



CONSTRUCTION EQUIPMENT

VOLVO A40G 352396 - DIESEL ENGINE



Sample No: VCP438449
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP438449	VCP434300	VCP328973	VCP305187
Sample Date	15 Feb 2024	08 Nov 2023	30 Sep 2021	01 Mar 2021
Machine Hours	4616	4271	2397	1556
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.2	■ 12.7	■ 12.94	■ 12.9
Base Number (BN)	mg KOH/g	■ 9.3	■ 8.7	---	---
Oxidation (PA)	%	76	83	85	80

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Valve wear is indicated. Fuel content negligible. 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.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.2	■ 0.3	■ 0.3	■ 0.2
Nitration (PA)	%	61	81	87	64
Sulfation (PA)	%	59	61	64	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.4	<1.0	<1.0	<1.0
Silicon	ppm	■ 5	■ 11	■ 7	■ 6
Sodium	ppm	■ 14	■ 24	■ 60	■ 0
Potassium	ppm	■ 2	■ 2	■ 1	■ 0



WEAR METALS

Iron	ppm	■ 20	■ 36	■ 14	■ 6
Copper	ppm	■ 2	■ 2	■ 3	■ 4
Lead	ppm	■ 0	■ <1	■ 1	■ <1
Tin	ppm	■ <1	■ <1	■ 2	■ <1
Aluminum	ppm	■ 8	■ 7	■ 5	■ 0
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 45	■ 57	■ 44	■ 42
Nickel	ppm	▲ 25	▲ 32	■ 2	■ 1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	■ 0	■ 0	<1	0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 1535	■ 1637	■ 1699	■ 1846
Magnesium	ppm	■ 485	■ 500	■ 527	■ 483
Zinc	ppm	■ 1066	■ 1065	■ 1107	■ 1114
Phosphorus	ppm	■ 944	■ 923	■ 977	■ 1044
Barium	ppm	■ 10	■ 0	■ 0	■ 0
Boron	ppm	■ 37	■ 27	■ 22	■ 42

Depot: VOLVO0090
Unique No: 10885590
Signed: Jonathan Hester
Report Date: 22 Feb 2024



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GRAPHS

