

OIL ANALYSIS REPORT

VOLVO PENTA

DANIEL HUTCHINSON HUTCH JAGUAR HCP12200 - DIESEL ENGINE

Sample No: VPA041594
Oil Type: RAVENOL 0W30

SAMPLE INFORMATION

Sample Number	VPA041594	VPA038597	VPA037613	VPA038599
Sample Date	01 Aug 2023	25 Mar 2023	14 Aug 2022	06 May 2022
Machine Hours	71000	68631	5168	58450
Oil Hours	3000	5013	5168	0
Oil Changed	Not Changd	Not Changd	Changed	Not Changd
Sample Status	MARGINAL	ABNORMAL	NORMAL	NORMAL

Helmut's Marine Service
619 Canal Street
SAN RAFAEL, CA
US 94901-3545
Contact: NADINE URUIOLI
SERVICE@HELMUTSMARINE.COM
T: x:
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OIL CONDITION

Visc @ 100°C	cSt	9.63	9.2	10.1	9.9
Base Number (BN)	mg KOH/g	2.5	2.5	6.7	8.0
Oxidation (PA)	%	171	173	78	63

CONTAMINATION

Soot %	%	0.3	0.6	0.6	0.1
Nitration (PA)	%	73	90	91	66
Sulfation (PA)	%	100	102	58	48
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	2.8	4.6	<1.0	<1.0
Silicon	ppm	5	6	3	2
Sodium	ppm	13	11	5	3
Potassium	ppm	3	2	2	1

WEAR METALS

Iron	ppm	48	82	55	12
Copper	ppm	2	4	3	1
Lead	ppm	<1	0	0	1
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	29	54	45	7
Chromium	ppm	2	3	2	<1
Molybdenum	ppm	90	78	16	15
Nickel	ppm	<1	<1	<1	<1
Titanium	ppm	1	5	40	38
Silver	ppm	<1	0	<1	0
Manganese	ppm	1	2	1	<1
Vanadium	ppm	<1	<1	<1	<1

ADDITIVES

Calcium	ppm	1855	1888	1739	1832
Magnesium	ppm	23	10	11	11
Zinc	ppm	862	926	812	842
Phosphorus	ppm	718	757	693	750
Barium	ppm	0	0	0	0
Boron	ppm	82	72	82	78

Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. The condition of the oil is acceptable for the time in service.

Depot: VP152741
Unique No: 10608495
Signed: Doug Bogart
Report Date: 18 Aug 2023

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GRAPHS

