



# CONSTRUCTION EQUIPMENT

SWO-068838 EPIROC TMG21 SED0223 - DIESEL ENGINE



**Sample No:** VCP441300  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWO-068838



## SAMPLE INFORMATION

Sample Number	<b>VCP441300</b>	VCP428675	VCP433641	VCP424048
Sample Date	<b>30 Jan 2024</b>	27 Nov 2023	29 Aug 2023	05 Jul 2023
Machine Hours	<b>4133</b>	3804	3384	3133
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

### SAIIA CONSTRUCTION LLC

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## OIL CONDITION

Visc @ 100°C	cSt	<b>13.0</b>	12.8	12.6	12.6
Base Number (BN)	mg KOH/g	<b>8.7</b>	9.0	9.6	9.9
Oxidation (PA)	%	<b>79</b>	84	86	85

### 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 acceptable for the time in service.



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.2	0.2	0.2
Nitration (PA)	%	<b>70</b>	71	70	69
Sulfation (PA)	%	<b>59</b>	61	63	63
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>6</b>	8	8	7
Sodium	ppm	<b>2</b>	2	0	2
Potassium	ppm	<b>2</b>	0	2	1



## WEAR METALS

Iron	ppm	<b>5</b>	6	6	5
Copper	ppm	<b>7</b>	8	2	2
Lead	ppm	<b>&lt;1</b>	0	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>2</b>	<1	2	2
Chromium	ppm	<b>0</b>	0	<1	0
Molybdenum	ppm	<b>63</b>	41	40	39
Nickel	ppm	<b>0</b>	0	0	<1
Titanium	ppm	<b>0</b>	0	<1	4
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	<1	0	<1



## ADDITIVES

Calcium	ppm	<b>1459</b>	1670	1634	1744
Magnesium	ppm	<b>540</b>	562	471	484
Zinc	ppm	<b>964</b>	1082	1033	1075
Phosphorus	ppm	<b>820</b>	902	873	852
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>46</b>	25	25	32

**Depot:** SAIBIR  
**Unique No:** 10860023  
**Signed:** Don Baldrige  
**Report Date:** 05 Feb 2024



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## VOLVO GRAPHS

