



# CONSTRUCTION EQUIPMENT

## 507 VOLVO L120H 632889 - DIESEL ENGINE



**Sample No:** VCP412888  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 507



### SAMPLE INFORMATION

Sample Number	<b>VCP412888</b>	VCP337860	VCP359757	VCP295346
Sample Date	<b>24 Oct 2023</b>	01 Aug 2023	08 Nov 2022	15 Jun 2021
Machine Hours	<b>6371</b>	5627	4637	1190
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Not Changd	Changed
Sample Status	<b>SEVERE</b>	SEVERE	NORMAL	ABNORMAL

**VCES- VOLVO CONSTRUCTION EQUIPMENT**  
 12345 MAPLEVIEW STREET  
 LAKESIDE, CA  
 US 92040  
 Contact: Mark Stewart  
 mark.stewart@vcesvolvo.com  
 T: X:  
 F: X:

### OIL CONDITION

Visc @ 100°C	cSt	<b>12.9</b>	12.8	13.7	13.7
Base Number (BN)	mg KOH/g	<b>5.8</b>	5.2	12.3	---
Oxidation (PA)	%	<b>126</b>	129	85	108

### CONTAMINATION

Soot %	%	<b>0.7</b>	0.7	0.3	0.5
Nitration (PA)	%	<b>84</b>	84	53	91
Sulfation (PA)	%	<b>76</b>	76	67	74
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>51</b>	82	14	26
Sodium	ppm	<b>7</b>	6	2	4
Potassium	ppm	<b>53</b>	48	2	<1

### WEAR METALS

Iron	ppm	<b>21</b>	34	5	32
Copper	ppm	<b>7</b>	11	2	32
Lead	ppm	<b>8</b>	9	<1	5
Tin	ppm	<b>3</b>	5	<1	3
Aluminum	ppm	<b>17</b>	16	4	15
Chromium	ppm	<b>1</b>	1	<1	2
Molybdenum	ppm	<b>166</b>	167	40	46
Nickel	ppm	<b>&lt;1</b>	<1	<1	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	<1	2	1
Manganese	ppm	<b>&lt;1</b>	1	<1	1
Vanadium	ppm	<b>&lt;1</b>	<1	<1	0

### ADDITIVES

Calcium	ppm	<b>1505</b>	1757	1637	1804
Magnesium	ppm	<b>438</b>	467	490	559
Zinc	ppm	<b>976</b>	1039	1119	1135
Phosphorus	ppm	<b>827</b>	798	925	934
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>31</b>	23	59	28

### 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. 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:** VOLVO4488  
**Unique No:** 10723682  
**Signed:** Don Baldrige  
**Report Date:** 03 Nov 2023

**VOLVO** **GRAPHS**

