

# **COOLANT REPORT**

Sample Rating Trend

NORMAL



Machine Id

# **VOLVO EC140E 315905**

Component Radiator Coolant

VOLVO VCS-2 Coolant (Orange) (--- GAL)

### 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.

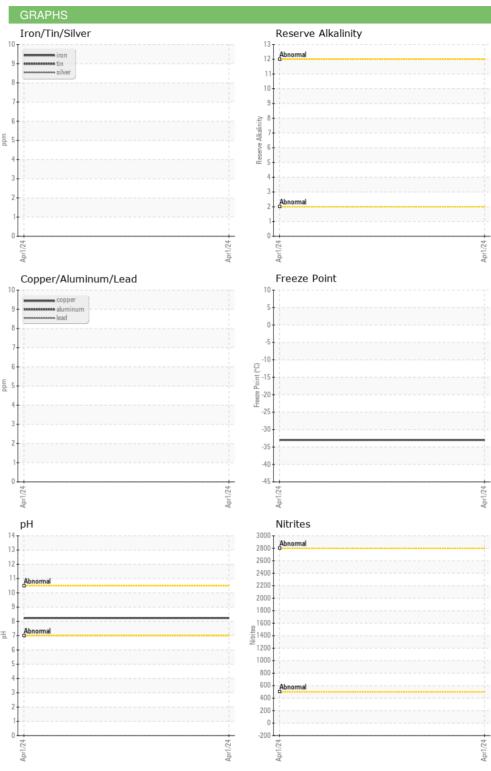
## **Fluid Condition**

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		ASC0000922		
Sample Date		Client Info		01 Apr 2024		
Machine Age	hrs	Client Info		554		
Oil Age	hrs	Client Info		554		
Oil Changed		Client Info		Not Changd		
Sample Status				NORMAL		
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method		NEG		
PHYSICAL TEST R	RESULTS	method	limit/base	current	history1	history2
Glycol Type		FT-IR				
Specific Gravity		*ASTM D1298		1.067		
pН	Scale 0-14	ASTM D1287		8.23		
Nitrites	ppm	AP-053:2009		NT		
Reserve Alkalinity	Scale 0-20	*ASTM D1121				
Percentage Glycol	%	ASTM D3321		49.2		
Freezing Point	°F	ASTM D3321		-33		
Total Dissolved Solids				269.5		
Carboxylate				fail		
VISUAL		method	limit/base	current	history1	history2
Coolant Color		*Visual		Yllow		
Coolant Appearance		*Visual	Clear	normal		
Color					no image	no image
Bottom					no image	no image

## **COOLANT REPORT**







Certificate 12367

Laboratory Sample No.

Unique Number : 10965269

: ASC0000922 Lab Number : 06140461

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

: 05 Apr 2024 **Tested** : 10 Apr 2024

Diagnosed : 10 Apr 2024 - Jonathan Hester Test Package : COOL- ( Additional Tests: BoilingPoint, COOL, GlycolType )

1036 BRANCHVIEW DR, SUITE 106 CONCORD, NC US 28025 Contact: KEVIN LADGERWOOD

**CAROLINA EXCAVATING** 

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)

Report Id: CARCONVC [WUSCAR] 06140461 (Generated: 07/03/2024 13:42:44) Rev: 1

Submitted By: CLAYTON SMITH

kevin@carlinaexcavation.com

T:

F:

# **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

# **VOLVO EC140E 315905**

Diesel Engine

**VOLVO VDS-4.5 Premium Motor Oil 15W40** 

## DIAGNOSIS

## Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

## Contamination

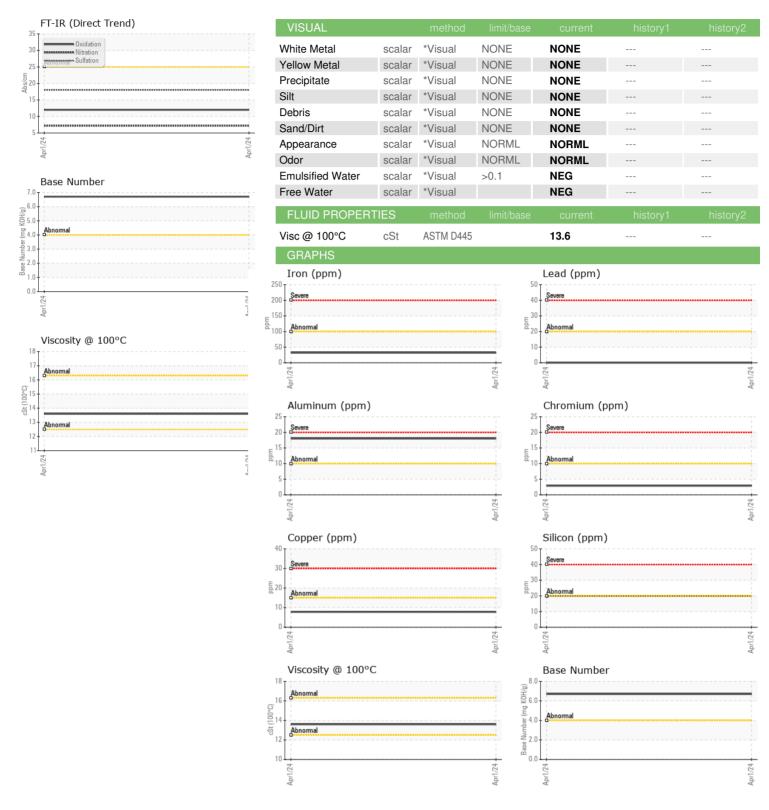
There is no indication of any contamination in the

## **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 Number   Client Info   ASC0000904							
Sample Number   Client Info   ASC0000904	( GAL)				Apr2024		
Client Info   ASC0000904           Sample Date   Client Info   O1 Apr 2024           Machine Age   hrs   Client Info   554           Oil Olage   hrs   Client Info   554           Oil Changed   Client Info   Changed           Oil Changed           Oil Changed   Client Info   Client Info   Changed           Oil Changed   Client Info	SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Cample Date   Client Info   01 Apr 2024							
Machine Age							
Dit Age		hrs			-		
Client Info   Changed   Client Info   Changed   Client Info   NORMAL   CONTAMINATION   Conta							
CONTAMINATION   method   limit/base   current   history1   history2   history3   history3   history3   history3   history4   history4   history4   history4   history4   history4   history5   histo	-	0					
Valer							
Water         WC Method         >0.1         NEG             Glycol         WC Method         Imitibase         current         history1         history1           WEAR METALS         method         limit/base         current         history1         history1           ron         ppm         ASTM D5185m         >10         3             chromium         ppm         ASTM D5185m         >10         6             Fittanium         ppm         ASTM D5185m         >0              Silver         ppm         ASTM D5185m         >10         18              Aluminum         ppm         ASTM D5185m         >20         0 </td <td>CONTAMINATION</td> <td></td> <td>method</td> <td>limit/base</td> <td>current</td> <td>history1</td> <td>history2</td>	CONTAMINATION		method	limit/base	current	history1	history2
WEAR METALS	- uel		WC Method	>6.0	<1.0		
WEAR METALS         method         limit/base         current         history1         history2           ron         ppm         ASTM D5185m         >100         32             chromium         ppm         ASTM D5185m         >10         6             clickel         ppm         ASTM D5185m         >10         6             clickel         ppm         ASTM D5185m         >2         0             clickel         ppm         ASTM D5185m         >1         0             clandium         ppm         ASTM D5185m         0 <td< td=""><td>Vater</td><td></td><td>WC Method</td><td>&gt;0.1</td><td>NEG</td><td></td><td></td></td<>	Vater		WC Method	>0.1	NEG		
ASTM D5185m   STM D5185m   ST	Glycol		WC Method		NEG		
ASTM D5185m   ASTM D5185m   Delication   D	WEAR METALS		method	limit/base	current	history1	history2
Action   A	ron	ppm	ASTM D5185m	>100	32		
STATUD   S	Chromium	ppm	ASTM D5185m	>10	3		
Silver	lickel	ppm	ASTM D5185m	>10	6		
Silver	- itanium		ASTM D5185m		0		
December   December	Silver		ASTM D5185m	>2	0		
December   December	Aluminum	ppm	ASTM D5185m	>10	18		
Description	_ead		ASTM D5185m	>20	0		
Action	Copper		ASTM D5185m	>15	8		
Anadium	• •						
ADDITIVES	/anadium	• •	ASTM D5185m		0		
Soron   ppm   ASTM D5185m   23					-		
Description	ADDITIVES		method	limit/base	current	history1	history2
Sarium	Boron	ppm	ASTM D5185m		23		
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         4870             Sulfur         ppm         ASTM D5185m         20         20             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         20         20             Godium         ppm         ASTM D5185m         20         2             Potassium         ppm         ASTM D5185m         20         2             Soot %         *ASTM D7844         >3         0.2             Silicon         Abs/.1mm	Barium		ASTM D5185m		0		
Manganese         ppm         ASTM D5185m         3             Magnesium         ppm         ASTM D5185m         66             Calcium         ppm         ASTM D5185m         1027             Phosphorus         ppm         ASTM D5185m         1184             Zinc         ppm         ASTM D5185m         4870             Sulfur         ppm         ASTM D5185m         >20         20             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         >20         20             Potassium         ppm         ASTM D5185m         2             Soot %         *ASTM D7844         >3         0.	Nolvbdenum		ASTM D5185m		10		
Magnesium         ppm         ASTM D5185m         66             Calcium         ppm         ASTM D5185m         2468             Phosphorus         ppm         ASTM D5185m         1027             Cinc         ppm         ASTM D5185m         1184             Sulfur         ppm         ASTM D5185m         4870             CONTAMINANTS         method         limit/base         current         history1         history2           Silicon         ppm         ASTM D5185m         20         20             Potassium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         2             Potassium         ppm         ASTM D5185m         >20         2             Soot %         *ASTM D5185m         >20         2             Soot %         *ASTM D5185m         >3         0.2             Soot %         *ASTM D7844         >3<	-		ASTM D5185m		3		
Ralcium         ppm         ASTM D5185m         2468             Phosphorus         ppm         ASTM D5185m         1027             Pinc         ppm         ASTM D5185m         1184             Poulfur         ppm         ASTM D5185m         4870             CONTAMINANTS         method         limit/base         current         history1         history1           Sidicon         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         20         2             Potassium         ppm         ASTM D5185m         >20         2              INFRA-RED         method         limit/base         current         history1         history2           Pootassium         Abs/cm         *ASTM D7624         >20         7.2             Potassium         Abs/limm         *ASTM D7415         >30         18.0			ASTM D5185m		66		
Contamination   Property   Prop	-						
Tinc							
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           Goot %         %         *ASTM D7844         >3         0.2             Silitration         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					_		
Solicon   ppm   ASTM D5185m   >20   20							
Sodium         ppm         ASTM D5185m         2             Potassium         ppm         ASTM D5185m         >20         2             INFRA-RED         method         limit/base         current         history1         history1           Soot %         %         *ASTM D7844         >3         0.2             Vitration         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	CONTAMINANTS		method	limit/base	current	history1	history2
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             Sulfration         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	Silicon	ppm	ASTM D5185m	>20	20		
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           Dxidation         Abs/.1mm         *ASTM D7414         >25         12.0							
Soot %				>20			
Nitration	INFRA-RED		method	limit/base	current	history1	history2
Sulfation	Soot %	%	*ASTM D7844	>3	0.2		
Sulfation         Abs/.1mm         *ASTM D7415         >30         18.0             FLUID DEGRADATION         method         limit/base         current         history1         history2           Oxidation         Abs/.1mm         *ASTM D7414         >25         12.0							
Oxidation Abs/.1mm *ASTM D7414 >25 <b>12.0</b>							
	FLUID DEGRADA	TION	method	limit/base	current	history1	history2
	Oxidation	Abs/.1mm	*ASTM D7414	>25	12.0		
2005 NULLIUGI U2IN		mg KOH/g	ASTM D2896	,	6.7		

## **OIL ANALYSIS REPORT**







Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Lab Number : 06139690

: ASC0000904 Unique Number : 10964498

Received **Tested** Diagnosed

: 05 Apr 2024 : 06 Apr 2024

: 07 Apr 2024 - Don Baldridge

US 28025 Contact: KEVIN LADGERWOOD kevin@carlinaexcavation.com T:

1036 BRANCHVIEW DR, SUITE 106

Test Package : MOBCE ( Additional Tests: TBN ) Certificate 12367 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)

Report Id: CARCONVC [WUSCAR] 06139690 (Generated: 07/03/2024 13:42:51) Rev: 1

Submitted By: CLAYTON SMITH

**CAROLINA EXCAVATING** 

F:

CONCORD, NC

# **OIL ANALYSIS REPORT**

Sample Rating Trend

**NORMAL** 



Machine Id

# **VOLVO EC140E 315905**

Hydraulic System

**VOLVO SUPER HYDRAULIC OIL 46 (--- GA** 

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

## Contamination

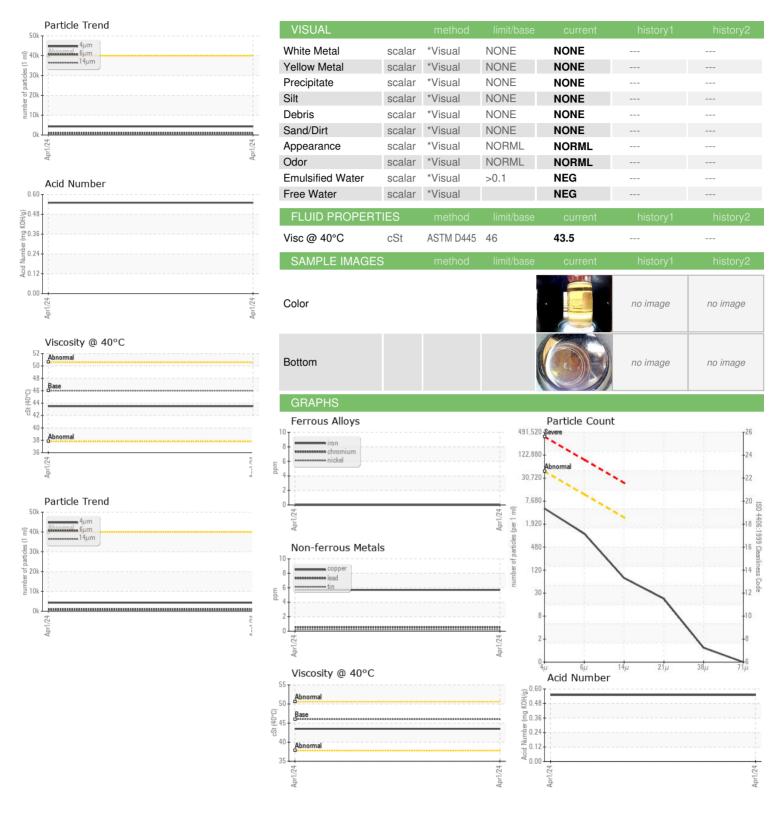
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

## **Fluid Condition**

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

AL)			,	Apr2024		
/						
SAMPLE INFORM	ATION	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 Changd		
Sample Status				NORMAL		
CONTAMINATIO	V	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>25	0		
Chromium	ppm	ASTM D5185m		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		>10	<1		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	mag	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm	ASTM D5185m		0		
Boron Barium	ppm		14	0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	14	0		
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0	0 0 0 0		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0	0 0 0		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0 0.0 2.6	0 0 0 0 <1 73		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0 0.0 2.6 49 354	0 0 0 0 <1 73 473		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0 2.6 49	0 0 0 0 <1 73		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419	0 0 0 0 <1 73 473 713		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419 3719	0 0 0 0 <1 73 473 713 1298	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419 3719	0 0 0 0 <1 73 473 713 1298	     history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419 3719	0 0 0 0 <1 73 473 713 1298 current	     history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50	0 0 0 0 <1 73 473 713 1298 current 4	     history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50	0 0 0 0 -1 73 473 713 1298 current 4 -1 -1 4298	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	14 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50 >20	0 0 0 0 0 <1 73 473 713 1298 current 4 <1 <1	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  MEthod ASTM D5185m ASTM D7647 ASTM D7647	14 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50 >20 limit/base	0 0 0 0 -1 73 473 713 1298 current 4 -1 -1 4298	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	14 0.0 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50	0 0 0 0 -1 73 473 713 1298 current 4 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1 -1	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  MEthod ASTM D5185m ASTM D7647 ASTM D7647	14 0.0 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50 >20 limit/base >40000 >10000 >2500	0 0 0 0 <1 73 473 713 1298 current 4 <1 <1 current 4298 951 66	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	14 0.0 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50 >20 limit/base >40000 >10000 >2500 >640	0 0 0 0 <1 73 473 713 1298 current 4 <1 <1 <1 current 4298 951 66	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	14 0.0 0.0 0.0 0.0 2.6 49 354 419 3719 limit/base >50 >20 limit/base >40000 >10000 >2500 >640 >160	0 0 0 0 0 <1 73 473 713 1298 current 4 <1 <1 <1 current 4298 951 66 19	history1 history1	history2 history2

## **OIL ANALYSIS REPORT**





Certificate 12367

Laboratory Sample No.

: ASC0000920 Lab Number : 06139847 Unique Number : 10964655

Test Package : MOBCE

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 05 Apr 2024

**Tested** : 08 Apr 2024 Diagnosed

: 08 Apr 2024 - Wes Davis

US 28025 Contact: KEVIN LADGERWOOD kevin@carlinaexcavation.com

1036 BRANCHVIEW DR, SUITE 106

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

**CAROLINA EXCAVATING** 

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CONCORD, NC

# **OIL ANALYSIS REPORT**

Sample Rating Trend **WEAR** 

Machine Id

# **VOLVO EC140E 315905**

Component Swing Drive

VOLVO PREMIUM GEAR OIL 85W-140 GL-

## 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

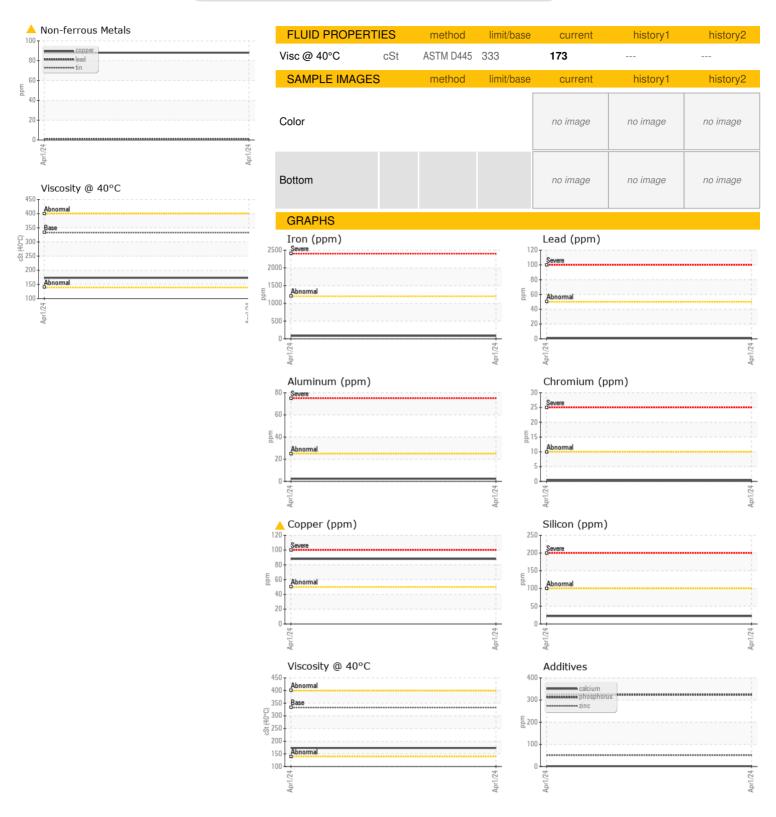
There is no indication of any contamination in the

### Fluid Condition

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

/=== (¬ΔΙ)						
( GAL)				Apr2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		ASC0001981		
Sample Date		Client Info		01 Apr 2024		
Machine Age	hrs	Client Info		554		
Dil Age	hrs	Client Info		554		
Dil Changed	1110	Client Info		Not Changd		
Sample Status				ABNORMAL		
CONTAMINATIO	N	method	limit/base	current	history1	history2
Vater	•	WC Method	>0.25	NEG		
WEAR METALS		method	limit/base	current	history1	history2
on	ppm	ASTM D5185m	>1200	83		
hromium	ppm		>10	<1		
lickel	ppm	ASTM D5185m	>10	0		
itanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Juminum	ppm	ASTM D5185m	>25	2		
ead	ppm	ASTM D5185m	>50	<1		
Copper	ppm	ASTM D5185m	>50	< 1 ▲ 88		
in		ASTM D5185m	>10	<1		
"anadium	ppm	ASTM D5185m	>10	0		
Cadmium	ppm	ASTM D5185m		0		
	ppm			U		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	111	0		
Barium	ppm	ASTM D5185m	0.0	2		
Nolybdenum	ppm	ASTM D5185m	0.9	0		
langanese	ppm	ASTM D5185m	0.0	4		
/lagnesium	ppm	ASTM D5185m	39	<1		
nagnesium	ppiii					
<u> </u>	ppm	ASTM D5185m	93	1		
Calcium		ASTM D5185m ASTM D5185m	93 920	1 324		
Calcium Phosphorus	ppm			-		
Calcium Phosphorus Zinc	ppm ppm	ASTM D5185m	920	324		
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	920 104	324 51		
Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	920 104 20179	324 51 17920		 
Calcium Phosphorus řinc Sulfur CONTAMINANTS	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	920 104 20179 limit/base	324 51 17920 current	   history1	  history2
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	920 104 20179 limit/base >100	324 51 17920 current 22	  history1	  history2
Calcium Phosphorus Cinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	920 104 20179 limit/base >100	324 51 17920 current 22	  history1	history2
Calcium Phosphorus Linc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m	920 104 20179 limit/base >100 >20	324 51 17920 current 22 1	  history1	  history2 
Calcium Phosphorus Cinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	920 104 20179 limit/base >100 >20 limit/base	324 51 17920 current 22 1 0	history1	history2
Calcium Phosphorus Cinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL Vhite Metal Cellow Metal	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m wethod *Visual	920 104 20179 limit/base >100 >20 limit/base NONE	324 51 17920 current 22 1 0 current NONE	  history1   history1	history2 history2 history2
Calcium Phosphorus Cinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Cellow Metal Precipitate	ppm ppm ppm ppm ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m wethod *Visual	920 104 20179 limit/base >100 >20 limit/base NONE	324 51 17920  current 22 1 0  current NONE NONE	history1 history1	history2 history2 history2
Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m wethod *Visual *Visual *Visual	920 104 20179 limit/base >100 >20 limit/base NONE NONE	324 51 17920  current 22 1 0  current NONE NONE NONE	history1 history1 history1	history2
Calcium Phosphorus Cinc Gulfur CONTAMINANTS Gilicon Godium Potassium VISUAL White Metal Cellow Metal Precipitate Gilt Debris	ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m wethod *Visual *Visual *Visual *Visual	920 104 20179 limit/base >100 >20 limit/base NONE NONE NONE NONE	324 51 17920  current 22 1 0  current NONE NONE NONE NONE	history1 history1	history2 history2
Calcium Phosphorus Cinc Sulfur CONTAMINANTS Silicon Sodium Potassium VISUAL White Metal Cellow Metal Precipitate Silt	ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	920 104 20179 limit/base >100 >20 limit/base NONE NONE NONE NONE NONE NONE	324 51 17920  current 22 1 0  current NONE NONE NONE NONE NONE NONE	history1 history1	history2
calcium chosphorus cinc culfur CONTAMINANTS cilicon codium cotassium VISUAL Vhite Metal cellow Metal crecipitate cilt cebris cand/Dirt cppearance	ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m  *Visual	920 104 20179 limit/base >100 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	324 51 17920  current 22 1 0  current NONE NONE NONE NONE NONE NONE NONE NON	history1 history1	history2 history2
calcium chosphorus cinc culfur CONTAMINANTS cilicon codium cotassium VISUAL Vhite Metal cellow Metal crecipitate cilt cebris cand/Dirt	ppm ppm ppm ppm ppm ppm ppm ppm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m  *Visual	920 104 20179 limit/base >100 >20 limit/base NONE NONE NONE NONE NONE NONE NONE NON	324 51 17920  current 22 1 0  current NONE NONE NONE NONE NONE NONE NONE NON	history1 history1	history2 history2

## **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Lab Number : 06140276

: ASC0001981

Unique Number : 10965084 Test Package : MOBCE

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 05 Apr 2024

**Tested** : 08 Apr 2024 Diagnosed

: 09 Apr 2024 - Don Baldridge

Contact: KEVIN LADGERWOOD kevin@carlinaexcavation.com T:

1036 BRANCHVIEW DR, SUITE 106

**CAROLINA EXCAVATING** 

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)

Report Id: CARCONVC [WUSCAR] 06140276 (Generated: 07/03/2024 13:43:06) Rev: 1

Submitted By: CLAYTON SMITH

CONCORD, NC

US 28025

F:

# **OIL ANALYSIS REPORT**

Sample Rating Trend **WEAR** 

Machine Id

# **VOLVO EC140E 315905**

Component Left Travel

**VOLVO PREMIUM GEAR OIL 85W-140 GL-5** 

## **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

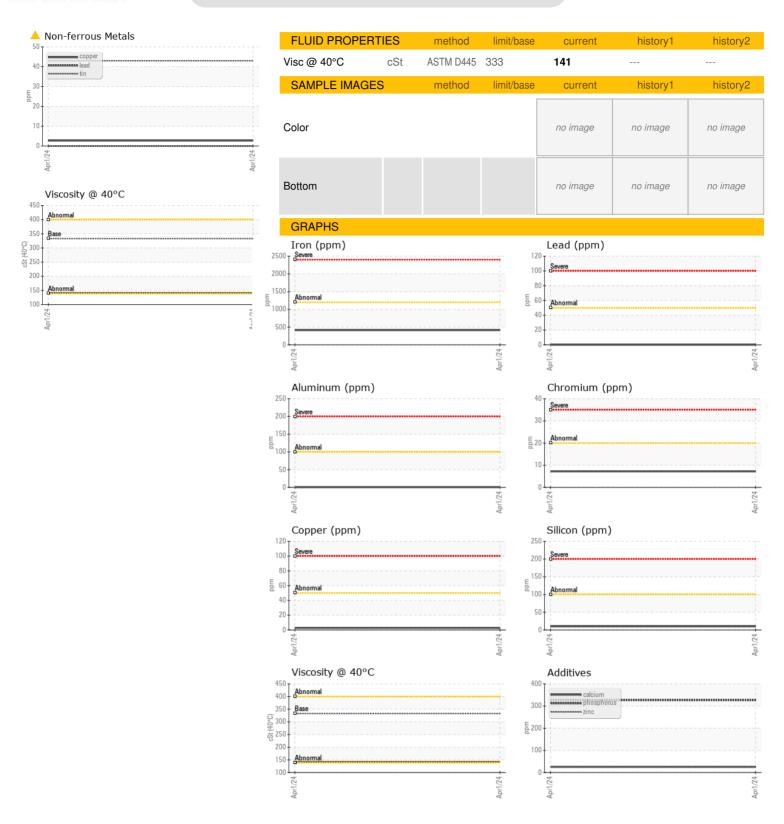
## **Fluid Condition**

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

5 ( GAL)		ı		Apr2024		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		ASC0000900		
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				ABNORMAL		
CONTAMINATIO	V	method	limit/base	current	history1	history2
Water		WC Method	>0.25	NEG		
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>1200	414		
Chromium	ppm	ASTM D5185m	>20	7		
Nickel	ppm	ASTM D5185m	>5	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m		0		
Aluminum	ppm	ASTM D5185m	>100	<1		
Lead	ppm	ASTM D5185m	>50	0		
Copper	ppm	ASTM D5185m	>50	3		
Tin	ppm	ASTM D5185m	>5	<b>43</b>		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	111	0		
Barium	ppm	ASTM D5185m	0.0	1		
Molybdenum	ppm	ASTM D5185m	0.9	0		
Manganese	ppm	ASTM D5185m	0.0	6		
Magnesium	ppm	ASTM D5185m	39	2		
Calcium	ppm	ASTM D5185m	93	25		
Phosphorus	ppm	ASTM D5185m	920	326		
Zinc	ppm	ASTM D5185m	104	26		
Sulfur	ppm	ASTM D5185m	20179	18721		
CONTAMINANTS	3	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>100	10		
Sodium	ppm	ASTM D5185m		4		
Potassium	ppm	ASTM D5185m	>20	0		
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	MODER		
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	>0.25	NEG		
Free Water	scalar	*Visual		NEG		
2-42-12\ Dov. 1					Submitted By: CL	AVEON CMITH

Submitted By: CLAYTON SMITH

## **OIL ANALYSIS REPORT**







Laboratory Sample No.

: ASC0000900 Lab Number : 06140277 Unique Number : 10965085 Test Package : MOBCE

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 05 Apr 2024 **Tested** : 08 Apr 2024

Diagnosed

: 09 Apr 2024 - Don Baldridge

US 28025 Contact: KEVIN LADGERWOOD kevin@carlinaexcavation.com

1036 BRANCHVIEW DR, SUITE 106

**CAROLINA EXCAVATING** 

Certificate 12367 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:

CONCORD, NC

# **OIL ANALYSIS REPORT**

Sample Rating Trend **WEAR** 

Machine Id

# **VOLVO EC140E 315905**

Right Travel

**VOLVO PREMIUM GEAR OIL 85W-140 GL-5** 

## 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

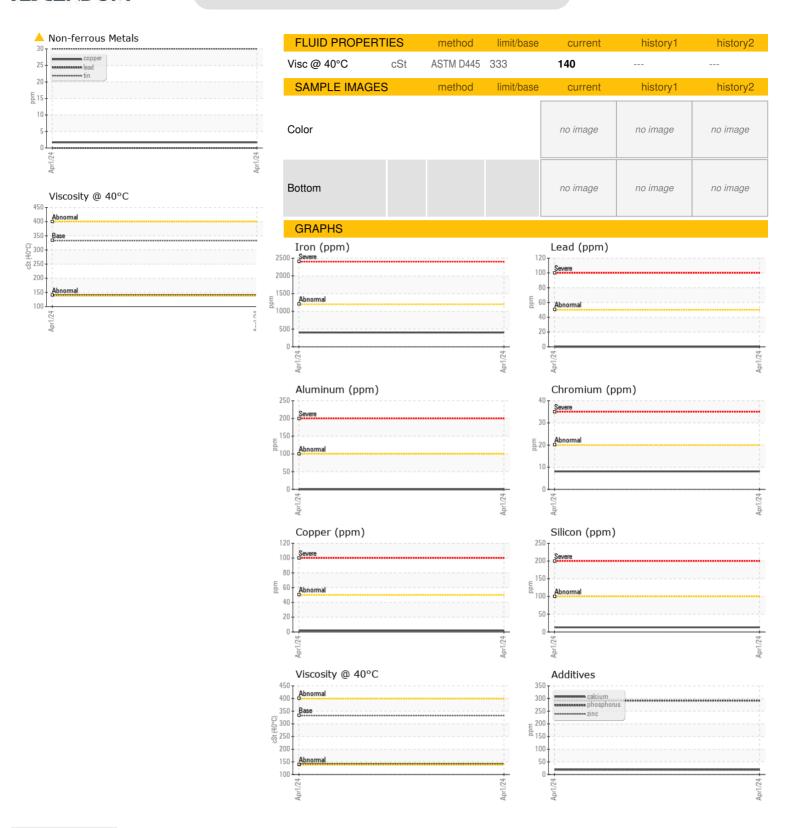
There is no indication of any contamination in the

## **Fluid Condition**

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

		,	Apr2024		
ATION	method	limit/base	current	history1	history2
	Client Info		ASC0000924		
	Client Info		01 Apr 2024		
hrs			-		
	0.1011, 11.110		ABNORMAL		
l	method	limit/base	current	history1	history2
	WC Method	>0.25	NEG		
	method	limit/base	current	history1	history2
ppm	ASTM D5185m	>1200	403		
ppm	ASTM D5185m	>20	8		
ppm	ASTM D5185m	>5	0		
ppm	ASTM D5185m		0		
	ASTM D5185m		0		
		>100	0		
		>50	-		
			=		
• •					
PPIII		limit/hoos		hiotomut	hiotom/0
					history2
• •					
ppm					
ppm			-		
ppm	ASTM D5185m	39	<1		
ppm	ASTM D5185m	93	20		
ppm	ASTM D5185m	920	292		
ppm	ASTM D5185m	104	17		
ppm	ASTM D5185m	20179	17723		
	method	limit/base	current	history1	history2
ppm	method ASTM D5185m		current 13	history1	history2
ppm ppm				,	,
• •	ASTM D5185m	>100	13		
ppm	ASTM D5185m ASTM D5185m	>100	13 3		
ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20	13 3 0		 
ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method	>100 >20 limit/base	13 3 0 current	  history1	  history2
ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual	>100 >20 limit/base NONE	13 3 0 current MODER	history1	 history2
ppm ppm scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method *Visual	>100 >20 limit/base NONE NONE	13 3 0 current MODER NONE	history1	 history2
ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual	>100  >20  limit/base  NONE  NONE  NONE	13 3 0 current MODER NONE NONE	history1	 history2
ppm ppm scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual *Visual	>100  >20  limit/base  NONE  NONE  NONE  NONE	13 3 0 current MODER NONE NONE	history1	history2
ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual *Visual *Visual	>100  >20  limit/base  NONE  NONE  NONE  NONE  NONE  NONE	13 3 0 current MODER NONE NONE NONE NONE	history1	 history2
ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m ASTM D5185m method *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>100  >20  limit/base  NONE  NONE  NONE  NONE  NONE  NONE  NONE	13 3 0 current MODER NONE NONE NONE NONE NONE NONE	history1	history2
ppm scalar	ASTM D5185m ASTM D5185m ASTM D5185m method  *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual *Visual	>100  >20  limit/base  NONE	13 3 0 current MODER NONE NONE NONE NONE NONE NONE NONE NO	history1	history2
	ppm	Client Info Client Info Client Info hrs Client Info  MC Method  MC Method  PPM ASTM D5185m	Client Info	Client Info	Client Info

## **OIL ANALYSIS REPORT**







Certificate 12367

Laboratory Sample No.

Lab Number : 06140275 Unique Number : 10965083

Test Package : MOBCE

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : ASC0000924

Received **Tested** 

: 08 Apr 2024 Diagnosed

: 09 Apr 2024 - Don Baldridge

: 05 Apr 2024

1036 BRANCHVIEW DR, SUITE 106 CONCORD, NC

US 28025 Contact: KEVIN LADGERWOOD kevin@carlinaexcavation.com

**CAROLINA EXCAVATING** 

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Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) Report Id: CARCONVC [WUSCAR] 06140275 (Generated: 07/03/2024 13:43:19) Rev: 1

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