



# CONSTRUCTION EQUIPMENT

## 717425 5378 VOLVO L180H 5378 - DIESEL ENGINE



**Sample No:** VCP454765  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 717425



### SAMPLE INFORMATION

Sample Number	<b>VCP454765</b>	DJJ022718	VCP433340	VCP312211
Sample Date	<b>05 Jun 2024</b>	05 Apr 2024	22 Nov 2023	03 May 2021
Machine Hours	<b>8050</b>	7610	6747	626
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	SEVERE

**TRADEMARK METALS RECYCLING - EVERGLADES**  
 3440 NW 135TH ST  
 OPA LOCKA, FL  
 US 33054  
 Contact: RYAN BOWDEN



### OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	13.5	13.3	▲ 11.2
Base Number (BN)	mg KOH/g	<b>9.3</b>	8.2	8.1	---
Oxidation (PA)	%	<b>56</b>	61	61	96

T:  
 F: (305)681-4914

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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). All other 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	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.1</b>	0.1	0.2	0.1
Nitration (PA)	%	<b>52</b>	62	63	63
Sulfation (PA)	%	<b>52</b>	53	53	70
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	0.2	▲ 39.1
Silicon	ppm	<b>4</b>	2	3	21
Sodium	ppm	<b>2</b>	0	2	3
Potassium	ppm	<b>2</b>	<1	2	6



### WEAR METALS

Iron	ppm	<b>10</b>	4	7	21
Copper	ppm	▲ <b>30</b>	2	3	▲ 391
Lead	ppm	<b>&lt;1</b>	<1	0	1
Tin	ppm	<b>&lt;1</b>	0	0	3
Aluminum	ppm	<b>3</b>	<1	2	1
Chromium	ppm	<b>&lt;1</b>	0	<1	<1
Molybdenum	ppm	<b>73</b>	58	62	41
Nickel	ppm	<b>&lt;1</b>	<1	<1	<1
Titanium	ppm	<b>&lt;1</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	0	0	4
Vanadium	ppm	<b>&lt;1</b>	<1	0	0



### ADDITIVES

Calcium	ppm	<b>1236</b>	1095	1073	1568
Magnesium	ppm	<b>1165</b>	1008	993	450
Zinc	ppm	<b>1443</b>	1293	1282	1124
Phosphorus	ppm	<b>1153</b>	1050	1012	949
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>0</b>	0	0	48

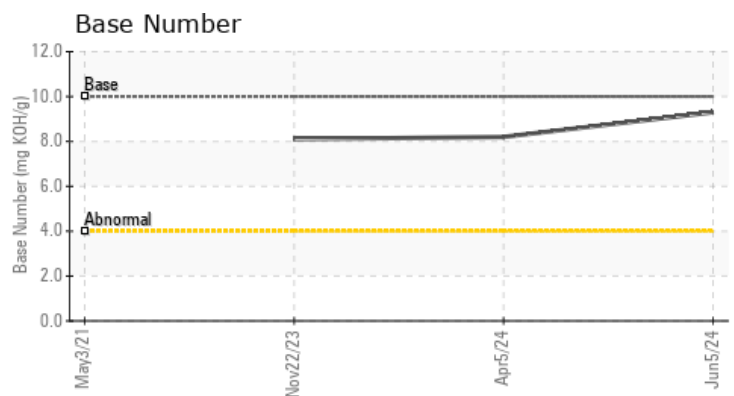
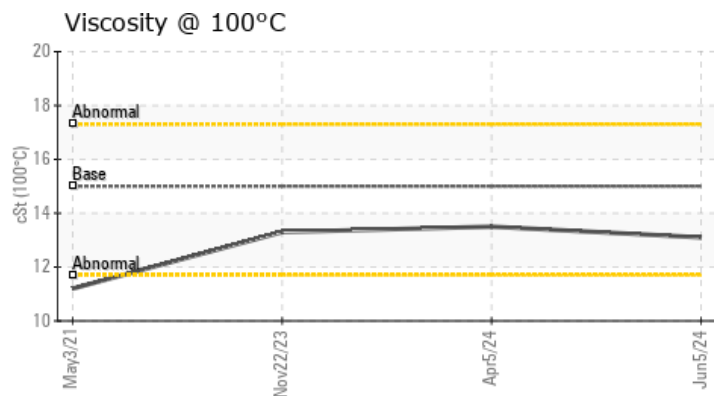
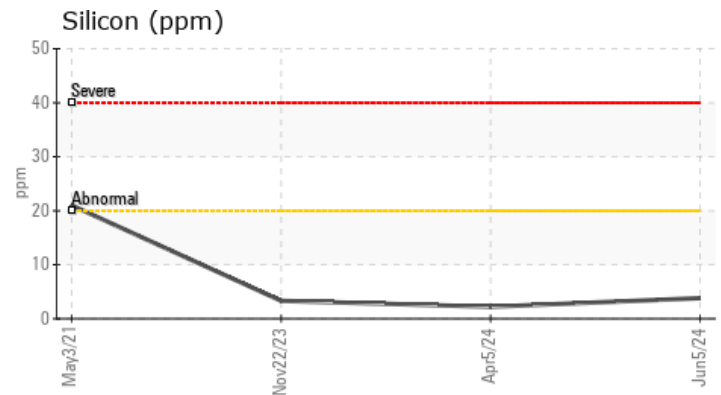
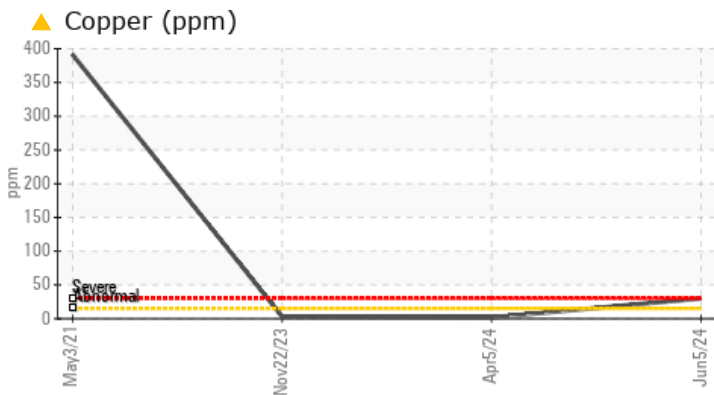
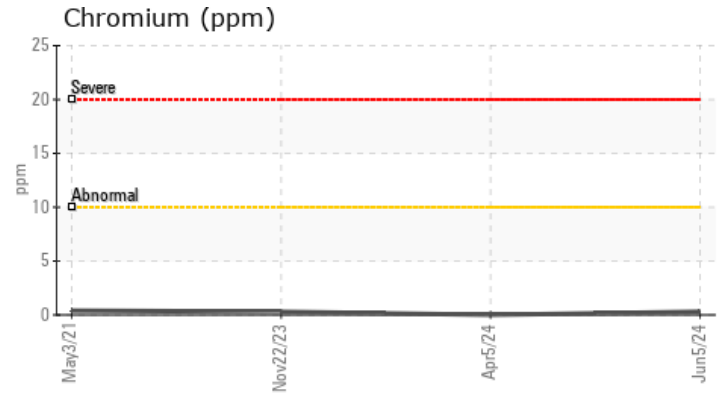
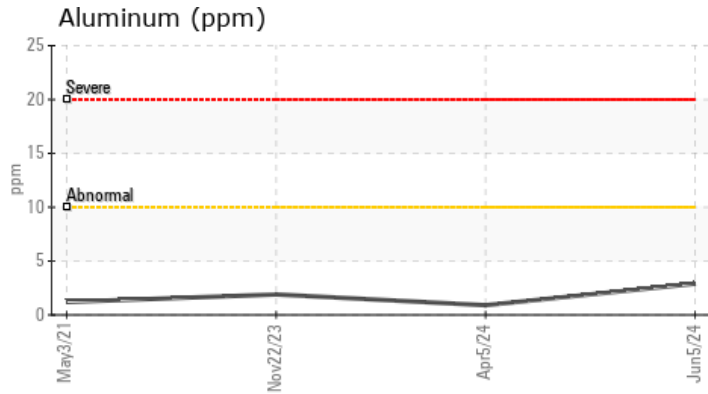
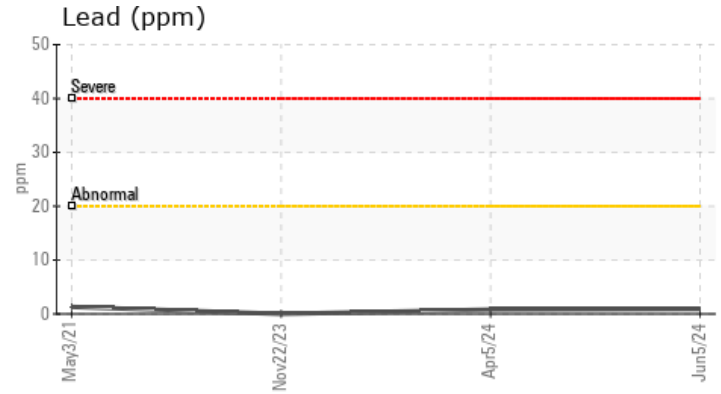
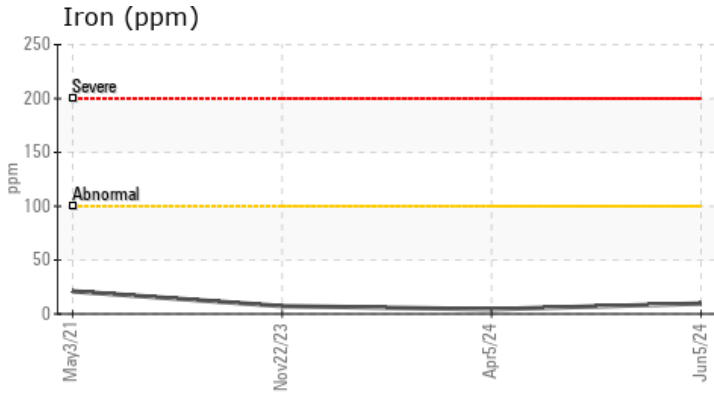
**Depot:** TRAOPA  
**Unique No:** 11073551  
**Signed:** Sean Felton  
**Report Date:** 13 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## 717425 5378 VOLVO L180H 5378 - TRANSMISSION (AUTO)



**Sample No:** VCP447005  
**Oil Type:** VOLVO AUTOMATIC TRANSMISSION FLUID AT102  
**Job No:** 717425



### SAMPLE INFORMATION

Sample Number	<b>VCP447005</b>	DJJ022636	VCP433360	VCP312215
Sample Date	<b>05 Jun 2024</b>	05 Apr 2024	22 Nov 2023	03 May 2021
Machine Hours	<b>8050</b>	7610	6747	626
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Not Changd
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	NORMAL

**TRADEMARK METALS RECYCLING - EVERGLADES**  
 3440 NW 135TH ST  
 OPA LOCKA, FL  
 US 33054  
 Contact: RYAN BOWDEN



### OIL CONDITION

Visc @ 40°C	cSt	<b>27.9</b>	28.0	26.1	28.7
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T:  
 F: (305)681-4914



### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	<b>4</b>	3	5	5
Sodium	ppm	<b>4</b>	3	2	2
Potassium	ppm	<b>4</b>	0	2	<1

### Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the fluid. The condition of the fluid is acceptable for the time in service.



### WEAR METALS

Iron	ppm	<b>127</b>	144	274	50
Copper	ppm	<b>6</b>	3	6	3
Lead	ppm	<b>3</b>	0	0	0
Tin	ppm	<b>1</b>	0	0	0
Aluminum	ppm	<b>1</b>	0	1	<1
Chromium	ppm	<b>1</b>	1	3	<1
Molybdenum	ppm	<b>2</b>	0	<1	<1
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>3</b>	2	5	2
Vanadium	ppm	<b>0</b>	<1	0	0



### ADDITIVES

Calcium	ppm	<b>72</b>	78	108	100
Magnesium	ppm	<b>2</b>	<1	0	<1
Zinc	ppm	<b>9</b>	8	8	17
Phosphorus	ppm	<b>145</b>	165	135	179
Barium	ppm	<b>0</b>	<1	0	0
Boron	ppm	<b>60</b>	70	50	66

**Depot:** TRAOPA  
**Unique No:** 11074442  
**Signed:** Don Baldrige  
**Report Date:** 13 Jun 2024

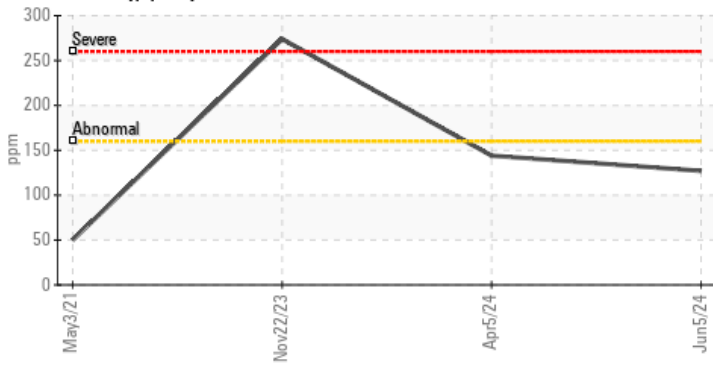


# CONSTRUCTION EQUIPMENT

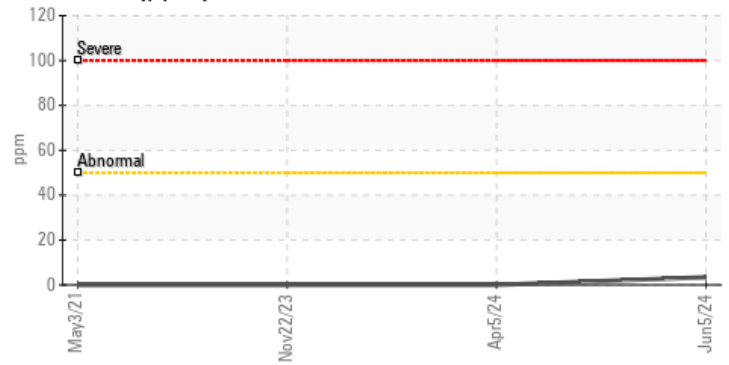


## GRAPHS

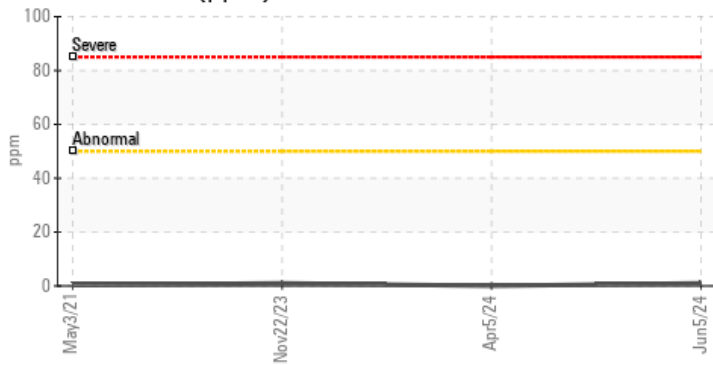
### Iron (ppm)



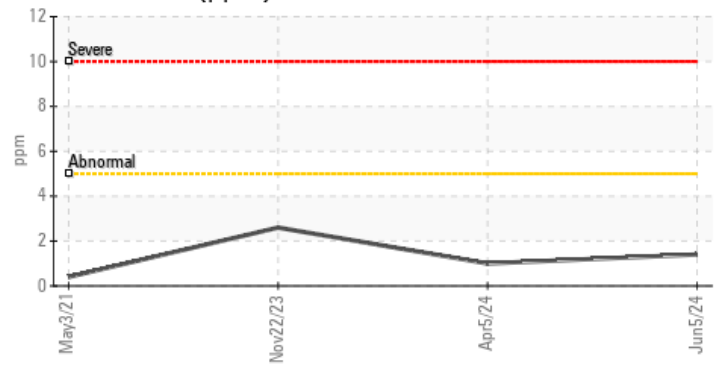
### Lead (ppm)



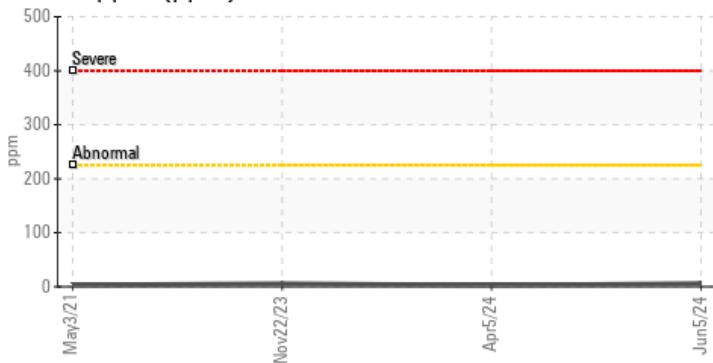
### Aluminum (ppm)



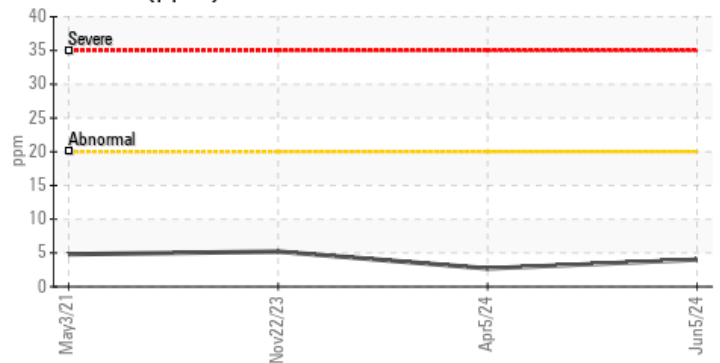
### Chromium (ppm)



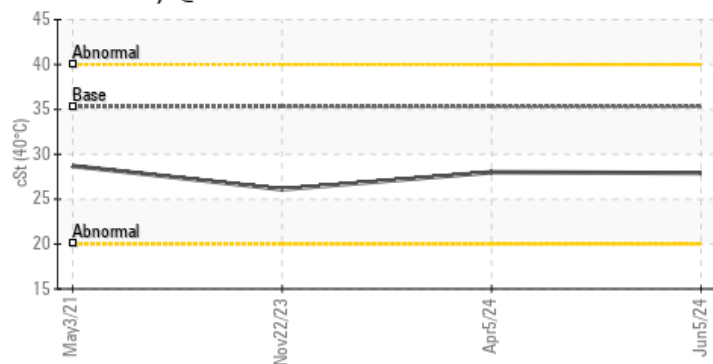
### Copper (ppm)



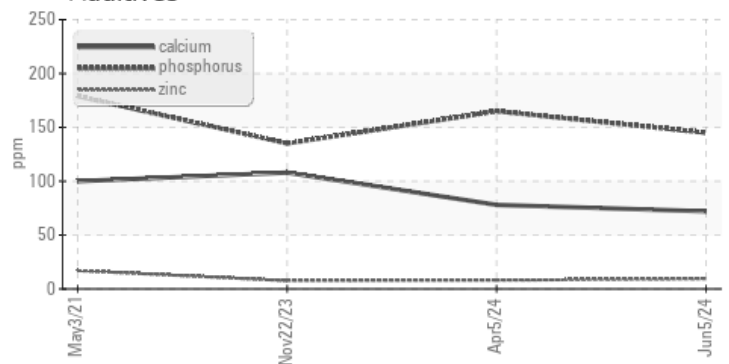
### Silicon (ppm)



### Viscosity @ 40°C



### Additives





# CONSTRUCTION EQUIPMENT

## 717425 5378 VOLVO L180H 5378 - HYDRAULIC SYSTEM



**Sample No:** VCP439980  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** 717425



### SAMPLE INFORMATION

Sample Number	<b>VCP439980</b>	DJJ022637	VCP433355	VCP312209
Sample Date	<b>05 Jun 2024</b>	05 Apr 2024	22 Nov 2023	03 May 2021
Machine Hours	<b>8050</b>	7610	6747	626
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Not Changd</b>	Changed	Changed	Not Changd
Sample Status	<b>NORMAL</b>	ABNORMAL	NORMAL	ABNORMAL

**TRADEMARK METALS RECYCLING - EVERGLADES**  
 3440 NW 135TH ST  
 OPA LOCKA, FL  
 US 33054  
 Contact: RYAN BOWDEN



### OIL CONDITION

Visc @ 40°C	cSt	<b>49.9</b>	50.1	53.0	41.2
Acid Number (AN)	mg KOH/g	<b>0.65</b>	0.71	0.59	0.347

T:  
 F: (305)681-4914



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Particles >4µm		<b>6335</b>	12115	3413	21588
Particles >6µm		<b>1630</b>	3570	762	5474
Particles >14µm		<b>59</b>	270	67	520
ISO 4406:1999 (c)		<b>20/18/13</b>	21/19/15	19/17/13	22/20/16
Silicon	ppm	<b>2</b>	2	3	1
Sodium	ppm	<b>3</b>	1	<1	0
Potassium	ppm	<b>&lt;1</b>	0	2	<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	<b>4</b>	2	6	<1
Copper	ppm	<b>2</b>	<1	3	7
Lead	ppm	<b>0</b>	0	1	1
Tin	ppm	<b>0</b>	<1	0	<1
Aluminum	ppm	<b>0</b>	0	<1	0
Chromium	ppm	<b>2</b>	1	2	<1
Molybdenum	ppm	<b>2</b>	1	3	<1
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	<1	0	0
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>926</b>	954	931	69
Magnesium	ppm	<b>12</b>	14	0	2
Zinc	ppm	<b>618</b>	639	746	415
Phosphorus	ppm	<b>518</b>	532	598	313
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>2</b>	3	4	5

**Depot:** TRAOPA  
**Unique No:** 11073891  
**Signed:** Wes Davis  
**Report Date:** 13 Jun 2024

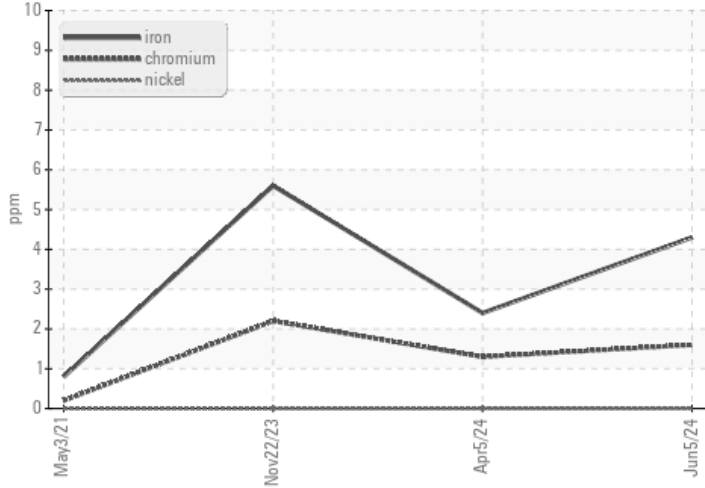


# CONSTRUCTION EQUIPMENT

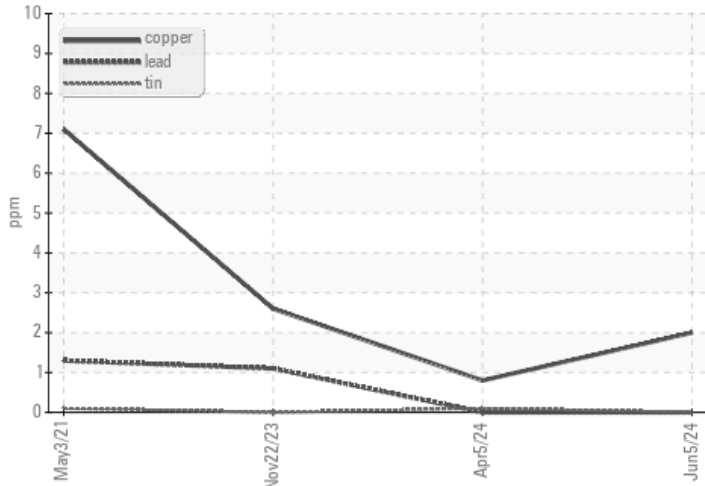


## GRAPHS

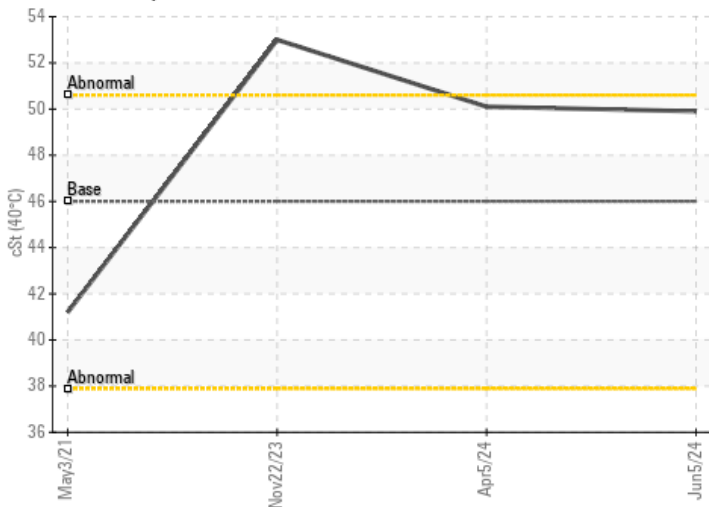
### Ferrous Alloys



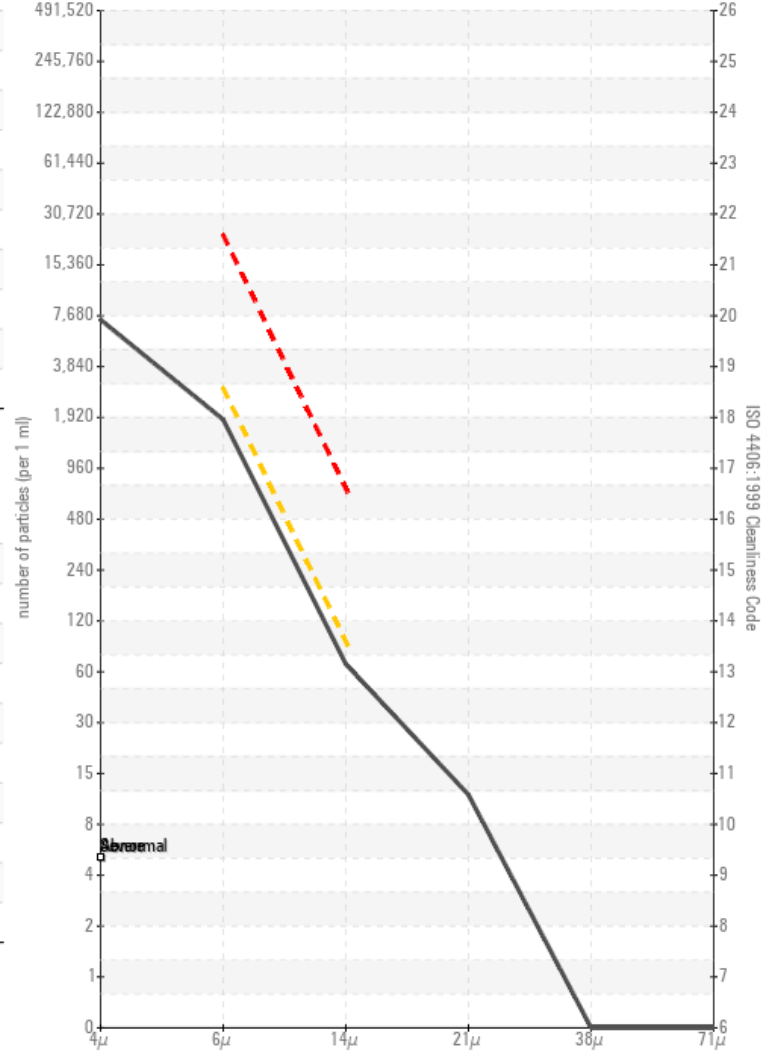
### Non-ferrous Metals



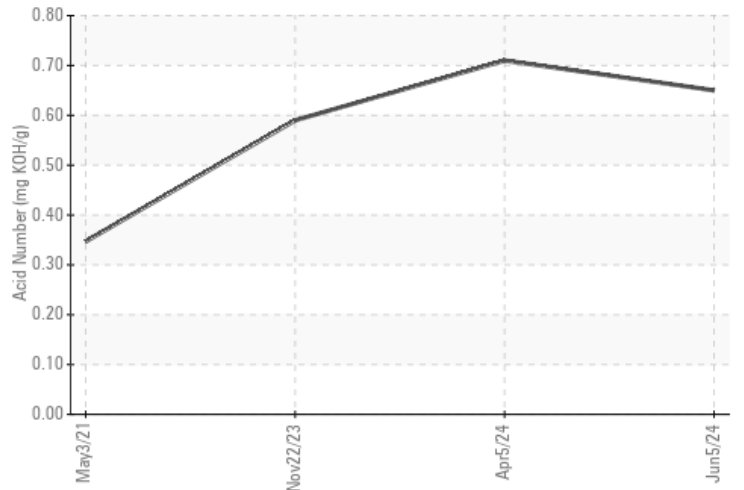
### Viscosity @ 40°C



### Particle Count



### Acid Number





# CONSTRUCTION EQUIPMENT

SPM689436 5378 VOLVO L180H 5378 - FRONT AXLE



**Sample No:** DJJ022704  
**Oil Type:** VOLVO WB 102  
**Job No:** SPM689436



## SAMPLE INFORMATION

Sample Number	<b>DJJ022704</b>	VCP433339	VCP312210	---
Sample Date	<b>05 Apr 2024</b>	22 Nov 2023	03 May 2021	---
Machine Hours	<b>7610</b>	6747	626	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	Changed	Not Changd	---
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	---

**TRADEMARK METALS RECYCLING - EVERGLADES**  
 3440 NW 135TH ST  
 OPA LOCKA, FL  
 US 33054  
 Contact: RYAN BOWDEN



## OIL CONDITION

Visc @ 40°C	cSt	<b>40.7</b>	40.6	39.9	---
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T:  
 F: (305)681-4914



## CONTAMINATION

Water	%	NEG	NEG	NEG	---
Silicon	ppm	<b>16</b>	11	20	---
Sodium	ppm	<b>4</b>	6	19	---
Potassium	ppm	<b>0</b>	2	7	---

## 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 condition of the oil is acceptable for the time in service.



## WEAR METALS

Iron	ppm	<b>109</b>	161	49	---
Copper	ppm	<b>17</b>	50	8	---
Lead	ppm	<b>&lt;1</b>	1	1	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>&lt;1</b>	<1	1	---
Chromium	ppm	<b>2</b>	3	3	---
Molybdenum	ppm	<b>&lt;1</b>	1	4	---
Nickel	ppm	<b>&lt;1</b>	1	<1	---
Titanium	ppm	<b>0</b>	<1	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>3</b>	4	5	---
Vanadium	ppm	<b>&lt;1</b>	0	<1	---



## ADDITIVES

Calcium	ppm	<b>3390</b>	3529	8675	---
Magnesium	ppm	<b>10</b>	0	23	---
Zinc	ppm	<b>1479</b>	1644	3712	---
Phosphorus	ppm	<b>1166</b>	1190	3003	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>41</b>	122	275	---

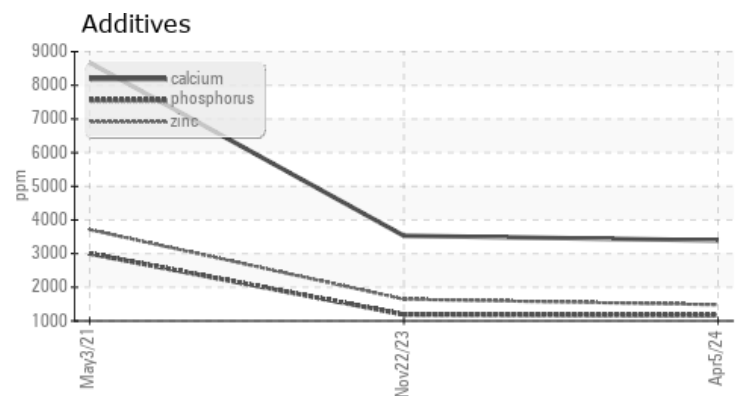
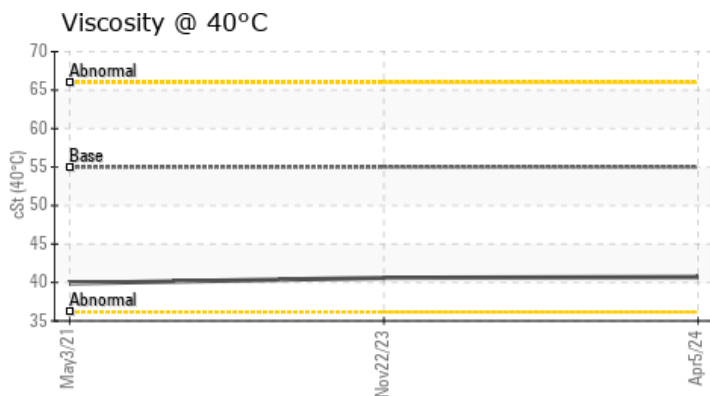
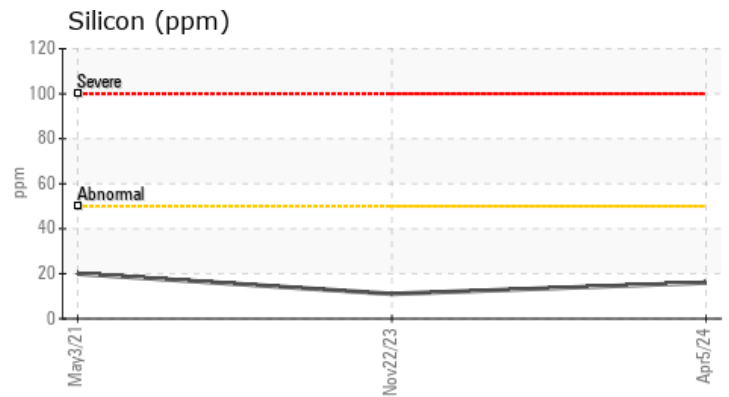
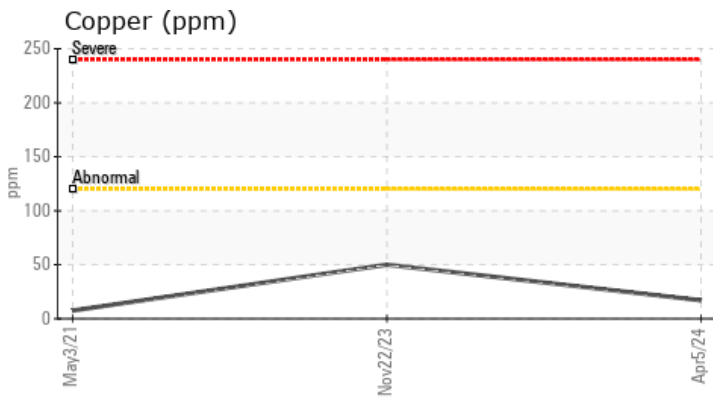
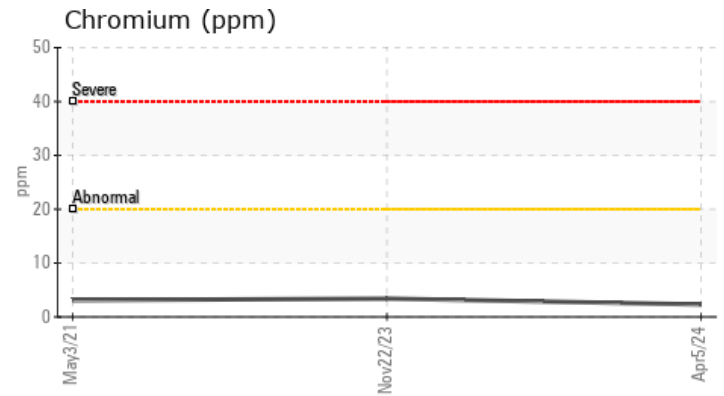
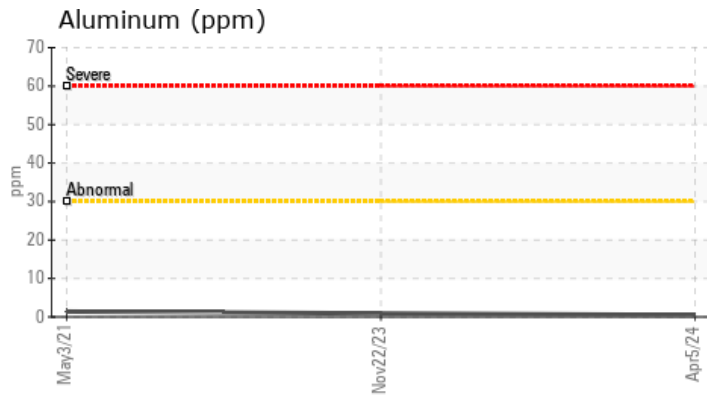
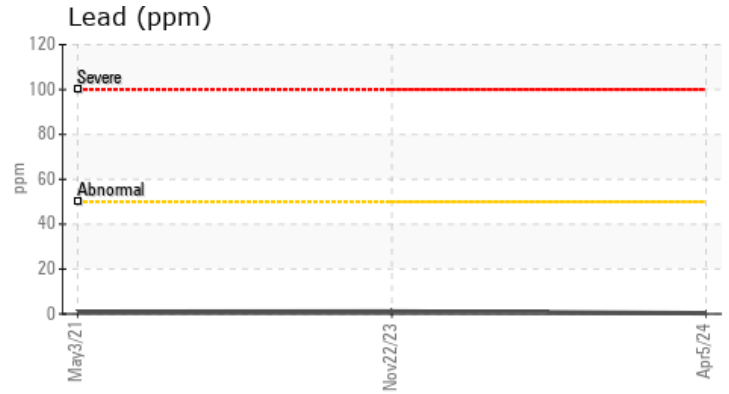
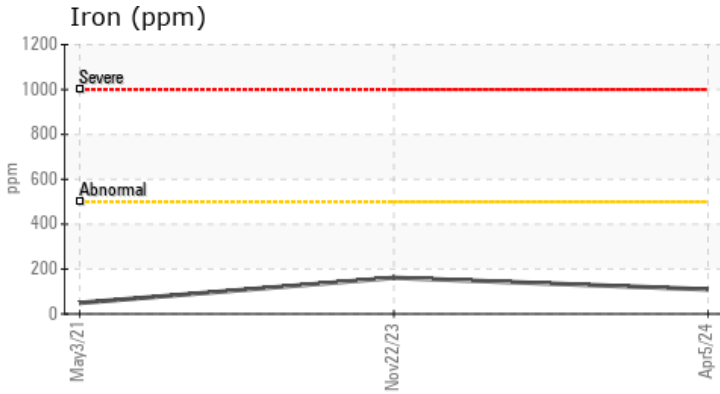
**Depot:** TRAOPA  
**Unique No:** 10969523  
**Signed:** Wes Davis  
**Report Date:** 11 Apr 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS







# CONSTRUCTION EQUIPMENT

717425 5378 VOLVO L180H 5378 - REAR AXLE



**Sample No:** VCP439979  
**Oil Type:** VOLVO WB 102  
**Job No:** 717425



## SAMPLE INFORMATION

Sample Number	<b>VCP439979</b>	DJJ022722	VCP433341	VCP312212
Sample Date	<b>05 Jun 2024</b>	05 Apr 2024	22 Nov 2023	03 May 2021
Machine Hours	<b>8050</b>	7610	6747	626
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Not Changd</b>	Changed	Changed	Not Changd
Sample Status	<b>NORMAL</b>	ABNORMAL	ATTENTION	ABNORMAL

**TRADEMARK METALS RECYCLING - EVERGLADES**  
 3440 NW 135TH ST  
 OPA LOCKA, FL  
 US 33054  
 Contact: RYAN BOWDEN



## OIL CONDITION

Visc @ 40°C	cSt	<b>42.2</b>	51.1	473	39.8
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T:  
 F: (305)681-4914



## CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Silicon	ppm	<b>14</b>	14	11	9
Sodium	ppm	<b>3</b>	3	6	9
Potassium	ppm	<b>1</b>	0	2	2

## 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 condition of the oil is acceptable for the time in service.



## WEAR METALS

Iron	ppm	<b>48</b>	46	124	25
Copper	ppm	<b>8</b>	8	34	4
Lead	ppm	<b>&lt;1</b>	0	<1	<1
Tin	ppm	<b>&lt;1</b>	0	0	<1
Aluminum	ppm	<b>1</b>	<1	<1	<1
Chromium	ppm	<b>&lt;1</b>	<1	3	1
Molybdenum	ppm	<b>0</b>	<1	1	2
Nickel	ppm	<b>&lt;1</b>	<1	1	0
Titanium	ppm	<b>&lt;1</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>2</b>	1	4	2
Vanadium	ppm	<b>0</b>	<1	0	0



## ADDITIVES

Calcium	ppm	<b>3266</b>	3187	3605	3946
Magnesium	ppm	<b>10</b>	7	0	11
Zinc	ppm	<b>1502</b>	1399	1665	1634
Phosphorus	ppm	<b>1245</b>	1118	1191	1359
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>35</b>	32	126	127

**Depot:** TRAOPA  
**Unique No:** 11074412  
**Signed:** Wes Davis  
**Report Date:** 13 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS

