



CONSTRUCTION EQUIPMENT

42079 - DIESEL ENGINE



Sample No: VCP453821
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 42079



SAMPLE INFORMATION

Sample Number	VCP453821	VCP454617	VCP407066	VCP381043
Sample Date	08 May 2024	29 Mar 2024	11 Sep 2023	03 May 2023
Machine Hours	5998	5825	5818	5272
Oil Hours	0	6	0	0
Oil Changed	Changed	Not Changd	N/A	Not Changd
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.5	12.9	13.2	14.2
Base Number (BN)	mg KOH/g	10.4	10.5	6.5	9.0
Oxidation (PA)	%	76	74	54	49

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. Valve wear is indicated. 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 suitable for further service.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.1	0.5	0.1
Nitration (PA)	%	53	43	64	39
Sulfation (PA)	%	60	59	51	43
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	9	6	6
Sodium	ppm	3	3	6	2
Potassium	ppm	0	0	0	1



WEAR METALS

Iron	ppm	8	6	17	6
Copper	ppm	6	5	17	7
Lead	ppm	<1	0	<1	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	3	2	3	<1
Chromium	ppm	0	0	1	0
Molybdenum	ppm	41	39	59	61
Nickel	ppm	▲ 10	6	6	<1
Titanium	ppm	0	0	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1594	1513	1109	1138
Magnesium	ppm	550	559	864	1032
Zinc	ppm	1084	1093	1144	1390
Phosphorus	ppm	952	948	967	1085
Barium	ppm	0	0	0	0
Boron	ppm	56	64	13	9

Depot: LANNOR
Unique No: 11021266
Signed: Don Baldrige
Report Date: 13 May 2024



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GRAPHS

