



CONSTRUCTION EQUIPMENT

SW1020060 SUNLAND VOLVO DD140C 290068 - DIESEL ENGINE



Sample No: VCP406627
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: SW1020060 SUNLAND



SAMPLE INFORMATION

Sample Number	VCP406627	VCP355331	VCP351945	VCP344685
Sample Date	11 Jul 2023	15 Oct 2022	28 Apr 2022	16 Dec 2021
Machine Hours	4437	3740	2977	2382
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	ABNORMAL	ABNORMAL



OIL CONDITION

Visc @ 100°C	cSt	12.7	8.4	11.5	10.6
Base Number (BN)	mg KOH/g	9.3	10.4	11.1	10.1
Oxidation (PA)	%	65	55	89	88



CONTAMINATION

Soot %	%	0.3	0.2	0.2	0.2
Nitration (PA)	%	70	55	68	65
Sulfation (PA)	%	55	63	65	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	3.3	7.3	7.9
Silicon	ppm	7	10	6	10
Sodium	ppm	3	2	2	2
Potassium	ppm	2	0	2	5



WEAR METALS

Iron	ppm	30	32	13	26
Copper	ppm	12	77	1	4
Lead	ppm	<1	1	1	0
Tin	ppm	1	1	1	1
Aluminum	ppm	27	8	10	17
Chromium	ppm	2	2	2	2
Molybdenum	ppm	57	16	40	41
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	<1	0	<1	0



ADDITIVES

Calcium	ppm	1392	3081	1679	1555
Magnesium	ppm	924	239	518	469
Zinc	ppm	1325	1419	1108	1040
Phosphorus	ppm	1051	1134	943	905
Barium	ppm	0	0	0	0
Boron	ppm	5	52	46	34



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Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. 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 acceptable for the time in service.

Depot: VOLVO6174
Unique No: 10562279
Signed: Don Baldrige
Report Date: 19 Jul 2023



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GRAPHS

