



CONSTRUCTION EQUIPMENT

333969 SUPERIOR CONS VOLVO EC480EL 314599 - DIESEL ENGINE



Sample No: VCP398032
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 333969 SUPERIOR CONS



SAMPLE INFORMATION

Sample Number	VCP398032	VCP343030	---	---
Sample Date	17 Aug 2023	20 Jan 2022	---	---
Machine Hours	2481	0	---	---
Oil Hours	500	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	ATTENTION	---	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.6	▲ 12.3	---	---
Base Number (BN)	mg KOH/g	■ 6.3	■ 10.2	---	---
Oxidation (PA)	%	■ 61	■ 86	---	---



CONTAMINATION

Soot %	%	■ 0.1	■ 0.1	---	---
Nitration (PA)	%	■ 71	■ 69	---	---
Sulfation (PA)	%	■ 54	■ 64	---	---
Glycol	%	■ NEG	■ NEG	---	---
Fuel	%	■ 0.9	■ 1.3	---	---
Silicon	ppm	■ 9	■ 8	---	---
Sodium	ppm	■ 2	■ 2	---	---
Potassium	ppm	■ 0	■ 0	---	---



WEAR METALS

Iron	ppm	■ 7	■ 6	---	---
Copper	ppm	▲ 59	■ <1	---	---
Lead	ppm	■ 2	■ <1	---	---
Tin	ppm	■ 1	■ <1	---	---
Aluminum	ppm	■ 2	■ <1	---	---
Chromium	ppm	■ 0	■ <1	---	---
Molybdenum	ppm	■ 63	■ 45	---	---
Nickel	ppm	■ 0	■ 0	---	---
Titanium	ppm	■ 0	■ <1	---	---
Silver	ppm	■ 0	■ <1	---	---
Manganese	ppm	■ <1	■ <1	---	---
Vanadium	ppm	■ <1	■ 0	---	---



ADDITIVES

Calcium	ppm	■ 1407	■ 1670	---	---
Magnesium	ppm	■ 856	■ 470	---	---
Zinc	ppm	■ 1236	■ 1053	---	---
Phosphorus	ppm	■ 883	■ 864	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 3	■ 30	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The copper level is abnormal. All other component wear rates are normal. Fuel content negligible. 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.

Depot: VOLVO0093
Unique No: 10636066
Signed: Jonathan Hester
Report Date: 13 Sep 2023

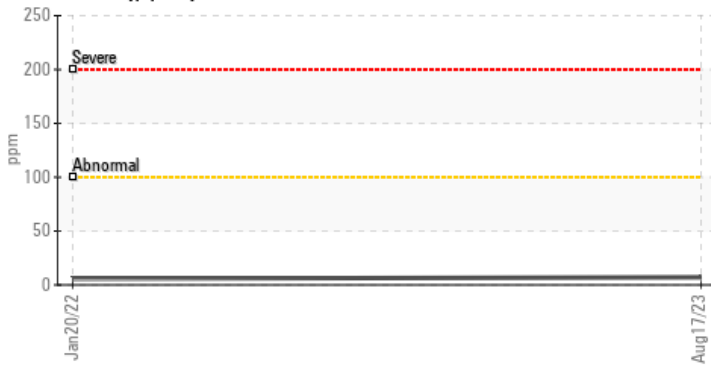


CONSTRUCTION EQUIPMENT



GRAPHS

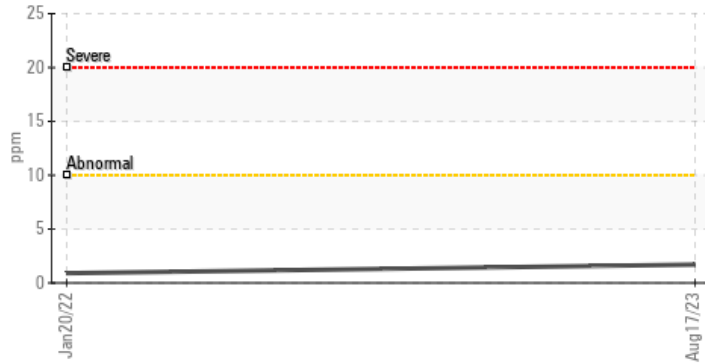
Iron (ppm)



Lead (ppm)



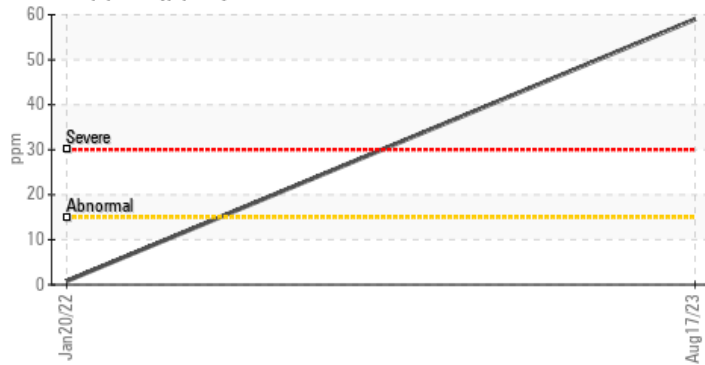
Aluminum (ppm)



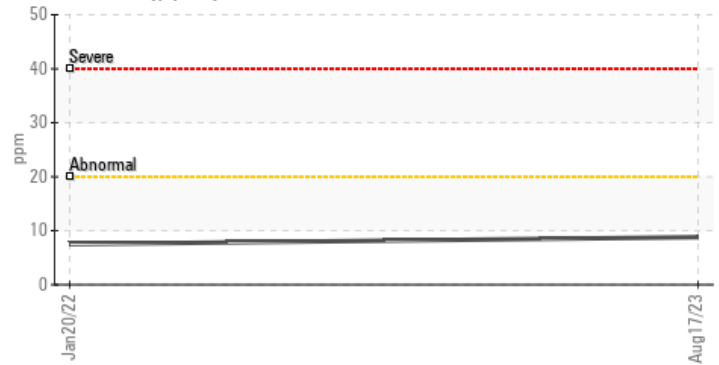
Chromium (ppm)



▲ Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

