



CONSTRUCTION EQUIPMENT

VOLVO A40G 352842 - DIESEL ENGINE



Sample No: VCP443772
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP443772	VCP454114	VCP440785	VCP414671
Sample Date	10 Apr 2024	08 Jan 2024	27 Nov 2023	11 Sep 2023
Machine Hours	4633	4505	4010	3555
Oil Hours	0	0	500	0
Oil Changed	Not Changed	Changed	Changed	N/A
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

RIPA AND ASSOCIATES
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 T:
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OIL CONDITION

Visc @ 100°C	cSt	▲ 10.7	■ 12.1	■ 12.4	■ 12.3
Base Number (BN)	mg KOH/g	■ 9.7	■ 10.1	■ 10.2	■ 9.2
Oxidation (PA)	%	69	80	82	79

Diagnosis

We advise that you check the fuel injection system. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.1	■ 0.2	■ 0.2	■ 0.7
Nitration (PA)	%	48	57	63	67
Sulfation (PA)	%	55	60	60	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 5.8	<1.0	<1.0	<1.0
Silicon	ppm	■ 5	■ 3	■ 5	■ 4
Sodium	ppm	■ 2	■ 0	■ 2	■ 3
Potassium	ppm	■ 1	■ 3	■ 0	■ 1



WEAR METALS

Iron	ppm	■ 1	■ 4	■ 5	■ 14
Copper	ppm	■ 0	■ 1	■ 1	■ 17
Lead	ppm	■ <1	■ <1	■ 0	■ <1
Tin	ppm	■ <1	■ <1	■ <1	■ <1
Aluminum	ppm	■ 2	■ 1	■ 1	■ 4
Chromium	ppm	■ 0	■ 0	■ 0	■ <1
Molybdenum	ppm	■ 38	■ 37	■ 40	■ 47
Nickel	ppm	■ <1	■ <1	■ 1	■ <1
Titanium	ppm	0	1	0	0
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	0	0	<1	<1



ADDITIVES

Calcium	ppm	■ 1458	■ 1641	■ 1716	■ 1818
Magnesium	ppm	■ 597	■ 460	■ 493	■ 532
Zinc	ppm	■ 1083	■ 1076	■ 1116	■ 1199
Phosphorus	ppm	■ 915	■ 917	■ 968	■ 969
Barium	ppm	■ 0	■ <1	■ 0	■ 0
Boron	ppm	■ 62	■ 35	■ 37	■ 29

Depot: RIPTAM
Unique No: 10976395
Signed: Jonathan Hester
Report Date: 17 Apr 2024



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VOLVO GRAPHS

