



CONSTRUCTION EQUIPMENT

RSO-033963 MIDSOUTH VOLVO EC480EL 315025 - COOLANT



Sample No: VCP383072
Oil Type: VOLVO COOLANT VCS (YELLOW)
Job No: RSO-033963 MIDSOUTH



SAMPLE INFORMATION

Sample Number	VCP383072	---	---	---
Sample Date	09 May 2023	---	---	---
Machine Hours	526	---	---	---
Sample Status	NORMAL	---	---	---



COOLANT CONDITION

pH	Scale 0-14	■ 8.22	---	---	---
Reserve Alkalinity	Scale 0-20	---	---	---	---
Nitrites	ppm	■ NT	---	---	---
Percentage Glycol	%	■ 50.0	---	---	---
Freezing Point	°C	■ -35	---	---	---



CONTAMINATION

Coolant Appearance	normal	---	---	---
Coolant Color	Yllow	---	---	---

MIDSOUTH PAVING INC

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BIRMINGHAM, AL
US 35217

Contact: CHRIS MCCOY
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F: (205)808-5431

Diagnosis

The fluid is suitable for further service. There is no indication of any contamination in the coolant. The carboxylate level of this fluid is acceptable. The glycol level is acceptable. The pH level of this fluid is within the acceptable limits.

Depot: APABIR
Unique No: 10470119
Signed: Jonathan Hester
Report Date: 17 May 2023



CONSTRUCTION EQUIPMENT

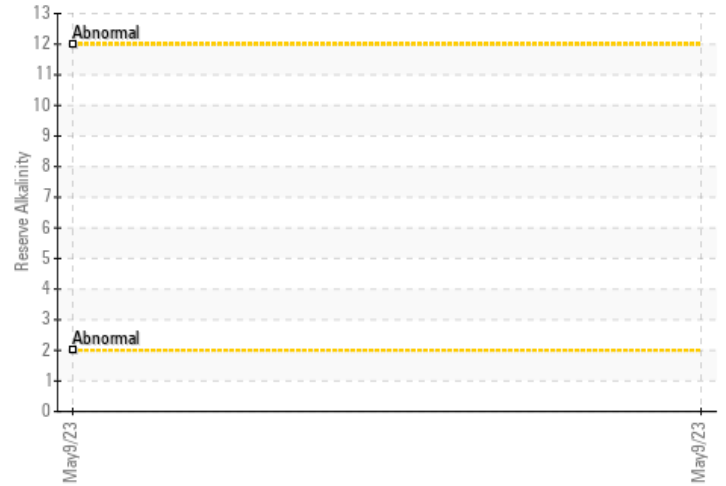


GRAPHS

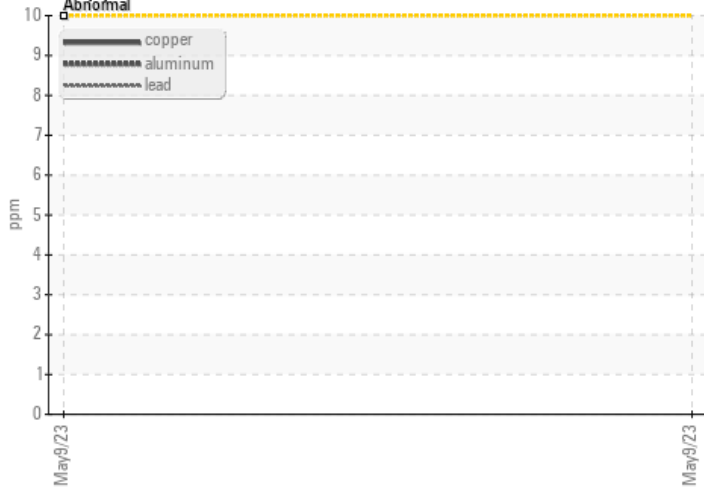
Iron/Tin/Silver



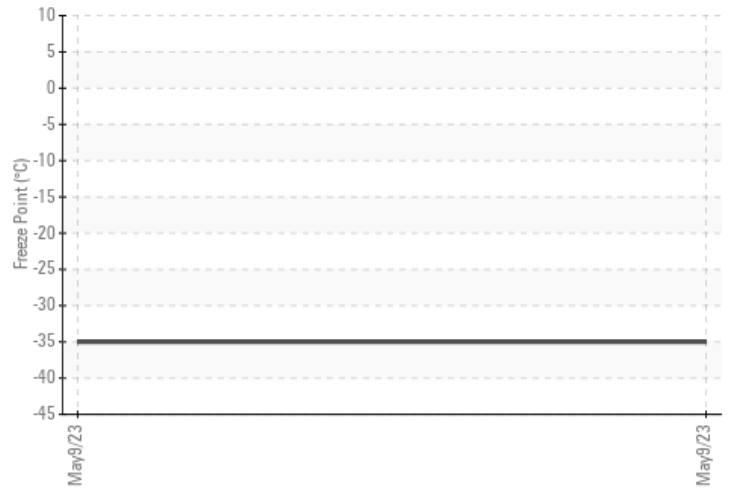
Reserve Alkalinity



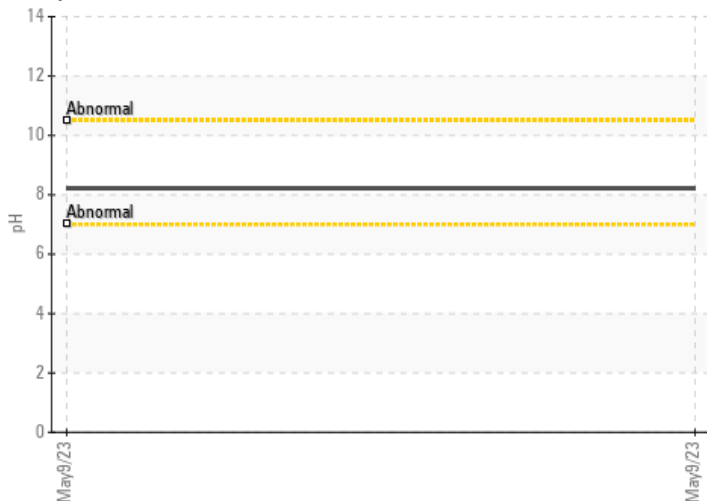
Copper/Aluminum/Lead



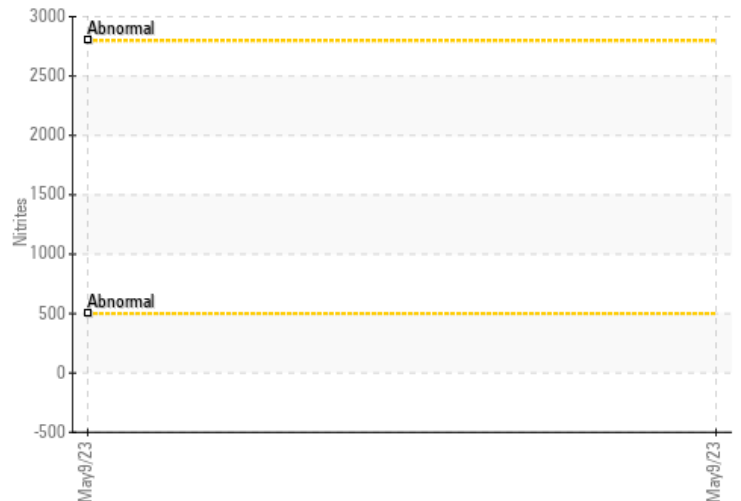
Freeze Point



pH



Nitrites





CONSTRUCTION EQUIPMENT

RSO-033963 MIDSOUTH VOLVO EC480EL 315025 - DIESEL ENGINE



Sample No: VCP383070
Oil Type: {unknown}
Job No: RSO-033963 MIDSOUTH



SAMPLE INFORMATION

Sample Number	VCP383070	---	---	---
Sample Date	09 May 2023	---	---	---
Machine Hours	526	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

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Contact: CHRIS MCCOY
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OIL CONDITION

Visc @ 100°C	cSt	10.7	---	---	---
Base Number (BN)	mg KOH/g	6.4	---	---	---
Oxidation (PA)	%	64	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	0.1	---	---	---
Nitration (PA)	%	73	---	---	---
Sulfation (PA)	%	55	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	0.6	---	---	---
Silicon	ppm	29	---	---	---
Sodium	ppm	4	---	---	---
Potassium	ppm	6	---	---	---

WEAR METALS

Iron	ppm	10	---	---	---
Copper	ppm	419	---	---	---
Lead	ppm	2	---	---	---
Tin	ppm	3	---	---	---
Aluminum	ppm	6	---	---	---
Chromium	ppm	<1	---	---	---
Molybdenum	ppm	86	---	---	---
Nickel	ppm	1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	3	---	---	---
Vanadium	ppm	<1	---	---	---

ADDITIVES

Calcium	ppm	2086	---	---	---
Magnesium	ppm	172	---	---	---
Zinc	ppm	1245	---	---	---
Phosphorus	ppm	1019	---	---	---
Barium	ppm	0	---	---	---
Boron	ppm	102	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. 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 metal levels are typical for a new component breaking in. Fuel content negligible. 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 acceptable for the time in service.

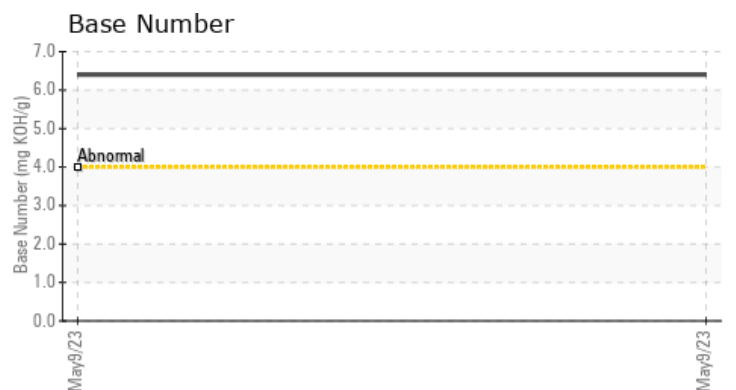
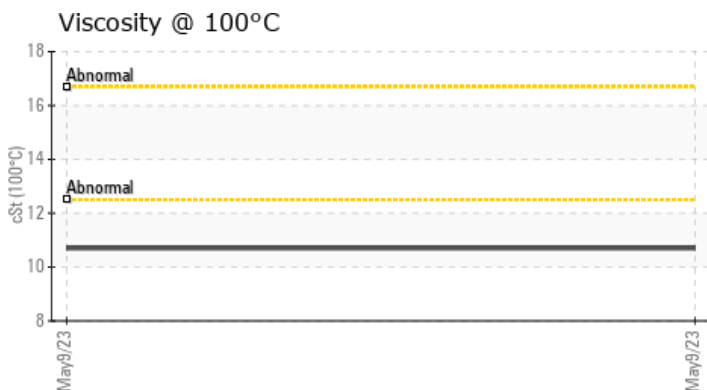
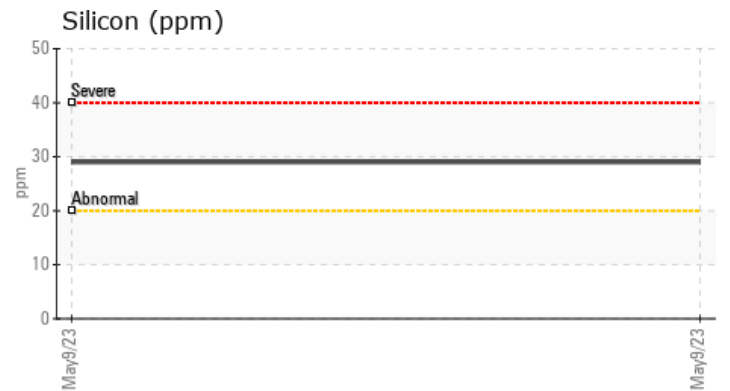
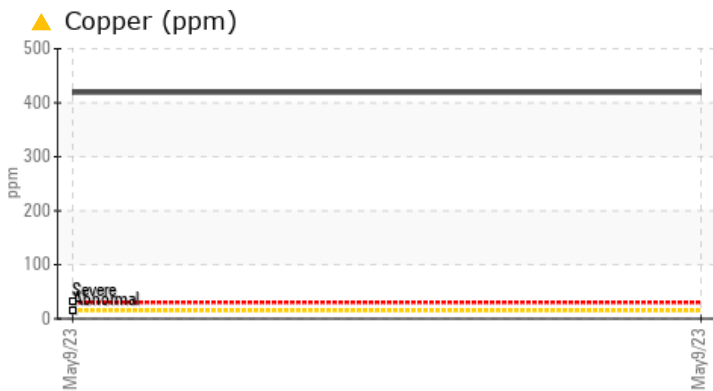
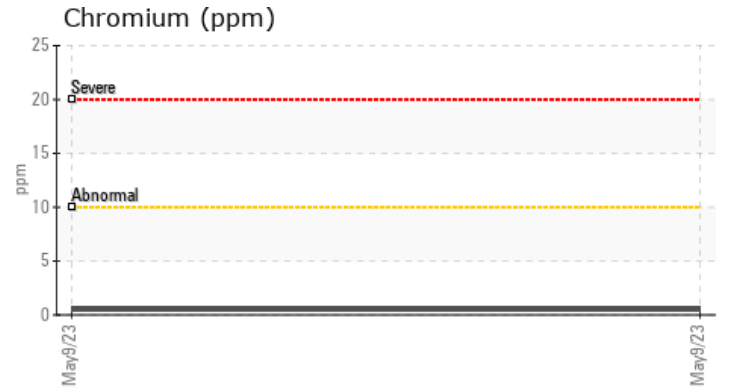
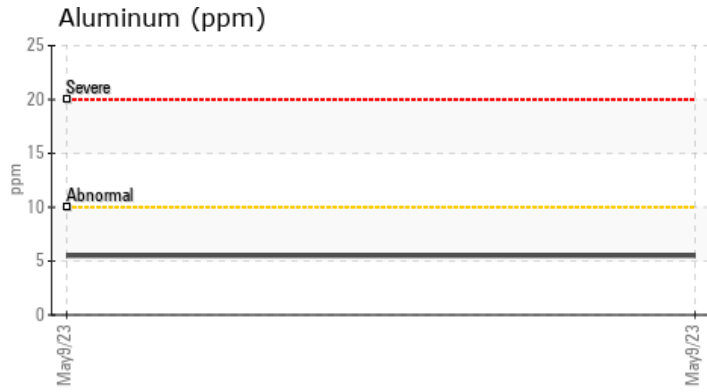
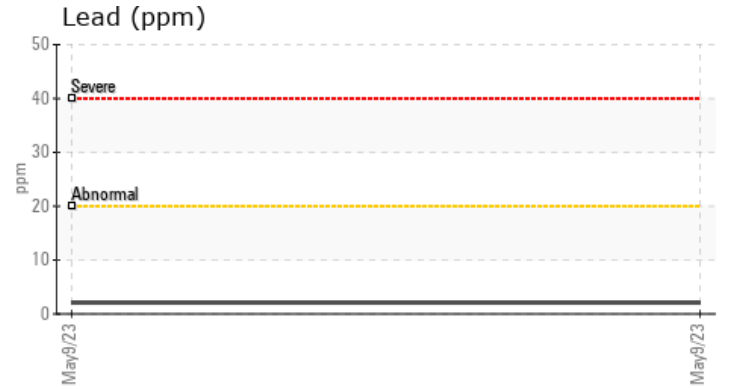
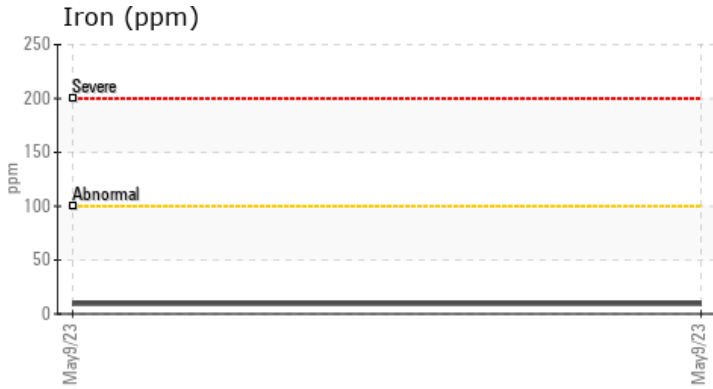
Depot: APABIR
Unique No: 10469391
Signed: Jonathan Hester
Report Date: 16 May 2023



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

RSO-033963 MIDSOUTH VOLVO EC480EL 315025 - HYDRAULIC SYSTEM



Sample No: VCP383078
Oil Type: {unknown}
Job No: RSO-033963 MIDSOUTH



SAMPLE INFORMATION

Sample Number	VCP383078	---	---	---
Sample Date	09 May 2023	---	---	---
Machine Hours	526	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---

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Contact: CHRIS MCCOY
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OIL CONDITION

Visc @ 40°C	cSt	█ 43.6	---	---	---
Acid Number (AN)	mg KOH/g	█ 0.46	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Particles >4µm		█ 8326	---	---	---
Particles >6µm		█ 710	---	---	---
Particles >14µm		█ 24	---	---	---
ISO 4406:1999 (c)		20/17/12	---	---	---
Silicon	ppm	█ 3	---	---	---
Sodium	ppm	█ 0	---	---	---
Potassium	ppm	█ 1	---	---	---

Diagnosis

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample. 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	█ 4	---	---	---
Copper	ppm	█ 9	---	---	---
Lead	ppm	█ <1	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	2	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	140	---	---	---
Magnesium	ppm	21	---	---	---
Zinc	ppm	493	---	---	---
Phosphorus	ppm	367	---	---	---
Barium	ppm	2	---	---	---
Boron	ppm	2	---	---	---

Depot: APABIR
Unique No: 10469547
Signed: Wes Davis
Report Date: 15 May 2023

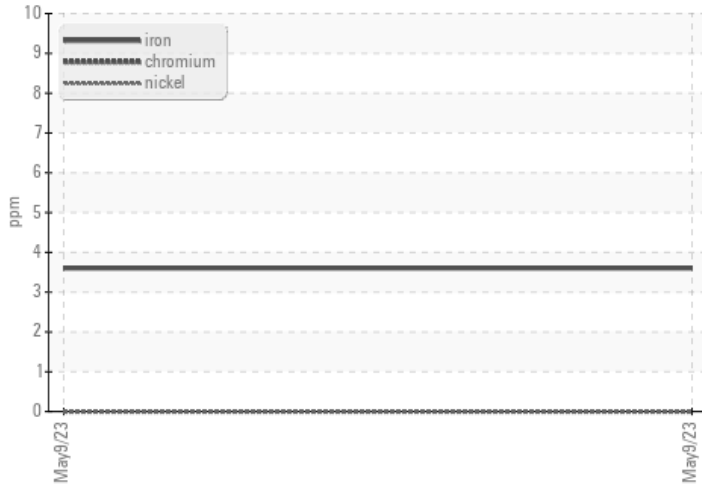


CONSTRUCTION EQUIPMENT

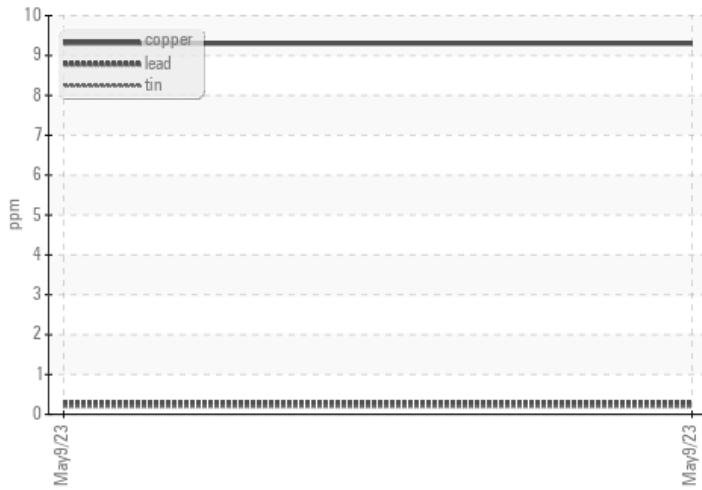


GRAPHS

Ferrous Alloys



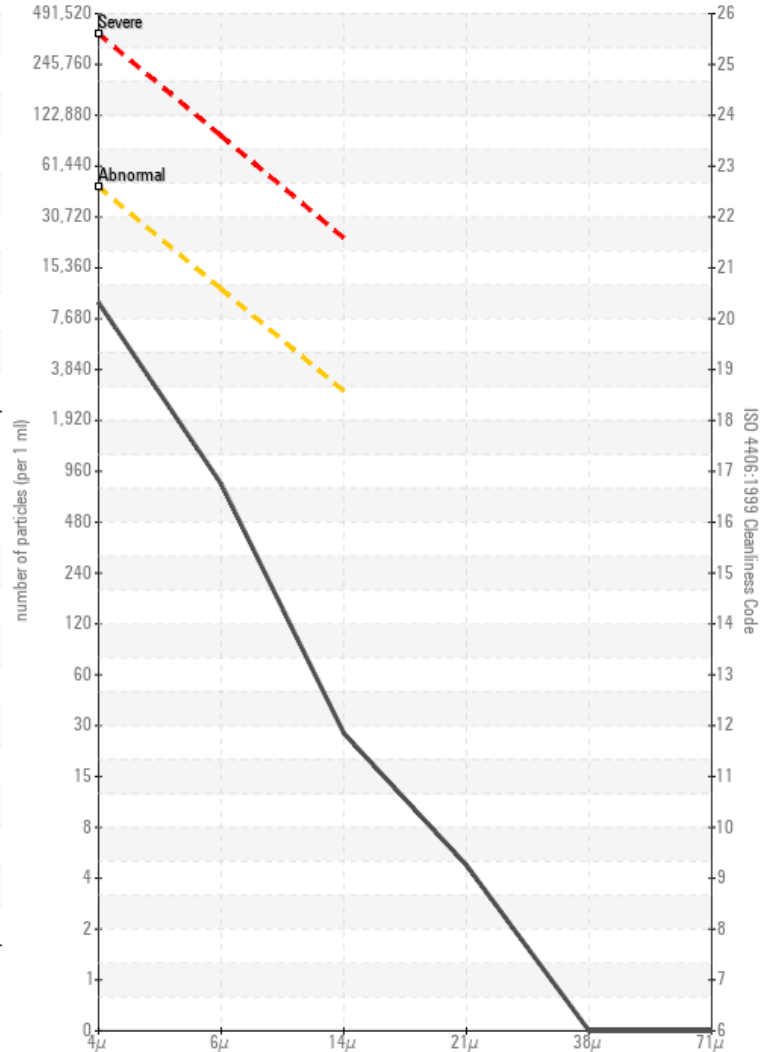
Non-ferrous Metals



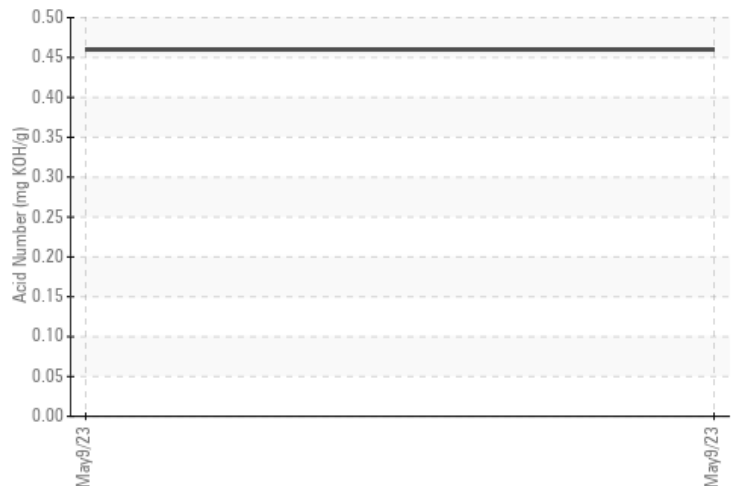
Viscosity @ 40°C



Particle Count



Acid Number





CONSTRUCTION EQUIPMENT

RS0-033963 VOLVO EC480EL 315025 - LEFT SWING DRIVE



Sample No: VCP383079

Oil Type: {unknown}

Job No: RS0-033963



SAMPLE INFORMATION

Sample Number	VCP383079	---	---	---
Sample Date	14 May 2023	---	---	---
Machine Hours	526	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Changed	---	---	---
Sample Status	ABNORMAL	---	---	---



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OIL CONDITION

Visc @ 40°C	cSt	█ 185	---	---	---
-------------	-----	-------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 14	---	---	---
Sodium	ppm	█ <1	---	---	---
Potassium	ppm	█ <1	---	---	---



WEAR METALS

Iron	ppm	█ 50	---	---	---
Copper	ppm	█ 12	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	25	---	---	---
Magnesium	ppm	0	---	---	---
Zinc	ppm	11	---	---	---
Phosphorus	ppm	325	---	---	---
Barium	ppm	4	---	---	---
Boron	ppm	0	---	---	---

Diagnosis

No corrective action is recommended at this time. 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 condition of the oil is acceptable for the time in service.

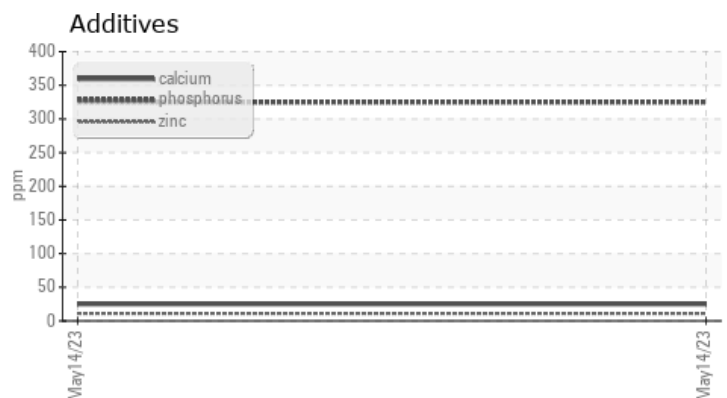
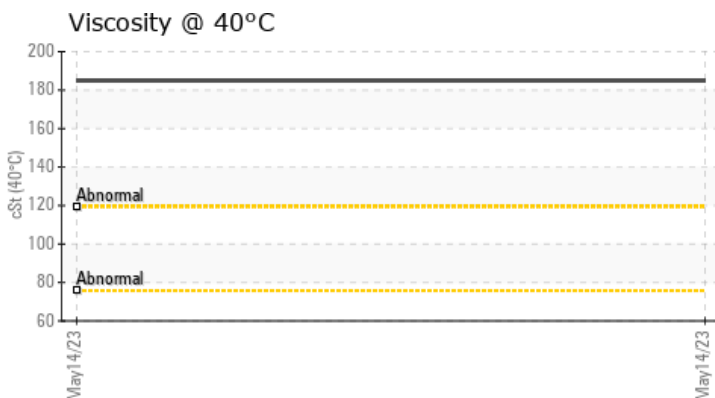
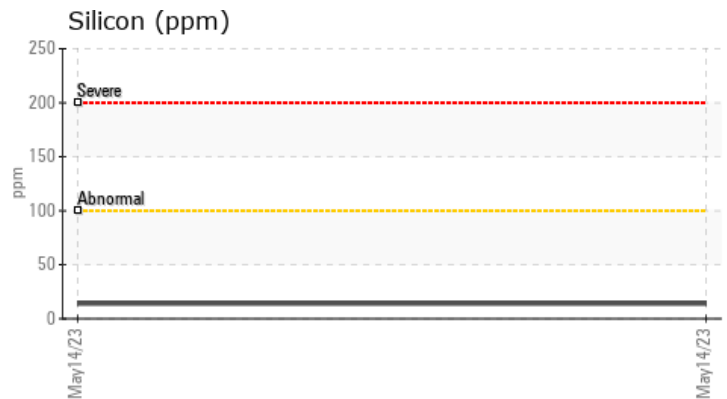
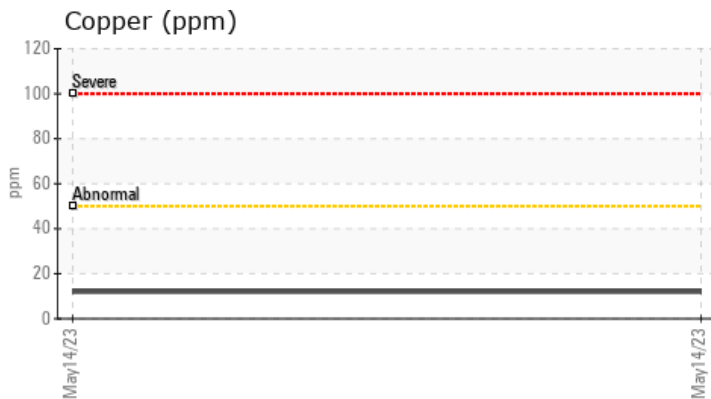
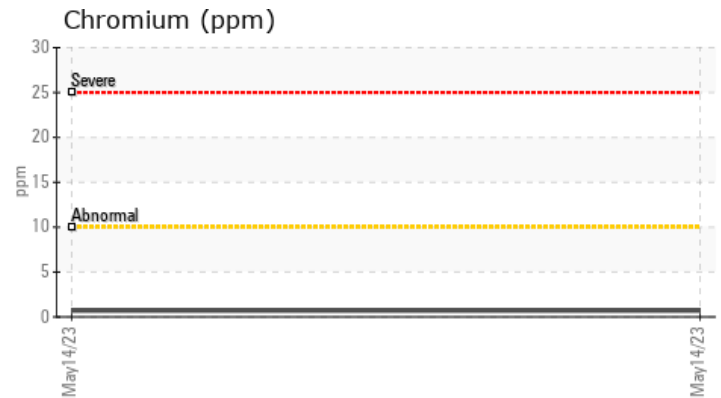
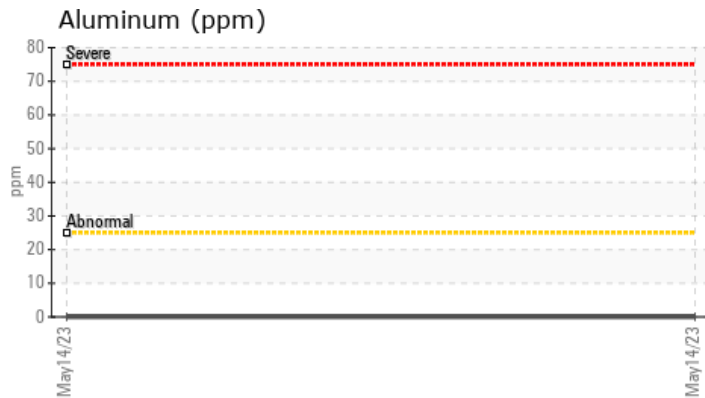
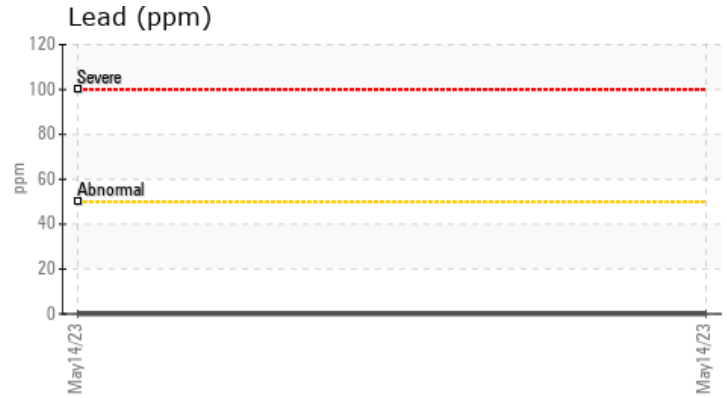
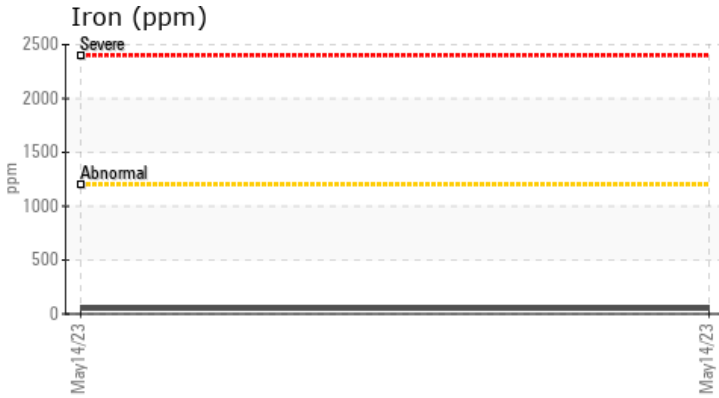
Depot: APABIR
Unique No: 10469994
Signed: Don Baldrige
Report Date: 16 May 2023



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

RS0-033963 VOLVO EC480EL 315025 - RIGHT SWING DRIVE



Sample No: VCP383075

Oil Type: {unknown}

Job No: RS0-033963



SAMPLE INFORMATION

Sample Number	VCP383075	---	---	---
Sample Date	09 May 2023	---	---	---
Machine Hours	526	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Changed	---	---	---
Sample Status	NORMAL	---	---	---

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OIL CONDITION

Visc @ 40°C	cSt	█ 183	---	---	---
-------------	-----	-------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 13	---	---	---
Sodium	ppm	█ 1	---	---	---
Potassium	ppm	█ 0	---	---	---



WEAR METALS

Iron	ppm	█ 38	---	---	---
Copper	ppm	█ 15	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 0	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	<1	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	29	---	---	---
Magnesium	ppm	1	---	---	---
Zinc	ppm	13	---	---	---
Phosphorus	ppm	335	---	---	---
Barium	ppm	3	---	---	---
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.

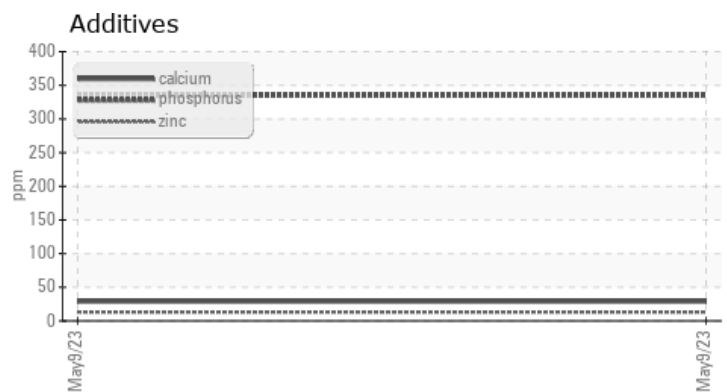
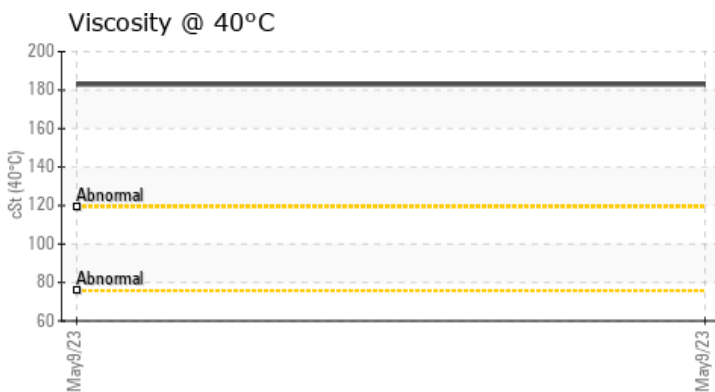
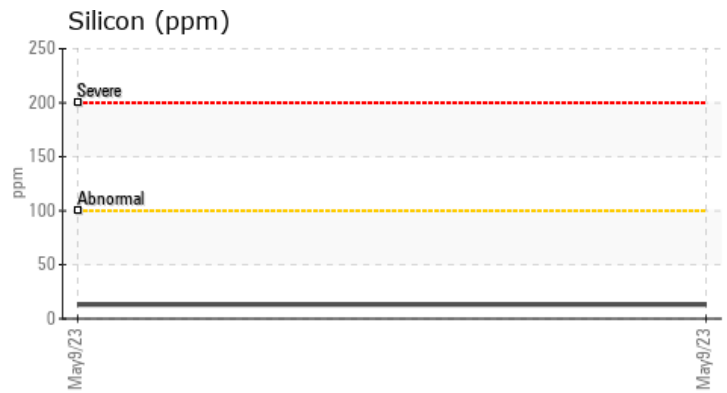
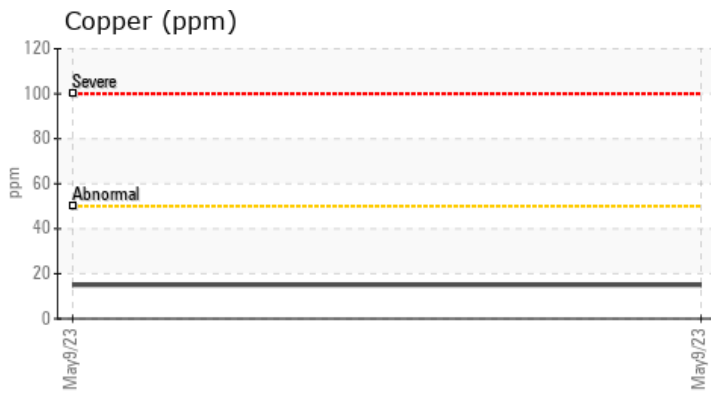
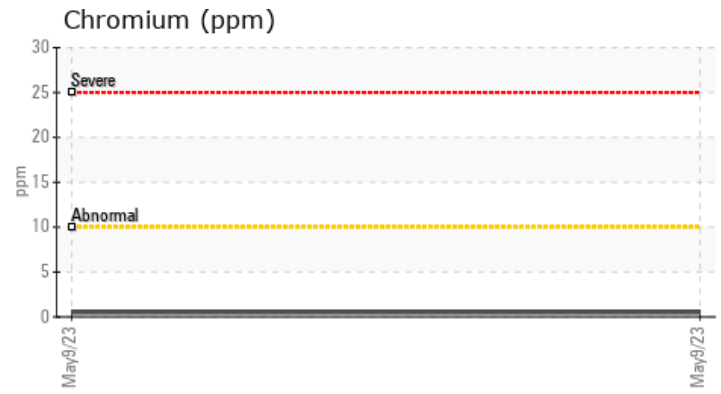
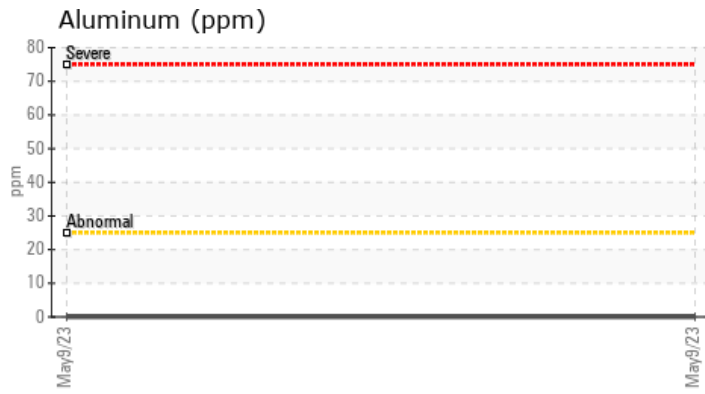
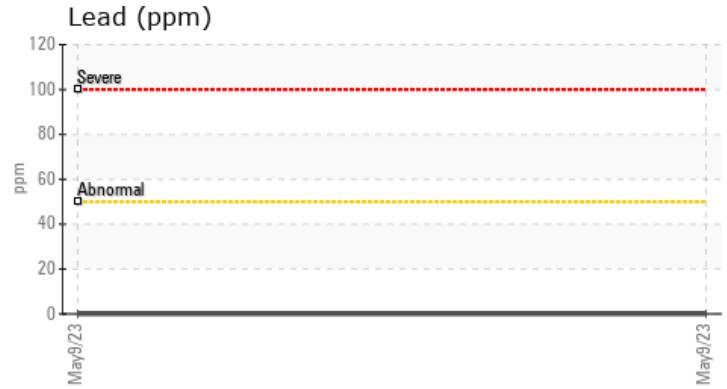
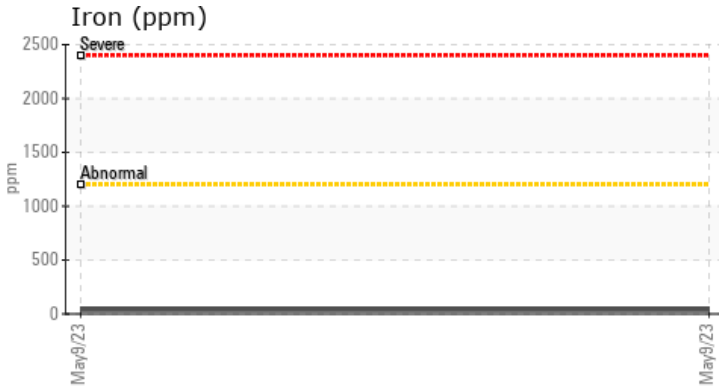
Depot: APABIR
Unique No: 10469995
Signed: Don Baldrige
Report Date: 16 May 2023



CONSTRUCTION EQUIPMENT



GRAPHS





CONSTRUCTION EQUIPMENT

RS0-033963 VOLVO EC480EL 315025 - REAR LEFT FINAL DRIVE



Sample No: VCP383077

Oil Type: {unknown}

Job No: RS0-033963



SAMPLE INFORMATION

Sample Number	VCP383077	---	---	---
Sample Date	09 May 2023	---	---	---
Machine Hours	526	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---



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OIL CONDITION

Visc @ 40°C	cSt	█ 171	---	---	---
-------------	-----	-------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 9	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ <1	---	---	---



WEAR METALS

Iron	ppm	█ 385	---	---	---
Copper	ppm	█ <1	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ 2	---	---	---
Chromium	ppm	█ 6	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	█ <1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	6	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	64	---	---	---
Magnesium	ppm	2	---	---	---
Zinc	ppm	20	---	---	---
Phosphorus	ppm	319	---	---	---
Barium	ppm	<1	---	---	---
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.

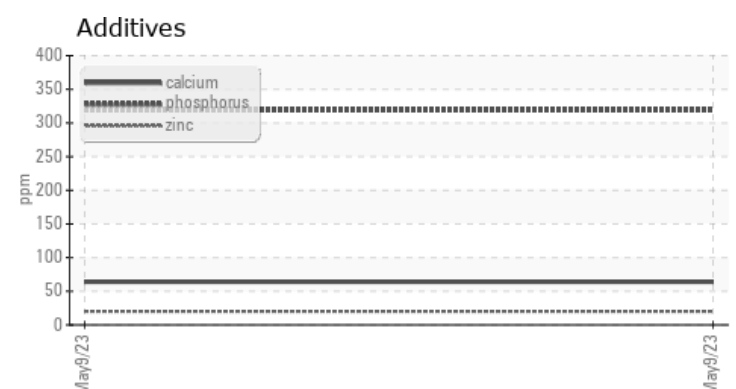
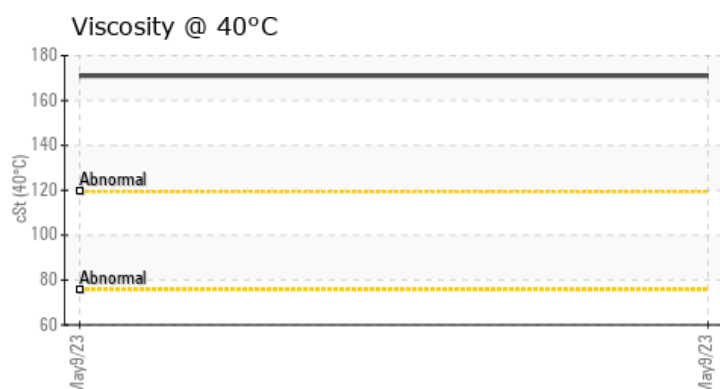
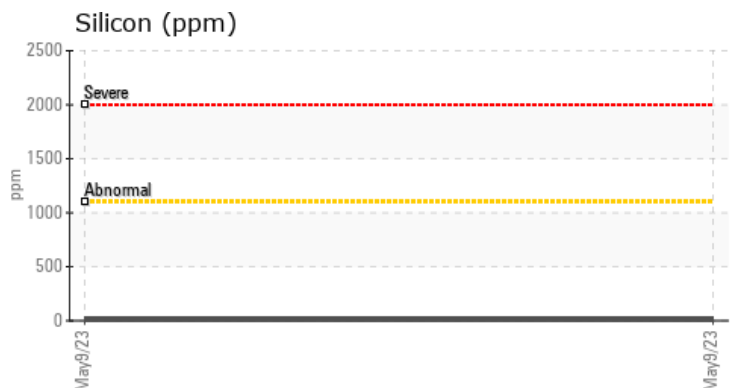
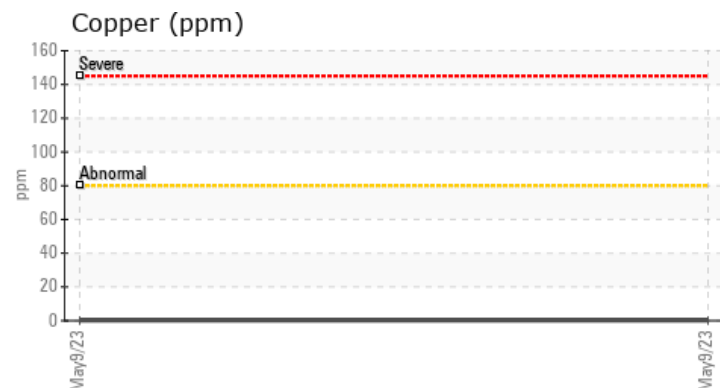
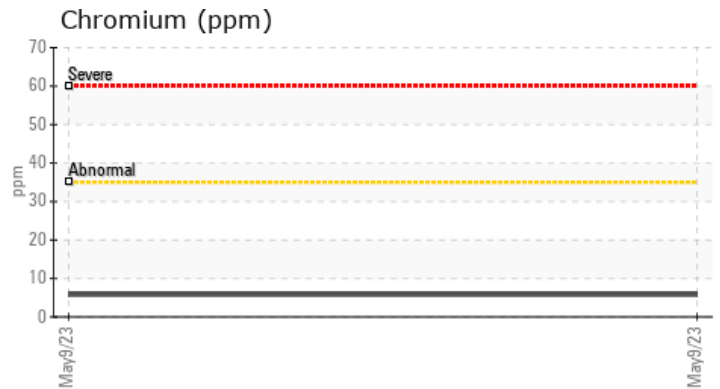
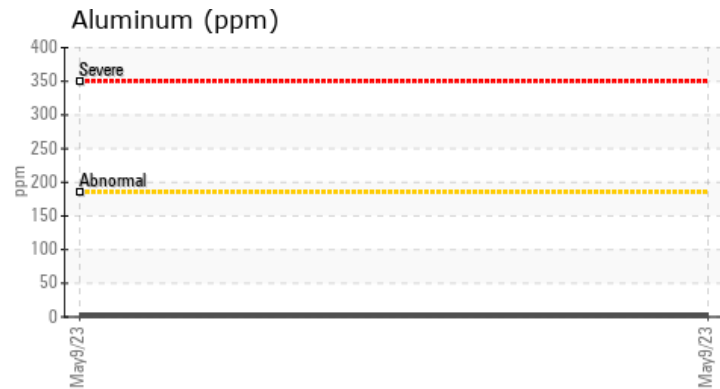
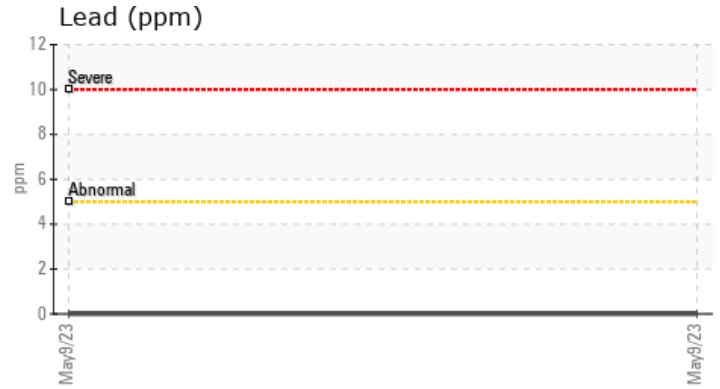
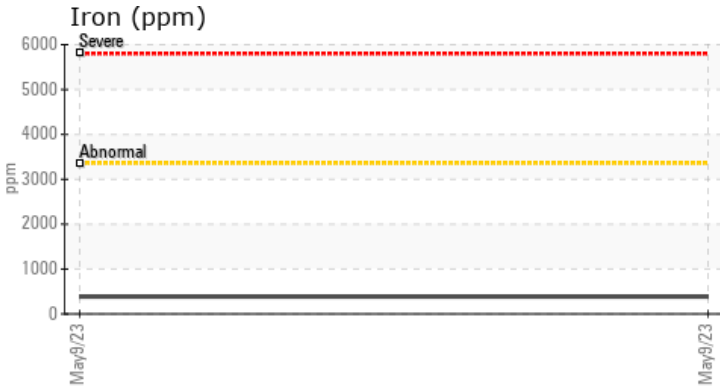
Depot: APABIR
Unique No: 10469996
Signed: Don Baldrige
Report Date: 16 May 2023



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS





CONSTRUCTION EQUIPMENT

RS0-033963 VOLVO EC480EL 315025 - REAR RIGHT FINAL DRIVE



Sample No: VCP383071

Oil Type: {unknown}

Job No: RS0-033963



SAMPLE INFORMATION

Sample Number	VCP383071	---	---	---
Sample Date	09 May 2023	---	---	---
Machine Hours	526	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	NORMAL	---	---	---



OIL CONDITION

Visc @ 40°C	cSt	█ 173	---	---	---
-------------	-----	-------	-----	-----	-----



CONTAMINATION

Water	%	NEG	---	---	---
Silicon	ppm	█ 13	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ 1	---	---	---



WEAR METALS

Iron	ppm	█ 402	---	---	---
Copper	ppm	█ 0	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ 2	---	---	---
Chromium	ppm	█ 6	---	---	---
Molybdenum	ppm	<1	---	---	---
Nickel	ppm	█ <1	---	---	---
Titanium	ppm	█ <1	---	---	---
Silver	ppm	0	---	---	---
Manganese	ppm	5	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	10	---	---	---
Magnesium	ppm	2	---	---	---
Zinc	ppm	1	---	---	---
Phosphorus	ppm	305	---	---	---
Barium	ppm	<1	---	---	---
Boron	ppm	0	---	---	---



MIDSOUTH PAVING INC

750 CLOW RD
BIRMINGHAM, AL
US 35217

Contact: CHRIS MCCOY
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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: APABIR
Unique No: 10469998
Signed: Don Baldrige
Report Date: 16 May 2023



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

