



# CONSTRUCTION EQUIPMENT

## 2825-1 VOLVO L90G 3199 - DIESEL ENGINE



**Sample No:** VCP445925  
**Oil Type:** CHEVRON DELO 400 MULTIGRADE 15W40  
**Job No:** 2825-1



### SAMPLE INFORMATION

Sample Number	<b>VCP445925</b>	VCP429481	VCP408339	VCP408443
Sample Date	<b>20 Feb 2024</b>	06 Dec 2023	26 Sep 2023	28 Jun 2023
Machine Hours	<b>18494</b>	13995	17537	16948
Oil Hours	<b>500</b>	500	500	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.6</b>	13.5	13.7	13.7
Base Number (BN)	mg KOH/g	<b>7.6</b>	7.7	7.6	8.1
Oxidation (PA)	%	<b>61</b>	62	62	64

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.3</b>	0.3	0.3	0.3
Nitration (PA)	%	<b>57</b>	57	57	61
Sulfation (PA)	%	<b>59</b>	60	60	61
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>7</b>	8	8	8
Sodium	ppm	<b>1</b>	<1	<1	1
Potassium	ppm	<b>1</b>	<1	1	2

### WEAR METALS

Iron	ppm	<b>19</b>	18	21	22
Copper	ppm	<b>&lt;1</b>	<1	<1	1
Lead	ppm	<b>&lt;1</b>	0	0	0
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>11</b>	10	14	9
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>83</b>	83	93	89
Nickel	ppm	<b>&lt;1</b>	0	<1	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>1368</b>	1366	1386	1481
Magnesium	ppm	<b>409</b>	409	385	491
Zinc	ppm	<b>1339</b>	1303	1270	1395
Phosphorus	ppm	<b>1068</b>	1010	1052	1122
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>395</b>	399	410	456

### 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:** VOLVO1023  
**Unique No:** 10903177  
**Signed:** Sean Felton  
**Report Date:** 04 Mar 2024

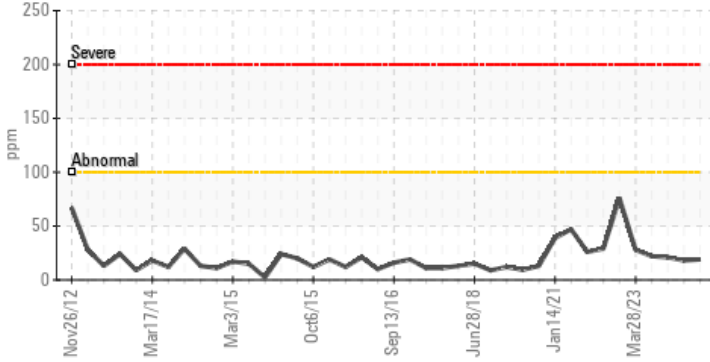


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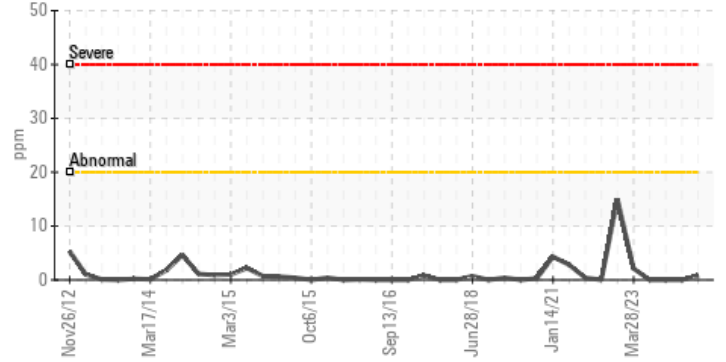


## GRAPHS

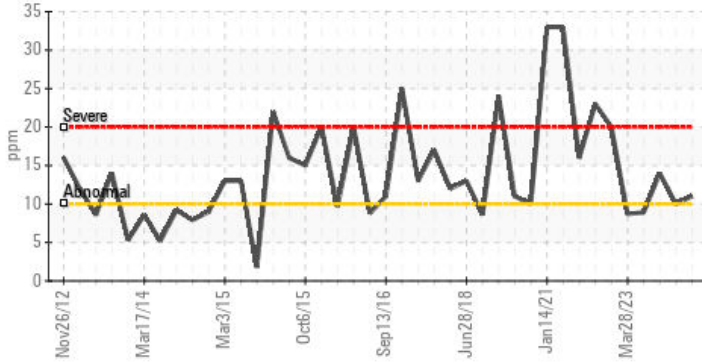
### Iron (ppm)



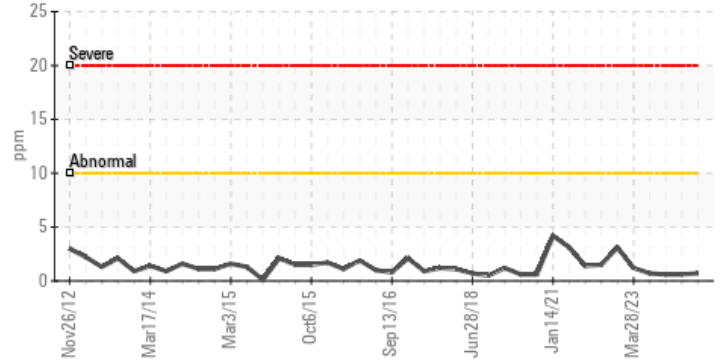
### Lead (ppm)



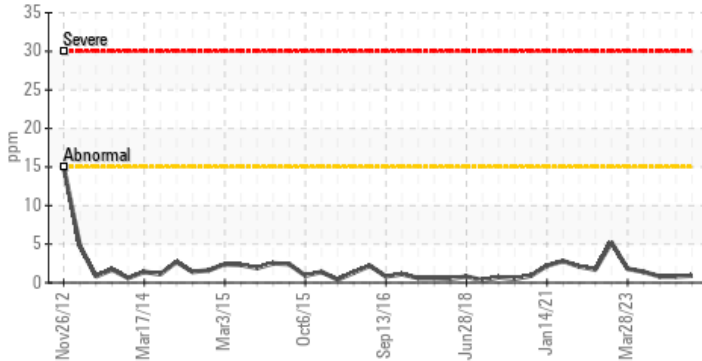
### Aluminum (ppm)



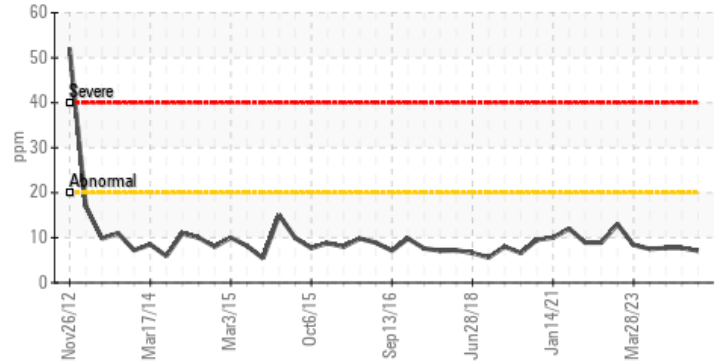
### Chromium (ppm)



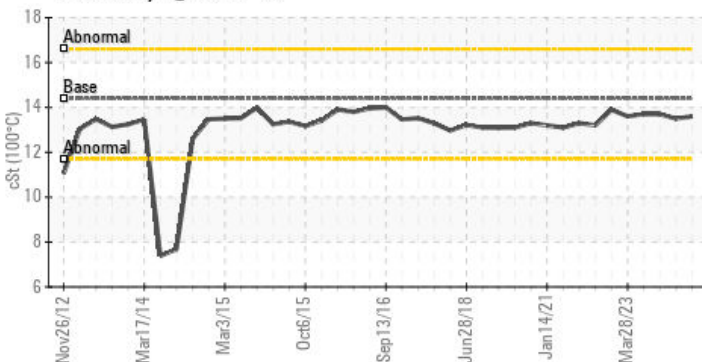
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

