



CONSTRUCTION EQUIPMENT

285628 SOM-MACOMB CATERPILLAR 3412 081210309 - DIESEL ENGINE



Sample No: VCP416319
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 285628 SOM-MACOMB



SAMPLE INFORMATION

Sample Number	VCP416319	---	---	---
Sample Date	12 Jul 2023	---	---	---
Machine Hours	1223	---	---	---
Oil Hours	50	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

ALTA EQUIPMENT COMPANY - METRO WEST
56195 PONTIAC TRAIL
NEW HUDSON, MI
US 48165
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OIL CONDITION

Visc @ 100°C	cSt	█ 13.0	---	---	---
Base Number (BN)	mg KOH/g	█ 9.9	---	---	---
Oxidation (PA)	%	62	---	---	---

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.



CONTAMINATION

Soot %	%	█ 0.1	---	---	---
Nitration (PA)	%	52	---	---	---
Sulfation (PA)	%	53	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 5	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ 0	---	---	---



WEAR METALS

Iron	ppm	█ 1	---	---	---
Copper	ppm	█ 3	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ <1	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 57	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ <1	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	<1	---	---	---



ADDITIVES

Calcium	ppm	█ 1274	---	---	---
Magnesium	ppm	█ 940	---	---	---
Zinc	ppm	█ 1278	---	---	---
Phosphorus	ppm	█ 1056	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 15	---	---	---

Depot: VOLVO2990
Unique No: 10565409
Signed: Don Baldrige
Report Date: 25 Jul 2023



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GRAPHS

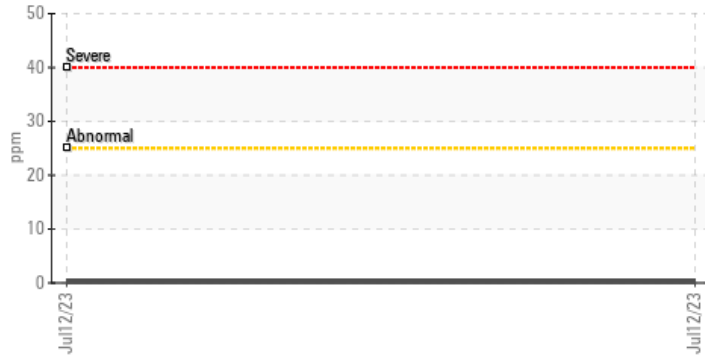
Iron (ppm)



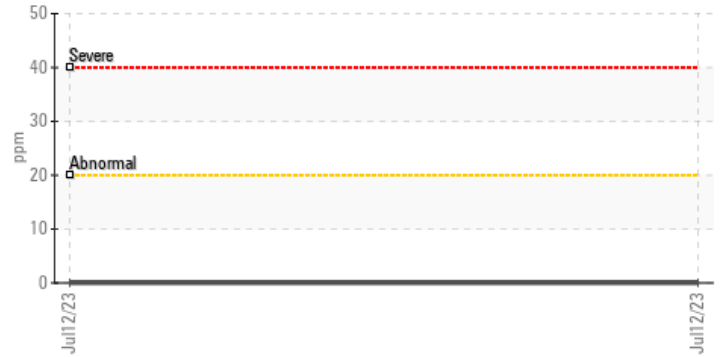
Lead (ppm)



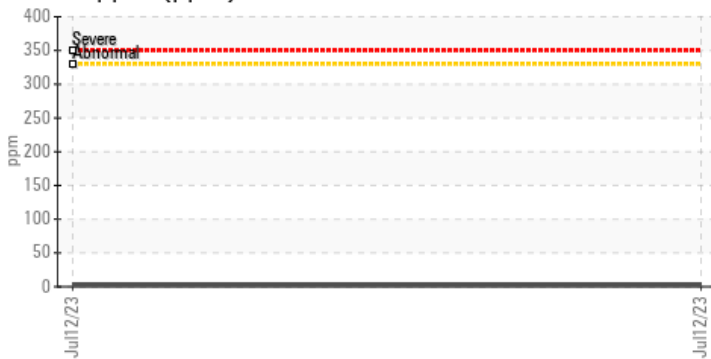
Aluminum (ppm)



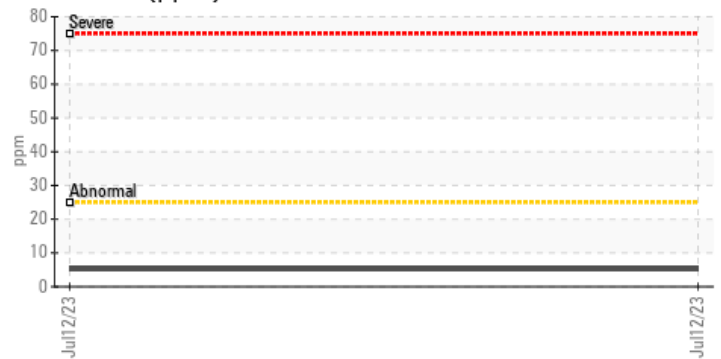
Chromium (ppm)



Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



Base Number

