

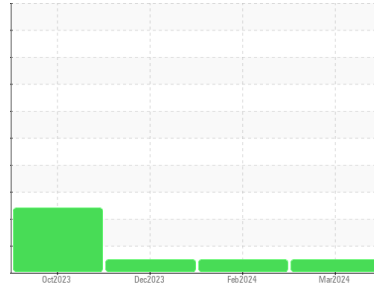


OIL ANALYSIS REPORT



Area
Bridgewater
 Machine ID
CATERPILLAR 336EL 5027 (S/N 0BZY01855)
 Component
Diesel Engine
 Fluid
GIBRALTAR 15W/40 SUPER S-3 LX (--- 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 suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0900010	WC0875289	WC0875306
Sample Date	Client Info			16 Mar 2024	21 Feb 2024	02 Dec 2023
Machine Age	hrs	Client Info		28183	28052	27760
Oil Age	hrs	Client Info		423	300	500
Oil Changed	Client Info			Changed	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	6	17	18
Chromium	ppm	ASTM D5185m	>20	0	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	1	5	6
Lead	ppm	ASTM D5185m	>40	0	7	1
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	0	2	0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		5	6	5
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m	66	61	62	61
Manganese	ppm	ASTM D5185m		0	<1	<1
Magnesium	ppm	ASTM D5185m	1000	973	1141	950
Calcium	ppm	ASTM D5185m	1050	1292	1378	1180
Phosphorus	ppm	ASTM D5185m	1150	1128	1091	959
Zinc	ppm	ASTM D5185m	1270	1289	1569	1252
Sulfur	ppm	ASTM D5185m		3905	3454	3222

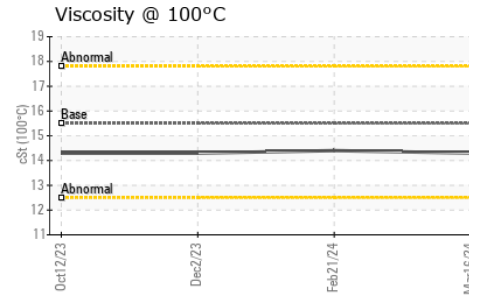
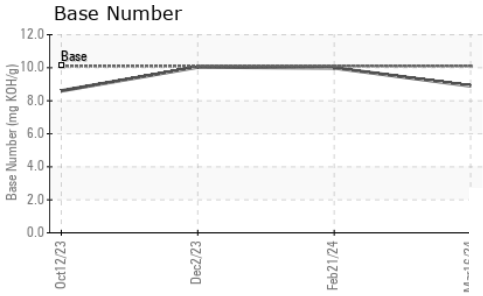
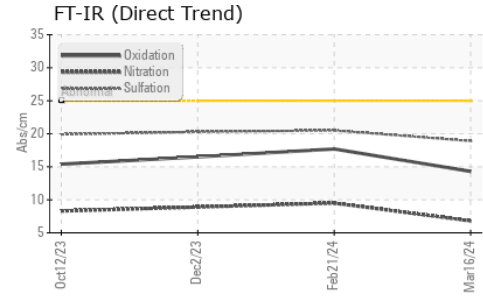
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	12	16
Sodium	ppm	ASTM D5185m		1	1	<1
Potassium	ppm	ASTM D5185m	>20	0	1	0

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.4	0.7	0.8
Nitration	Abs/cm	*ASTM D7624	>20	6.8	9.5	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	20.5	20.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.3	17.7	16.5
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	8.9	9.99	10.04



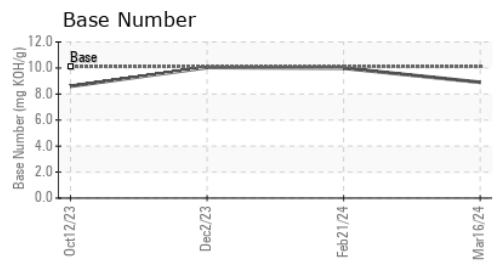
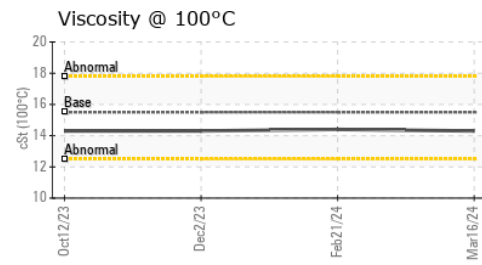
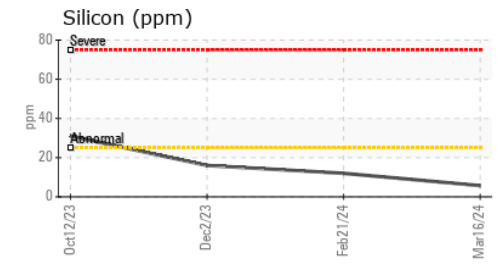
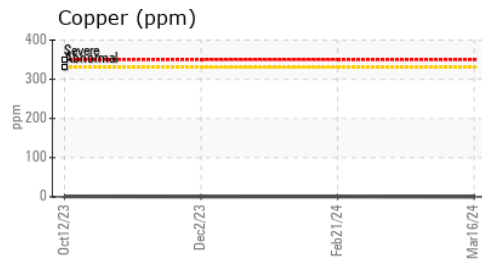
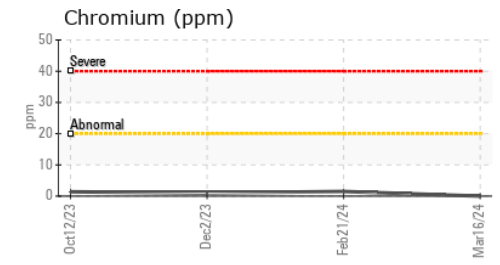
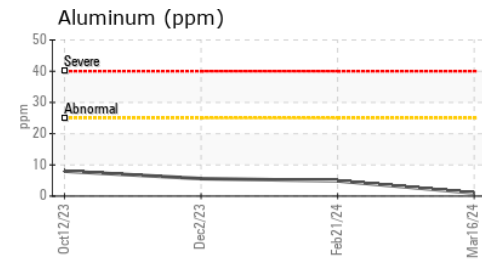
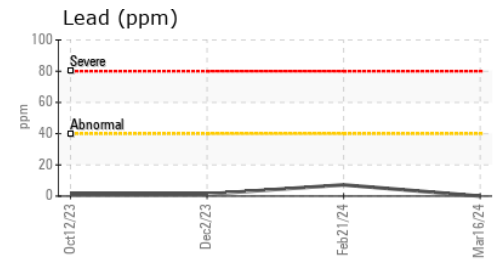
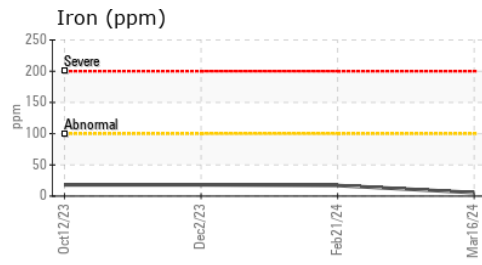
OIL ANALYSIS REPORT



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	15.5	14.3	14.4

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0900010 **Received** : 12 Apr 2024
Lab Number : 06146980 **Tested** : 15 Apr 2024
Unique Number : 10977058 **Diagnosed** : 15 Apr 2024 - Wes Davis
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)