



# CONSTRUCTION EQUIPMENT

## VOLVO L90H 625046 - DIESEL ENGINE



**Sample No:** VCP428798  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP428798</b>	VCP417366	VCP385335	VCP349362
Sample Date	<b>08 Feb 2024</b>	12 Jun 2023	16 Sep 2022	28 Jan 2022
Machine Hours	<b>3603</b>	3112	2470	2000
Oil Hours	<b>0</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	N/A
Sample Status	<b>ABNORMAL</b>	ABNORMAL	ABNORMAL	NORMAL

### RIPA AND ASSOCIATES

10149 FISHER AVENUE  
TAMPA, FL  
US 33619  
Contact: PM Services  
PMServices@ripaconstruction.com  
T:  
F:



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.7</b>	12.9	13.2	13.3
Base Number (BN)	mg KOH/g	<b>9.5</b>	10.4	11.7	10.1
Oxidation (PA)	%	<b>78</b>	86	88	80

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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 acceptable for the time in service.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.5</b>	0.6	0.5	0.5
Nitration (PA)	%	<b>69</b>	76	74	77
Sulfation (PA)	%	<b>59</b>	63	66	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>11</b>	7	10	9
Sodium	ppm	<b>2</b>	2	3	5
Potassium	ppm	<b>1</b>	2	6	6



### WEAR METALS

Iron	ppm	<b>32</b>	20	14	21
Copper	ppm	<b>2</b>	2	2	2
Lead	ppm	<b>&lt;1</b>	0	0	<1
Tin	ppm	<b>1</b>	<1	1	2
Aluminum	ppm	<b>▲ 27</b>	▲ 30	▲ 26	16
Chromium	ppm	<b>3</b>	2	2	2
Molybdenum	ppm	<b>45</b>	39	38	37
Nickel	ppm	<b>&lt;1</b>	0	1	0
Titanium	ppm	<b>&lt;1</b>	0	<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>	<1	1	<1



### ADDITIVES

Calcium	ppm	<b>1794</b>	1585	1681	1606
Magnesium	ppm	<b>516</b>	482	509	540
Zinc	ppm	<b>1157</b>	1039	1125	1069
Phosphorus	ppm	<b>1003</b>	847	941	926
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>27</b>	22	23	22

**Depot:** RIPTAM  
**Unique No:** 10874372  
**Signed:** Sean Felton  
**Report Date:** 14 Feb 2024

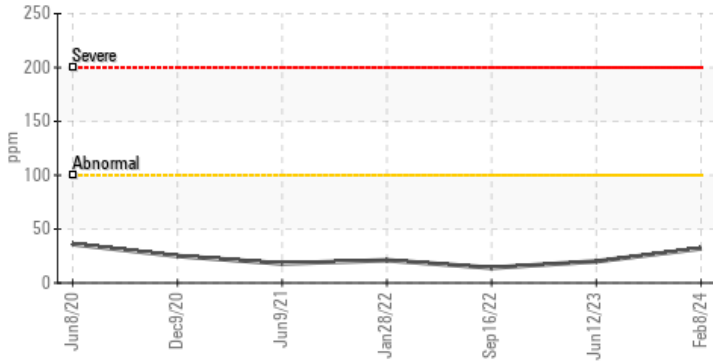


# CONSTRUCTION EQUIPMENT

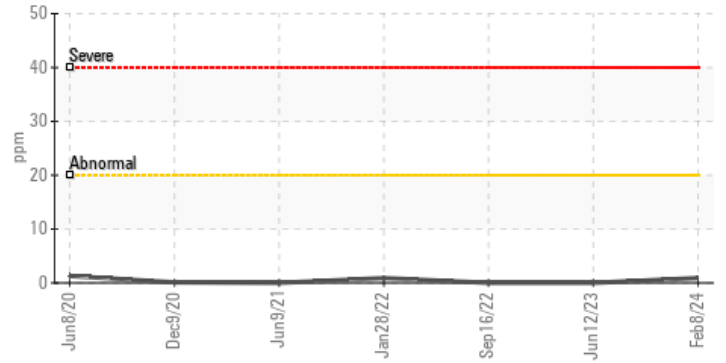


## GRAPHS

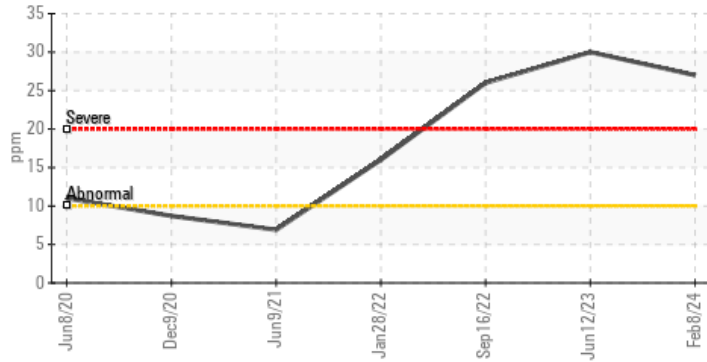
### Iron (ppm)



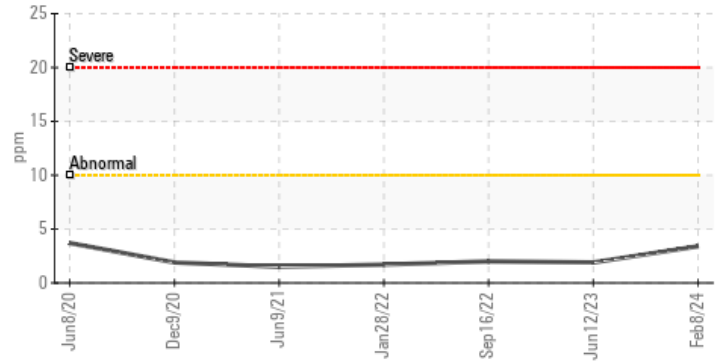
### Lead (ppm)



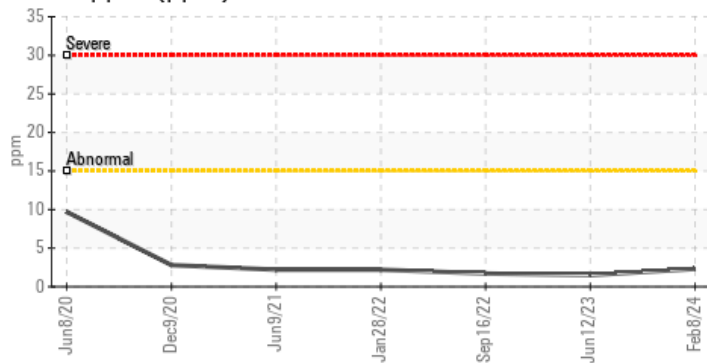
### Aluminum (ppm)



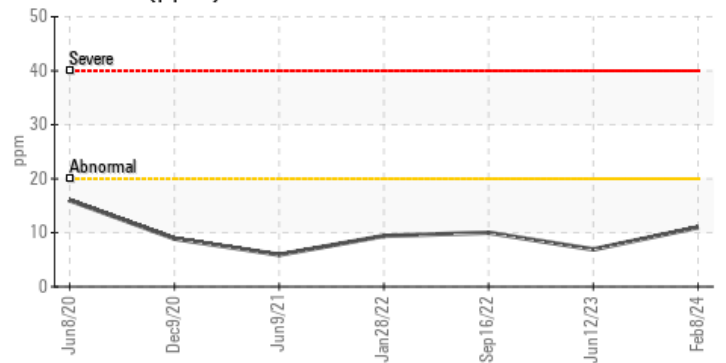
### Chromium (ppm)



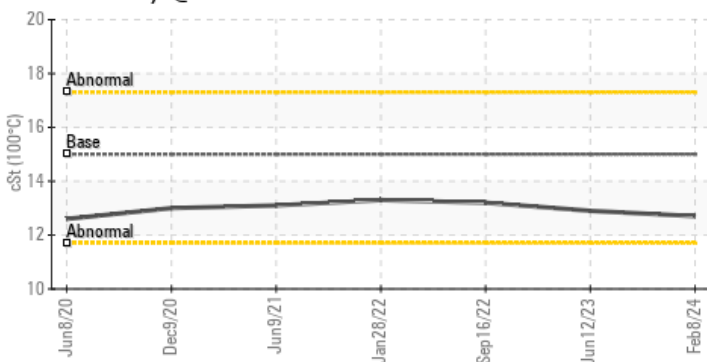
### Copper (ppm)



### Silicon (ppm)



### Viscosity @ 100°C



### Base Number

