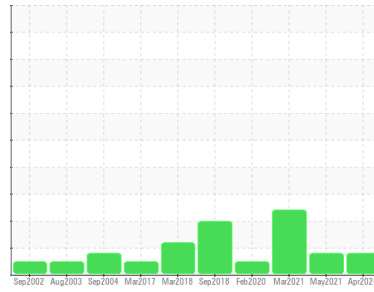




OIL ANALYSIS REPORT

Sample Rating Trend



FUEL



Machine Id

GENERAC SIMPSONVILLE FD

Component

Diesel Engine

Fluid

SHELL ROTELLA T 15W40 (3 QTS)

DIAGNOSIS

Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

Wear

Metal levels are typical for a new component breaking in.

Contamination

Light fuel dilution occurring. No other contaminants were detected 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		WC0887876	WC0458245	WC0545196
Sample Date	Client Info		05 Apr 2024	03 May 2021	24 Mar 2021
Machine Age	hrs	Client Info	463	0	401
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	Not Changd	Changed
Sample Status			MARGINAL	MARGINAL	SEVERE

CONTAMINATION

	method	limit/base	current	history1	history2
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	2	<1	1
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	1	<1
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	<1	<1
Lead	ppm	ASTM D5185m	>40	2	1	1
Copper	ppm	ASTM D5185m	>330	<1	0	<1
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Antimony	ppm	ASTM D5185m		---	1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		1	<1	0

ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	316	102	78	58
Barium	ppm	ASTM D5185m	0.0	<1	0	0
Molybdenum	ppm	ASTM D5185m	1.2	79	66	51
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	24	76	283	654
Calcium	ppm	ASTM D5185m	2292	1941	1778	1183
Phosphorus	ppm	ASTM D5185m	1064	1031	1027	927
Zinc	ppm	ASTM D5185m	1160	1043	1192	1100
Sulfur	ppm	ASTM D5185m	4996	3916	3073	2633

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	9	0	3
Sodium	ppm	ASTM D5185m		2	0	<1
Potassium	ppm	ASTM D5185m	>20	2	2	<1
Fuel	%	ASTM D3524	>5	▲ 4.4	▲ 3.4	▲ 9.2

INFRA-RED

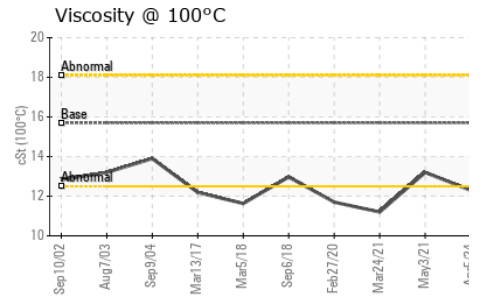
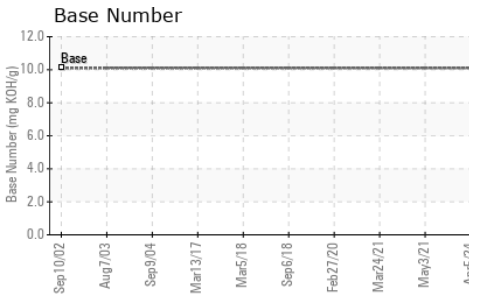
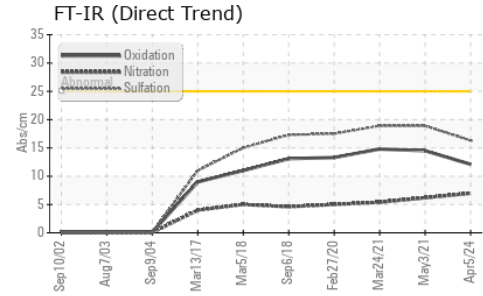
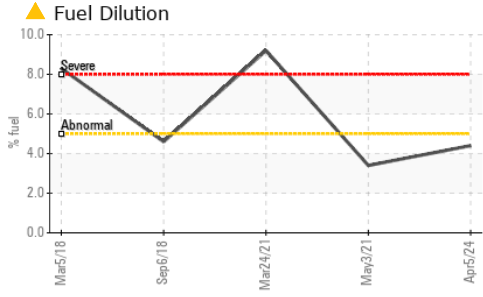
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>3	0.1	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.0	6.2	5.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.3	18.9	18.9

FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	12.1	14.5	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.0	---	---



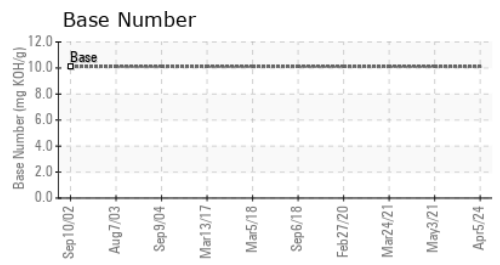
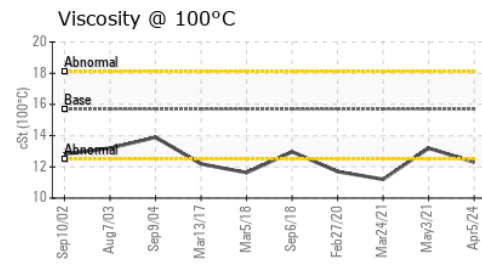
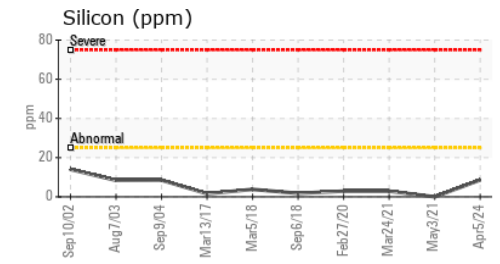
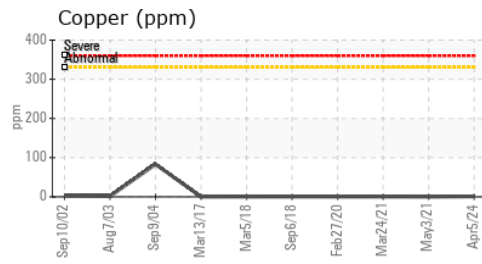
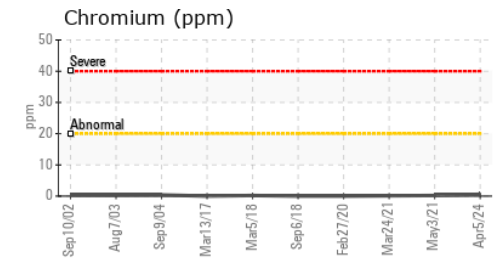
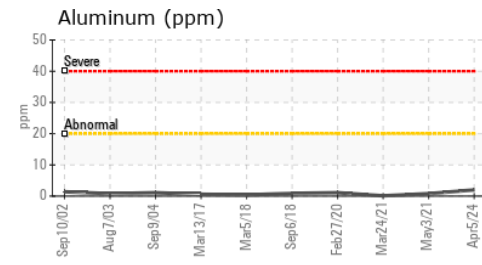
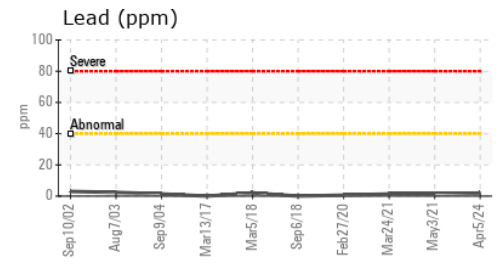
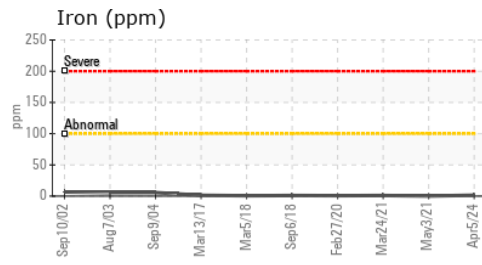
OIL ANALYSIS REPORT



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	12.3	13.2 ▲ 11.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0887876 **Received** : 12 Apr 2024
Lab Number : 06146935 **Tested** : 17 Apr 2024
Unique Number : 10977013 **Diagnosed** : 17 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

PIEDMONT GENERATOR
 7560 NC HWY 22 NORTH
 CLIMAX, NC
 US 27233
 Contact: TERRY SHEPPARD
 terry1pg@bellsouth.net; bill3pg@bellsouth.net

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)