



CONSTRUCTION EQUIPMENT

621191 CARDINAL AGG VOLVO EC350 314509 - DIESEL ENGINE



Sample No: VCP432708
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 621191 CARDINAL AGG



SAMPLE INFORMATION

Sample Number	VCP432708	VCP412652	---	---
Sample Date	20 Oct 2023	07 Aug 2023	---	---
Machine Hours	925	608	---	---
Oil Hours	500	608	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.0	▲ 10.3	---	---
Base Number (BN)	mg KOH/g	■ 7.1	■ 5.1	---	---
Oxidation (PA)	%	60	70	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level has decreased, but is still abnormal. 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 %	%	■ 0.1	■ 0.1	---	---
Nitration (PA)	%	62	88	---	---
Sulfation (PA)	%	54	61	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	■ 0.7	---	---
Silicon	ppm	■ 6	■ 30	---	---
Sodium	ppm	■ 2	■ 2	---	---
Potassium	ppm	■ 1	■ 4	---	---



WEAR METALS

Iron	ppm	■ 4	■ 14	---	---
Copper	ppm	▲ 74	▲ 202	---	---
Lead	ppm	■ 2	■ 4	---	---
Tin	ppm	■ <1	■ 2	---	---
Aluminum	ppm	■ 1	■ 2	---	---
Chromium	ppm	■ 0	■ 0	---	---
Molybdenum	ppm	■ 60	■ 83	---	---
Nickel	ppm	■ 0	■ 0	---	---
Titanium	ppm	<1	3	---	---
Silver	ppm	■ 0	■ 0	---	---
Manganese	ppm	■ <1	■ 3	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	■ 1211	■ 2228	---	---
Magnesium	ppm	■ 870	53	---	---
Zinc	ppm	■ 1100	■ 1229	---	---
Phosphorus	ppm	■ 1007	■ 972	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 0	■ 23	---	---

Depot: VOLVO2990
Unique No: 10729739
Signed: Jonathan Hester
Report Date: 09 Nov 2023



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GRAPHS

