



CONSTRUCTION EQUIPMENT

314195 VOLVO EC350EL 310534 - DIESEL ENGINE



Sample No: VCP335061
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 314195



STRONGCO EQUIPMENT--CALGARY
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SAMPLE INFORMATION

Sample Number	VCP335061	VCP213997	VCP233263	VCP210224
Sample Date	09 Feb 2022	31 Jan 2019	14 Dec 2018	03 Nov 2018
Machine Hours	4369	1044	764	518
Oil Hours	0	500	250	518
Oil Changed	Changed	N/A	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

OIL CONDITION

Visc @ 100°C	cSt	13.3	12.6	12.7	12.6
Oxidation (PA)	%	58	81	77	66

CONTAMINATION

Soot %	%	0	0	0	0
Nitration (PA)	%	58	62	49	51
Sulfation (PA)	%	55	63	61	57
Glycol	%	NEG	0.0	NEG	0.0
Fuel	%	<1.0	0.6	<1.0	0.8
Silicon	ppm	3	10	8	22
Sodium	ppm	2	2	2	3
Potassium	ppm	<1	<1	<1	3

WEAR METALS

Iron	ppm	3	5	4	11
Copper	ppm	57	139	71	270
Lead	ppm	2	4	2	8
Tin	ppm	<1	0	0	<1
Aluminum	ppm	1	1	1	2
Chromium	ppm	0	0	0	0
Molybdenum	ppm	53	35	35	11
Nickel	ppm	0	0	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	2
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1057	1677	1645	2141
Magnesium	ppm	967	429	425	88
Zinc	ppm	1190	885	872	1135
Phosphorus	ppm	1015	741	750	945
Barium	ppm	0	0	0	<1
Boron	ppm	6	43	51	8

Diagnosis

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Depot: VOLVO3909
Unique No: 5356794
Signed: Wes Davis
Report Date: 14 Feb 2022



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GRAPHS

