



# CONSTRUCTION EQUIPMENT

## 688896 BULK EXPRESS VOLVO L180H 5391 - DIESEL ENGINE



**Sample No:** VCP440455  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 688896 BULK EXPRESS



### SAMPLE INFORMATION

Sample Number	<b>VCP440455</b>	VCP440263	VCP440365	VCP434823
Sample Date	<b>23 Mar 2024</b>	26 Dec 2023	10 Nov 2023	14 Sep 2023
Machine Hours	<b>5788</b>	5286	4739	3966
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.7</b>	12.8	12.6	12.5
Base Number (BN)	mg KOH/g	<b>9.5</b>	9.3	9.5	9.5
Oxidation (PA)	%	<b>83</b>	82	82	82



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.1</b>	0.1	0.2	0.2
Nitration (PA)	%	<b>58</b>	58	61	58
Sulfation (PA)	%	<b>60</b>	60	60	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>15</b>	12	11	15
Sodium	ppm	<b>0</b>	1	3	2
Potassium	ppm	<b>3</b>	<1	<1	1



### WEAR METALS

Iron	ppm	<b>5</b>	4	2	5
Copper	ppm	<b>2</b>	<1	2	1
Lead	ppm	<b>1</b>	<1	<1	<1
Tin	ppm	<b>1</b>	2	<1	<1
Aluminum	ppm	<b>1</b>	2	1	<1
Chromium	ppm	<b>&lt;1</b>	0	0	<1
Molybdenum	ppm	<b>48</b>	43	40	40
Nickel	ppm	<b>2</b>	<1	<1	<1
Titanium	ppm	<b>&lt;1</b>	<1	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1663</b>	1758	1594	1689
Magnesium	ppm	<b>506</b>	568	518	468
Zinc	ppm	<b>1088</b>	1175	1107	1111
Phosphorus	ppm	<b>985</b>	985	937	917
Barium	ppm	<b>&lt;1</b>	0	0	0
Boron	ppm	<b>49</b>	34	27	24

### 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.

**Depot:** VOLVO0096  
**Unique No:** 10949830  
**Signed:** Wes Davis  
**Report Date:** 28 Mar 2024



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## GRAPHS

