



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
US NAVY [205559]
Machine Id
CUMMINS 73463854
Component
Diesel Engine
Fluid
CUMMINS CUMMINS BLUE 2000 15W40 (12 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA059902	VPA059900	---
Sample Date		Client Info		23 Apr 2024	13 Feb 2024	---
Machine Age	hrs	Client Info		3	0	---
Oil Age	hrs	Client Info		3	1	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Changd	Not Changd	---
Filter Changed		Client Info		Not Changd	Not Changd	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	4	3	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>2	1	<1	---
Titanium	ppm	ASTM D5185m	>2	1	1	---
Silver	ppm	ASTM D5185m	>2	<1	<1	---
Aluminum	ppm	ASTM D5185m	>20	2	1	---
Lead	ppm	ASTM D5185m	>40	2	1	---
Copper	ppm	ASTM D5185m	>330	8	8	---
Tin	ppm	ASTM D5185m	>15	1	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

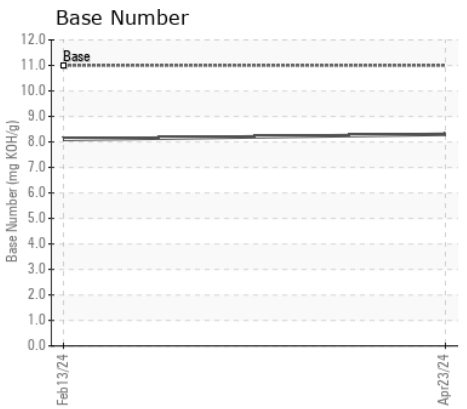
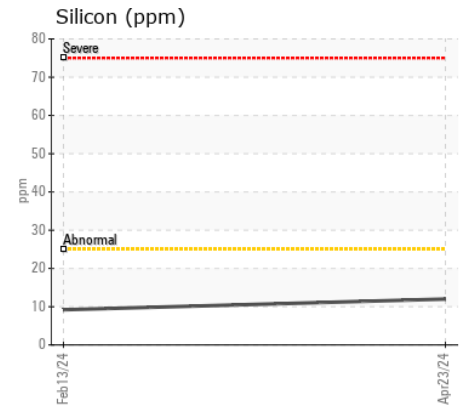
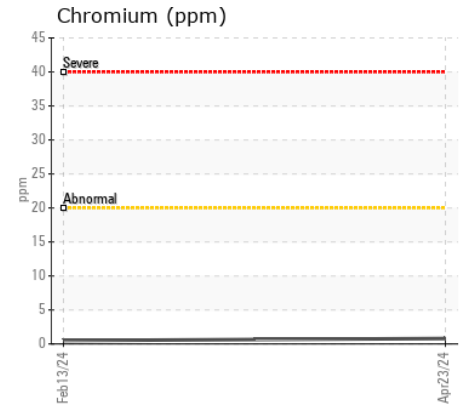
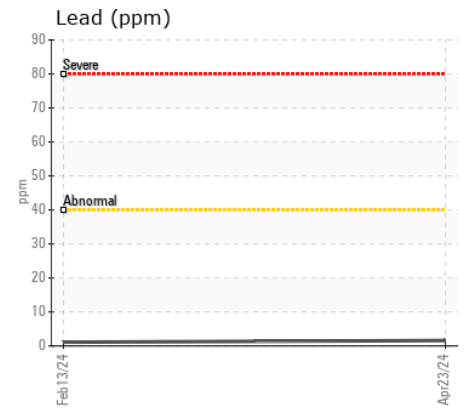
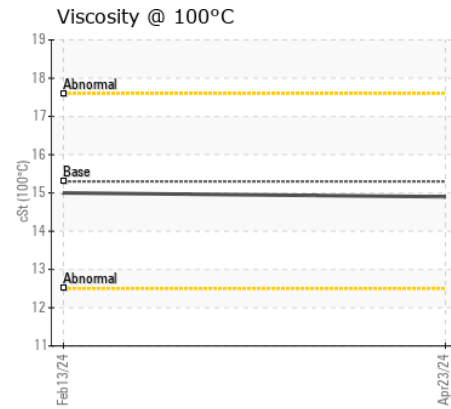
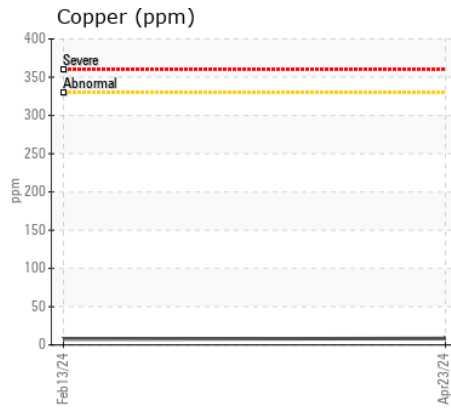
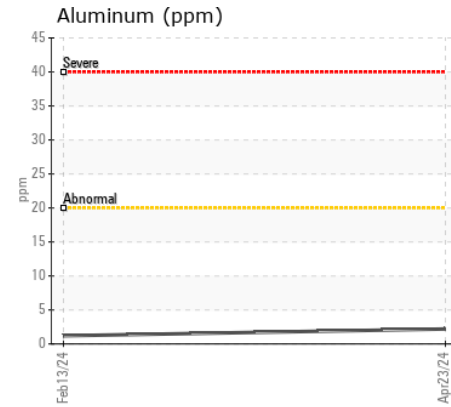
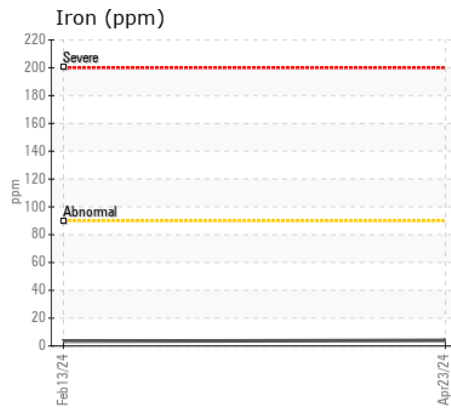
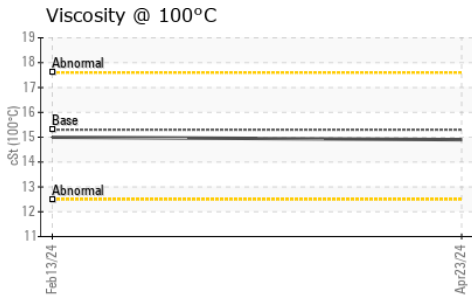
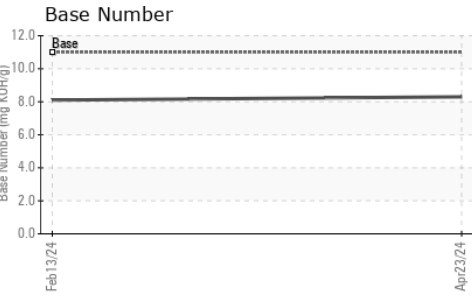
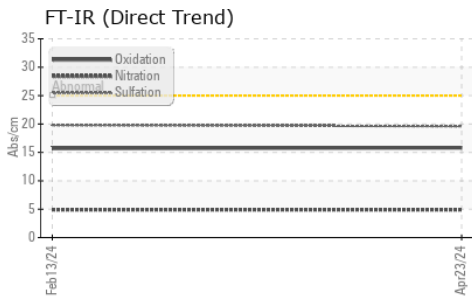
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	12	9	---
Potassium	ppm	ASTM D5185m	>20	9	9	---
Fuel		WC Method	>3.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>6	0.1	0	---
Nitration	Abs/cm	*ASTM D7624	>20	4.9	4.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.6	19.8	---
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	>0.2	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		3	0	---
Boron	ppm	ASTM D5185m	1.7	195	208	---
Barium	ppm	ASTM D5185m	0.1	<1	0	---
Molybdenum	ppm	ASTM D5185m	0.0	4	5	---
Manganese	ppm	ASTM D5185m		2	1	---
Magnesium	ppm	ASTM D5185m	12	52	42	---
Calcium	ppm	ASTM D5185m	2946	1979	1993	---
Phosphorus	ppm	ASTM D5185m	1002	884	988	---
Zinc	ppm	ASTM D5185m	1288	1063	1055	---
Sulfur	ppm	ASTM D5185m	5265	3555	4204	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.8	15.7	---
Base Number (BN)	mg KOH/g	ASTM D2896	11.0	8.3	8.1	---
Visc @ 100°C	cSt	ASTM D445	15.3	14.9	15.0	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA059902 **Received** : 25 Apr 2024
Lab Number : 06160190 **Tested** : 26 Apr 2024
Unique Number : 10995613 **Diagnosed** : 26 Apr 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

Cogswell Marine & Motorsports, Inc
 865 Stella Street
 CHULA VISTA, CA
 US 91911
 Contact: Mitchell Cogswell
 Cogswellmarinemotorsports@gmail.com

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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F: