



# CONSTRUCTION EQUIPMENT

SPM661220 VOLVO L180H 5412 - DIESEL ENGINE



**Sample No:** VCP442816  
**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40  
**Job No:** SPM661220



## SAMPLE INFORMATION

Sample Number	<b>VCP442816</b>	VCP423025	VCP396097	VCP373356
Sample Date	<b>07 Feb 2024</b>	30 Jun 2023	01 Feb 2023	18 Jun 2022
Machine Hours	<b>7046</b>	5936	6657	4250
Oil Hours	<b>0</b>	0	700	500
Oil Changed	<b>N/A</b>	N/A	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**CALLANAN**  
 RT 32 677 FLATBUSH RD  
 EAST KINGSTON, NY  
 US 12401  
 Contact:

## OIL CONDITION

Visc @ 100°C	cSt	<b>12.3</b>	13.0	12.7	12.8
Base Number (BN)	mg KOH/g	<b>10.2</b>	10.1	9.3	10.9
Oxidation (PA)	%	<b>80</b>	84	82	85

T:  
F:

## Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Fuel content negligible. 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>	0.2	0.1	0.2
Nitration (PA)	%	<b>56</b>	51	67	65
Sulfation (PA)	%	<b>61</b>	63	61	63
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>0.8</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>6</b>	3	4	4
Sodium	ppm	<b>2</b>	3	3	2
Potassium	ppm	<b>0</b>	2	0	0

## WEAR METALS

Iron	ppm	<b>2</b>	3	6	6
Copper	ppm	<b>&lt;1</b>	<1	<1	2
Lead	ppm	<b>0</b>	<1	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	1
Aluminum	ppm	<b>&lt;1</b>	<1	<1	<1
Chromium	ppm	<b>&lt;1</b>	0	<1	<1
Molybdenum	ppm	<b>39</b>	38	41	40
Nickel	ppm	<b>0</b>	0	<1	<1
Titanium	ppm	<b>0</b>	0	0	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	<1	0	0

## ADDITIVES

Calcium	ppm	<b>1635</b>	1757	1705	1621
Magnesium	ppm	<b>504</b>	492	508	493
Zinc	ppm	<b>1097</b>	1137	1099	1149
Phosphorus	ppm	<b>962</b>	920	920	885
Barium	ppm	<b>0</b>	<1	0	0
Boron	ppm	<b>54</b>	56	46	51

**Depot:** CALEAS  
**Unique No:** 10873265  
**Signed:** Wes Davis  
**Report Date:** 14 Feb 2024



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## GRAPHS

