



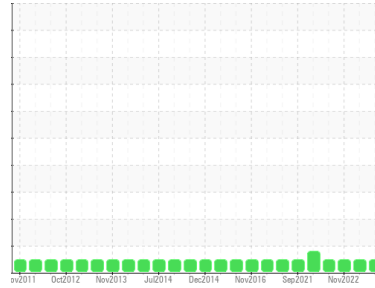
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**WMR-West Salt Lake**  
 Machine Id  
**VOLVO L90F 68767**  
 Component  
**Diesel Engine**  
 Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (6 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		<b>DJJ0015297</b>	DJJ0017375	VCP357497
Sample Date	Client Info		<b>08 Nov 2023</b>	25 Apr 2023	04 Nov 2022
Machine Age	hrs	Client Info	<b>14235</b>	13940	13627
Oil Age	hrs	Client Info	<b>260</b>	300	500
Oil Changed	Client Info		<b>Changed</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	>0.1	<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>&lt;1</b>	4	4
Chromium	ppm	ASTM D5185m >10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185m >10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	<1
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >10	<b>1</b>	<1	<1
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >15	<b>0</b>	0	<1
Tin	ppm	ASTM D5185m >10	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2.5	<b>10</b>	14	32
Barium	ppm	ASTM D5185m 0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0.7	<b>61</b>	65	50
Manganese	ppm	ASTM D5185m 0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m 256	<b>960</b>	1046	675
Calcium	ppm	ASTM D5185m 2057	<b>1120</b>	1285	1442
Phosphorus	ppm	ASTM D5185m 935	<b>1061</b>	1071	924
Zinc	ppm	ASTM D5185m 1223	<b>1299</b>	1385	1114
Sulfur	ppm	ASTM D5185m 4079	<b>3178</b>	3746	3303

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	<b>3</b>	3	2
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	1
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	2

## INFRA-RED

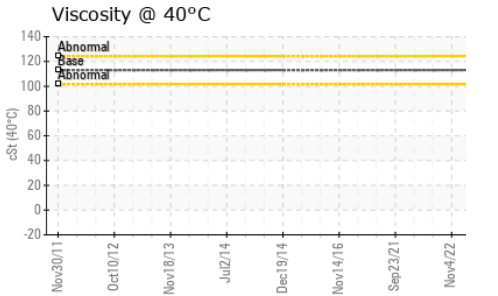
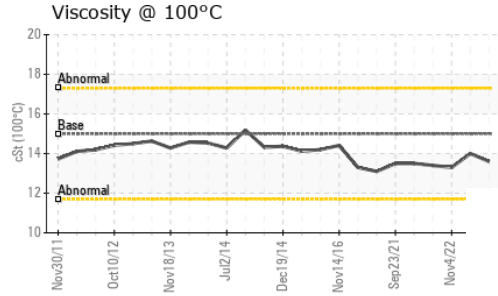
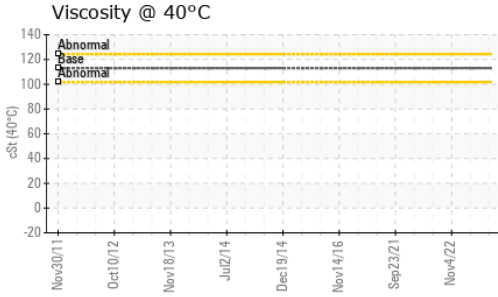
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.3</b>	0.3	0.3
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.7</b>	6.7	7.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.3</b>	17.9	22.7

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.0</b>	14.8	19.9
Base Number (BN)	mg KOH/g	ASTM D2896 10	<b>8.1</b>	8.3	11.1



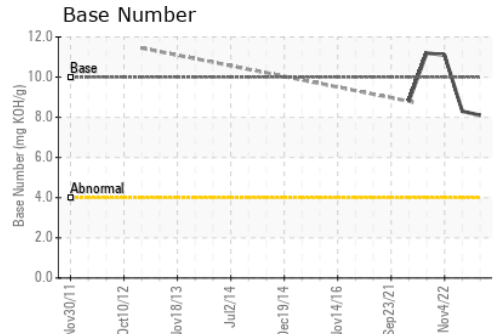
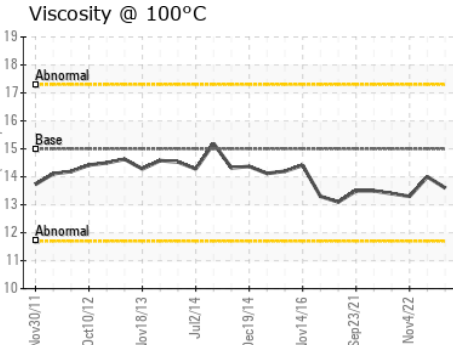
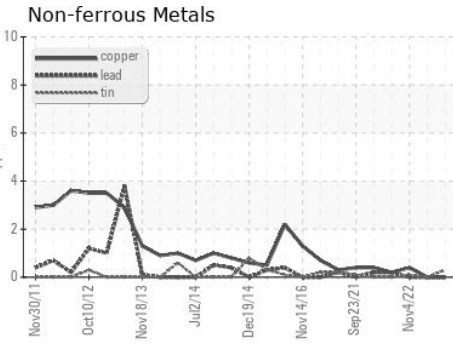
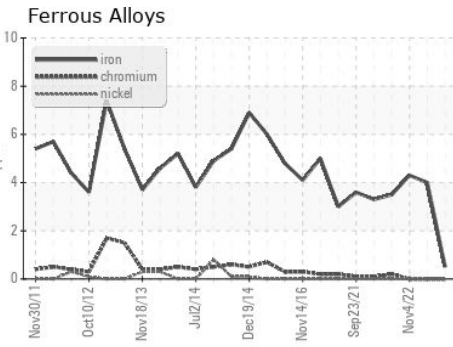
# OIL ANALYSIS REPORT



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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.0	13.6	14.0

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0015297 **Received** : 17 Nov 2023  
**Lab Number** : 06010638 **Diagnosed** : 21 Nov 2023  
**Unique Number** : 10749782 **Diagnostician** : Jonathan Hester  
**Test Package** : CONST ( Additional Tests: KV40, TBN )

**WESTERN METALS RECYCLING - SALT LAKE CITY**  
 4221 WEST 700 SOUTH  
 SALT LAKE CITY, UT  
 US 84104  
 Contact: TIMOTHY SHEFFIELD  
 timothy.sheffield@wmrecycling.com  
 T: (801)373-4225  
 F: (801)975-9590

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)