



CONSTRUCTION EQUIPMENT

VOLVO L220H 3440 - DIESEL ENGINE



Sample No: VCP453832
Oil Type: SHELL ROTELLA T3 15W40
Job No:



SAMPLE INFORMATION

Sample Number	VCP453832	VCP441403	VCP441405	VCP441590
Sample Date	17 Jun 2024	31 May 2024	17 May 2024	03 May 2024
Machine Hours	10140	9814	9541	9275
Oil Hours	326	273	266	270
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

COVANTA ENERGY
 141 CRANBERRY HWY
 WEST WAREHAM, MA
 US 02576
 Contact: SAWYER
 ssawyer@woodcomachinery.com
 T:
 F:



OIL CONDITION

Visc @ 100°C	cSt	13.3	13.3	13.2	13.3
Base Number (BN)	mg KOH/g	6.4	6.6	6.6	6.3
Oxidation (PA)	%	39	38	39	39



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	53	54	54	53
Sulfation (PA)	%	48	47	46	46
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	7	10	7	10
Sodium	ppm	2	<1	<1	5
Potassium	ppm	2	3	3	5



WEAR METALS

Iron	ppm	3	2	3	5
Copper	ppm	1	<1	<1	3
Lead	ppm	0	0	<1	3
Tin	ppm	0	<1	<1	3
Aluminum	ppm	2	2	1	4
Chromium	ppm	<1	<1	<1	2
Molybdenum	ppm	10	9	13	17
Nickel	ppm	0	0	<1	2
Titanium	ppm	<1	<1	<1	2
Silver	ppm	0	0	0	3
Manganese	ppm	0	0	0	2
Vanadium	ppm	0	0	<1	2



ADDITIVES

Calcium	ppm	2238	2217	2180	2903
Magnesium	ppm	63	43	62	54
Zinc	ppm	1073	1060	1071	1340
Phosphorus	ppm	860	912	935	1146
Barium	ppm	0	0	0	<1
Boron	ppm	11	5	9	14

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: COVWES
Unique No: 11089388
Signed: Wes Davis
Report Date: 24 Jun 2024

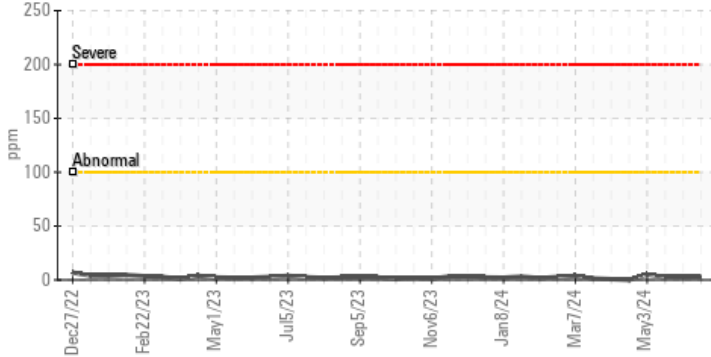


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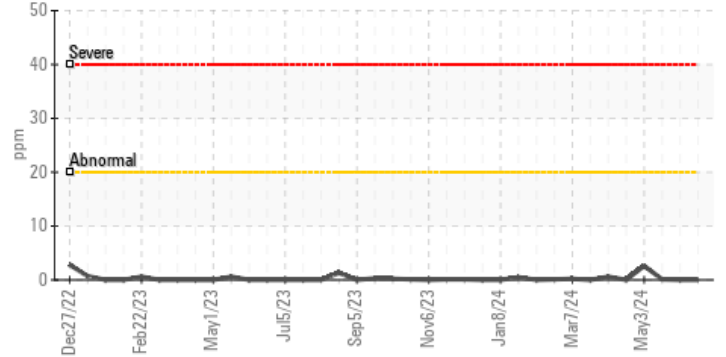


GRAPHS

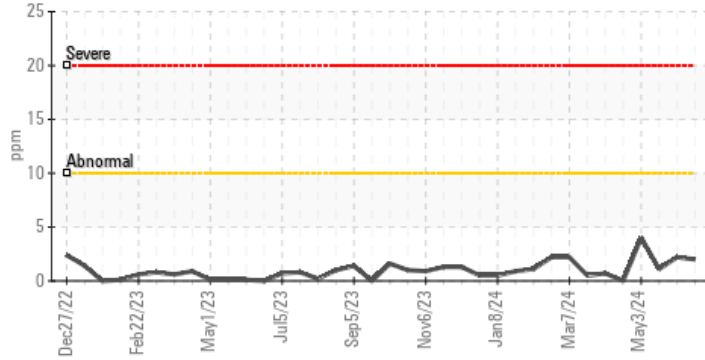
Iron (ppm)



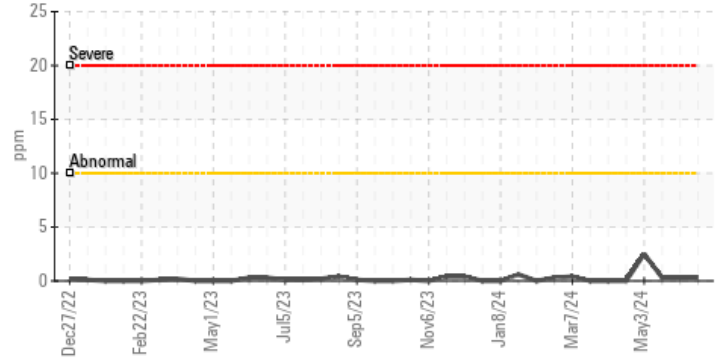
Lead (ppm)



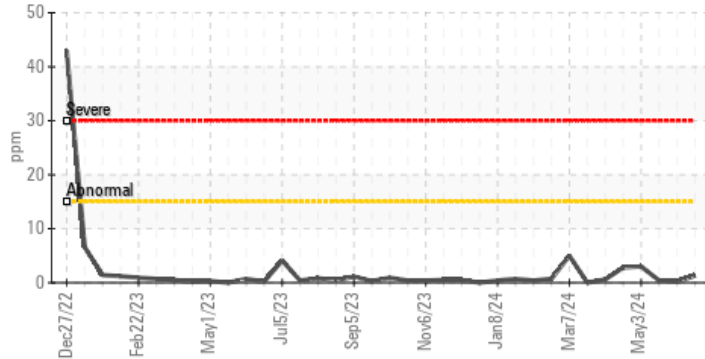
Aluminum (ppm)



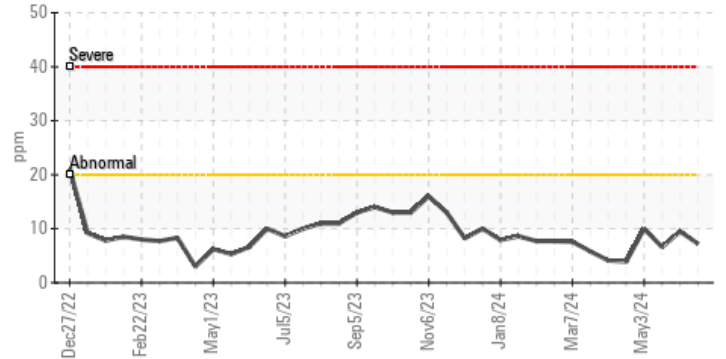
Chromium (ppm)



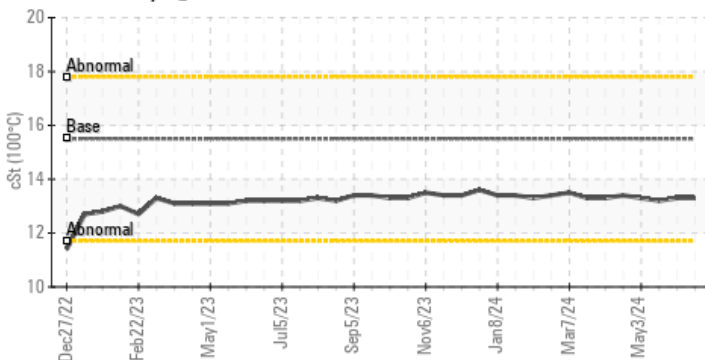
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

