



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area  
**VANQUISH 58**  
Machine Id  
**VOLVO PENTA 7011474059**  
Component  
**Port Diesel Engine**  
Fluid  
**VOLVO PENTA SAE 15W40 (10 GAL)**

**RECOMMENDATION**

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA049950	VPA046460	VPA046178
Sample Date		Client Info		02 May 2024	21 Dec 2022	03 Nov 2022
Machine Age	hrs	Client Info		2023	1552	1493
Oil Age	hrs	Client Info		0	0	100
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	N/A	Not Changd
Filter Changed		Client Info		Changed	N/A	N/A
Sample Status				ABNORMAL	SEVERE	MARGINAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	9	2	4
Chromium	ppm	ASTM D5185m	>6	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	0	<1
Lead	ppm	ASTM D5185m	>95	<1	0	<1
Copper	ppm	ASTM D5185m	>85	42	6	13
Tin	ppm	ASTM D5185m	>9	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

**CONTAMINATION**

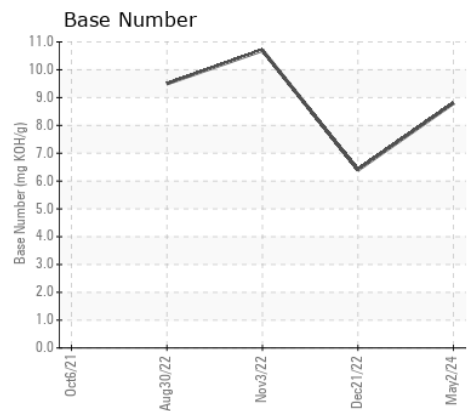
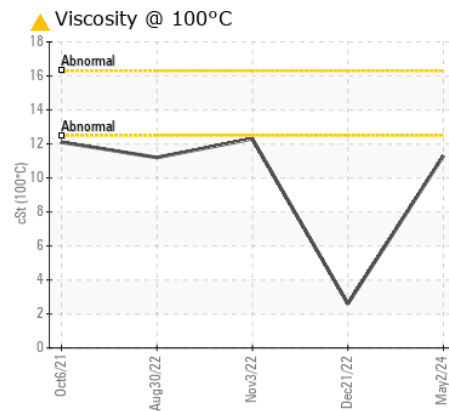
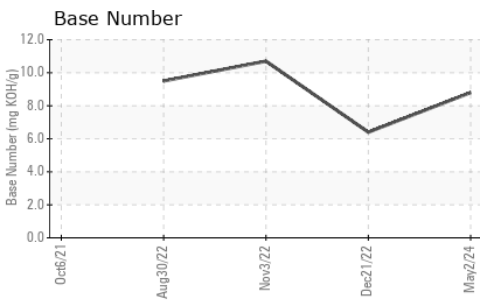
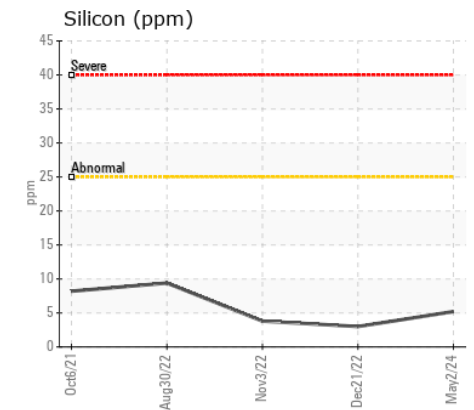
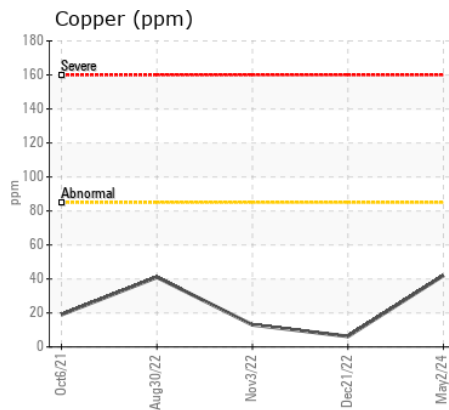
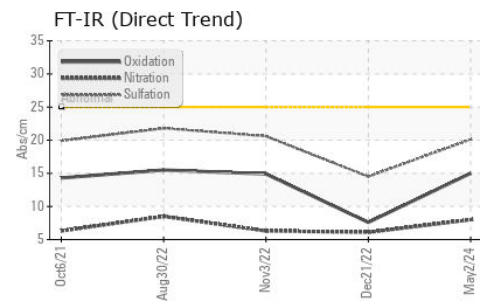
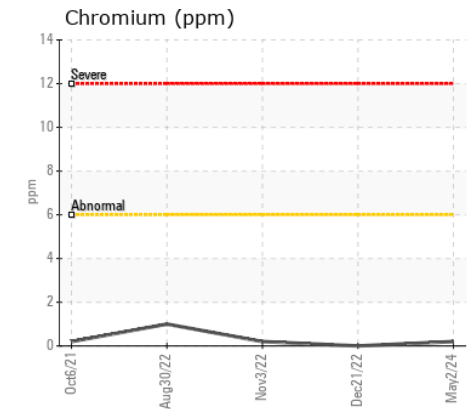
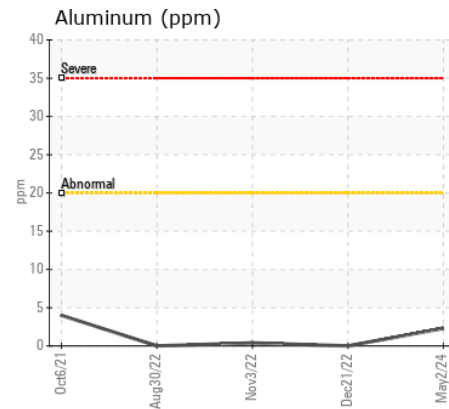
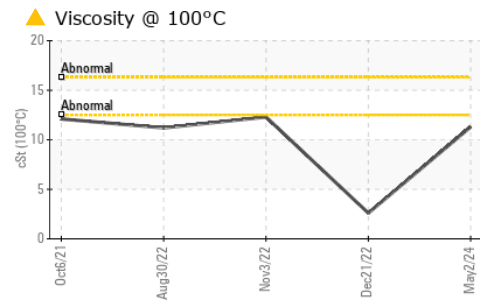
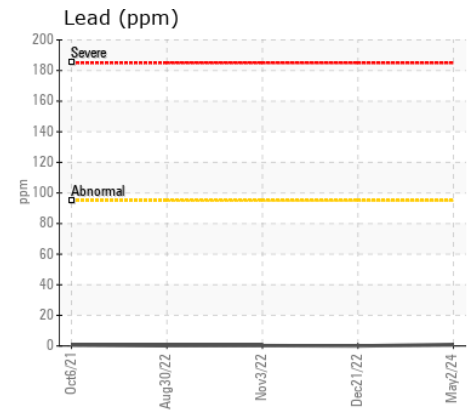
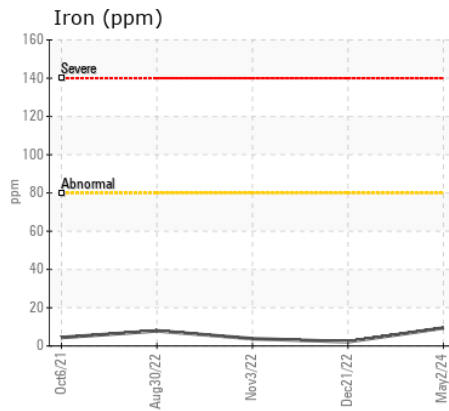
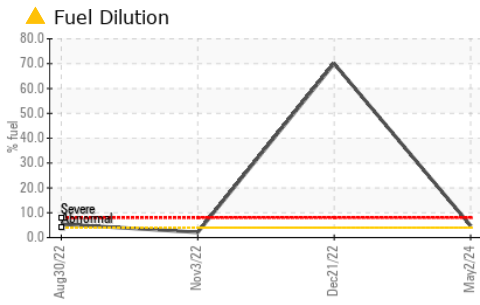
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>25	5	3	4
Potassium	ppm	ASTM D5185m	>20	2	<1	2
Fuel	%	ASTM D3524	>4.0	▲ 4.8	▲ 70	▲ 2.1
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.3	0.1	0.3
Nitration	Abs/cm	*ASTM D7624	>20	8.0	6.1	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	14.5	20.6
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**

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<1	0	0
Boron	ppm	ASTM D5185m		10	0	1
Barium	ppm	ASTM D5185m		0	0	2
Molybdenum	ppm	ASTM D5185m		58	● 22	58
Manganese	ppm	ASTM D5185m		0	0	<1
Magnesium	ppm	ASTM D5185m		906	● 344	881
Calcium	ppm	ASTM D5185m		1056	● 406	1075
Phosphorus	ppm	ASTM D5185m		920	● 387	1015
Zinc	ppm	ASTM D5185m		1244	● 466	1195
Sulfur	ppm	ASTM D5185m		2936	● 1333	3363
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.0	7.6	14.9
Base Number (BN)	mg KOH/g	ASTM D2896		8.8	6.4	10.7
Visc @ 100°C	cSt	ASTM D445		▲ 11.3	▲ 2.6	▲ 12.3



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA049950 **Received** : 26 Jun 2024  
**Lab Number** : 06220985 **Tested** : 01 Jul 2024  
**Unique Number** : 11099182 **Diagnosed** : 01 Jul 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel, TBN )

**Marine International Diesels Inc.**  
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Certificate L2367  
 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)