



CONSTRUCTION EQUIPMENT

SW-20921-2 DIG N IT VOLVO L90G 617763 - DIESEL ENGINE



Sample No: VCP419287
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-20921-2 DIG N IT



SAMPLE INFORMATION

Sample Number	VCP419287	VCP330602	VCP187662	---
Sample Date	09 Jul 2023	11 May 2022	16 Mar 2017	---
Machine Hours	6648	6190	3256	---
Oil Hours	500	500	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	ABNORMAL	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.1	▲ 12.1	■ 13.22	---
Base Number (BN)	mg KOH/g	■ 10.1	■ 9.7	---	---
Oxidation (PA)	%	82	72	■ 60	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level has decreased, but is still abnormal. All other 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	■ 0.3	■ 0.7	---
Nitration (PA)	%	58	59	■ 67	---
Sulfation (PA)	%	61	58	■ 58	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	▲ 4.1	<1.0	---
Silicon	ppm	■ 6	■ 6	■ 9	---
Sodium	ppm	■ 3	■ 2	■ 10	---
Potassium	ppm	■ 0	■ 0	■ 0	---



WEAR METALS

Iron	ppm	■ 11	■ 13	■ 47	---
Copper	ppm	■ 1	■ 2	■ 4	---
Lead	ppm	■ 0	■ <1	■ <1	---
Tin	ppm	■ <1	■ <1	■ 0	---
Aluminum	ppm	▲ 20	▲ 27	■ 8	---
Chromium	ppm	■ 1	■ 1	■ 1	---
Molybdenum	ppm	■ 35	■ 34	■ 52	---
Nickel	ppm	■ 0	■ 0	■ <1	---
Titanium	ppm	<1	<1	0	---
Silver	ppm	■ 0	0	0	---
Manganese	ppm	■ <1	■ <1	■ <1	---
Vanadium	ppm	0	0	0	---



ADDITIVES

Calcium	ppm	■ 1556	■ 1658	■ 1278	---
Magnesium	ppm	■ 464	■ 554	814	---
Zinc	ppm	■ 997	■ 1067	■ 1080	---
Phosphorus	ppm	■ 825	■ 945	■ 809	---
Barium	ppm	■ 0	■ 0	■ 0	---
Boron	ppm	■ 58	■ 62	■ 13	---

Depot: VOLVO8770
Unique No: 10549134
Signed: Don Baldrige
Report Date: 11 Jul 2023



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GRAPHS

