



CONSTRUCTION EQUIPMENT

579405 TOEBE VOLVO A40G 353263 - DIESEL ENGINE



Sample No: VCP416258
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 579405 TOEBE



SAMPLE INFORMATION

Sample Number	VCP416258	---	---	---
Sample Date	17 Jul 2023	---	---	---
Machine Hours	467	---	---	---
Oil Hours	467	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

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OIL CONDITION

Visc @ 100°C	cSt	▲ 10.6	---	---	---
Base Number (BN)	mg KOH/g	■ 6.0	---	---	---
Oxidation (PA)	%	■ 57	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other metal levels are typical for a new component breaking in. 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.



CONTAMINATION

Soot %	%	■ 0.2	---	---	---
Nitration (PA)	%	■ 83	---	---	---
Sulfation (PA)	%	■ 53	---	---	---
Glycol	%	■ 0.0	---	---	---
Fuel	%	■ 0.4	---	---	---
Silicon	ppm	■ 25	---	---	---
Sodium	ppm	■ 4	---	---	---
Potassium	ppm	■ 2	---	---	---



WEAR METALS

Iron	ppm	■ 16	---	---	---
Copper	ppm	▲ 329	---	---	---
Lead	ppm	■ 3	---	---	---
Tin	ppm	■ 3	---	---	---
Aluminum	ppm	■ 1	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 92	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 3	---	---	---
Vanadium	ppm	<1	---	---	---



ADDITIVES

Calcium	ppm	■ 2348	---	---	---
Magnesium	ppm	■ 28	---	---	---
Zinc	ppm	■ 1248	---	---	---
Phosphorus	ppm	■ 1051	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 49	---	---	---

Depot: VOLVO2990
Unique No: 10565399
Signed: Don Baldrige
Report Date: 25 Jul 2023



CONSTRUCTION EQUIPMENT



GRAPHS

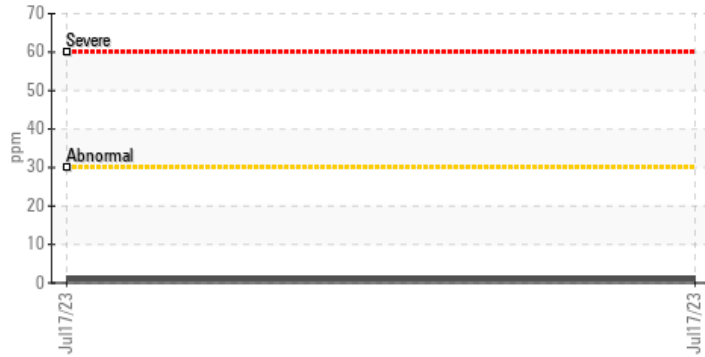
Iron (ppm)



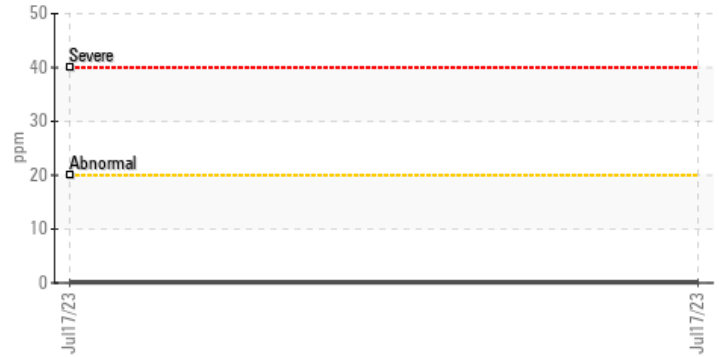
Lead (ppm)



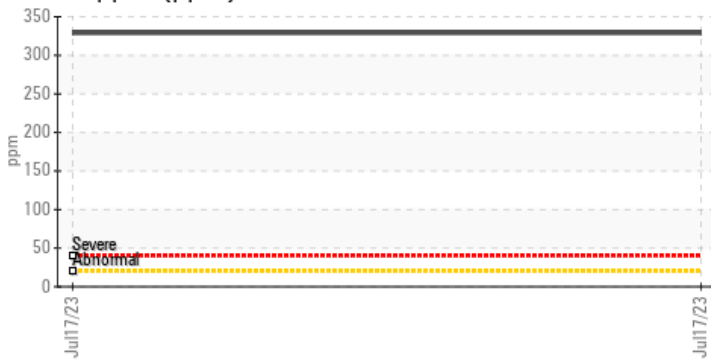
Aluminum (ppm)



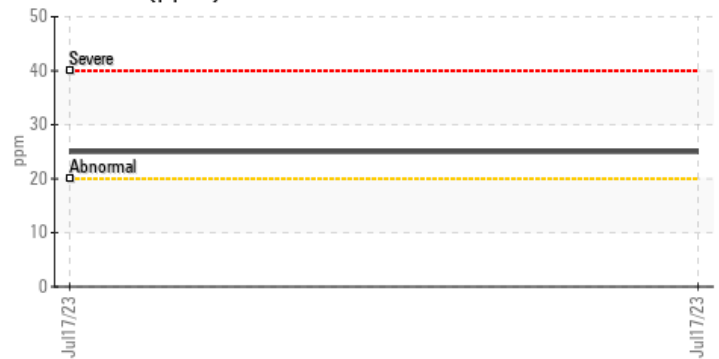
Chromium (ppm)



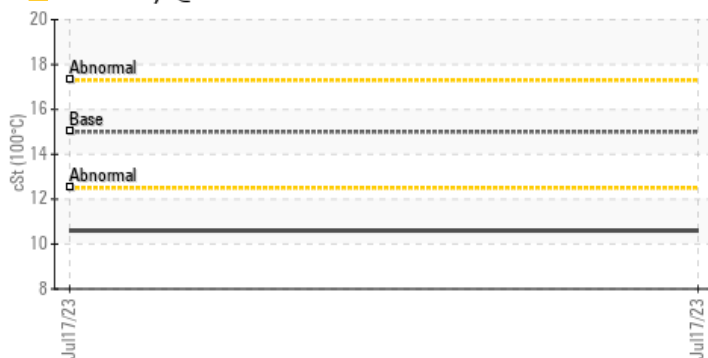
▲ Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

