



# CONSTRUCTION EQUIPMENT

580049 RYAN GOLF VOLVO EC480EL 314822 - DIESEL ENGINE



**Sample No:** VCP424527  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 580049 RYAN GOLF



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## SAMPLE INFORMATION

Sample Number	VCP424527	VCP409288	VCP367283	---
Sample Date	17 Jul 2023	11 Feb 2023	05 Nov 2022	---
Machine Hours	2382	1668	1035	---
Oil Hours	500	500	1035	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	---

## OIL CONDITION

Visc @ 100°C	cSt	▲ 12.3	▲ 12.0	▲ 10.3	---
Base Number (BN)	mg KOH/g	■ 8.1	■ 8.1	■ 5.2	---
Oxidation (PA)	%	75	80	84	---

## CONTAMINATION

Soot %	%	■ 0.1	■ 0.1	■ 0.1	---
Nitration (PA)	%	69	71	103	---
Sulfation (PA)	%	58	62	71	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	■ 0.8	---
Silicon	ppm	■ 13	■ 10	▲ 27	---
Sodium	ppm	■ 1	■ 2	■ 3	---
Potassium	ppm	■ 0	■ 0	■ <1	---

## WEAR METALS

Iron	ppm	■ 8	■ 7	■ 15	---
Copper	ppm	▲ 22	▲ 40	▲ 146	---
Lead	ppm	■ 0	■ 2	■ 4	---
Tin	ppm	■ <1	■ 1	■ 4	---
Aluminum	ppm	■ 1	■ <1	■ 2	---
Chromium	ppm	■ <1	■ <1	■ <1	---
Molybdenum	ppm	■ 55	■ 51	■ 81	---
Nickel	ppm	■ 2	■ <1	■ <1	---
Titanium	ppm	0	0	0	---
Silver	ppm	■ 0	■ 0	■ 0	---
Manganese	ppm	■ <1	■ <1	■ 3	---
Vanadium	ppm	0	0	0	---

## ADDITIVES

Calcium	ppm	■ 1868	■ 1665	■ 2129	---
Magnesium	ppm	■ 541	■ 459	110	---
Zinc	ppm	■ 1276	■ 1136	■ 1214	---
Phosphorus	ppm	■ 1021	■ 890	■ 915	---
Barium	ppm	■ <1	■ 0	■ 0	---
Boron	ppm	■ 8	■ 8	■ 2	---

## 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 has decreased, but is still abnormal. 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:** VOLVO0093  
**Unique No:** 10566553  
**Signed:** Don Baldrige  
**Report Date:** 25 Jul 2023



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## VOLVO GRAPHS

