



CONSTRUCTION EQUIPMENT

701328 NORTH STAR - DIESEL ENGINE



Sample No: VCP445558
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 701328 NORTH STAR



SAMPLE INFORMATION

Sample Number	VCP445558	---	---	---
Sample Date	16 Apr 2024	---	---	---
Machine Hours	291	---	---	---
Oil Hours	291	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

ALTA EQUIPMENT COMPANY - METRO WEST
 56195 PONTIAC TRAIL
 NEW HUDSON, MI
 US 48165
 Contact: PAUL ELZERMAN
 paul.elzerman@altaequipment.com
 T: (248)356-5200
 F: (248)356-2029



OIL CONDITION

Visc @ 100°C	cSt	● 10.8	---	---	---
Base Number (BN)	mg KOH/g	■ 5.6	---	---	---
Oxidation (PA)	%	■ 53	---	---	---

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All 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.



CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.2	---	---	---
Nitration (PA)	%	■ 77	---	---	---
Sulfation (PA)	%	■ 55	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	■ 1.8	---	---	---
Silicon	ppm	■ 11	---	---	---
Sodium	ppm	■ 5	---	---	---
Potassium	ppm	■ 4	---	---	---



WEAR METALS

Iron	ppm	■ 24	---	---	---
Copper	ppm	■ 70	---	---	---
Lead	ppm	■ <1	---	---	---
Tin	ppm	■ 1	---	---	---
Aluminum	ppm	■ 3	---	---	---
Chromium	ppm	■ 1	---	---	---
Molybdenum	ppm	■ 26	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	■ 0	---	---	---
Manganese	ppm	■ 4	---	---	---
Vanadium	ppm	<1	---	---	---



ADDITIVES

Calcium	ppm	■ 2079	---	---	---
Magnesium	ppm	■ 218	---	---	---
Zinc	ppm	■ 1002	---	---	---
Phosphorus	ppm	■ 847	---	---	---
Barium	ppm	■ 4	---	---	---
Boron	ppm	■ 36	---	---	---

Depot: VOLVO2990
Unique No: 10996688
Signed: Don Baldrige
Report Date: 02 May 2024

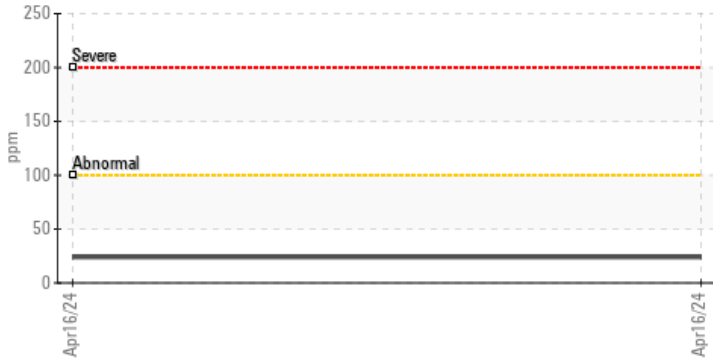


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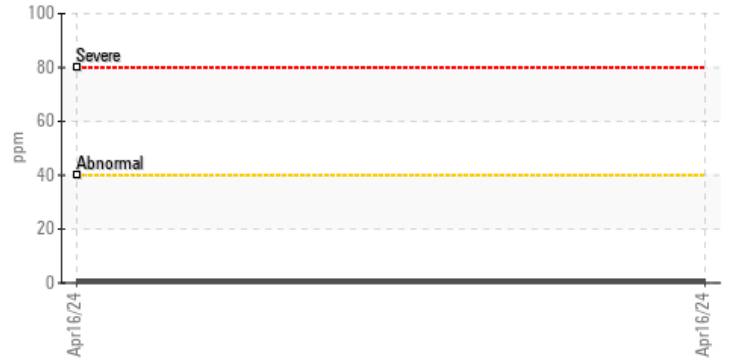


GRAPHS

Iron (ppm)



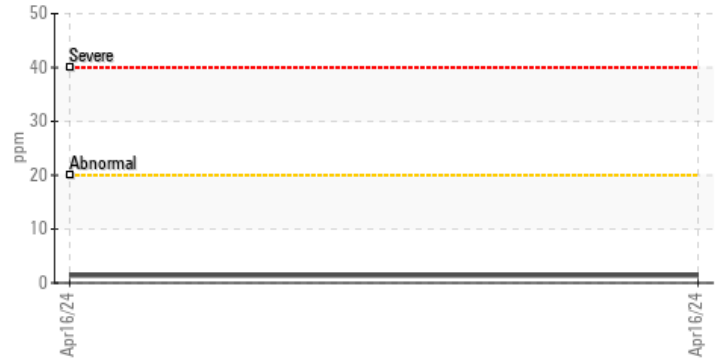
Lead (ppm)



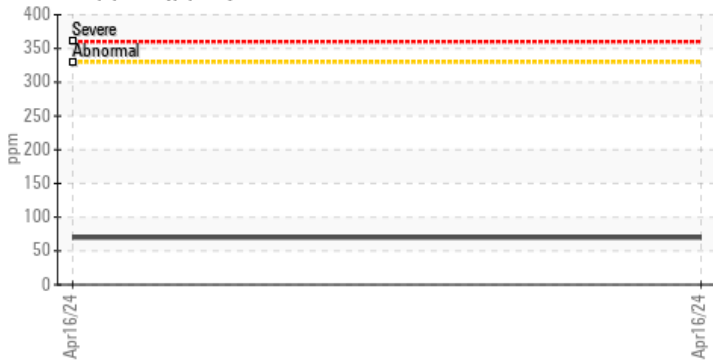
Aluminum (ppm)



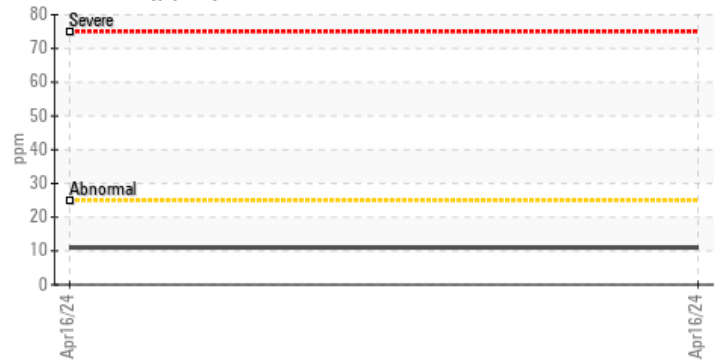
Chromium (ppm)



Copper (ppm)



Silicon (ppm)



● Viscosity @ 100°C



Base Number

