CONSTRUCTION EQUIPMENT
W02007536   VOLVO A25G 752623 - DIESEL ENGINE

Sample No: VCP425211

Oil Type: MOBIL 15W40

Job No: W02007536

SAMPLE INFORMATION

Sample Number	VCP425211	---	---	---
Sample Date	07 Sep 2023	---	---	---
Machine Hours	693	---	---	---
Oil Hours	500	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

OIL CONDITION

Visc @ 100°C	cSt	▲ 10.5	---	---	---
Base Number (BN)	mg KOH/g	■ 6.0	---	---	---
Oxidation (PA)	%	57	---	---	---

CONTAMINATION

Soot %	%	■ 0.3	---	---	---
Nitration (PA)	%	76	---	---	---
Sulfation (PA)	%	53	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	■ 0.6	---	---	---
Silicon	ppm	■ 28	---	---	---
Sodium	ppm	■ 4	---	---	---
Potassium	ppm	■ 4	---	---	---

WEAR METALS

Iron	ppm	■ 28	---	---	---
Copper	ppm	▲ 388	---	---	---
Lead	ppm	■ 2	---	---	---
Tin	ppm	■ 4	---	---	---
Aluminum	ppm	■ <1	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 86	---	---	---
Nickel	ppm	■ 1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	■ 2	---	---	---
Manganese	ppm	■ 5	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	■ 2289	---	---	---
Magnesium	ppm	■ 19	---	---	---
Zinc	ppm	■ 1243	---	---	---
Phosphorus	ppm	■ 1055	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 39	---	---	---

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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. 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.

Depot:	VOLVO0002
Unique No:	10646595
Signed:	Jonathan Hester
Report Date:	18 Sep 2023

GRAPHS

Iron (ppm)
- Severe: 400
- Abnormal: 200

Lead (ppm)
- Severe: 80
- Abnormal: 40

Aluminum (ppm)
- Severe: 60
- Abnormal: 30

Chromium (ppm)
- Severe: 40
- Abnormal: 20

⚠ Copper (ppm)
- Severe: ~40
- Abnormal: ~25

Silicon (ppm)
- Severe: 40
- Abnormal: 20

⚠ Viscosity @ 100°C
- Abnormal: 16.2
- Abnormal: 12.5

Base Number