OIL ANALYSIS REPORT

VOLVO PENTA

VOLVO PENTA 2071135392 - STARBOARD DIESEL ENGINE

Sample No: VPA049818

Oil Type: DIESEL ENGINE OIL SAE 15W40

SAMPLE INFORMATION

Sample Number		**VPA049818**	---	---	---
Sample Date		**09 Oct 2023**	---	---	---
Machine Hours		**667**	---	---	---
Oil Hours		**20**	---	---	---
Oil Changed		**Not Changd**	---	---	---
Sample Status		**SEVERE**	---	---	---

OIL CONDITION

Visc @ 100°C	cSt	**13.8**	---	---	---
Base Number (BN)	mg KOH/g	**7.7**	---	---	---
Oxidation (PA)	%	**59**	---	---	---

CONTAMINATION

Soot %	%	**0.1**	---	---	---
Nitration (PA)	%	**43**	---	---	---
Sulfation (PA)	%	**51**	---	---	---
Glycol	%	**NEG**	---	---	---
Fuel	%	**<1.0**	---	---	---
Silicon	ppm	**9**	---	---	---
Sodium	ppm	**111**	---	---	---
Potassium	ppm	**9**	---	---	---

WEAR METALS

Iron	ppm	**224**	---	---	---
Copper	ppm	**86**	---	---	---
Lead	ppm	**17**	---	---	---
Tin	ppm	**1**	---	---	---
Aluminum	ppm	**133**	---	---	---
Chromium	ppm	**7**	---	---	---
Molybdenum	ppm	**6**	---	---	---
Nickel	ppm	**2**	---	---	---
Titanium	ppm	**<1**	---	---	---
Silver	ppm	**2**	---	---	---
Manganese	ppm	**2**	---	---	---
Vanadium	ppm	**<1**	---	---	---

ADDITIVES

Calcium	ppm	**1558**	---	---	---
Magnesium	ppm	**131**	---	---	---
Zinc	ppm	**1031**	---	---	---
Phosphorus	ppm	**1027**	---	---	---
Barium	ppm	**<1**	---	---	---
Boron	ppm	**126**	---	---	---

FLORIDA DETROIT DIESEL - 531006 - 1125774
1128 CHESTNUT AVE
PANAMA CITY, FL
US 32401
Contact: RICHARD ROBERTS
ri.roberts@ssss.com
T: (850)763-7656
F:

Diagnosis

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.Piston, ring and cylinder wear is indicated. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: VPFLOPAN
Unique No: 10687239
Signed: Jonathan Hester
Report Date: 13 Oct 2023

OIL ANALYSIS REPORT

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GRAPHS