



CONSTRUCTION EQUIPMENT

SPM687467 BL DUKE SENNEBOGEN 835ME 835.0.2813 - DIESEL ENGINE



Sample No: VCP436191
Oil Type: DIESEL ENGINE OIL SAE 15W40
Job No: SPM687467 BL DUKE



SAMPLE INFORMATION

Sample Number	VCP436191	VCP415219	VCP404349	VCP400454
Sample Date	15 Mar 2024	12 Sep 2023	01 Mar 2023	04 Jan 2023
Machine Hours	6537	5520	4525	4103
Oil Hours	0	0	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	MARGINAL	ABNORMAL	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.0	■ 13.4	▲ 12.1	▲ 12.3
Base Number (BN)	mg KOH/g	■ 7.1	■ 6.8	■ 7.8	■ 8.5
Oxidation (PA)	%	98	102	86	85

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.3	■ 0.2	■ 0.3	■ 0.2
Nitration (PA)	%	98	91	82	81
Sulfation (PA)	%	65	66	61	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 7.7	▲ 2.3	▲ 6.4	▲ 4.6
Silicon	ppm	■ 8	■ 4	■ 2	■ 2
Sodium	ppm	■ 0	■ 6	■ 0	■ 0
Potassium	ppm	■ 5	■ 9	■ 2	■ 0

Diagnosis

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

WEAR METALS

Iron	ppm	■ 15	■ 12	■ 19	■ 5
Copper	ppm	■ 1	■ <1	■ <1	■ <1
Lead	ppm	■ 3	■ 0	■ 0	■ 0
Tin	ppm	■ 2	■ <1	■ <1	■ 0
Aluminum	ppm	■ 6	■ 2	■ 2	■ <1
Chromium	ppm	■ 1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 63	■ 65	■ 53	■ 57
Nickel	ppm	■ 1	■ <1	■ <1	■ 0
Titanium	ppm	■ <1	■ 0	■ <1	■ 0
Silver	ppm	■ <1	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	■ <1	■ 0	■ 0	■ 0

ADDITIVES

Calcium	ppm	■ 1131	■ 1132	■ 964	■ 990
Magnesium	ppm	■ 987	■ 1034	■ 829	■ 888
Zinc	ppm	■ 1216	■ 1317	■ 1108	■ 1112
Phosphorus	ppm	■ 925	■ 1028	■ 898	■ 918
Barium	ppm	■ 1	■ 0	■ 0	■ 0
Boron	ppm	■ 4	■ 5	■ <1	■ 0

Depot: VOLVO8885
Unique No: 10940992
Signed: Wes Davis
Report Date: 26 Mar 2024

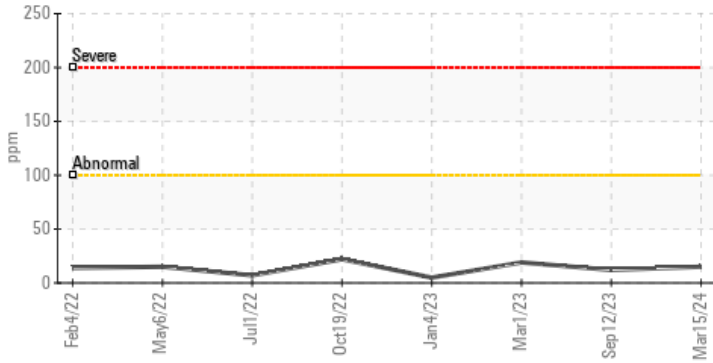


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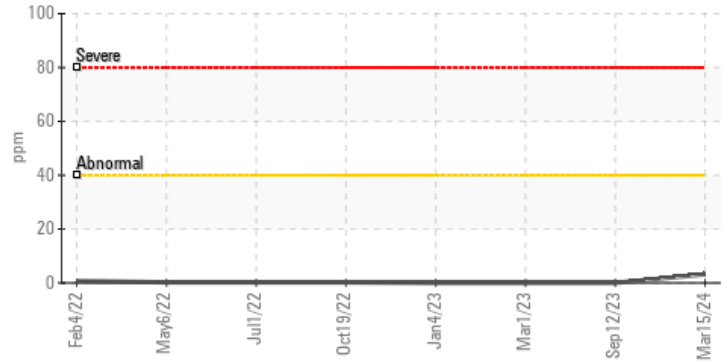


GRAPHS

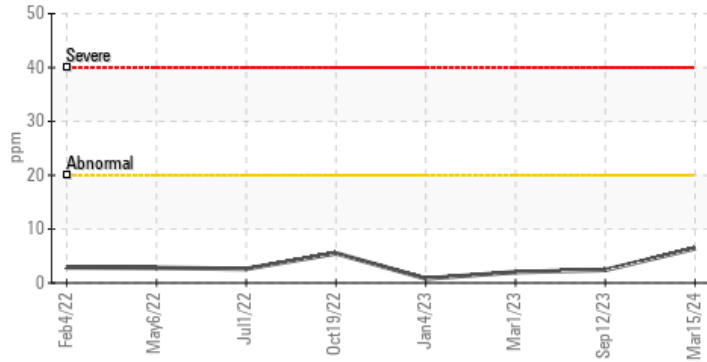
Iron (ppm)



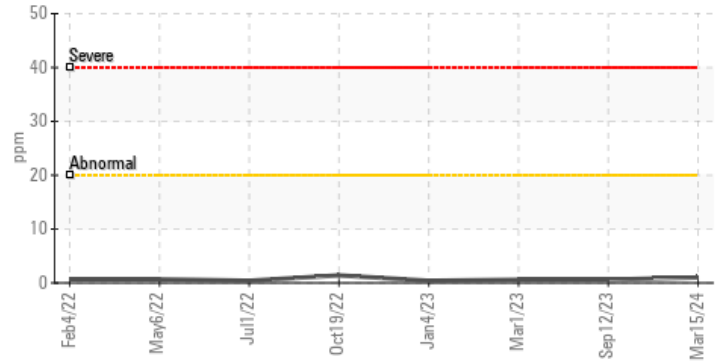
Lead (ppm)



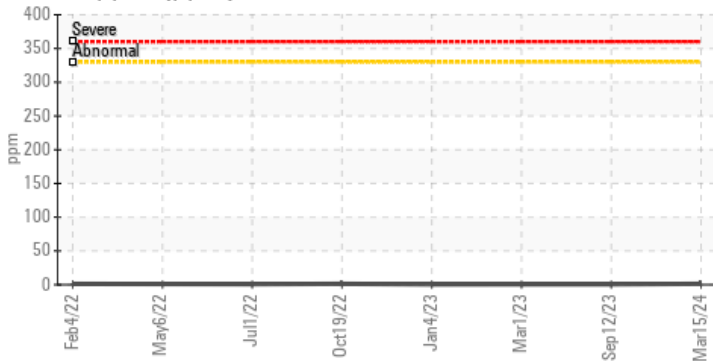
Aluminum (ppm)



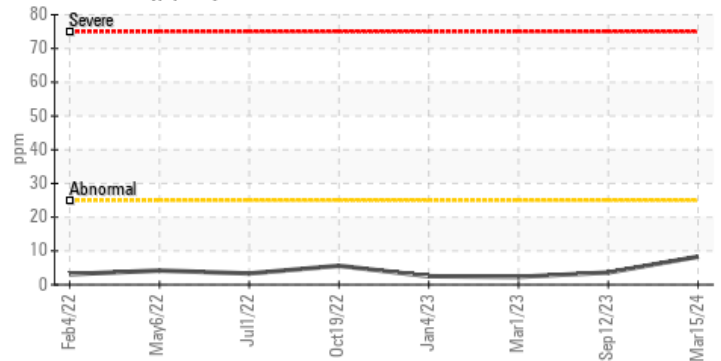
Chromium (ppm)



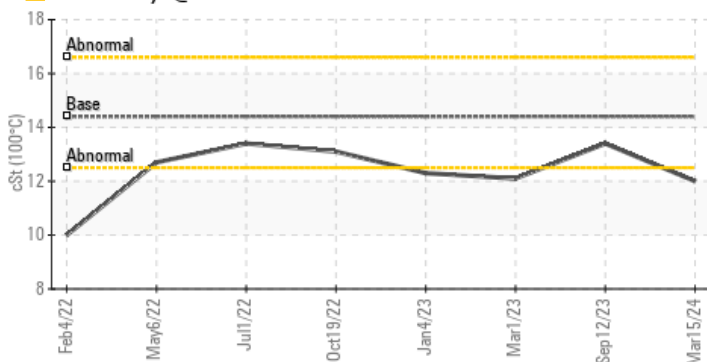
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

