

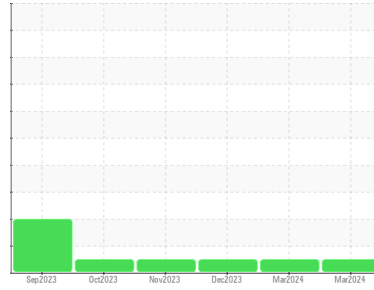


OIL ANALYSIS REPORT



Area
Bridgewater
 Machine ID
CATERPILLAR 5642
 Component
Diesel Engine
 Fluid
SHELL ROTELLA T 15W40 (--- QTS)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All 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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0864865	WC0864860	WC0875304
Sample Date	Client Info		29 Mar 2024	05 Mar 2024	24 Dec 2023
Machine Age	hrs	Client Info	2773	2513	2007
Oil Age	hrs	Client Info	250	500	500
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	7	11	13
Chromium	ppm	ASTM D5185m >20	0	<1	0
Nickel	ppm	ASTM D5185m >2	0	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >25	0	2	1
Lead	ppm	ASTM D5185m >40	0	<1	0
Copper	ppm	ASTM D5185m >330	0	2	3
Tin	ppm	ASTM D5185m >15	0	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 316	3	7	6
Barium	ppm	ASTM D5185m 0.0	0	0	0
Molybdenum	ppm	ASTM D5185m 1.2	61	61	59
Manganese	ppm	ASTM D5185m	0	0	0
Magnesium	ppm	ASTM D5185m 24	983	883	955
Calcium	ppm	ASTM D5185m 2292	1253	1154	1184
Phosphorus	ppm	ASTM D5185m 1064	1121	992	1074
Zinc	ppm	ASTM D5185m 1160	1274	1219	1251
Sulfur	ppm	ASTM D5185m 4996	3962	3223	3343

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	2	6	6
Sodium	ppm	ASTM D5185m	1	0	1
Potassium	ppm	ASTM D5185m >20	1	2	<1

INFRA-RED

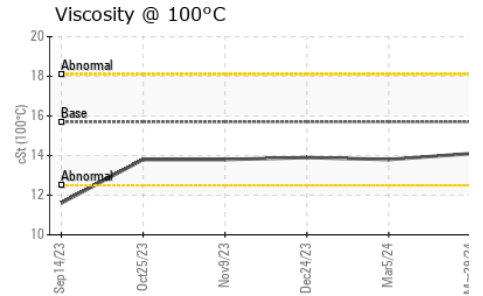
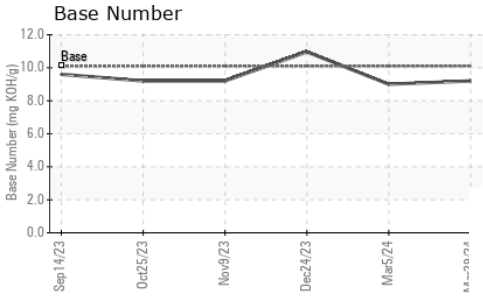
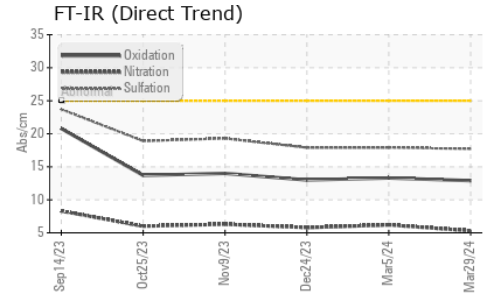
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.2	0.3	0.4
Nitration	Abs/cm	*ASTM D7624 >20	5.3	6.2	5.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.7	17.9	17.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	12.9	13.3	13.0
Base Number (BN)	mg KOH/g	ASTM D2896 10.1	9.2	9.0	10.96



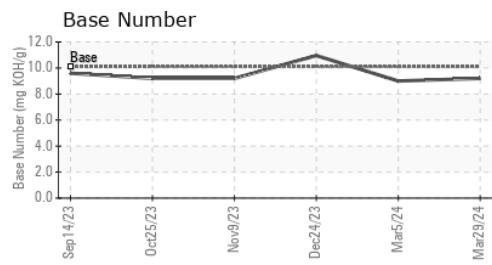
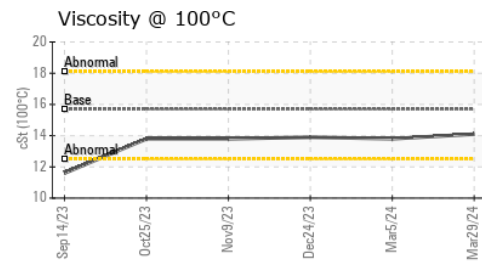
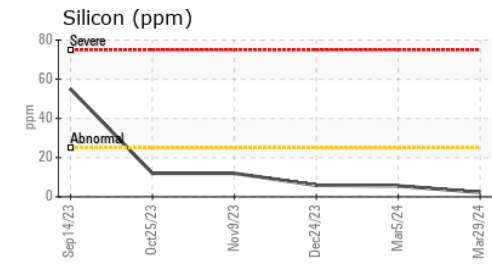
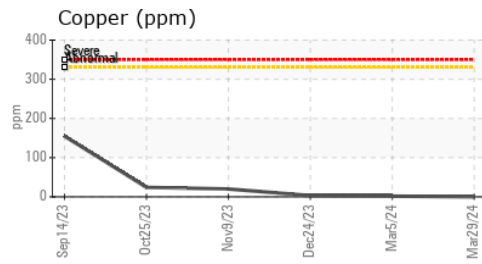
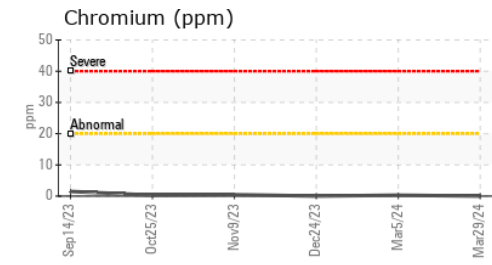
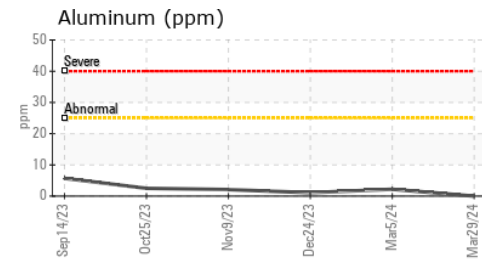
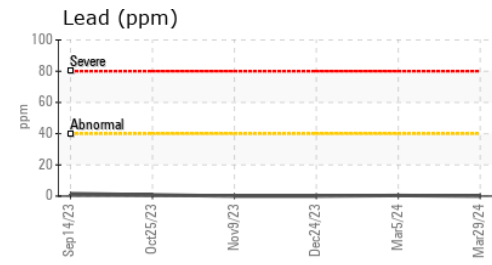
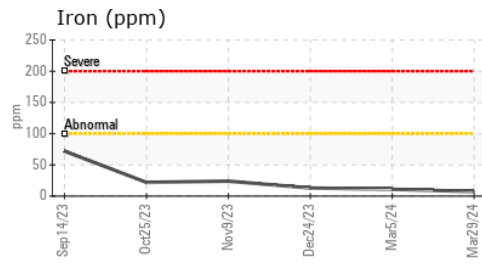
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	14.1	13.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0864865 **Received** : 12 Apr 2024
Lab Number : 06146984 **Tested** : 15 Apr 2024
Unique Number : 10977062 **Diagnosed** : 15 Apr 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

INTERSTATE WASTE-BRIDGEWATER
 15 POLHEMUS LANE
 BRIDGEWATER, NJ
 US 08807
 Contact: PABLO CHARDON
 PChardon@interstatewaste.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)