



CONSTRUCTION EQUIPMENT

SW31580 SWAGGART BRO VOLVO L220H 3301 - DIESEL ENGINE



Sample No: VCP378782
Oil Type: MOBIL 15W40
Job No: SW31580 SWAGGART BRO



SAMPLE INFORMATION

Sample Number	VCP378782	VCP406273	VCP400964	VCP375291
Sample Date	03 Apr 2024	02 Aug 2023	27 Apr 2023	20 Jan 2023
Machine Hours	4634	4402	4166	3610
Oil Hours	500	350	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	12.9	13.0	12.7	13.2
Base Number (BN)	mg KOH/g	8.2	8.3	7.4	9.5
Oxidation (PA)	%	61	57	57	57



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.2	0.2	0.1
Nitration (PA)	%	62	54	58	51
Sulfation (PA)	%	54	51	48	51
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	0.3	<1.0	<1.0	<1.0
Silicon	ppm	2	3	3	4
Sodium	ppm	2	<1	<1	0
Potassium	ppm	0	2	0	<1



WEAR METALS

Iron	ppm	4	5	3	4
Copper	ppm	6	4	5	7
Lead	ppm	0	<1	0	2
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	0	1	<1	0
Chromium	ppm	0	<1	0	<1
Molybdenum	ppm	64	67	54	61
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	0	0	0
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1262	1217	1068	1426
Magnesium	ppm	953	867	701	992
Zinc	ppm	1227	1181	939	1418
Phosphorus	ppm	1058	994	780	1088
Barium	ppm	0	0	0	0
Boron	ppm	13	20	38	31

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. Tests indicate that there is no fuel present in the oil. 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: VOLVO0077
Unique No: 10977088
Signed: Don Baldrige
Report Date: 18 Apr 2024

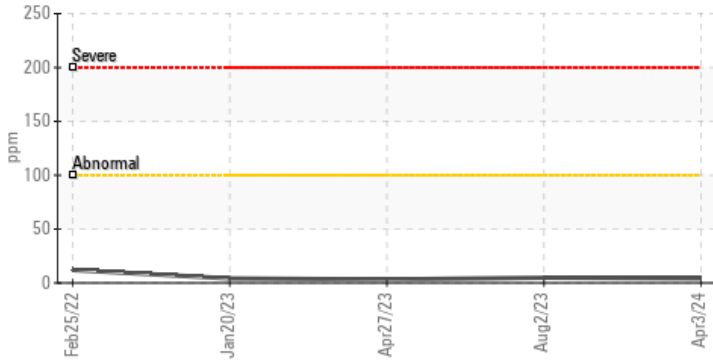


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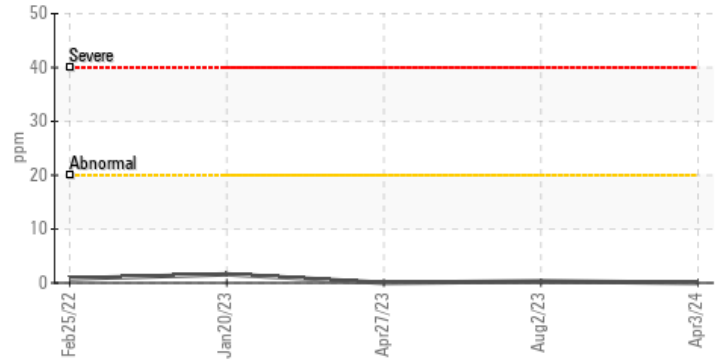


GRAPHS

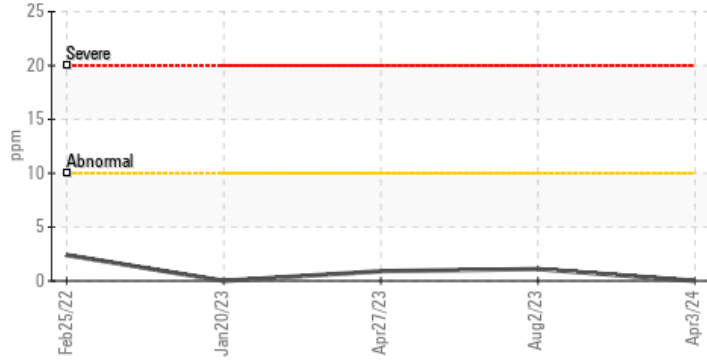
Iron (ppm)



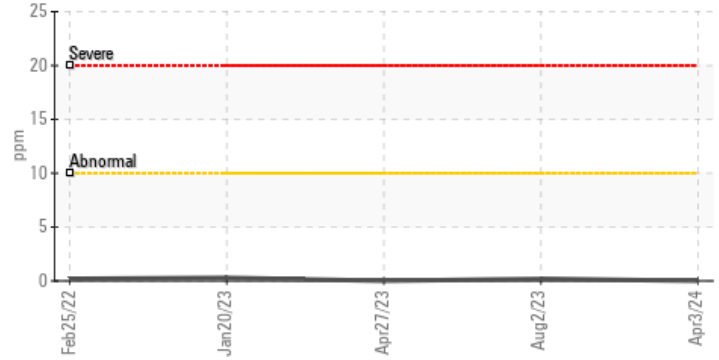
Lead (ppm)



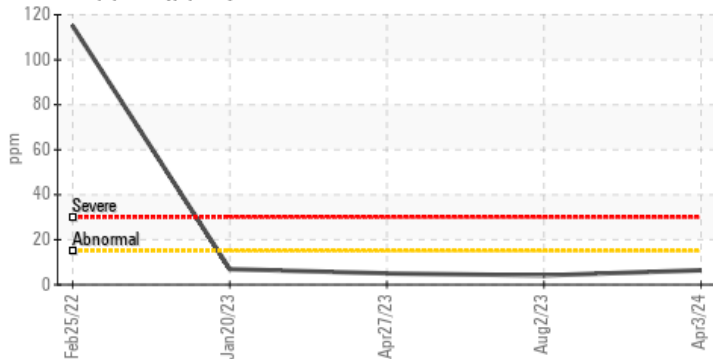
Aluminum (ppm)



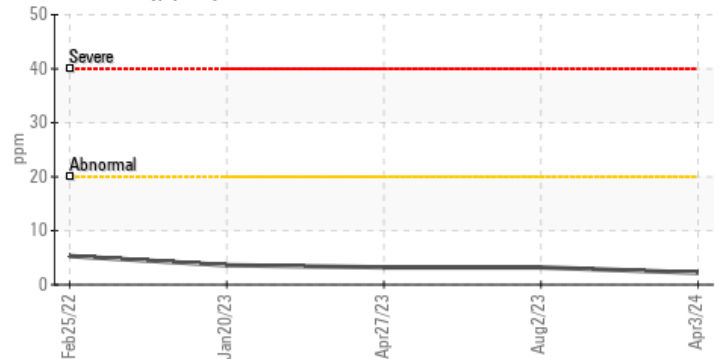
Chromium (ppm)



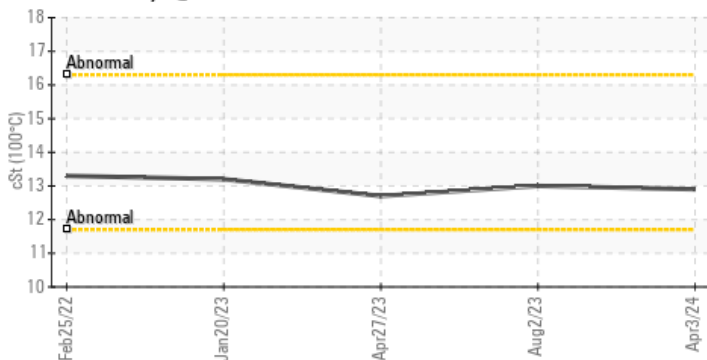
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

