



CONSTRUCTION EQUIPMENT

VOLVO ECR145EL 311251 - DIESEL ENGINE



Sample No: VCP392688
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP392688	VCP374612	VCP264576	---
Sample Date	20 Jun 2023	13 Jun 2022	17 Mar 2020	---
Machine Hours	2299	1890	941	---
Oil Hours	500	1500	500	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	ABNORMAL	NORMAL	---

RIPA AND ASSOCIATES

10149 FISHER AVENUE
 TAMPA, FL
 US 33619
 Contact: ROBERT TURNER
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 T:
 F:



OIL CONDITION

Visc @ 100°C	cSt	13.3	13.0	12.8	---
Base Number (BN)	mg KOH/g	11.2	12.0	---	---
Oxidation (PA)	%	86	89	79	---

Diagnosis

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



CONTAMINATION

Soot %	%	0.2	0.3	0.3	---
Nitration (PA)	%	65	76	62	---
Sulfation (PA)	%	63	65	57	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	8	10	15	---
Sodium	ppm	2	3	3	---
Potassium	ppm	0	<1	0	---



WEAR METALS

Iron	ppm	41	59	48	---
Copper	ppm	2	3	4	---
Lead	ppm	0	<1	<1	---
Tin	ppm	<1	1	0	---
Aluminum	ppm	10	▲ 25	18	---
Chromium	ppm	1	3	2	---
Molybdenum	ppm	38	40	35	---
Nickel	ppm	0	<1	4	---
Titanium	ppm	0	<1	<1	---
Silver	ppm	0	4	0	---
Manganese	ppm	<1	<1	1	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	1660	1676	1632	---
Magnesium	ppm	481	490	418	---
Zinc	ppm	1050	1128	788	---
Phosphorus	ppm	869	914	694	---
Barium	ppm	0	0	0	---
Boron	ppm	44	41	32	---

Depot: RIPTAM
Unique No: 10551672
Signed: Wes Davis
Report Date: 12 Jul 2023



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GRAPHS

