

OIL ANALYSIS REPORT

VOLVO PENTA

MIKE MANZ 503266 VOLVO PENTA 2006007128 - STARBOARD DIESEL ENGINE

Sample No: VPA061617

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA061617	VPA061599	---	---
Sample Date	28 Jun 2024	20 Jun 2024	---	---
Machine Hours	697	694	---	---
Oil Hours	0	90	---	---
Oil Changed	Not Changd	Not Changd	---	---
Sample Status	NORMAL	ABNORMAL	---	---

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OIL CONDITION

Visc @ 100°C	cSt	█ 13.5	█ 13.8	---	---
Base Number (BN)	mg KOH/g	█ 9.5	█ 8.5	---	---
Oxidation (PA)	%	55	78	---	---

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

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.1	█ 0.2	---	---
Nitration (PA)	%	43	79	---	---
Sulfation (PA)	%	51	63	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 3	█ 6	---	---
Sodium	ppm	█ 2	█ 3	---	---
Potassium	ppm	█ 1	█ 3	---	---

WEAR METALS

Iron	ppm	█ 4	█ 22	---	---
Copper	ppm	█ 2	█ 16	---	---
Lead	ppm	█ 0	█ 3	---	---
Tin	ppm	█ 0	█ 1	---	---
Aluminum	ppm	█ 15	▲ 93	---	---
Chromium	ppm	█ <1	█ 4	---	---
Molybdenum	ppm	█ 57	█ 89	---	---
Nickel	ppm	█ <1	█ 3	---	---
Titanium	ppm	█ 0	█ <1	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ 0	█ 1	---	---
Vanadium	ppm	0	<1	---	---

ADDITIVES

Calcium	ppm	█ 1026	█ 1501	---	---
Magnesium	ppm	█ 851	█ 746	---	---
Zinc	ppm	█ 1133	█ 906	---	---
Phosphorus	ppm	█ 943	█ 751	---	---
Barium	ppm	█ 0	█ 2	---	---
Boron	ppm	█ 36	█ 231	---	---

Depot: VP794951
Unique No: 11110447
Signed: Don Baldrige
Report Date: 05 Jul 2024

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GRAPHS

