



# CONSTRUCTION EQUIPMENT

## 19804 LKQ VOLVO L90H 624047 - DIESEL ENGINE



**Sample No:** VCP411911  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 19804 LKQ



### SAMPLE INFORMATION

Sample Number	<b>VCP411911</b>	VCP0005125	VCP371666	VCP348177
Sample Date	<b>26 Sep 2023</b>	12 Dec 2022	13 Jul 2022	08 Mar 2022
Machine Hours	<b>11145</b>	10016	9403	8692
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>15.6</b>	14.4	14.5	14.2
Base Number (BN)	mg KOH/g	<b>6.5</b>	8.8	8.7	7.8
Oxidation (PA)	%	<b>74</b>	80	85	80



### CONTAMINATION

Soot %	%	<b>0.9</b>	0.6	0.5	0.6
Nitration (PA)	%	<b>87</b>	89	84	85
Sulfation (PA)	%	<b>61</b>	62	63	63
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>6</b>	2	4	4
Sodium	ppm	<b>2</b>	1	<1	<1
Potassium	ppm	<b>1</b>	<1	<1	3



### WEAR METALS

Iron	ppm	<b>14</b>	6	9	10
Copper	ppm	<b>1</b>	1	<1	<1
Lead	ppm	<b>0</b>	<1	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>7</b>	6	4	8
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>30</b>	48	40	52
Nickel	ppm	<b>0</b>	<1	0	0
Titanium	ppm	<b>&lt;1</b>	0	<1	0
Silver	ppm	<b>&lt;1</b>	0	<1	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1785</b>	1642	1702	1409
Magnesium	ppm	<b>442</b>	722	512	697
Zinc	ppm	<b>1300</b>	1281	1176	1299
Phosphorus	ppm	<b>1086</b>	1012	960	1066
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>27</b>	30	52	28

### 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.

**Depot:** VOLVO8769  
**Unique No:** 10701631  
**Signed:** Wes Davis  
**Report Date:** 20 Oct 2023

**VOLVO** GRAPHS

