



CONSTRUCTION EQUIPMENT

24558 VOLVO A40G 352850 - DIESEL ENGINE



Sample No: VCP434620
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 24558



SAMPLE INFORMATION

Sample Number	VCP434620	VCP430766	VCP426838	VCP317332
Sample Date	07 Dec 2023	02 Sep 2023	22 Mar 2023	11 Apr 2022
Machine Hours	4536	4011	2992	1077
Oil Hours	1000	1000	1000	0
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	ATTENTION	ABNORMAL	ABNORMAL	ABNORMAL

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 NORTH CHARLESTON, SC
 US 29418
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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.2	▲ 12.3	▲ 11.7	■ 10.9
Base Number (BN)	mg KOH/g	■ 9.8	■ 7.9	■ 5.3	■ 7.1
Oxidation (PA)	%	78	81	92	71

Diagnosis

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. 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

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.1	■ 0.2	■ 0.3	■ 0.1
Nitration (PA)	%	60	74	98	81
Sulfation (PA)	%	60	63	69	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	■ 0.8
Silicon	ppm	■ 6	■ 6	■ 15	▲ 31
Sodium	ppm	■ <1	■ 2	■ 4	■ 2
Potassium	ppm	■ 2	■ 0	■ 0	■ 3



WEAR METALS

Iron	ppm	■ 7	■ 12	■ 22	■ 20
Copper	ppm	■ 15	▲ 86	▲ 80	▲ 302
Lead	ppm	■ <1	■ 0	■ 2	■ 1
Tin	ppm	■ 1	■ <1	■ 3	■ 5
Aluminum	ppm	■ 1	■ 2	■ 2	■ 2
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 40	■ 42	■ 47	■ 55
Nickel	ppm	■ 1	■ <1	■ 2	■ <1
Titanium	ppm	<1	0	<1	0
Silver	ppm	■ 0	■ 0	■ 0	<1
Manganese	ppm	■ <1	■ 1	■ 2	3
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	■ 1587	■ 1782	■ 1638	■ 1838
Magnesium	ppm	■ 479	■ 534	■ 454	■ 453
Zinc	ppm	■ 1047	■ 1107	■ 1064	■ 1196
Phosphorus	ppm	■ 845	■ 920	■ 758	■ 1044
Barium	ppm	■ 11	■ 0	■ 0	■ 0
Boron	ppm	■ 44	■ 22	■ 9	■ 65

Depot: VOLVO3387
Unique No: 10782869
Signed: Don Baldrige
Report Date: 15 Dec 2023



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GRAPHS

