OIL ANALYSIS REPORT

VOLVO PENTA

NADINE URCIUOLI KOHLER KOHLER 13EOZD (S/N NOT GIVEN) - GENSET

Sample No: VPA051506

Oil Type: DIESEL ENGINE OIL SAE 15W40

SAMPLE INFORMATION

Sample Number		**VPA051506**	---	---	---
Sample Date		**03 Aug 2023**	---	---	---
Machine Hours		**139**	---	---	---
Oil Hours		**0**	---	---	---
Oil Changed		**N/A**	---	---	---
Sample Status		**NORMAL**	---	---	---

OIL CONDITION

Visc @ 100°C	cSt	**13.8**	---	---	---
Base Number (BN)	mg KOH/g	**8.0**	---	---	---
Oxidation (PA)	%	**48**	---	---	---

CONTAMINATION

Soot %	%	**0.1**	---	---	---
Nitration (PA)	%	**51**	---	---	---
Sulfation (PA)	%	**47**	---	---	---
Glycol	%	**NEG**	---	---	---
Fuel	%	**<1.0**	---	---	---
Silicon	ppm	**8**	---	---	---
Sodium	ppm	**3**	---	---	---
Potassium	ppm	**5**	---	---	---

WEAR METALS

Iron	ppm	**2**	---	---	---
Copper	ppm	**<1**	---	---	---
Lead	ppm	**<1**	---	---	---
Tin	ppm	**0**	---	---	---
Aluminum	ppm	**<1**	---	---	---
Chromium	ppm	**0**	---	---	---
Molybdenum	ppm	**<1**	---	---	---
Nickel	ppm	**0**	---	---	---
Titanium	ppm	**<1**	---	---	---
Silver	ppm	**0**	---	---	---
Manganese	ppm	**<1**	---	---	---
Vanadium	ppm	**<1**	---	---	---

ADDITIVES

Calcium	ppm	**1290**	---	---	---
Magnesium	ppm	**684**	---	---	---
Zinc	ppm	**784**	---	---	---
Phosphorus	ppm	**654**	---	---	---
Barium	ppm	**0**	---	---	---
Boron	ppm	**97**	---	---	---

Helmuts Marine Service
619 Canal Street
SAN RAFAEL, CA
US 94901-3545
Contact: NADINE URCIUOLI
SERVICE@HELMUTSMARINE.COM
T: x:
F: x:

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.

Depot: VP152741
Unique No: 10587860
Signed: Don Baldridge
Report Date: 07 Aug 2023

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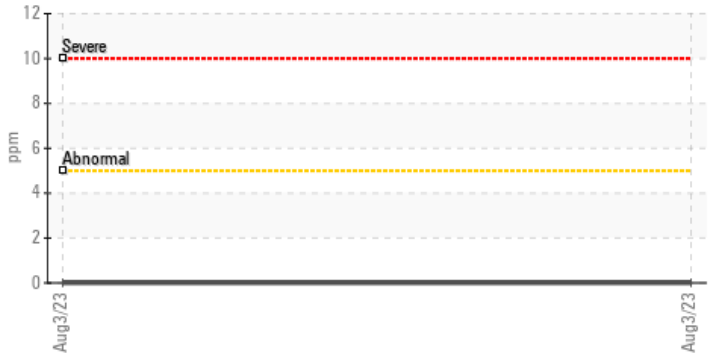
GRAPHS

Iron (ppm)

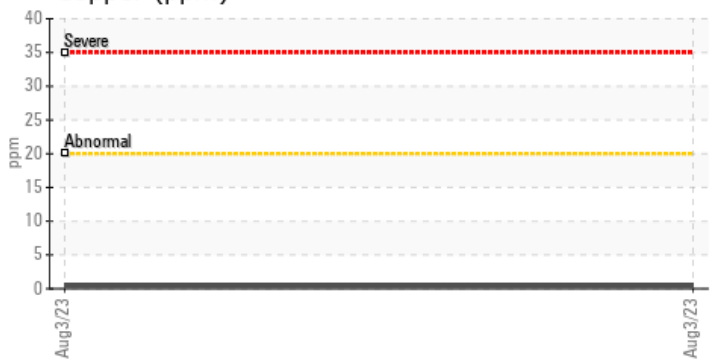
Lead (ppm)

Aluminum (ppm)

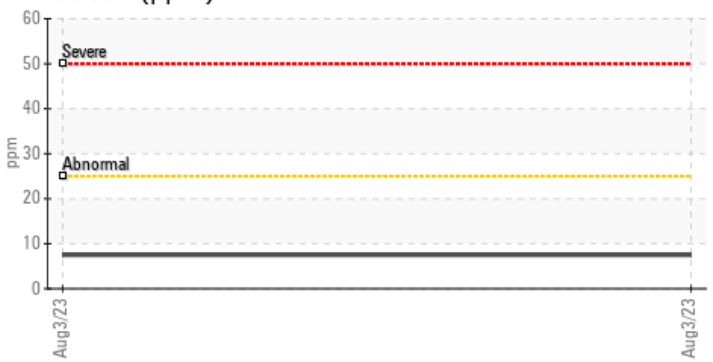
Chromium (ppm)



Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C

Base Number