



# CONSTRUCTION EQUIPMENT

## RENTAL VOLVO L180H 5785 - DIESEL ENGINE



**Sample No:** VCP440307  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** RENTAL



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### SAMPLE INFORMATION

Sample Number	<b>VCP440307</b>	VCP440005	VCP411600	VCP414713
Sample Date	<b>23 Feb 2024</b>	16 Jan 2024	16 Oct 2023	14 Sep 2023
Machine Hours	<b>0</b>	3171	1214	628
Oil Hours	<b>0</b>	0	500	628
Oil Changed	<b>Changed</b>	N/A	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	ABNORMAL



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.6</b>	12.8	12.7	11.2
Base Number (BN)	mg KOH/g	<b>10.3</b>	9.6	9.5	6.2
Oxidation (PA)	%	<b>80</b>	75	79	57



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.1</b>	0.1	0.1	0.1
Nitration (PA)	%	<b>53</b>	53	59	78
Sulfation (PA)	%	<b>59</b>	58	61	51
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	0.5
Silicon	ppm	<b>4</b>	3	9	25
Sodium	ppm	<b>2</b>	0	3	<1
Potassium	ppm	<b>0</b>	2	2	4



### WEAR METALS

Iron	ppm	<b>4</b>	3	5	10
Copper	ppm	<b>2</b>	<1	71	509
Lead	ppm	<b>0</b>	0	<1	<1
Tin	ppm	<b>0</b>	0	<1	2
Aluminum	ppm	<b>&lt;1</b>	2	2	0
Chromium	ppm	<b>0</b>	<1	<1	0
Molybdenum	ppm	<b>41</b>	44	44	86
Nickel	ppm	<b>0</b>	0	0	<1
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	0	<1	2
Vanadium	ppm	<b>0</b>	0	<1	0



### ADDITIVES

Calcium	ppm	<b>1799</b>	1492	1733	2099
Magnesium	ppm	<b>518</b>	547	445	22
Zinc	ppm	<b>1156</b>	1104	1154	1168
Phosphorus	ppm	<b>960</b>	838	937	974
Barium	ppm	<b>0</b>	5	0	2
Boron	ppm	<b>40</b>	40	35	44

### 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:** VOLVO0093  
**Unique No:** 10995428  
**Signed:** Wes Davis  
**Report Date:** 25 Apr 2024

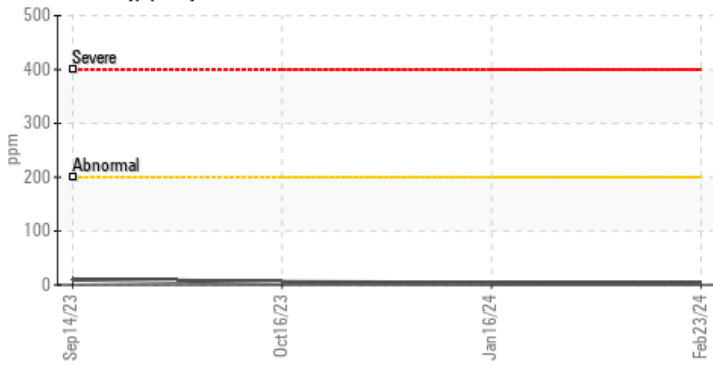


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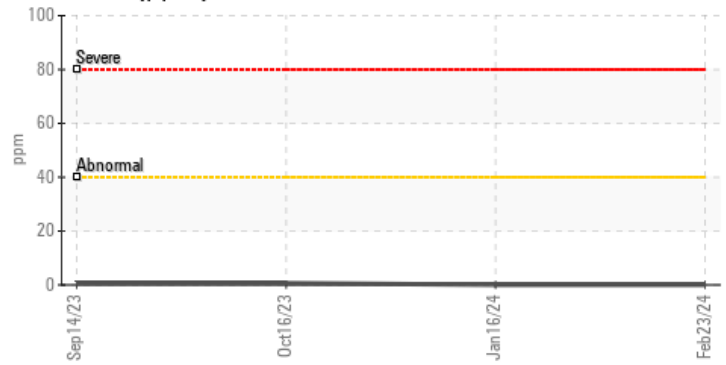


## GRAPHS

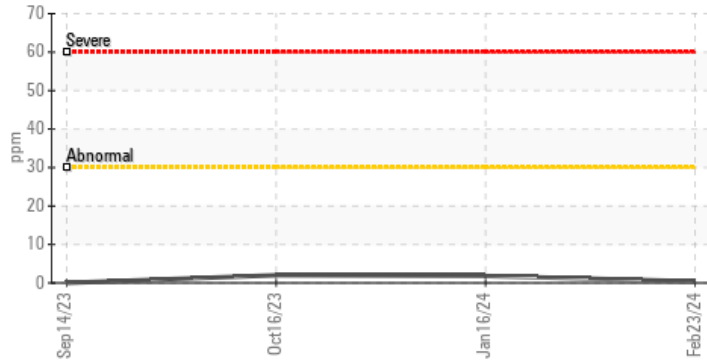
### Iron (ppm)



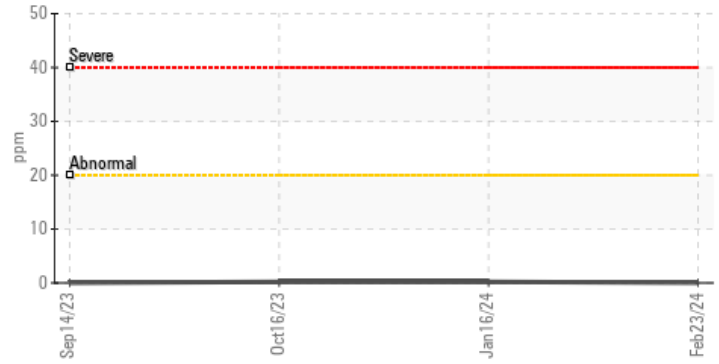
### Lead (ppm)



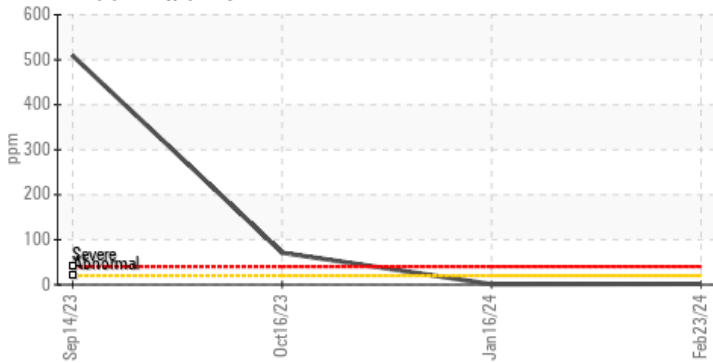
### Aluminum (ppm)



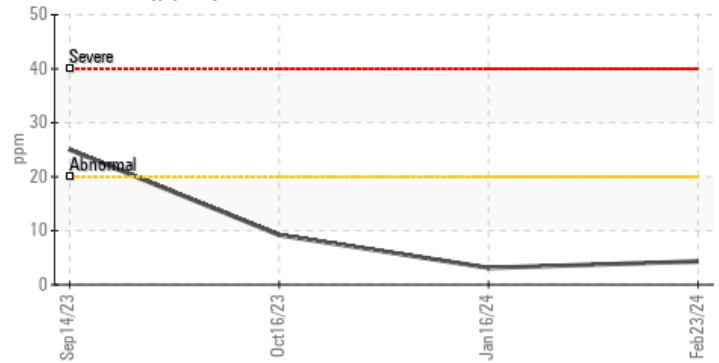
### Chromium (ppm)



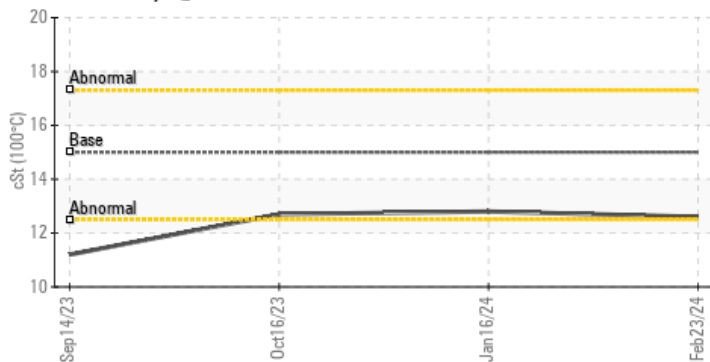
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

