



NORMAL



Machine Id  
**VOLVO EC140E 315905**  
 Component  
**Radiator Coolant**  
 Fluid  
**VOLVO VCS-2 Coolant (Orange) (--- GAL)**

DIAGNOSIS

**Recommendation**

No corrective action is recommended at this time. The fluid is suitable for further service.

**Contamination**

There is no indication of any contamination in the coolant.

**Fluid Condition**

Carboxylate test failed. The glycol level is acceptable. The pH level of this fluid is within the acceptable limits.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info		<b>ASC0000922</b>	---	---
Sample Date	Client Info		<b>01 Apr 2024</b>	---	---
Machine Age	hrs	Client Info	<b>554</b>	---	---
Oil Age	hrs	Client Info	<b>554</b>	---	---
Oil Changed		Client Info	<b>Not Chngd</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

CONTAMINATION method limit/base current history1 history2

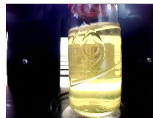
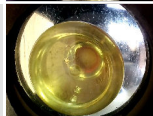
Water	WC Method		<b>NEG</b>	---	---
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PHYSICAL TEST RESULTS method limit/base current history1 history2

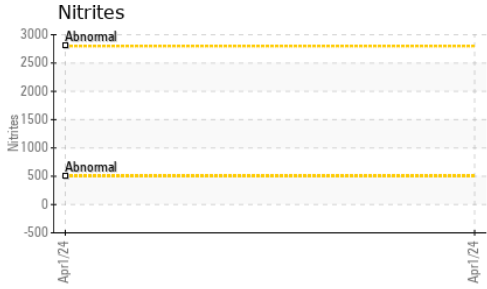
Glycol Type		FT-IR		<b>---</b>	---	---
Specific Gravity		*ASTM D1298		<b>1.067</b>	---	---
pH	Scale 0-14	ASTM D1287		<b>8.23</b>	---	---
Nitrites	ppm	AP-053:2009		<b>NT</b>	---	---
Reserve Alkalinity	Scale 0-20	*ASTM D1121		<b>---</b>	---	---
Percentage Glycol	%	ASTM D3321		<b>49.2</b>	---	---
Freezing Point	°F	ASTM D3321		<b>-33</b>	---	---
Total Dissolved Solids				<b>269.5</b>	---	---
Carboxylate				<b>fail</b>	---	---

VISUAL method limit/base current history1 history2

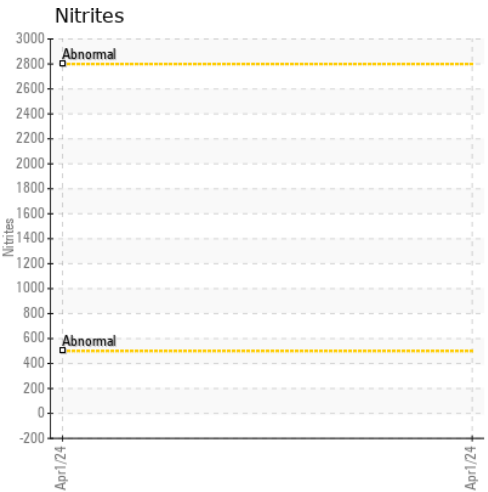
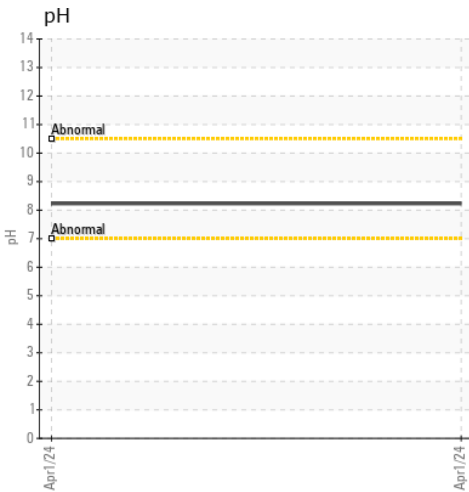
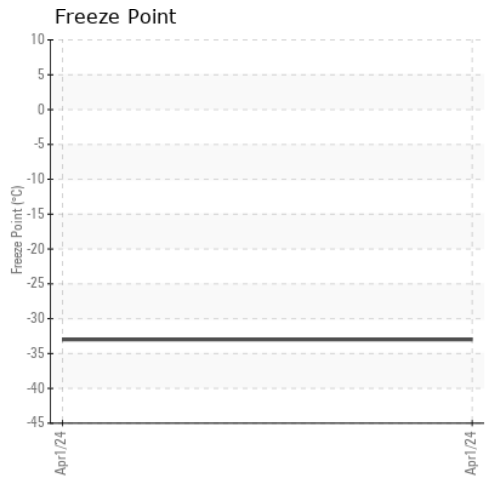
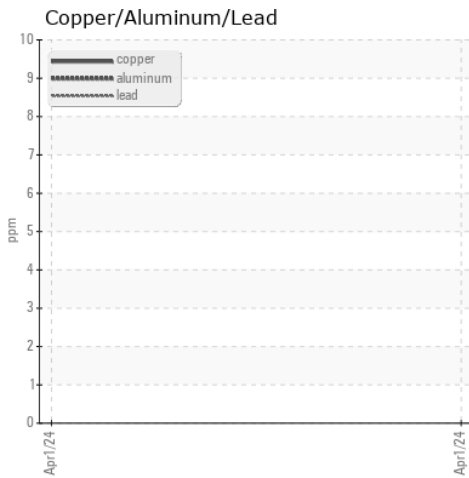
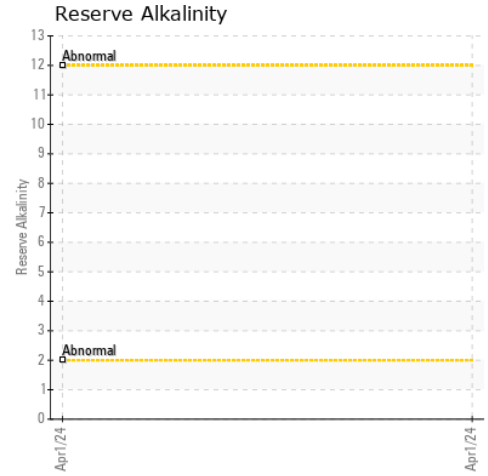
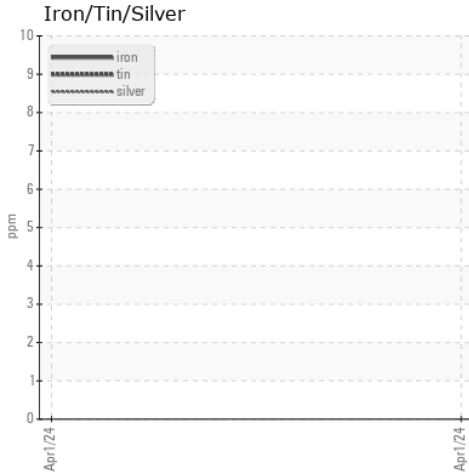
Coolant Color		*Visual		<b>Yllow</b>	---	---
Coolant Appearance		*Visual	Clear	<b>normal</b>	---	---

Color					no image	no image
Bottom					no image	no image

# COOLANT REPORT



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0000922      **Received** : 05 Apr 2024  
**Lab Number** : 06140461      **Tested** : 10 Apr 2024  
**Unique Number** : 10965269      **Diagnosed** : 10 Apr 2024 - Jonathan Hester  
**Test Package** : COOL- ( Additional Tests: BoilingPoint, COOL, GlycolType )

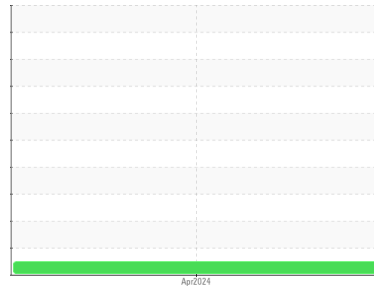
**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
F:



NORMAL



Machine Id  
**VOLVO EC140E 315905**

Component  
**Diesel Engine**

Fluid  
**VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)**

DIAGNOSIS

**Recommendation**

Resample at the next service interval to monitor.

**Wear**

All component wear rates are normal.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info	ASC0000904	---	---
Sample Date	Client Info	01 Apr 2024	---	---
Machine Age	hrs	Client Info	554	---
Oil Age	hrs	Client Info	554	---
Oil Changed	Client Info	Changed	---	---
Sample Status		NORMAL	---	---

CONTAMINATION method limit/base current history1 history2

Fuel	WC Method	>6.0	<1.0	---	---
Water	WC Method	>0.1	NEG	---	---
Glycol	WC Method		NEG	---	---

WEAR METALS method limit/base current history1 history2

Iron	ppm	ASTM D5185m	>100	32	---	---
Chromium	ppm	ASTM D5185m	>10	3	---	---
Nickel	ppm	ASTM D5185m	>10	6	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>10	18	---	---
Lead	ppm	ASTM D5185m	>20	0	---	---
Copper	ppm	ASTM D5185m	>15	8	---	---
Tin	ppm	ASTM D5185m	>10	2	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185m		23	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		10	---	---
Manganese	ppm	ASTM D5185m		3	---	---
Magnesium	ppm	ASTM D5185m		66	---	---
Calcium	ppm	ASTM D5185m		2468	---	---
Phosphorus	ppm	ASTM D5185m		1027	---	---
Zinc	ppm	ASTM D5185m		1184	---	---
Sulfur	ppm	ASTM D5185m		4870	---	---

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>20	20	---	---
Sodium	ppm	ASTM D5185m		2	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---

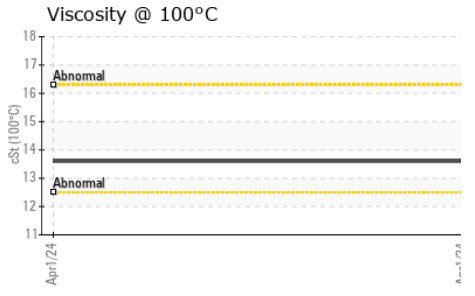
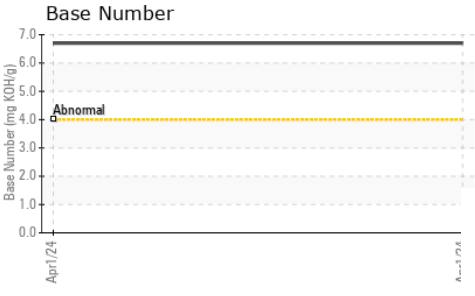
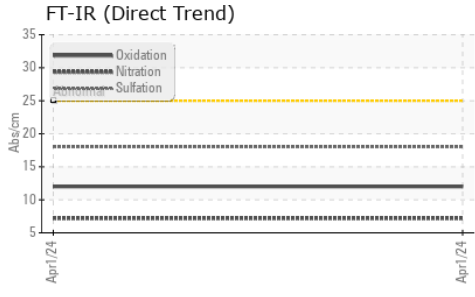
INFRA-RED method limit/base current history1 history2

Soot %	%	*ASTM D7844	>3	0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	7.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	---	---

FLUID DEGRADATION method limit/base current history1 history2

Oxidation	Abs/.1mm	*ASTM D7414	>25	12.0	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		6.7	---	---

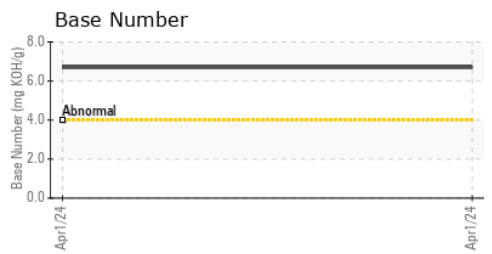
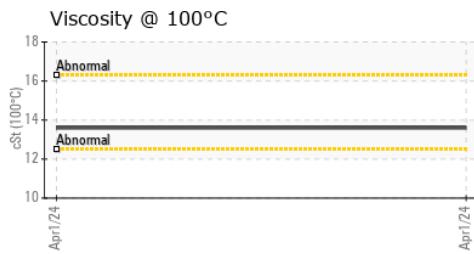
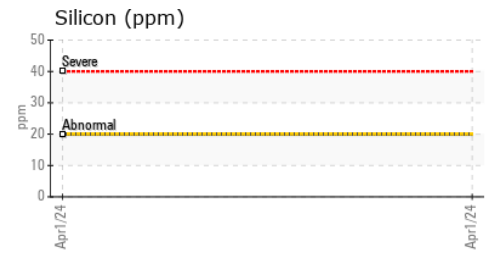
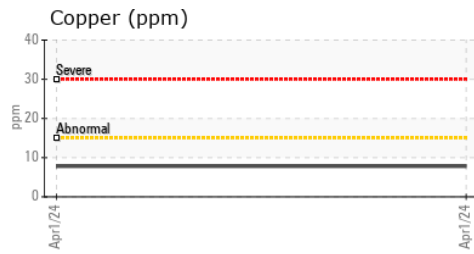
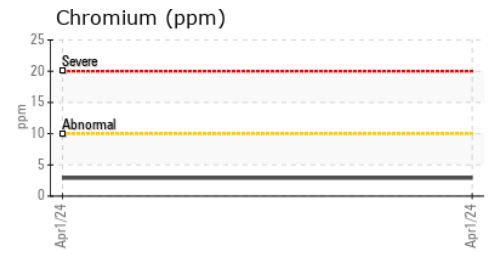
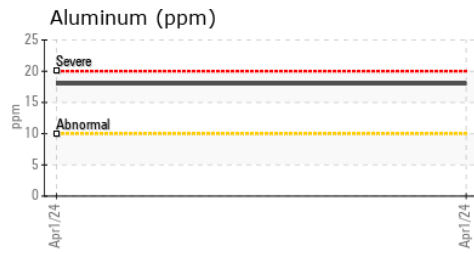
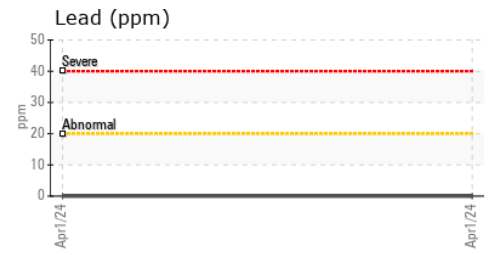
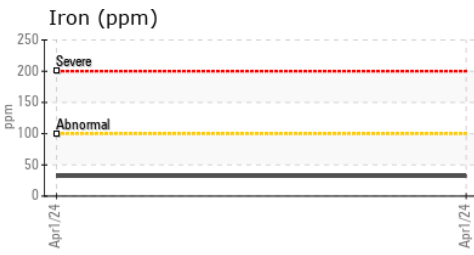
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.6	---	---

GRAPHS



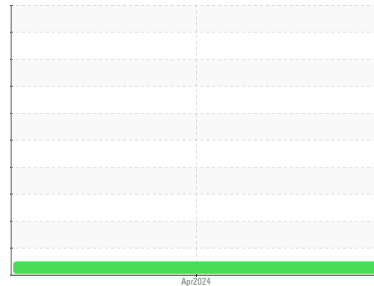
**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC000904      **Received** : 05 Apr 2024  
**Lab Number** : 06139690      **Tested** : 06 Apr 2024  
**Unique Number** : 10964498      **Diagnosed** : 07 Apr 2024 - Don Baldrige  
**Test Package** : MOBCE ( Additional Tests: TBN )

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)



NORMAL



Machine Id  
**VOLVO EC140E 315905**  
 Component  
**Hydraulic System**  
 Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

DIAGNOSIS

**Recommendation**  
 Resample at the next service interval to monitor.

**Wear**  
 All component wear rates are normal.

**Contamination**  
 The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

**Fluid Condition**  
 The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION method limit/base current history1 history2

Sample Number	Client Info	ASC0000920	---	---
Sample Date	Client Info	01 Apr 2024	---	---
Machine Age	hrs	Client Info	554	---
Oil Age	hrs	Client Info	554	---
Oil Changed	Client Info	Not Chngd	---	---
Sample Status		NORMAL	---	---

CONTAMINATION method limit/base current history1 history2

Water	WC Method	>0.1	NEG	---	---
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WEAR METALS method limit/base current history1 history2

Iron	ppm	ASTM D5185m	>25	0	---	---
Chromium	ppm	ASTM D5185m	>10	0	---	---
Nickel	ppm	ASTM D5185m	>10	<1	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>20	<1	---	---
Lead	ppm	ASTM D5185m	>20	<1	---	---
Copper	ppm	ASTM D5185m	>150	6	---	---
Tin	ppm	ASTM D5185m	>10	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
Cadmium	ppm	ASTM D5185m		0	---	---

ADDITIVES method limit/base current history1 history2

Boron	ppm	ASTM D5185m	14	0	---	---
Barium	ppm	ASTM D5185m	0.0	0	---	---
Molybdenum	ppm	ASTM D5185m	0.0	0	---	---
Manganese	ppm	ASTM D5185m	0.0	0	---	---
Magnesium	ppm	ASTM D5185m	2.6	<1	---	---
Calcium	ppm	ASTM D5185m	49	73	---	---
Phosphorus	ppm	ASTM D5185m	354	473	---	---
Zinc	ppm	ASTM D5185m	419	713	---	---
Sulfur	ppm	ASTM D5185m	3719	1298	---	---

CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>50	4	---	---
Sodium	ppm	ASTM D5185m		<1	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---

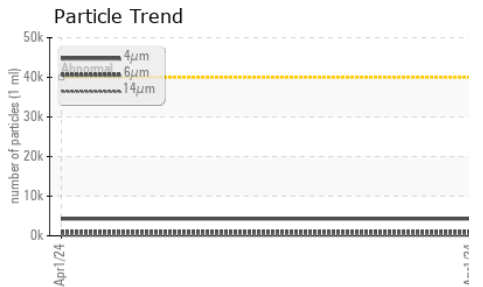
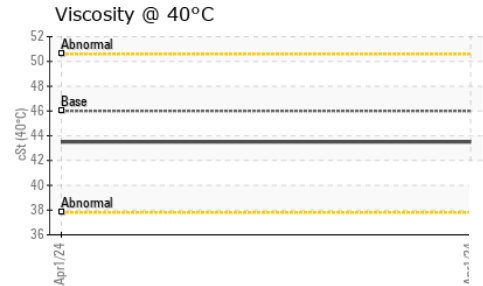
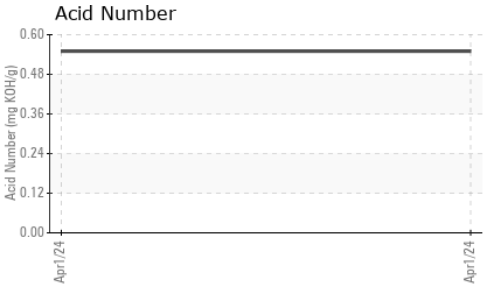
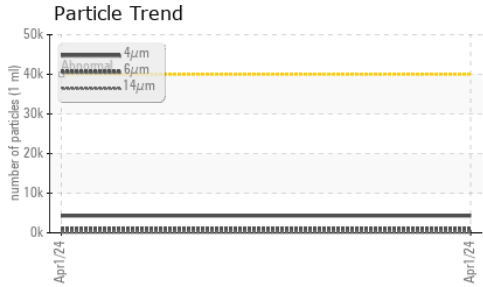
FLUID CLEANLINESS method limit/base current history1 history2

Particles >4µm	ASTM D7647	>40000	4298	---	---
Particles >6µm	ASTM D7647	>10000	951	---	---
Particles >14µm	ASTM D7647	>2500	66	---	---
Particles >21µm	ASTM D7647	>640	19	---	---
Particles >38µm	ASTM D7647	>160	1	---	---
Particles >71µm	ASTM D7647	>40	0	---	---
Oil Cleanliness	ISO 4406 (c)	>22/20/18	19/17/13	---	---

FLUID DEGRADATION method limit/base current history1 history2

Acid Number (AN)	mg KOH/g	ASTM D8045	0.55	---	---
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# OIL ANALYSIS REPORT



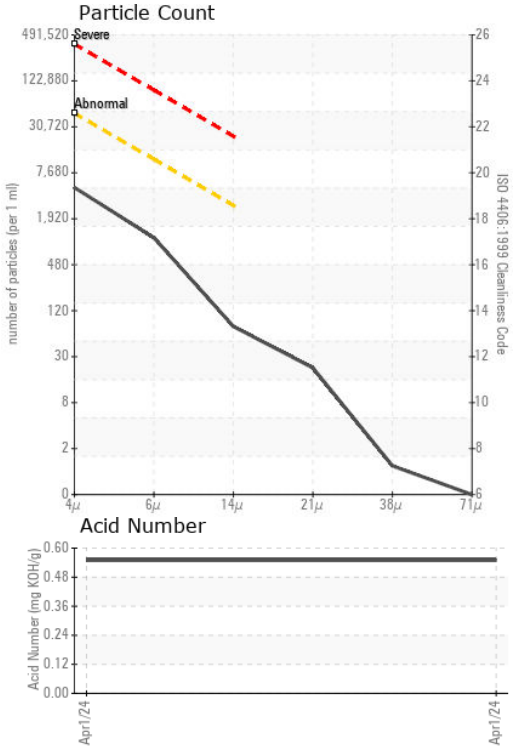
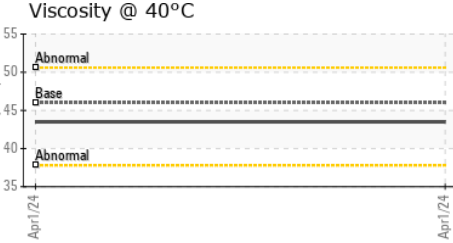
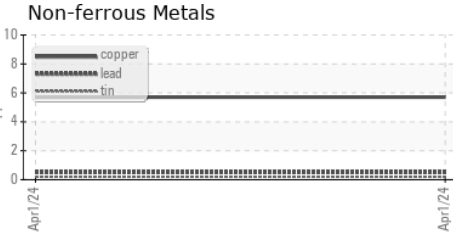
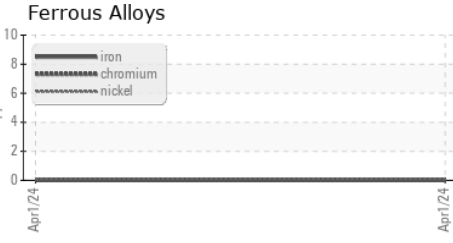
VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 40°C	cSt	ASTM D445	46	<b>43.5</b>	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Color				no image	no image
Bottom				no image	no image

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC000920      **Received** : 05 Apr 2024  
**Lab Number** : **06139847**      **Tested** : 08 Apr 2024  
**Unique Number** : 10964655      **Diagnosed** : 08 Apr 2024 - Wes Davis  
**Test Package** : MOBCE

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
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 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)



WEAR



Machine Id

**VOLVO EC140E 315905**

Component

**Swing Drive**

Fluid

**VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)**

DIAGNOSIS

▲ Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

▲ Wear

The copper level is abnormal. All other metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

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

SAMPLE INFORMATION	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>ASC0001981</b>	---	---
Sample Date	Client Info		<b>01 Apr 2024</b>	---	---
Machine Age	hrs	Client Info	<b>554</b>	---	---
Oil Age	hrs	Client Info	<b>554</b>	---	---
Oil Changed	Client Info		<b>Not Chngd</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

CONTAMINATION	method	limit/base	current	history1	history2
Water	WC Method	>0.25	<b>NEG</b>	---	---

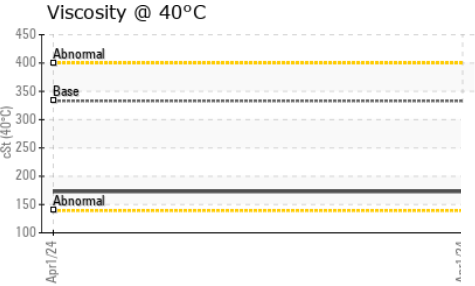
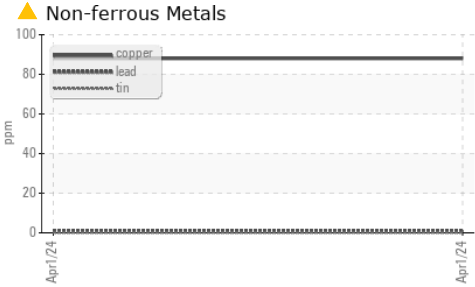
WEAR METALS	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >1200	<b>83</b>	---	---
Chromium	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m >10	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >25	<b>2</b>	---	---
Lead	ppm	ASTM D5185m >50	<b>&lt;1</b>	---	---
Copper	ppm	ASTM D5185m >50	<b>▲ 88</b>	---	---
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

ADDITIVES	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 111	<b>0</b>	---	---
Barium	ppm	ASTM D5185m 0.0	<b>2</b>	---	---
Molybdenum	ppm	ASTM D5185m 0.9	<b>0</b>	---	---
Manganese	ppm	ASTM D5185m 0.0	<b>4</b>	---	---
Magnesium	ppm	ASTM D5185m 39	<b>&lt;1</b>	---	---
Calcium	ppm	ASTM D5185m 93	<b>1</b>	---	---
Phosphorus	ppm	ASTM D5185m 920	<b>324</b>	---	---
Zinc	ppm	ASTM D5185m 104	<b>51</b>	---	---
Sulfur	ppm	ASTM D5185m 20179	<b>17920</b>	---	---

CONTAMINANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	<b>22</b>	---	---
Sodium	ppm	ASTM D5185m	<b>1</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	---	---

VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual >0.25	<b>NEG</b>	---	---
Free Water	scalar	*Visual	<b>NEG</b>	---	---

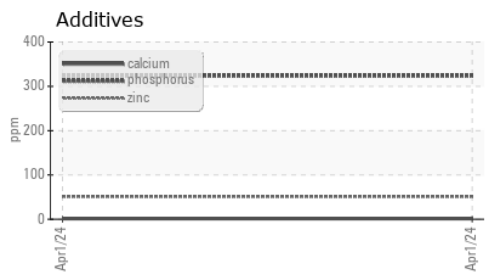
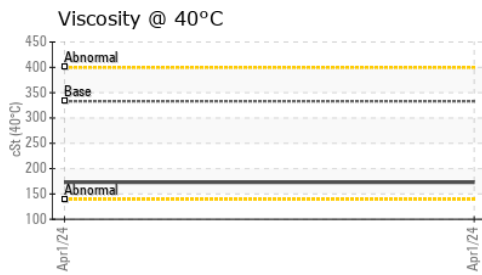
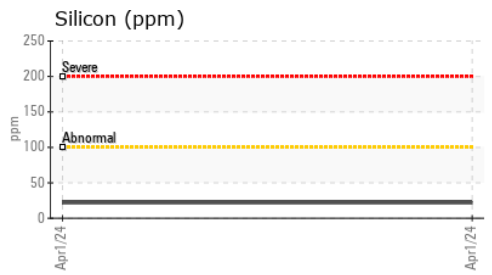
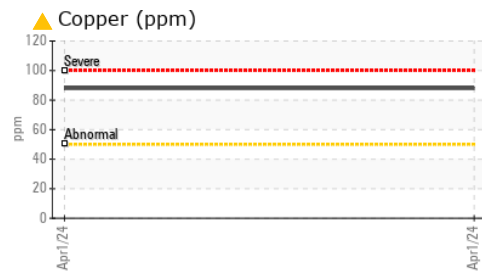
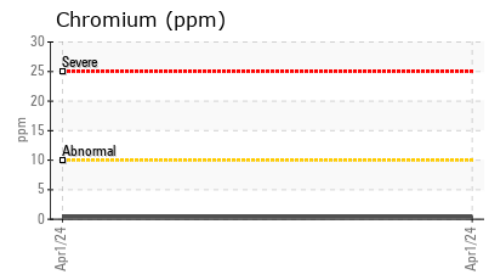
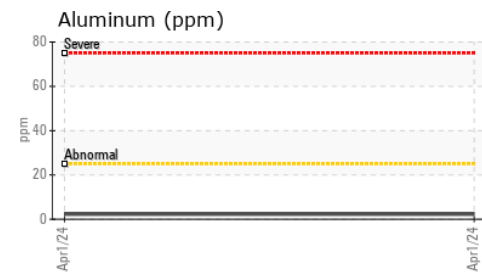
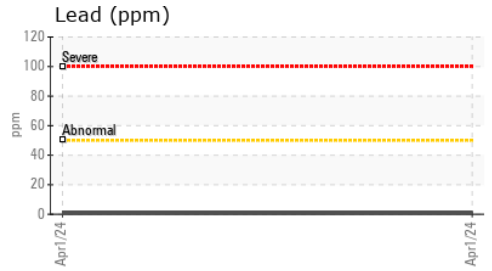
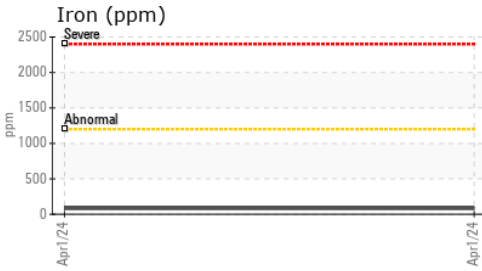
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 333	<b>173</b>	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				no image	no image
Bottom				no image	no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0001981      **Received** : 05 Apr 2024  
**Lab Number** : **06140276**      **Tested** : 08 Apr 2024  
**Unique Number** : 10965084      **Diagnosed** : 09 Apr 2024 - Don Baldrige  
**Test Package** : MOBCE

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
F:



Machine Id

**VOLVO EC140E 315905**

Component

**Left Travel**

Fluid

**VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)**



**DIAGNOSIS**

**Recommendation**

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

**Wear**

The tin level is abnormal. All other metal levels are typical for a new component breaking in.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

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

**SAMPLE INFORMATION**

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>ASC0000900</b>	---	---
Sample Date	Client Info		<b>01 Apr 2024</b>	---	---
Machine Age	hrs	Client Info	<b>554</b>	---	---
Oil Age	hrs	Client Info	<b>554</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

**CONTAMINATION**

	method	limit/base	current	history1	history2
Water	WC Method	>0.25	<b>NEG</b>	---	---

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >1200	<b>414</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>7</b>	---	---
Nickel	ppm	ASTM D5185m >5	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >100	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185m >50	<b>0</b>	---	---
Copper	ppm	ASTM D5185m >50	<b>3</b>	---	---
Tin	ppm	ASTM D5185m >5	<b>▲ 43</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 111	<b>0</b>	---	---
Barium	ppm	ASTM D5185m 0.0	<b>1</b>	---	---
Molybdenum	ppm	ASTM D5185m 0.9	<b>0</b>	---	---
Manganese	ppm	ASTM D5185m 0.0	<b>6</b>	---	---
Magnesium	ppm	ASTM D5185m 39	<b>2</b>	---	---
Calcium	ppm	ASTM D5185m 93	<b>25</b>	---	---
Phosphorus	ppm	ASTM D5185m 920	<b>326</b>	---	---
Zinc	ppm	ASTM D5185m 104	<b>26</b>	---	---
Sulfur	ppm	ASTM D5185m 20179	<b>18721</b>	---	---

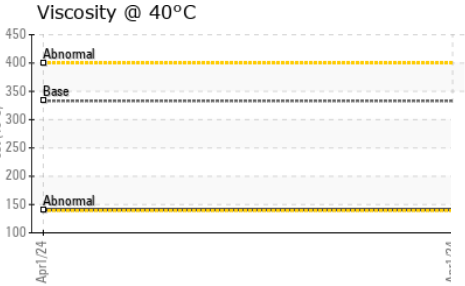
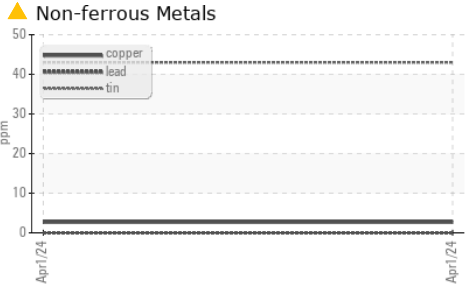
**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	<b>10</b>	---	---
Sodium	ppm	ASTM D5185m	<b>4</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	---	---

**VISUAL**

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual NONE	<b>MODER</b>	---	---
Debris	scalar	*Visual NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual >0.25	<b>NEG</b>	---	---
Free Water	scalar	*Visual	<b>NEG</b>	---	---

# OIL ANALYSIS REPORT



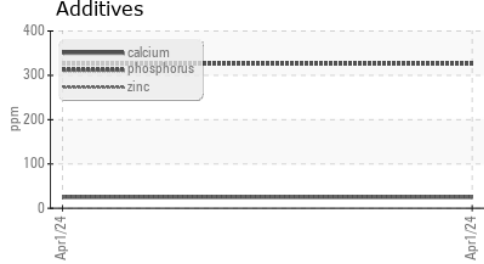
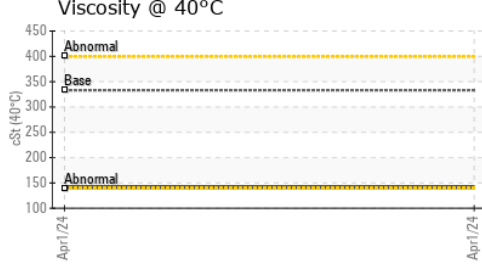
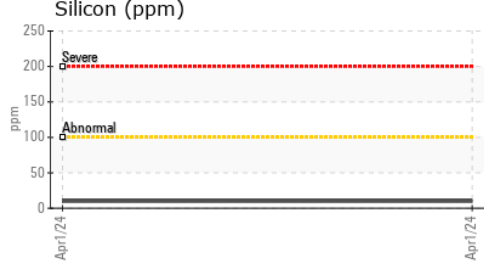
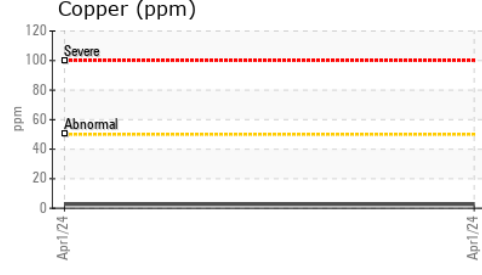
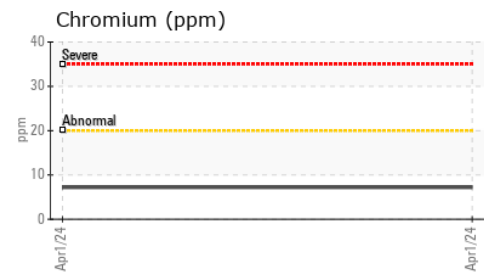
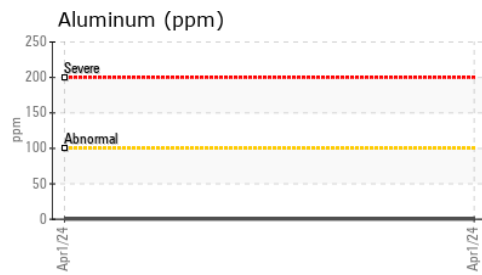
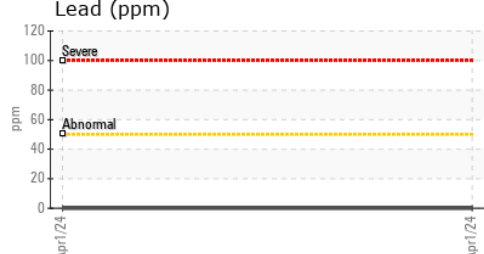
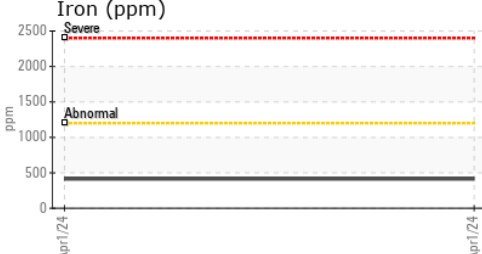
### FLUID PROPERTIES

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 333	141	---	---

### SAMPLE IMAGES

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			no image	no image	no image
Bottom			no image	no image	no image

### GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC000900      **Received** : 05 Apr 2024  
**Lab Number** : 06140277      **Tested** : 08 Apr 2024  
**Unique Number** : 10965085      **Diagnosed** : 09 Apr 2024 - Don Baldrige  
**Test Package** : MOBCE

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
F:

Machine Id

**VOLVO EC140E 315905**

Component

**Right Travel**

Fluid

**VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)**



**DIAGNOSIS**

**Recommendation**

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

**Wear**

The tin level is abnormal. All other metal levels are typical for a new component breaking in.

**Contamination**

There is no indication of any contamination in the oil.

**Fluid Condition**

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

**SAMPLE INFORMATION**

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>ASC0000924</b>	---	---
Sample Date	Client Info		<b>01 Apr 2024</b>	---	---
Machine Age	hrs	Client Info	<b>554</b>	---	---
Oil Age	hrs	Client Info	<b>554</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>ABNORMAL</b>	---	---

**CONTAMINATION**

	method	limit/base	current	history1	history2
Water	WC Method	>0.25	<b>NEG</b>	---	---

**WEAR METALS**

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >1200	<b>403</b>	---	---
Chromium	ppm	ASTM D5185m >20	<b>8</b>	---	---
Nickel	ppm	ASTM D5185m >5	<b>0</b>	---	---
Titanium	ppm	ASTM D5185m	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m >100	<b>0</b>	---	---
Lead	ppm	ASTM D5185m >50	<b>0</b>	---	---
Copper	ppm	ASTM D5185m >50	<b>2</b>	---	---
Tin	ppm	ASTM D5185m >5	<b>▲ 30</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	---	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 111	<b>0</b>	---	---
Barium	ppm	ASTM D5185m 0.0	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185m 0.9	<b>0</b>	---	---
Manganese	ppm	ASTM D5185m 0.0	<b>6</b>	---	---
Magnesium	ppm	ASTM D5185m 39	<b>&lt;1</b>	---	---
Calcium	ppm	ASTM D5185m 93	<b>20</b>	---	---
Phosphorus	ppm	ASTM D5185m 920	<b>292</b>	---	---
Zinc	ppm	ASTM D5185m 104	<b>17</b>	---	---
Sulfur	ppm	ASTM D5185m 20179	<b>17723</b>	---	---

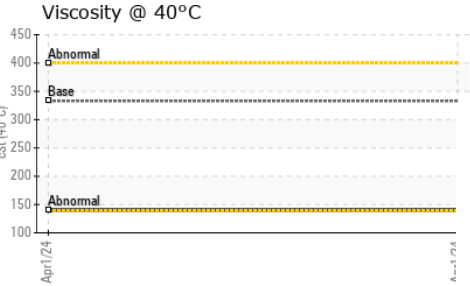
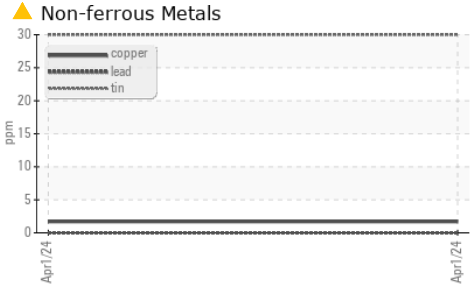
**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >100	<b>13</b>	---	---
Sodium	ppm	ASTM D5185m	<b>3</b>	---	---
Potassium	ppm	ASTM D5185m >20	<b>0</b>	---	---

**VISUAL**

	method	limit/base	current	history1	history2
White Metal	scalar	*Visual NONE	<b>MODER</b>	---	---
Yellow Metal	scalar	*Visual NONE	<b>NONE</b>	---	---
Precipitate	scalar	*Visual NONE	<b>NONE</b>	---	---
Silt	scalar	*Visual NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual >0.25	<b>NEG</b>	---	---
Free Water	scalar	*Visual	<b>NEG</b>	---	---

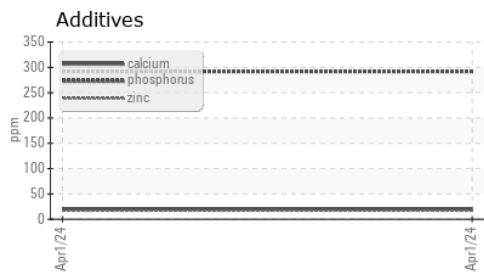
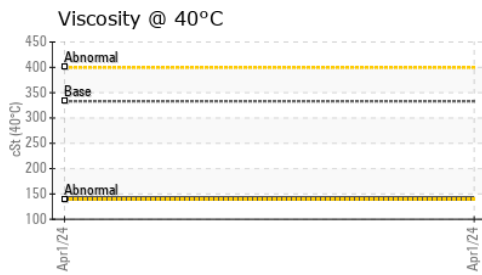
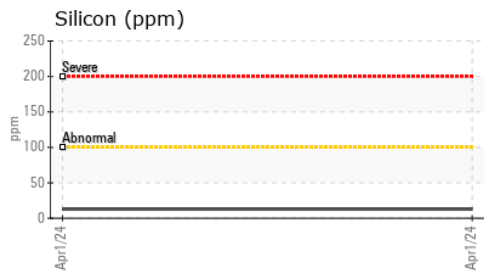
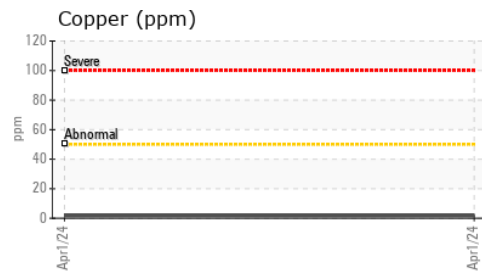
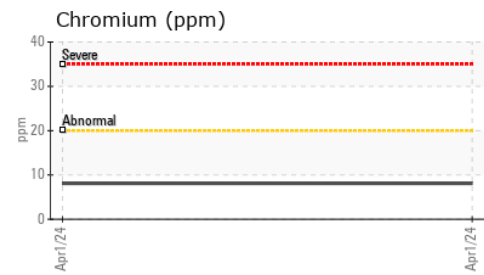
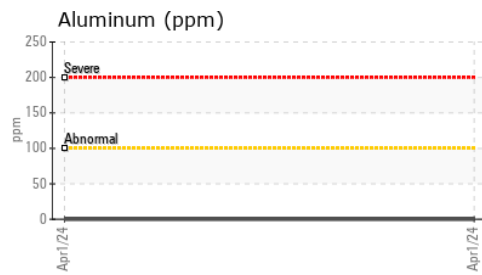
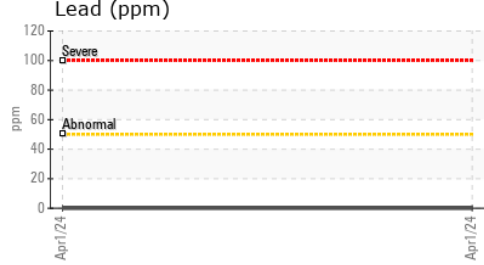
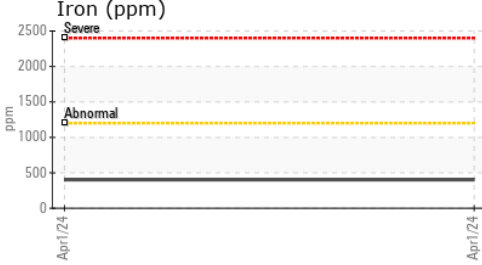
# OIL ANALYSIS REPORT



FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 333	<b>140</b>	---	---

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color			no image	no image	no image
Bottom			no image	no image	no image

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0000924      **Received** : 05 Apr 2024  
**Lab Number** : **06140275**      **Tested** : 08 Apr 2024  
**Unique Number** : 10965083      **Diagnosed** : 09 Apr 2024 - Don Baldrige  
**Test Package** : MOBCE

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.  
 \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.  
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)