



# CONSTRUCTION EQUIPMENT

## VOLVO L90H 625046 - DIESEL ENGINE



**Sample No:** VCP417366  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP417366</b>	VCP385335	VCP349362	VCP313718
Sample Date	<b>12 Jun 2023</b>	16 Sep 2022	28 Jan 2022	09 Jun 2021
Machine Hours	<b>3112</b>	2470	2000	1458
Oil Hours	<b>500</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	N/A	Changed
Sample Status	<b>ABNORMAL</b>	ABNORMAL	NORMAL	NORMAL

### RIPA AND ASSOCIATES

10149 FISHER AVENUE  
 TAMPA, FL  
 US 33619  
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 T:  
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### OIL CONDITION

Visc @ 100°C	cSt	█ <b>12.9</b>	█ 13.2	█ 13.3	█ 13.1
Base Number (BN)	mg KOH/g	█ <b>10.4</b>	█ 11.7	█ 10.1	---
Oxidation (PA)	%	<b>86</b>	88	80	71

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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 acceptable for the time in service.

### CONTAMINATION

Soot %	%	█ <b>0.6</b>	█ 0.5	█ 0.5	█ 0.4
Nitration (PA)	%	<b>76</b>	74	77	79
Sulfation (PA)	%	<b>63</b>	66	60	58
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	█ <b>7</b>	█ 10	█ 9	█ 6
Sodium	ppm	█ <b>2</b>	█ 3	█ 5	█ 4
Potassium	ppm	█ <b>2</b>	█ 6	█ 6	█ 4

### WEAR METALS

Iron	ppm	█ <b>20</b>	█ 14	█ 21	█ 18
Copper	ppm	█ <b>2</b>	█ 2	█ 2	█ 2
Lead	ppm	█ <b>0</b>	█ 0	█ <1	█ 0
Tin	ppm	█ <b>&lt;1</b>	█ 1	█ 2	█ 1
Aluminum	ppm	▲ <b>30</b>	▲ 26	█ 16	█ 7
Chromium	ppm	█ <b>2</b>	█ 2	█ 2	█ 2
Molybdenum	ppm	█ <b>39</b>	█ 38	█ 37	█ 36
Nickel	ppm	█ <b>0</b>	█ 1	█ 0	█ <1
Titanium	ppm	<b>0</b>	<1	<1	<1
Silver	ppm	█ <b>0</b>	0	0	0
Manganese	ppm	█ <b>&lt;1</b>	█ 1	█ <1	█ <1
Vanadium	ppm	<b>&lt;1</b>	1	<1	0

### ADDITIVES

Calcium	ppm	█ <b>1585</b>	█ 1681	█ 1606	█ 1511
Magnesium	ppm	█ <b>482</b>	█ 509	█ 540	█ 640
Zinc	ppm	█ <b>1039</b>	█ 1125	█ 1069	█ 1070
Phosphorus	ppm	█ <b>847</b>	█ 941	█ 926	█ 904
Barium	ppm	█ <b>0</b>	█ 0	█ 0	█ 0
Boron	ppm	█ <b>22</b>	█ 23	█ 22	█ 45

**Depot:** RIPTAM  
**Unique No:** 10551669  
**Signed:** Don Baldrige  
**Report Date:** 13 Jul 2023



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## VOLVO GRAPHS

