



CONSTRUCTION EQUIPMENT

VOLVO A40G 352778 - DIESEL ENGINE



Sample No: VCP415814
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP415814	VCP344076	VCP328956	---
Sample Date	29 Jun 2023	21 Jan 2022	15 Oct 2021	---
Machine Hours	3734	0	585	---
Oil Hours	0	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	NORMAL	ATTENTION	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.3	■ 12.5	▲ 10.7	---
Base Number (BN)	mg KOH/g	■ 4.8	■ 10.2	---	---
Oxidation (PA)	%	104	86	65	---



CONTAMINATION

Soot %	%	■ 0.6	■ 0.2	■ 0.2	---
Nitration (PA)	%	108	73	65	---
Sulfation (PA)	%	74	66	58	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	■ 0.8	---
Silicon	ppm	■ 8	■ 8	■ 25	---
Sodium	ppm	■ 4	■ 2	■ 1	---
Potassium	ppm	■ 2	■ 0	■ 2	---



WEAR METALS

Iron	ppm	■ 26	■ 10	■ 19	---
Copper	ppm	▲ 66	■ 7	■ 37	---
Lead	ppm	■ 2	■ <1	■ 2	---
Tin	ppm	■ 3	■ 1	■ 4	---
Aluminum	ppm	■ 5	■ 1	■ 3	---
Chromium	ppm	■ <1	■ <1	■ <1	---
Molybdenum	ppm	■ 49	■ 48	■ 61	---
Nickel	ppm	■ 9	■ <1	■ <1	---
Titanium	ppm	0	<1	<1	---
Silver	ppm	■ 0	<1	<1	---
Manganese	ppm	■ 2	■ <1	■ 2	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	■ 1759	■ 1708	■ 1746	---
Magnesium	ppm	■ 512	■ 463	■ 373	---
Zinc	ppm	■ 1116	■ 1099	■ 1198	---
Phosphorus	ppm	■ 835	■ 912	■ 1028	---
Barium	ppm	■ 0	■ 0	■ <1	---
Boron	ppm	■ 6	■ 38	■ 66	---

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 copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Depot: VOLVO0090
Unique No: 10546912
Signed: Sean Felton
Report Date: 07 Jul 2023



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GRAPHS

