



CONSTRUCTION EQUIPMENT

VOLVO EC350EL 314579 - DIESEL ENGINE



Sample No: VCP451104
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP451104	VCP431850	---	---
Sample Date	15 May 2024	16 Jan 2024	---	---
Machine Hours	0	608	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	ABNORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 100°C	cSt	● 11.8	10.3	---	---
Base Number (BN)	mg KOH/g	■ 8.2	■ 7.3	---	---
Oxidation (PA)	%	81	69	---	---

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.



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	■ 0.1	■ 0.1	---	---
Nitration (PA)	%	66	63	---	---
Sulfation (PA)	%	61	57	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	■ 0.8	---	---
Silicon	ppm	■ 8	■ 23	---	---
Sodium	ppm	■ <1	■ 2	---	---
Potassium	ppm	■ 2	■ 5	---	---



WEAR METALS

Iron	ppm	■ 7	■ 12	---	---
Copper	ppm	▲ 313	▲ 265	---	---
Lead	ppm	■ <1	■ 1	---	---
Tin	ppm	■ 2	■ 2	---	---
Aluminum	ppm	■ 2	■ 2	---	---
Chromium	ppm	■ <1	■ 0	---	---
Molybdenum	ppm	■ 49	■ 62	---	---
Nickel	ppm	■ <1	■ <1	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	■ <1	■ 0	---	---
Manganese	ppm	■ 1	3	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	■ 1622	■ 1657	---	---
Magnesium	ppm	■ 523	■ 408	---	---
Zinc	ppm	■ 1112	■ 1259	---	---
Phosphorus	ppm	■ 943	■ 1090	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 25	■ 75	---	---

Depot: VOLVO0090
Unique No: 11035301
Signed: Sean Felton
Report Date: 21 May 2024



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GRAPHS

