



CONSTRUCTION EQUIPMENT

91 VOLVO EW180E 320033 - DIESEL ENGINE



Sample No: VC463535
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 91



CHEMUNG CO HWY DEPT
 803 CHEMUNG STREET
 HORSEHEADS, NY
 US 14845
 Contact: TIM COLLINS

T: (607)739-3898
 F:

SAMPLE INFORMATION

Sample Number	VC463535	VCE183801	VCE248386	VCE152935
Sample Date	27 Dec 2023	27 Mar 2023	13 Jun 2019	09 Oct 2018
Machine Hours	4099	3613	1567	1124
Oil Hours	500	500	443	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

OIL CONDITION

Visc @ 100°C	cSt	13.2	12.8	14.0	13.62
Base Number (BN)	mg KOH/g	10.3	10.1	---	---
Oxidation (PA)	%	85	72	67	63

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	64	53	63	65
Sulfation (PA)	%	61	59	56	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	5	7	10
Sodium	ppm	3	0	2	4
Potassium	ppm	<1	1	8	24

WEAR METALS

Iron	ppm	6	0	8	15
Copper	ppm	2	<1	1	2
Lead	ppm	0	0	0	0
Tin	ppm	<1	0	0	0
Aluminum	ppm	3	<1	4	10
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	43	57	40	58
Nickel	ppm	<1	0	1	2
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1700	1696	1880	1920
Magnesium	ppm	531	418	323	463
Zinc	ppm	1172	1082	1073	1165
Phosphorus	ppm	934	943	901	1052
Barium	ppm	0	0	0	0
Boron	ppm	42	74	77	55

Diagnosis

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Depot: CHEHOR
Unique No: 10843955
Signed: Wes Davis
Report Date: 23 Jan 2024



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VOLVO GRAPHS

