



CONSTRUCTION EQUIPMENT

SWA307696-10 VOLVO A40G 342584 - DIESEL ENGINE



Sample No: VCP418839
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40
Job No: SWA307696-10



SAMPLE INFORMATION

Sample Number	VCP418839	VCP316309	VCP321419	VCP321453
Sample Date	19 Aug 2023	17 Mar 2022	17 Dec 2021	03 Sep 2021
Machine Hours	8359	5285	4805	4228
Oil Hours	0	500	500	300
Oil Changed	Not Changed	Changed	Changed	Changed
Sample Status	ATTENTION	ATTENTION	NORMAL	ATTENTION

THALLE INDUSTRIES

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.1	▲ 12.2	■ 12.7	▲ 12.0
Base Number (BN)	mg KOH/g	■ 9.0	■ 10.1	■ 11.6	---
Oxidation (PA)	%	85	68	88	82

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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Soot %	%	■ 0.3	■ 0.1	■ 0.2	■ 0.2
Nitration (PA)	%	74	53	68	56
Sulfation (PA)	%	63	60	66	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	■ 0.2	<1.0	■ 1.0
Silicon	ppm	■ 6	■ 4	■ 9	■ 3
Sodium	ppm	■ 5	■ <1	■ 2	■ 2
Potassium	ppm	■ 0	■ 0	■ 0	■ 0



WEAR METALS

Iron	ppm	■ 14	■ 6	■ 12	■ 9
Copper	ppm	■ 3	■ 1	■ 2	■ 4
Lead	ppm	■ 0	■ 0	■ <1	■ <1
Tin	ppm	■ <1	■ <1	■ <1	■ <1
Aluminum	ppm	■ 2	■ 1	■ 3	■ 2
Chromium	ppm	■ <1	■ 0	■ <1	■ <1
Molybdenum	ppm	■ 42	■ 60	■ 43	■ 42
Nickel	ppm	■ 2	■ 0	■ 0	■ 0
Titanium	ppm	0	0	<1	0
Silver	ppm	■ 0	0	0	■ <1
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	■ 1755	■ 1573	■ 1767	■ 1760
Magnesium	ppm	507	■ 461	■ 519	■ 529
Zinc	ppm	■ 1109	■ 1091	■ 1172	■ 1170
Phosphorus	ppm	■ 944	■ 1012	■ 988	■ 983
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 47	281	■ 48	■ 52

Depot: THAFIS
Unique No: 10617097
Signed: Don Baldrige
Report Date: 24 Aug 2023



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GRAPHS

