



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**TIFFINE TOLLEN [SAM]**  
Machine Id  
**CUMMINS/ONAN TIFFINE TOLLEN (S/N N/A)**  
Component  
**Genset**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (2 GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA059161	---	---
Sample Date		Client Info		22 Feb 2024	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

### WEAR

All component wear rates are normal.

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

### CONTAMINATION

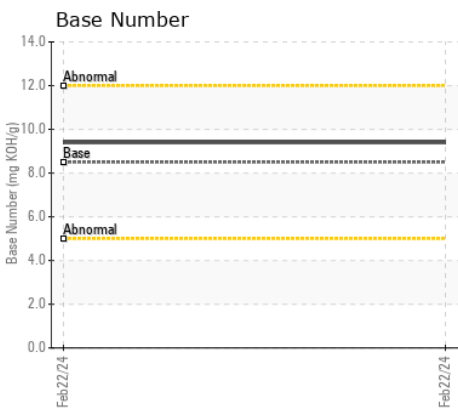
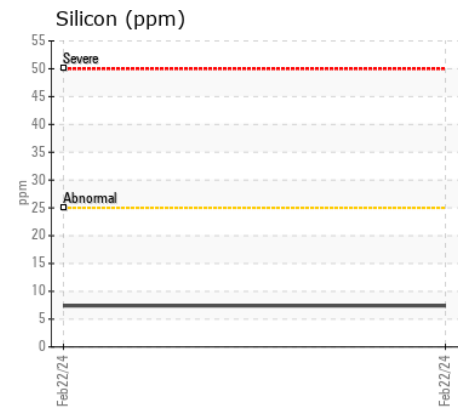
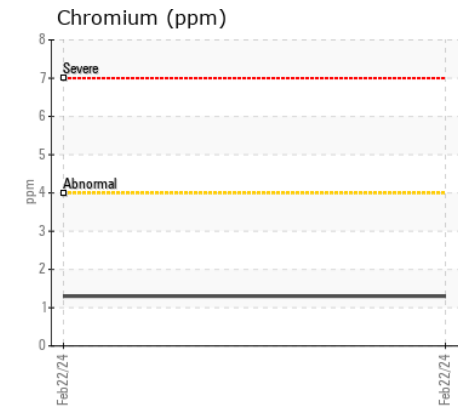
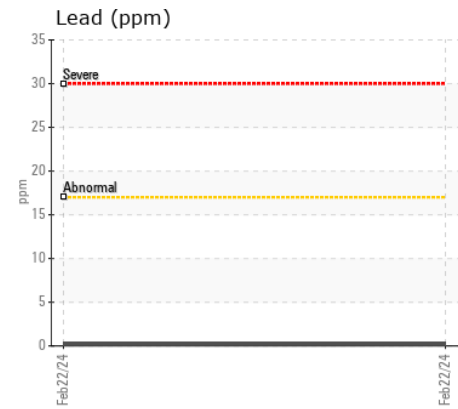
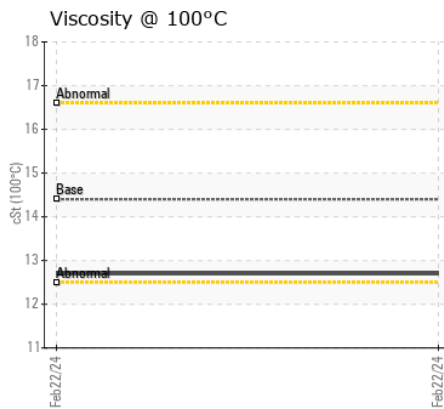
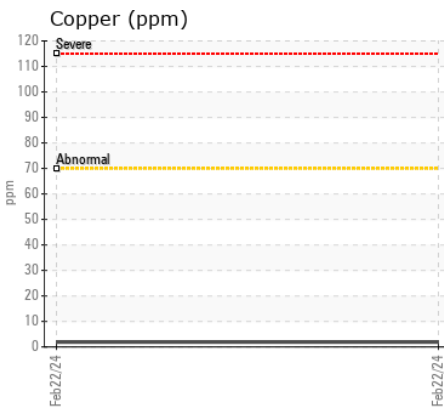
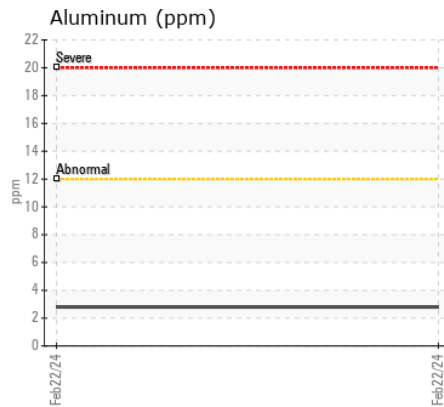
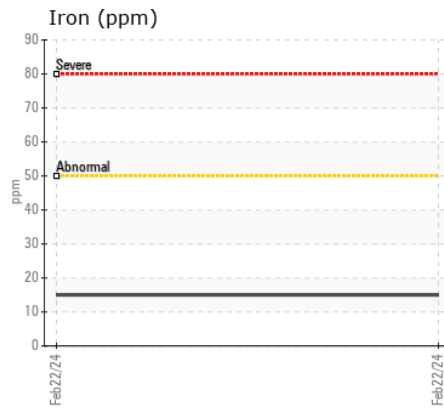
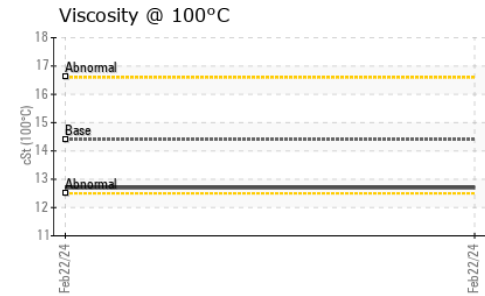
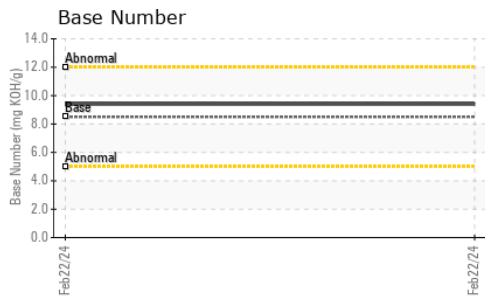
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	8.2	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	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	4	---	---
Boron	ppm	ASTM D5185m	250	3	---	---
Barium	ppm	ASTM D5185m	10	2	---	---
Molybdenum	ppm	ASTM D5185m	100	61	---	---
Manganese	ppm	ASTM D5185m		1	---	---
Magnesium	ppm	ASTM D5185m	450	937	---	---
Calcium	ppm	ASTM D5185m	3000	1032	---	---
Phosphorus	ppm	ASTM D5185m	1150	966	---	---
Zinc	ppm	ASTM D5185m	1350	1222	---	---
Sulfur	ppm	ASTM D5185m	4250	3319	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.4	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.4	---	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.7	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : VPA059161

**Lab Number** : 06102670

**Unique Number** : 10900900

**Test Package** : MOB 1 ( Additional Tests: TBN )

**Received** : 28 Feb 2024

**Tested** : 29 Feb 2024

**Diagnosed** : 29 Feb 2024 - Don Baldrige

**Endor Marine LLC - Coastal Marine - 152124**

4300 11th Ave. NW

SEATTLE, WA

US 98107

Contact: WILLOW YANARELLA

service@coastalmarineengine.com

T: (206)784-3703

F: (206)784-8823

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)