



CONSTRUCTION EQUIPMENT

VOLVO L110H 632644 - DIESEL ENGINE



Sample No: VCP449548
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP449548	VCP441891	VCP431798	---
Sample Date	29 Apr 2024	15 Jan 2024	04 Dec 2023	---
Machine Hours	3827	2464	1860	---
Oil Hours	0	500	0	---
Oil Changed	Changed	Changed	N/A	---
Sample Status	ABNORMAL	NORMAL	ABNORMAL	---

COVANTA
 350 FLAKENBURG ROAD
 TAMPA, FL
 US 33619
 Contact: SERVICE MANAGER

OIL CONDITION

Visc @ 100°C	cSt	13.7	13.3	13.1	---
Base Number (BN)	mg KOH/g	9.2	9.4	9.5	---
Oxidation (PA)	%	72	76	84	---

T: (813)684-5688
 F:

Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. 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.

CONTAMINATION

Water	%	NEG	NEG	NEG	---
Soot %	%	0.3	0.2	0.4	---
Nitration (PA)	%	66	58	73	---
Sulfation (PA)	%	57	58	61	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	▲ 22	13	18	---
Sodium	ppm	<1	1	0	---
Potassium	ppm	2	0	3	---

WEAR METALS

Iron	ppm	19	9	20	---
Copper	ppm	4	3	10	---
Lead	ppm	1	<1	2	---
Tin	ppm	2	<1	2	---
Aluminum	ppm	● 12	7	▲ 21	---
Chromium	ppm	1	<1	1	---
Molybdenum	ppm	52	39	39	---
Nickel	ppm	<1	0	<1	---
Titanium	ppm	<1	<1	<1	---
Silver	ppm	0	0	<1	---
Manganese	ppm	<1	0	<1	---
Vanadium	ppm	0	<1	0	---

ADDITIVES

Calcium	ppm	1238	1624	1625	---
Magnesium	ppm	758	562	491	---
Zinc	ppm	1145	1135	1120	---
Phosphorus	ppm	1027	911	937	---
Barium	ppm	2	0	4	---
Boron	ppm	7	33	27	---

Depot: COVTAM
Unique No: 11057082
Signed: Don Baldrige
Report Date: 31 May 2024

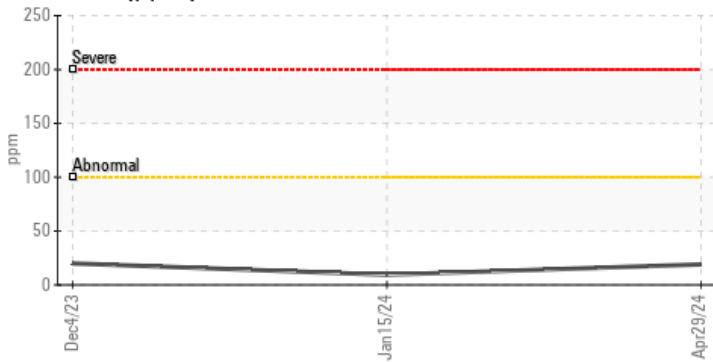


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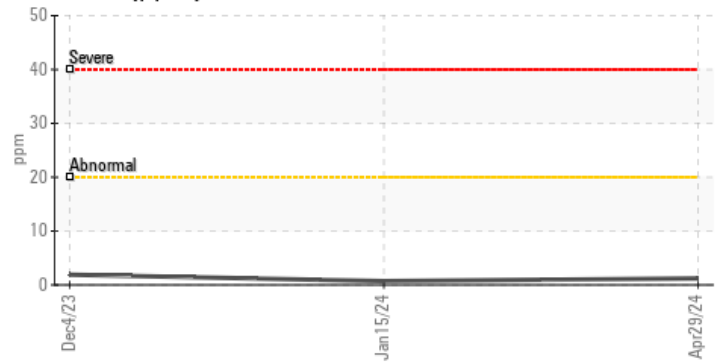


GRAPHS

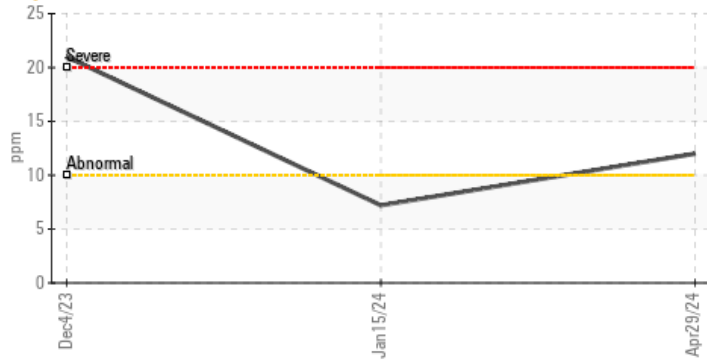
Iron (ppm)



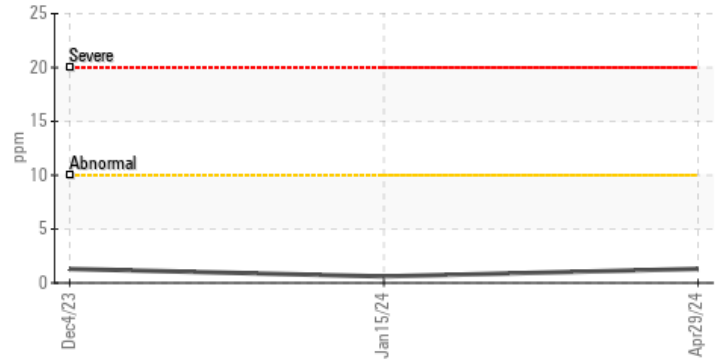
Lead (ppm)



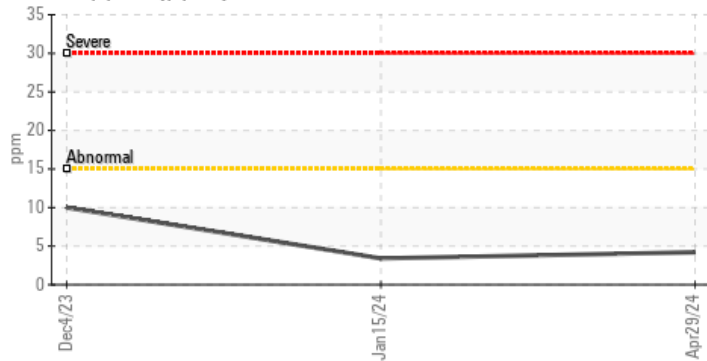
Aluminum (ppm)



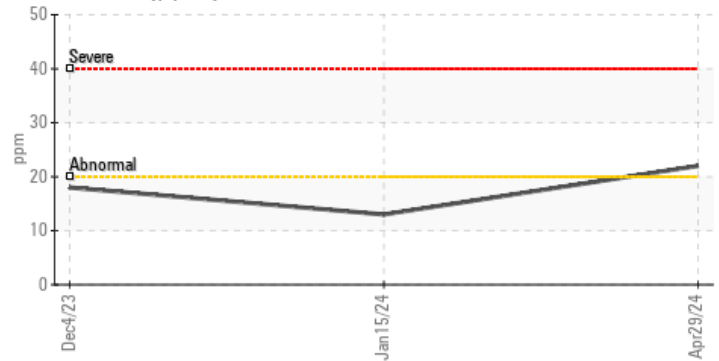
Chromium (ppm)



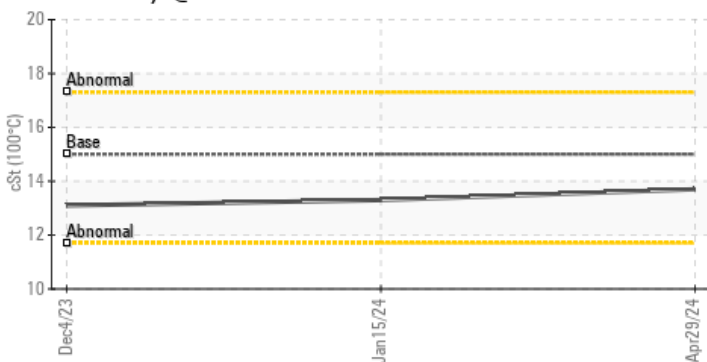
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

