



# CONSTRUCTION EQUIPMENT

SWA118304-20 VOLVO A30G 752316 - DIESEL ENGINE



**Sample No:** VCP379708  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWA118304-20



## SAMPLE INFORMATION

Sample Number	VCP379708	VCP330160	VCP356206	VCP340868
Sample Date	29 Nov 2022	05 Apr 2022	05 Apr 2022	23 Nov 2021
Machine Hours	2557	1425	1425	627
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ABNORMAL

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 5210 REESE ROAD  
 DAVIE, FL  
 US 33314  
 Contact: N. FACEY  
 nfacey@altaequipfl.com  
 T: (954)581-4744  
 F: (954)583-0318



## OIL CONDITION

Visc @ 100°C	cSt	12.3	11.9	11.1	11.0
Base Number (BN)	mg KOH/g	9.2	8.4	4.7	8.8
Oxidation (PA)	%	70	67	113	63



## CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.2	0.7	0.2
Nitration (PA)	%	73	71	118	59
Sulfation (PA)	%	61	59	78	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	0.5
Silicon	ppm	4	7	24	38
Sodium	ppm	5	2	3	2
Potassium	ppm	0	1	5	4



## WEAR METALS

Iron	ppm	14	13	53	20
Copper	ppm	195	361	166	232
Lead	ppm	2	0	3	<1
Tin	ppm	2	2	8	2
Aluminum	ppm	2	1	5	2
Chromium	ppm	<1	<1	2	<1
Molybdenum	ppm	56	62	53	53
Nickel	ppm	<1	0	5	<1
Titanium	ppm	0	0	<1	<1
Silver	ppm	<1	<1	0	2
Manganese	ppm	<1	1	5	3
Vanadium	ppm	0	0	0	0



## ADDITIVES

Calcium	ppm	1171	1390	1790	1653
Magnesium	ppm	887	1009	539	639
Zinc	ppm	1193	1484	1183	1188
Phosphorus	ppm	954	1156	927	1099
Barium	ppm	0	0	0	<1
Boron	ppm	4	13	13	47

## Diagnosis

Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). 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.

**Depot:** VOLVO0095  
**Unique No:** 10234489  
**Signed:** Sean Felton  
**Report Date:** 01 Dec 2022

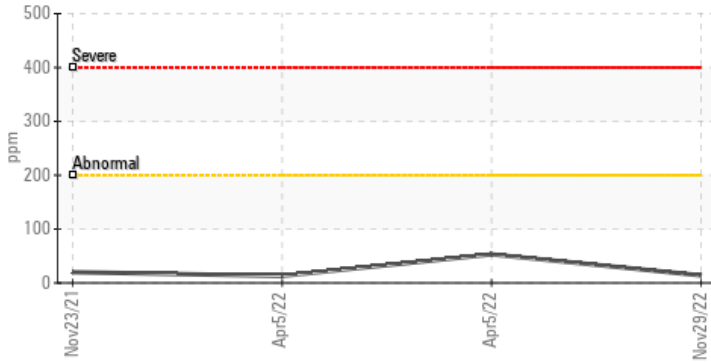


# CONSTRUCTION EQUIPMENT

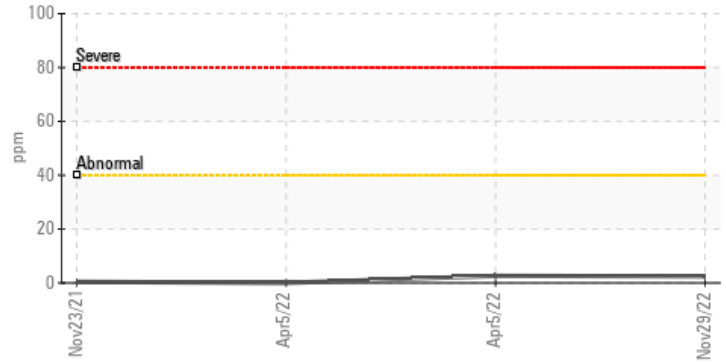


## GRAPHS

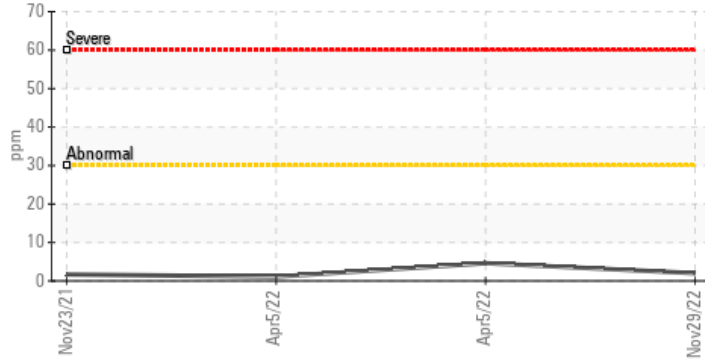
### Iron (ppm)



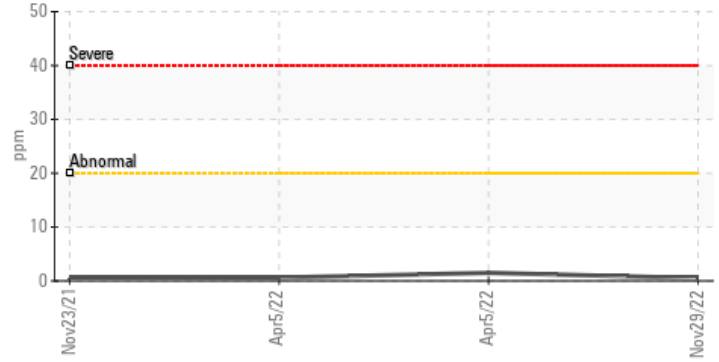
### Lead (ppm)



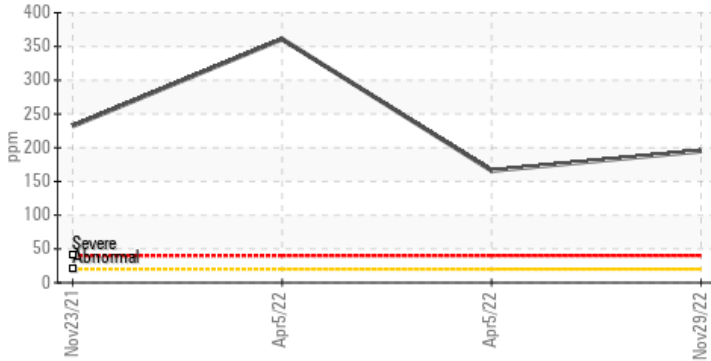
### Aluminum (ppm)



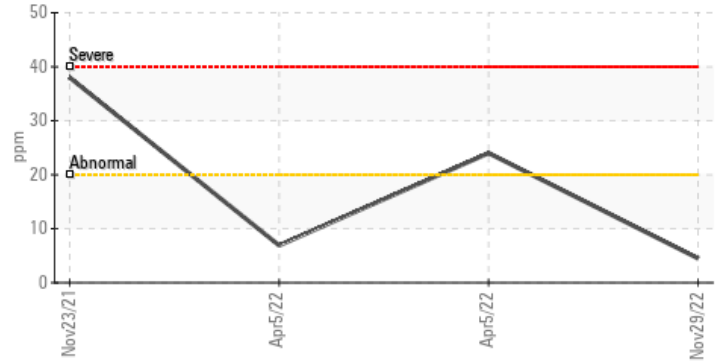
### Chromium (ppm)



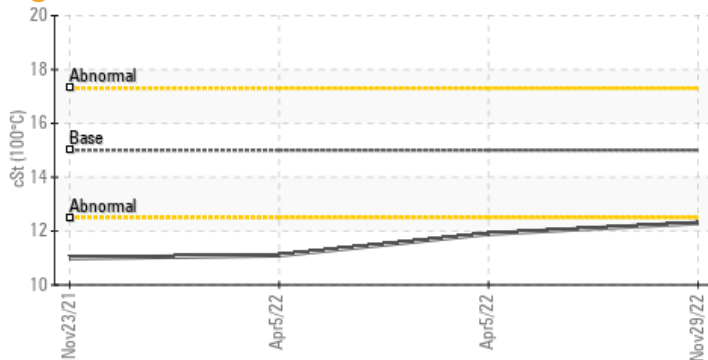
### Copper (ppm)



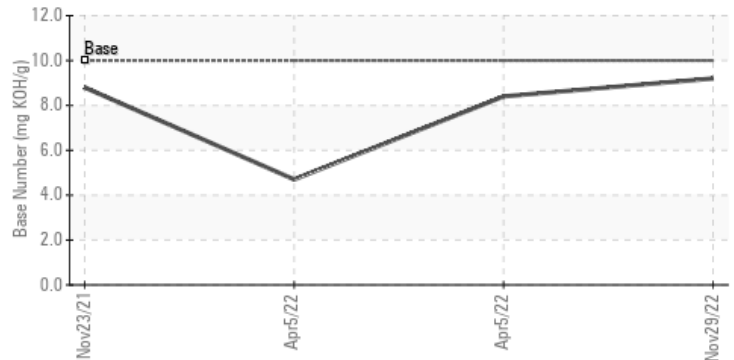
### Silicon (ppm)



### Viscosity @ 100°C



### Base Number





# CONSTRUCTION EQUIPMENT

SWA578879 VOLVO A30G 752316 - TRANSMISSION



**Sample No:** VCP454053  
**Oil Type:** AW HYDRAULIC OIL ISO 46  
**Job No:** SWA578879



**ALTA EQUIPMENT COMPANY**  
 5210 REESE ROAD  
 DAVIE, FL  
 US 33314  
 Contact: N. FACEY  
 nfacey@altaequipfl.com  
 T: (954)581-4744  
 F: (954)583-0318



## SAMPLE INFORMATION

Sample Number	<b>VCP454053</b>	VCP379711	---	---
Sample Date	<b>06 Jun 2024</b>	29 Nov 2022	---	---
Machine Hours	<b>3946</b>	2557	---	---
Oil Hours	<b>0</b>	0	---	---
Oil Changed	<b>Not Chngd</b>	Changed	---	---
Sample Status	<b>SEVERE</b>	ATTENTION	---	---



## OIL CONDITION

Visc @ 40°C	cSt	<b>28.4</b>	29.7	---	---
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## CONTAMINATION

Water	%	<b>▲ 2.61</b>	NEG	---	---
Silicon	ppm	<b>7</b>	15	---	---
Sodium	ppm	<b>2</b>	0	---	---
Potassium	ppm	<b>4</b>	0	---	---



## WEAR METALS

Iron	ppm	<b>43</b>	37	---	---
Copper	ppm	<b>8</b>	23	---	---
Lead	ppm	<b>4</b>	0	---	---
Tin	ppm	<b>3</b>	2	---	---
Aluminum	ppm	<b>5</b>	21	---	---
Chromium	ppm	<b>&lt;1</b>	0	---	---
Molybdenum	ppm	<b>2</b>	0	---	---
Nickel	ppm	<b>&lt;1</b>	0	---	---
Titanium	ppm	<b>0</b>	0	---	---
Silver	ppm	<b>0</b>	0	---	---
Manganese	ppm	<b>4</b>	4	---	---
Vanadium	ppm	<b>0</b>	0	---	---



## ADDITIVES

Calcium	ppm	<b>62</b>	71	---	---
Magnesium	ppm	<b>6</b>	0	---	---
Zinc	ppm	<b>22</b>	7	---	---
Phosphorus	ppm	<b>109</b>	184	---	---
Barium	ppm	<b>0</b>	<1	---	---
Boron	ppm	<b>22</b>	73	---	---

## Diagnosis

We advise that you check for the source of water entry. We recommend that you drain the fluid and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition. All component wear rates are normal. Appearance is milky. There is a moderate amount of visible silt present in the sample. There is a high concentration of water present in the fluid. The fluid viscosity is lower than normal. Confirm oil type. The fluid is no longer serviceable due to the presence of contaminants.

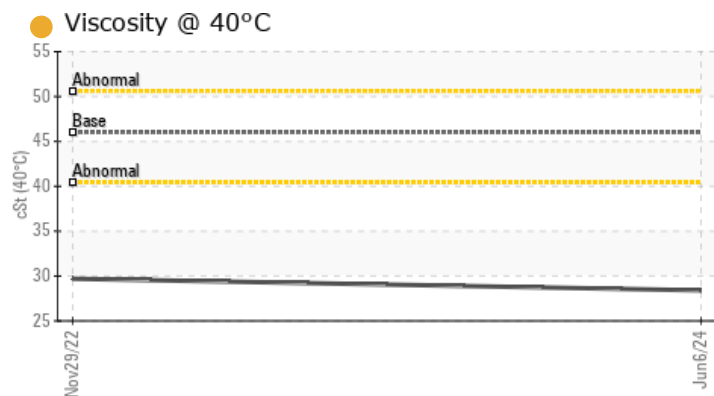
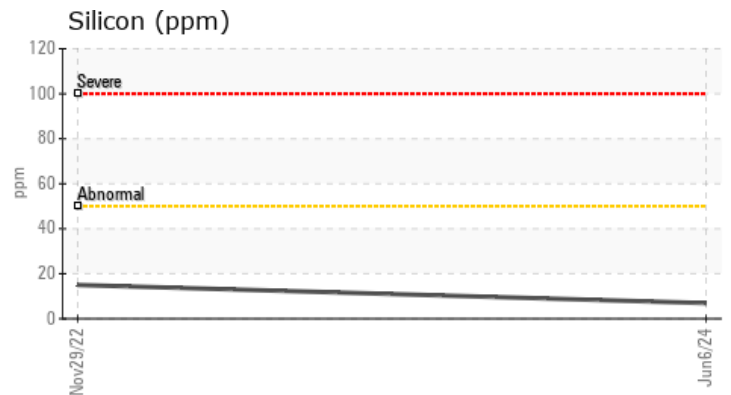
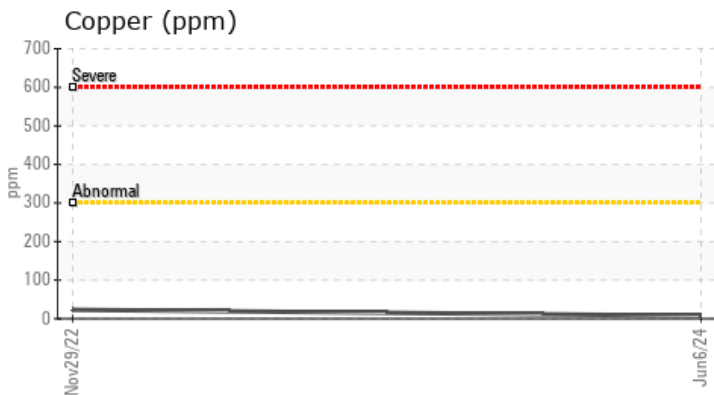
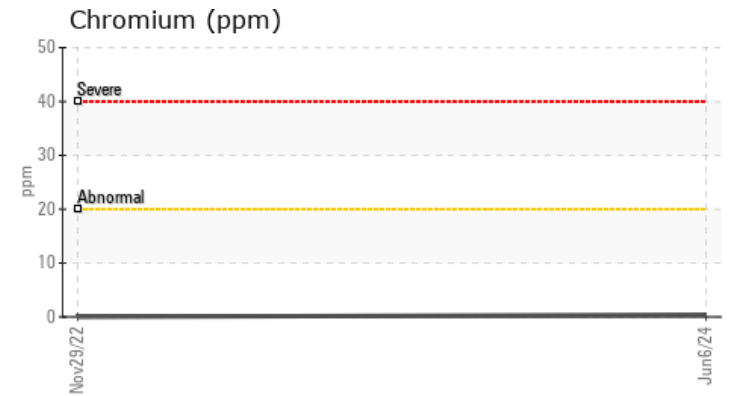
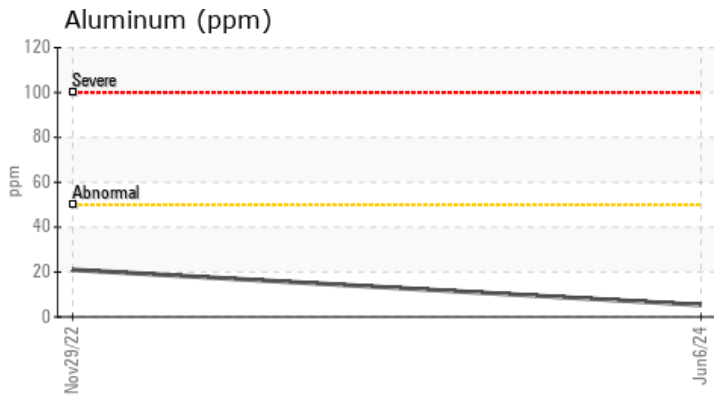
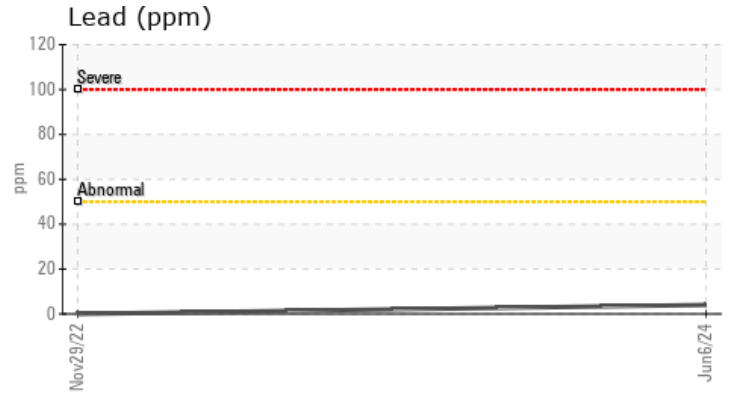
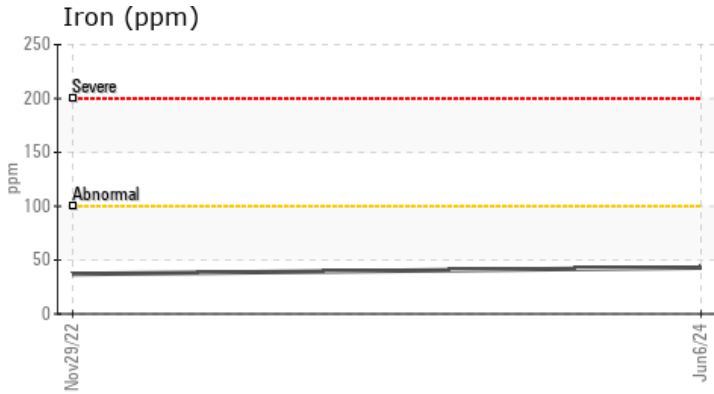
**Depot:** VOLVO0095  
**Unique No:** 11074445  
**Signed:** Don Baldrige  
**Report Date:** 13 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

SWA578879 VOLVO A30G 752316 - HYDRAULIC SYSTEM



**Sample No:** VCP454051  
**Oil Type:** AW HYDRAULIC OIL ISO 46  
**Job No:** SWA578879



## SAMPLE INFORMATION

Sample Number	<b>VCP454051</b>	VCP379689	VCP330162	---
Sample Date	<b>06 Jun 2024</b>	29 Nov 2022	05 Apr 2022	---
Machine Hours	<b>3946</b>	2557	1425	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Not Chngd</b>	Changed	Changed	---
Sample Status	<b>ABNORMAL</b>	NORMAL	ABNORMAL	---

**ALTA EQUIPMENT COMPANY**  
 5210 REESE ROAD  
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 nfacey@altaequipfl.com  
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 F: (954)583-0318

## OIL CONDITION

Visc @ 40°C	cSt	<b>45.7</b>	45.1	45.8	---
Acid Number (AN)	mg KOH/g	<b>0.34</b>	0.39	0.46	---

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Particles >4µm		---	9137	27593	---
Particles >6µm		---	2046	8877	---
Particles >14µm		---	159	1223	---
ISO 4406:1999 (c)		---	20/18/14	22/20/17	---
Silicon	ppm	<b>3</b>	2	3	---
Sodium	ppm	<b>4</b>	0	2	---
Potassium	ppm	<b>0</b>	<1	0	---

## Diagnosis

We recommend you service the filters on this component. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample. All component wear rates are normal. High concentration of visible dirt/debris present in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## WEAR METALS

Iron	ppm	<b>7</b>	6	6	---
Copper	ppm	<b>5</b>	7	6	---
Lead	ppm	<b>2</b>	4	3	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>&lt;1</b>	0	<1	---
Chromium	ppm	<b>&lt;1</b>	<1	<1	---
Molybdenum	ppm	<b>0</b>	<1	0	---
Nickel	ppm	<b>0</b>	0	0	---
Titanium	ppm	<b>0</b>	0	0	---
Silver	ppm	<b>0</b>	0	<1	---
Manganese	ppm	<b>0</b>	0	<1	---
Vanadium	ppm	<b>0</b>	0	0	---

## ADDITIVES

Calcium	ppm	<b>77</b>	54	50	---
Magnesium	ppm	<b>4</b>	5	4	---
Zinc	ppm	<b>426</b>	421	425	---
Phosphorus	ppm	<b>330</b>	316	343	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>0</b>	0	1	---

**Depot:** VOLVO0095  
**Unique No:** 11073890  
**Signed:** Don Baldrige  
**Report Date:** 13 Jun 2024

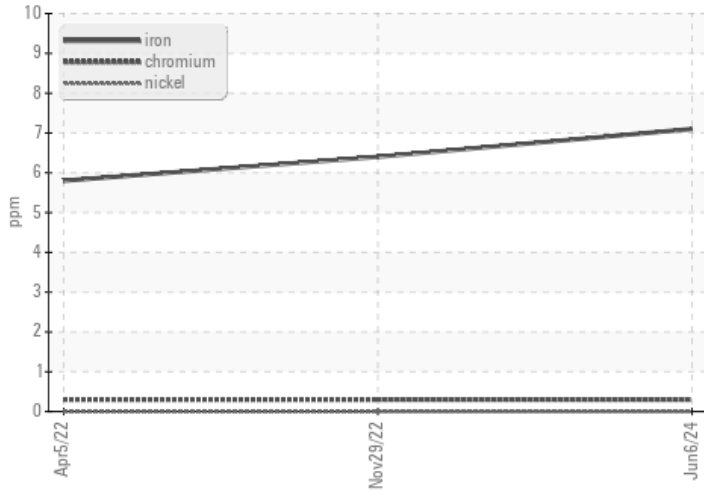


# CONSTRUCTION EQUIPMENT

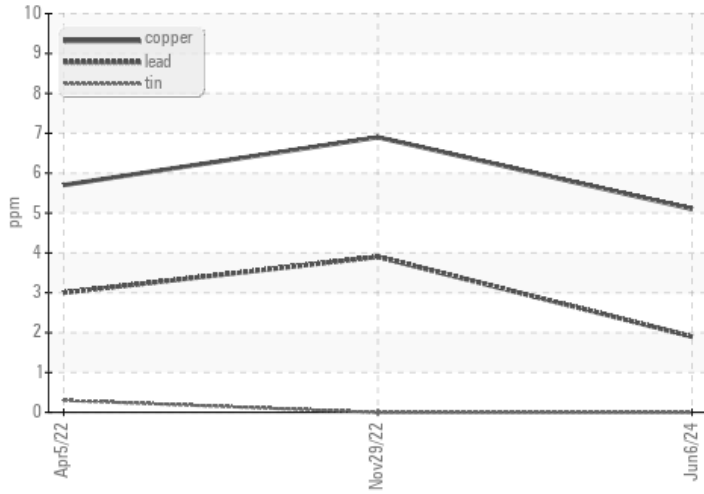


## GRAPHS

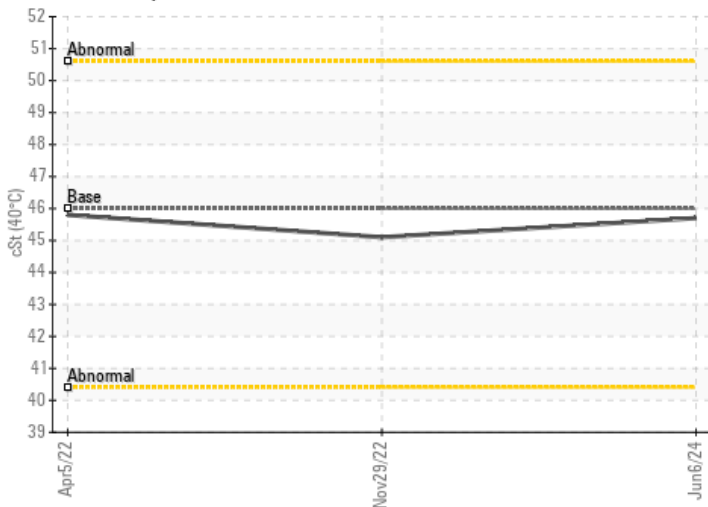
### Ferrous Alloys



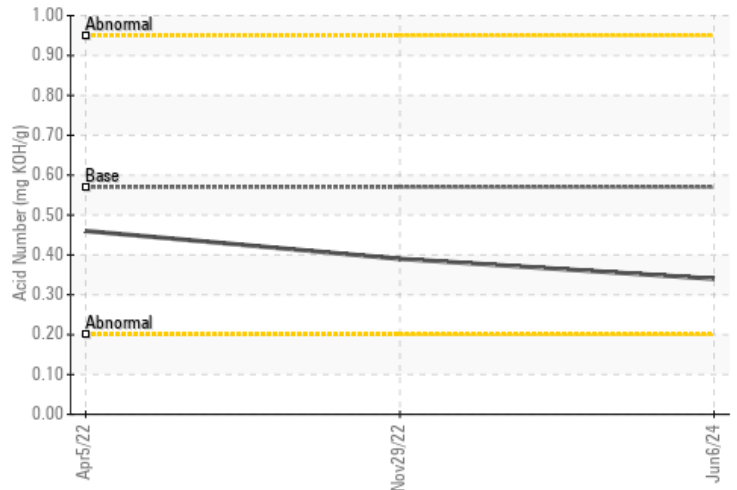
### Non-ferrous Metals



### Viscosity @ 40°C



### Acid Number





# CONSTRUCTION EQUIPMENT

SWA118304 VOLVO A30G 752316 - FRONT AXLE



**Sample No:** VCP379709  
**Oil Type:** {unknown}  
**Job No:** SWA118304



## SAMPLE INFORMATION

Sample Number	VCP379709	---	---	---
Sample Date	29 Nov 2022	---	---	---
Machine Hours	2557	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**ALTA EQUIPMENT COMPANY**  
 5210 REESE ROAD  
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 Contact: N. FACEY  
 nfacey@altaequipfl.com  
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 F: (954)583-0318



## OIL CONDITION

Visc @ 40°C	cSt	■ 97.7	---	---	---
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## CONTAMINATION

Water	%	▲ 0.388	---	---	---
Silicon	ppm	■ 30	---	---	---
Sodium	ppm	■ 0	---	---	---
Potassium	ppm	■ 0	---	---	---



## WEAR METALS

Iron	ppm	■ 514	---	---	---
Copper	ppm	■ 42	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ 0	---	---	---
Aluminum	ppm	■ 6	---	---	---
Chromium	ppm	■ 10	---	---	---
Molybdenum	ppm	14	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	23	---	---	---
Vanadium	ppm	0	---	---	---



## ADDITIVES

Calcium	ppm	656	---	---	---
Magnesium	ppm	10	---	---	---
Zinc	ppm	313	---	---	---
Phosphorus	ppm	1336	---	---	---
Barium	ppm	7	---	---	---
Boron	ppm	155	---	---	---

## 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 a light concentration of water present in the oil. The condition of the oil is acceptable for the time in service.

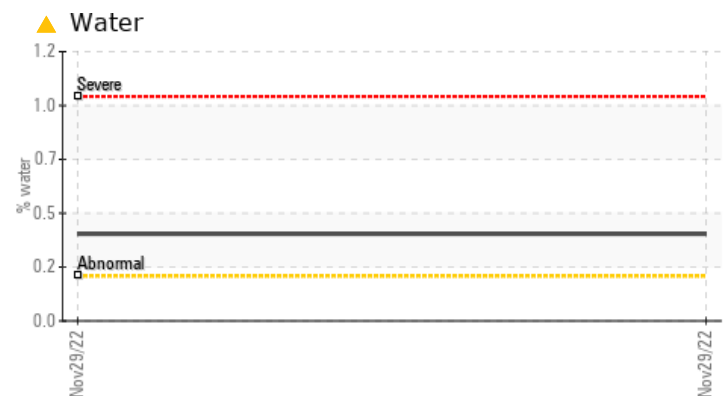
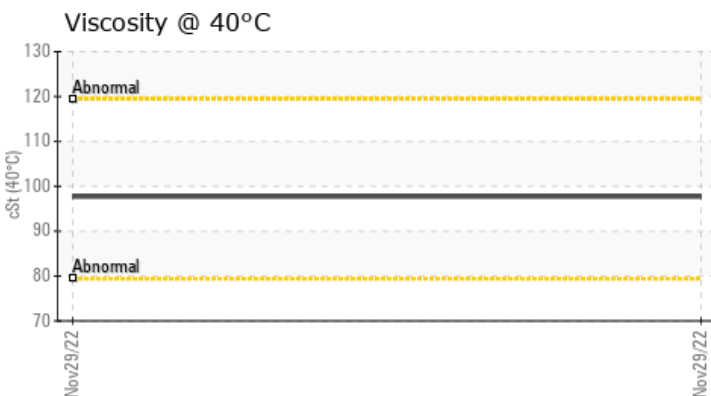
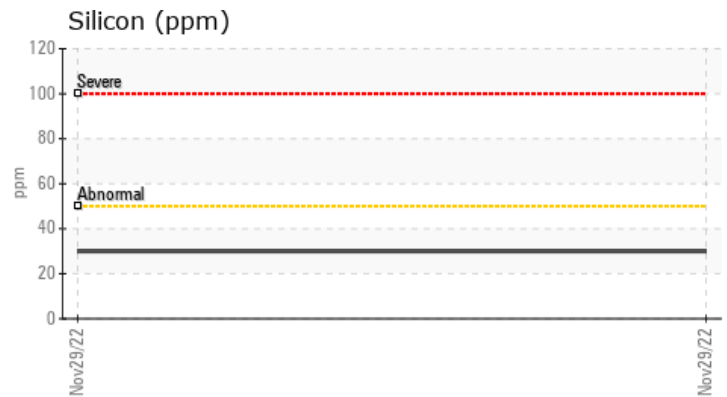
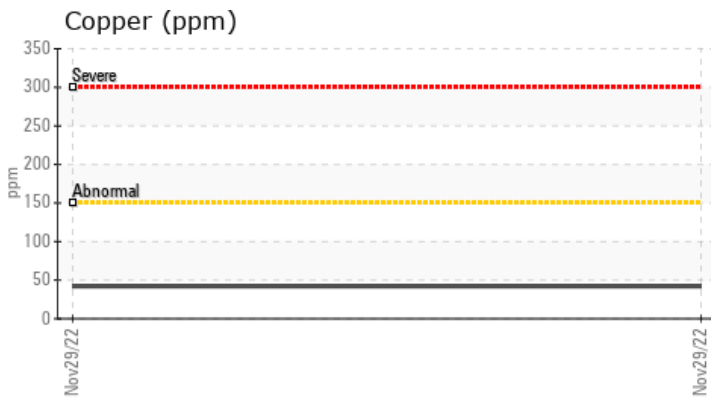
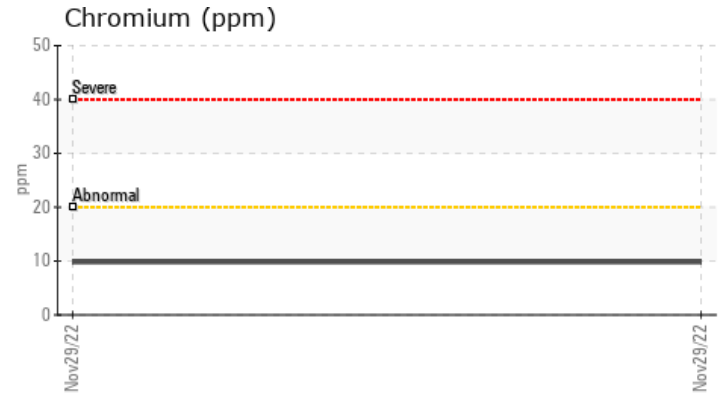
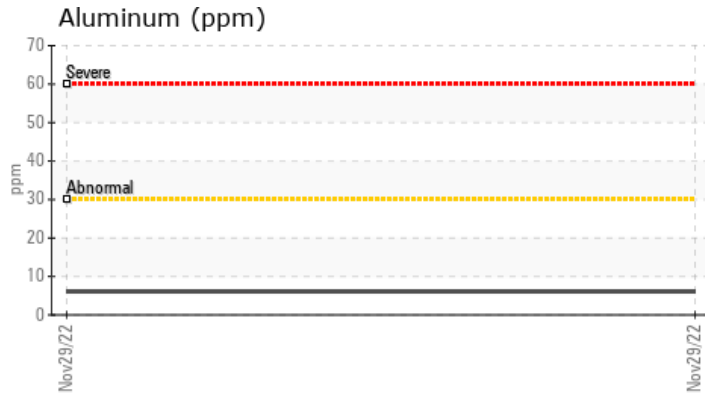
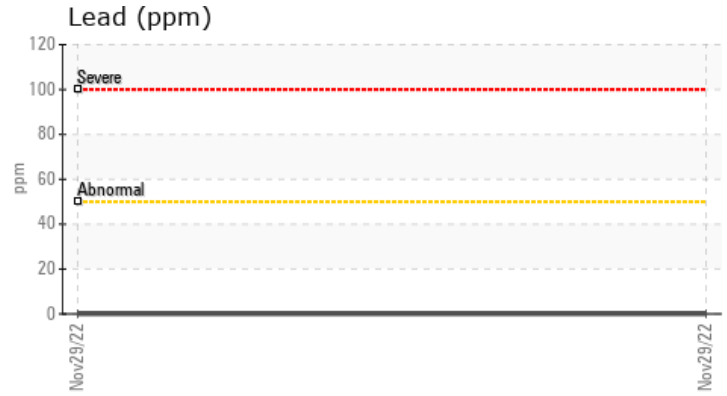
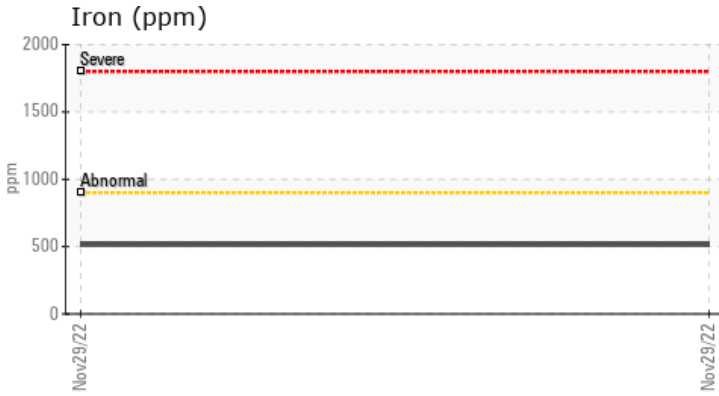
**Depot:** VOLVO0095  
**Unique No:** 10234823  
**Signed:** Don Baldrige  
**Report Date:** 01 Dec 2022



# CONSTRUCTION EQUIPMENT



## GRAPHS







# CONSTRUCTION EQUIPMENT

SWA118304-20 VOLVO A30G 752316 - BOGIE/CENTER AXLE



**Sample No:** VCP379705  
**Oil Type:** {unknown}  
**Job No:** SWA118304-20



## SAMPLE INFORMATION

Sample Number	VCP379705	---	---	---
Sample Date	29 Nov 2022	---	---	---
Machine Hours	2557	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

## ALTA EQUIPMENT COMPANY

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F: (954)583-0318



## OIL CONDITION

Visc @ 40°C	cSt	■ 97.8	---	---	---
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## CONTAMINATION

Water	%	▲ 0.406	---	---	---
Silicon	ppm	■ 32	---	---	---
Sodium	ppm	■ 0	---	---	---
Potassium	ppm	■ 0	---	---	---



## WEAR METALS

Iron	ppm	■ 616	---	---	---
Copper	ppm	■ 43	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ 6	---	---	---
Chromium	ppm	■ 11	---	---	---
Molybdenum	ppm	■ 15	---	---	---
Nickel	ppm	■ 1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	<1	---	---	---
Manganese	ppm	■ 25	---	---	---
Vanadium	ppm	■ 0	---	---	---



## ADDITIVES

Calcium	ppm	■ 691	---	---	---
Magnesium	ppm	■ 11	---	---	---
Zinc	ppm	■ 327	---	---	---
Phosphorus	ppm	■ 1371	---	---	---
Barium	ppm	■ 8	---	---	---
Boron	ppm	■ 160	---	---	---

## Diagnosis

We advise that you check for the source of water entry. 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. There is a moderate concentration of water present in the oil. The condition of the oil is acceptable for the time in service.

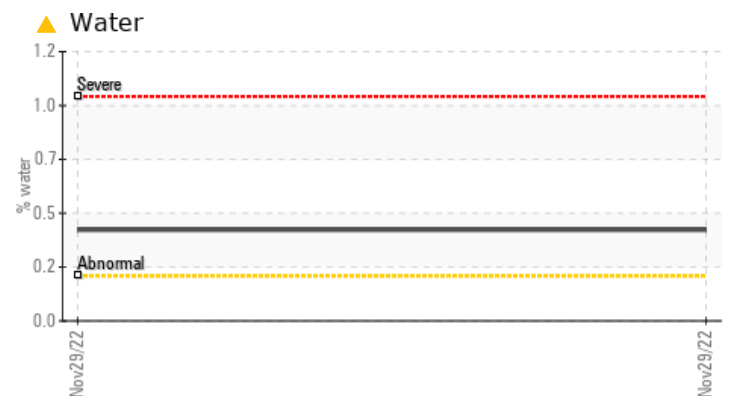
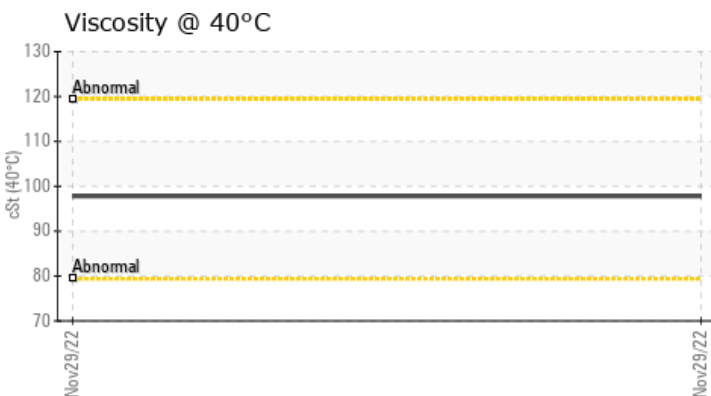
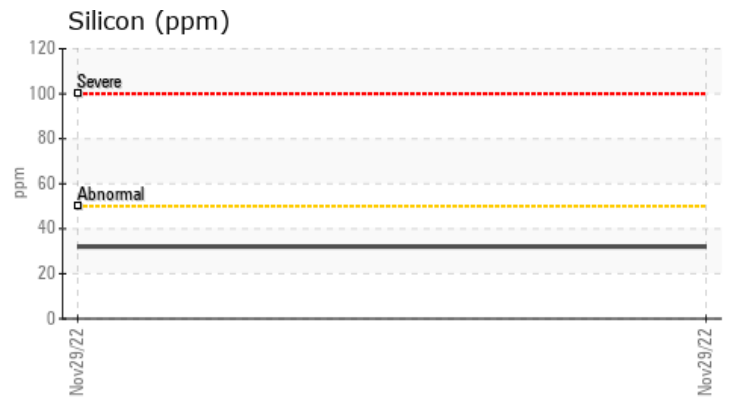
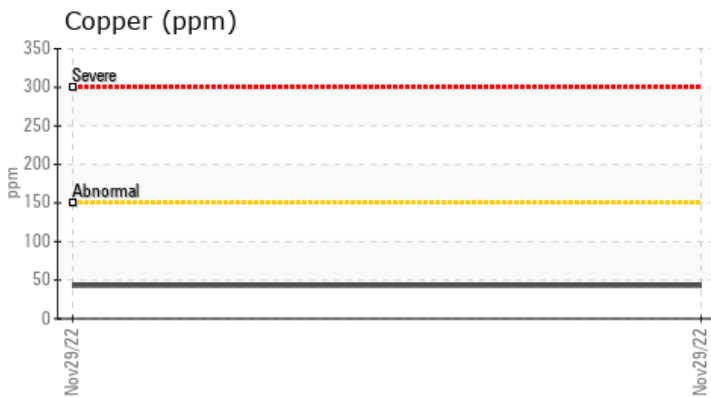
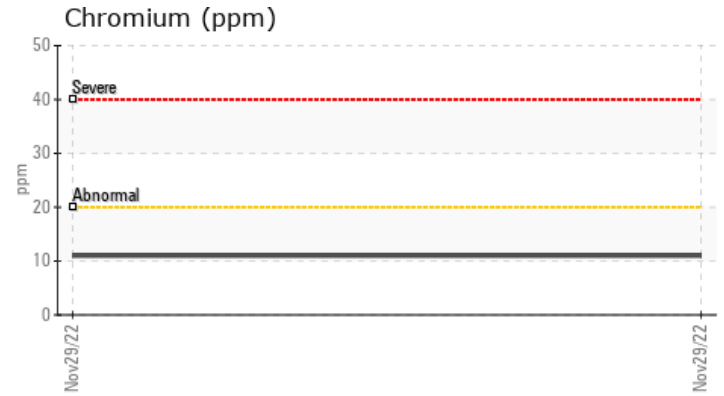
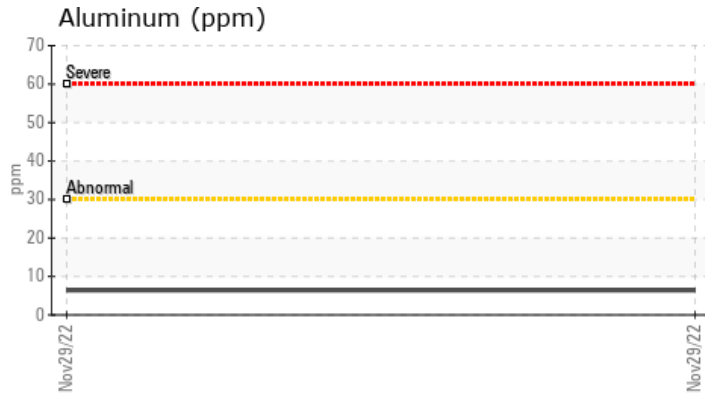
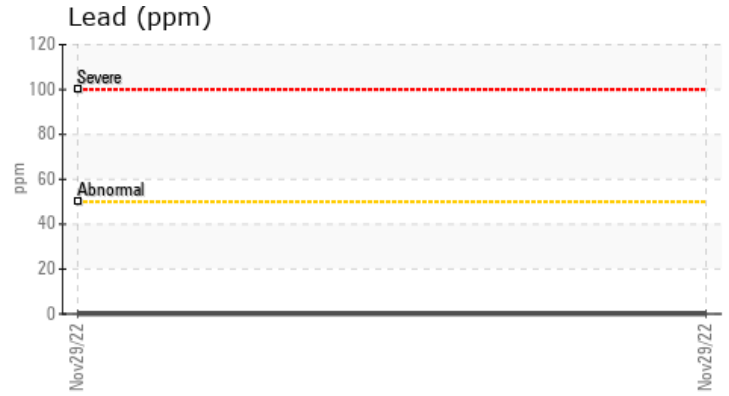
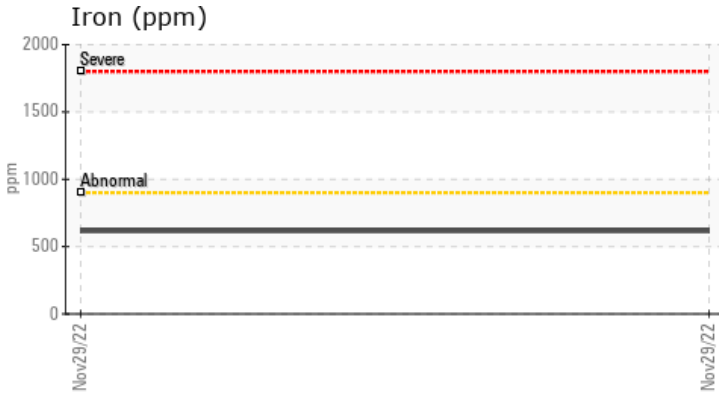
**Depot:** VOLVO0095  
**Unique No:** 10234822  
**Signed:** Don Baldrige  
**Report Date:** 01 Dec 2022



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

SWA118304-20 VOLVO A30G 752316 - REAR AXLE



**Sample No:** VCP379702  
**Oil Type:** {unknown}  
**Job No:** SWA118304-20



## SAMPLE INFORMATION

Sample Number	VCP379702	---	---	---
Sample Date	29 Nov 2022	---	---	---
Machine Hours	2557	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

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## OIL CONDITION

Visc @ 40°C	cSt	■ 99.8	---	---	---
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## CONTAMINATION

Water	%	▲ 0.429	---	---	---
Silicon	ppm	■ 33	---	---	---
Sodium	ppm	■ 0	---	---	---
Potassium	ppm	■ 0	---	---	---



## WEAR METALS

Iron	ppm	■ 596	---	---	---
Copper	ppm	■ 44	---	---	---
Lead	ppm	■ 0	---	---	---
Tin	ppm	■ <1	---	---	---
Aluminum	ppm	■ 6	---	---	---
Chromium	ppm	■ 11	---	---	---
Molybdenum	ppm	■ 15	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 26	---	---	---
Vanadium	ppm	■ 0	---	---	---



## ADDITIVES

Calcium	ppm	■ 712	---	---	---
Magnesium	ppm	■ 10	---	---	---
Zinc	ppm	■ 331	---	---	---
Phosphorus	ppm	■ 1389	---	---	---
Barium	ppm	■ 8	---	---	---
Boron	ppm	■ 181	---	---	---

## Diagnosis

We advise that you check for the source of water entry. 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. Appearance is hazy. There is a moderate concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** VOLVO0095  
**Unique No:** 10234835  
**Signed:** Jonathan Hester  
**Report Date:** 01 Dec 2022



# CONSTRUCTION EQUIPMENT



## GRAPHS

