



CONSTRUCTION EQUIPMENT

646971 VOLVO EC380EL 311542 - DIESEL ENGINE



Sample No: VCP452303
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 646971



SAMPLE INFORMATION

Sample Number	VCP452303	VCP407009	VCP334852	---
Sample Date	20 Dec 2023	09 May 2023	02 Sep 2021	---
Machine Hours	3878	3035	1499	---
Oil Hours	700	500	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ATTENTION	ATTENTION	ABNORMAL	---

FERROUS PROCESSING AND TRADING

3400 E LAFAYETTE
 DETROIT, MI
 US 48207

Contact: KEITH HALL
 keith.hall@fpt1.com

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 F:



OIL CONDITION

Visc @ 100°C	cSt	▲ 11.9	▲ 12.2	▲ 12.2	---
Base Number (BN)	mg KOH/g	■ 5.8	■ 5.3	---	---
Oxidation (PA)	%	65	72	74	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All 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	NEG	---
Soot %	%	■ 0.1	■ 0.1	■ 0.1	---
Nitration (PA)	%	76	84	82	---
Sulfation (PA)	%	57	62	60	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	■ 0.4	---
Silicon	ppm	■ 6	■ 6	■ 6	---
Sodium	ppm	■ 2	■ 3	■ 5	---
Potassium	ppm	■ 0	■ 0	■ 2	---



WEAR METALS

Iron	ppm	■ 6	■ 9	■ 8	---
Copper	ppm	■ 3	■ 11	▲ 142	---
Lead	ppm	■ <1	■ <1	■ 1	---
Tin	ppm	■ <1	■ <1	■ 2	---
Aluminum	ppm	■ <1	■ <1	■ 4	---
Chromium	ppm	■ 0	■ 0	■ <1	---
Molybdenum	ppm	■ 59	■ 60	■ 29	---
Nickel	ppm	■ 0	■ 0	■ <1	---
Titanium	ppm	0	0	■ <1	---
Silver	ppm	■ 0	■ 0	<1	---
Manganese	ppm	■ <1	■ <1	■ <1	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	■ 1017	■ 1117	■ 1677	---
Magnesium	ppm	■ 938	■ 952	■ 580	---
Zinc	ppm	■ 1225	■ 1241	■ 1018	---
Phosphorus	ppm	■ 925	■ 880	■ 841	---
Barium	ppm	■ 0	■ 0	■ 0	---
Boron	ppm	■ 0	■ 0	■ 43	---

Depot: FERDET
Unique No: 10822403
Signed: Don Baldrige
Report Date: 11 Jan 2024



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GRAPHS

