



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Machine Id  
**GENERAC LIBERTY COMMONS SALISBURY**  
 Component  
**Diesel Engine**  
 Fluid  
**SHELL ROTELLA T 15W40 (8 QTS)**

## RECOMMENDATION

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0887870</b>	WC0712749	WC0458258
Sample Date		Client Info		<b>17 Apr 2024</b>	08 Feb 2023	16 Nov 2021
Machine Age	hrs	Client Info		<b>593</b>	553	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	N/A
Filter Changed		Client Info		<b>Changed</b>	Changed	N/A
Sample Status				<b>ABNORMAL</b>	SEVERE	NORMAL

## WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	<b>0</b>	<1	1
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>40	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

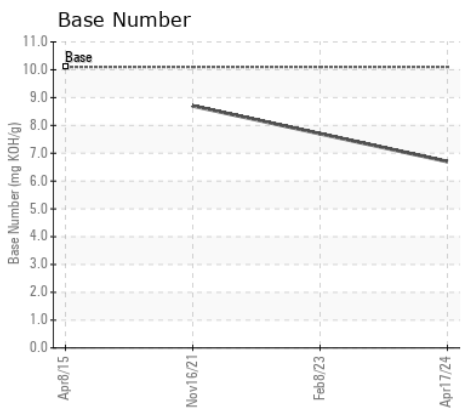
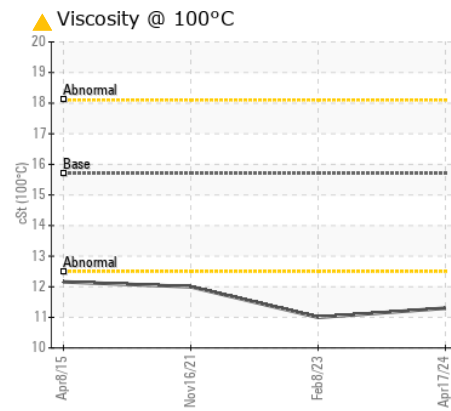
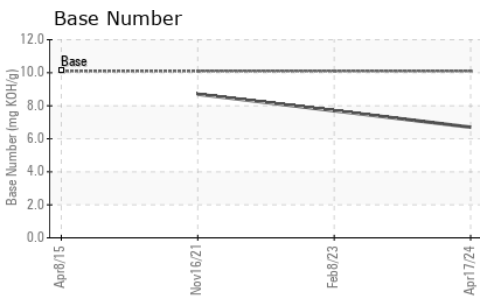
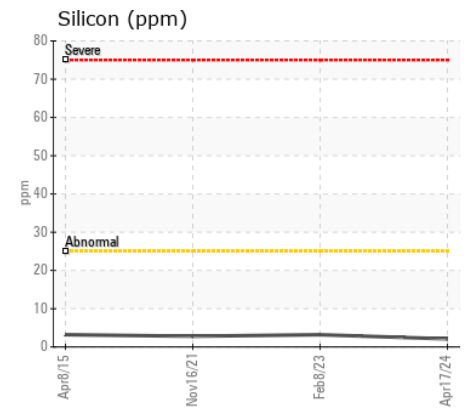
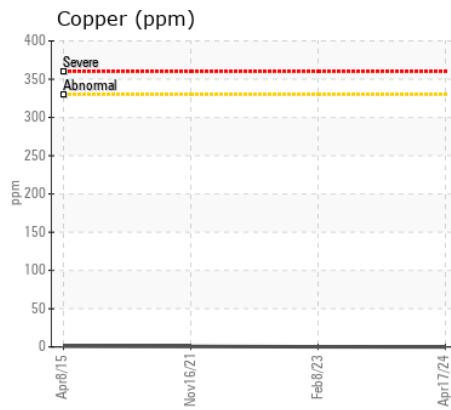
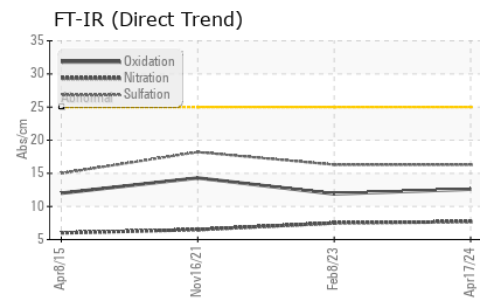
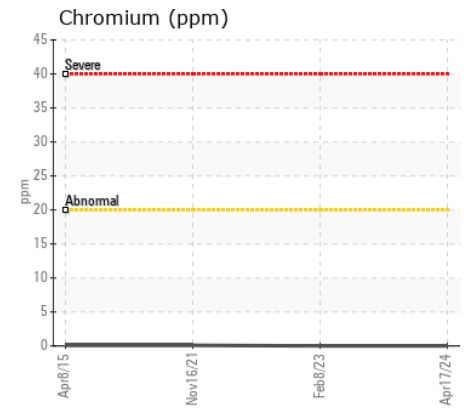
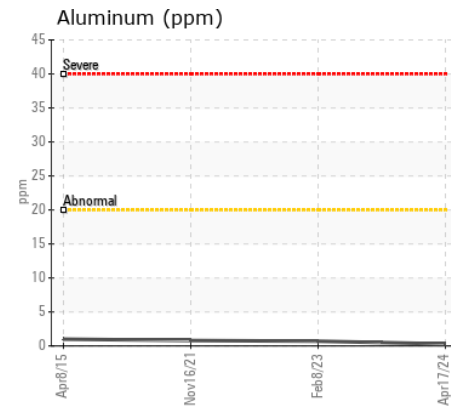
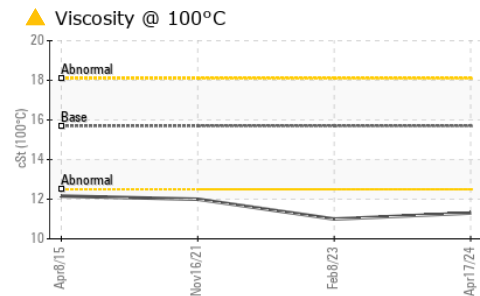
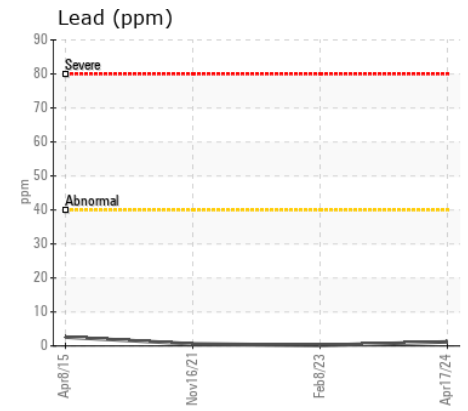
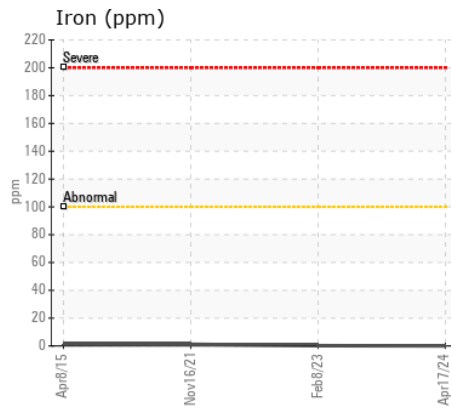
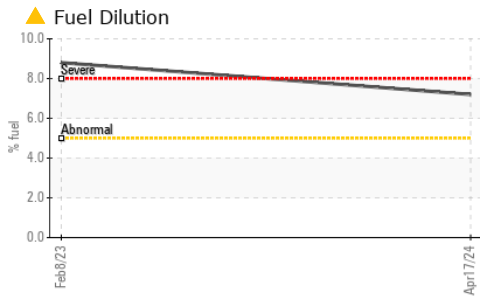
There is a moderate amount of fuel present in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>2</b>	3	3
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	<1	0
Fuel	%	ASTM D3524	>5	<b>▲ 7.2</b>	▲ 8.8	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0</b>	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.7</b>	7.5	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>16.3</b>	16.3	18.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m		<b>1</b>	1	<1
Boron	ppm	ASTM D5185m	316	<b>73</b>	69	99
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m	1.2	<b>89</b>	71	52
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	24	<b>36</b>	98	190
Calcium	ppm	ASTM D5185m	2292	<b>2382</b>	1798	1604
Phosphorus	ppm	ASTM D5185m	1064	<b>1099</b>	832	823
Zinc	ppm	ASTM D5185m	1160	<b>1321</b>	1092	1013
Sulfur	ppm	ASTM D5185m	4996	<b>4718</b>	3608	2786
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>12.6</b>	11.9	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>6.7</b>	7.7	8.7
Visc @ 100°C	cSt	ASTM D445	15.7	<b>▲ 11.3</b>	▲ 11.0	12.0



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0887870 **Received** : 24 Apr 2024  
**Lab Number** : 06158766 **Tested** : 25 Apr 2024  
**Unique Number** : 10994189 **Diagnosed** : 25 Apr 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel, TBN )

**PIEDMONT GENERATOR**  
 7560 NC HWY 22 NORTH  
 CLIMAX, NC  
 US 27233

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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)