



CONSTRUCTION EQUIPMENT

674070 DIPRO CATERPILLAR 982M LLSU02686 - DIESEL ENGINE



Sample No: VCP445990
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 674070 DIPRO



SAMPLE INFORMATION

Sample Number	VCP445990	VCP452300	VCP401161	VCP411765
Sample Date	14 Feb 2024	28 Dec 2023	14 Sep 2023	11 Jul 2023
Machine Hours	13510	12902	11568	10846
Oil Hours	510	500	500	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	ABNORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.5	13.3	13.9	14.0
Base Number (BN)	mg KOH/g	8.6	6.6	8.1	9.4
Oxidation (PA)	%	67	80	63	63

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 %	%	0.5	1.6	1	0.5
Nitration (PA)	%	73	97	73	63
Sulfation (PA)	%	56	67	56	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	11	34	4
Sodium	ppm	2	3	2	1
Potassium	ppm	0	<1	1	1



WEAR METALS

Iron	ppm	16	32	26	14
Copper	ppm	<1	2	2	2
Lead	ppm	1	8	4	1
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	5	6	4	4
Chromium	ppm	<1	1	1	<1
Molybdenum	ppm	59	70	58	53
Nickel	ppm	0	0	<1	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	<1	0	0



ADDITIVES

Calcium	ppm	1102	1336	1032	1099
Magnesium	ppm	911	821	911	907
Zinc	ppm	1100	1293	1200	1248
Phosphorus	ppm	995	1040	983	1012
Barium	ppm	0	0	0	0
Boron	ppm	0	6	0	4

Depot: VOLVO2990
Unique No: 10896439
Signed: Don Baldrige
Report Date: 26 Feb 2024



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VOLVO GRAPHS

