



# CONSTRUCTION EQUIPMENT

646429 VOLVO L220H 3368 - DIESEL ENGINE



**Sample No:** VCP432381  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 646429



## SAMPLE INFORMATION

Sample Number	<b>VCP432381</b>	VCP415547	VCP369990	VCP378755
Sample Date	<b>12 Dec 2023</b>	18 Jul 2023	13 Oct 2022	01 Aug 2022
Machine Hours	<b>4672</b>	3780	2139	1673
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	N/A	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**BLUE GOOSE GROWERS**  
 16059 W ORANGE AVE  
 FT PIERCE, FL  
 US 34945  
 Contact: SERVICE MANAGER

## OIL CONDITION

Visc @ 100°C	cSt	<b>12.9</b>	12.9	13.2	13.4
Base Number (BN)	mg KOH/g	<b>8.7</b>	9.2	11.3	11.2
Oxidation (PA)	%	<b>85</b>	81	89	88

T: (772)461-3020  
 F:

## 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.

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.3</b>	0.3	0.2	0.2
Nitration (PA)	%	<b>75</b>	68	69	67
Sulfation (PA)	%	<b>61</b>	61	66	66
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>5</b>	5	5	5
Sodium	ppm	<b>2</b>	3	2	4
Potassium	ppm	<b>2</b>	0	0	2

## WEAR METALS

Iron	ppm	<b>5</b>	6	4	5
Copper	ppm	<b>2</b>	1	2	7
Lead	ppm	<b>0</b>	0	0	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	2
Aluminum	ppm	<b>&lt;1</b>	<1	<1	<1
Chromium	ppm	<b>&lt;1</b>	0	2	0
Molybdenum	ppm	<b>39</b>	46	42	42
Nickel	ppm	<b>0</b>	0	0	<1
Titanium	ppm	<b>0</b>	<1	0	0
Silver	ppm	<b>0</b>	0	<1	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	<1	<1	<1

## ADDITIVES

Calcium	ppm	<b>1703</b>	1785	1652	1625
Magnesium	ppm	<b>508</b>	580	530	481
Zinc	ppm	<b>1145</b>	1171	1129	1057
Phosphorus	ppm	<b>901</b>	983	892	850
Barium	ppm	<b>0</b>	0	0	<1
Boron	ppm	<b>17</b>	26	23	38

**Depot:** BLUFOR  
**Unique No:** 10792826  
**Signed:** Wes Davis  
**Report Date:** 19 Dec 2023



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## VOLVO GRAPHS

