MOB I

VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
ASTLE [NICK/23526]
Machine Id
VOLVO PENTA A1099682
Component
Port Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The nickel level is abnormal. All other component wear rates are normal.

CONTAMINATION

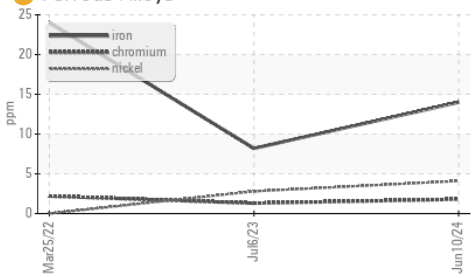
There is no indication of any contamination in the oil.

FLUID CONDITION

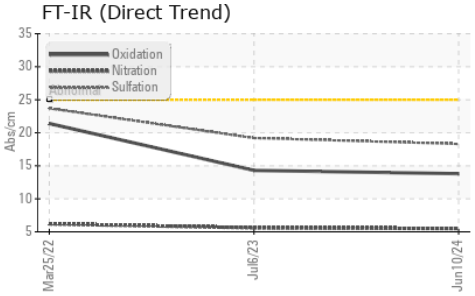
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA06221973	VPA048626	VPA048355
Sample Date		Client Info		10 Jun 2024	06 Jul 2023	25 Mar 2022
Machine Age	hrs	Client Info		0	984	197
Oil Age	hrs	Client Info		0	0	197
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>80	14	8	24
Chromium	ppm	ASTM D5185m	>6	2	1	2
Nickel	ppm	ASTM D5185m	>2	4	3	0
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	7	2	13
Lead	ppm	ASTM D5185m	>95	<1	1	5
Copper	ppm	ASTM D5185m	>85	3	3	15
Tin	ppm	ASTM D5185m	>9	<1	0	3
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>25	4	3	24
Potassium	ppm	ASTM D5185m	>20	2	4	4
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	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	5.5	5.6	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	19.2	23.7
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
Sodium	ppm	ASTM D5185m	>216	5	2	<1
Boron	ppm	ASTM D5185m	250	<1	3	61
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	61	57	41
Manganese	ppm	ASTM D5185m		<1	<1	1
Magnesium	ppm	ASTM D5185m	450	1057	974	495
Calcium	ppm	ASTM D5185m	3000	1088	1071	1717
Phosphorus	ppm	ASTM D5185m	1150	1052	1018	965
Zinc	ppm	ASTM D5185m	1350	1311	1254	1132
Sulfur	ppm	ASTM D5185m	4250	3583	4000	2938
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	14.3	21.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.7	10.2	11.2
Visc @ 100°C	cSt	ASTM D445	14.4	13.1	12.8	12.7

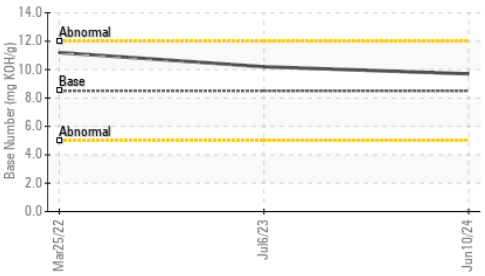
Ferrous Alloys



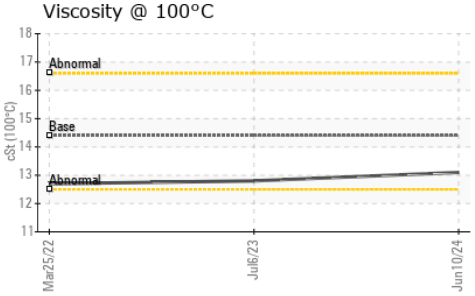
FT-IR (Direct Trend)



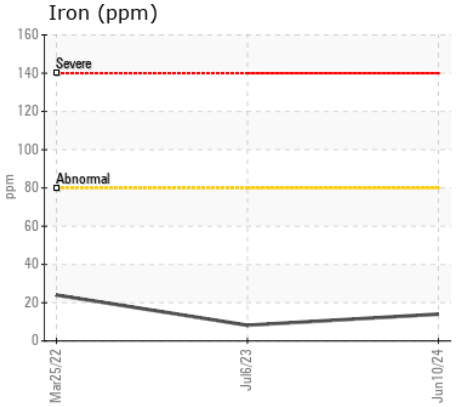
Base Number



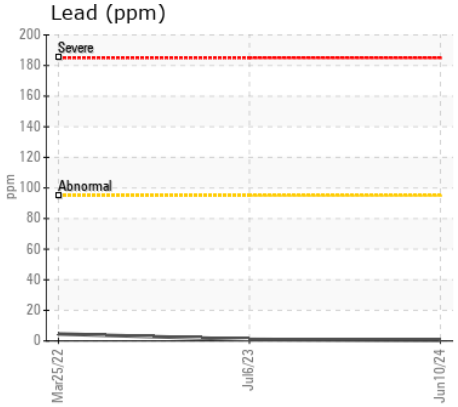
Viscosity @ 100°C



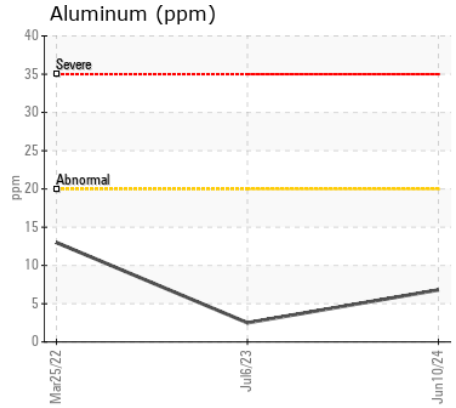
Iron (ppm)



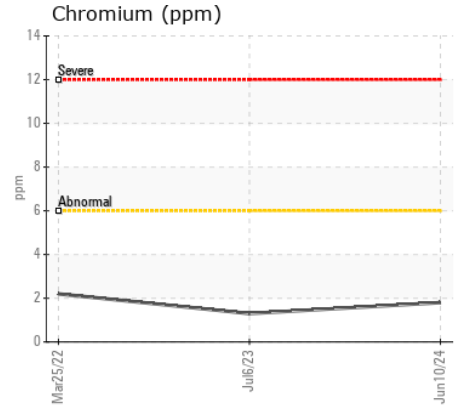
Lead (ppm)



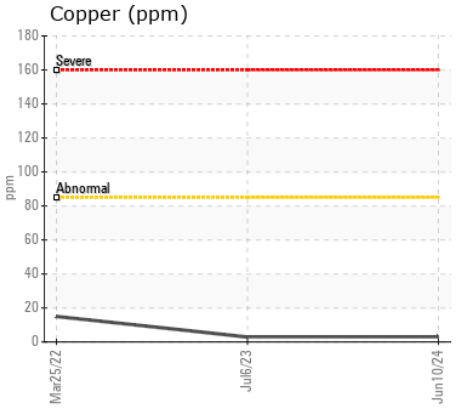
Aluminum (ppm)



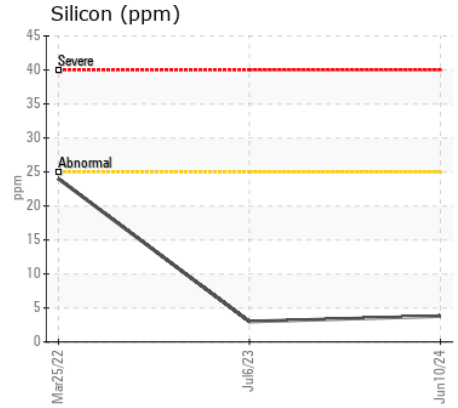
Chromium (ppm)



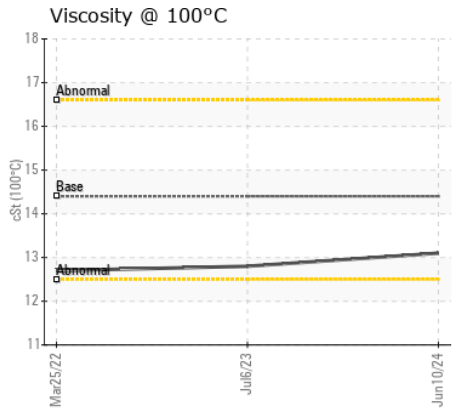
Copper (ppm)



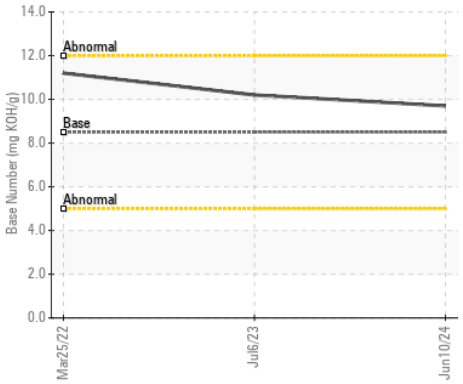
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA06221973
Lab Number : 06221973
Unique Number : 11100170
Test Package : MOB 1 (Additional Tests: TBN)

Received : 27 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 28 Jun 2024 - Don Baldridge

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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