

OIL ANALYSIS REPORT



KEANE H15461 CUMMINS 74262082 - STARBOARD DIESEL ENGINE

Sample No: VPA051402
Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA051402	VPA022005	---	---
Sample Date	02 Apr 2024	16 Nov 2018	---	---
Machine Hours	352	78	---	---
Oil Hours	352	78	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

Walstrom Marine - 767948

501 Bay Street
HARBOR SPRINGS, MI
US 49740
Contact: MARK LEWIS
mlewis@walstrom.com

T:
F:

OIL CONDITION

Visc @ 100°C	cSt	█ 14.3	█ 13.62	---	---
Base Number (BN)	mg KOH/g	█ 8.2	---	---	---
Oxidation (PA)	%	65	54	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.4	█ 0.5	---	---
Nitration (PA)	%	58	58	---	---
Sulfation (PA)	%	57	52	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 6	█ 19	---	---
Sodium	ppm	█ 4	█ 3	---	---
Potassium	ppm	█ 8	█ 0	---	---

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.

WEAR METALS

Iron	ppm	█ 10	█ 22	---	---
Copper	ppm	█ 29	█ 41	---	---
Lead	ppm	█ 1	█ 2	---	---
Tin	ppm	█ 1	█ 0	---	---
Aluminum	ppm	█ 2	█ 5	---	---
Chromium	ppm	█ 1	█ <1	---	---
Molybdenum	ppm	█ 5	█ 69	---	---
Nickel	ppm	█ 2	█ 1	---	---
Titanium	ppm	█ <1	█ <1	---	---
Silver	ppm	█ <1	█ <1	---	---
Manganese	ppm	█ <1	█ 2	---	---
Vanadium	ppm	<1	0	---	---

ADDITIVES

Calcium	ppm	█ 2055	█ 1770	---	---
Magnesium	ppm	█ 45	█ 517	---	---
Zinc	ppm	█ 1091	█ 1128	---	---
Phosphorus	ppm	█ 910	█ 960	---	---
Barium	ppm	█ <1	█ 5	---	---
Boron	ppm	█ 160	█ 39	---	---

Depot: VP154879
Unique No: 10967639
Signed: Don Baldrige
Report Date: 11 Apr 2024

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VOLVO PENTA

GRAPHS

