



# CONSTRUCTION EQUIPMENT

TMR-OKEECHOBEE 60849 434166 VOLVO L180H 4821 - DIESEL ENGINE



**Sample No:** VCP432915  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 60849



## SAMPLE INFORMATION

Sample Number	<b>VCP432915</b>	VCP412620	VCP408001	VCP406020
Sample Date	<b>23 Jan 2024</b>	21 Jul 2023	01 May 2023	06 Apr 2023
Machine Hours	<b>15313</b>	13817	13007	12758
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ATTENTION</b>	NORMAL	NORMAL	NORMAL

**TRADEMARK METALS RECYCLING - OKEECHOBEE**  
 9800 NE 128TH AVE  
 OKEECHOBEE, FL  
 US 34972  
 Contact: RYAN BOWDEN



## OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.8</b>	■ 12.3	■ 12.3	■ 12.3
Base Number (BN)	mg KOH/g	<b>■ 6.6</b>	■ 9.7	■ 10.4	■ 9.9
Oxidation (PA)	%	<b>92</b>	81	79	73

T: (863)467-9810  
 F: (863)467-9814

## Diagnosis

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>■ 0.4</b>	■ 0.1	■ 0.1	■ 0.1
Nitration (PA)	%	<b>80</b>	55	48	50
Sulfation (PA)	%	<b>63</b>	60	60	58
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>■ 2.6</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>■ 6</b>	■ 3	■ 4	■ 4
Sodium	ppm	<b>■ 3</b>	■ 3	■ 3	■ 2
Potassium	ppm	<b>■ 2</b>	■ 0	■ 1	■ <1



## WEAR METALS

Iron	ppm	<b>■ 10</b>	■ 3	■ 2	■ 3
Copper	ppm	<b>■ 2</b>	■ 3	■ <1	■ <1
Lead	ppm	<b>■ 3</b>	■ <1	■ <1	■ 0
Tin	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ 0
Aluminum	ppm	<b>■ 3</b>	■ <1	■ 0	■ 0
Chromium	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Molybdenum	ppm	<b>■ 39</b>	■ 42	■ 42	■ 42
Nickel	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Manganese	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Vanadium	ppm	<b>0</b>	<1	<1	0



## ADDITIVES

Calcium	ppm	<b>■ 1578</b>	■ 1710	■ 1598	■ 1433
Magnesium	ppm	<b>■ 481</b>	■ 495	■ 507	■ 508
Zinc	ppm	<b>■ 1110</b>	■ 1108	■ 1123	■ 1027
Phosphorus	ppm	<b>■ 937</b>	■ 907	■ 941	■ 856
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 14</b>	■ 38	■ 44	■ 33

**Depot:** TRAOKE  
**Unique No:** 10857575  
**Signed:** Jonathan Hester  
**Report Date:** 02 Feb 2024



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## GRAPHS

