



# CONSTRUCTION EQUIPMENT

## 729089 PRINCE VOLVO L90H 626545 - DIESEL ENGINE



**Sample No:** VCP449744  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 729089 PRINCE



### SAMPLE INFORMATION

Sample Number	<b>VCP449744</b>	VCP417715	VCP417705	VCP398517
Sample Date	<b>08 Jun 2024</b>	20 Oct 2023	07 Jul 2023	10 Apr 2023
Machine Hours	<b>2846</b>	1583	988	449
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.4</b>	12.9	12.9	12.7
Base Number (BN)	mg KOH/g	<b>9.8</b>	10.4	10.3	8.6
Oxidation (PA)	%	<b>84</b>	84	83	70



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.3</b>	0.2	0.2	0.1
Nitration (PA)	%	<b>71</b>	61	60	50
Sulfation (PA)	%	<b>61</b>	61	62	54
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>▲ 23</b>	13	10	3
Sodium	ppm	<b>0</b>	3	2	4
Potassium	ppm	<b>3</b>	0	0	1



### WEAR METALS

Iron	ppm	<b>15</b>	9	10	21
Copper	ppm	<b>1</b>	<1	2	2
Lead	ppm	<b>&lt;1</b>	0	0	2
Tin	ppm	<b>1</b>	<1	1	<1
Aluminum	ppm	<b>● 5</b>	2	4	4
Chromium	ppm	<b>2</b>	1	1	<1
Molybdenum	ppm	<b>45</b>	41	40	68
Nickel	ppm	<b>&lt;1</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	0	0	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	1
Vanadium	ppm	<b>0</b>	0	<1	0



### ADDITIVES

Calcium	ppm	<b>1631</b>	1756	1621	1193
Magnesium	ppm	<b>578</b>	540	494	898
Zinc	ppm	<b>1165</b>	1201	1046	1237
Phosphorus	ppm	<b>900</b>	864	861	1030
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>29</b>	32	34	14

### Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** VOLVO0096  
**Unique No:** 11077120  
**Signed:** Don Baldrige  
**Report Date:** 17 Jun 2024

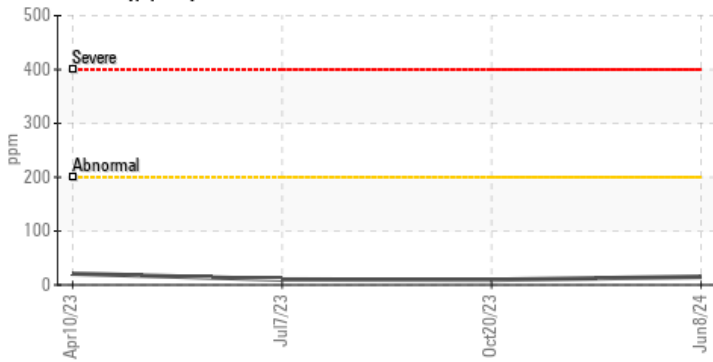


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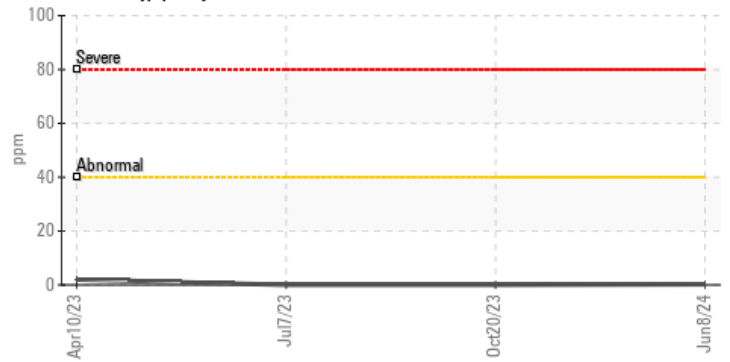


## GRAPHS

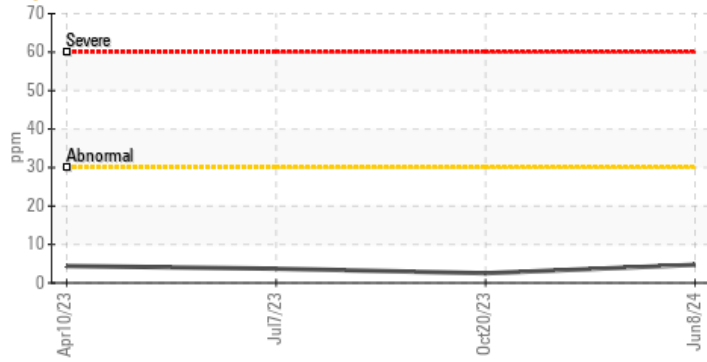
### Iron (ppm)



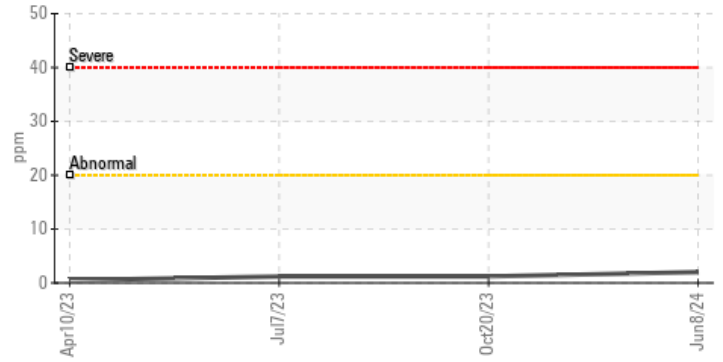
### Lead (ppm)



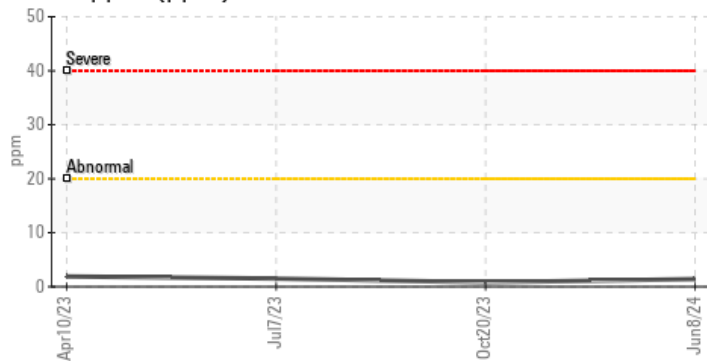
### Aluminum (ppm)



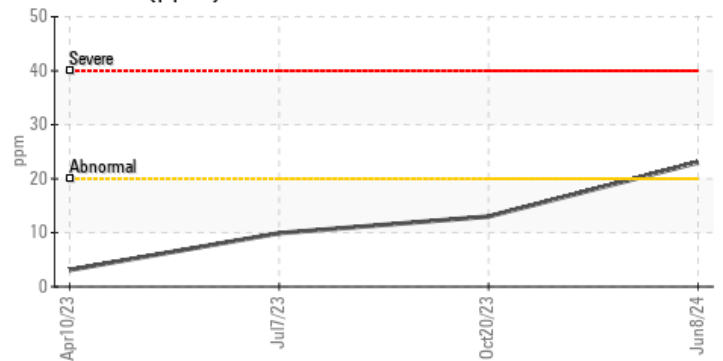
### Chromium (ppm)



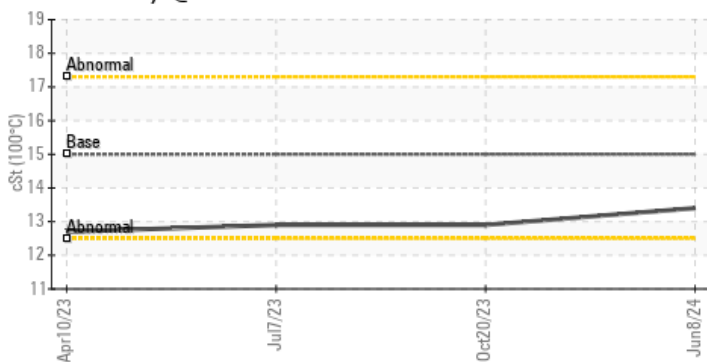
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

