MOB I

VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
NADINE URCIUOLI [DICK ROBINSON]
Machine Id
VOLVO PENTA A1089615
Component
Center Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (2 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Cylinder, crank, or cam shaft wear is indicated. Piston and ring wear is indicated. Component wear metal level(s) high for break in.

CONTAMINATION

There is no indication of any contamination in the oil.

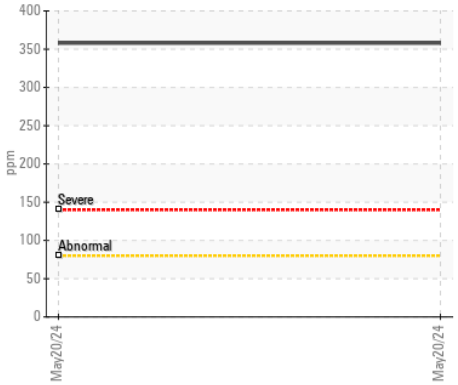
FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

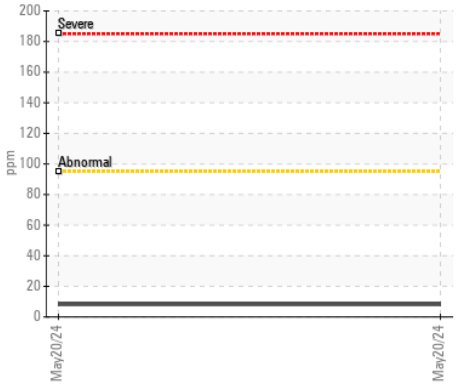
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA053289	---	---
Sample Date		Client Info		20 May 2024	---	---
Machine Age	hrs	Client Info		148	---	---
Oil Age	hrs	Client Info		148	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				ABNORMAL	---	---
Iron	ppm	ASTM D5185m	>80	▲ 358	---	---
Chromium	ppm	ASTM D5185m	>6	▲ 27	---	---
Nickel	ppm	ASTM D5185m	>2	▲ 7	---	---
Titanium	ppm	ASTM D5185m	>2	<1	---	---
Silver	ppm	ASTM D5185m	>2	<1	---	---
Aluminum	ppm	ASTM D5185m	>20	▲ 78	---	---
Lead	ppm	ASTM D5185m	>95	8	---	---
Copper	ppm	ASTM D5185m	>85	48	---	---
Tin	ppm	ASTM D5185m	>9	4	---	---
Vanadium	ppm	ASTM D5185m		<1	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Silicon	ppm	ASTM D5185m	>25	45	---	---
Potassium	ppm	ASTM D5185m	>20	25	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.6	---	---
Nitration	Abs/cm	*ASTM D7624	>20	7.4	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.3	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---
Sodium	ppm	ASTM D5185m		8	---	---
Boron	ppm	ASTM D5185m	2.5	6	---	---
Barium	ppm	ASTM D5185m	0.0	2	---	---
Molybdenum	ppm	ASTM D5185m	0.7	85	---	---
Manganese	ppm	ASTM D5185m	0.0	4	---	---
Magnesium	ppm	ASTM D5185m	256	1326	---	---
Calcium	ppm	ASTM D5185m	2057	1432	---	---
Phosphorus	ppm	ASTM D5185m	935	1542	---	---
Zinc	ppm	ASTM D5185m	1223	1718	---	---
Sulfur	ppm	ASTM D5185m	4079	4758	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.2	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	13.5	---	---

Ferrous Alloys

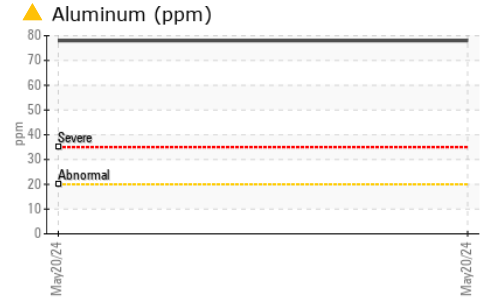
Iron (ppm)



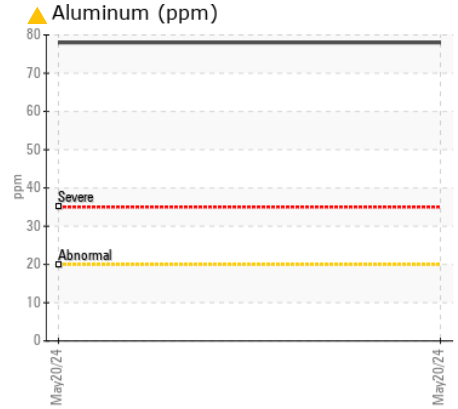
Lead (ppm)



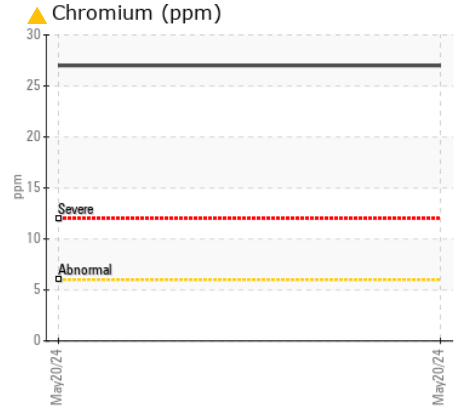
Aluminum (ppm)



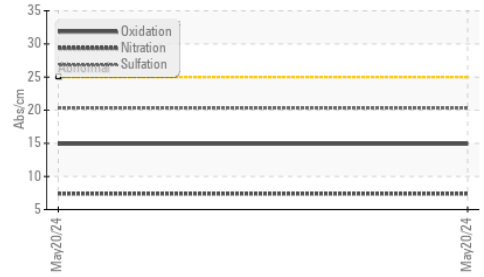
Aluminum (ppm)



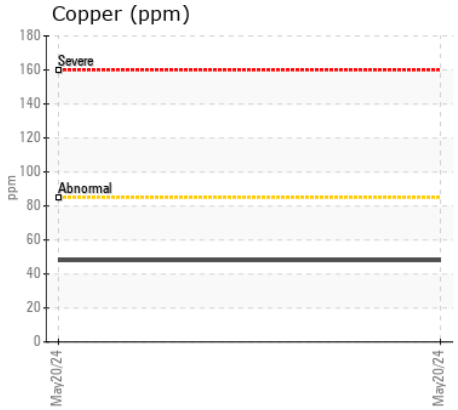
Chromium (ppm)



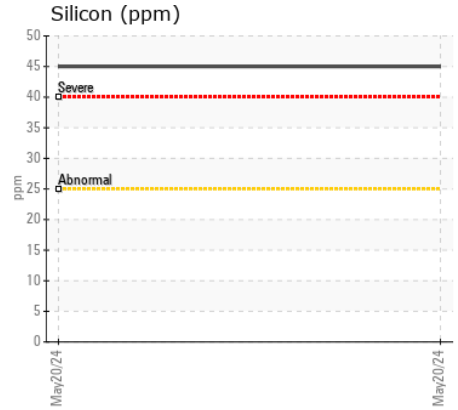
FT-IR (Direct Trend)



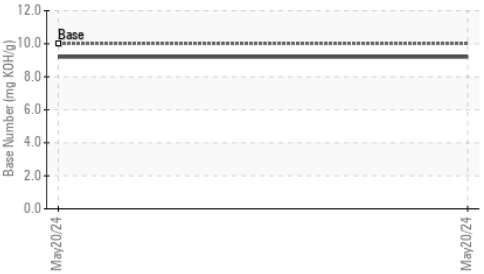
Copper (ppm)



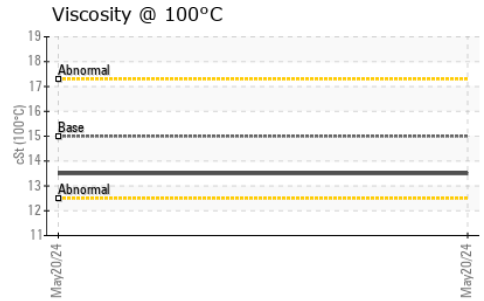
Silicon (ppm)



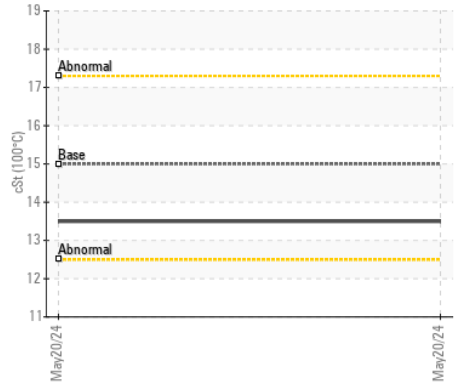
Base Number



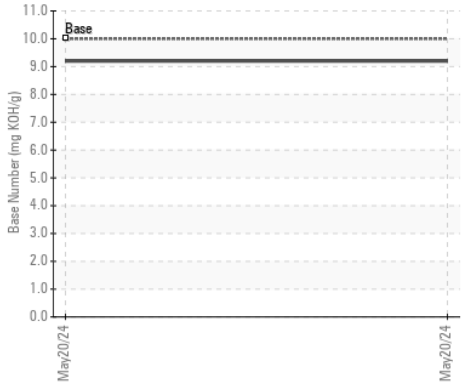
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA053289 **Received** : 30 May 2024
Lab Number : 06194939 **Tested** : 31 May 2024
Unique Number : 11057062 **Diagnosed** : 31 May 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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