



CONSTRUCTION EQUIPMENT

688511 VOLVO ECR145 310112 - DIESEL ENGINE



Sample No: VCP455122
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 688511



SAMPLE INFORMATION

Sample Number	VCP455122	VCP393311	VCP320422	VCP291167
Sample Date	19 Mar 2024	14 Mar 2023	25 Aug 2021	14 Oct 2020
Machine Hours	6977	6267	5286	4776
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	11.8	12.7	13.0	12.7
Base Number (BN)	mg KOH/g	10.6	10.4	---	---
Oxidation (PA)	%	77	82	81	85

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. Fuel content negligible. 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	NEG
Soot %	%	0.5	0.3	0.2	0.2
Nitration (PA)	%	74	65	64	67
Sulfation (PA)	%	57	61	61	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	1.0	<1.0	<1.0	<1.0
Silicon	ppm	9	8	6	5
Sodium	ppm	2	<1	3	3
Potassium	ppm	0	2	<1	0



WEAR METALS

Iron	ppm	30	42	27	16
Copper	ppm	5	6	3	3
Lead	ppm	0	<1	0	0
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	16	31	12	6
Chromium	ppm	1	3	1	<1
Molybdenum	ppm	44	44	43	38
Nickel	ppm	0	<1	<1	0
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	0	<1	0	0



ADDITIVES

Calcium	ppm	1795	1724	1646	1692
Magnesium	ppm	521	485	485	542
Zinc	ppm	1187	1092	1068	1108
Phosphorus	ppm	1024	908	918	906
Barium	ppm	0	2	0	0
Boron	ppm	29	42	42	43

Depot: HUBORL
Unique No: 10941521
Signed: Don Baldrige
Report Date: 27 Mar 2024



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VOLVO GRAPHS

