



CONSTRUCTION EQUIPMENT

VOLVO A45G 67 (S/N 342048) - DIESEL ENGINE



Sample No: VCP411947
Oil Type: SHELL ROTELLA T 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP411947	VCP423705	VCP400440	VCP396274
Sample Date	30 Oct 2023	07 Jun 2023	14 Mar 2023	16 Nov 2022
Machine Hours	15090	0	13996	13328
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	SEVERE	NORMAL	NORMAL	ATTENTION

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OIL CONDITION

Visc @ 100°C	cSt	9.6	12.5	13.3	11.9
Base Number (BN)	mg KOH/g	5.6	5.8	6.4	6.9
Oxidation (PA)	%	68	61	79	70

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.8	1	0.6	0.8
Nitration (PA)	%	79	82	96	84
Sulfation (PA)	%	60	61	61	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	13.3	<1.0	<1.0	1.4
Silicon	ppm	5	5	5	6
Sodium	ppm	2	3	0	4
Potassium	ppm	4	3	1	2

WEAR METALS

Iron	ppm	25	19	15	22
Copper	ppm	3	9	29	1
Lead	ppm	2	<1	<1	2
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	7	9	8	13
Chromium	ppm	<1	1	<1	1
Molybdenum	ppm	24	48	47	73
Nickel	ppm	2	1	<1	1
Titanium	ppm	<1	<1	<1	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	<1	0	0

ADDITIVES

Calcium	ppm	1758	1678	1311	1784
Magnesium	ppm	143	342	696	316
Zinc	ppm	996	1073	889	1174
Phosphorus	ppm	782	942	673	907
Barium	ppm	3	0	0	0
Boron	ppm	41	21	19	25

Diagnosis

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Depot: JMHMAR
Unique No: 10781132
Signed: Wes Davis
Report Date: 18 Dec 2023



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GRAPHS

