun 2024

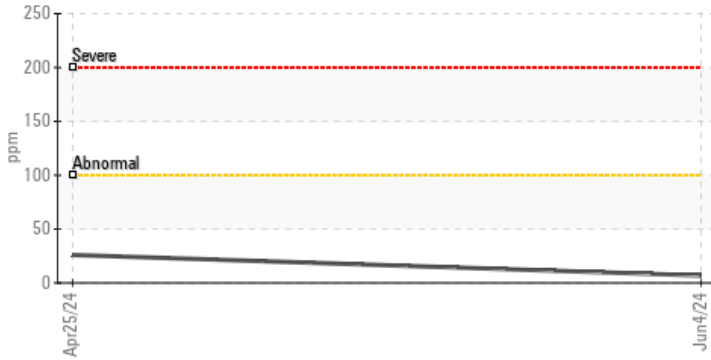


# CONSTRUCTION EQUIPMENT



## GRAPHS

### Iron (ppm)



### Lead (ppm)



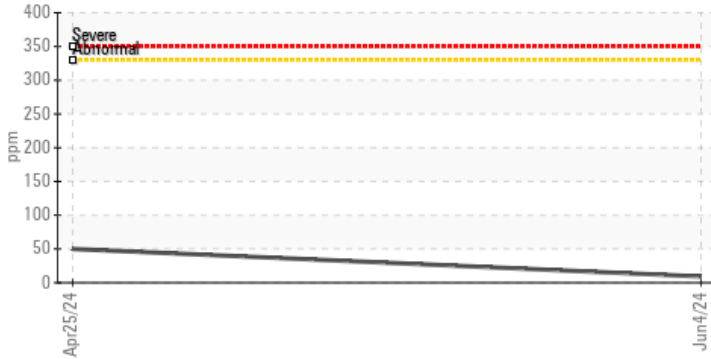
### Aluminum (ppm)



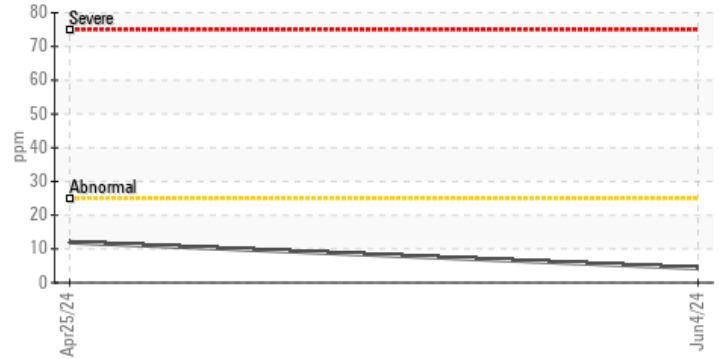
### Chromium (ppm)



### Copper (ppm)



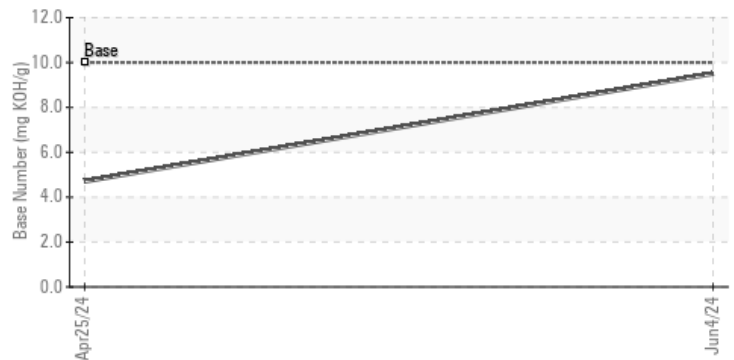
### Silicon (ppm)



### ● Viscosity @ 100°C



### Base Number





# CONSTRUCTION EQUIPMENT

## VOLVO A40G 353267 - TRANSMISSION (AUTO)



**Sample No:** VCP445625  
**Oil Type:** VOLVO AUTOMATIC TRANSMISSION FLUID AT102  
**Job No:**



**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
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### SAMPLE INFORMATION

Sample Number	VCP445625	---	---	---
Sample Date	25 Apr 2024	---	---	---
Machine Hours	2215	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---



### OIL CONDITION

Visc @ 40°C	cSt	█ 28.3	---	---	---
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### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 5	---	---	---
Sodium	ppm	█ 3	---	---	---
Potassium	ppm	█ <1	---	---	---



### WEAR METALS

Iron	ppm	█ 20	---	---	---
Copper	ppm	█ 8	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 8	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 1	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	█ 89	---	---	---
Magnesium	ppm	█ 0	---	---	---
Zinc	ppm	█ 0	---	---	---
Phosphorus	ppm	█ 197	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 92	---	---	---

### Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the fluid. The condition of the fluid is acceptable for the time in service.

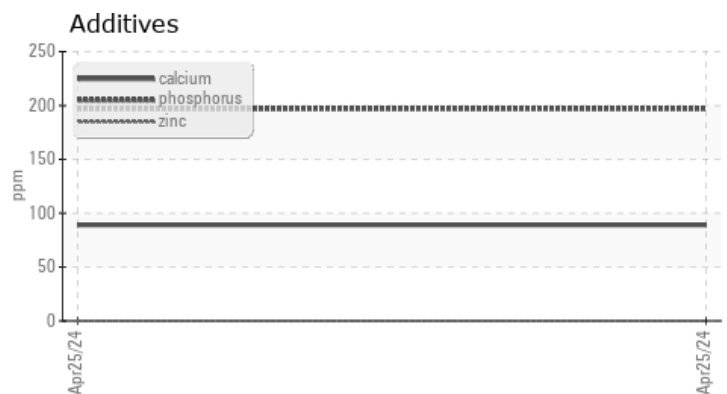
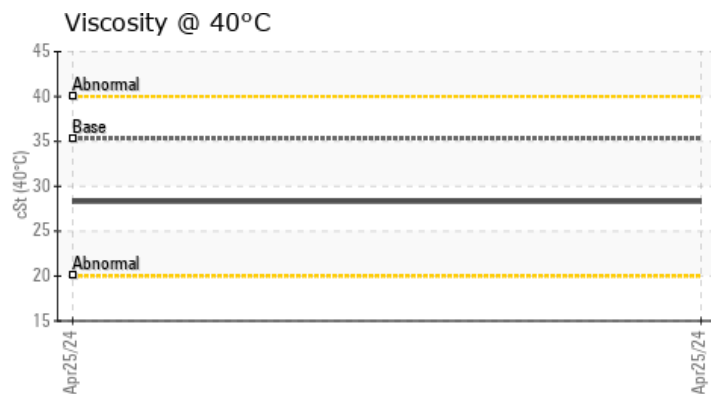
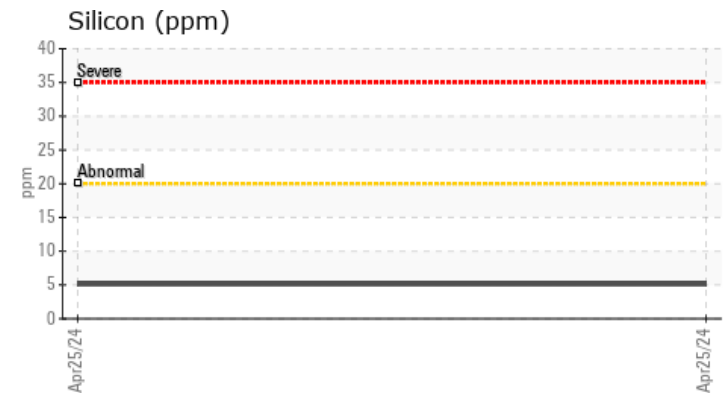
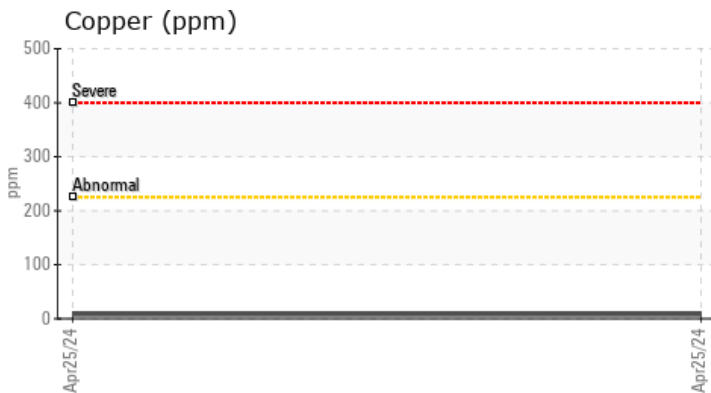
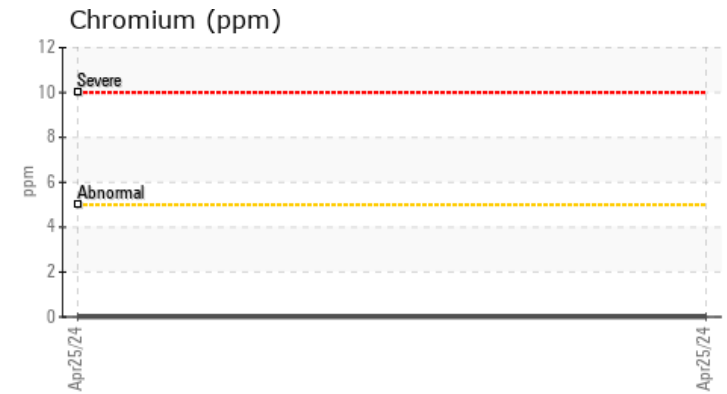
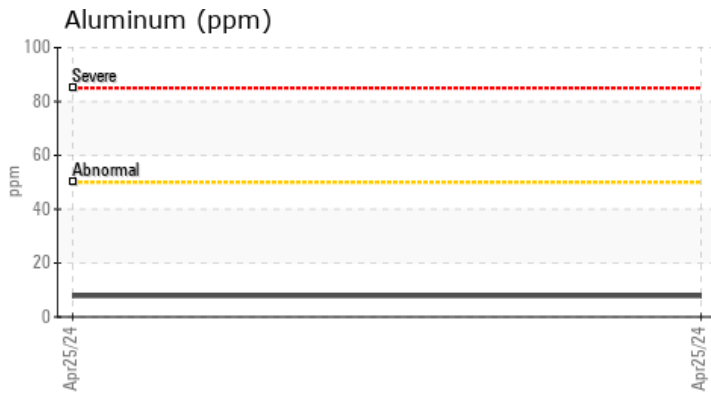
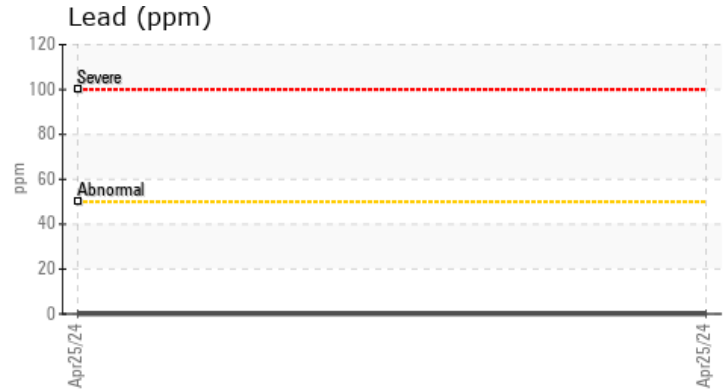
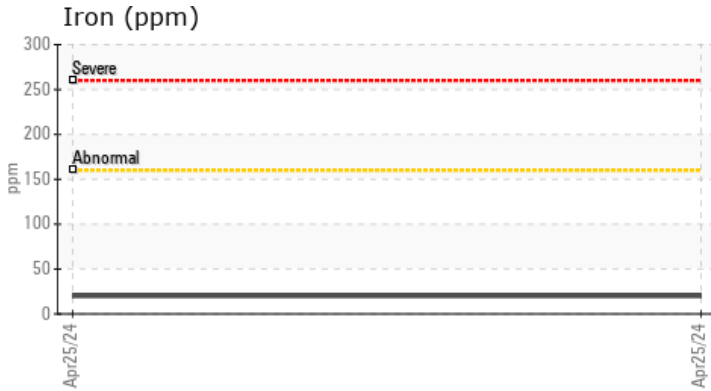
**Depot:** VOLVO0090  
**Unique No:** 11005697  
**Signed:** Jonathan Hester  
**Report Date:** 03 May 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## VOLVO A40G 353267 - WET DISC BRAKE



**Sample No:** VCP437305  
**Oil Type:** VOLVO WET BRAKE TRANSAXLE OIL  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP437305	---	---	---
Sample Date	25 Apr 2024	---	---	---
Machine Hours	2215	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	ABNORMAL	---	---	---

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### OIL CONDITION

Visc @ 40°C	cSt	■ 40.9	---	---	---
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### CONTAMINATION

Water	%	■ NEG	---	---	---
Silicon	ppm	■ 17	---	---	---
Sodium	ppm	■ 12	---	---	---
Potassium	ppm	■ 0	---	---	---



### WEAR METALS

Iron	ppm	▲ 25	---	---	---
Copper	ppm	▲ 121	---	---	---
Lead	ppm	■ 1	---	---	---
Tin	ppm	■ 0	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 0	---	---	---
Nickel	ppm	■ 5	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ <1	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	■ 3595	---	---	---
Magnesium	ppm	■ 10	---	---	---
Zinc	ppm	■ 1490	---	---	---
Phosphorus	ppm	■ 1288	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 101	---	---	---

**Diagnosis**  
 No corrective action is recommended at this time. Resample at the next service interval to monitor. The iron level is abnormal. The copper level is abnormal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** VOLVO0090  
**Unique No:** 11005558  
**Signed:** Jonathan Hester  
**Report Date:** 03 May 2024

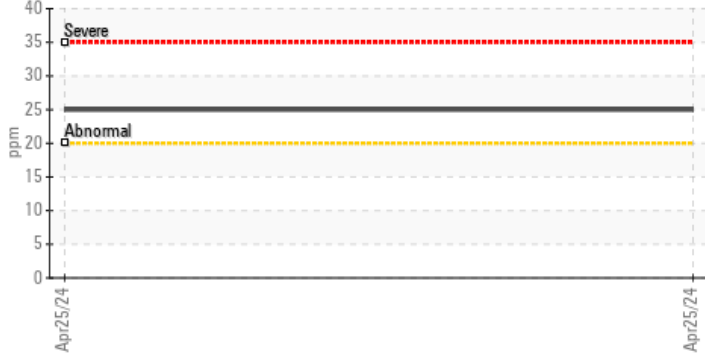


# CONSTRUCTION EQUIPMENT

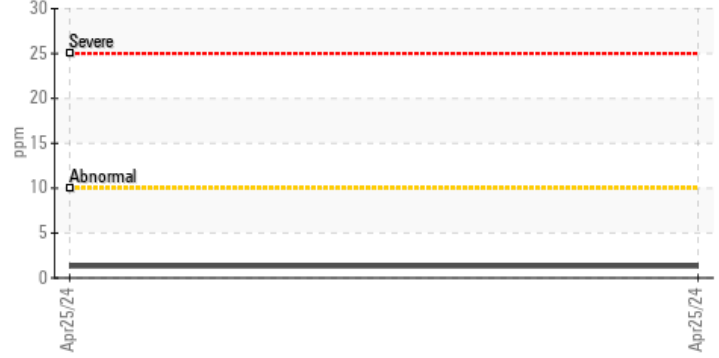


## VOLVO GRAPHS

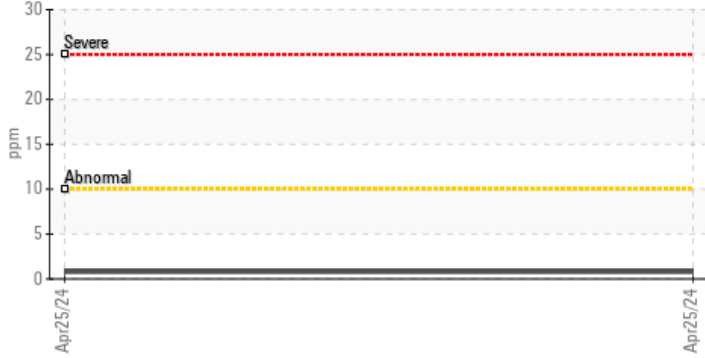
### ▲ Iron (ppm)



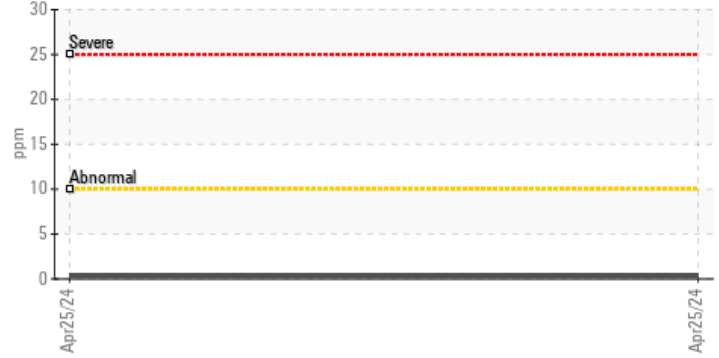
### Lead (ppm)



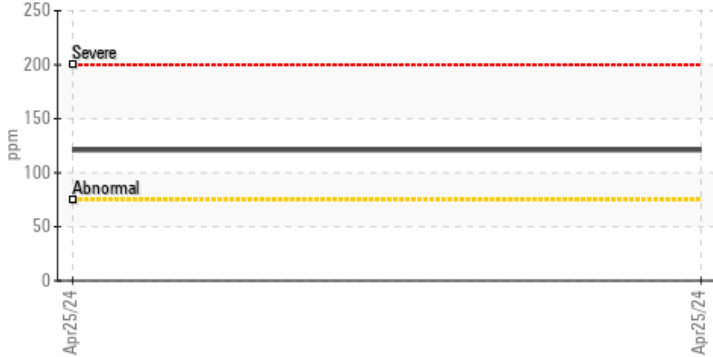
### Aluminum (ppm)



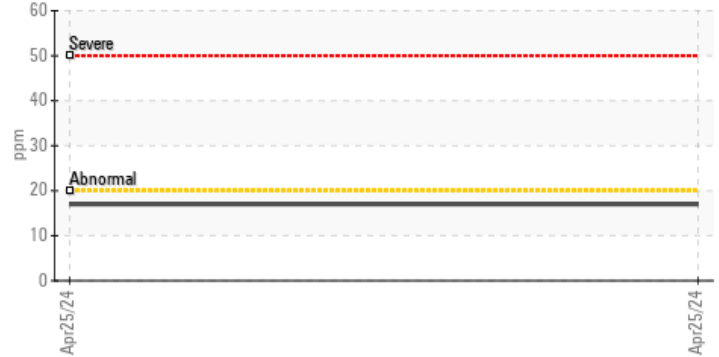
### Chromium (ppm)



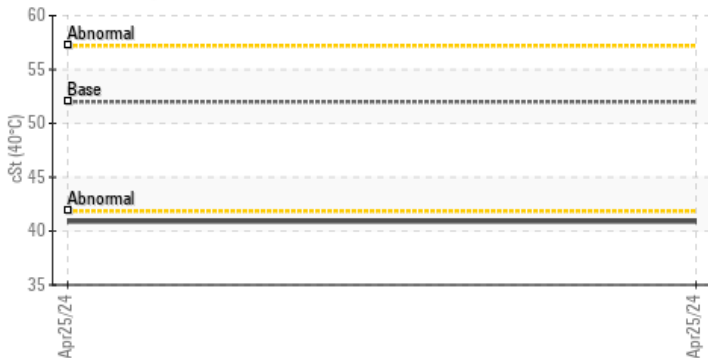
### ▲ Copper (ppm)



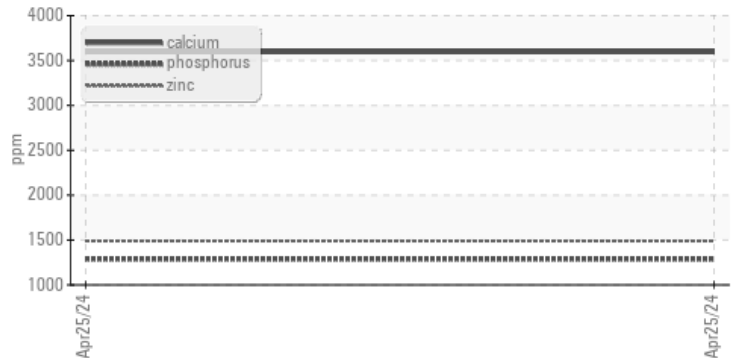
### Silicon (ppm)



### Viscosity @ 40°C



### Additives





# CONSTRUCTION EQUIPMENT

## SWA553574-10 VOLVO A40G 353267 - HYDRAULIC SYSTEM



**Sample No:** VCP436848  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** SWA553574-10



### SAMPLE INFORMATION

Sample Number	<b>VCP436848</b>	VCP445605	---	---
Sample Date	<b>04 May 2024</b>	25 Apr 2024	---	---
Machine Hours	<b>2599</b>	2215	---	---
Oil Hours	<b>0</b>	0	---	---
Oil Changed	<b>N/A</b>	Not Changd	---	---
Sample Status	<b>NORMAL</b>	ABNORMAL	---	---

**ALTA EQUIPMENT COMPANY**  
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### OIL CONDITION

Visc @ 40°C	cSt	<b>43.1</b>	45.3	---	---
Acid Number (AN)	mg KOH/g	<b>0.37</b>	0.43	---	---



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	---	---
Particles >4µm		<b>2195</b>	14541	---	---
Particles >6µm		<b>244</b>	3949	---	---
Particles >14µm		<b>23</b>	624	---	---
ISO 4406:1999 (c)		<b>18/15/12</b>	21/19/16	---	---
Silicon	ppm	<b>11</b>	4	---	---
Sodium	ppm	<b>0</b>	2	---	---
Potassium	ppm	<b>1</b>	2	---	---

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.



### WEAR METALS

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



### ADDITIVES

Calcium	ppm	<b>67</b>	115	---	---
Magnesium	ppm	<b>2</b>	6	---	---
Zinc	ppm	<b>432</b>	416	---	---
Phosphorus	ppm	<b>349</b>	326	---	---
Barium	ppm	<b>0</b>	0	---	---
Boron	ppm	<b>0</b>	0	---	---

**Depot:** VOLVO0090  
**Unique No:** 11017153  
**Signed:** Wes Davis  
**Report Date:** 08 May 2024

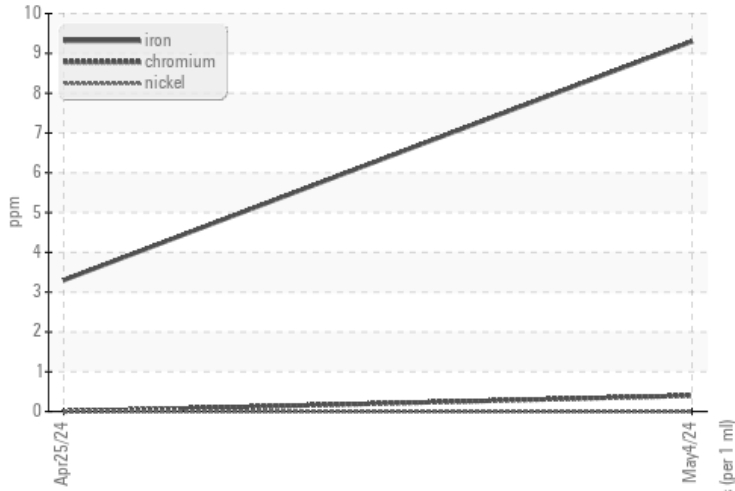


# CONSTRUCTION EQUIPMENT

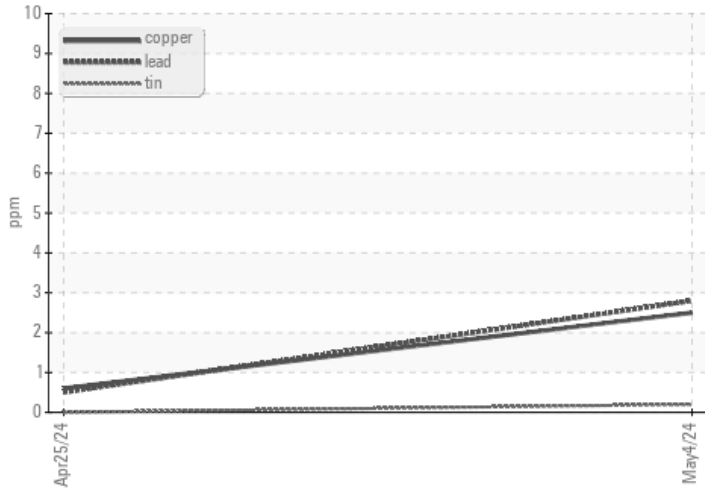


## GRAPHS

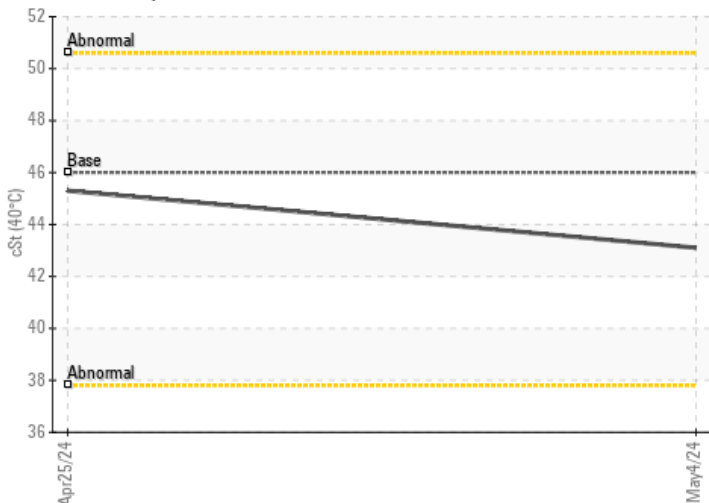
### Ferrous Alloys



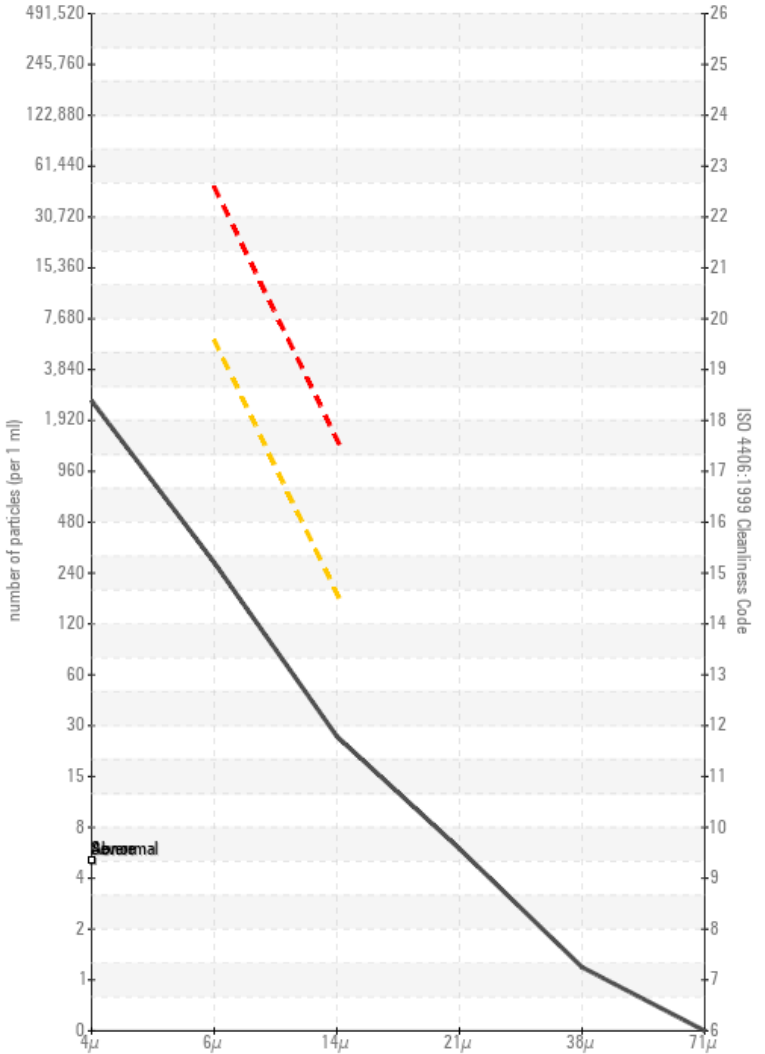
### Non-ferrous Metals



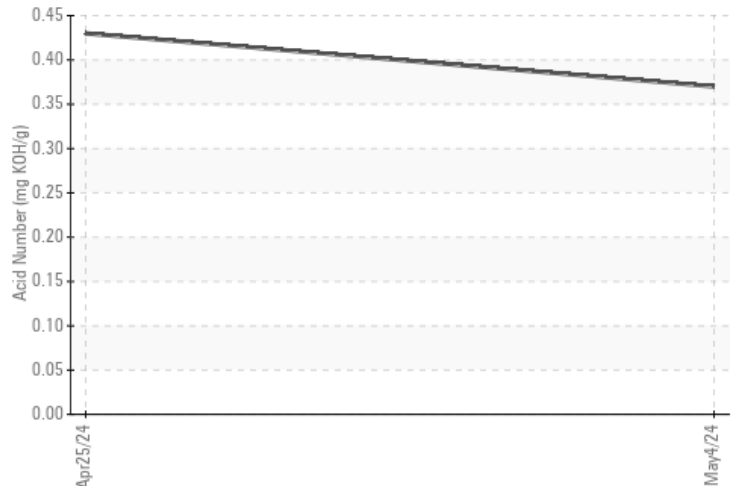
### Viscosity @ 40°C



### Particle Count



### Acid Number







# CONSTRUCTION EQUIPMENT

## VOLVO A40G 353267 - DROP BOX



**Sample No:** VCP445627  
**Oil Type:** VOLVO PREMIUM GEAR OIL 85W-140 GL-5  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP445627	---	---	---
Sample Date	25 Apr 2024	---	---	---
Machine Hours	2215	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

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### OIL CONDITION

Visc @ 40°C	cSt	● 48.1	---	---	---
-------------	-----	--------	-----	-----	-----



### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 40	---	---	---
Sodium	ppm	■ 8	---	---	---
Potassium	ppm	■ 3	---	---	---



### WEAR METALS

Iron	ppm	■ 296	---	---	---
Copper	ppm	■ 19	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ 0	---	---	---
Aluminum	ppm	■ 0	---	---	---
Chromium	ppm	■ 2	---	---	---
Molybdenum	ppm	■ 10	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 6	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	■ 99	---	---	---
Magnesium	ppm	■ 4	---	---	---
Zinc	ppm	■ 128	---	---	---
Phosphorus	ppm	2097	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 114	---	---	---

### Diagnosis

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Moderate concentration of visible dirt/debris present in the oil. The oil viscosity is lower than normal. Confirm oil type.

**Depot:** VOLVO0090  
**Unique No:** 11005555  
**Signed:** Jonathan Hester  
**Report Date:** 03 May 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS

