



# CONSTRUCTION EQUIPMENT

659877 VOLVO L120H 632860 - DIESEL ENGINE



**Sample No:** VCP437448  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 659877



## SAMPLE INFORMATION

Sample Number	<b>VCP437448</b>	VCP432769	VCP370518	VCP397642
Sample Date	<b>15 Jan 2024</b>	06 Sep 2023	06 Jun 2023	08 Feb 2023
Machine Hours	<b>6693</b>	5768	4936	4349
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	ABNORMAL	ABNORMAL	NORMAL

**ORANGE COUNTY SOLID WASTE**  
 5901 YOUNG PINE ROAD  
 ORLANDO, FL  
 US 32829  
 Contact: MICHAEL BEEBE  
 michael.beebe@ocfl.net  
 T: (407)836-6652  
 F: (407)836-6650



## OIL CONDITION

Visc @ 100°C	cSt	<b>14.4</b>	14.4	14.1	13.9
Base Number (BN)	mg KOH/g	<b>8.3</b>	7.5	9.1	9.8
Oxidation (PA)	%	<b>86</b>	91	79	80



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.9</b>	1.2	0.8	0.5
Nitration (PA)	%	<b>87</b>	92	79	67
Sulfation (PA)	%	<b>65</b>	67	63	62
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>▲ 30</b>	▲ 44	▲ 21	20
Sodium	ppm	<b>0</b>	4	2	2
Potassium	ppm	<b>2</b>	0	0	0



## WEAR METALS

Iron	ppm	<b>39</b>	46	24	22
Copper	ppm	<b>3</b>	3	1	2
Lead	ppm	<b>4</b>	5	0	1
Tin	ppm	<b>&lt;1</b>	1	<1	1
Aluminum	ppm	<b>▲ 15</b>	▲ 19	9	8
Chromium	ppm	<b>&lt;1</b>	1	<1	<1
Molybdenum	ppm	<b>56</b>	49	50	47
Nickel	ppm	<b>0</b>	0	0	<1
Titanium	ppm	<b>0</b>	<1	0	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



## ADDITIVES

Calcium	ppm	<b>1897</b>	2150	1657	1791
Magnesium	ppm	<b>621</b>	537	455	545
Zinc	ppm	<b>1357</b>	1348	1017	1271
Phosphorus	ppm	<b>1060</b>	1119	907	975
Barium	ppm	<b>3</b>	0	0	0
Boron	ppm	<b>26</b>	20	28	37

## 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. Resample at the next service interval to monitor. 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:** ORAORL  
**Unique No:** 10835349  
**Signed:** Don Baldrige  
**Report Date:** 20 Jan 2024



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## VOLVO GRAPHS

