



# CONSTRUCTION EQUIPMENT

SPM703638 ALPINE DEM VOLVO EC750E 314070 - DIESEL ENGINE



**Sample No:** VCP438292  
**Oil Type:** DIESEL ENGINE OIL SAE 15W40  
**Job No:** SPM703638 ALPINE DEM



**ALTA EQUIPMENT CO - ORLAND PARK**  
 5000 INDUSTRIAL HWY  
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## SAMPLE INFORMATION

Sample Number	VCP438292	VCP415204	---	---
Sample Date	30 Apr 2024	28 Sep 2023	---	---
Machine Hours	2591	1522	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ATTENTION	NORMAL	---	---



## OIL CONDITION

Visc @ 100°C	cSt	11.7	12.9	---	---
Base Number (BN)	mg KOH/g	7.8	10.7	---	---
Oxidation (PA)	%	59	78	---	---



## CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.8	1.2	---	---
Nitration (PA)	%	56	65	---	---
Sulfation (PA)	%	57	64	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	0.4	<1.0	---	---
Silicon	ppm	4	9	---	---
Sodium	ppm	1	3	---	---
Potassium	ppm	<1	2	---	---



## WEAR METALS

Iron	ppm	13	28	---	---
Copper	ppm	2	11	---	---
Lead	ppm	0	<1	---	---
Tin	ppm	<1	1	---	---
Aluminum	ppm	3	2	---	---
Chromium	ppm	<1	<1	---	---
Molybdenum	ppm	49	45	---	---
Nickel	ppm	1	3	---	---
Titanium	ppm	0	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	0	<1	---	---
Vanadium	ppm	0	0	---	---



## ADDITIVES

Calcium	ppm	970	1730	---	---
Magnesium	ppm	817	545	---	---
Zinc	ppm	1186	1153	---	---
Phosphorus	ppm	998	944	---	---
Barium	ppm	0	0	---	---
Boron	ppm	2	47	---	---

## Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. 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.

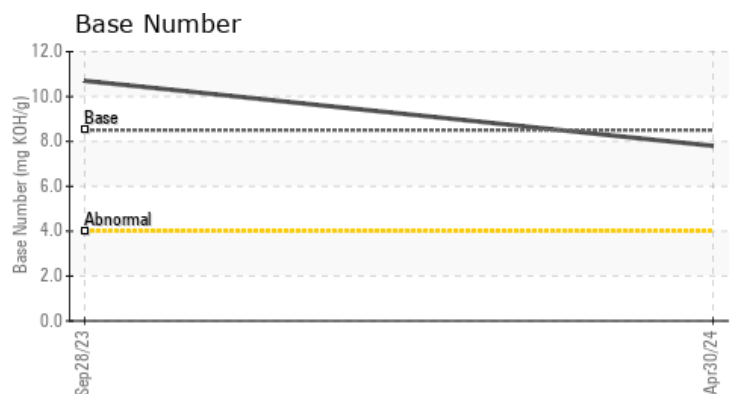
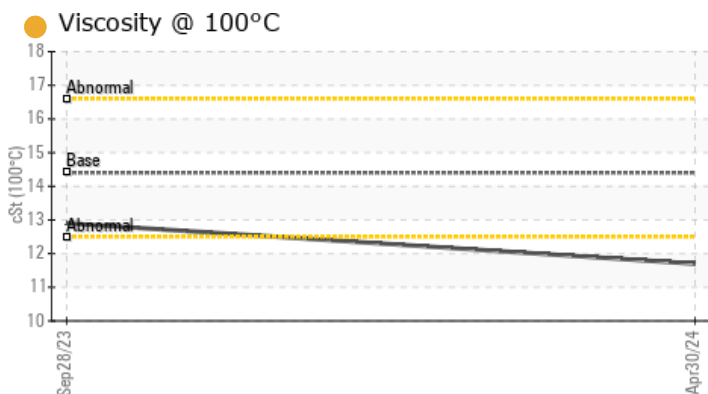
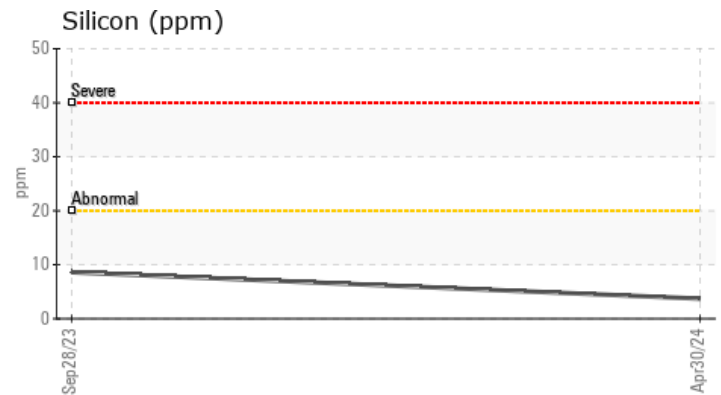
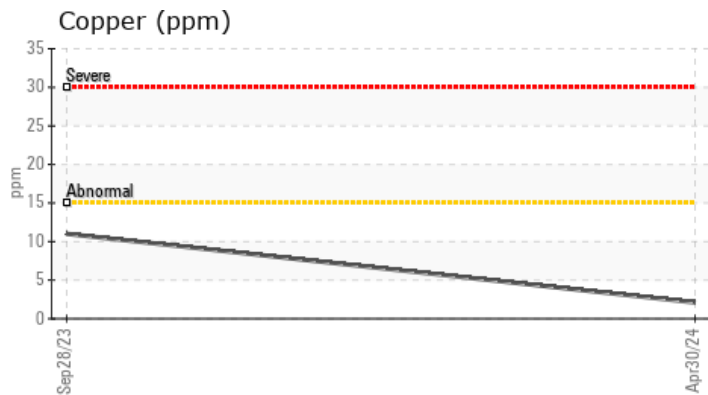
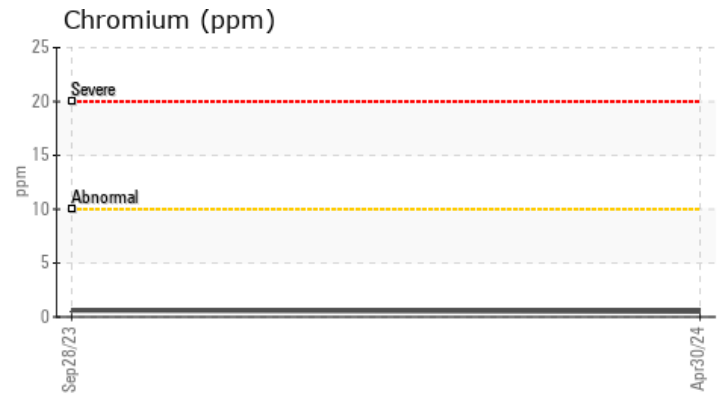
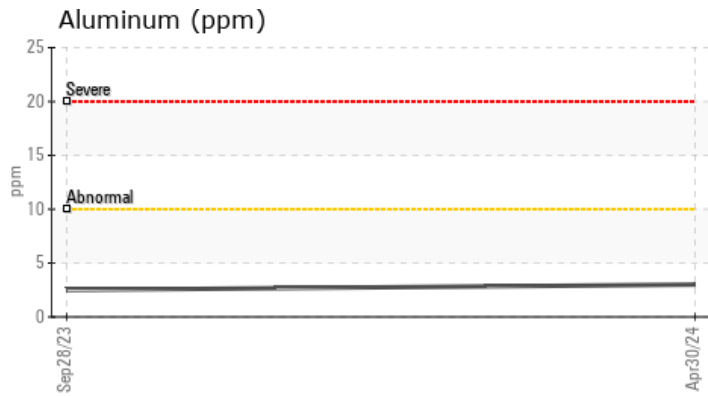
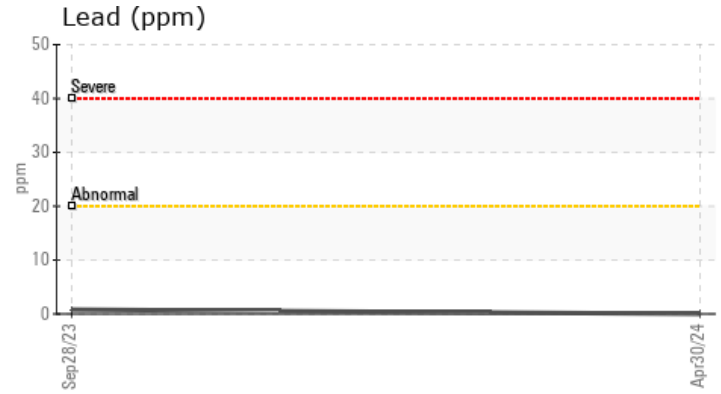
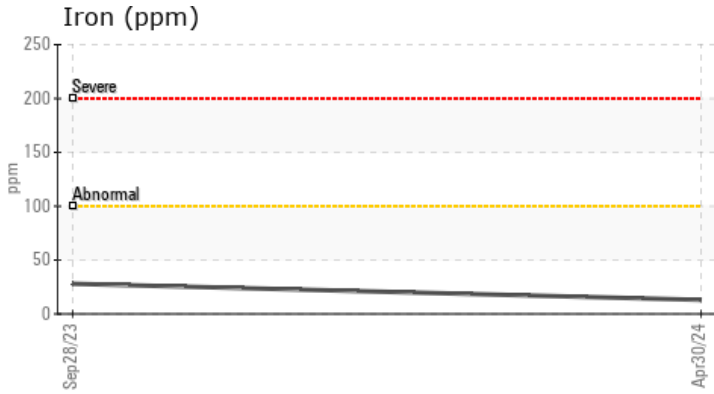
**Depot:** VOLVO8885  
**Unique No:** 11084084  
**Signed:** Sean Felton  
**Report Date:** 19 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

## SPM703638 ALPINE DEM VOLVO EC750E 314070 - HYDRAULIC SYSTEM



**Sample No:** VCP438290  
**Oil Type:** VOLVO SUPER HYDRAULIC OIL 46  
**Job No:** SPM703638 ALPINE DEM



**ALTA EQUIPMENT CO - ORLAND PARK**  
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### SAMPLE INFORMATION

Sample Number	VCP438290	---	---	---
Sample Date	30 Apr 2024	---	---	---
Machine Hours	2591	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

### OIL CONDITION

Visc @ 40°C	cSt	█ 43.3	---	---	---
Acid Number (AN)	mg KOH/g	█ 0.36	---	---	---

### CONTAMINATION

Water	%	NEG	---	---	---
Particles >4µm		█ 9507	---	---	---
Particles >6µm		█ 2696	---	---	---
Particles >14µm		█ 114	---	---	---
ISO 4406:1999 (c)		20/19/14	---	---	---
Silicon	ppm	█ 2	---	---	---
Sodium	ppm	█ <1	---	---	---
Potassium	ppm	█ <1	---	---	---

### WEAR METALS

Iron	ppm	█ 6	---	---	---
Copper	ppm	█ 4	---	---	---
Lead	ppm	█ <1	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 2	---	---	---
Chromium	ppm	█ 2	---	---	---
Molybdenum	ppm	█ 1	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	0	---	---	---

### ADDITIVES

Calcium	ppm	█ 86	---	---	---
Magnesium	ppm	█ 11	---	---	---
Zinc	ppm	█ 438	---	---	---
Phosphorus	ppm	█ 337	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	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.

**Depot:** VOLVO8885  
**Unique No:** 11084399  
**Signed:** Wes Davis  
**Report Date:** 18 Jun 2024

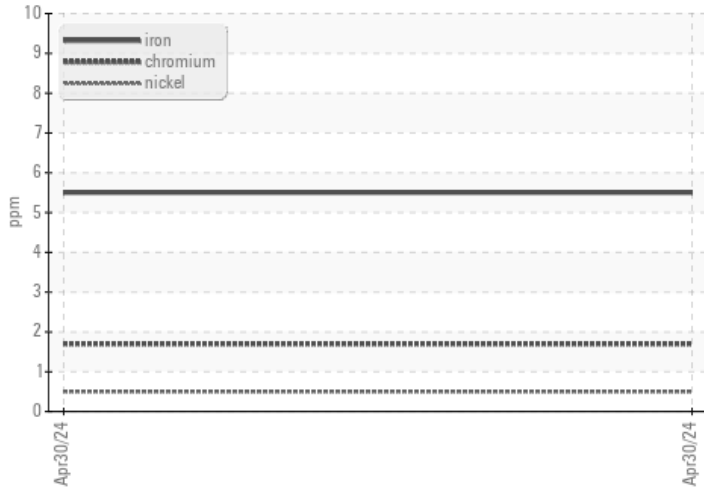


# CONSTRUCTION EQUIPMENT

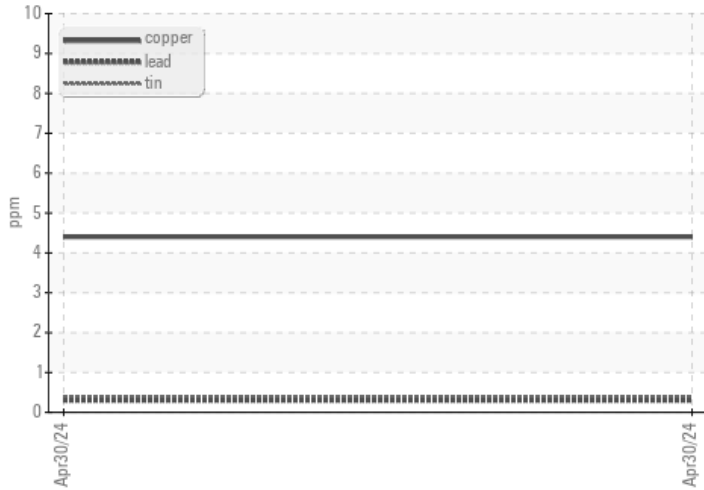


## VOLVO GRAPHS

### Ferrous Alloys



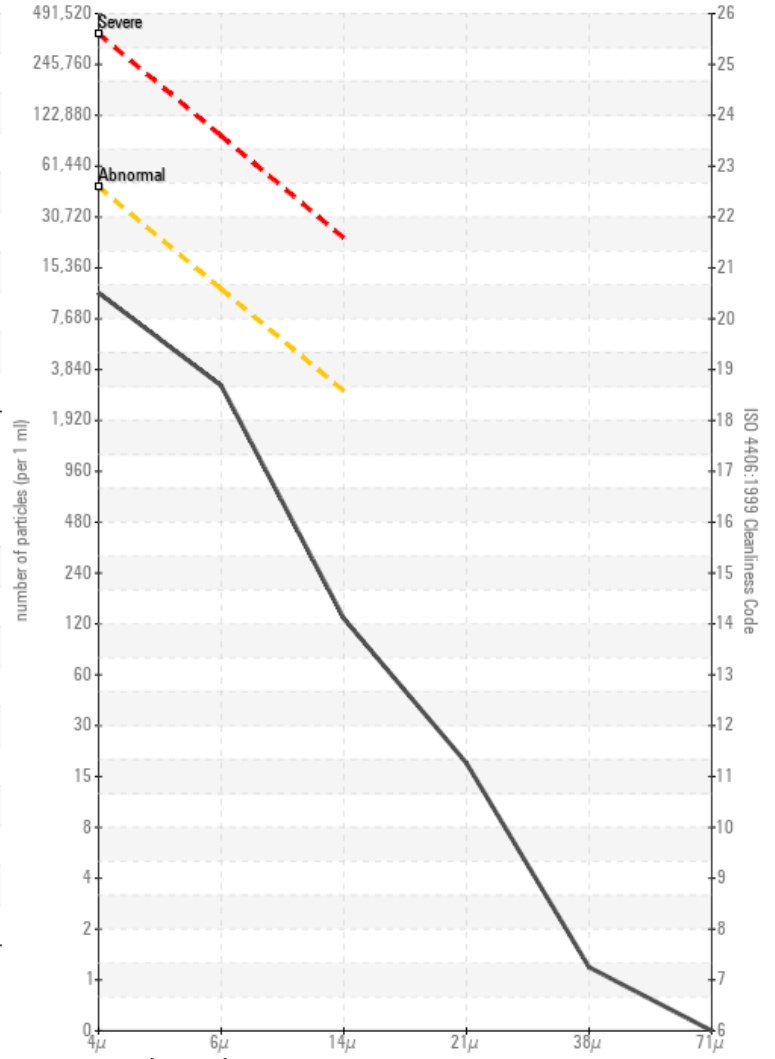
### Non-ferrous Metals



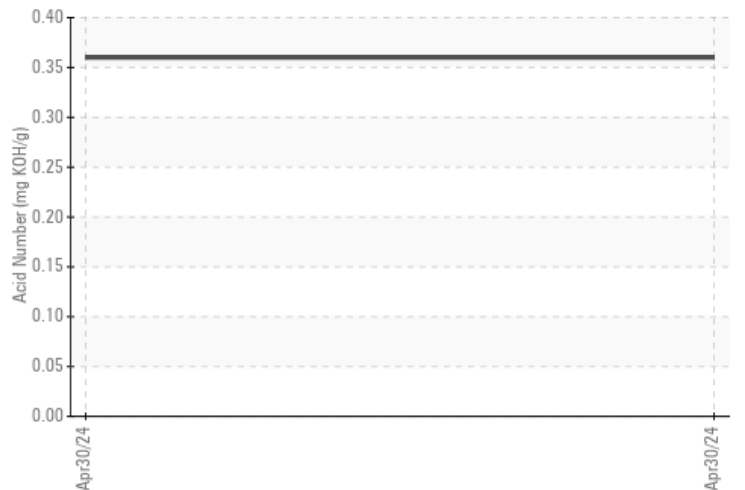
### Viscosity @ 40°C



### Particle Count



### Acid Number





# CONSTRUCTION EQUIPMENT

SPM703638 ALPINE VOLVO EC750E 3 14070 - SWING DRIVE



**Sample No:** VCP446781  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM703638 ALPINE



## SAMPLE INFORMATION

Sample Number	VCP446781	---	---	---
Sample Date	30 Apr 2024	---	---	---
Machine Hours	2591	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

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## OIL CONDITION

Visc @ 40°C	cSt	█ 165	---	---	---
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## CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 11	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ 2	---	---	---



## WEAR METALS

Iron	ppm	█ 81	---	---	---
Copper	ppm	█ 46	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 2	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 1	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ 3	---	---	---
Vanadium	ppm	<1	---	---	---



## ADDITIVES

Calcium	ppm	█ 929	---	---	---
Magnesium	ppm	█ 17	---	---	---
Zinc	ppm	█ 467	---	---	---
Phosphorus	ppm	█ 834	---	---	---
Barium	ppm	█ 7	---	---	---
Boron	ppm	█ 27	---	---	---

## 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.

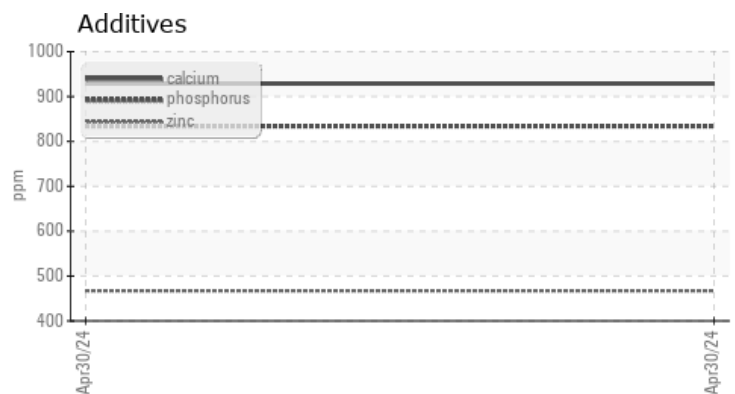
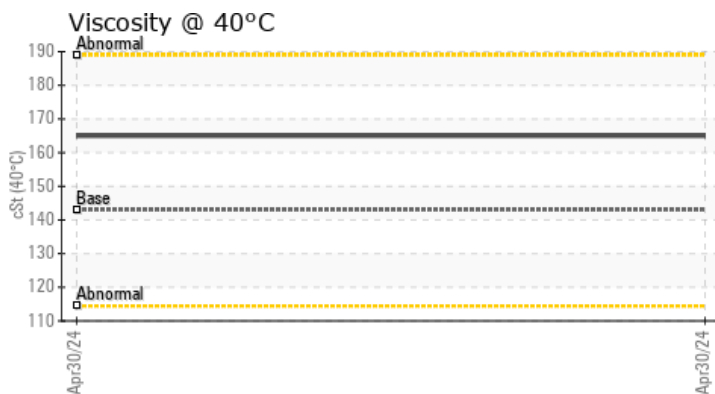
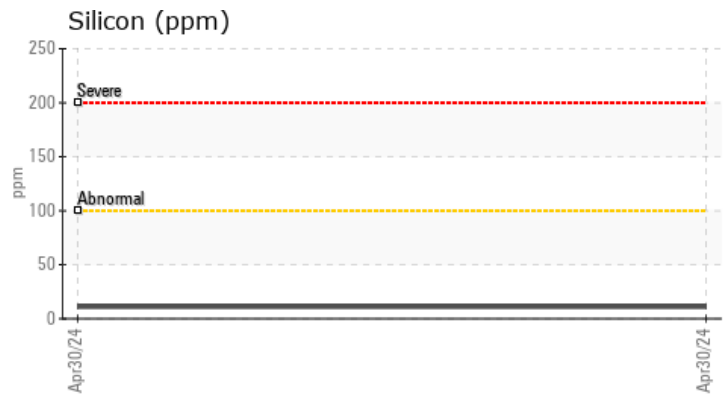
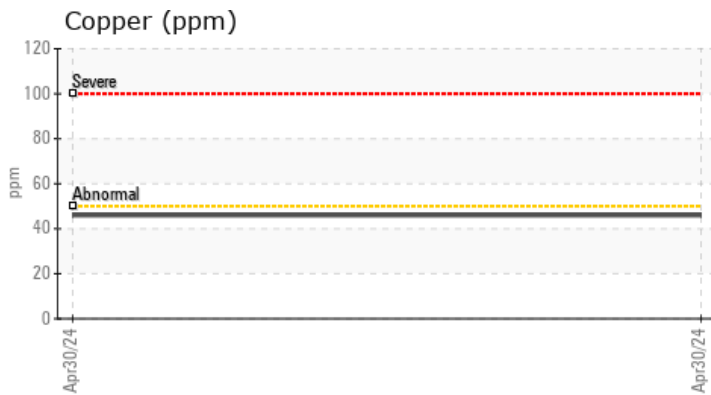
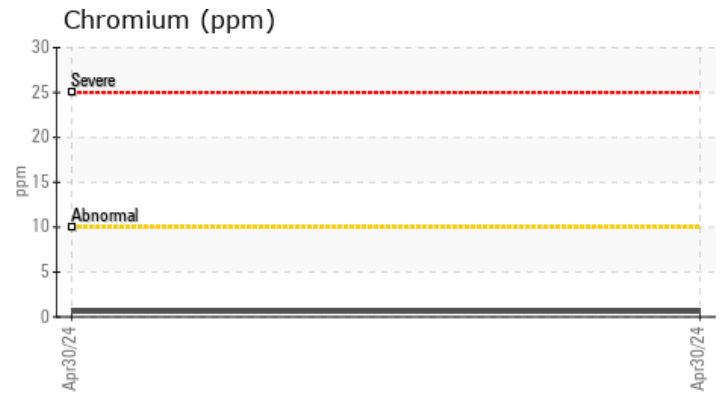
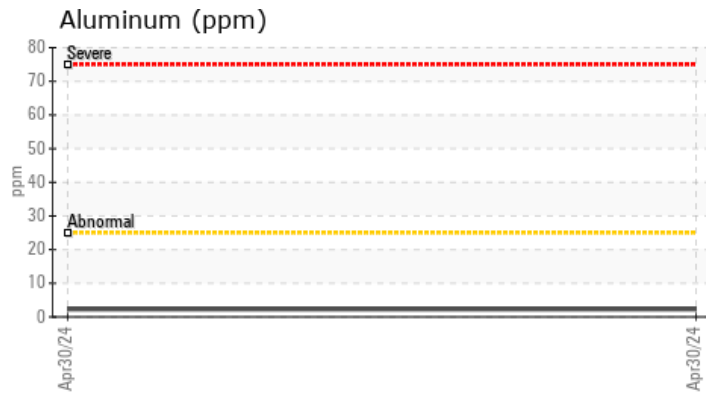
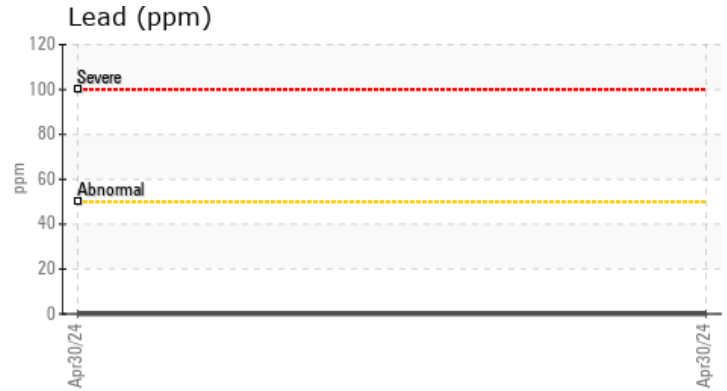
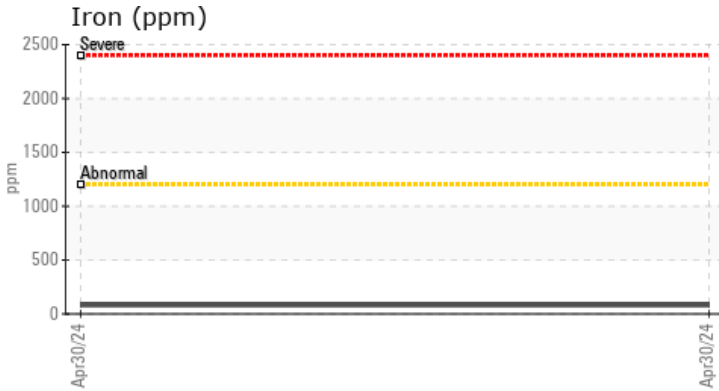
**Depot:** VOLVO8885  
**Unique No:** 11085056  
**Signed:** Don Baldrige  
**Report Date:** 19 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

SPM594618 ALPINE DEM VOLVO EC750E 314070 - RIGHT SWING DRIVE



**Sample No:** VCP415205  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM594618 ALPINE DEM



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## SAMPLE INFORMATION

Sample Number	VCP415205	---	---	---
Sample Date	28 Sep 2023	---	---	---
Machine Hours	1522	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---



## OIL CONDITION

Visc @ 40°C	cSt	█ 168	---	---	---
-------------	-----	-------	-----	-----	-----



## CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 12	---	---	---
Sodium	ppm	█ 0	---	---	---
Potassium	ppm	█ 2	---	---	---



## WEAR METALS

Iron	ppm	█ 209	---	---	---
Copper	ppm	█ 13	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ 3	---	---	---
Molybdenum	ppm	█ <1	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	█ 4	---	---	---
Vanadium	ppm	0	---	---	---



## ADDITIVES

Calcium	ppm	█ 32	---	---	---
Magnesium	ppm	█ <1	---	---	---
Zinc	ppm	█ 25	---	---	---
Phosphorus	ppm	█ 285	---	---	---
Barium	ppm	█ 7	---	---	---
Boron	ppm	█ 0	---	---	---

## 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.

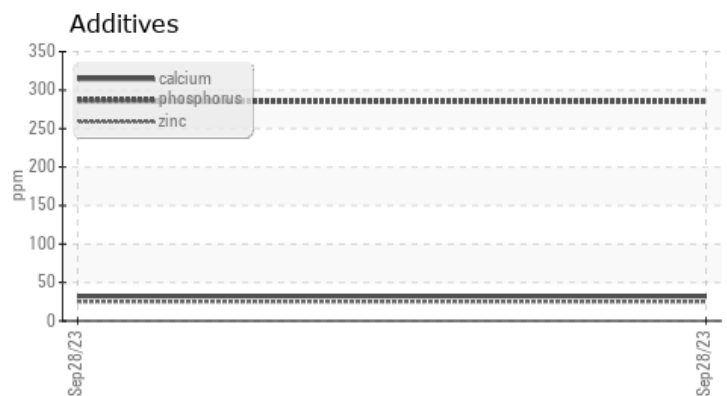
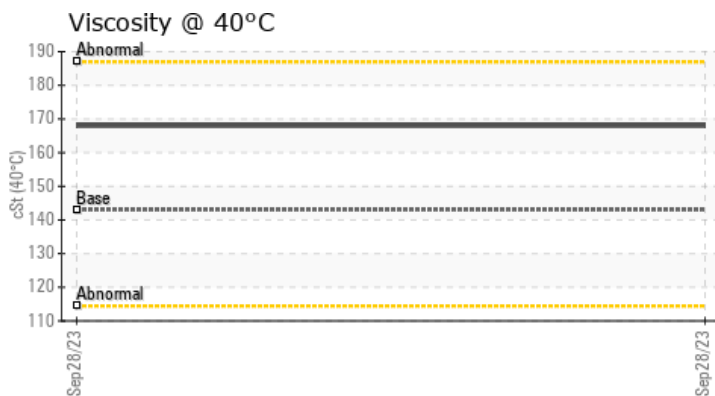
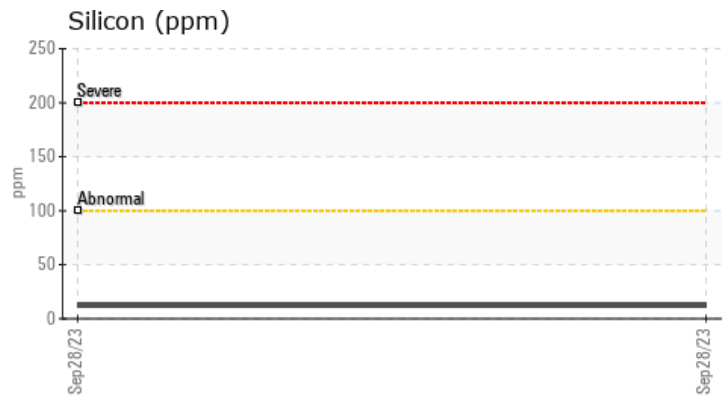
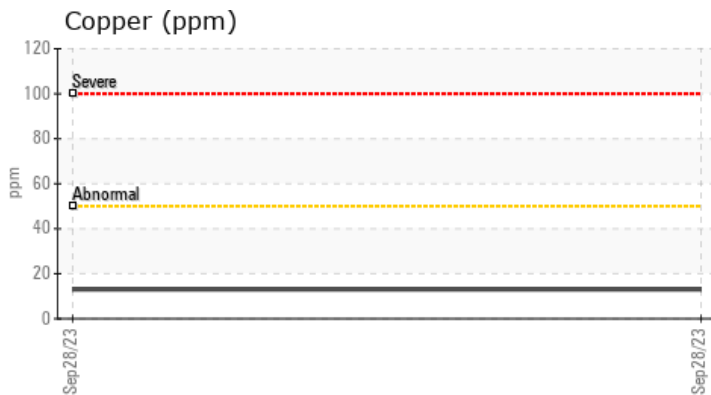
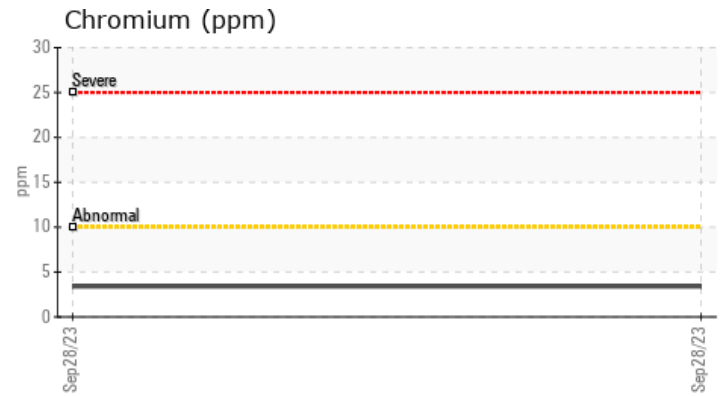
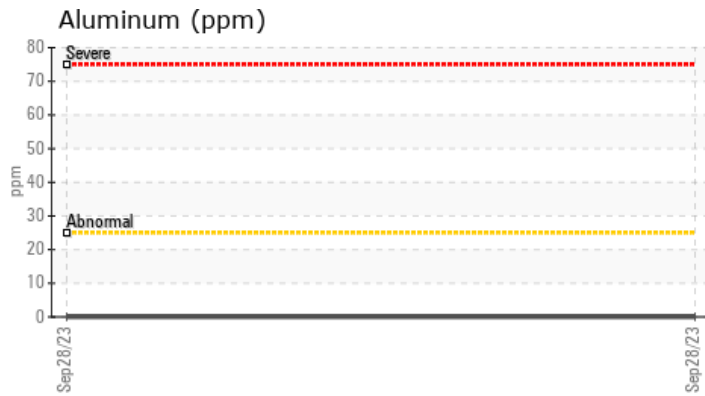
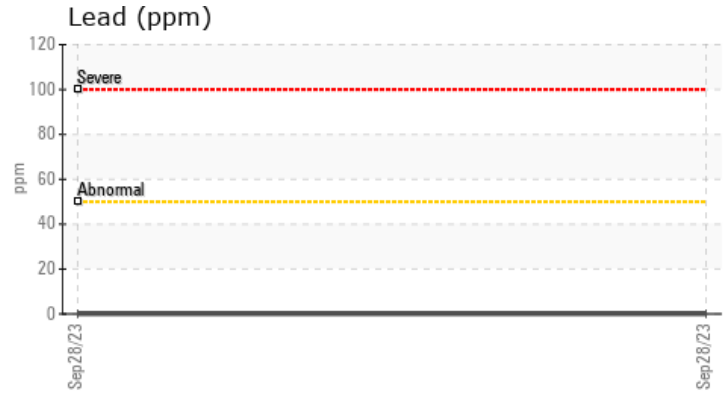
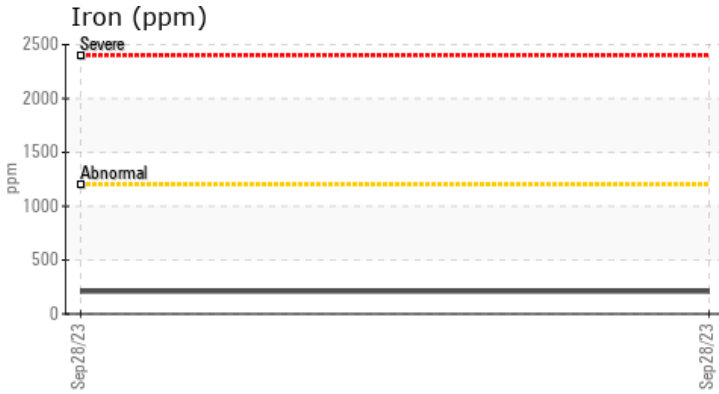
**Depot:** VOLVO8885  
**Unique No:** 10686316  
**Signed:** Don Baldrige  
**Report Date:** 12 Oct 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS







# CONSTRUCTION EQUIPMENT

SPM703638 ALPINE VOLVO EC750E 3 14070 - LEFT FINAL DRIVE



**Sample No:** VCP446776  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM703638 ALPINE



**ALTA EQUIPMENT CO - ORLAND PARK**  
5000 INDUSTRIAL HWY  
GARY, IN  
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## SAMPLE INFORMATION

Sample Number	VCP446776	VCP422980	---	---
Sample Date	30 Apr 2024	28 Sep 2023	---	---
Machine Hours	2591	1522	---	---
Oil Hours	0	0	---	---
Oil Changed	Not Chngd	Changed	---	---
Sample Status	NORMAL	ABNORMAL	---	---



## OIL CONDITION

Visc @ 40°C	cSt	█ 163	█ 180	---	---
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## CONTAMINATION

Water	%	NEG	NEG	---	---
Silicon	ppm	█ 10	▲ 148	---	---
Sodium	ppm	█ 3	█ 4	---	---
Potassium	ppm	█ 2	█ 10	---	---



## WEAR METALS

Iron	ppm	█ 78	█ 435	---	---
Copper	ppm	█ 48	█ 4	---	---
Lead	ppm	█ <1	█ 0	---	---
Tin	ppm	█ <1	█ 0	---	---
Aluminum	ppm	█ 2	● 25	---	---
Chromium	ppm	█ <1	█ 4	---	---
Molybdenum	ppm	█ 1	█ <1	---	---
Nickel	ppm	█ <1	█ 2	---	---
Titanium	ppm	<1	2	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	█ 3	█ 6	---	---
Vanadium	ppm	<1	<1	---	---



## ADDITIVES

Calcium	ppm	█ 930	█ 107	---	---
Magnesium	ppm	█ 17	█ 42	---	---
Zinc	ppm	█ 469	█ 4	---	---
Phosphorus	ppm	█ 839	█ 152	---	---
Barium	ppm	█ 7	█ 0	---	---
Boron	ppm	█ 27	█ 0	---	---

## 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.

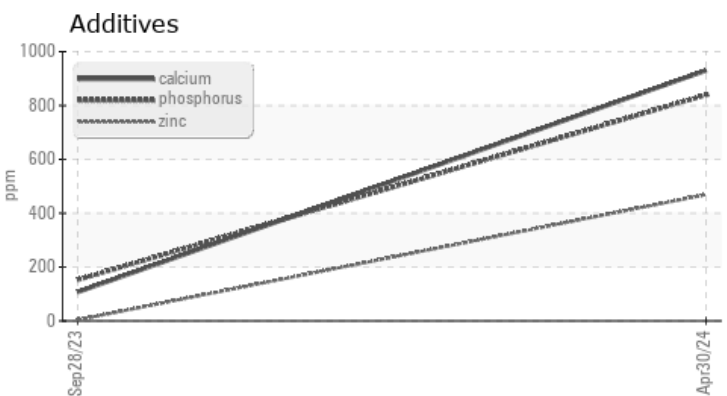
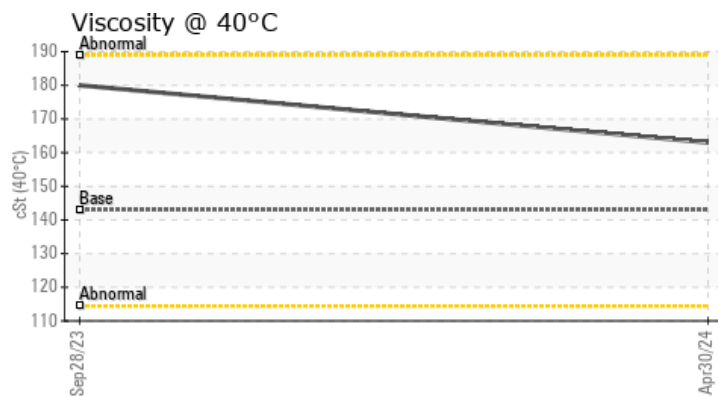
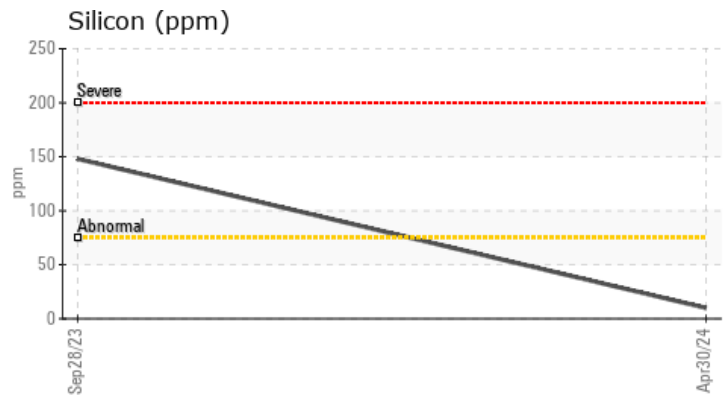
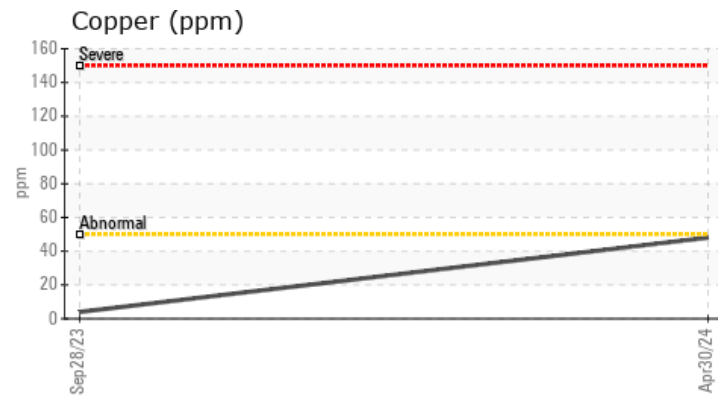
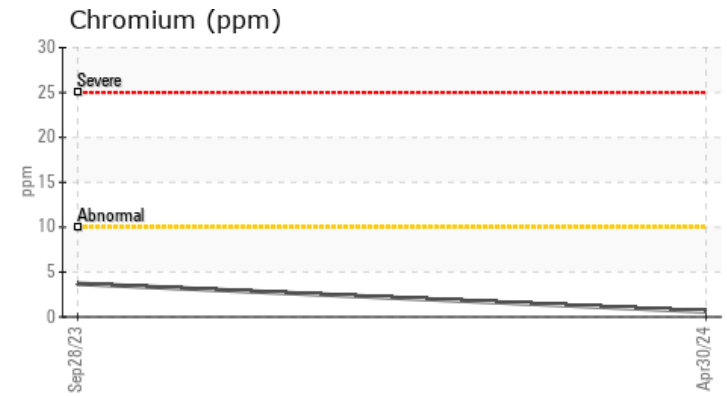
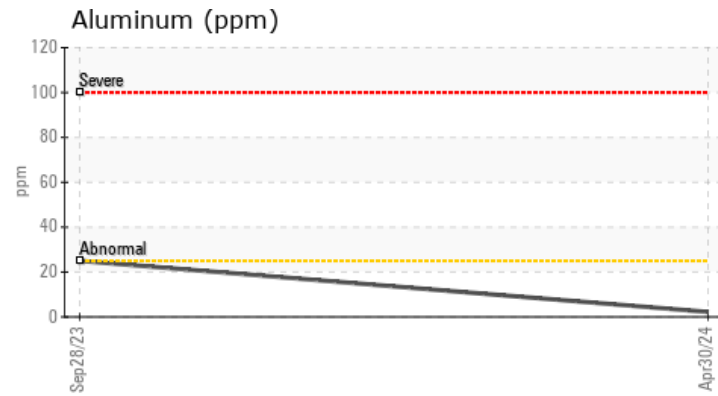
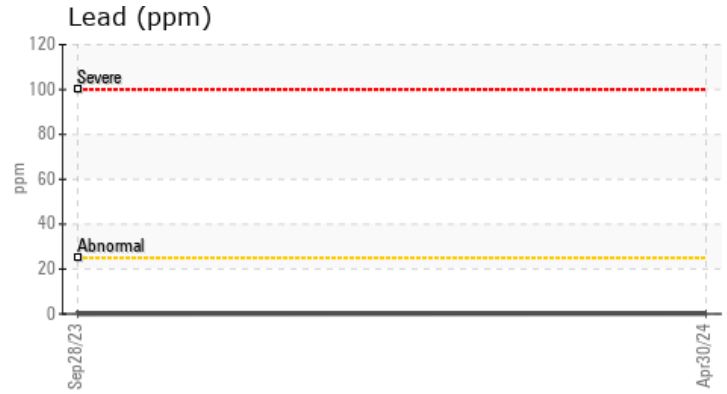
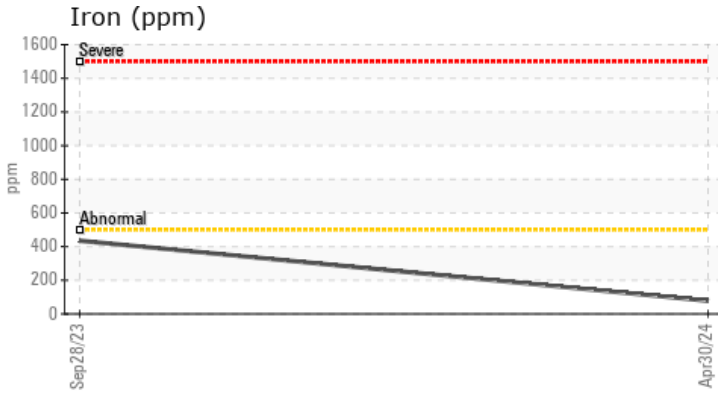
**Depot:** VOLVO8885  
**Unique No:** 11085063  
**Signed:** Don Baldrige  
**Report Date:** 19 Jun 2024



# CONSTRUCTION EQUIPMENT



## GRAPHS





# CONSTRUCTION EQUIPMENT

SPM703638 ALPINE VOLVO EC750E 3 14070 - RIGHT FINAL DRIVE



**Sample No:** VCP446789  
**Oil Type:** GEAR OIL SAE 80W90  
**Job No:** SPM703638 ALPINE



**ALTA EQUIPMENT CO - ORLAND PARK**  
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GARY, IN  
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## SAMPLE INFORMATION

Sample Number	<b>VCP446789</b>	VCP415207	---	---
Sample Date	<b>30 Apr 2024</b>	28 Sep 2023	---	---
Machine Hours	<b>2591</b>	1522	---	---
Oil Hours	<b>0</b>	0	---	---
Oil Changed	<b>Not Chngd</b>	Changed	---	---
Sample Status	<b>NORMAL</b>	ABNORMAL	---	---



## OIL CONDITION

Visc @ 40°C	cSt	<b>165</b>	177	---	---
-------------	-----	------------	-----	-----	-----



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	---	---
Silicon	ppm	<b>10</b>	96	---	---
Sodium	ppm	<b>2</b>	0	---	---
Potassium	ppm	<b>2</b>	7	---	---



## WEAR METALS

Iron	ppm	<b>73</b>	345	---	---
Copper	ppm	<b>47</b>	<1	---	---
Lead	ppm	<b>0</b>	<1	---	---
Tin	ppm	<b>&lt;1</b>	0	---	---
Aluminum	ppm	<b>2</b>	5	---	---
Chromium	ppm	<b>&lt;1</b>	3	---	---
Molybdenum	ppm	<b>1</b>	<1	---	---
Nickel	ppm	<b>&lt;1</b>	2	---	---
Titanium	ppm	<b>&lt;1</b>	1	---	---
Silver	ppm	<b>0</b>	0	---	---
Manganese	ppm	<b>3</b>	4	---	---
Vanadium	ppm	<b>&lt;1</b>	0	---	---



## ADDITIVES

Calcium	ppm	<b>941</b>	63	---	---
Magnesium	ppm	<b>17</b>	21	---	---
Zinc	ppm	<b>483</b>	6	---	---
Phosphorus	ppm	<b>873</b>	125	---	---
Barium	ppm	<b>7</b>	1	---	---
Boron	ppm	<b>27</b>	0	---	---

## 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:** 11085064  
**Signed:** Don Baldrige  
**Report Date:** 19 Jun 2024



# CONSTRUCTION EQUIPMENT



## VOLVO GRAPHS

