

OIL ANALYSIS REPORT



DANIEL HUTCHINSON HUTCH JAGUAR HCP12200 - DIESEL ENGINE

Sample No: VPA059537
Oil Type: RAVENOL 0W30

SAMPLE INFORMATION

Sample Number	VPA059537	VPA060181	VPA041594	VPA038597
Sample Date	08 Jan 2024	13 Nov 2023	01 Aug 2023	25 Mar 2023
Machine Hours	79222	75000	71000	68631
Oil Hours	4000	4000	3000	5013
Oil Changed	Not Changd	Not Changd	Not Changd	Not Changd
Sample Status	ABNORMAL	ABNORMAL	MARGINAL	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	9.4	9.3	9.63	9.2
Base Number (BN)	mg KOH/g	2.2	1.3	2.5	2.5
Oxidation (PA)	%	163	189	171	173

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.3	0.6	0.3	0.6
Nitration (PA)	%	69	88	73	90
Sulfation (PA)	%	94	109	100	102
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	4.2	2.8	4.6
Silicon	ppm	9	7	5	6
Sodium	ppm	4	13	13	11
Potassium	ppm	<1	5	3	2

Diagnosis

The oil is near the end of it's useful service life, recommend schedule an oil change. 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 level is low. The condition of the oil is acceptable for the time in service.

WEAR METALS

Iron	ppm	47	108	48	82
Copper	ppm	2	4	2	4
Lead	ppm	<1	0	<1	0
Tin	ppm	0	0	<1	0
Aluminum	ppm	31	70	29	54
Chromium	ppm	1	3	2	3
Molybdenum	ppm	73	90	90	78
Nickel	ppm	<1	2	<1	<1
Titanium	ppm	<1	2	1	5
Silver	ppm	0	0	<1	0
Manganese	ppm	<1	2	1	2
Vanadium	ppm	<1	<1	<1	<1

ADDITIVES

Calcium	ppm	1122	1718	1855	1888
Magnesium	ppm	444	9	23	10
Zinc	ppm	804	836	862	926
Phosphorus	ppm	692	675	718	757
Barium	ppm	0	0	0	0
Boron	ppm	81	72	82	72

Depot: VP152741
Unique No: 10832032
Signed: Jonathan Hester
Report Date: 17 Jan 2024

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VOLVO PENTA

GRAPHS

