



# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752119 - DIESEL ENGINE



**Sample No:** VCP451444  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP451444	VCP441821	---	---
Sample Date	01 Jun 2024	30 Jan 2024	---	---
Machine Hours	1566	767	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	ATTENTION	---	---

**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
 FORT MYERS, FL  
 US 33905  
 Contact: TODD LARK  
 tlark@altaequipfl.com  
 T:  
 F: (239)481-3302



### OIL CONDITION

Visc @ 100°C	cSt	█ 12.5	● 11.1	---	---
Base Number (BN)	mg KOH/g	█ 7.8	█ 5.3	---	---
Oxidation (PA)	%	77	60	---	---

### 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.4	█ 0.4	---	---
Nitration (PA)	%	68	81	---	---
Sulfation (PA)	%	61	58	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	█ 0.4	---	---
Silicon	ppm	█ 9	█ 25	---	---
Sodium	ppm	█ 3	█ 3	---	---
Potassium	ppm	█ 2	█ 1	---	---



### WEAR METALS

Iron	ppm	█ 11	█ 20	---	---
Copper	ppm	█ 100	█ 264	---	---
Lead	ppm	█ <1	█ 3	---	---
Tin	ppm	█ 2	█ 5	---	---
Aluminum	ppm	█ 2	█ 2	---	---
Chromium	ppm	█ <1	█ <1	---	---
Molybdenum	ppm	█ 47	█ 84	---	---
Nickel	ppm	█ 2	█ 2	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ 1	█ 1	---	---
Vanadium	ppm	0	0	---	---



### ADDITIVES

Calcium	ppm	█ 1757	█ 2135	---	---
Magnesium	ppm	█ 444	88	---	---
Zinc	ppm	█ 1112	█ 1204	---	---
Phosphorus	ppm	█ 968	█ 1022	---	---
Barium	ppm	█ <1	█ 0	---	---
Boron	ppm	█ 24	█ 16	---	---

**Depot:** VOLVO0090  
**Unique No:** 11061913  
**Signed:** Wes Davis  
**Report Date:** 05 Jun 2024

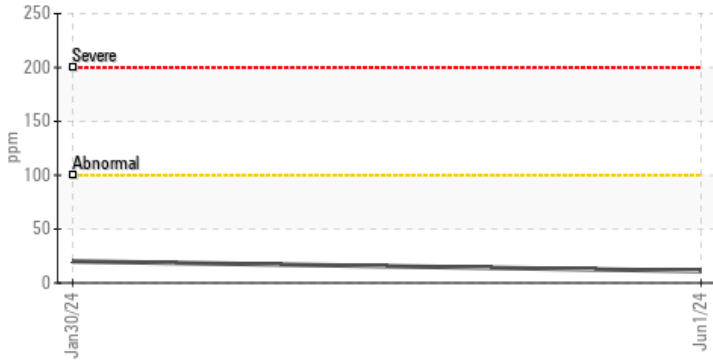


# CONSTRUCTION EQUIPMENT

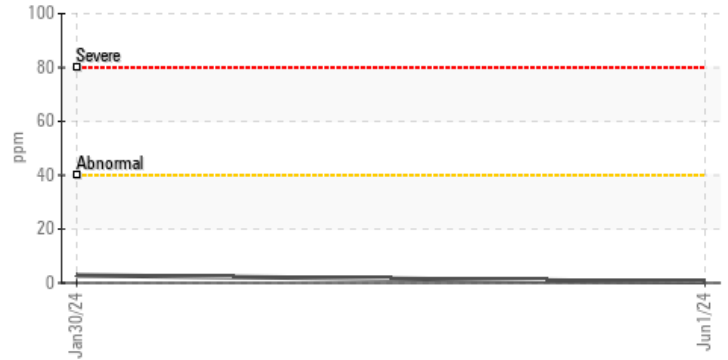


## GRAPHS

### Iron (ppm)



### Lead (ppm)



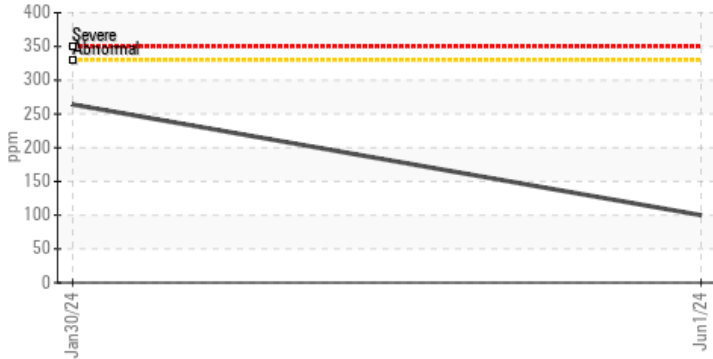
### Aluminum (ppm)



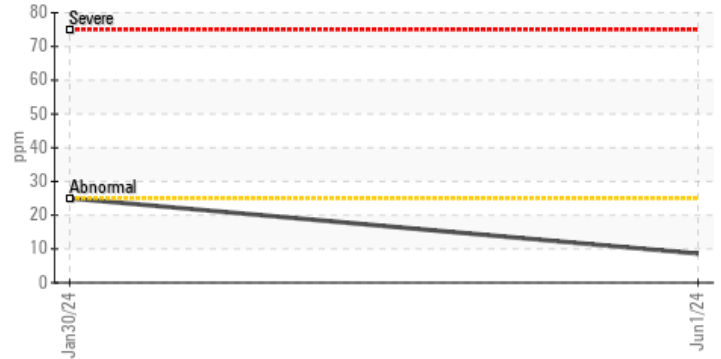
### Chromium (ppm)



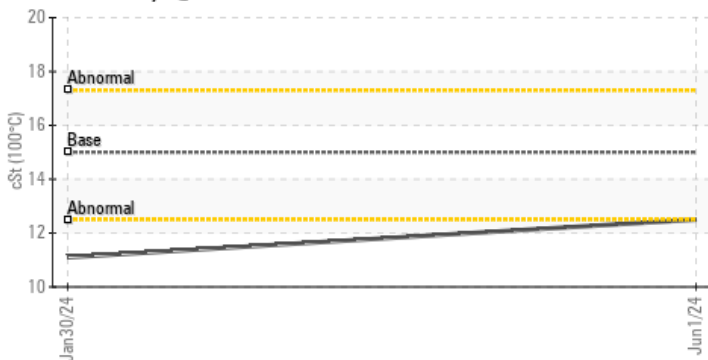
### Copper (ppm)



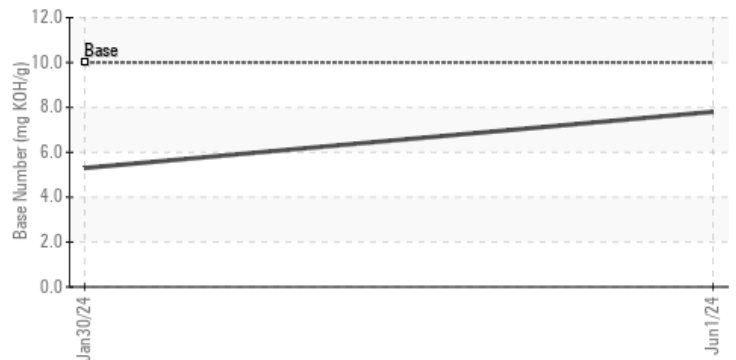
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number





# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752 I 19 - TRANSMISSION (AUTO)



**Sample No:** VCP438605  
**Oil Type:** VOLVO AUTOMATIC TRANSMISSION FLUID AT102  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP438605	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
 FORT MYERS, FL  
 US 33905  
 Contact: TODD LARK  
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 T:  
 F: (239)481-3302



### OIL CONDITION

Visc @ 40°C	cSt	█ 28.7	---	---	---
-------------	-----	--------	-----	-----	-----



### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 14	---	---	---
Sodium	ppm	█ 6	---	---	---
Potassium	ppm	█ 4	---	---	---

### Diagnosis

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. Moderate concentration of visible dirt/debris present in the fluid. The condition of the fluid is acceptable for the time in service.



### WEAR METALS

Iron	ppm	█ 36	---	---	---
Copper	ppm	█ 50	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 6	---	---	---
Aluminum	ppm	█ 19	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 6	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 5	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	█ 76	---	---	---
Magnesium	ppm	█ 0	---	---	---
Zinc	ppm	█ 7	---	---	---
Phosphorus	ppm	█ 210	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 86	---	---	---

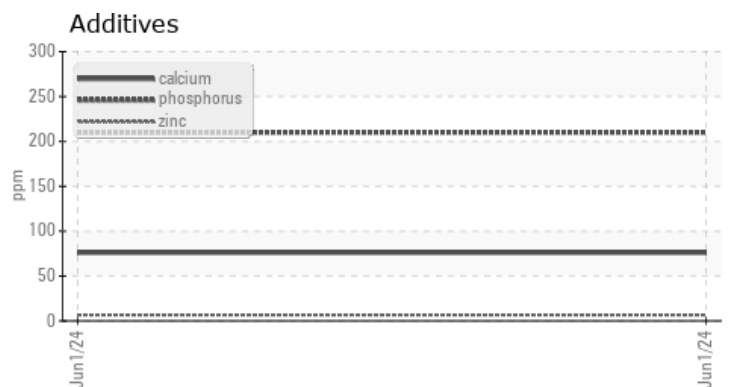
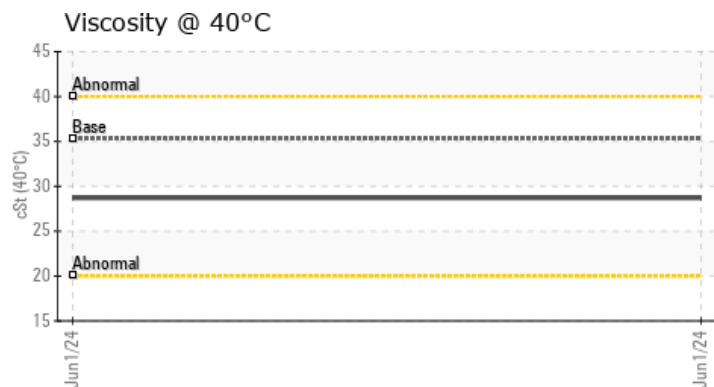
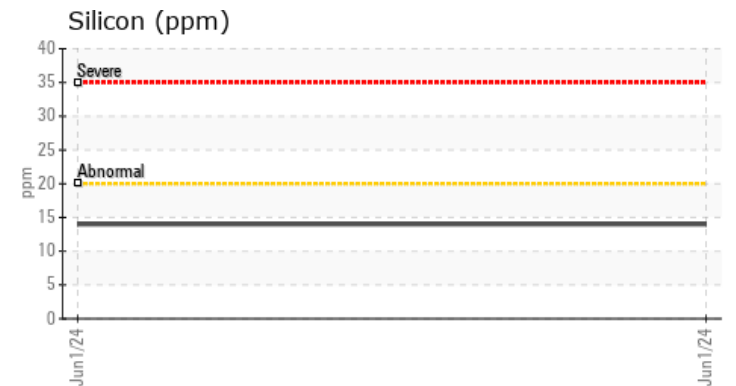
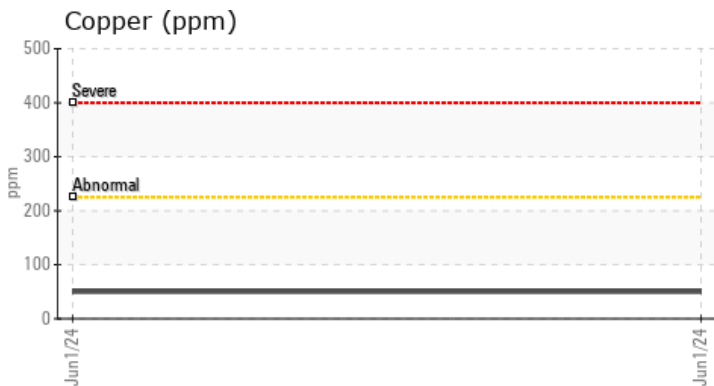
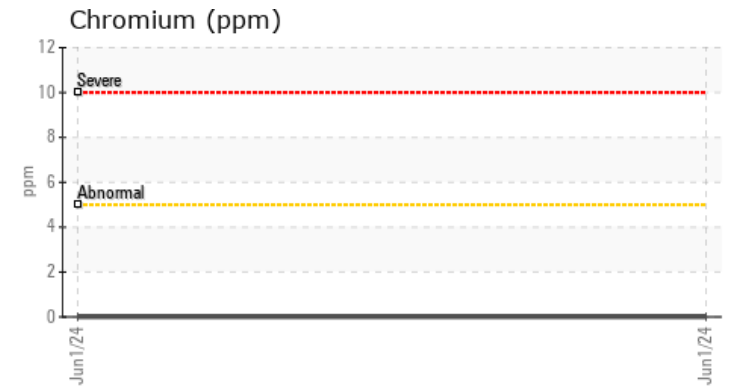
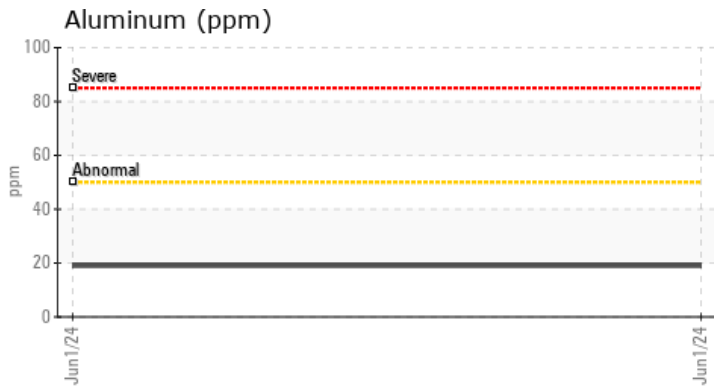
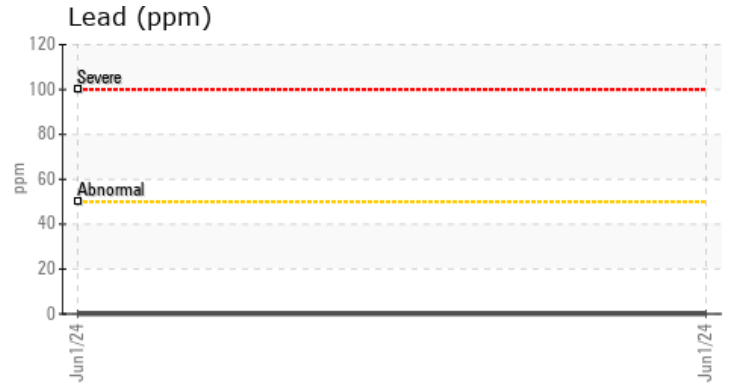
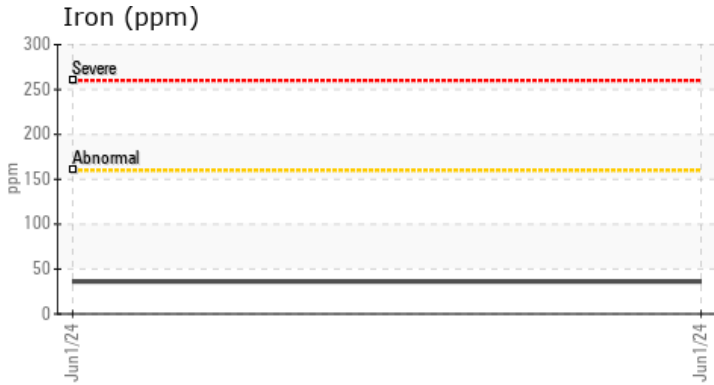
**Depot:** VOLVO0090  
**Unique No:** 11062820  
**Signed:** Don Baldrige  
**Report Date:** 07 Jun 2024



# CONSTRUCTION EQUIPMENT



## VOLVO GRAPHS





# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752 119 - WET DISC BRAKE



**Sample No:** VCP454786  
**Oil Type:** VOLVO WET BRAKE TRANSAXLE OIL  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP454786	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	ABNORMAL	---	---	---

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 5151 DR MARTIN LUTHER KING BLVD  
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 Contact: TODD LARK  
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 T:  
 F: (239)481-3302



### OIL CONDITION

Visc @ 40°C	cSt	█ 43.7	---	---	---
-------------	-----	--------	-----	-----	-----



### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 15	---	---	---
Sodium	ppm	█ 4	---	---	---
Potassium	ppm	█ 3	---	---	---

**Diagnosis**  
 No corrective action is recommended at this time. Resample at the next service interval to monitor. 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.



### WEAR METALS

Iron	ppm	█ 24	---	---	---
Copper	ppm	▲ 103	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 3	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ 2	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	█ 3903	---	---	---
Magnesium	ppm	█ 8	---	---	---
Zinc	ppm	█ 1583	---	---	---
Phosphorus	ppm	█ 1454	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 166	---	---	---

**Depot:** VOLVO0090  
**Unique No:** 11062707  
**Signed:** Don Baldrige  
**Report Date:** 07 Jun 2024

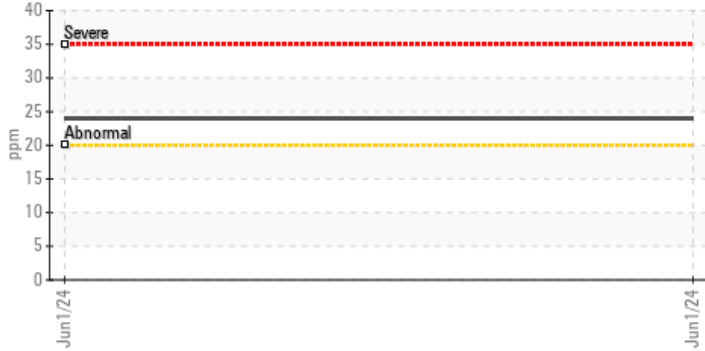


# CONSTRUCTION EQUIPMENT

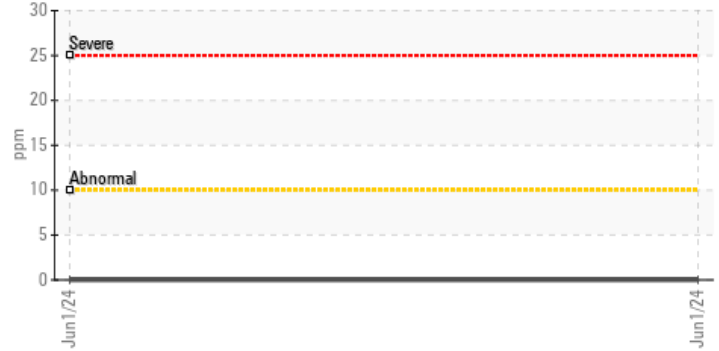


## GRAPHS

### Iron (ppm)



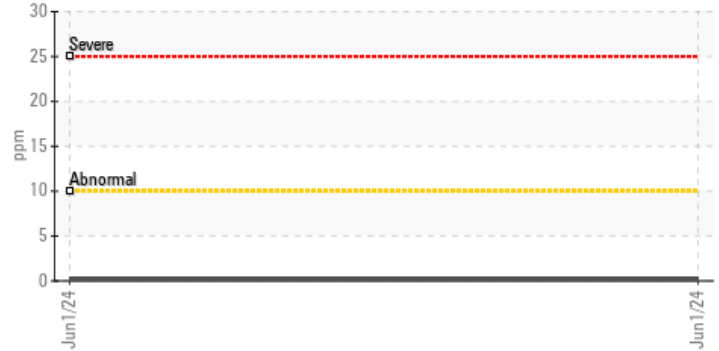
### Lead (ppm)



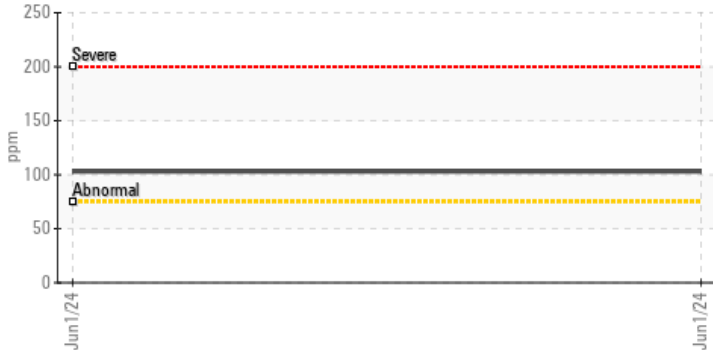
### Aluminum (ppm)



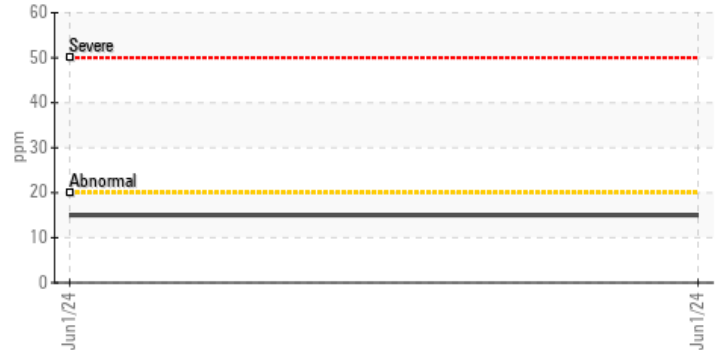
### Chromium (ppm)



### ▲ Copper (ppm)



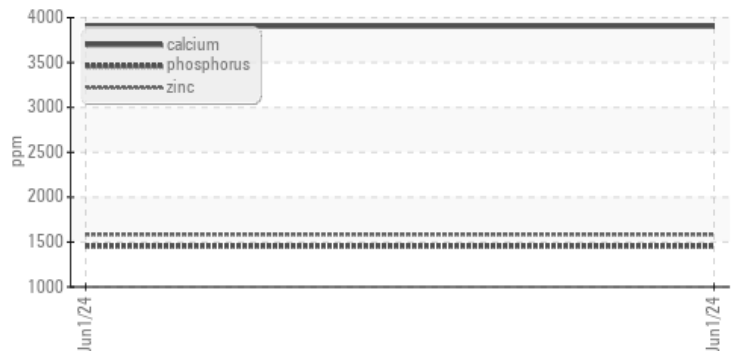
### Silicon (ppm)



### Viscosity @ 40°C



### Additives





# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752 1 19 - HYDRAULIC SYSTEM



**Sample No:** VCP438722  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP438722	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

**ALTA EQUIPMENT COMPANY**  
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 US 33905  
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### OIL CONDITION

Visc @ 40°C	cSt	█ 44.4	---	---	---
Acid Number (AN)	mg KOH/g	█ 0.46	---	---	---



### CONTAMINATION

Water	%	NEG	---	---	---
Particles >4µm		█ 1461	---	---	---
Particles >6µm		█ 427	---	---	---
Particles >14µm		█ 29	---	---	---
ISO 4406:1999 (c)		█ 18/16/12	---	---	---
Silicon	ppm	█ 2	---	---	---
Sodium	ppm	█ 1	---	---	---
Potassium	ppm	█ <1	---	---	---

### 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	█ 1	---	---	---
Copper	ppm	█ 2	---	---	---
Lead	ppm	█ <1	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 0	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	█ 0	---	---	---



### ADDITIVES

Calcium	ppm	█ 52	---	---	---
Magnesium	ppm	█ 0	---	---	---
Zinc	ppm	█ 448	---	---	---
Phosphorus	ppm	█ 374	---	---	---
Barium	ppm	█ <1	---	---	---
Boron	ppm	█ 0	---	---	---

**Depot:** VOLVO0090  
**Unique No:** 11062170  
**Signed:** Wes Davis  
**Report Date:** 06 Jun 2024

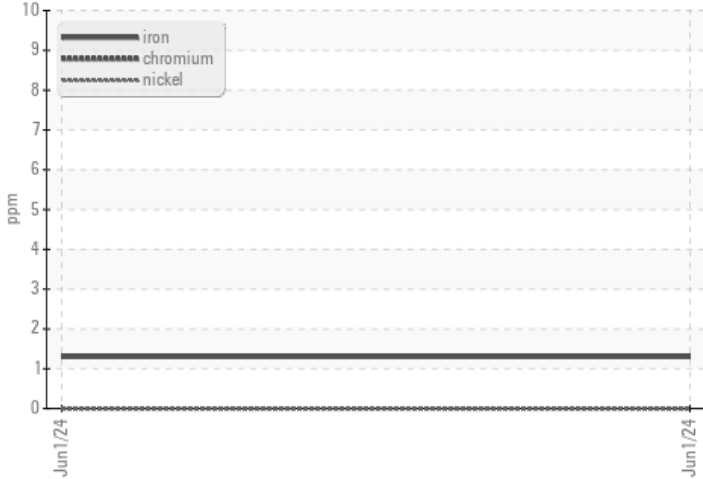


# CONSTRUCTION EQUIPMENT

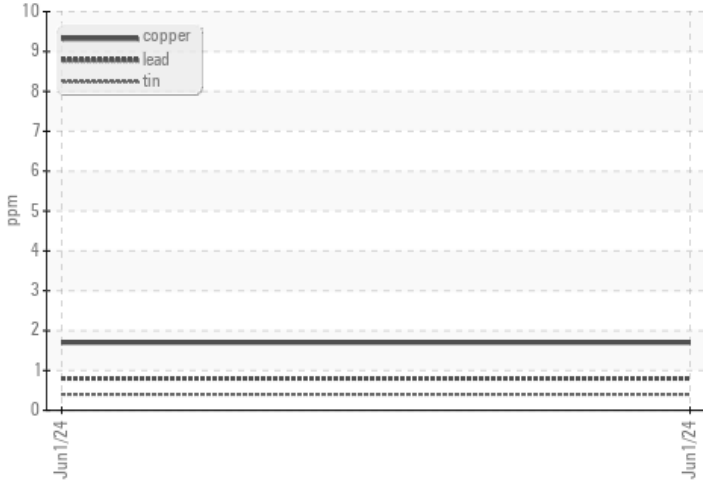


## GRAPHS

### Ferrous Alloys



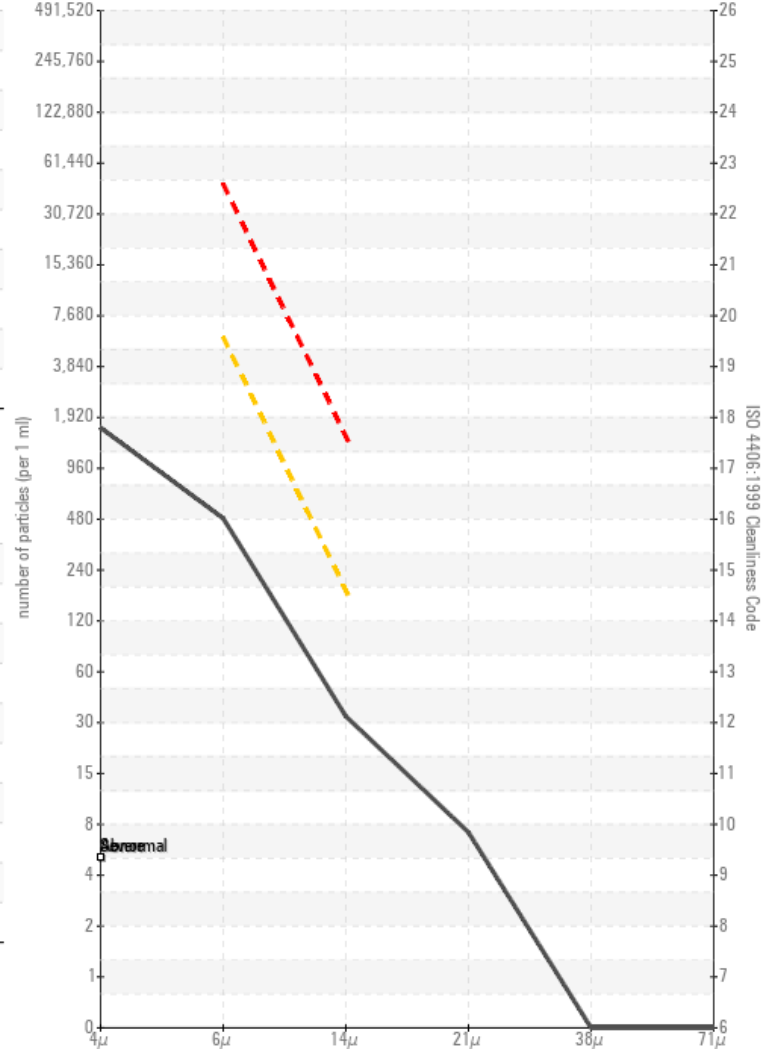
### Non-ferrous Metals



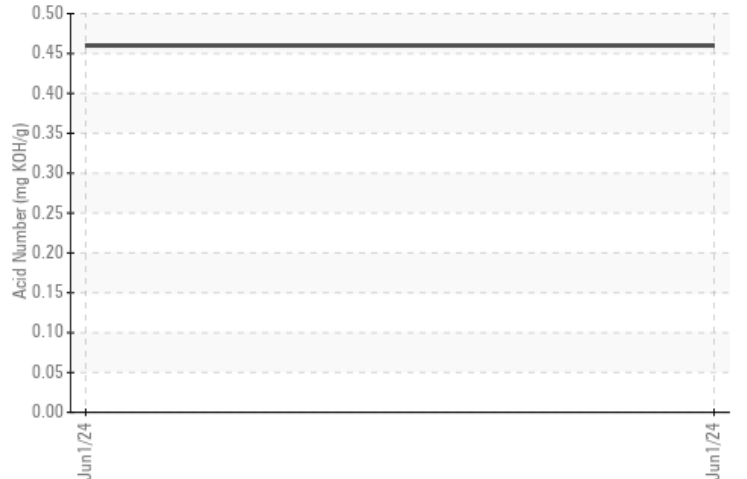
### Viscosity @ 40°C



### Particle Count



### Acid Number







# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752119 - FRONT AXLE



**Sample No:** VCP451441  
**Oil Type:** VOLVO PREMIUM GEAR OIL 85W-140 GL-5  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP451441	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
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 US 33905  
 Contact: TODD LARK  
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 T:  
 F: (239)481-3302



### OIL CONDITION

Visc @ 40°C	cSt	● 52.7	---	---	---
-------------	-----	--------	-----	-----	-----



### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 5	---	---	---
Sodium	ppm	■ 2	---	---	---
Potassium	ppm	■ 2	---	---	---



### WEAR METALS

Iron	ppm	■ 356	---	---	---
Copper	ppm	■ 2	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ 0	---	---	---
Chromium	ppm	■ 4	---	---	---
Molybdenum	ppm	■ 11	---	---	---
Nickel	ppm	■ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 12	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	■ 147	---	---	---
Magnesium	ppm	■ 1	---	---	---
Zinc	ppm	■ 61	---	---	---
Phosphorus	ppm	● 2691	---	---	---
Barium	ppm	■ 1	---	---	---
Boron	ppm	● 312	---	---	---

### 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. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type.

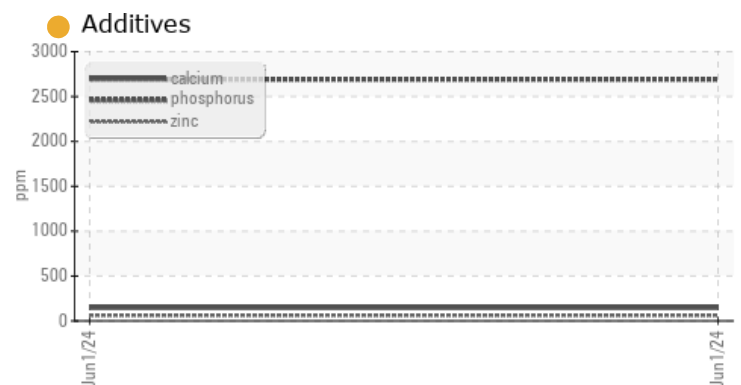
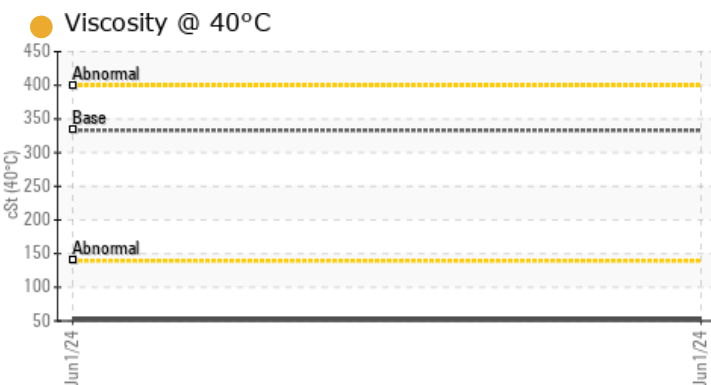
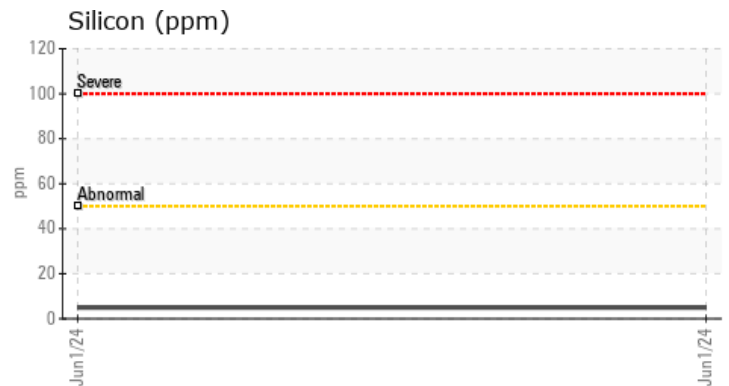
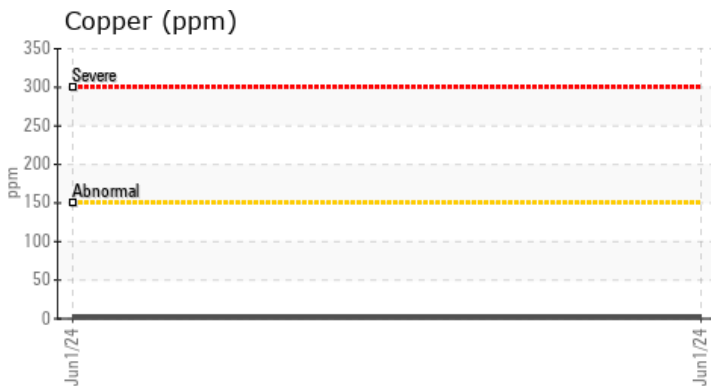
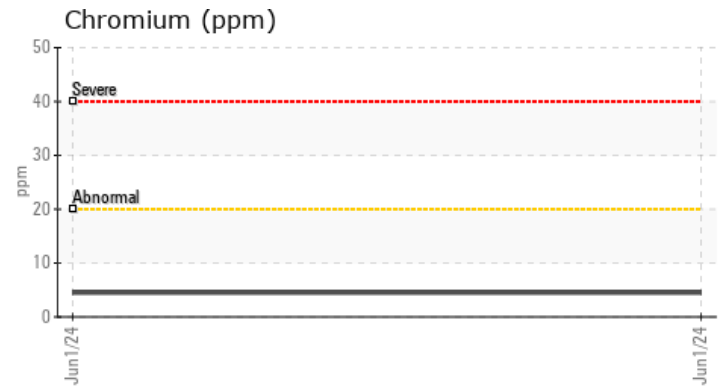
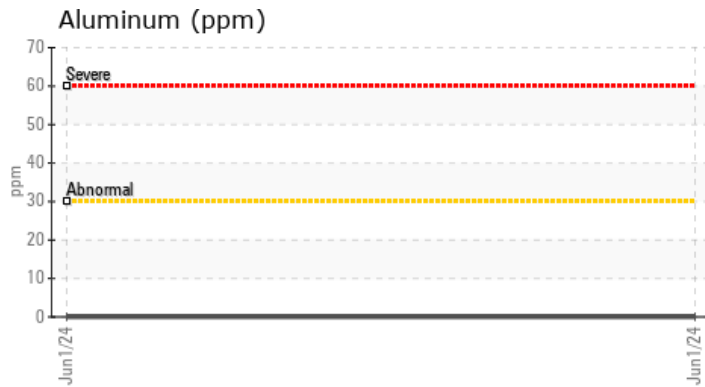
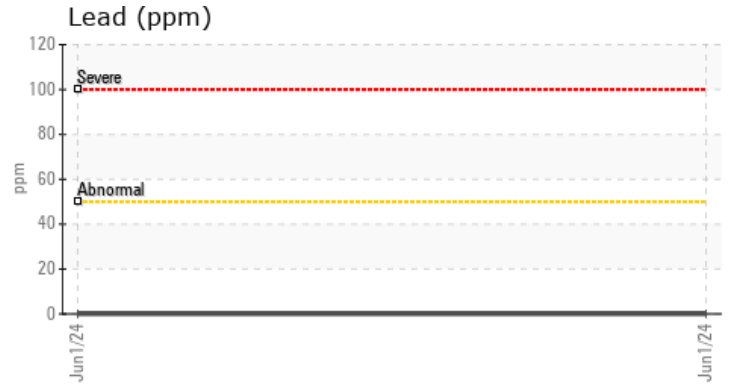
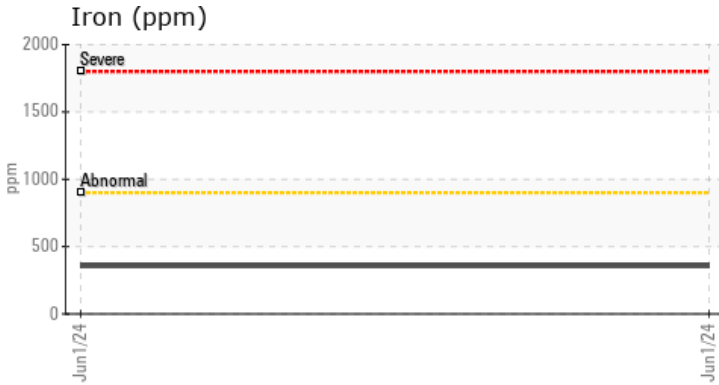
**Depot:** VOLVO0090  
**Unique No:** 11062705  
**Signed:** Don Baldrige  
**Report Date:** 07 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752 1 19 - BOGIE/CENTER AXLE



**Sample No:** VCP451445  
**Oil Type:** VOLVO PREMIUM GEAR OIL 85W-140 GL-5  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP451445	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

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

Visc @ 40°C	cSt	● 52.5	---	---	---
-------------	-----	--------	-----	-----	-----



### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 5	---	---	---
Sodium	ppm	■ 2	---	---	---
Potassium	ppm	■ 2	---	---	---



### WEAR METALS

Iron	ppm	■ 355	---	---	---
Copper	ppm	■ 1	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ 0	---	---	---
Chromium	ppm	■ 4	---	---	---
Molybdenum	ppm	■ 11	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 12	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	■ 113	---	---	---
Magnesium	ppm	■ <1	---	---	---
Zinc	ppm	● 51	---	---	---
Phosphorus	ppm	● 2592	---	---	---
Barium	ppm	■ 1	---	---	---
Boron	ppm	● 317	---	---	---

### 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. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type.

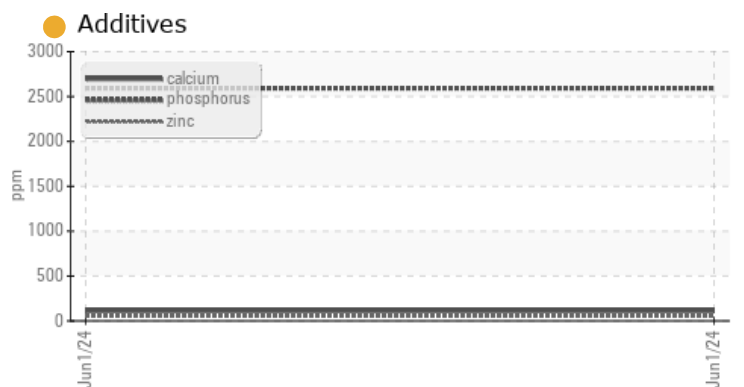
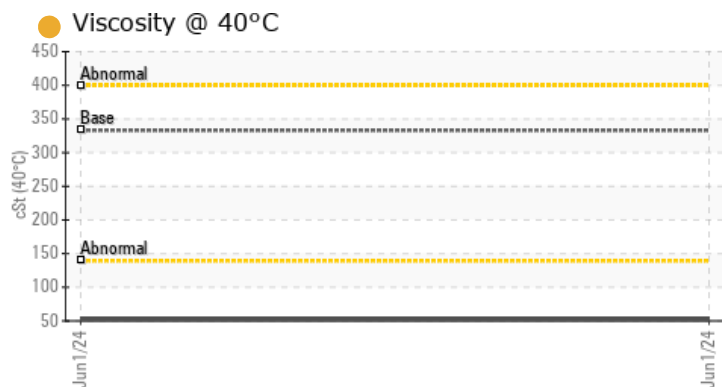
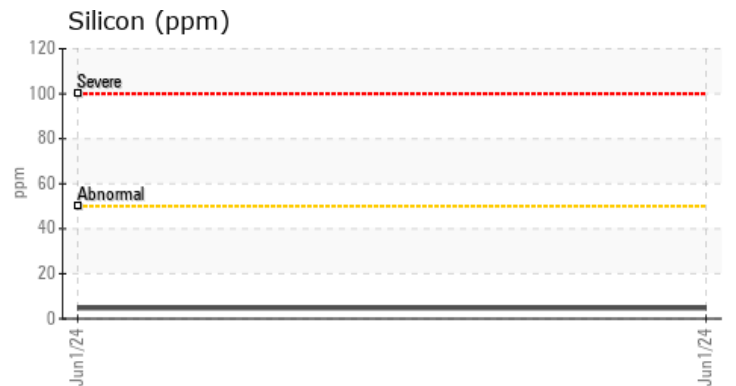
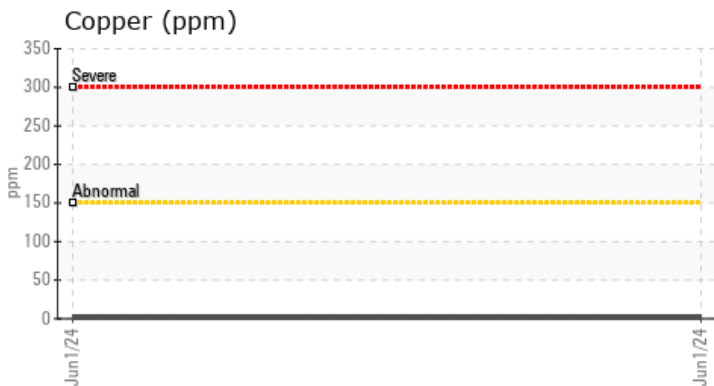
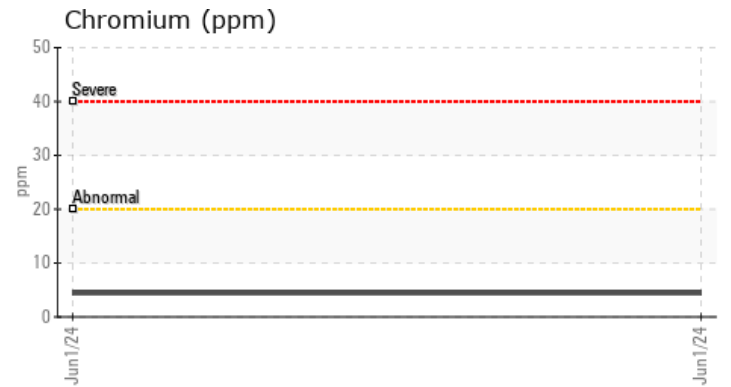
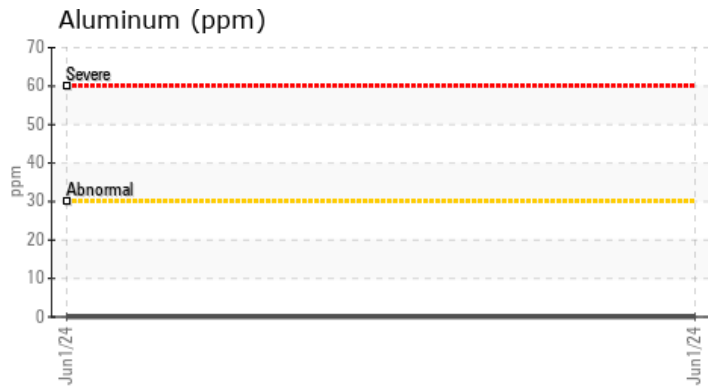
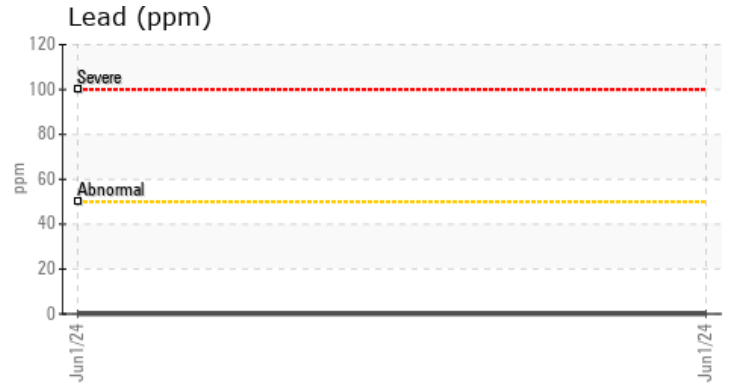
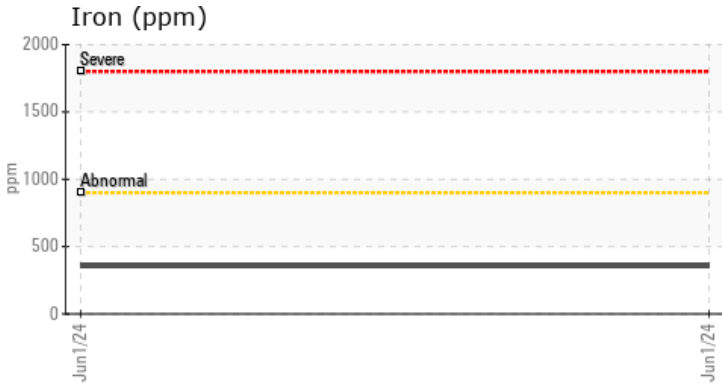
**Depot:** VOLVO0090  
**Unique No:** 11062706  
**Signed:** Don Baldrige  
**Report Date:** 07 Jun 2024



# CONSTRUCTION EQUIPMENT



## VOLVO GRAPHS





# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752119 - REAR AXLE



**Sample No:** VCP451446  
**Oil Type:** VOLVO PREMIUM GEAR OIL 85W-140 GL-5  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP451446	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
 FORT MYERS, FL  
 US 33905  
 Contact: TODD LARK  
 tlark@altaequipfl.com  
 T:  
 F: (239)481-3302



### OIL CONDITION

Visc @ 40°C	cSt	● 52.5	---	---	---
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### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 5	---	---	---
Sodium	ppm	■ 2	---	---	---
Potassium	ppm	■ 6	---	---	---



### WEAR METALS

Iron	ppm	■ 309	---	---	---
Copper	ppm	■ 2	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ 4	---	---	---
Molybdenum	ppm	■ 10	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 13	---	---	---
Vanadium	ppm	0	---	---	---



### ADDITIVES

Calcium	ppm	■ 120	---	---	---
Magnesium	ppm	■ 3	---	---	---
Zinc	ppm	■ 67	---	---	---
Phosphorus	ppm	● 2675	---	---	---
Barium	ppm	■ 2	---	---	---
Boron	ppm	● 330	---	---	---

### 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. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type.

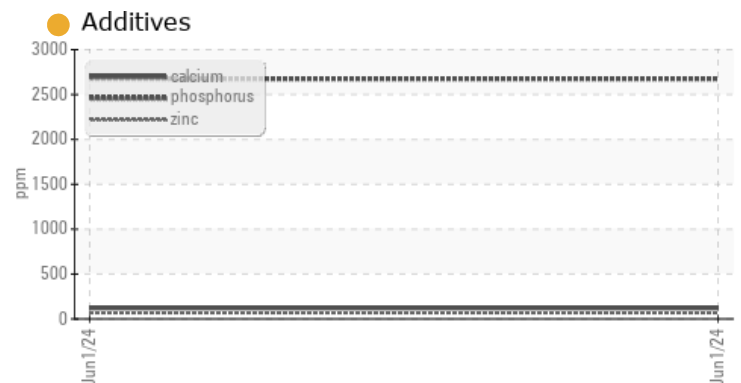
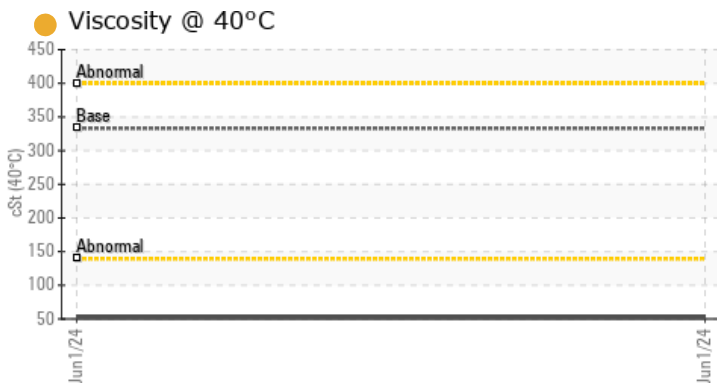
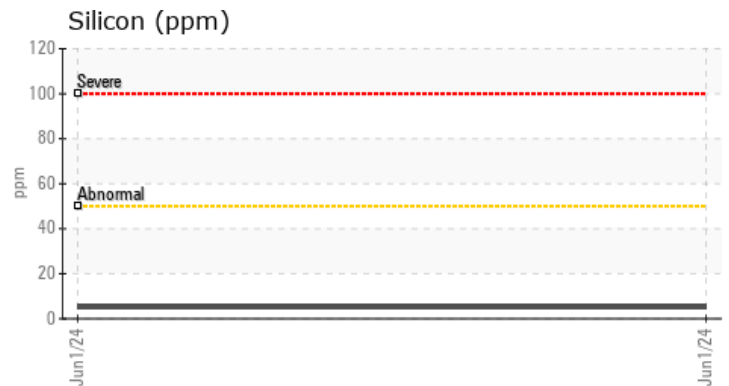
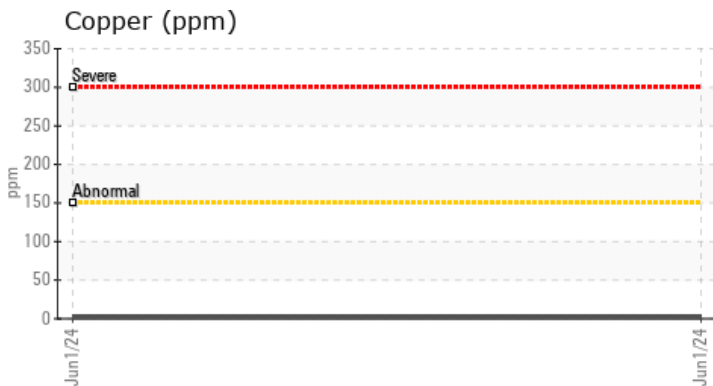
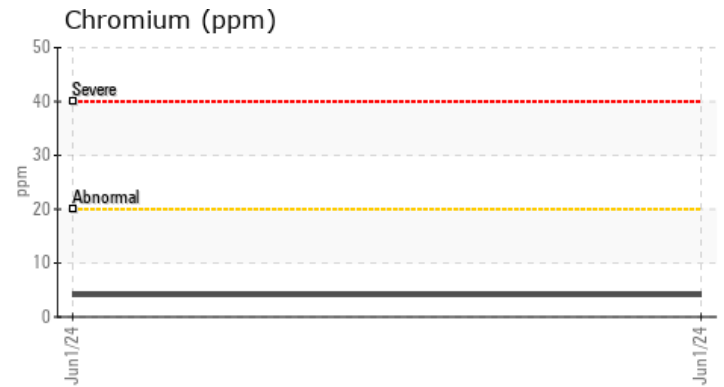
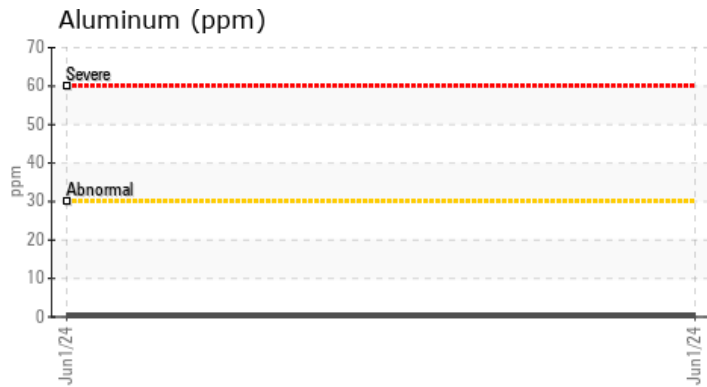
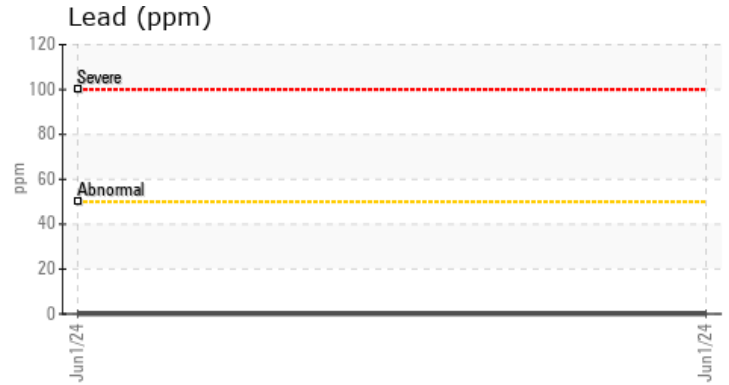
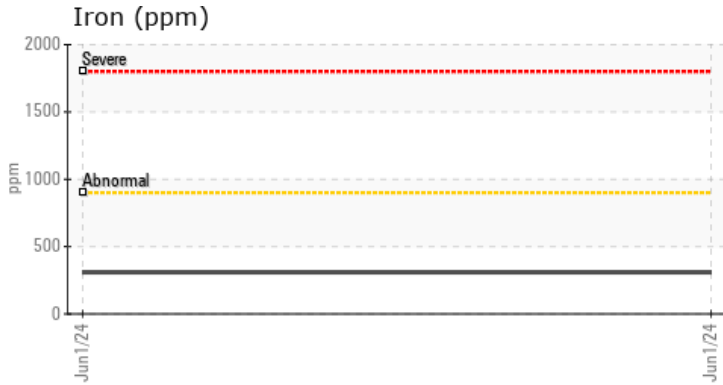
**Depot:** VOLVO0090  
**Unique No:** 11062703  
**Signed:** Don Baldrige  
**Report Date:** 07 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## VOLVO A45G 752119 - DROP BOX



**Sample No:** VCP438727  
**Oil Type:** VOLVO PREMIUM GEAR OIL 85W-140 GL-5  
**Job No:**



### SAMPLE INFORMATION

Sample Number	VCP438727	---	---	---
Sample Date	01 Jun 2024	---	---	---
Machine Hours	1566	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**ALTA EQUIPMENT COMPANY**  
 5151 DR MARTIN LUTHER KING BLVD  
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 Contact: TODD LARK  
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 T:  
 F: (239)481-3302

### OIL CONDITION

Visc @ 40°C	cSt	● 49.4	---	---	---
-------------	-----	--------	-----	-----	-----

### CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	■ 17	---	---	---
Sodium	ppm	■ 11	---	---	---
Potassium	ppm	■ 3	---	---	---

### WEAR METALS

Iron	ppm	■ 100	---	---	---
Copper	ppm	■ 12	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ 0	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 7	---	---	---
Nickel	ppm	■ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	■ 3	---	---	---
Vanadium	ppm	0	---	---	---

### ADDITIVES

Calcium	ppm	● 43	---	---	---
Magnesium	ppm	■ 1	---	---	---
Zinc	ppm	● 78	---	---	---
Phosphorus	ppm	● 2540	---	---	---
Barium	ppm	■ <1	---	---	---
Boron	ppm	■ 152	---	---	---

**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. This plus the additive levels indicates the addition of a different brand, or type of oil. Confirm oil type.

**Depot:** VOLVO0090  
**Unique No:** 11062709  
**Signed:** Don Baldrige  
**Report Date:** 07 Jun 2024



# CONSTRUCTION EQUIPMENT

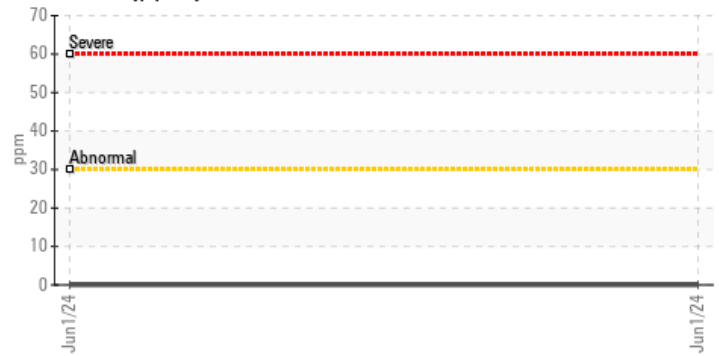


## GRAPHS

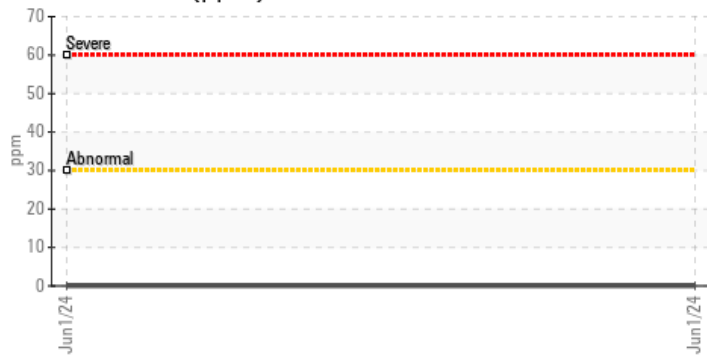
### Iron (ppm)



### Lead (ppm)



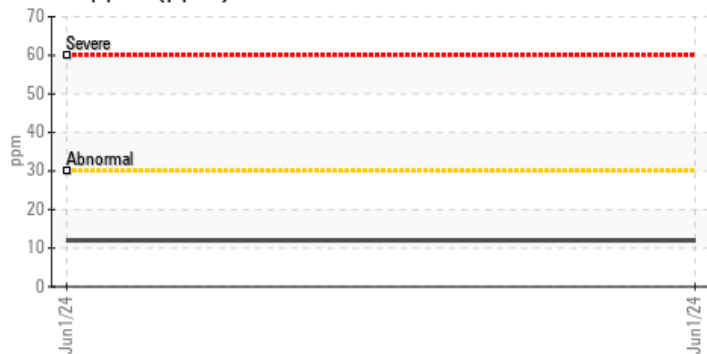
### Aluminum (ppm)



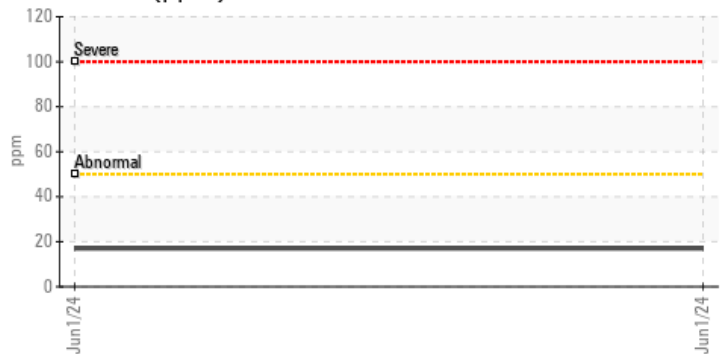
### Chromium (ppm)



### Copper (ppm)



### Silicon (ppm)



### ● Viscosity @ 40°C



### ● Additives

