



# CONSTRUCTION EQUIPMENT

## VOLVO L90H 626088 - DIESEL ENGINE



**Sample No:** VCP449098  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP449098</b>	VCP392751	VCP396934	VCP385266
Sample Date	<b>25 Jan 2024</b>	07 Jun 2023	10 Feb 2023	14 Nov 2022
Machine Hours	<b>4413</b>	3173	2420	1836
Oil Hours	<b>0</b>	500	500	1836
Oil Changed	<b>N/A</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	ABNORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.9</b>	12.7	12.8	13.4
Base Number (BN)	mg KOH/g	<b>10.3</b>	9.6	10.6	8.9
Oxidation (PA)	%	<b>81</b>	83	82	95



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.2	0.3	0.9
Nitration (PA)	%	<b>58</b>	60	64	111
Sulfation (PA)	%	<b>61</b>	60	61	69
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	8	18
Sodium	ppm	<b>0</b>	2	3	2
Potassium	ppm	<b>1</b>	0	0	3



### WEAR METALS

Iron	ppm	<b>10</b>	14	46	387
Copper	ppm	<b>&lt;1</b>	<1	3	15
Lead	ppm	<b>0</b>	0	<1	2
Tin	ppm	<b>0</b>	<1	<1	3
Aluminum	ppm	<b>2</b>	<1	4	34
Chromium	ppm	<b>&lt;1</b>	<1	2	11
Molybdenum	ppm	<b>42</b>	45	39	36
Nickel	ppm	<b>0</b>	0	<1	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	2
Silver	ppm	<b>0</b>	0	<1	0
Manganese	ppm	<b>0</b>	<1	2	8
Vanadium	ppm	<b>0</b>	0	<1	0



### ADDITIVES

Calcium	ppm	<b>1604</b>	1641	1560	1661
Magnesium	ppm	<b>528</b>	520	486	566
Zinc	ppm	<b>1117</b>	1065	1000	1035
Phosphorus	ppm	<b>822</b>	880	825	833
Barium	ppm	<b>5</b>	0	0	0
Boron	ppm	<b>34</b>	30	27	15

### 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:** GREDAVFL  
**Unique No:** 10863264  
**Signed:** Wes Davis  
**Report Date:** 06 Feb 2024



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## GRAPHS

