



# CONSTRUCTION EQUIPMENT

TMR-SANFORD 701990 102145 VOLVO L20F 1705481 - DIESEL ENGINE



**Sample No:** VCP446377  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 701990



## SAMPLE INFORMATION

Sample Number	<b>VCP446377</b>	VCP421521	VCP411051	VCP342382
Sample Date	<b>15 Apr 2024</b>	30 May 2023	01 May 2023	04 Nov 2021
Machine Hours	<b>7031</b>	6917	6881	8240
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**TRADEMARK METALS RECYCLING - SANFORD**  
 3301 W FL 46  
 SANFORD, FL  
 US 32771  
 Contact: RYAN BOWDEN

## OIL CONDITION

Visc @ 100°C	cSt	<b>13.4</b>	13.7	12.1	15.5
Base Number (BN)	mg KOH/g	<b>9.8</b>	10.3	8.1	---
Oxidation (PA)	%	<b>78</b>	75	77	92

T:  
 F: (407)321-0177

## 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	0.4	0.2
Nitration (PA)	%	<b>53</b>	48	55	93
Sulfation (PA)	%	<b>60</b>	59	57	68
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>14</b>	10	7	12
Sodium	ppm	<b>4</b>	1	1	18
Potassium	ppm	<b>2</b>	0	<1	1

## WEAR METALS

Iron	ppm	<b>10</b>	6	6	34
Copper	ppm	<b>3</b>	0	0	11
Lead	ppm	<b>1</b>	0	0	1
Tin	ppm	<b>1</b>	0	0	<1
Aluminum	ppm	<b>4</b>	0	1	10
Chromium	ppm	<b>1</b>	<1	0	3
Molybdenum	ppm	<b>53</b>	45	45	60
Nickel	ppm	<b>1</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	<1	0	2
Silver	ppm	<b>&lt;1</b>	0	0	0
Manganese	ppm	<b>1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0

## ADDITIVES

Calcium	ppm	<b>1543</b>	1589	1577	1827
Magnesium	ppm	<b>497</b>	665	613	575
Zinc	ppm	<b>1053</b>	1280	1206	1186
Phosphorus	ppm	<b>893</b>	971	953	934
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>128</b>	49	55	162

**Depot:** TRASTAFL  
**Unique No:** 10982936  
**Signed:** Wes Davis  
**Report Date:** 19 Apr 2024

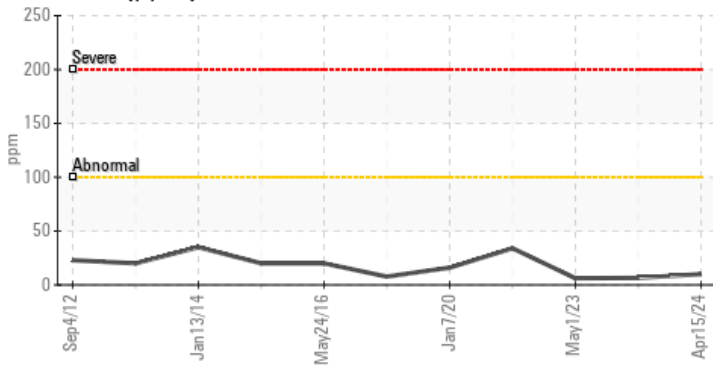


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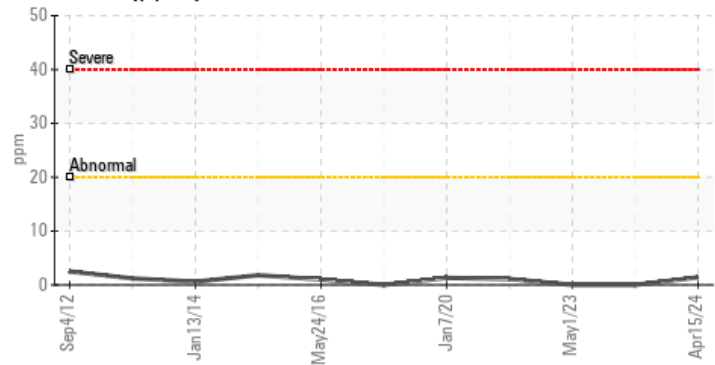


## GRAPHS

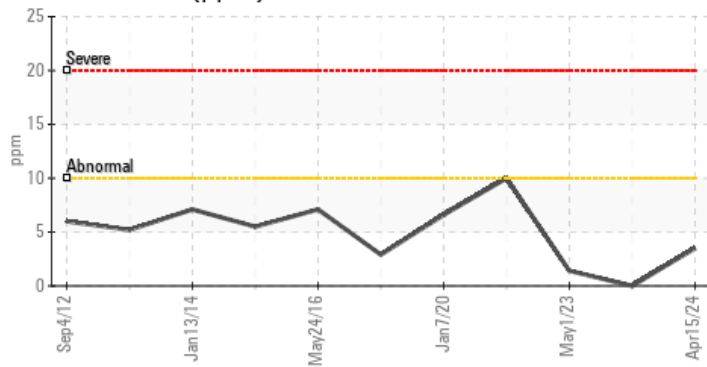
### Iron (ppm)



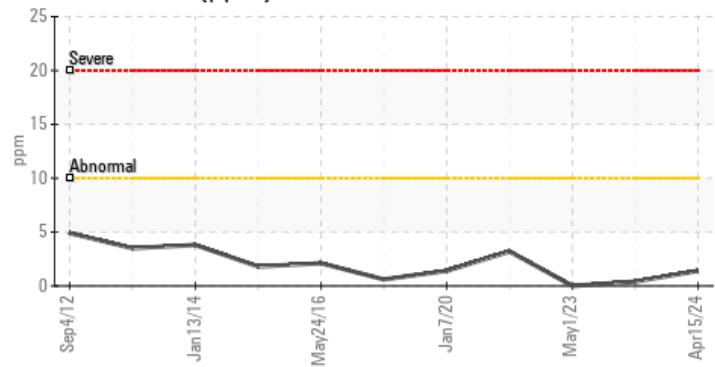
### Lead (ppm)



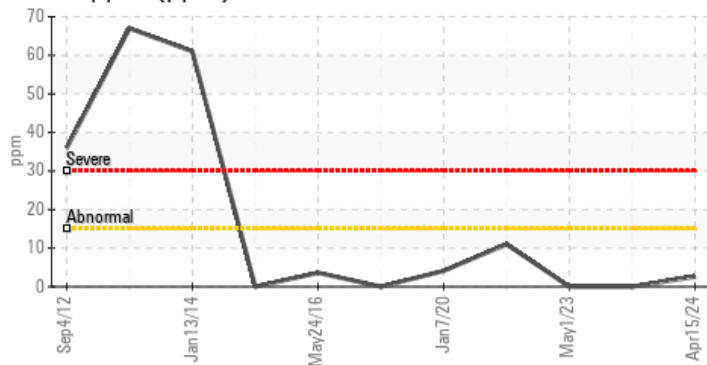
### Aluminum (ppm)



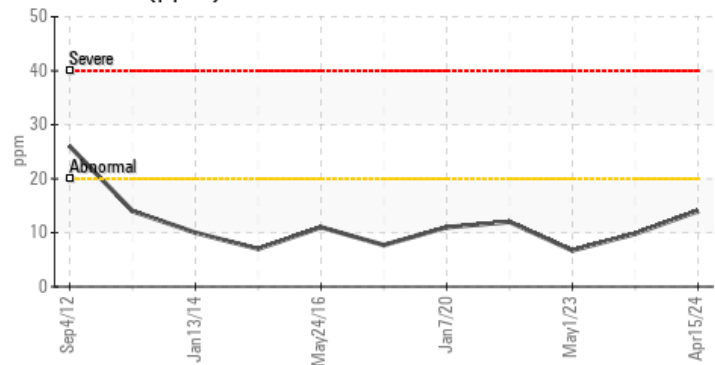
### Chromium (ppm)



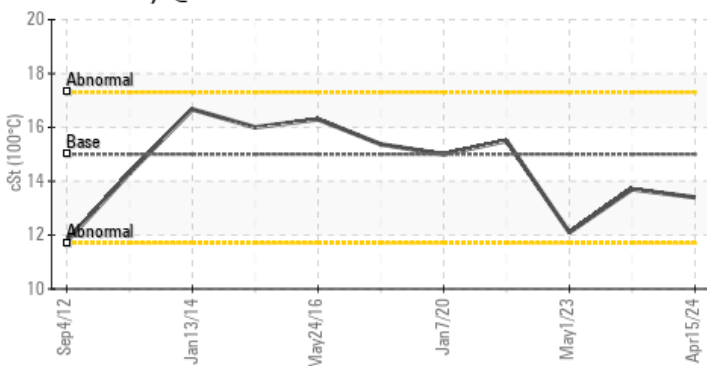
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

