



# CONSTRUCTION EQUIPMENT

S997 I PULL U PULL VOLVO L90F 68599 - DIESEL ENGINE



**Sample No:** VCP422664  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** S997 I PULL U PULL



## SAMPLE INFORMATION

Sample Number	<b>VCP422664</b>	VCP379905	VCP375073	VCP325618
Sample Date	<b>15 Sep 2023</b>	23 Jan 2023	11 Oct 2022	19 Jan 2022
Machine Hours	<b>19382</b>	18806	18438	17953
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Not Changd	Not Changd
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**VCES- VOLVO CONSTRUCTION EQUIPMENT**  
 8594 FRUITRIDGE ROAD  
 SACRAMENTO, CA  
 US 95826  
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 T:  
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## OIL CONDITION

Visc @ 100°C	cSt	<b>13.5</b>	13.6	13.7	13.7
Base Number (BN)	mg KOH/g	<b>9.5</b>	10.1	9.2	7.7
Oxidation (PA)	%	<b>96</b>	89	67	116

## CONTAMINATION

Soot %	%	<b>0.5</b>	0.4	1.3	0.6
Nitration (PA)	%	<b>78</b>	70	93	109
Sulfation (PA)	%	<b>67</b>	65	61	78
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>7</b>	8	14	8
Sodium	ppm	<b>3</b>	2	1	55
Potassium	ppm	<b>0</b>	1	3	<1

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

## WEAR METALS

Iron	ppm	<b>14</b>	14	25	22
Copper	ppm	<b>1</b>	<1	3	2
Lead	ppm	<b>&lt;1</b>	0	<1	0
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>0</b>	2	5	8
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>41</b>	43	42	54
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0

## ADDITIVES

Calcium	ppm	<b>1757</b>	1761	1816	1716
Magnesium	ppm	<b>553</b>	507	506	661
Zinc	ppm	<b>1139</b>	1202	1163	1238
Phosphorus	ppm	<b>917</b>	1001	947	1005
Barium	ppm	<b>0</b>	<1	0	0
Boron	ppm	<b>46</b>	53	43	57

**Depot:** VOLVO4485  
**Unique No:** 10669352  
**Signed:** Jonathan Hester  
**Report Date:** 28 Sep 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS

