



# CONSTRUCTION EQUIPMENT

## SW1020500 ALL CITY T VOLVO L90H 624182 - DIESEL ENGINE



**Sample No:** VCP406934  
**Oil Type:** DIESEL ENGINE OIL SAE 15W40  
**Job No:** SW1020500 ALL CITY T



### SAMPLE INFORMATION

Sample Number	<b>VCP406934</b>	VCP350393	VCP277080	VCP220712
Sample Date	<b>28 Jun 2023</b>	23 Mar 2022	21 May 2020	31 Jul 2019
Machine Hours	<b>2608</b>	2110	883	612
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Not Changd	Changed
Sample Status	<b>ABNORMAL</b>	ATTENTION	NORMAL	ABNORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>14.5</b>	14.5	13.8	12.8
Base Number (BN)	mg KOH/g	<b>9.1</b>	8.6	---	---
Oxidation (PA)	%	<b>66</b>	95	84	77



### CONTAMINATION

Soot %	%	<b>0.3</b>	0.6	0.4	0.5
Nitration (PA)	%	<b>59</b>	88	58	67
Sulfation (PA)	%	<b>54</b>	66	65	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>6</b>	14	16	31
Sodium	ppm	<b>2</b>	1	3	4
Potassium	ppm	<b>0</b>	2	2	0



### WEAR METALS

Iron	ppm	<b>18</b>	50	24	69
Copper	ppm	<b>2</b>	9	2	8
Lead	ppm	<b>0</b>	<1	0	2
Tin	ppm	<b>&lt;1</b>	2	<1	<1
Aluminum	ppm	<b>▲ 17</b>	▲ 32	11	▲ 41
Chromium	ppm	<b>2</b>	4	2	6
Molybdenum	ppm	<b>53</b>	45	38	40
Nickel	ppm	<b>0</b>	0	<1	<1
Titanium	ppm	<b>&lt;1</b>	<1	0	<1
Silver	ppm	<b>0</b>	<1	0	0
Manganese	ppm	<b>&lt;1</b>	1	1	5
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1169</b>	1633	1552	1632
Magnesium	ppm	<b>859</b>	584	466	595
Zinc	ppm	<b>1188</b>	1022	785	929
Phosphorus	ppm	<b>960</b>	795	694	778
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>6</b>	25	51	41

### 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 has decreased, but is still 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.

**Depot:** VOLVO6174  
**Unique No:** 10549127  
**Signed:** Don Baldrige  
**Report Date:** 11 Jul 2023



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## GRAPHS

