

OIL ANALYSIS REPORT



MIKE S NORTHERN LIGHTS 0642-58268 - STARBOARD GENSET

Sample No: VPA051764

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

SAMPLE INFORMATION

Sample Number	VPA051764	VPA051742	VPA034006	VPA034051
Sample Date	10 Feb 2024	22 Oct 2023	18 Jun 2023	18 Nov 2022
Machine Hours	6878	6025	4997	4229
Oil Hours	0	500	0	0
Oil Changed	Changed	Not Changd	Not Changd	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

NEWT MARINE

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OIL CONDITION

Visc @ 100°C	cSt	12.7	12.7	13.0	13.0
Base Number (BN)	mg KOH/g	9.4	9.1	9.9	10.8
Oxidation (PA)	%	68	59	64	70

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	63	53	58	65
Sulfation (PA)	%	57	53	57	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	5	4	4	5
Sodium	ppm	3	2	<1	2
Potassium	ppm	2	3	0	8

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 suitable for further service.

WEAR METALS

Iron	ppm	8	8	9	13
Copper	ppm	<1	<1	0	2
Lead	ppm	11	5	3	6
Tin	ppm	0	0	0	<1
Aluminum	ppm	2	<1	2	2
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	67	62	69	66
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1280	1069	1248	1145
Magnesium	ppm	1224	1063	1156	1000
Zinc	ppm	1531	1359	1506	1306
Phosphorus	ppm	1159	1043	1157	1042
Barium	ppm	0	0	0	0
Boron	ppm	0	0	1	2

Depot: VP99298099
Unique No: 10915907
Signed: Don Baldrige
Report Date: 11 Mar 2024

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VOLVO PENTA

GRAPHS

