



CONSTRUCTION EQUIPMENT

A12583 VOLVO ECR235D 210265 - DIESEL ENGINE



Sample No: VCP436573
Oil Type: MOBIL 15W40
Job No: A12583



SAMPLE INFORMATION

Sample Number	VCP436573	VCP408932	VCP341004	VCBM001650
Sample Date	16 May 2024	27 Jun 2023	08 Nov 2021	01 Apr 2021
Machine Hours	7756	7470	6940	6720
Oil Hours	250	250	250	50
Oil Changed	Changed	Changed	Changed	Not Changd
Sample Status	ABNORMAL	ABNORMAL	ATTENTION	ABNORMAL

DYER QUARRY
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BIRDSBORO, PA
US 19508
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OIL CONDITION

Visc @ 100°C	cSt	■ 13.0	■ 12.8	● 12.35	▲ 12.0
Base Number (BN)	mg KOH/g	■ 7.4	■ 11.2	---	---
Oxidation (PA)	%	49	81	76	71

Diagnosis

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Cylinder, crank, or cam shaft wear is indicated. 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.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.2	■ 0.2	■ 0.2	■ 0.1
Nitration (PA)	%	66	63	55	43
Sulfation (PA)	%	47	61	60	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	■ 0.4
Silicon	ppm	■ 12	■ 12	■ 10	■ 8
Sodium	ppm	■ 2	■ 4	■ 4	■ 2
Potassium	ppm	■ 3	■ 0	■ 1	■ <1



WEAR METALS

Iron	ppm	▲ 111	▲ 137	■ 49	■ 23
Copper	ppm	■ 3	■ 2	■ 1	■ <1
Lead	ppm	■ <1	■ 0	■ <1	■ <1
Tin	ppm	■ 2	■ 1	■ <1	■ <1
Aluminum	ppm	■ 8	■ 7	■ 6	■ 2
Chromium	ppm	■ 2	■ 2	■ 1	■ <1
Molybdenum	ppm	■ 30	■ 41	■ 49	■ 51
Nickel	ppm	■ 1	■ <1	■ <1	■ <1
Titanium	ppm	2	4	<1	<1
Silver	ppm	■ 1	■ 0	0	<1
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	■ 1863	■ 1775	■ 1712	■ 1651
Magnesium	ppm	■ 380	■ 537	■ 520	■ 409
Zinc	ppm	■ 1135	■ 1124	■ 1025	■ 1044
Phosphorus	ppm	■ 926	■ 943	■ 943	■ 857
Barium	ppm	■ <1	■ 0	■ 0	■ 0
Boron	ppm	■ 12	■ 53	■ 52	■ 72

Depot: DYEBIR
Unique No: 11048556
Signed: Sean Felton
Report Date: 30 May 2024

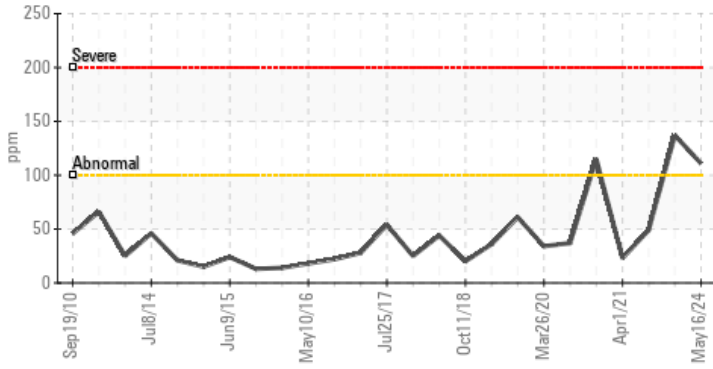


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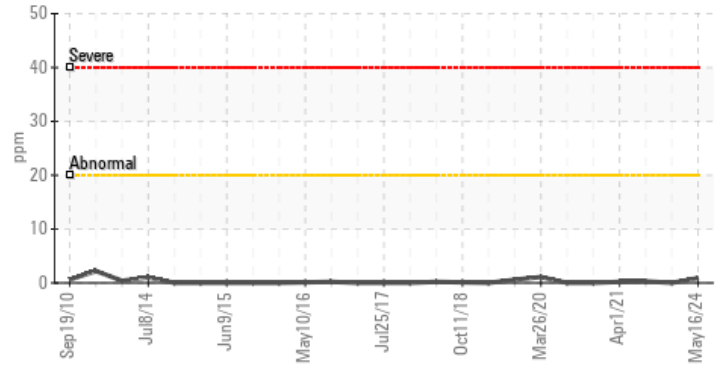


GRAPHS

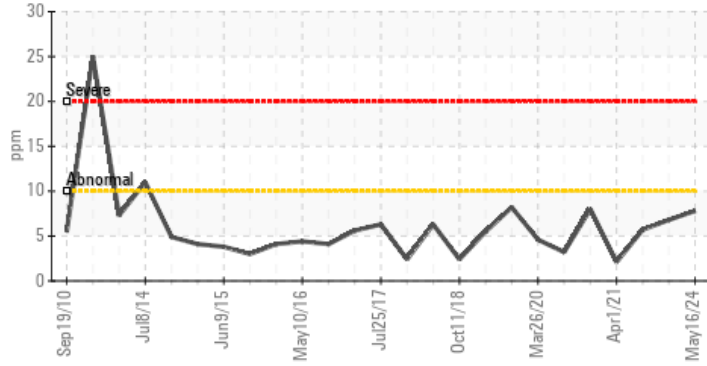
▲ Iron (ppm)



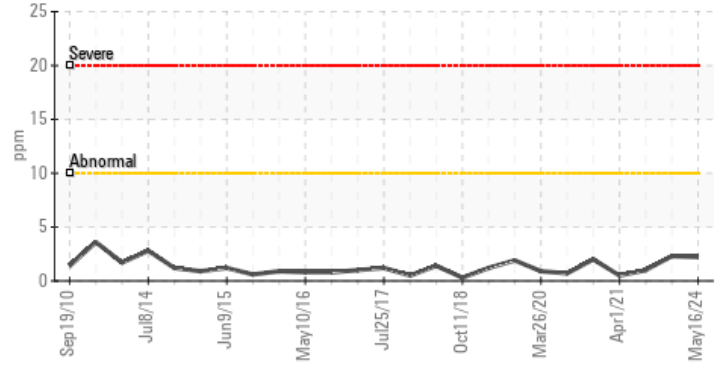
Lead (ppm)



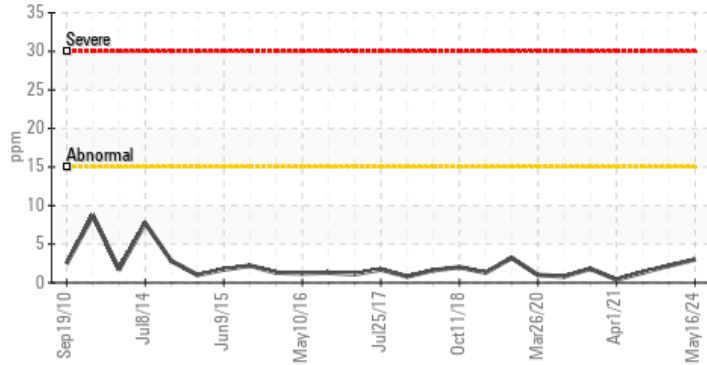
Aluminum (ppm)



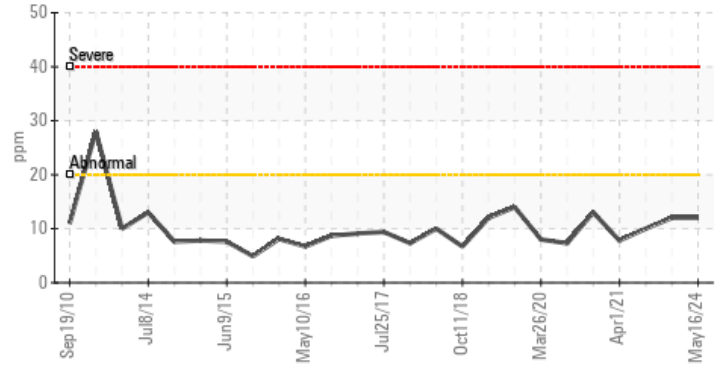
Chromium (ppm)



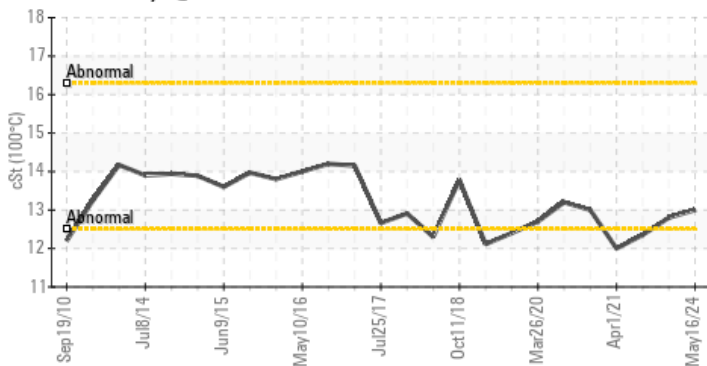
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

