



CONSTRUCTION EQUIPMENT

14028 CASTLE VOLVO ECR145E 312161 - DIESEL ENGINE



Sample No: VCP447960
Oil Type: SHELL 15W40
Job No: 14028 CASTLE



SAMPLE INFORMATION

Sample Number	VCP447960	VCP369380	VCP347527	VCP297105
Sample Date	19 Jan 2024	02 Jan 2023	13 Jun 2022	13 Jan 2021
Machine Hours	2757	1990	1546	945
Oil Hours	0	0	500	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.7	13.6	13.7	14.0
Base Number (BN)	mg KOH/g	5.3	8.1	7.3	---
Oxidation (PA)	%	63	74	76	50

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

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.4	0.3	0.3	0.3
Nitration (PA)	%	82	87	88	71
Sulfation (PA)	%	59	55	58	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	9	8	9
Sodium	ppm	3	2	4	3
Potassium	ppm	2	1	4	15



WEAR METALS

Iron	ppm	29	26	52	30
Copper	ppm	3	3	5	10
Lead	ppm	<1	<1	<1	0
Tin	ppm	2	<1	1	2
Aluminum	ppm	7	10	8	10
Chromium	ppm	2	2	2	2
Molybdenum	ppm	66	52	48	2
Nickel	ppm	<1	0	2	4
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1874	1223	1431	2325
Magnesium	ppm	138	730	594	27
Zinc	ppm	950	881	969	958
Phosphorus	ppm	799	706	722	851
Barium	ppm	0	0	0	<1
Boron	ppm	18	21	26	6

Depot: VOLVO8882
Unique No: 10846514
Signed: Wes Davis
Report Date: 25 Jan 2024



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GRAPHS

