



# CONSTRUCTION EQUIPMENT

## VOLVO L220H 2933 - DIESEL ENGINE



**Sample No:** VCP06180935  
**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP06180935</b>	VCP424075	VCP332067	VCP278988
Sample Date	<b>07 May 2024</b>	07 Sep 2023	26 Aug 2022	15 Apr 2022
Machine Hours	<b>0</b>	9700	4665	4205
Oil Hours	<b>0</b>	0	500	500
Oil Changed	<b>N/A</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

### DENALI WE CARE

400 TORNE RD  
HILLBURN, NY  
US 10931  
Contact: Service Manager



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.7</b>	12.8	13.0	12.6
Base Number (BN)	mg KOH/g	<b>9.8</b>	9.1	11.8	6.4
Oxidation (PA)	%	<b>79</b>	81	85	66

T:  
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>0.2</b>	0.3	0.2	0.3
Nitration (PA)	%	<b>58</b>	67	71	67
Sulfation (PA)	%	<b>60</b>	60	64	59
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>6</b>	4	2	4
Sodium	ppm	<b>2</b>	3	3	<1
Potassium	ppm	<b>2</b>	<1	3	0



### WEAR METALS

Iron	ppm	<b>5</b>	4	4	7
Copper	ppm	<b>1</b>	1	<1	2
Lead	ppm	<b>&lt;1</b>	<1	1	<1
Tin	ppm	<b>1</b>	<1	1	<1
Aluminum	ppm	<b>2</b>	1	0	2
Chromium	ppm	<b>&lt;1</b>	0	<1	<1
Molybdenum	ppm	<b>57</b>	41	42	66
Nickel	ppm	<b>1</b>	<1	<1	<1
Titanium	ppm	<b>&lt;1</b>	<1	0	<1
Silver	ppm	<b>&lt;1</b>	0	0	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	<1	<1	0



### ADDITIVES

Calcium	ppm	<b>2149</b>	1913	1580	1577
Magnesium	ppm	<b>699</b>	553	480	443
Zinc	ppm	<b>1513</b>	1214	1107	1154
Phosphorus	ppm	<b>1336</b>	978	876	998
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>66</b>	38	70	185

**Depot:** DENHIL  
**Unique No:** 11032261  
**Signed:** Jonathan Hester  
**Report Date:** 20 May 2024



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## GRAPHS

