



CONSTRUCTION EQUIPMENT

SW-23434-2 JRJ EXCAV VOLVO EC220E 314436 - DIESEL ENGINE



Sample No: VCP412539
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-23434-2 JRJ EXCAV



SAMPLE INFORMATION

Sample Number	VCP412539	VCP396456	VCP357342	---
Sample Date	05 Sep 2023	30 Nov 2022	02 May 2022	---
Machine Hours	2201	1221	633	---
Oil Hours	980	600	500	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	NORMAL	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	13.9	13.3	13.6	---
Base Number (BN)	mg KOH/g	7.8	10.7	8.3	---
Oxidation (PA)	%	78	86	57	---

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is 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 suitable for further service.



CONTAMINATION

Soot %	%	0.4	0.3	0.2	---
Nitration (PA)	%	83	73	72	---
Sulfation (PA)	%	63	66	57	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	7	8	6	---
Sodium	ppm	2	0	2	---
Potassium	ppm	0	0	2	---



WEAR METALS

Iron	ppm	21	7	12	---
Copper	ppm	2	2	2	---
Lead	ppm	0	0	1	---
Tin	ppm	1	0	2	---
Aluminum	ppm	▲ 11	4	3	---
Chromium	ppm	1	<1	<1	---
Molybdenum	ppm	68	48	45	---
Nickel	ppm	<1	0	2	---
Titanium	ppm	0	0	<1	---
Silver	ppm	0	0	<1	---
Manganese	ppm	<1	<1	1	---
Vanadium	ppm	0	0	<1	---



ADDITIVES

Calcium	ppm	1294	1687	1794	---
Magnesium	ppm	973	632	441	---
Zinc	ppm	1403	1170	1212	---
Phosphorus	ppm	1095	951	1052	---
Barium	ppm	0	0	0	---
Boron	ppm	55	36	154	---

Depot: VOLVO8770
Unique No: 10644710
Signed: Don Baldrige
Report Date: 14 Sep 2023



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GRAPHS

