



CONSTRUCTION EQUIPMENT

24772 VOLVO EC350E 314354 - DIESEL ENGINE



Sample No: VCP440964
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 24772



SAMPLE INFORMATION

Sample Number	VCP440964	VCP426946	VCP426840	VCP383505
Sample Date	11 Jan 2024	12 Aug 2023	24 Mar 2023	05 Oct 2022
Machine Hours	2275	1796	1308	731
Oil Hours	0	1000	1000	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	ATTENTION	ABNORMAL	ABNORMAL

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 NORTH CHARLESTON, SC
 US 29418
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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.1	▲ 11.8	▲ 12.0	▲ 10.1
Base Number (BN)	mg KOH/g	■ 8.7	■ 8.5	■ 8.6	■ 6.2
Oxidation (PA)	%	80	75	73	70



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.1	■ 0.1	■ 0.1	■ 0.1
Nitration (PA)	%	68	65	79	90
Sulfation (PA)	%	59	58	60	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	■ 0.8
Silicon	ppm	■ 7	■ 7	■ 10	■ 26
Sodium	ppm	■ 2	■ 3	■ 2	■ 1
Potassium	ppm	■ 0	■ 0	■ 0	■ 4

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.



WEAR METALS

Iron	ppm	■ 6	■ 5	■ 6	■ 1
Copper	ppm	■ 3	■ 7	▲ 47	▲ 283
Lead	ppm	■ 0	■ <1	■ 0	■ 1
Tin	ppm	■ <1	■ 1	■ 1	■ 3
Aluminum	ppm	■ 1	■ 2	■ 2	■ 2
Chromium	ppm	■ 0	■ <1	■ <1	■ 0
Molybdenum	ppm	■ 41	■ 44	■ 48	■ 91
Nickel	ppm	■ 0	■ 0	■ 0	■ 0
Titanium	ppm	0	<1	0	0
Silver	ppm	■ 0	■ <1	■ 0	0
Manganese	ppm	■ <1	■ <1	■ 1	■ 3
Vanadium	ppm	<1	<1	<1	0



ADDITIVES

Calcium	ppm	■ 1596	■ 1778	■ 1648	■ 2197
Magnesium	ppm	■ 531	■ 499	■ 427	71
Zinc	ppm	■ 1109	■ 1105	■ 1107	■ 1167
Phosphorus	ppm	■ 941	■ 924	■ 872	■ 979
Barium	ppm	■ 0	■ 0	■ 0	■ <1
Boron	ppm	■ 36	■ 34	■ 25	■ 38

Depot: VOLVO3387
Unique No: 10836846
Signed: Don Baldrige
Report Date: 22 Jan 2024



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GRAPHS

