



CONSTRUCTION EQUIPMENT

673801 VOLVO ECR145E 314441 - DIESEL ENGINE



Sample No: VCP440684
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 673801



SAMPLE INFORMATION

Sample Number	VCP440684	VCP396823	VCP354612	VCP315729
Sample Date	21 Feb 2024	28 Dec 2022	19 May 2022	13 Sep 2021
Machine Hours	3640	2450	2007	1499
Oil Hours	600	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	14.0	13.2	13.0	12.6
Base Number (BN)	mg KOH/g	9.9	10.2	11.3	---
Oxidation (PA)	%	60	62	84	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 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 %	%	0.3	0.3	0.3	0.3
Nitration (PA)	%	61	64	68	66
Sulfation (PA)	%	52	52	62	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	6	7	6
Sodium	ppm	1	<1	2	1
Potassium	ppm	1	2	1	<1



WEAR METALS

Iron	ppm	18	15	18	12
Copper	ppm	3	2	3	2
Lead	ppm	<1	1	<1	<1
Tin	ppm	1	1	1	1
Aluminum	ppm	4	5	5	3
Chromium	ppm	2	1	1	<1
Molybdenum	ppm	61	58	42	38
Nickel	ppm	1	<1	<1	<1
Titanium	ppm	<1	0	<1	<1
Silver	ppm	0	0	<1	1
Manganese	ppm	1	<1	<1	<1
Vanadium	ppm	<1	<1	<1	0



ADDITIVES

Calcium	ppm	1024	1295	1696	1716
Magnesium	ppm	952	990	510	533
Zinc	ppm	1226	1361	1166	1116
Phosphorus	ppm	975	1055	952	923
Barium	ppm	1	0	0	0
Boron	ppm	<1	5	50	45

Depot: BLADET
Unique No: 10900929
Signed: Don Baldrige
Report Date: 29 Feb 2024



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VOLVO GRAPHS

