



CONSTRUCTION EQUIPMENT

23844 VOLVO L90G 617079 - DIESEL ENGINE



Sample No: VCP405643
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 23844



SAMPLE INFORMATION

Sample Number	VCP405643	VCP411022	VCP401761	VCP333599
Sample Date	03 Aug 2023	02 May 2023	13 Feb 2023	31 Jan 2022
Machine Hours	12863	12413	12049	10710
Oil Hours	1000	1000	1000	0
Oil Changed	Changed	Changed	N/A	N/A
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

218 - ASCENDUM MACHINERY INC - N. CHARLESTON
 7235 CROSS COUNTRY RD.
 NORTH CHARLESTON, SC
 US 29418
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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.0	■ 13.2	■ 13.2	■ 13.3
Base Number (BN)	mg KOH/g	■ 10.2	■ 9.4	■ 10.4	■ 11.6
Oxidation (PA)	%	56	73	81	85

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. Fuel content negligible. 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

Soot %	%	■ 0.2	■ 0.2	■ 0.5	■ 0.3
Nitration (PA)	%	48	49	75	62
Sulfation (PA)	%	51	54	59	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 2.7	<1.0	<1.0	<1.0
Silicon	ppm	■ 5	■ 5	■ 5	■ 6
Sodium	ppm	■ 0	■ 1	■ 2	■ 3
Potassium	ppm	■ 0	■ 0	■ 0	■ <1



WEAR METALS

Iron	ppm	■ 7	■ 7	■ 16	■ 9
Copper	ppm	■ 0	■ 0	■ 2	■ 2
Lead	ppm	■ 0	■ 0	■ <1	■ <1
Tin	ppm	■ 0	■ 0	■ <1	■ <1
Aluminum	ppm	■ 2	■ 5	■ 12	■ 3
Chromium	ppm	■ <1	■ 0	■ <1	■ <1
Molybdenum	ppm	■ 22	■ 43	■ 46	■ 39
Nickel	ppm	■ 0	■ 0	■ <1	■ 0
Titanium	ppm	0	0	0	0
Silver	ppm	■ 0	■ 0	■ 0	■ <1
Manganese	ppm	■ 0	■ <1	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 2481	■ 1767	■ 1738	■ 1880
Magnesium	ppm	■ 347	■ 578	■ 544	■ 530
Zinc	ppm	■ 1310	■ 1236	■ 1175	■ 1059
Phosphorus	ppm	■ 1008	■ 987	■ 940	■ 960
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 61	■ 46	■ 23	■ 54

Depot: VOLVO3387
Unique No: 10605182
Signed: Jonathan Hester
Report Date: 17 Aug 2023

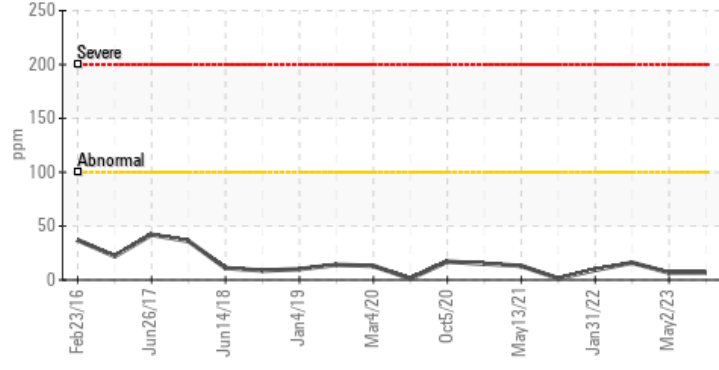


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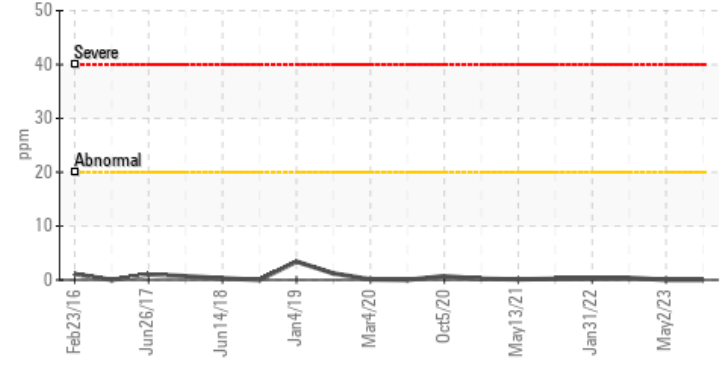


GRAPHS

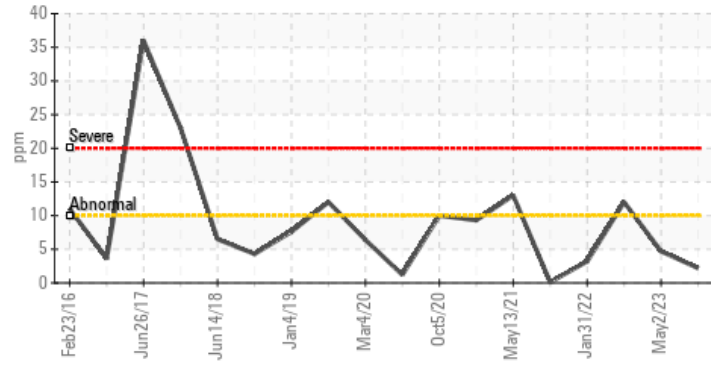
Iron (ppm)



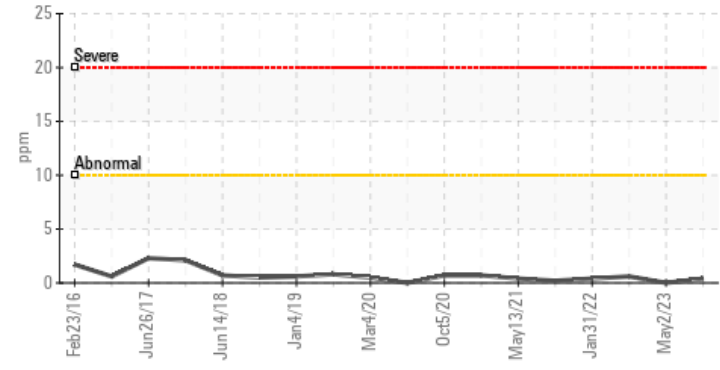
Lead (ppm)



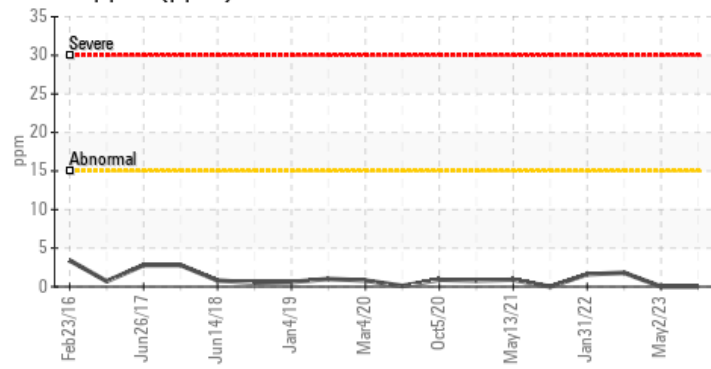
Aluminum (ppm)



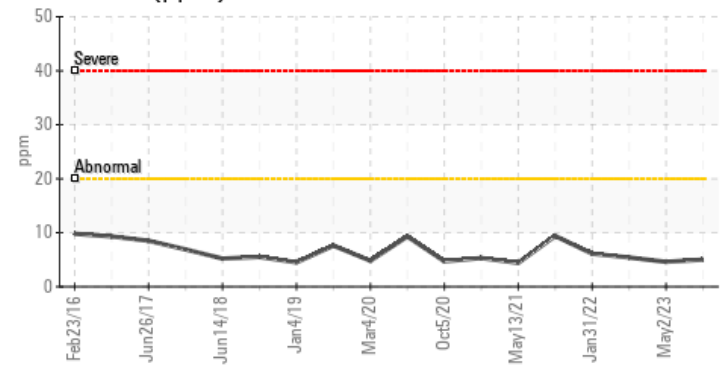
Chromium (ppm)



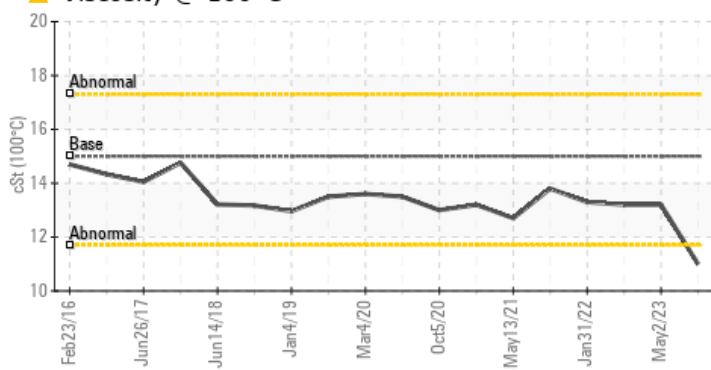
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

