



CONSTRUCTION EQUIPMENT

VOLVO A40G 352676 - DIESEL ENGINE



Sample No: VCP412500
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP412500	VCP353643	VCP343809	VCP316440
Sample Date	05 Sep 2023	08 Jun 2022	21 Oct 2021	21 Jul 2021
Machine Hours	4379	2274	991	587
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	NORMAL	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.3	■ 12.6	■ 12.8	▲ 10.8
Base Number (BN)	mg KOH/g	■ 6.4	■ 6.6	---	---
Oxidation (PA)	%	63	89	64	92



CONTAMINATION

Soot %	%	■ 0.3	■ 0.3	■ 0.1	■ 0.2
Nitration (PA)	%	78	98	67	70
Sulfation (PA)	%	57	69	57	70
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 2.9	<1.0	<1.0	■ 0.4
Silicon	ppm	■ 4	■ 6	■ 6	■ 21
Sodium	ppm	■ 9	■ 2	■ 2	■ 3
Potassium	ppm	■ 10	■ 0	■ 2	■ 3



WEAR METALS

Iron	ppm	■ 9	■ 12	■ 6	■ 19
Copper	ppm	■ 13	▲ 57	■ 36	▲ 172
Lead	ppm	■ 2	■ 2	■ <1	■ 2
Tin	ppm	■ 2	■ 3	■ 0	■ 4
Aluminum	ppm	■ 3	■ 2	■ 2	■ 2
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 54	■ 44	■ 24	■ 40
Nickel	ppm	■ 2	■ 5	■ <1	■ <1
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	■ 0	0	0	0
Manganese	ppm	■ <1	■ 1	■ <1	■ 2
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	■ 1665	■ 1623	■ 1972	■ 1580
Magnesium	ppm	701	■ 407	■ 314	■ 466
Zinc	ppm	■ 1126	■ 979	■ 1013	■ 1075
Phosphorus	ppm	■ 838	■ 729	■ 853	■ 900
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 24	■ 14	■ 21	■ 44

Diagnosis

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: VOLVO0090
Unique No: 10642227
Signed: Don Baldrige
Report Date: 12 Sep 2023



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GRAPHS

