



# CONSTRUCTION EQUIPMENT

687187 TORO TX100N 412549843 - DIESEL ENGINE



**Sample No:** VCP445313  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 687187



## SAMPLE INFORMATION

Sample Number	<b>VCP445313</b>	VCP431343	---	---
Sample Date	<b>11 Mar 2024</b>	18 Sep 2023	---	---
Machine Hours	<b>1015</b>	745	---	---
Oil Hours	<b>500</b>	405	---	---
Oil Changed	<b>Changed</b>	Changed	---	---
Sample Status	<b>NORMAL</b>	NORMAL	---	---

### FERROUS PROCESSING AND TRADING

3400 E LAFAYETTE  
 DETROIT, MI  
 US 48207

Contact: KEITH HALL  
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T:  
 F:



## OIL CONDITION

Visc @ 100°C	cSt	<b>13.2</b>	13.1	---	---
Base Number (BN)	mg KOH/g	<b>7.2</b>	7.3	---	---
Oxidation (PA)	%	<b>57</b>	62	---	---

### 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	---	---
Soot %	%	<b>0.5</b>	0.5	---	---
Nitration (PA)	%	<b>79</b>	80	---	---
Sulfation (PA)	%	<b>53</b>	56	---	---
Glycol	%	<b>NEG</b>	NEG	---	---
Fuel	%	<b>&lt;1.0</b>	<1.0	---	---
Silicon	ppm	<b>11</b>	18	---	---
Sodium	ppm	<b>3</b>	2	---	---
Potassium	ppm	<b>2</b>	<1	---	---



## WEAR METALS

Iron	ppm	<b>29</b>	48	---	---
Copper	ppm	<b>5</b>	6	---	---
Lead	ppm	<b>&lt;1</b>	<1	---	---
Tin	ppm	<b>&lt;1</b>	<1	---	---
Aluminum	ppm	<b>7</b>	9	---	---
Chromium	ppm	<b>1</b>	2	---	---
Molybdenum	ppm	<b>67</b>	71	---	---
Nickel	ppm	<b>&lt;1</b>	0	---	---
Titanium	ppm	<b>&lt;1</b>	<1	---	---
Silver	ppm	<b>0</b>	0	---	---
Manganese	ppm	<b>&lt;1</b>	<1	---	---
Vanadium	ppm	<b>&lt;1</b>	0	---	---



## ADDITIVES

Calcium	ppm	<b>2228</b>	2108	---	---
Magnesium	ppm	<b>173</b>	285	---	---
Zinc	ppm	<b>1195</b>	1262	---	---
Phosphorus	ppm	<b>1014</b>	982	---	---
Barium	ppm	<b>0</b>	0	---	---
Boron	ppm	<b>59</b>	50	---	---

**Depot:** FERDET  
**Unique No:** 10937565  
**Signed:** Wes Davis  
**Report Date:** 21 Mar 2024



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## GRAPHS

