



# CONSTRUCTION EQUIPMENT

## SPM579499 WASTE MGMT VOLVO L90H 624438 - DIESEL ENGINE



**Sample No:** VCP417658  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SPM579499 WASTE MGMT



### SAMPLE INFORMATION

Sample Number	<b>VCP417658</b>	VCP422233	VCP405131	VCP396592
Sample Date	<b>10 Jul 2023</b>	16 May 2023	03 Apr 2023	10 Feb 2023
Machine Hours	<b>11301</b>	10677	10330	9322
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>12.4</b>	12.6	12.8	12.8
Base Number (BN)	mg KOH/g	<b>9.7</b>	10.0	9.5	10.1
Oxidation (PA)	%	<b>86</b>	80	79	85



### CONTAMINATION

Soot %	%	<b>0.4</b>	0.2	0.3	0.3
Nitration (PA)	%	<b>68</b>	58	68	67
Sulfation (PA)	%	<b>62</b>	61	59	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>3.6</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>25</b>	10	13	12
Sodium	ppm	<b>4</b>	0	2	2
Potassium	ppm	<b>0</b>	<1	1	0



### WEAR METALS

Iron	ppm	<b>6</b>	4	6	6
Copper	ppm	<b>&lt;1</b>	<1	<1	<1
Lead	ppm	<b>0</b>	0	<1	<1
Tin	ppm	<b>0</b>	<1	<1	<1
Aluminum	ppm	<b>2</b>	1	2	6
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>45</b>	45	45	43
Nickel	ppm	<b>0</b>	<1	<1	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>&lt;1</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1852</b>	1629	1405	1719
Magnesium	ppm	<b>535</b>	492	564	513
Zinc	ppm	<b>1150</b>	1092	1059	1108
Phosphorus	ppm	<b>961</b>	922	888	903
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>25</b>	33	15	32

### 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. We recommend an early resample to monitor this condition. All component wear rates are normal. Light fuel dilution occurring. Elemental level of silicon (Si) above normal indicating ingress of dirt/seal material. No other contaminants were detected in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

**Depot:** VOLVO0093  
**Unique No:** 10563386  
**Signed:** Doug Bogart  
**Report Date:** 23 Jul 2023



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## GRAPHS

