CONSTRUCTION EQUIPMENT
VOLVO L70H 623349 - DIESEL ENGINE

Sample No: VCP438789

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

Job No:

SAMPLE INFORMATION

Sample Number		**VCP438789**	VCP334570	---	---
Sample Date		**16 Mar 2024**	04 Aug 2021	---	---
Machine Hours		**4835**	1583	---	---
Oil Hours		**0**	0	---	---
Oil Changed		**Changed**	Changed	---	---
Sample Status		**SEVERE**	ABNORMAL	---	---

OIL CONDITION

Visc @ 100°C	cSt	**14.7**	14.0	---	---
Base Number (BN)	mg KOH/g	**4.9**	---	---	---
Oxidation (PA)	%	**98**	75	---	---

CONTAMINATION

Water	%	**NEG**	NEG	---	---
Soot %	%	**2.4**	0.6	---	---
Nitration (PA)	%	**122**	79	---	---
Sulfation (PA)	%	**86**	59	---	---
Glycol	%	**NEG**	NEG	---	---
Fuel	%	**<1.0**	<1.0	---	---
Silicon	ppm	⚠ **23**	12	---	---
Sodium	ppm	**6**	4	---	---
Potassium	ppm	**4**	4	---	---

WEAR METALS

Iron	ppm	**131**	50	---	---
Copper	ppm	**13**	12	---	---
Lead	ppm	**5**	<1	---	---
Tin	ppm	**5**	2	---	---
Aluminum	ppm	🔺 **69**	⚠ 43	---	---
Chromium	ppm	**9**	6	---	---
Molybdenum	ppm	**64**	26	---	---
Nickel	ppm	**2**	<1	---	---
Titanium	ppm	**<1**	<1	---	---
Silver	ppm	**0**	<1	---	---
Manganese	ppm	**3**	2	---	---
Vanadium	ppm	**<1**	<1	---	---

ADDITIVES

Calcium	ppm	**2920**	1749	---	---
Magnesium	ppm	**699**	486	---	---
Zinc	ppm	**1927**	1029	---	---
Phosphorus	ppm	**1440**	873	---	---
Barium	ppm	**0**	0	---	---
Boron	ppm	**11**	62	---	---

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Diagnosis

Oil and filter change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.The aluminum level is severe. Piston wear is indicated. Elemental level of silicon (Si) above normal indicating ingress of seal material. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: VOLVO0090
Unique No: 10936254
Signed: Jonathan Hester
Report Date: 21 Mar 2024

GRAPHS

Iron (ppm)

Lead (ppm)

▲ Aluminum (ppm)

Chromium (ppm)

Copper (ppm)

▲ Silicon (ppm)

Viscosity @ 100°C

Base Number