



CONSTRUCTION EQUIPMENT

SW-28834-2 CMC ROCK VOLVO L180H 5503 - DIESEL ENGINE



Sample No: VCP438071
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SW-28834-2 CMC ROCK



SAMPLE INFORMATION

Sample Number	VCP438071	VCP412472	VCP419290	VCP396448
Sample Date	24 Jan 2024	25 Sep 2023	28 Jun 2023	17 Nov 2022
Machine Hours	5177	4470	3902	2955
Oil Hours	730	500	1000	900
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.1	13.1	13.0	13.0
Base Number (BN)	mg KOH/g	7.4	9.4	8.3	10.2
Oxidation (PA)	%	59	59	67	73



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.2	0.2	0.2
Nitration (PA)	%	68	54	70	70
Sulfation (PA)	%	53	53	57	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	7	8	5
Sodium	ppm	3	1	4	2
Potassium	ppm	3	0	4	1



WEAR METALS

Iron	ppm	4	5	10	7
Copper	ppm	1	2	12	4
Lead	ppm	1	<1	<1	<1
Tin	ppm	<1	<1	1	1
Aluminum	ppm	3	0	2	2
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	63	62	63	58
Nickel	ppm	<1	0	<1	0
Titanium	ppm	<1	0	<1	0
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	1	<1
Vanadium	ppm	<1	<1	0	<1



ADDITIVES

Calcium	ppm	1258	1099	1152	1319
Magnesium	ppm	701	1015	991	809
Zinc	ppm	1244	1289	1319	1236
Phosphorus	ppm	1054	1038	1067	1028
Barium	ppm	0	0	0	2
Boron	ppm	16	<1	4	12

Diagnosis

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Depot: VOLVO8770
Unique No: 10857584
Signed: Don Baldrige
Report Date: 01 Feb 2024

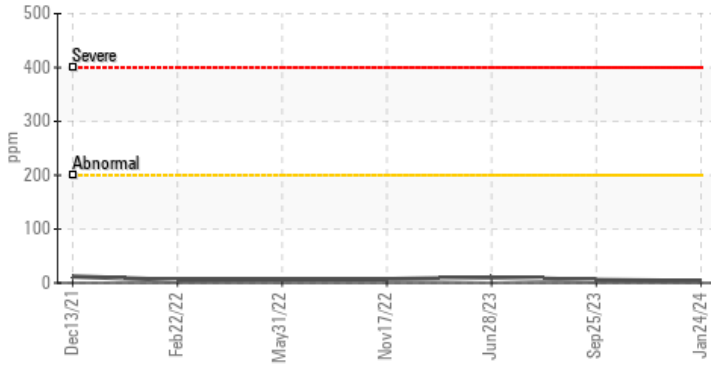


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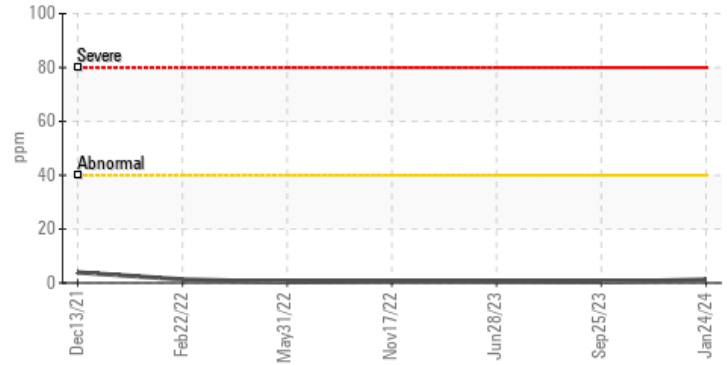


GRAPHS

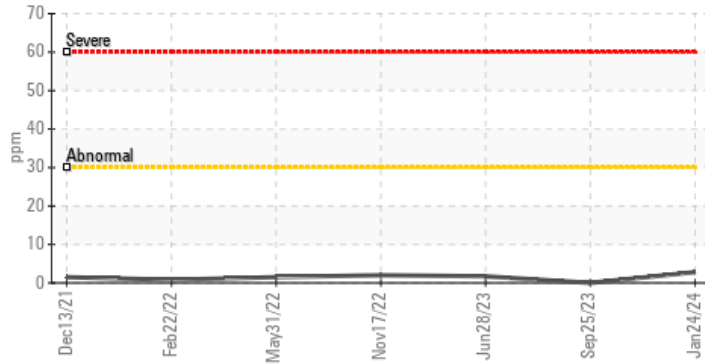
Iron (ppm)



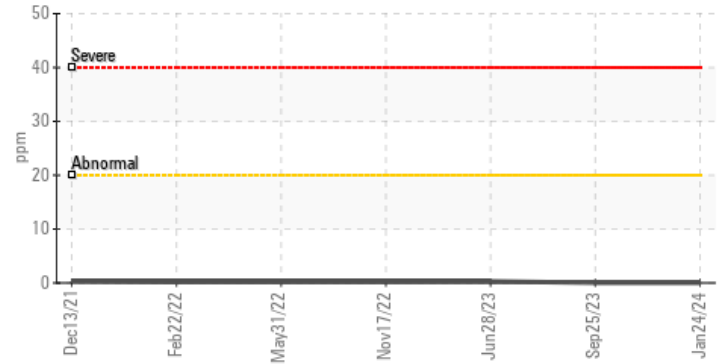
Lead (ppm)



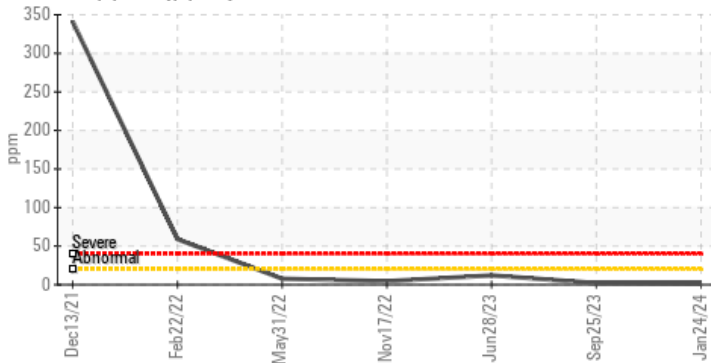
Aluminum (ppm)



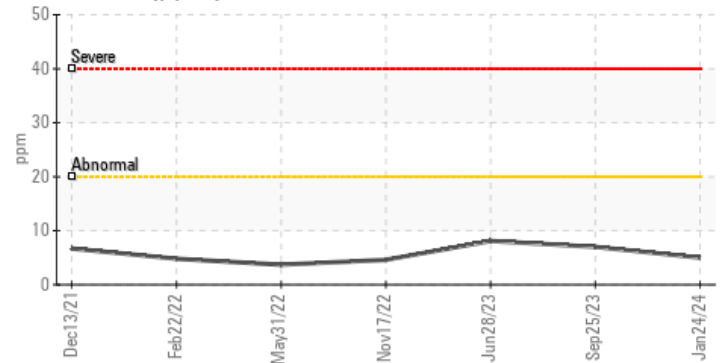
Chromium (ppm)



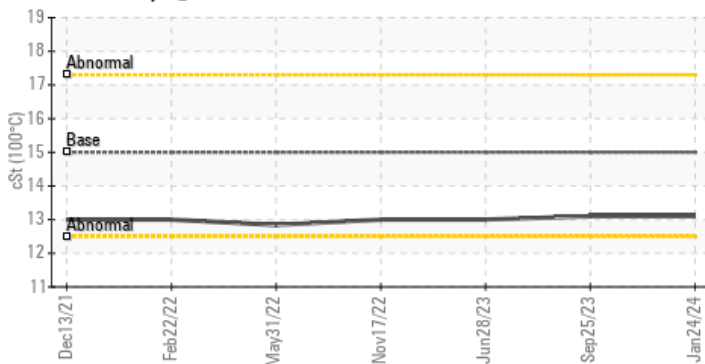
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

