



VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO PENTA A1072862
Component
Starboard Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA059407	VPA036555	VPA048224
Sample Date		Client Info		09 Jul 2024	29 Aug 2023	11 Apr 2022
Machine Age	hrs	Client Info		869	768	540
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	15	20	23
Chromium	ppm	ASTM D5185m	>6	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	2	1
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>95	<1	<1	2
Copper	ppm	ASTM D5185m	>85	5	7	10
Tin	ppm	ASTM D5185m	>9	<1	<1	1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

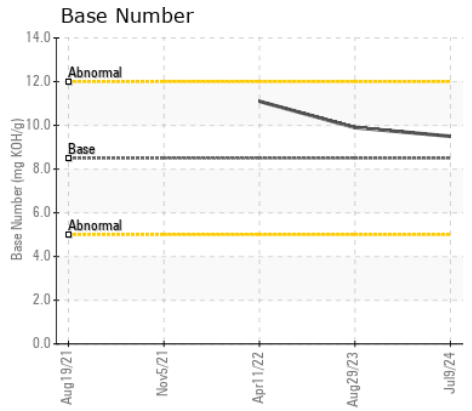
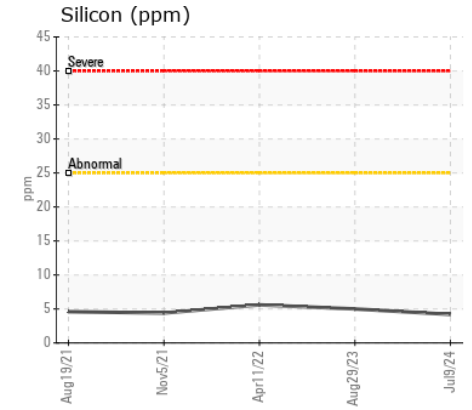
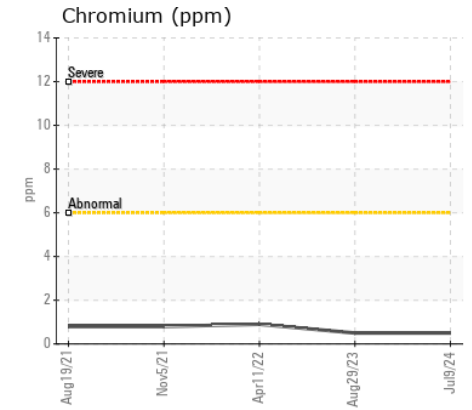
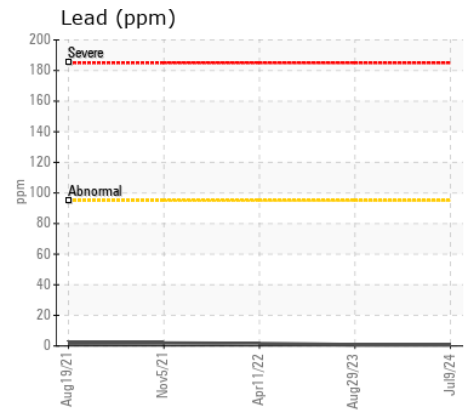
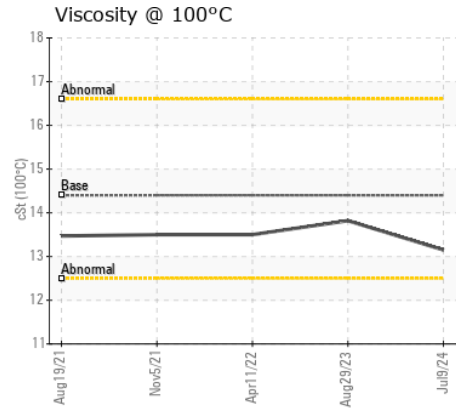
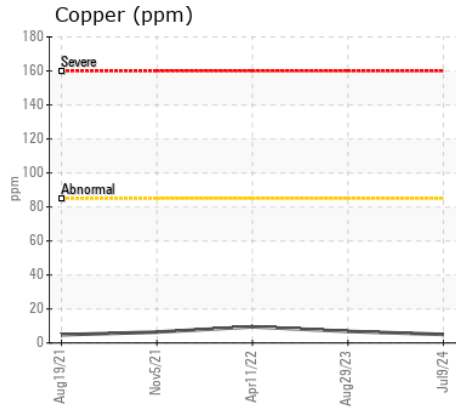
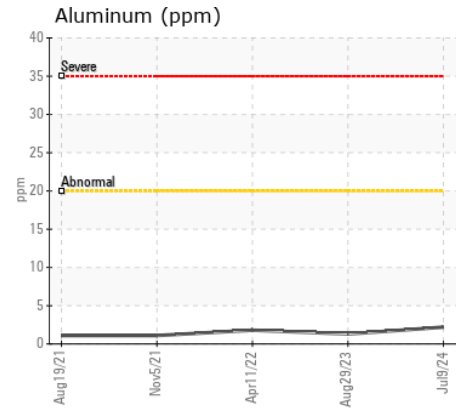
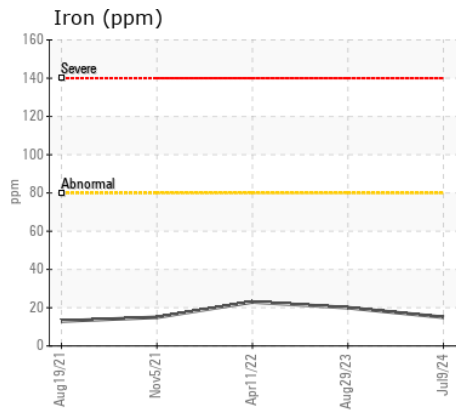
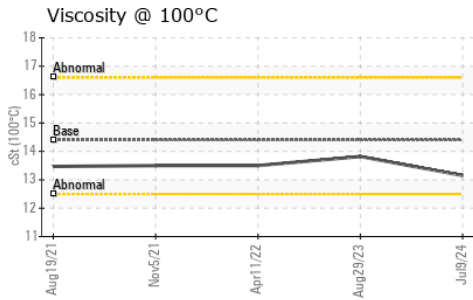
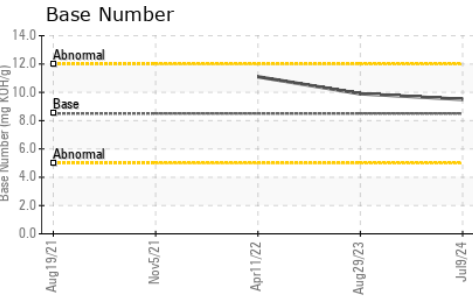
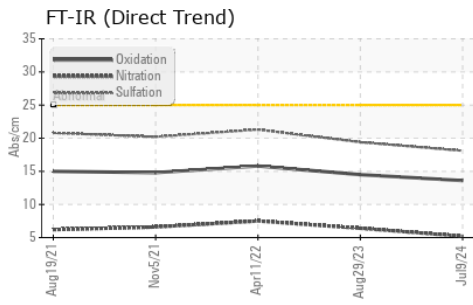
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	6
Potassium	ppm	ASTM D5185m	>20	2	<1	0
Fuel		WC Method	>4.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.1	0.2	0.5
Nitration	Abs/cm	*ASTM D7624	>20	5.2	6.4	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	19.4	21.3
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 condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>158	<1	0	2
Boron	ppm	ASTM D5185m	250	2	6	8
Barium	ppm	ASTM D5185m	10	1	2	0
Molybdenum	ppm	ASTM D5185m	100	65	63	62
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	945	936	1001
Calcium	ppm	ASTM D5185m	3000	1084	1120	1145
Phosphorus	ppm	ASTM D5185m	1150	920	1075	1110
Zinc	ppm	ASTM D5185m	1350	1222	1241	1216
Sulfur	ppm	ASTM D5185m	4250	3122	3661	2916
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	14.5	15.8
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.5	9.9	11.1
Visc @ 100°C	cSt	ASTM D445	14.4	13.15	13.82	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA059407 **Received** : 10 Jul 2024
Lab Number : 06232754 **Tested** : 10 Jul 2024
Unique Number : 11116247 **Diagnosed** : 10 Jul 2024 - Doug Bogart
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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