

OIL ANALYSIS REPORT



KATIE NORTHERN LIGHTS 0642-56786 - PORT GENSET

Sample No: VPA051768
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA051768	VPA038882	VPA038796	VPA038823
Sample Date	25 Mar 2024	03 Oct 2022	05 Jul 2022	14 Apr 2022
Machine Hours	2838	1806	1241	1057
Oil Hours	0	534	0	1057
Oil Changed	Changed	Not Changd	Changed	Changed
Sample Status	NORMAL	NORMAL	ATTENTION	ATTENTION

NEWT MARINE
 5 JONES ST
 DUBUQUE, IA
 US 52001
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OIL CONDITION

Visc @ 100°C	cSt	13.1	12.6	10.6	10.5
Base Number (BN)	mg KOH/g	9.1	10.6	9.1	10.2
Oxidation (PA)	%	71	64	77	76

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.1	0.2	0.2
Nitration (PA)	%	59	54	78	81
Sulfation (PA)	%	60	59	63	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	0.2
Silicon	ppm	13	5	16	16
Sodium	ppm	3	2	4	4
Potassium	ppm	2	1	<1	<1

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	34	18	47	41
Copper	ppm	17	13	203	180
Lead	ppm	4	1	4	3
Tin	ppm	1	<1	2	1
Aluminum	ppm	2	1	4	4
Chromium	ppm	<1	<1	<1	<1
Molybdenum	ppm	75	67	214	223
Nickel	ppm	<1	<1	0	0
Titanium	ppm	<1	<1	<1	<1
Silver	ppm	0	0	<1	<1
Manganese	ppm	1	<1	4	4
Vanadium	ppm	<1	0	<1	0

ADDITIVES

Calcium	ppm	1182	1150	1480	1530
Magnesium	ppm	1020	993	827	851
Zinc	ppm	1340	1308	1055	1005
Phosphorus	ppm	1155	1077	863	925
Barium	ppm	2	0	2	0
Boron	ppm	4	9	193	214

Depot: VP99298099
Unique No: 11022892
Signed: Sean Felton
Report Date: 14 May 2024

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VOLVO PENTA

GRAPHS

