



CONSTRUCTION EQUIPMENT

703489 SENNEBOGEN 830R 2296 - DIESEL ENGINE



Sample No: VCP454546
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 703489



SAMPLE INFORMATION

Sample Number	VCP454546	VCP431175	VCP399391	---
Sample Date	24 May 2024	05 Dec 2023	09 Feb 2023	---
Machine Hours	3753	2444	619	---
Oil Hours	500	500	500	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	ABNORMAL	SEVERE	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.2	▲ 18.1	■ 13.5	---
Base Number (BN)	mg KOH/g	■ 8.3	▲ 0.0	■ 7.6	---
Oxidation (PA)	%	94	180	68	---

Diagnosis

We advise that you check the fuel injection system. 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. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.



CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	■ 1.9	▲ 7.3	■ 0.3	---
Nitration (PA)	%	116	222	83	---
Sulfation (PA)	%	72	127	56	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	▲ 5.8	<1.0	<1.0	---
Silicon	ppm	■ 18	■ 8	■ 4	---
Sodium	ppm	■ 3	■ 1	■ 2	---
Potassium	ppm	■ 5	■ 5	■ 2	---



WEAR METALS

Iron	ppm	▲ 111	■ 72	■ 23	---
Copper	ppm	■ 17	■ 3	■ 1	---
Lead	ppm	■ <1	■ 0	■ <1	---
Tin	ppm	■ 1	■ 0	■ <1	---
Aluminum	ppm	■ 9	■ 6	■ 4	---
Chromium	ppm	■ 5	■ 2	■ <1	---
Molybdenum	ppm	■ 83	■ 89	■ 70	---
Nickel	ppm	■ 1	■ <1	■ 0	---
Titanium	ppm	<1	<1	0	---
Silver	ppm	■ 1	■ 0	■ 0	---
Manganese	ppm	■ 3	■ 0	■ <1	---
Vanadium	ppm	<1	0	0	---



ADDITIVES

Calcium	ppm	■ 1662	■ 1724	■ 1491	---
Magnesium	ppm	1247	752	743	---
Zinc	ppm	1682	■ 1446	■ 1361	---
Phosphorus	ppm	1305	■ 1193	■ 1067	---
Barium	ppm	■ 2	■ 3	■ 0	---
Boron	ppm	■ 9	■ 21	■ 21	---

Depot: VOLVO2990
Unique No: 11048569
Signed: Sean Felton
Report Date: 30 May 2024

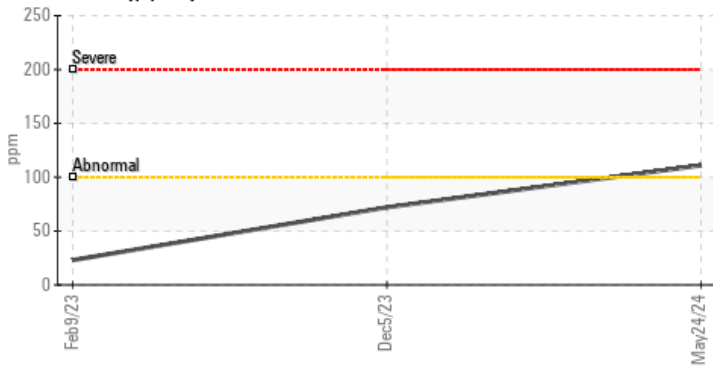


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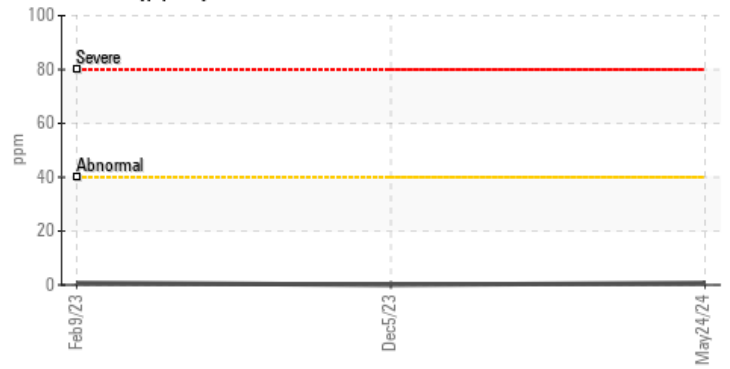


GRAPHS

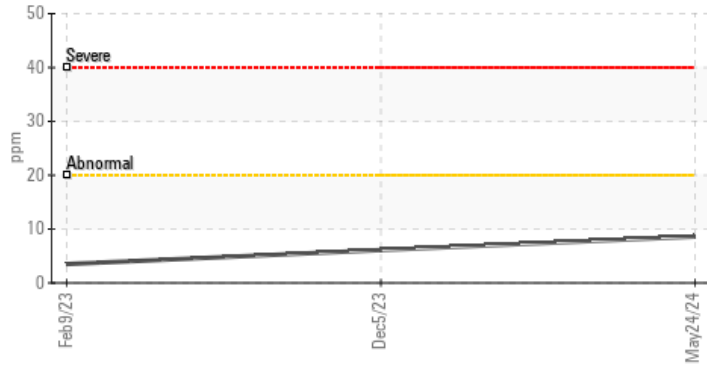
▲ Iron (ppm)



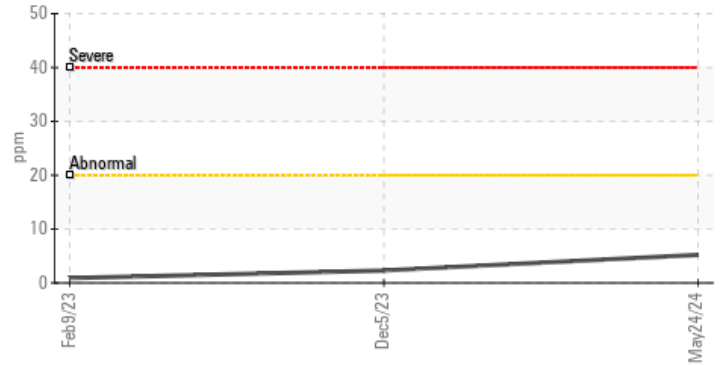
Lead (ppm)



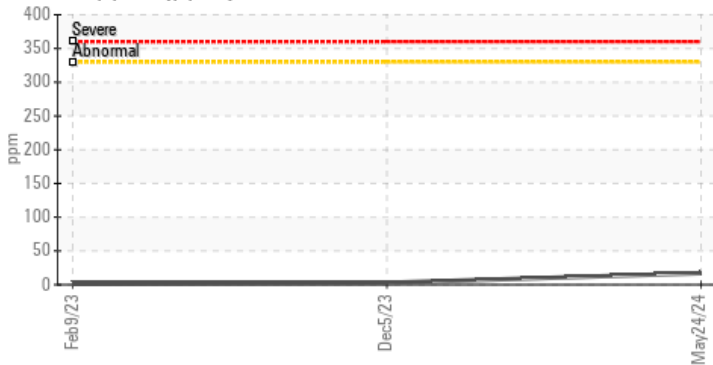
Aluminum (ppm)



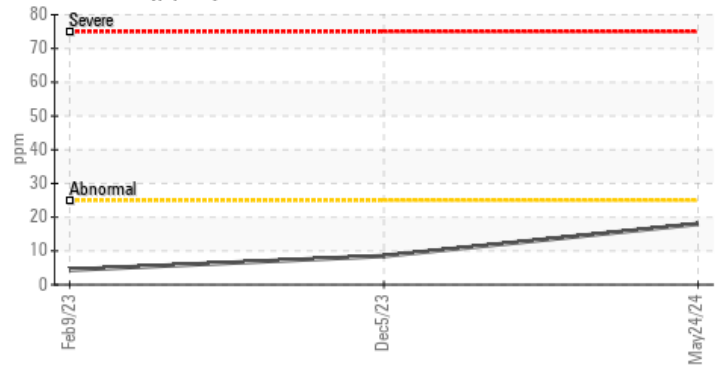
Chromium (ppm)



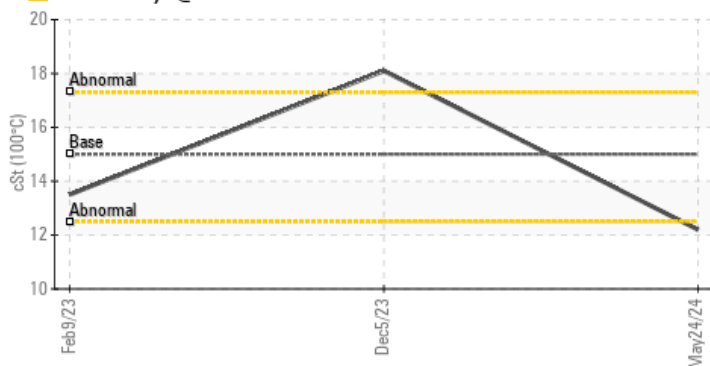
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

