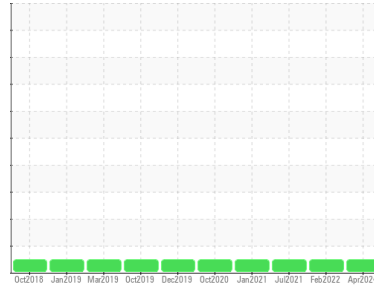




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Machine Id  
**VOLVO FSP 137978 (S/N 4V4WC9EG5KN196324)**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (44 QTS)**

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

#### 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			<b>WC0903214</b>	WC0666704	WC0574291
Sample Date	Client Info			<b>04 Apr 2024</b>	23 Feb 2022	13 Jul 2021
Machine Age	mls Client Info			<b>368357</b>	0	0
Oil Age	mls Client Info			<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Fuel	WC Method	>6.0		<b>&lt;1.0</b>	<1.0	<1.0
Water	WC Method	>0.2		<b>NEG</b>	NEG	NEG
Glycol	WC Method			<b>NEG</b>	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>30</b>	10	10
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>4</b>	9	0
Lead	ppm	ASTM D5185m	>40	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>8</b>	2	3
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185m		<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>243</b>	12	4
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>83</b>	61	63
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>476</b>	980	1014
Calcium	ppm	ASTM D5185m	3000	<b>1378</b>	1160	1127
Phosphorus	ppm	ASTM D5185m	1150	<b>1096</b>	1059	1080
Zinc	ppm	ASTM D5185m	1350	<b>1239</b>	1300	1214
Sulfur	ppm	ASTM D5185m	4250	<b>3595</b>	2846	2974

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>7</b>	4	3
Sodium	ppm	ASTM D5185m	>158	<b>6</b>	1	6
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	2	2

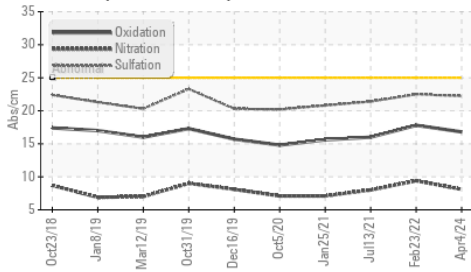
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.1</b>	9.4	8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	22.5	21.4

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.8</b>	17.8	16
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>6.6</b>	9.5	9.8

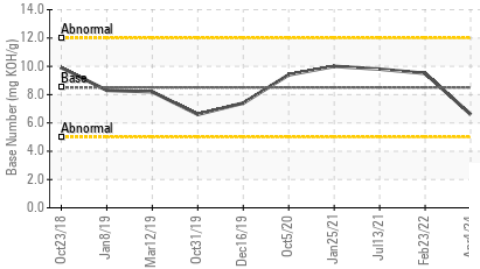


# OIL ANALYSIS REPORT

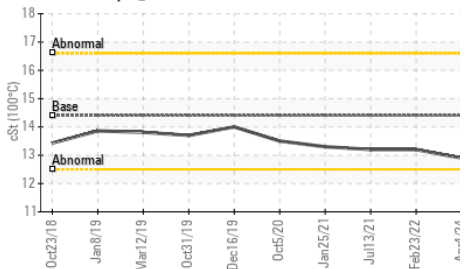
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

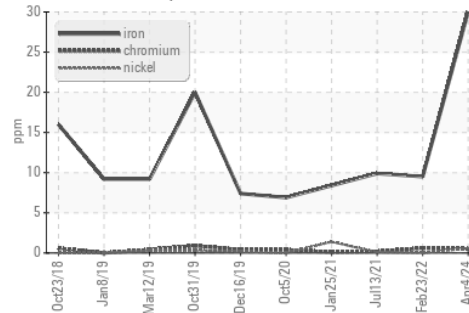


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

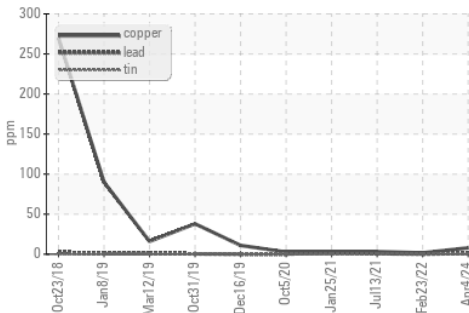
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	13.2

## GRAPHS

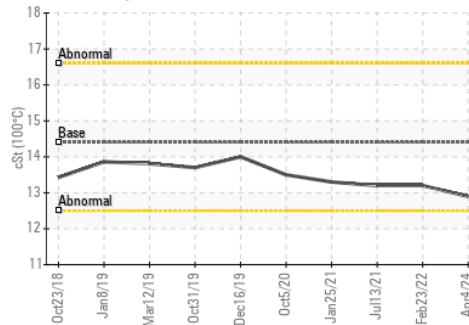
Ferrous Alloys



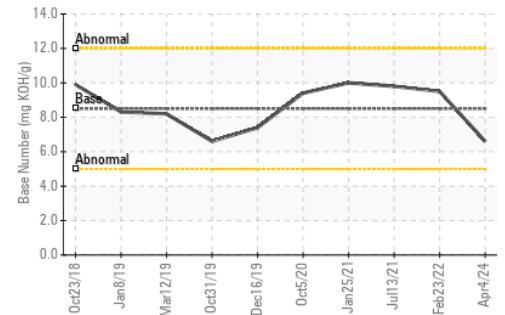
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0903214 **Received** : 19 Apr 2024  
**Lab Number** : 06155135 **Tested** : 22 Apr 2024  
**Unique Number** : 10990558 **Diagnosed** : 22 Apr 2024 - Wes Davis  
**Test Package** : FLEET

**FRESHPOINT**  
 8801 EXCHANGE DRIVE  
 ORLANDO, FL  
 US 32809  
 Contact: CRAIG EVANS  
 evans\_craig@sbcglobal.net

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)