



CONSTRUCTION EQUIPMENT

VOLVO L90H 625095 - DIESEL ENGINE



Sample No: VCP437486
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP437486	VCP372841	VCP337596	VCP351785
Sample Date	08 Apr 2024	18 Jul 2023	08 Dec 2022	05 Jul 2022
Machine Hours	5831	5559	4694	0
Oil Hours	0	500	0	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	NORMAL

VCES- VOLVO CONSTRUCTION EQUIPMENT
 12345 MAPLEVIEW STREET
 LAKESIDE, CA
 US 92040
 Contact: Mark Stewart
 mark.stewart@vcesvolvo.com
 T: X
 F: X



OIL CONDITION

Visc @ 100°C	cSt	▲ 16.4	■ 13.5	■ 13.7	■ 13.5
Base Number (BN)	mg KOH/g	▲ 0.0	■ 10.0	■ 11.7	■ 11.2
Oxidation (PA)	%	116	90	91	85



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	▲ 4.8	■ 0.7	■ 0.4	■ 0.2
Nitration (PA)	%	143	82	70	58
Sulfation (PA)	%	93	63	67	63
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	■ 9	■ 6	■ 6	■ 5
Sodium	ppm	■ 4	■ 3	■ 0	■ 11
Potassium	ppm	■ 1	■ 0	■ 1	■ 7



WEAR METALS

Iron	ppm	■ 49	■ 17	■ 13	■ 9
Copper	ppm	■ 2	■ 1	■ <1	■ <1
Lead	ppm	■ <1	■ 0	■ 0	■ <1
Tin	ppm	■ 0	■ <1	■ 0	■ 1
Aluminum	ppm	■ 22	■ 4	■ 2	■ 2
Chromium	ppm	■ 2	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 45	■ 47	■ 44	■ 42
Nickel	ppm	■ <1	■ <1	■ 0	■ 0
Titanium	ppm	0	<1	0	0
Silver	ppm	■ 0	■ 0	■ 0	■ <1
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	<1	<1	0	0



ADDITIVES

Calcium	ppm	■ 1755	■ 1927	■ 1800	■ 1739
Magnesium	ppm	■ 552	■ 566	■ 513	■ 523
Zinc	ppm	■ 1094	■ 1228	■ 1185	■ 1156
Phosphorus	ppm	■ 902	■ 1008	■ 1010	■ 958
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 14	■ 35	■ 35	■ 51

Diagnosis

We advise that you check for faulty combustion, plugged air filters, or aftercoolers. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. NOTE: High solids (carbon/soot) in the sample have limited the accuracy of Infra-Red data including Total Base Number (TBN) value. All component wear rates are normal. There is an abnormal amount of solids and carbon present in the oil. The oil viscosity is higher than normal. The BN level is low.

Depot: VOLVO4488
Unique No: 10981661
Signed: Jonathan Hester
Report Date: 19 Apr 2024

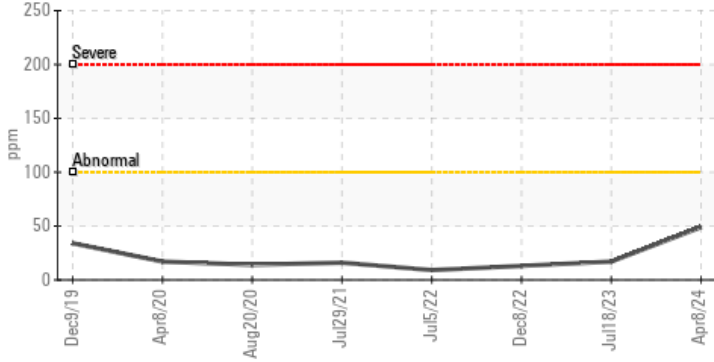


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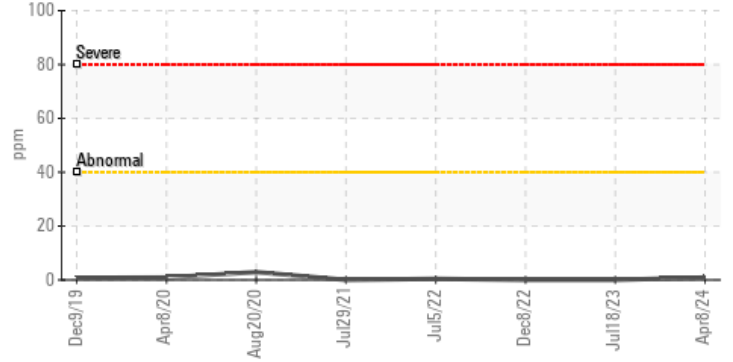


GRAPHS

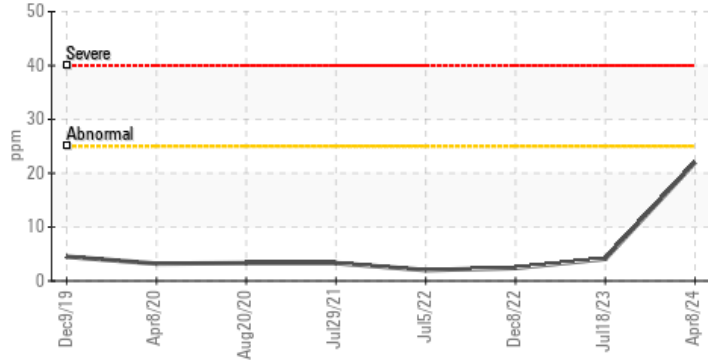
Iron (ppm)



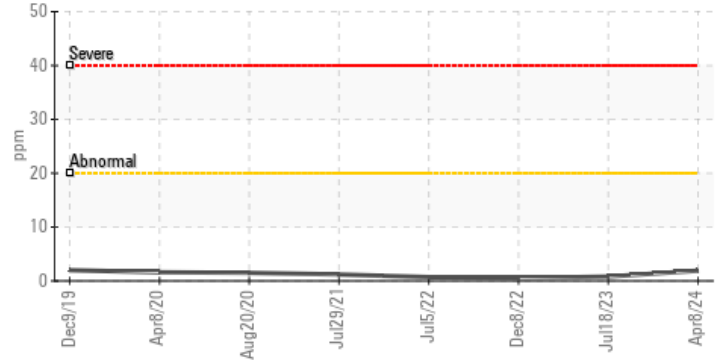
Lead (ppm)



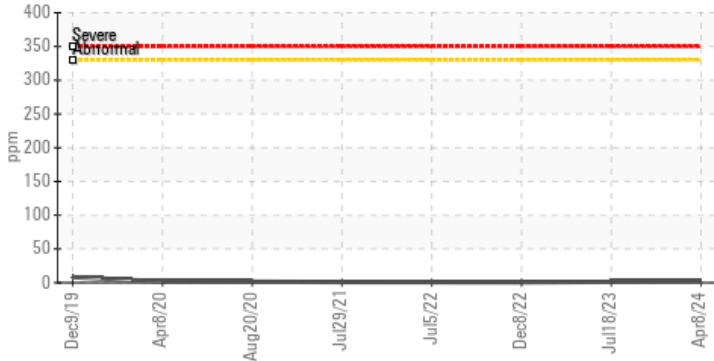
Aluminum (ppm)



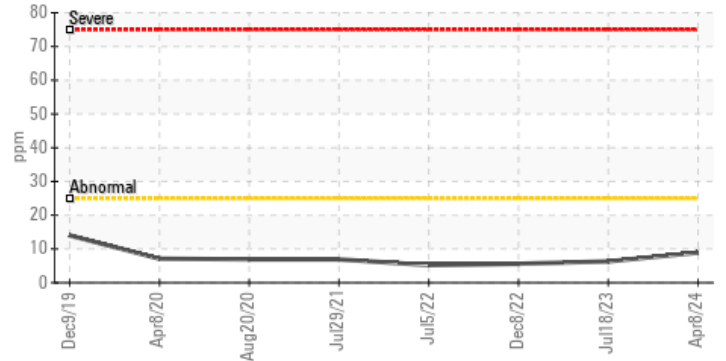
Chromium (ppm)



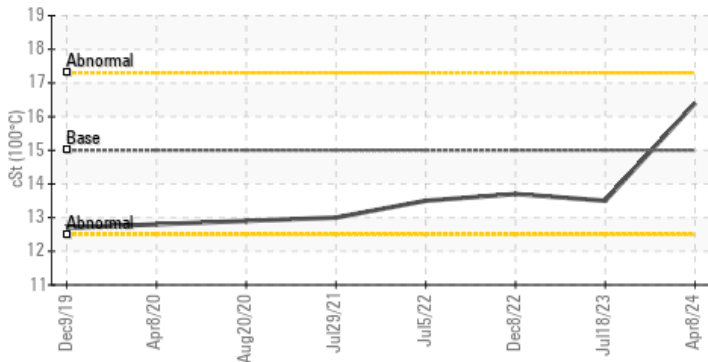
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



▲ Base Number

