



CONSTRUCTION EQUIPMENT

VOLVO ECR145E 312070 - DIESEL ENGINE



Sample No: VCP426230
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP426230	VCP393624	VCP265622	---
Sample Date	25 Sep 2023	29 Nov 2022	31 Aug 2020	---
Machine Hours	1654	1137	462	---
Oil Hours	0	0	462	---
Oil Changed	Changed	N/A	Changed	---
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	---

RIPA AND ASSOCIATES

10149 FISHER AVENUE
 TAMPA, FL
 US 33619
 Contact: PM Services
 PMServices@ripaconstruction.com
 T:
 F:



OIL CONDITION

Visc @ 100°C	cSt	13.4	13.2	13.0	---
Base Number (BN)	mg KOH/g	9.5	9.7	---	---
Oxidation (PA)	%	88	97	59	---

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



CONTAMINATION

Soot %	%	0.5	0.2	0.2	---
Nitration (PA)	%	77	70	53	---
Sulfation (PA)	%	64	77	51	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	15	13	18	---
Sodium	ppm	6	<1	4	---
Potassium	ppm	3	2	0	---



WEAR METALS

Iron	ppm	76	72	56	---
Copper	ppm	9	6	11	---
Lead	ppm	1	0	<1	---
Tin	ppm	2	<1	0	---
Aluminum	ppm	▲ 13	▲ 14	▲ 37	---
Chromium	ppm	3	3	5	---
Molybdenum	ppm	50	40	3	---
Nickel	ppm	1	0	12	---
Titanium	ppm	<1	0	<1	---
Silver	ppm	0	0	0	---
Manganese	ppm	2	1	5	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	1584	1811	2463	---
Magnesium	ppm	498	481	56	---
Zinc	ppm	1091	1103	1195	---
Phosphorus	ppm	954	946	988	---
Barium	ppm	0	0	0	---
Boron	ppm	24	49	2	---

Depot: RIPTAM
Unique No: 10723679
Signed: Don Baldrige
Report Date: 03 Nov 2023



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GRAPHS

