



CONSTRUCTION EQUIPMENT

VOLVO A40G 352499 - DIESEL ENGINE



Sample No: VCP441817
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

Sample Number	VCP441817	VCP323548	---	---
Sample Date	20 Feb 2024	30 Jun 2021	---	---
Machine Hours	5166	0	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	ATTENTION	ABNORMAL	---	---

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OIL CONDITION

Visc @ 100°C	cSt	● 12.1	▲ 11.1	---	---
Base Number (BN)	mg KOH/g	■ 7.7	---	---	---
Oxidation (PA)	%	73	100	---	---



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	■ 0.7	■ 0.4	---	---
Nitration (PA)	%	103	96	---	---
Sulfation (PA)	%	65	71	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	■ 0.8	---	---
Silicon	ppm	■ 8	▲ 27	---	---
Sodium	ppm	■ 3	■ 3	---	---
Potassium	ppm	■ 3	■ 4	---	---

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. 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.



WEAR METALS

Iron	ppm	■ 27	■ 35	---	---
Copper	ppm	■ 18	▲ 183	---	---
Lead	ppm	■ 2	■ 2	---	---
Tin	ppm	■ 2	■ 6	---	---
Aluminum	ppm	■ 7	■ 0	---	---
Chromium	ppm	■ 1	■ <1	---	---
Molybdenum	ppm	■ 61	■ 41	---	---
Nickel	ppm	■ 3	■ 4	---	---
Titanium	ppm	<1	■ <1	---	---
Silver	ppm	■ 0	0	---	---
Manganese	ppm	■ 2	■ 4	---	---
Vanadium	ppm	<1	0	---	---



ADDITIVES

Calcium	ppm	■ 964	■ 1509	---	---
Magnesium	ppm	■ 850	■ 419	---	---
Zinc	ppm	■ 1111	■ 978	---	---
Phosphorus	ppm	■ 820	■ 811	---	---
Barium	ppm	■ 1	■ <1	---	---
Boron	ppm	■ 1	■ 29	---	---

Depot: VOLVO0090
Unique No: 10899674
Signed: Jonathan Hester
Report Date: 29 Feb 2024

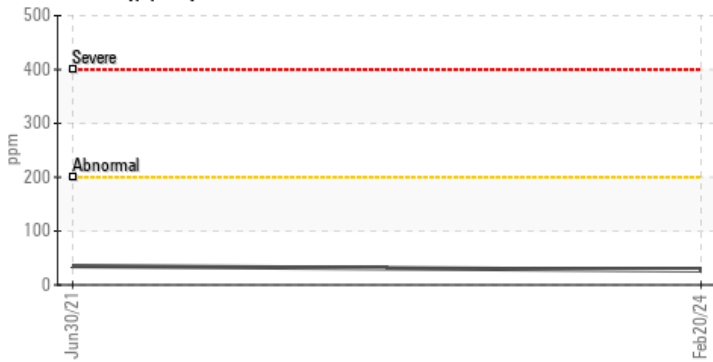


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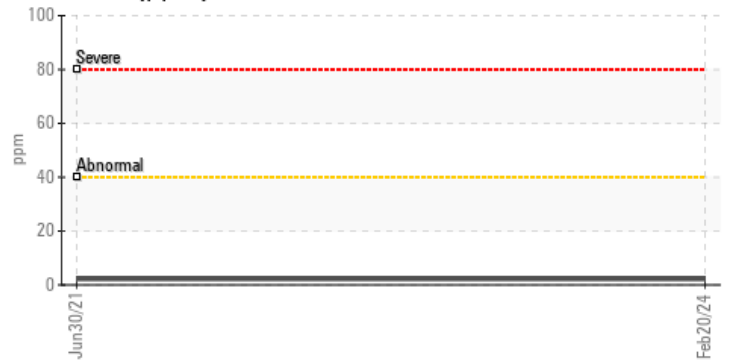


GRAPHS

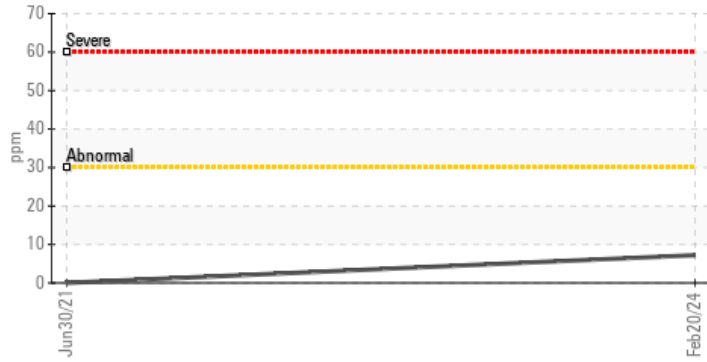
Iron (ppm)



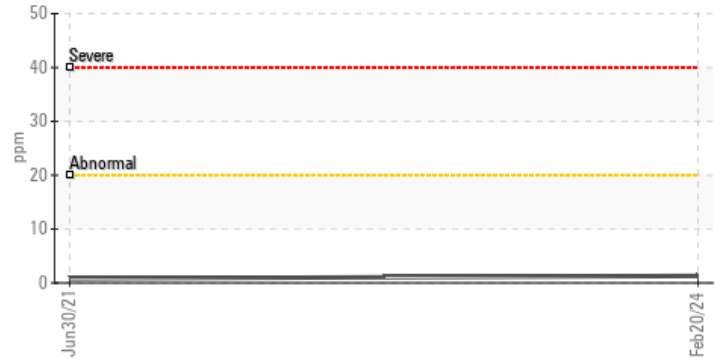
Lead (ppm)



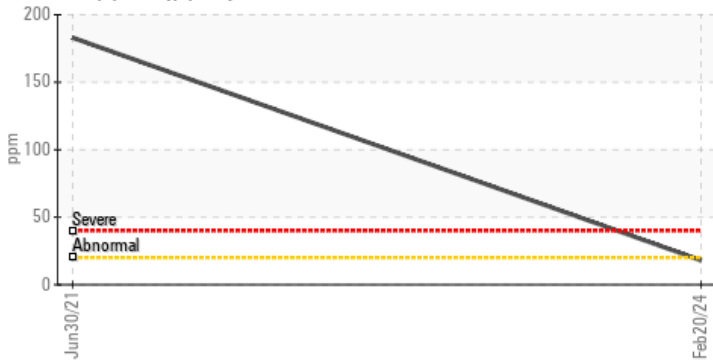
Aluminum (ppm)



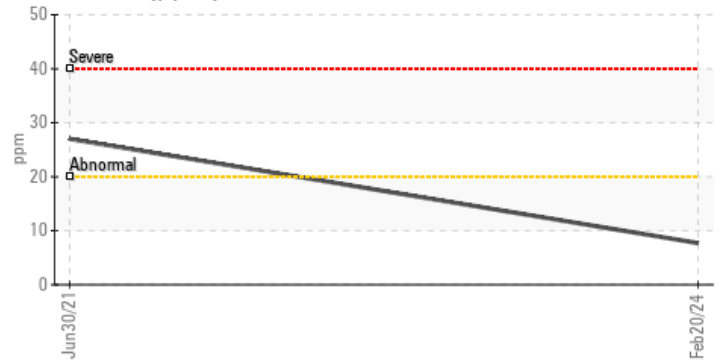
Chromium (ppm)



Copper (ppm)



Silicon (ppm)



● Viscosity @ 100°C



Base Number

