



CONSTRUCTION EQUIPMENT

CITRUS COUNTY VOLVO L110H 632401 - DIESEL ENGINE



Sample No: VCP440673
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: CITRUS COUNTY



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SAMPLE INFORMATION

Sample Number	VCP440673	VCP431748	VCP433370	VCP420930
Sample Date	27 Mar 2024	07 Feb 2024	18 Oct 2023	26 Jul 2023
Machine Hours	3649	3072	2627	2194
Oil Hours	0	0	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL



OIL CONDITION

Visc @ 100°C	cSt	13.5	13.0	12.9	13.1
Base Number (BN)	mg KOH/g	9.7	10.5	10.0	9.9
Oxidation (PA)	%	61	79	78	78



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.4	0.3	0.4	0.5
Nitration (PA)	%	61	58	58	59
Sulfation (PA)	%	53	60	60	59
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	5	5	6
Sodium	ppm	2	0	1	2
Potassium	ppm	3	3	3	2



WEAR METALS

Iron	ppm	12	10	11	16
Copper	ppm	2	3	3	3
Lead	ppm	<1	<1	0	1
Tin	ppm	<1	1	<1	2
Aluminum	ppm	8	6	6	8
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	55	36	46	43
Nickel	ppm	0	<1	0	<1
Titanium	ppm	0	<1	<1	<1
Silver	ppm	0	0	0	<1
Manganese	ppm	<1	<1	0	<1
Vanadium	ppm	0	0	<1	0



ADDITIVES

Calcium	ppm	1223	1761	1607	1703
Magnesium	ppm	879	448	485	530
Zinc	ppm	1236	1100	1101	1190
Phosphorus	ppm	1059	971	923	969
Barium	ppm	0	<1	7	0
Boron	ppm	8	40	38	30

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 suitable for further service.

Depot: VOLVO0093
Unique No: 11044011
Signed: Don Baldrige
Report Date: 23 May 2024

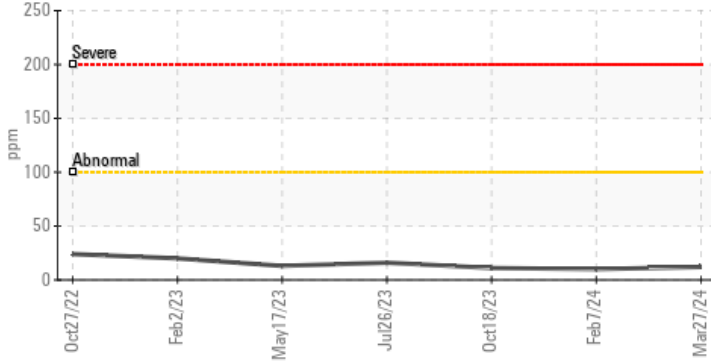


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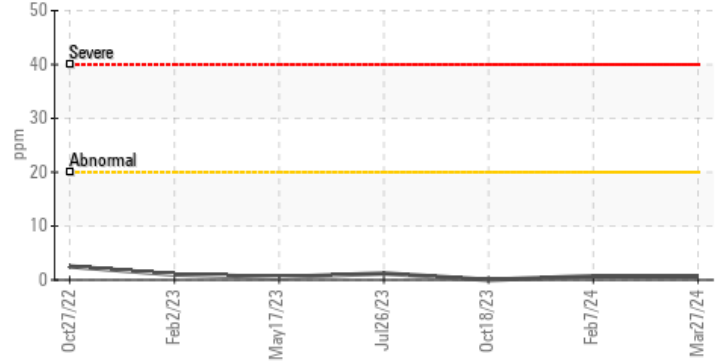


GRAPHS

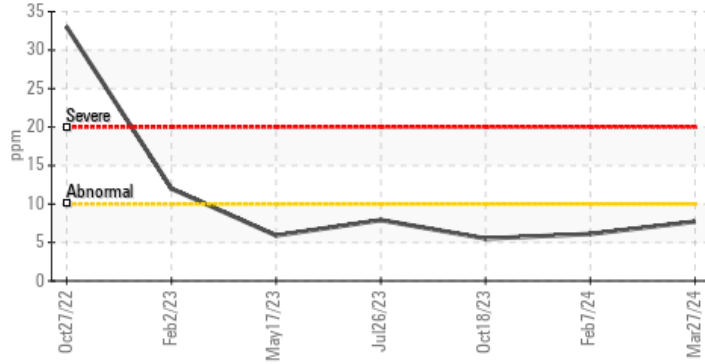
Iron (ppm)



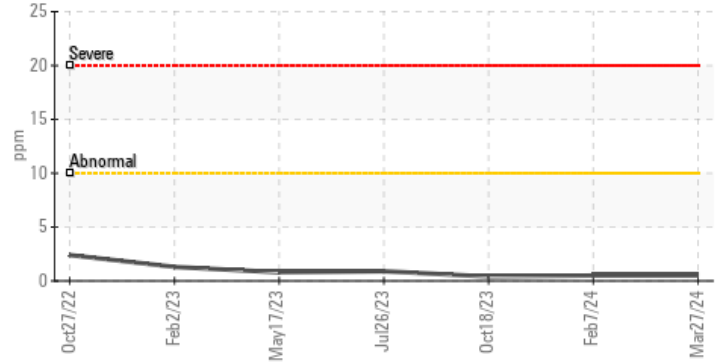
Lead (ppm)



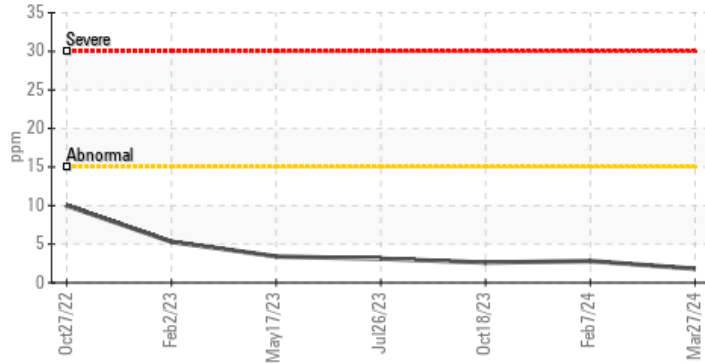
Aluminum (ppm)



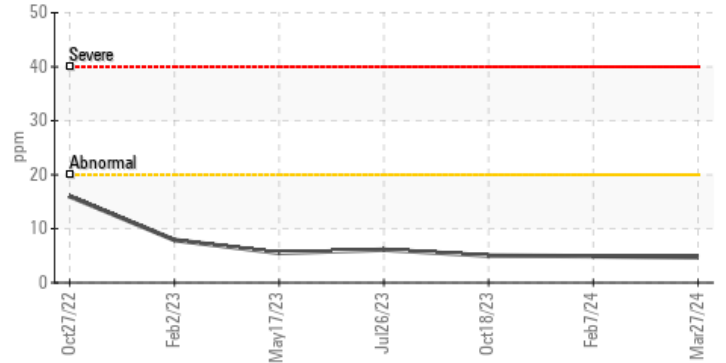
Chromium (ppm)



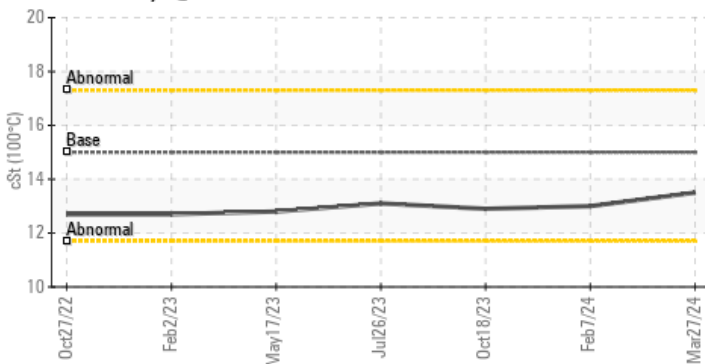
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

