

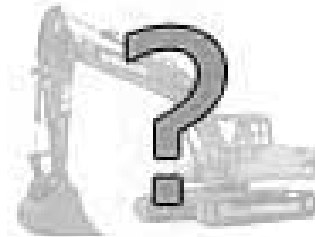


CONSTRUCTION EQUIPMENT

660752 NORTHSTAR BLU SENNEBOGEN 850 3139 - DIESEL ENGINE



Sample No: VCP445852
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 660752 NORTHSTAR BLU



SAMPLE INFORMATION

Sample Number	VCP445852	VCP418188	VCP416278	VCP426597
Sample Date	13 Feb 2024	08 Nov 2023	26 Jul 2023	19 Apr 2023
Machine Hours	3118	2471	1921	1453
Oil Hours	500	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	13.2	13.3	13.4	13.4
Base Number (BN)	mg KOH/g	8.4	8.4	9.5	8.0
Oxidation (PA)	%	71	74	65	73

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 %	%	0.2	0.2	0.1	0.1
Nitration (PA)	%	77	76	81	76
Sulfation (PA)	%	57	58	54	57
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	4	3	3
Sodium	ppm	4	2	3	2
Potassium	ppm	5	20	4	10



WEAR METALS

Iron	ppm	11	14	10	13
Copper	ppm	<1	0	1	<1
Lead	ppm	0	0	<1	0
Tin	ppm	<1	<1	<1	0
Aluminum	ppm	3	6	3	4
Chromium	ppm	<1	<1	0	0
Molybdenum	ppm	60	57	53	63
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1123	1201	1983	1236
Magnesium	ppm	928	943	883	1057
Zinc	ppm	1106	1298	1404	1444
Phosphorus	ppm	996	1034	1148	1111
Barium	ppm	0	0	0	0
Boron	ppm	1	11	57	2

Depot: VOLVO2990
Unique No: 10896456
Signed: Don Baldrige
Report Date: 26 Feb 2024



CONSTRUCTION EQUIPMENT



VOLVO GRAPHS

