

# [MIKE KOKENGE] DETROIT DIESEL 06VF216807 - STARBOARD DIESEL ENGINE

**Sample No:** VPA032556

**Oil Type:** {unknown}

## SAMPLE INFORMATION

Sample Number	VPA032556	---	---	---
Sample Date	28 Aug 2020	---	---	---
Machine Hours	2808	---	---	---
Oil Hours	20	---	---	---
Oil Changed	Not Chngd	---	---	---
Sample Status	SEVERE	---	---	---

**Endor Marine LLC - Coastal Marine - 152124**  
 4300 11th Ave. NW  
 SEATTLE, WA  
 US 98107  
 Contact: Willow Yanarella  
 wyanarella@coastalmarineengine.com  
 T: (206)784-3703  
 F: (206)784-8823

## OIL CONDITION

Visc @ 100°C	cSt	█ 15.2	---	---	---
Oxidation (PA)	%	█ 34	---	---	---

## CONTAMINATION

Water	%	▲ 0.182	---	---	---
Soot %	%	█ 0.3	---	---	---
Nitration (PA)	%	█ 46	---	---	---
Sulfation (PA)	%	█ 40	---	---	---
Glycol	%	▲ 0.10	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 10	---	---	---
Sodium	ppm	▲ 150	---	---	---
Potassium	ppm	▲ 38	---	---	---

## WEAR METALS

Iron	ppm	█ 79	---	---	---
Copper	ppm	▲ 316	---	---	---
Lead	ppm	▲ 15	---	---	---
Tin	ppm	▲ 84	---	---	---
Aluminum	ppm	█ 2	---	---	---
Chromium	ppm	█ 2	---	---	---
Molybdenum	ppm	█ 110	---	---	---
Nickel	ppm	█ 2	---	---	---
Titanium	ppm	<1	---	---	---
Silver	ppm	█ <1	---	---	---
Manganese	ppm	1	---	---	---
Vanadium	ppm	0	---	---	---

## ADDITIVES

Calcium	ppm	█ 219	---	---	---
Magnesium	ppm	█ 895	---	---	---
Zinc	ppm	█ 896	---	---	---
Phosphorus	ppm	█ 720	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 43	---	---	---

## Diagnosis

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Bearing and/or bushing wear is indicated. Sodium and/or potassium levels are high. Test for glycol is positive. There is a trace of moisture present in the oil. The oil is no longer serviceable due to the presence of contaminants and wear.

**Depot:** VP794951  
**Unique No:** 9155960  
**Signed:** Doug Bogart  
**Report Date:** 04 Sep 2020

# GRAPHS

