



VOLVO PENTA

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
FREE TRADE 255
 Machine Id
CUMMINS/ONAN K180453944
 Component
Genset
 Fluid
DIESEL ENGINE OIL SAE 15W40 (5 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA062996	VPA041428	---
Sample Date		Client Info		28 May 2024	15 Jun 2023	---
Machine Age	hrs	Client Info		0	888	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Not Changed	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	0	3	---
Chromium	ppm	ASTM D5185m	>4	<1	0	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m	>5	0	0	---
Aluminum	ppm	ASTM D5185m	>12	2	<1	---
Lead	ppm	ASTM D5185m	>17	0	0	---
Copper	ppm	ASTM D5185m	>70	0	<1	---
Tin	ppm	ASTM D5185m	>15	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

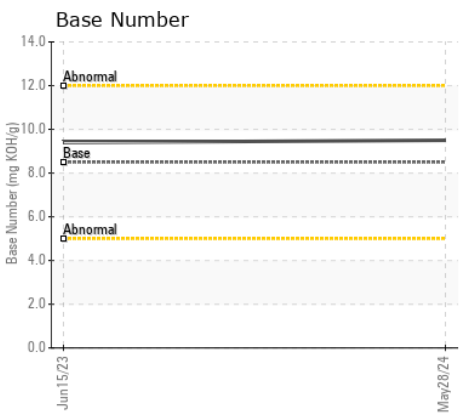
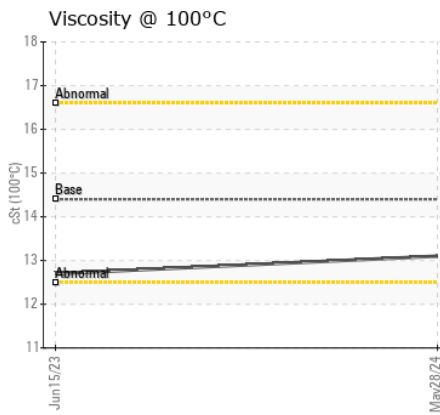
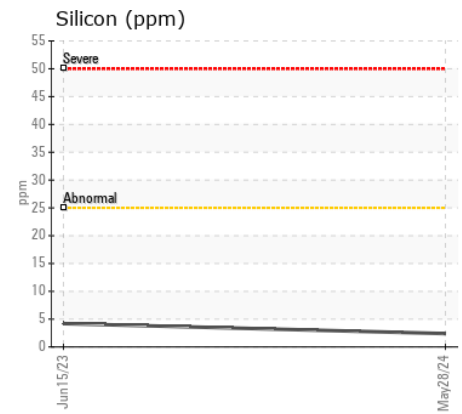
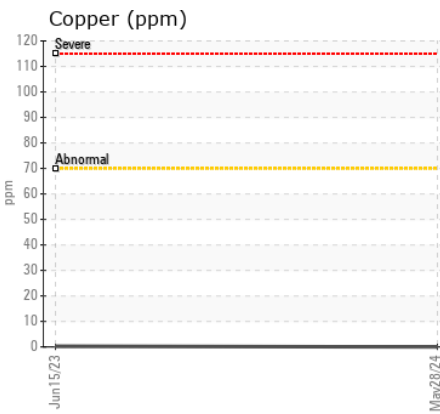
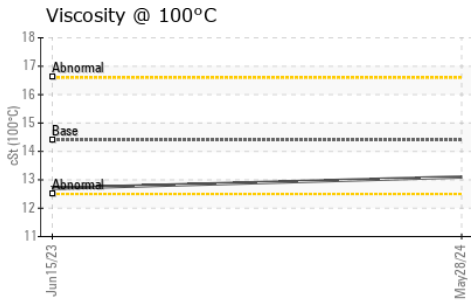
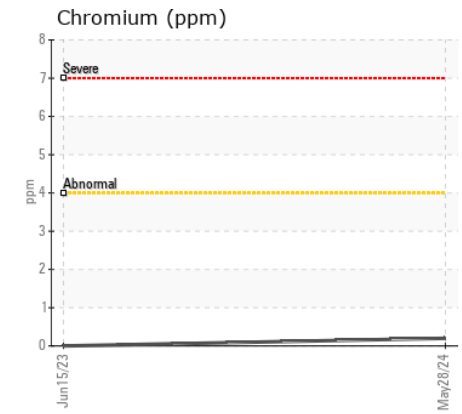
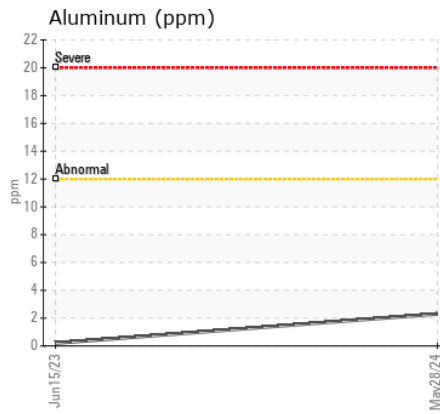
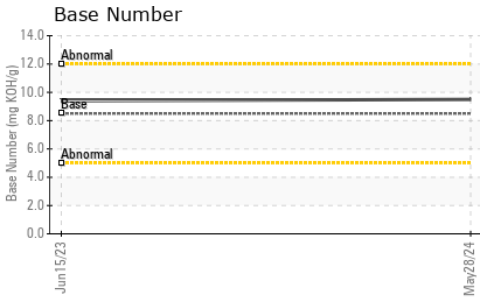
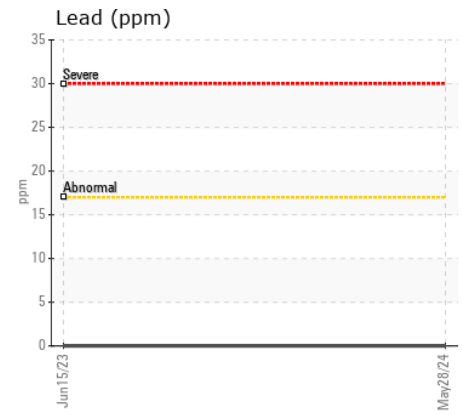
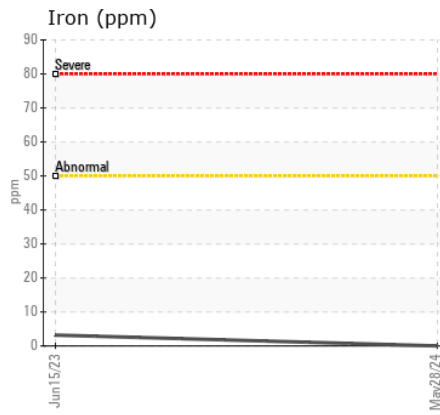
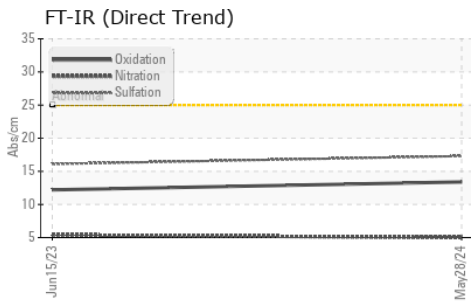
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	2	4	---
Potassium	ppm	ASTM D5185m	>20	1	2	---
Fuel		WC Method	>4.0	<1.0	<1.0	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	5.0	5.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.3	16.1	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	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	>158	2	3	---
Boron	ppm	ASTM D5185m	250	3	0	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	58	62	---
Manganese	ppm	ASTM D5185m		0	0	---
Magnesium	ppm	ASTM D5185m	450	932	1057	---
Calcium	ppm	ASTM D5185m	3000	1051	1265	---
Phosphorus	ppm	ASTM D5185m	1150	927	1141	---
Zinc	ppm	ASTM D5185m	1350	1246	1427	---
Sulfur	ppm	ASTM D5185m	4250	3046	4292	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.4	12.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.5	9.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.1	12.7	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA062996 **Received** : 26 Jun 2024
Lab Number : 06220989 **Tested** : 27 Jun 2024
Unique Number : 11099186 **Diagnosed** : 27 Jun 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

Marine International Diesels Inc.
 3600 HACIENDA BLVD UNIT G
 DAVIE, FL
 US 33314
 Contact: ASHANTI BURKE
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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)