



CONSTRUCTION EQUIPMENT

SPM633674-10 CARMUSE VOLVO A60H 350292 - DIESEL ENGINE



Sample No: VCP409098
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SPM633674-10 CARMUSE



SAMPLE INFORMATION

Sample Number	VCP409098	VCP390168	---	---
Sample Date	16 Nov 2023	08 Aug 2023	---	---
Machine Hours	1648	597	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	SEVERE	ATTENTION	---	---

ALTA EQUIPMENT COMPANY - METRO WEST
56195 PONTIAC TRAIL
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OIL CONDITION

Visc @ 100°C	cSt	▲ 12.0	▲ 10.9	---	---
Base Number (BN)	mg KOH/g	■ 11.8	■ 5.7	---	---
Oxidation (PA)	%	79	61	---	---

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Valve wear is indicated. Sodium and/or potassium levels are high. There is a high concentration of glycol present in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.



CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	■ 0.6	■ 0.9	---	---
Nitration (PA)	%	89	79	---	---
Sulfation (PA)	%	68	55	---	---
Glycol	%	● 0.10	NEG	---	---
Fuel	%	<1.0	■ 1.3	---	---
Silicon	ppm	■ 7	■ 32	---	---
Sodium	ppm	▲ 1433	■ 0	---	---
Potassium	ppm	▲ 250	■ 0	---	---



WEAR METALS

Iron	ppm	■ 21	■ 45	---	---
Copper	ppm	■ 48	■ 246	---	---
Lead	ppm	■ <1	■ 0	---	---
Tin	ppm	■ <1	■ 4	---	---
Aluminum	ppm	■ 5	■ 3	---	---
Chromium	ppm	■ 2	■ 4	---	---
Molybdenum	ppm	■ 58	■ 87	---	---
Nickel	ppm	▲ 8	■ 4	---	---
Titanium	ppm	■ 0	0	---	---
Silver	ppm	■ 0	■ 0	---	---
Manganese	ppm	■ <1	■ 1	---	---
Vanadium	ppm	0	0	---	---



ADDITIVES

Calcium	ppm	■ 1701	■ 2326	---	---
Magnesium	ppm	■ 479	14	---	---
Zinc	ppm	■ 1125	■ 1272	---	---
Phosphorus	ppm	■ 920	■ 990	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 6	■ 28	---	---

Depot: VOLVO2990
Unique No: 10780142
Signed: Jonathan Hester
Report Date: 13 Dec 2023

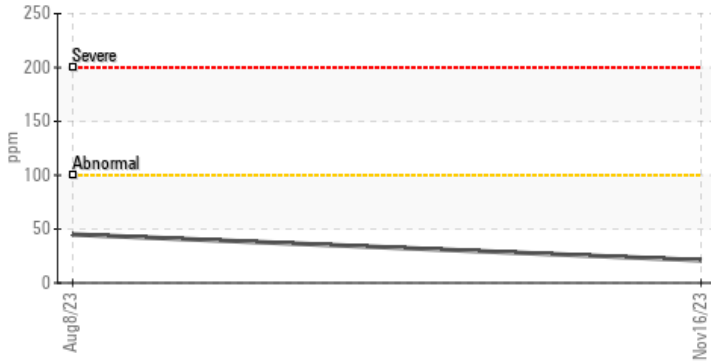


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GRAPHS

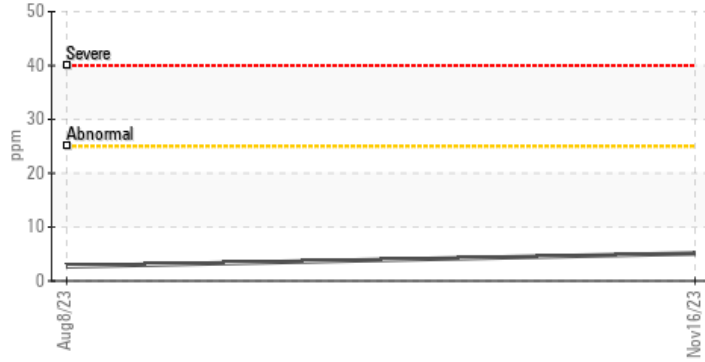
Iron (ppm)



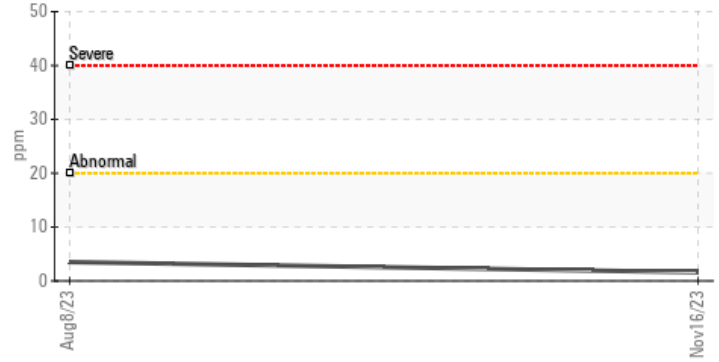
Lead (ppm)



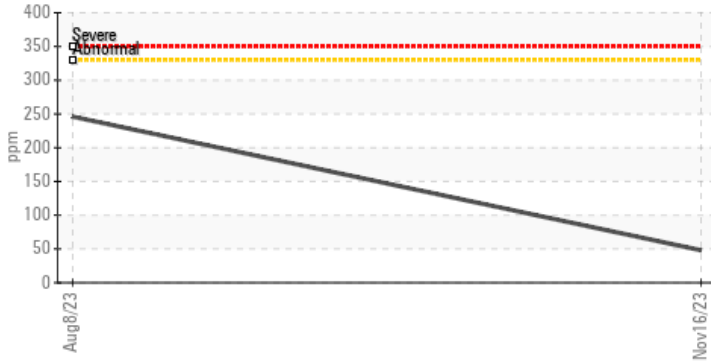
Aluminum (ppm)



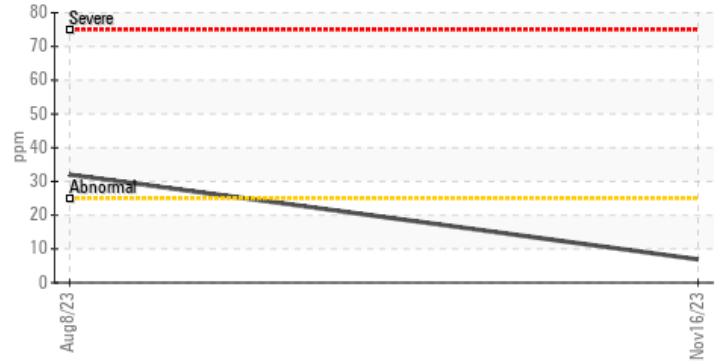
Chromium (ppm)



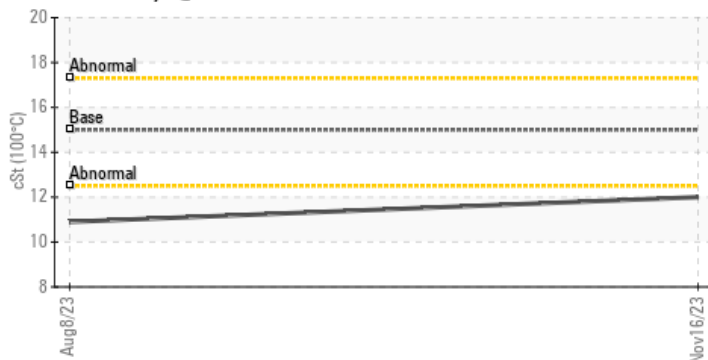
Copper (ppm)



Silicon (ppm)



▲ Viscosity @ 100°C



Base Number

