



CONSTRUCTION EQUIPMENT

W0230938 YANMAR SD40 302086 - DIESEL ENGINE



Sample No: VCP428511
Oil Type: YANMAR 15W40
Job No: W0230938



SAMPLE INFORMATION

Sample Number	VCP428511	---	---	---
Sample Date	17 Jun 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	211	---	---	---
Oil Changed	N/A	---	---	---
Sample Status	ABNORMAL	---	---	---

ROMCO INC
 1350 NE LOOP 820
 FORT WORTH, TX
 US 76106
 Contact: ROB HOLCOMB
 rholcomb@romco.com
 T: (817)798-9289
 F: (817)626-8983



OIL CONDITION

Visc @ 100°C	cSt	● 10.4	---	---	---
Base Number (BN)	mg KOH/g	■ 7.2	---	---	---
Oxidation (PA)	%	▲ 47	---	---	---

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. Elemental level of silicon (Si) above normal indicating ingress of seal material. Light fuel dilution occurring. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.1	---	---	---
Nitration (PA)	%	▲ 57	---	---	---
Sulfation (PA)	%	▲ 45	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	▲ 2.6	---	---	---
Silicon	ppm	▲ 41	---	---	---
Sodium	ppm	■ 14	---	---	---
Potassium	ppm	▲ 176	---	---	---



WEAR METALS

Iron	ppm	■ 20	---	---	---
Copper	ppm	■ 8	---	---	---
Lead	ppm	■ 3	---	---	---
Tin	ppm	■ 2	---	---	---
Aluminum	ppm	■ 4	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 165	---	---	---
Nickel	ppm	■ 1	---	---	---
Titanium	ppm	■ <1	---	---	---
Silver	ppm	■ <1	---	---	---
Manganese	ppm	1	---	---	---
Vanadium	ppm	<1	---	---	---



ADDITIVES

Calcium	ppm	■ 2320	---	---	---
Magnesium	ppm	■ 23	---	---	---
Zinc	ppm	■ 863	---	---	---
Phosphorus	ppm	722	---	---	---
Barium	ppm	■ 4	---	---	---
Boron	ppm	■ 198	---	---	---

Depot: VOLVO0081
Unique No: 11103651
Signed: Jonathan Hester
Report Date: 03 Jul 2024

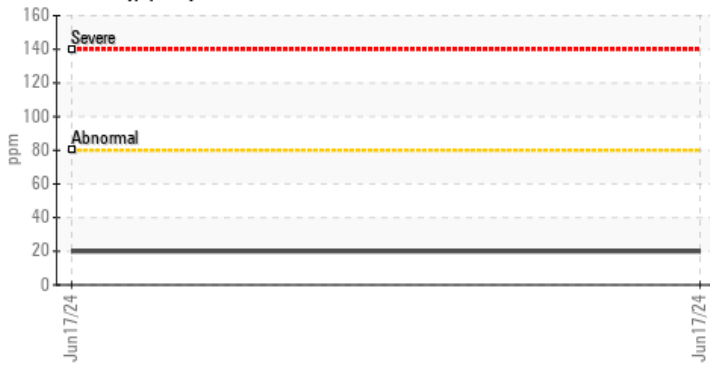


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GRAPHS

Iron (ppm)



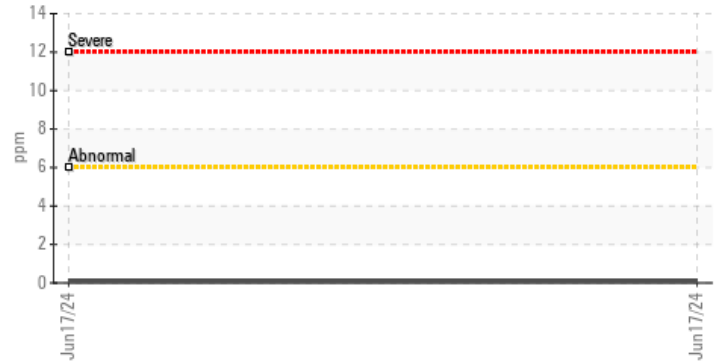
Lead (ppm)



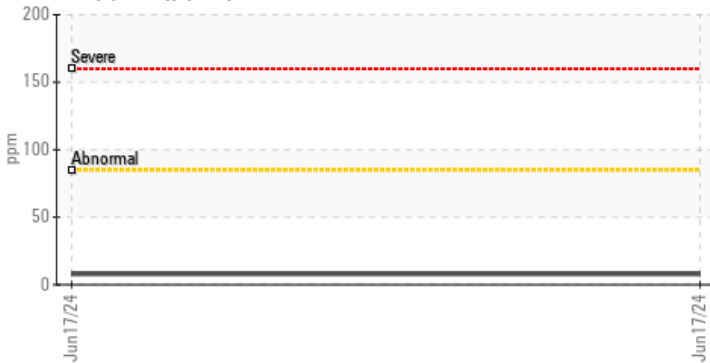
Aluminum (ppm)



Chromium (ppm)



Copper (ppm)



▲ Silicon (ppm)



● Viscosity @ 100°C



Base Number

