



# CONSTRUCTION EQUIPMENT

## SWA532686 LIBERTY LF VOLVO A40G 352020 - DIESEL ENGINE



**Sample No:** VCP423818  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SWA532686 LIBERTY LF



### SAMPLE INFORMATION

Sample Number	<b>VCP423818</b>	VCP322895	VCP385859	VCP342326
Sample Date	<b>16 Apr 2024</b>	02 Apr 2024	28 Oct 2022	11 Nov 2021
Machine Hours	<b>6476</b>	6397	6287	4531
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Not Chngd</b>	Not Chngd	Changed	Not Chngd
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**LIBERTY ENVIRONMENTALIST INC**  
 7900 S MERIDIAN  
 CLARKLAKE, MI  
 US 49234  
 Contact: SERVICE MANAGER



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.6</b>	12.5	12.7	13.2
Base Number (BN)	mg KOH/g	<b>10.3</b>	10.5	10.7	---
Oxidation (PA)	%	<b>74</b>	75	61	80

T: (517)787-1177  
 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>0.1</b>	0.1	0.1	0.1
Nitration (PA)	%	<b>51</b>	49	60	48
Sulfation (PA)	%	<b>60</b>	59	55	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>7</b>	5	4	7
Sodium	ppm	<b>8</b>	9	5	18
Potassium	ppm	<b>3</b>	4	1	0



### WEAR METALS

Iron	ppm	<b>31</b>	27	8	9
Copper	ppm	<b>17</b>	15	4	13
Lead	ppm	<b>0</b>	1	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>5</b>	4	2	1
Chromium	ppm	<b>&lt;1</b>	0	<1	0
Molybdenum	ppm	<b>46</b>	42	57	39
Nickel	ppm	<b>2</b>	3	2	0
Titanium	ppm	<b>0</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>1</b>	1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1582</b>	1466	1119	1568
Magnesium	ppm	<b>606</b>	536	842	467
Zinc	ppm	<b>1153</b>	1096	1177	879
Phosphorus	ppm	<b>985</b>	951	989	767
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>45</b>	44	4	70

**Depot:** LIBCLA  
**Unique No:** 10993686  
**Signed:** Wes Davis  
**Report Date:** 24 Apr 2024



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## GRAPHS

