



# CONSTRUCTION EQUIPMENT

## SPM717251 ALPINE VOLVO EC750EHR 391010 - DIESEL ENGINE



**Sample No:** VCP437360  
**Oil Type:** DIESEL ENGINE OIL SAE 15W40  
**Job No:** SPM717251 ALPINE



### SAMPLE INFORMATION

Sample Number	<b>VCP437360</b>	VCP423231	VCP390538	VCP350499
Sample Date	<b>28 May 2024</b>	28 Jul 2023	16 Nov 2022	17 Dec 2021
Machine Hours	<b>2944</b>	1761	1246	1015
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	ABNORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.5</b>	12.5	13.2	13.0
Base Number (BN)	mg KOH/g	<b>9.2</b>	8.0	10.2	8.8
Oxidation (PA)	%	<b>54</b>	64	64	86

### 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	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.4	0.3	0.3
Nitration (PA)	%	<b>50</b>	65	63	68
Sulfation (PA)	%	<b>50</b>	55	57	63
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>3</b>	7	5	14
Sodium	ppm	<b>1</b>	2	4	<1
Potassium	ppm	<b>5</b>	3	2	2



### WEAR METALS

Iron	ppm	<b>6</b>	16	14	18
Copper	ppm	<b>2</b>	9	27	126
Lead	ppm	<b>&lt;1</b>	2	1	7
Tin	ppm	<b>&lt;1</b>	2	<1	1
Aluminum	ppm	<b>2</b>	3	2	2
Chromium	ppm	<b>&lt;1</b>	<1	1	1
Molybdenum	ppm	<b>56</b>	62	55	39
Nickel	ppm	<b>2</b>	4	7	5
Titanium	ppm	<b>&lt;1</b>	0	0	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	<1



### ADDITIVES

Calcium	ppm	<b>971</b>	1148	1235	1742
Magnesium	ppm	<b>943</b>	964	936	480
Zinc	ppm	<b>1225</b>	1311	1315	939
Phosphorus	ppm	<b>1065</b>	1059	1022	849
Barium	ppm	<b>0</b>	0	0	2
Boron	ppm	<b>0</b>	1	11	33

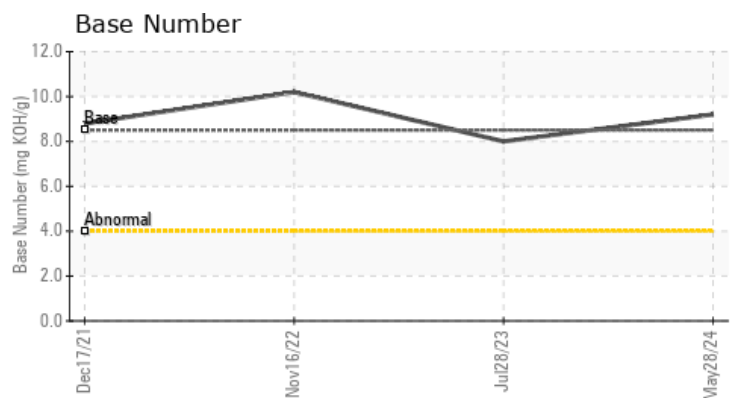
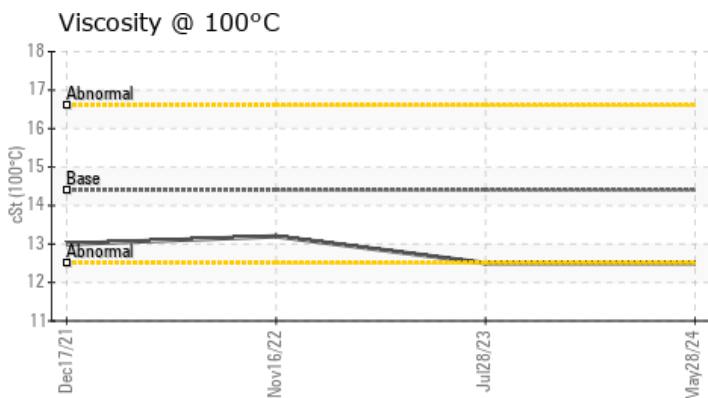
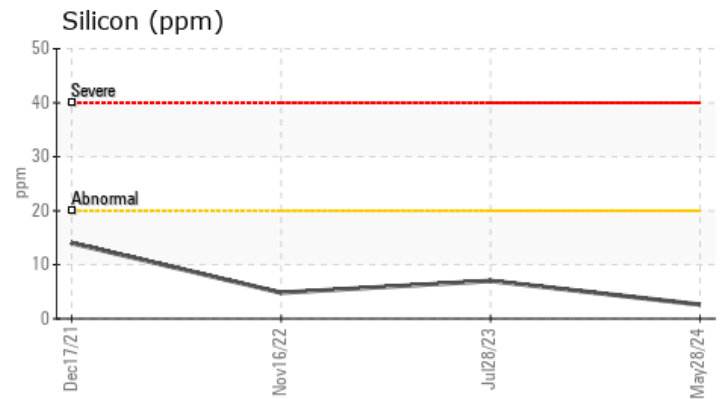
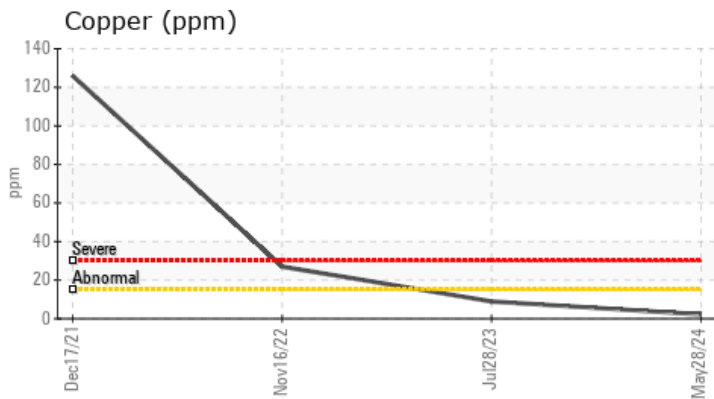
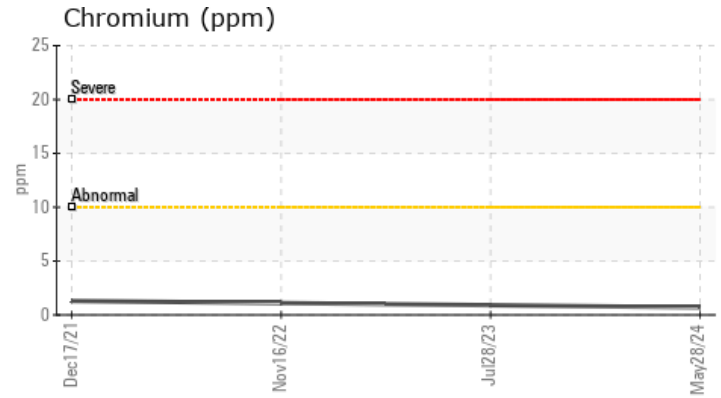
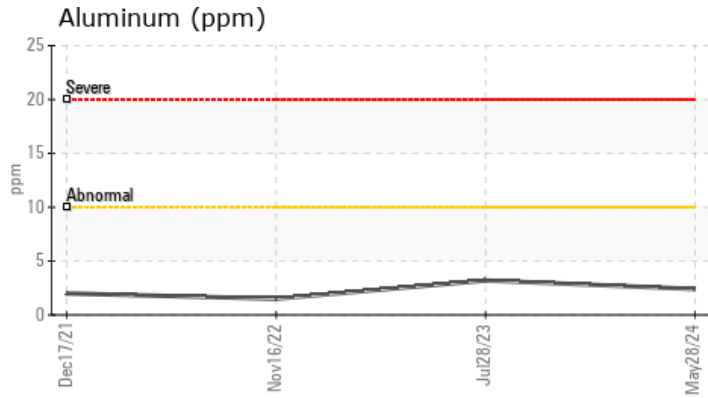
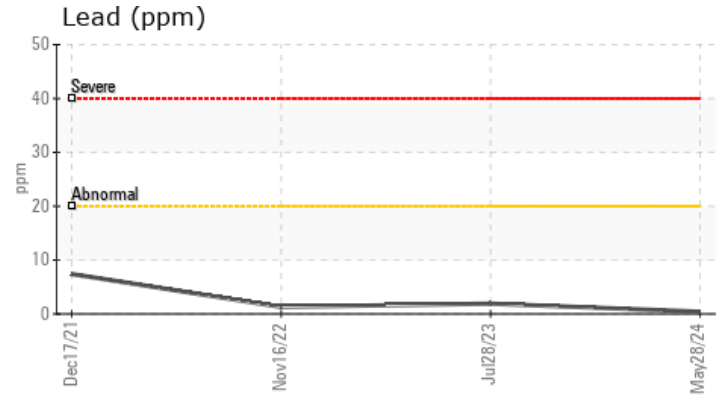
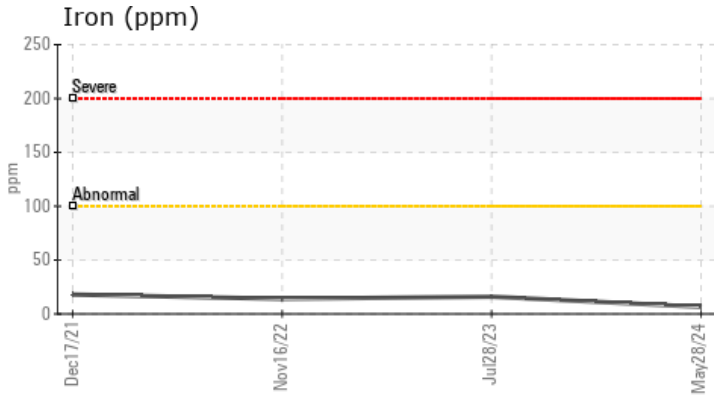
**Depot:** VOLVO8885  
**Unique No:** 11059521  
**Signed:** Wes Davis  
**Report Date:** 04 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## SPM717251 ALPINE VOLVO EC750EHR 391010 - HYDRAULIC SYSTEM



**Sample No:** VCP444423  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** SPM717251 ALPINE



### SAMPLE INFORMATION

Sample Number	<b>VCP444423</b>	VCP422983	VCP390785	VCP415424
Sample Date	<b>28 May 2024</b>	12 Sep 2023	12 Sep 2023	06 Sep 2023
Machine Hours	<b>2944</b>	1989	1985	1979
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Not Chngd</b>	Not Chngd	Not Chngd	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	ABNORMAL	ABNORMAL

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### OIL CONDITION

Visc @ 40°C	cSt	<b>41.4</b>	41.9	42.1	43.1
Acid Number (AN)	mg KOH/g	<b>0.42</b>	0.39	0.38	0.47



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	▲ 0.251	▲ 0.854
Particles >4µm		▲ <b>144954</b>	■ 34593	---	---
Particles >6µm		● <b>13144</b>	■ 362	---	---
Particles >14µm		■ <b>287</b>	■ 11	---	---
ISO 4406:1999 (c)		<b>24/21/15</b>	22/16/11	---	---
Silicon	ppm	■ <b>0</b>	■ 1	■ 1	■ 3
Sodium	ppm	■ <b>2</b>	■ 1	■ <1	■ 2
Potassium	ppm	■ <b>0</b>	■ <1	■ 1	■ 1

### Diagnosis

The filter 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 silt (particulates < 14 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>9</b>	■ 6	■ 6	■ 14
Copper	ppm	■ <b>12</b>	■ 7	■ 7	■ 11
Lead	ppm	■ <b>0</b>	■ 0	■ 0	■ <1
Tin	ppm	■ <b>0</b>	■ 0	■ 0	■ <1
Aluminum	ppm	■ <b>0</b>	■ <1	■ <1	■ <1
Chromium	ppm	■ <b>&lt;1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	■ <b>0</b>	■ 0	■ 0	■ <1
Nickel	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	■ <b>0</b>	■ 0	■ 0	■ <1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	■ <b>204</b>	■ 138	■ 134	■ 212
Magnesium	ppm	■ <b>4</b>	■ 5	■ 4	■ 5
Zinc	ppm	■ <b>491</b>	■ 497	■ 506	■ 550
Phosphorus	ppm	■ <b>417</b>	■ 412	■ 417	■ 451
Barium	ppm	■ <b>0</b>	■ 0	■ 0	■ 0
Boron	ppm	■ <b>0</b>	■ 0	■ 0	■ 0

**Depot:** VOLVO8885  
**Unique No:** 11059693  
**Signed:** Wes Davis  
**Report Date:** 04 Jun 2024

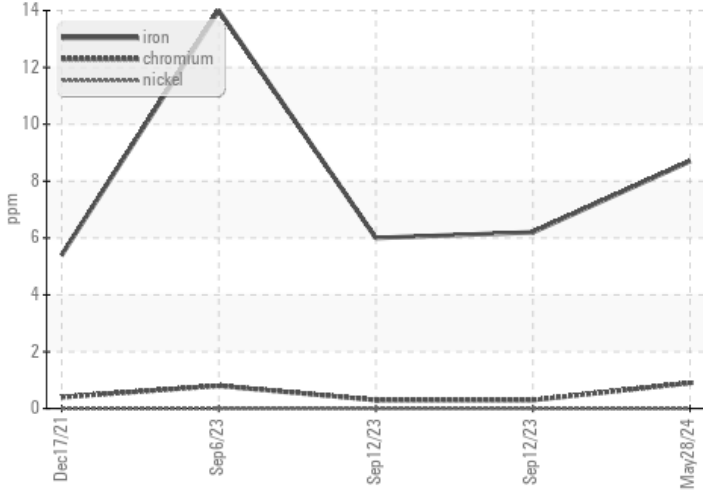


# CONSTRUCTION EQUIPMENT

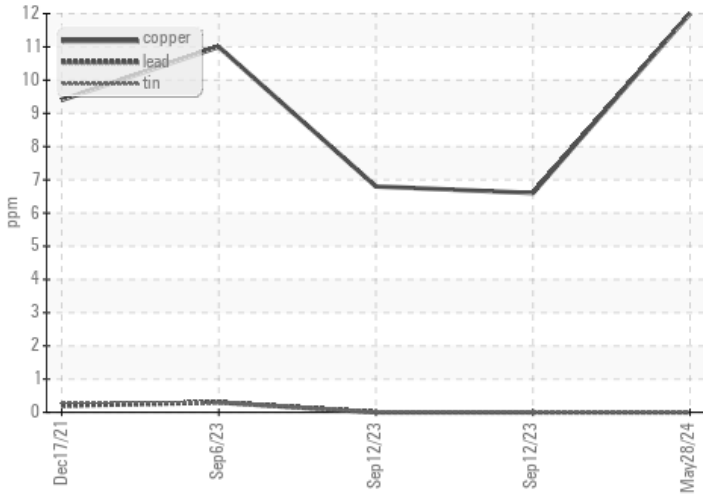


## GRAPHS

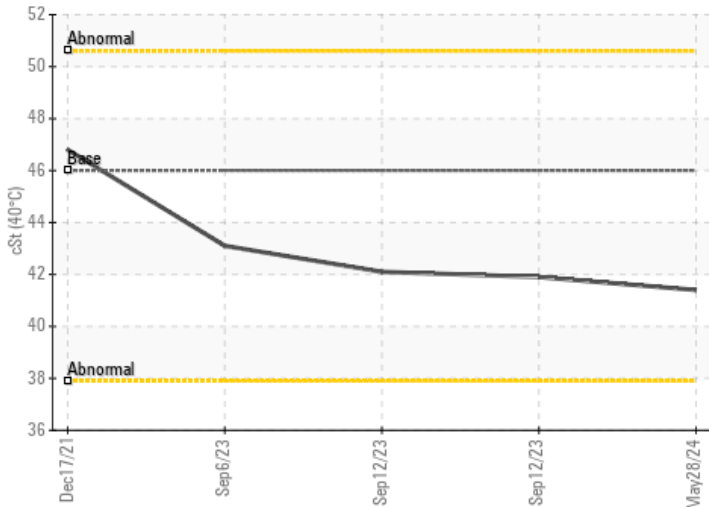
### Ferrous Alloys



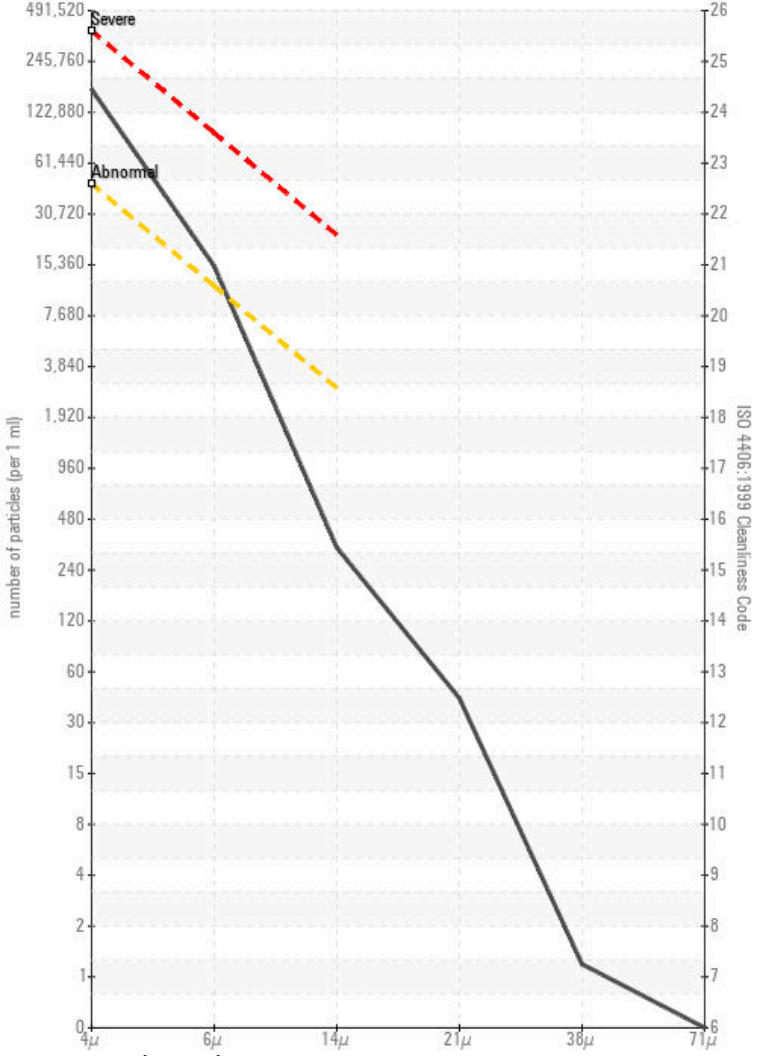
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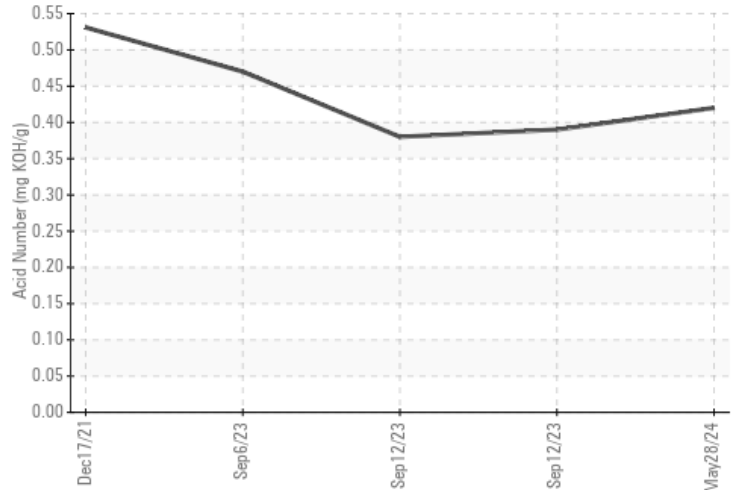
### Viscosity @ 40°C



### Particle Count



### Acid Number





# CONSTRUCTION EQUIPMENT

## SPM717251 ALPINE VOLVO EC750EHR 391010 - LEFT SWING DRIVE



**Sample No:** VCP444421  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM717251 ALPINE



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### SAMPLE INFORMATION

Sample Number	<b>VCP444421</b>	VCP423224	VCP350500	---
Sample Date	<b>28 May 2024</b>	28 Jul 2023	17 Dec 2021	---
Machine Hours	<b>2944</b>	1761	1015	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	Not Changd	Changed	---
Sample Status	<b>NORMAL</b>	ABNORMAL	NORMAL	---

### OIL CONDITION

Visc @ 40°C	cSt	<b>148</b>	195	178	---
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### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Silicon	ppm	<b>12</b>	20	12	---
Sodium	ppm	<b>&lt;1</b>	0	2	---
Potassium	ppm	<b>0</b>	1	0	---

### WEAR METALS

Iron	ppm	<b>359</b>	59	187	---
Copper	ppm	<b>5</b>	4	12	---
Lead	ppm	<b>0</b>	<1	<1	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>&lt;1</b>	2	1	---
Chromium	ppm	<b>2</b>	<1	2	---
Molybdenum	ppm	<b>2</b>	1	<1	---
Nickel	ppm	<b>0</b>	<1	0	---
Titanium	ppm	<b>0</b>	0	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>3</b>	<1	3	---
Vanadium	ppm	<b>0</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>495</b>	1828	8	---
Magnesium	ppm	<b>43</b>	20	<1	---
Zinc	ppm	<b>216</b>	792	18	---
Phosphorus	ppm	<b>640</b>	668	297	---
Barium	ppm	<b>0</b>	2	3	---
Boron	ppm	<b>0</b>	2	11	---

### 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.

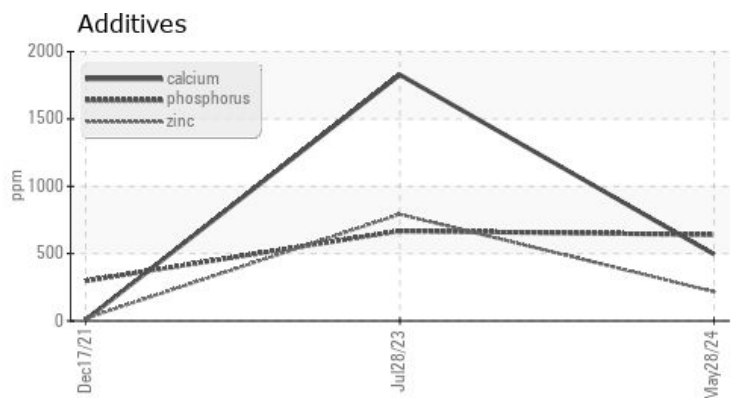
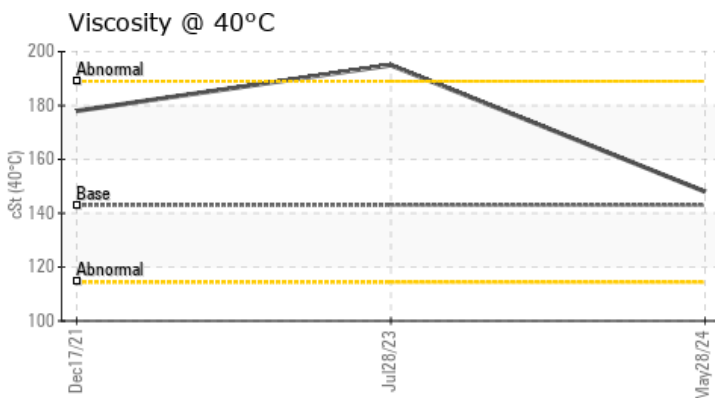
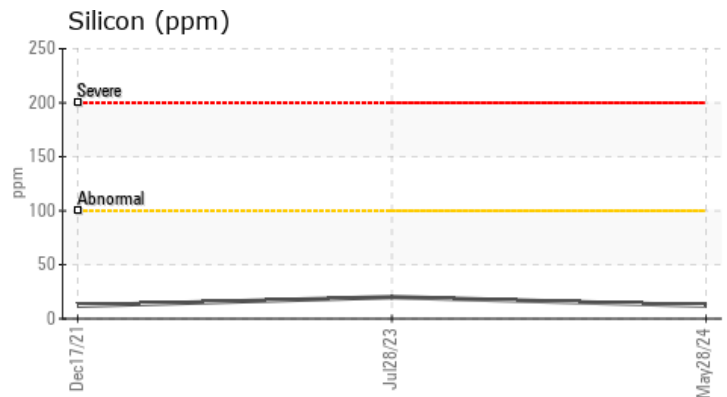
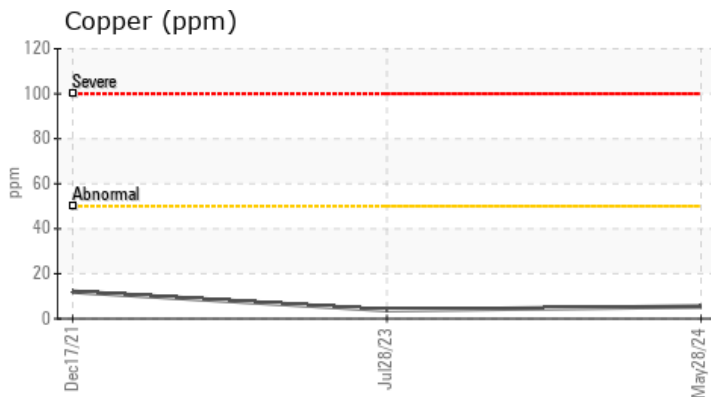
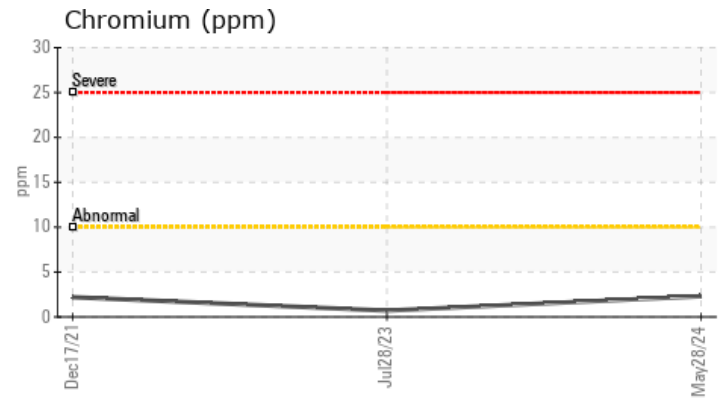
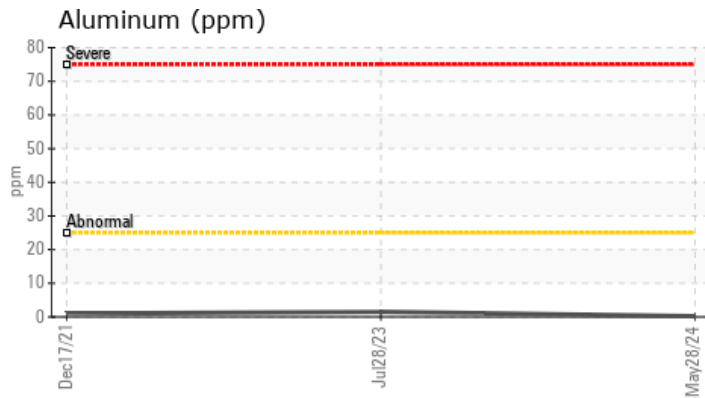
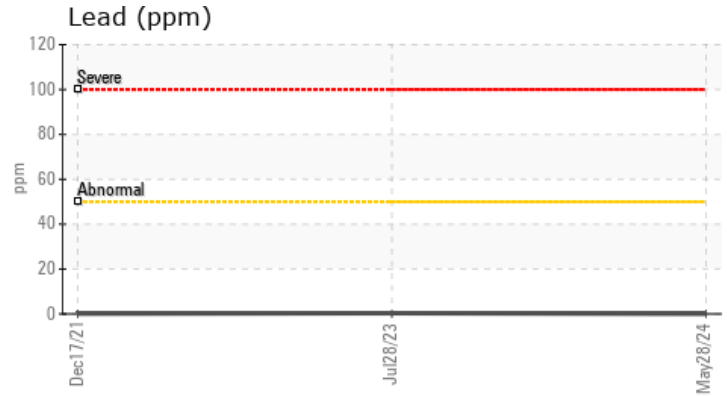
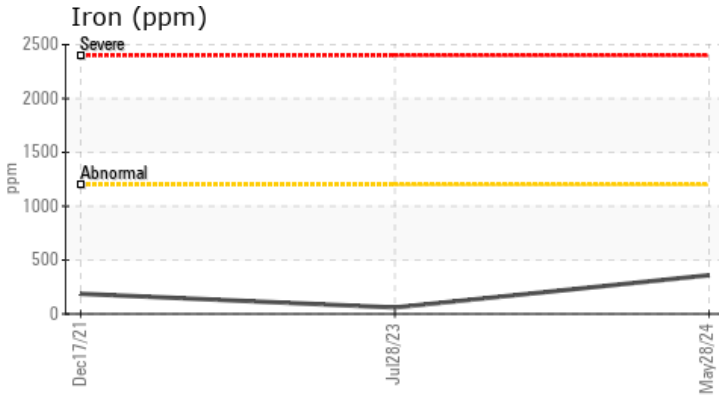
**Depot:** VOLVO8885  
**Unique No:** 11060106  
**Signed:** Don Baldrige  
**Report Date:** 05 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## SPM717251 ALPINE VOLVO EC750EHR 391010 - RIGHT SWING DRIVE



**Sample No:** VCP453615  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM717251 ALPINE



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### SAMPLE INFORMATION

Sample Number	<b>VCP453615</b>	VCP423234	VCP350501	---
Sample Date	<b>28 May 2024</b>	28 Jul 2023	17 Dec 2021	---
Machine Hours	<b>2944</b>	1761	1015	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	Not Changd	Not Changd	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

### OIL CONDITION

Visc @ 40°C	cSt	<b>144</b>	186	178	---
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### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Silicon	ppm	<b>6</b>	13	12	---
Sodium	ppm	<b>&lt;1</b>	0	2	---
Potassium	ppm	<b>0</b>	1	<1	---

### WEAR METALS

Iron	ppm	<b>186</b>	140	275	---
Copper	ppm	<b>5</b>	7	12	---
Lead	ppm	<b>0</b>	<1	0	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>0</b>	1	1	---
Chromium	ppm	<b>1</b>	2	3	---
Molybdenum	ppm	<b>&lt;1</b>	<1	<1	---
Nickel	ppm	<b>0</b>	<1	0	---
Titanium	ppm	<b>0</b>	0	0	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>2</b>	2	3	---
Vanadium	ppm	<b>0</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>241</b>	1003	6	---
Magnesium	ppm	<b>9</b>	9	1	---
Zinc	ppm	<b>111</b>	439	20	---
Phosphorus	ppm	<b>517</b>	485	293	---
Barium	ppm	<b>0</b>	4	2	---
Boron	ppm	<b>0</b>	0	11	---

### 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.

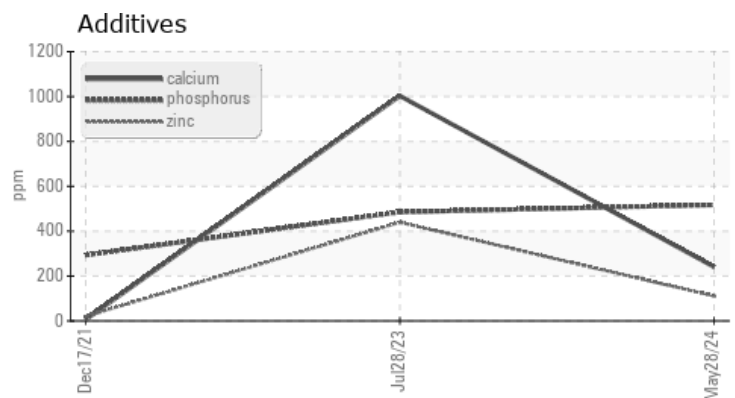
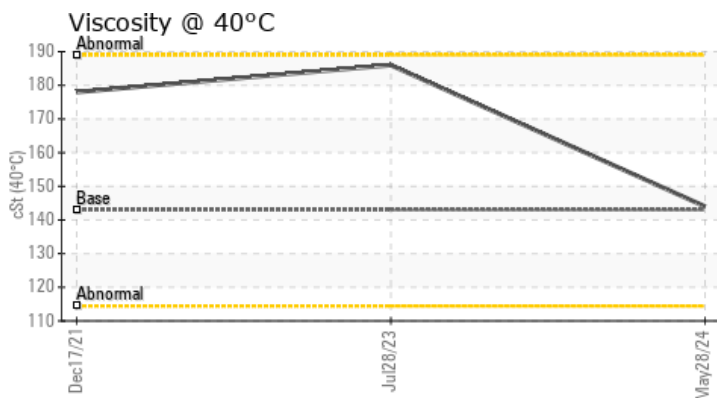
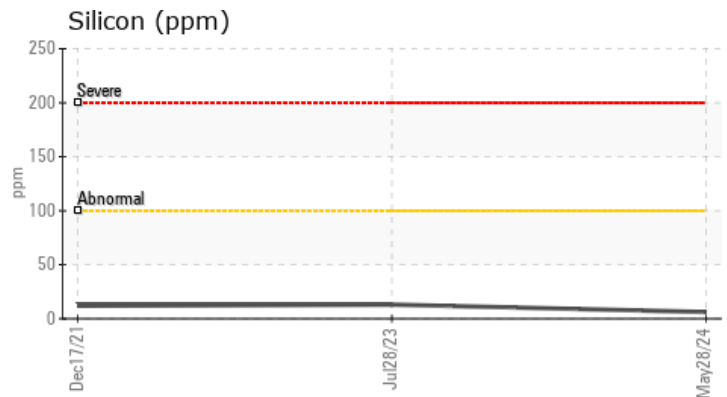
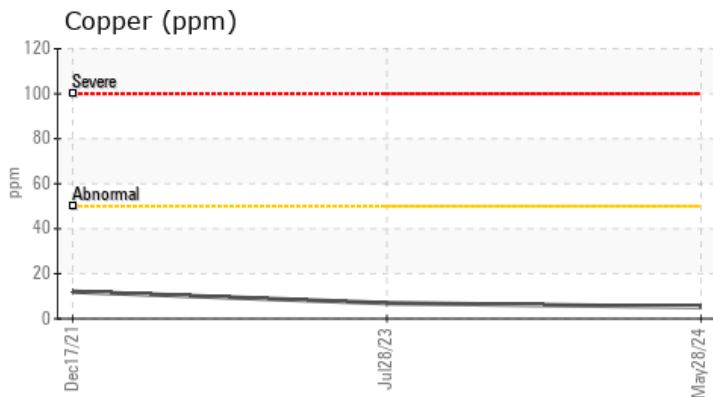
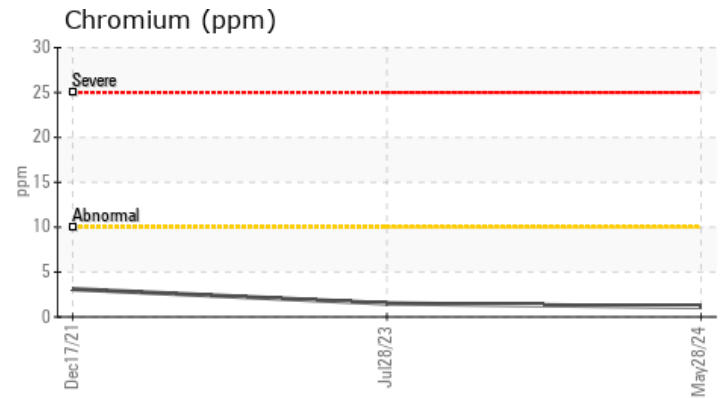
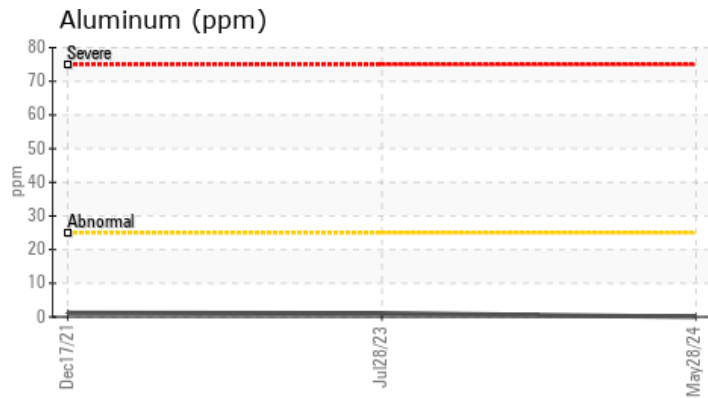
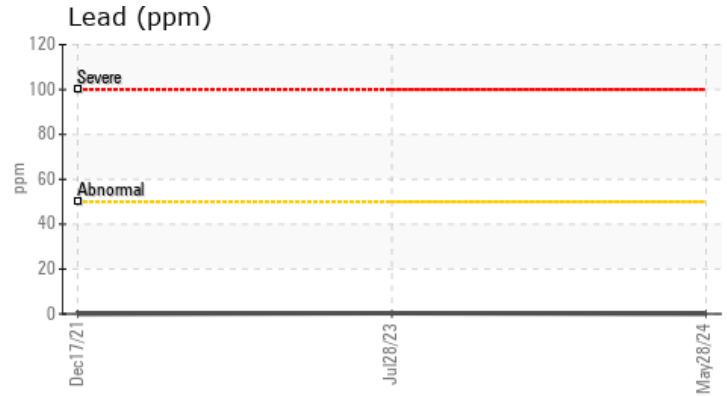
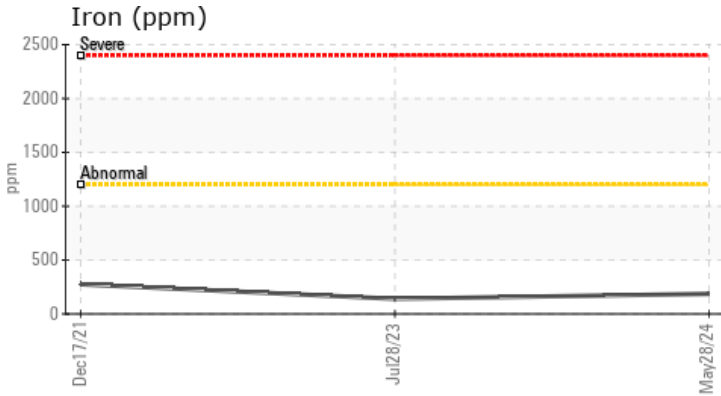
**Depot:** VOLVO8885  
**Unique No:** 11060108  
**Signed:** Wes Davis  
**Report Date:** 04 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS







# CONSTRUCTION EQUIPMENT

SPM717251 ALPINE VOLVO EC750EHR 391010 - REAR LEFT FINAL DRIVE



**Sample No:** VCP453620  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM717251 ALPINE



## SAMPLE INFORMATION

Sample Number	<b>VCP453620</b>	VCP420685	VCP350530	---
Sample Date	<b>28 May 2024</b>	28 Jul 2023	17 Dec 2021	---
Machine Hours	<b>2944</b>	1761	558	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Not Chngd</b>	Not Chngd	Not Chngd	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

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## OIL CONDITION

Visc @ 40°C	cSt	<b>148</b>	180	179	---
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## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Silicon	ppm	<b>15</b>	10	8	---
Sodium	ppm	<b>2</b>	<1	2	---
Potassium	ppm	<b>3</b>	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 oil. The condition of the oil is acceptable for the time in service.



## WEAR METALS

Iron	ppm	<b>224</b>	155	119	---
Copper	ppm	<b>&lt;1</b>	<1	<1	---
Lead	ppm	<b>0</b>	0	0	---
Tin	ppm	<b>&lt;1</b>	0	<1	---
Aluminum	ppm	<b>2</b>	1	<1	---
Chromium	ppm	<b>3</b>	2	2	---
Molybdenum	ppm	<b>&lt;1</b>	<1	<1	---
Nickel	ppm	<b>0</b>	<1	0	---
Titanium	ppm	<b>&lt;1</b>	<1	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>3</b>	3	2	---
Vanadium	ppm	<b>&lt;1</b>	0	0	---



## ADDITIVES

Calcium	ppm	<b>22</b>	35	20	---
Magnesium	ppm	<b>4</b>	2	2	---
Zinc	ppm	<b>16</b>	19	15	---
Phosphorus	ppm	<b>492</b>	432	433	---
Barium	ppm	<b>10</b>	21	21	---
Boron	ppm	<b>0</b>	0	11	---

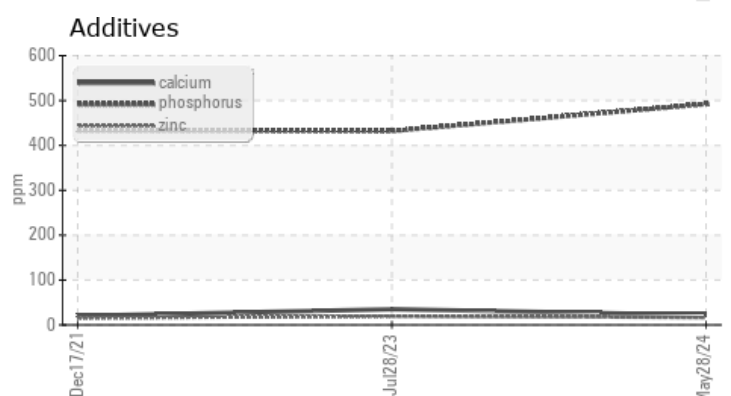
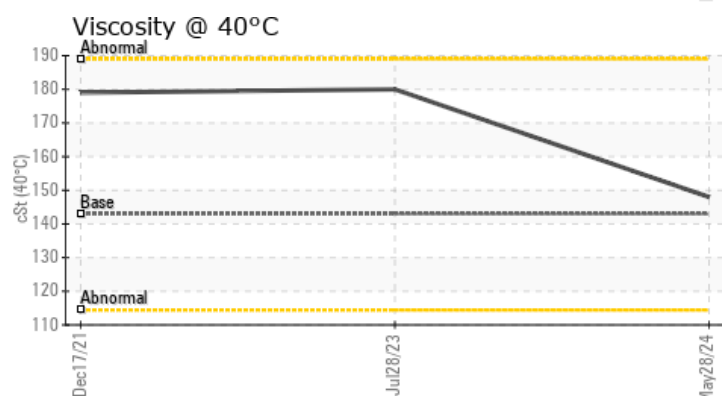
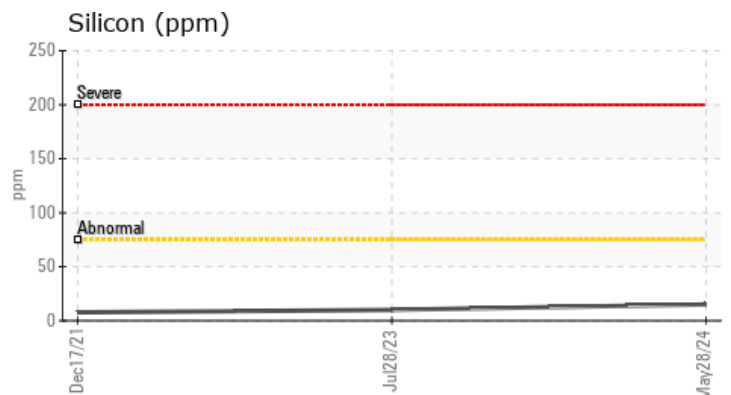
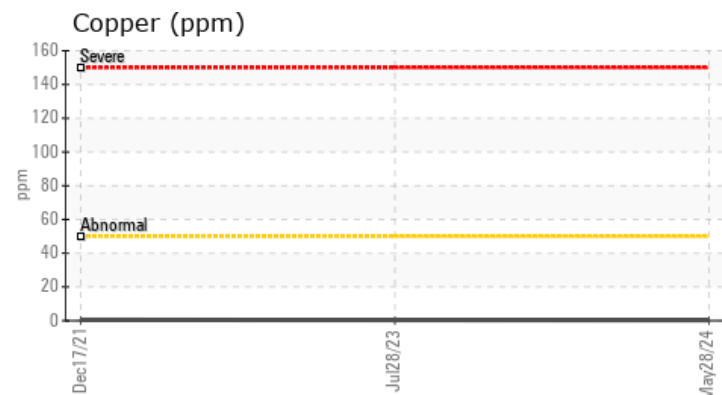
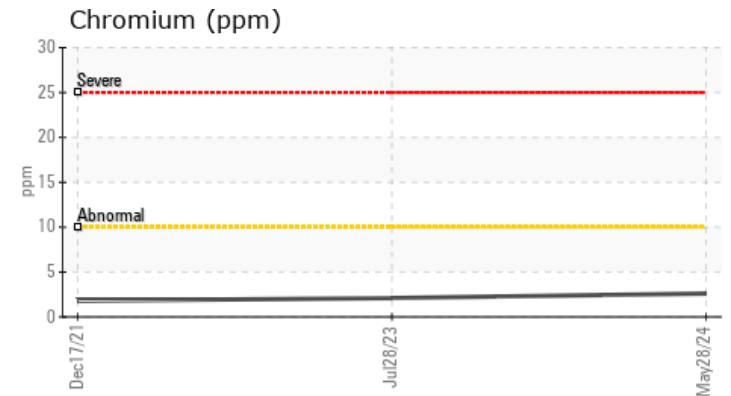
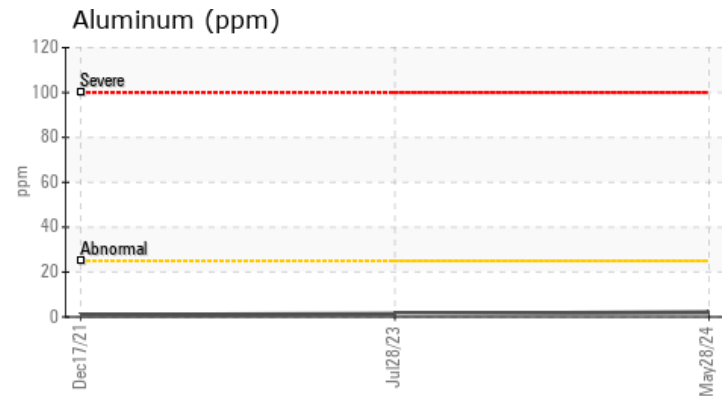
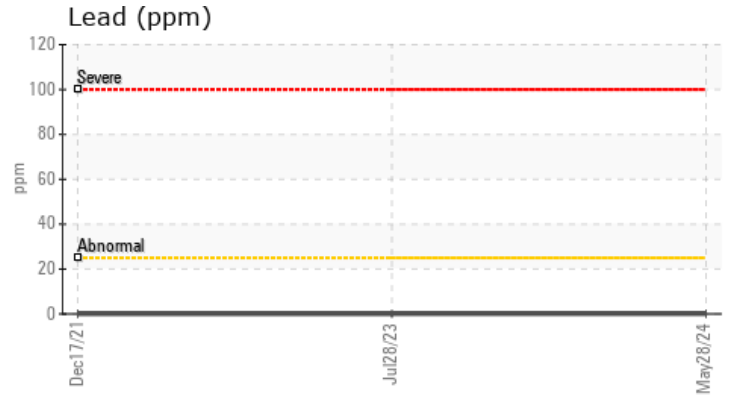
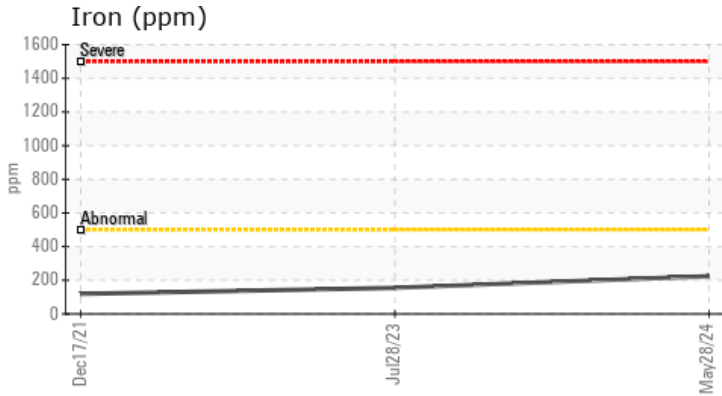
**Depot:** VOLVO8885  
**Unique No:** 11057877  
**Signed:** Wes Davis  
**Report Date:** 31 May 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

SPM717251 ALPINE VOLVO EC750EHR 391010 - REAR RIGHT FINAL DRIVE



**Sample No:** VCP446966  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM717251 ALPINE



## SAMPLE INFORMATION

Sample Number	<b>VCP446966</b>	VCP423232	VCP350527	---
Sample Date	<b>28 May 2024</b>	28 Jul 2023	17 Dec 2021	---
Machine Hours	<b>2944</b>	1761	558	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Not Chngd</b>	Not Chngd	Not Chngd	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

**ALTA EQUIPMENT CO - ORLAND PARK**  
5000 INDUSTRIAL HWY  
GARY, IN  
US 46406  
Contact: MARK DEROSA  
mark.derosa@altg.com  
T: (248)356-5200  
F:



## OIL CONDITION

Visc @ 40°C	cSt	<b>141</b>	181	183	---
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## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Silicon	ppm	<b>6</b>	9	11	---
Sodium	ppm	<b>1</b>	<1	2	---
Potassium	ppm	<b>0</b>	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 oil. The condition of the oil is acceptable for the time in service.



## WEAR METALS

Iron	ppm	<b>119</b>	149	130	---
Copper	ppm	<b>0</b>	<1	<1	---
Lead	ppm	<b>0</b>	0	0	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>1</b>	1	2	---
Chromium	ppm	<b>&lt;1</b>	2	2	---
Molybdenum	ppm	<b>1</b>	<1	<1	---
Nickel	ppm	<b>0</b>	<1	0	---
Titanium	ppm	<b>0</b>	<1	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>1</b>	3	2	---
Vanadium	ppm	<b>0</b>	0	0	---



## ADDITIVES

Calcium	ppm	<b>80</b>	14	10	---
Magnesium	ppm	<b>14</b>	2	2	---
Zinc	ppm	<b>30</b>	12	9	---
Phosphorus	ppm	<b>439</b>	430	437	---
Barium	ppm	<b>2</b>	22	21	---
Boron	ppm	<b>0</b>	0	12	---

**Depot:** VOLVO8885  
**Unique No:** 11060111  
**Signed:** Wes Davis  
**Report Date:** 04 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS

