



CONSTRUCTION EQUIPMENT

661201 BCSW VOLVO A40G 342555 - DIESEL ENGINE



Sample No: VCP439298
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 661201 BCSW



SAMPLE INFORMATION

Sample Number	VCP439298	VCP425715	VCP406007	VCP376917
Sample Date	02 Feb 2024	09 May 2023	21 Apr 2023	15 Sep 2022
Machine Hours	11136	9586	9562	8294
Oil Hours	0	20	0	0
Oil Changed	Changed	Not Chngd	Changed	Changed
Sample Status	ATTENTION	ATTENTION	ABNORMAL	ATTENTION

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OIL CONDITION

Visc @ 100°C	cSt	▲ 10.8	▲ 9.9	▲ 11.4	▲ 12.1
Base Number (BN)	mg KOH/g	■ 4.7	■ 10.6	■ 6.4	■ 10.4
Oxidation (PA)	%	104	78	97	91

Diagnosis

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.5	■ 0.1	■ 0.3	■ 0.2
Nitration (PA)	%	92	43	87	69
Sulfation (PA)	%	70	61	64	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	■ 0.9	▲ 5.2	<1.0
Silicon	ppm	■ 7	■ 6	■ 6	■ 4
Sodium	ppm	■ 3	■ 1	■ 3	■ 2
Potassium	ppm	■ 0	■ <1	■ 0	■ <1



WEAR METALS

Iron	ppm	■ 18	■ 2	■ 10	■ 5
Copper	ppm	■ 4	■ <1	■ <1	■ <1
Lead	ppm	■ 3	■ 0	■ 0	■ <1
Tin	ppm	■ 1	■ <1	■ 0	■ <1
Aluminum	ppm	■ 11	■ 4	■ 5	■ 3
Chromium	ppm	■ 1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 41	■ 39	■ 43	■ 39
Nickel	ppm	■ <1	■ 0	■ 0	■ 0
Titanium	ppm	<1	<1	0	0
Silver	ppm	■ 0	■ 0	■ 0	■ 0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	0	0	<1



ADDITIVES

Calcium	ppm	■ 1589	■ 1654	■ 1585	■ 1561
Magnesium	ppm	■ 445	■ 499	■ 514	■ 448
Zinc	ppm	■ 1026	■ 1103	■ 1094	■ 1018
Phosphorus	ppm	■ 789	■ 877	■ 850	■ 846
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 9	■ 60	■ 17	■ 27

Depot: VOLVO0096
Unique No: 10871598
Signed: Don Baldrige
Report Date: 12 Feb 2024

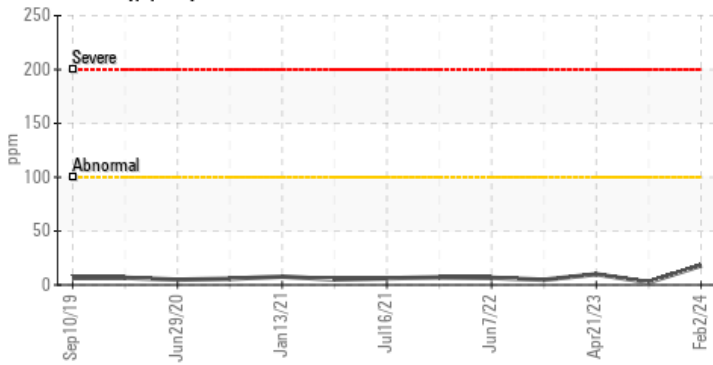


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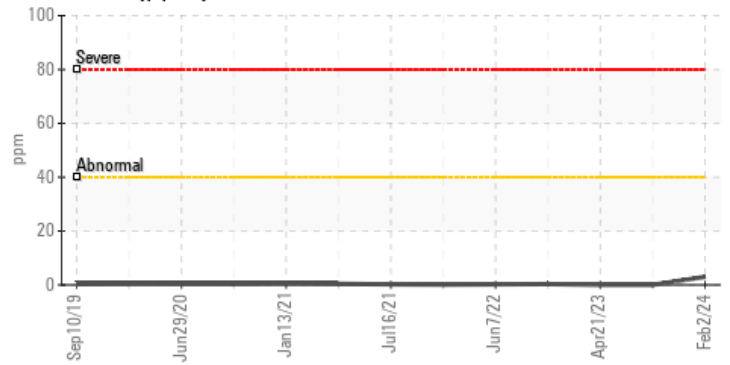


GRAPHS

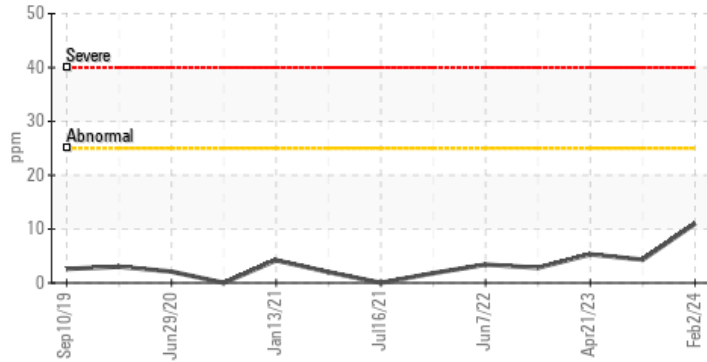
Iron (ppm)



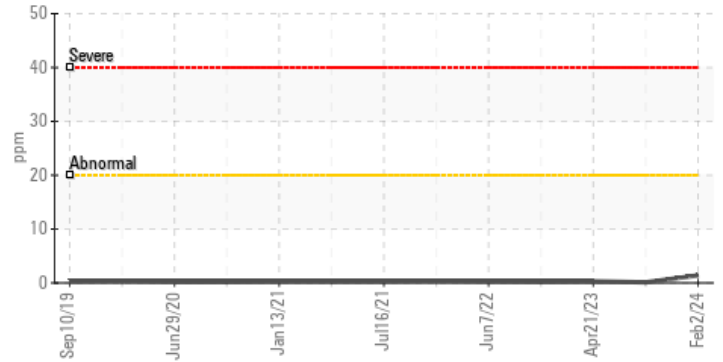
Lead (ppm)



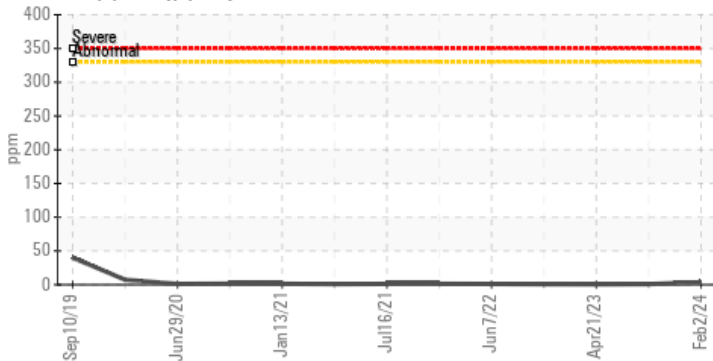
Aluminum (ppm)



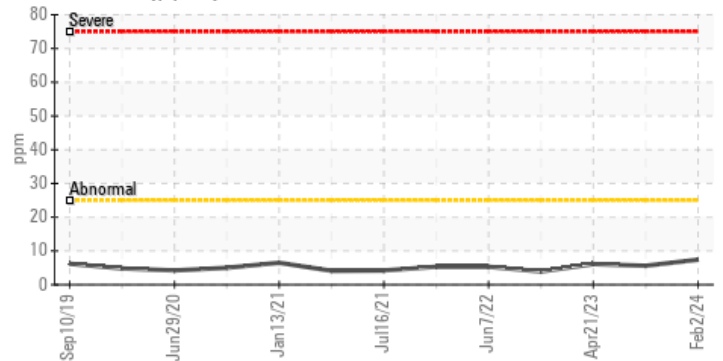
Chromium (ppm)



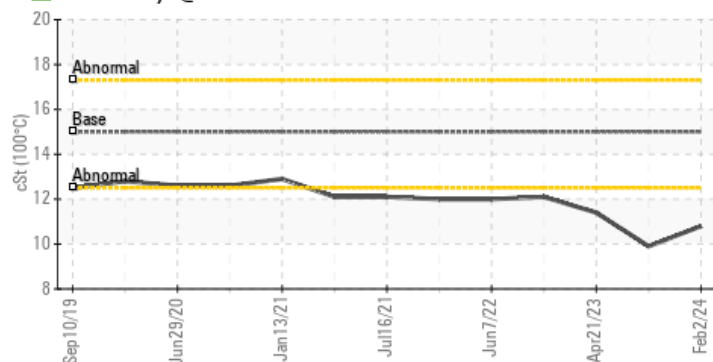
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

