



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
GARY SWEARINGEN [7719584]

Machine Id
VOLVO PENTA A1118518

Component
Center Diesel Engine

Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (3 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA050845	VPA056775	VPA025737
Sample Date		Client Info		11 Apr 2024	01 May 2023	09 Feb 2022
Machine Age	hrs	Client Info		476	361	185
Oil Age	hrs	Client Info		476	0	185
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ATTENTION	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	16	23	31
Chromium	ppm	ASTM D5185m	>6	2	3	3
Nickel	ppm	ASTM D5185m	>2	2	5	4
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	8	15	27
Lead	ppm	ASTM D5185m	>95	2	4	7
Copper	ppm	ASTM D5185m	>85	6	11	19
Tin	ppm	ASTM D5185m	>9	1	2	6
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

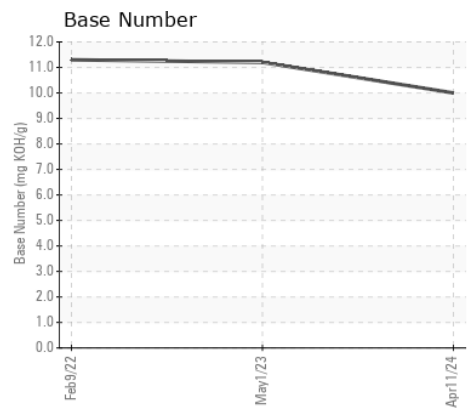
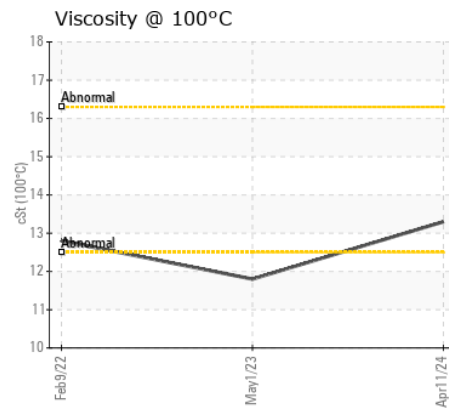
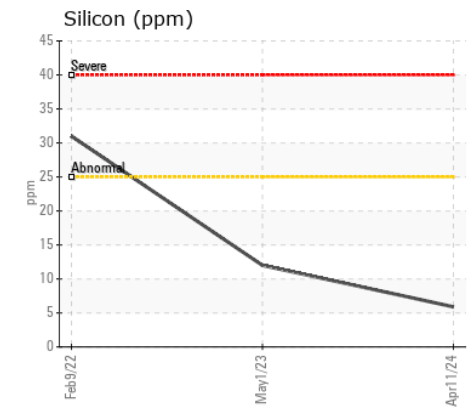
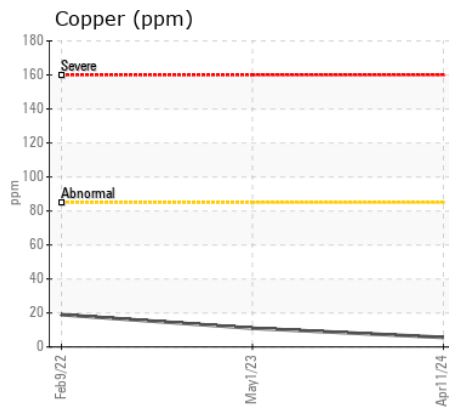
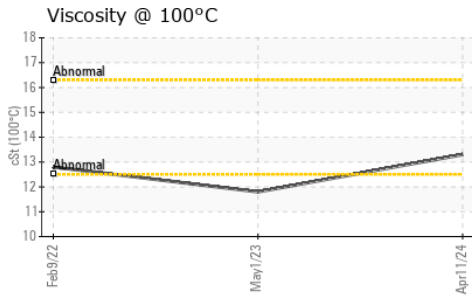
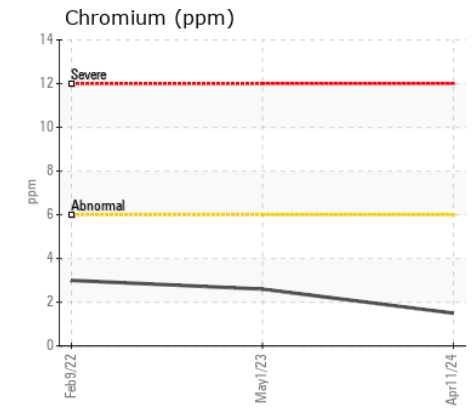
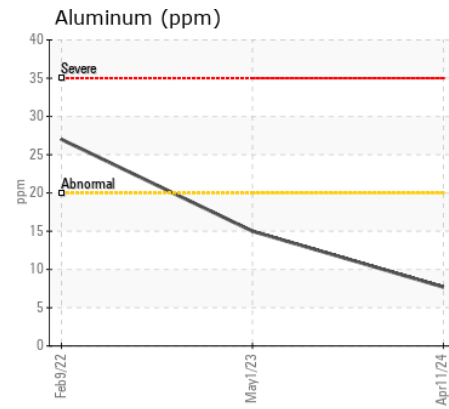
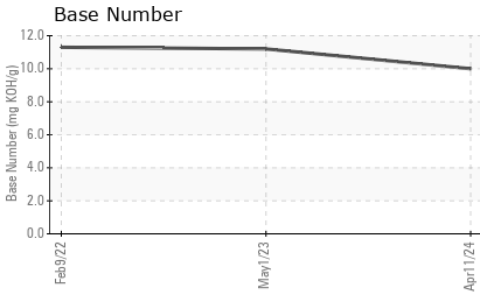
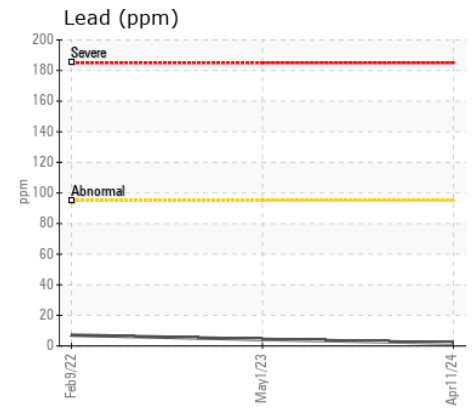
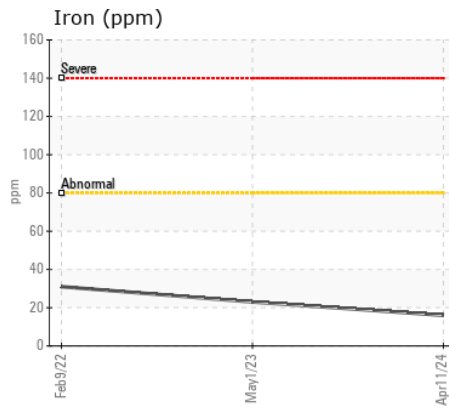
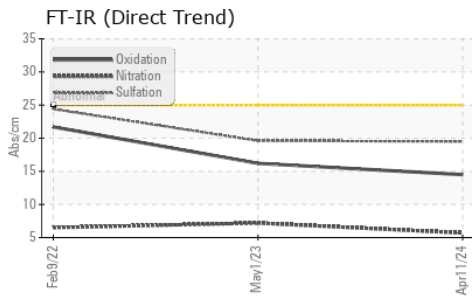
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	12	31
Potassium	ppm	ASTM D5185m	>20	0	3	2
Fuel		WC Method	>4.0	<1.0	0.4	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.5	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	5.7	7.2	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	19.6	24.4
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	41	5
Boron	ppm	ASTM D5185m		11	9	55
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		60	57	41
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m		909	909	526
Calcium	ppm	ASTM D5185m		1182	1229	1713
Phosphorus	ppm	ASTM D5185m		1045	1002	957
Zinc	ppm	ASTM D5185m		1197	1246	1103
Sulfur	ppm	ASTM D5185m		3611	3490	2681
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.5	16.2	21.7
Base Number (BN)	mg KOH/g	ASTM D2896		10.0	11.2	11.3
Visc @ 100°C	cSt	ASTM D445		13.3	11.8	12.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA050845 **Received** : 23 Apr 2024
Lab Number : 06157338 **Tested** : 24 Apr 2024
Unique Number : 10992761 **Diagnosed** : 25 Apr 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: TBN)

Pacific Power Group - VP981534
 7215 S 228th St
 Kent, WA
 US 98032
 Contact: PAT RYAN
 pryan@pacificpowergroup.com

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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