

# OIL ANALYSIS REPORT



**JOHN BOYLE ES 7718120 VOLVO PENTA D6-435D-F A698129 - STARBOARD DIESEL ENGINE**

**Sample No:** VPA055084

**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

## SAMPLE INFORMATION

Sample Number	<b>VPA055084</b>	VPA025657	VPA029066	---
Sample Date	<b>20 Dec 2023</b>	02 Oct 2020	27 Nov 2019	---
Machine Hours	<b>466</b>	200	63	---
Oil Hours	<b>0</b>	0	63	---
Oil Changed	<b>Changed</b>	Changed	Changed	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

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## OIL CONDITION

Visc @ 100°C	cSt	<b>13.3</b>	13.3	13.7	---
Base Number (BN)	mg KOH/g	<b>10.2</b>	---	---	---
Oxidation (PA)	%	<b>57</b>	58	59	---

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.4</b>	0.4	0.1	---
Nitration (PA)	%	<b>52</b>	51	38	---
Sulfation (PA)	%	<b>53</b>	55	55	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>6</b>	12	53	---
Sodium	ppm	<b>1</b>	2	5	---
Potassium	ppm	<b>&lt;1</b>	0	3	---

## 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.

## WEAR METALS

Iron	ppm	<b>16</b>	13	14	---
Copper	ppm	<b>11</b>	13	18	---
Lead	ppm	<b>2</b>	2	6	---
Tin	ppm	<b>&lt;1</b>	0	<1	---
Aluminum	ppm	<b>5</b>	5	11	---
Chromium	ppm	<b>&lt;1</b>	<1	1	---
Molybdenum	ppm	<b>58</b>	53	41	---
Nickel	ppm	<b>3</b>	2	1	---
Titanium	ppm	<b>0</b>	<1	0	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	2	---
Vanadium	ppm	<b>0</b>	0	0	---

## ADDITIVES

Calcium	ppm	<b>1001</b>	1266	3024	---
Magnesium	ppm	<b>940</b>	888	134	---
Zinc	ppm	<b>1245</b>	1170	1002	---
Phosphorus	ppm	<b>1049</b>	980	990	---
Barium	ppm	<b>0</b>	0	<1	---
Boron	ppm	<b>2</b>	36	357	---

**Depot:** VP99031103  
**Unique No:** 10816642  
**Signed:** Sean Felton  
**Report Date:** 05 Jan 2024

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**VOLVO  
PENTA**

## GRAPHS

