



CONSTRUCTION EQUIPMENT

SW365342 VOLVO L220E 3527 - DIESEL ENGINE



Sample No: VCP454309
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW365342



SAMPLE INFORMATION

Sample Number	VCP454309	VCP446575	VCP120433	---
Sample Date	02 Jul 2024	16 Apr 2024	06 Feb 2014	---
Machine Hours	1185	549	6059	---
Oil Hours	600	549	0	---
Oil Changed	Changed	Changed	N/A	---
Sample Status	ABNORMAL	ABNORMAL	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	█ 12.7	● 11.3	█ 13.99	---
Base Number (BN)	mg KOH/g	█ 5.5	█ 5.4	---	---
Oxidation (PA)	%	45	59	█ 40	---

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	█ 0.3	█ 0.3	█ 0.2	---
Nitration (PA)	%	58	78	█ 33	---
Sulfation (PA)	%	52	53	█ 33	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	█ 0.5	<1.0	---
Silicon	ppm	█ 6	█ 19	█ 3	---
Sodium	ppm	█ <1	█ 2	█ 3	---
Potassium	ppm	█ 2	█ 2	█ 1	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

WEAR METALS

Iron	ppm	█ 11	█ 16	█ 7	---
Copper	ppm	▲ 57	▲ 156	█ 4	---
Lead	ppm	█ <1	█ <1	█ <1	---
Tin	ppm	█ 1	█ 2	█ 0	---
Aluminum	ppm	█ 2	█ 2	█ 3	---
Chromium	ppm	█ 0	█ <1	█ 1	---
Molybdenum	ppm	█ 22	█ 86	█ 3	---
Nickel	ppm	█ <1	█ 0	█ 0	---
Titanium	ppm	<1	0	1	---
Silver	ppm	█ 0	█ 0	█ 0	---
Manganese	ppm	█ 0	█ 2	█ 0	---
Vanadium	ppm	0	0	<1	---

ADDITIVES

Calcium	ppm	█ 2141	█ 2242	█ 3135	---
Magnesium	ppm	█ 153	26	█ 131	---
Zinc	ppm	█ 1135	█ 1189	█ 1290	---
Phosphorus	ppm	█ 930	█ 993	█ 1153	---
Barium	ppm	█ 0	█ 0	█ 0	---
Boron	ppm	█ 9	█ 43	█ 25	---

Depot: VOLVO8770
Unique No: 11123246
Signed: Don Baldrige
Report Date: 14 Jul 2024



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GRAPHS

