



CONSTRUCTION EQUIPMENT

594443 TOEBE VOLVO A40 35380 - DIESEL ENGINE



Sample No: VCP435463
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 594443 TOEBE



SAMPLE INFORMATION

Sample Number	VCP435463	---	---	---
Sample Date	11 Sep 2023	---	---	---
Machine Hours	554	---	---	---
Oil Hours	554	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.0	---	---	---
Base Number (BN)	mg KOH/g	■ 5.7	---	---	---
Oxidation (PA)	%	■ 57	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. 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 metal levels are typical for a new component breaking in. Fuel content negligible. 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.



CONTAMINATION

Soot %	%	■ 0.2	---	---	---
Nitration (PA)	%	■ 79	---	---	---
Sulfation (PA)	%	■ 53	---	---	---
Glycol	%	■ 0.0	---	---	---
Fuel	%	■ 0.6	---	---	---
Silicon	ppm	■ 33	---	---	---
Sodium	ppm	■ 4	---	---	---
Potassium	ppm	■ 4	---	---	---



WEAR METALS

Iron	ppm	■ 20	---	---	---
Copper	ppm	▲ 278	---	---	---
Lead	ppm	■ 1	---	---	---
Tin	ppm	■ 3	---	---	---
Aluminum	ppm	■ 6	---	---	---
Chromium	ppm	■ < 1	---	---	---
Molybdenum	ppm	■ 90	---	---	---
Nickel	ppm	■ 2	---	---	---
Titanium	ppm	0	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 4	---	---	---
Vanadium	ppm	0	---	---	---



ADDITIVES

Calcium	ppm	■ 2303	---	---	---
Magnesium	ppm	■ 19	---	---	---
Zinc	ppm	■ 1316	---	---	---
Phosphorus	ppm	■ 1073	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 50	---	---	---

Depot: VOLVO2990
Unique No: 10647179
Signed: Jonathan Hester
Report Date: 19 Sep 2023



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GRAPHS

