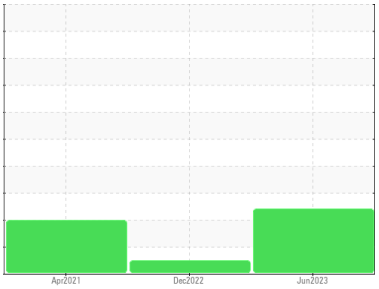
FUEL REPORT

Sample Rating Trend



ISO

Machine Id
Carver Living Center Generac
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (HIGH-SULPHUR) (1400 GAL)

DIAGNOSIS

Recommendation

Recommend pre-filtering before use. All laboratory tests indicate that this sample meets specifications for No.2 low-sulfur diesel fuel.

Corrosion

All metal levels are normal indicating no corrosion in the system.

Contaminants

There is a high amount of particulates present in the fuel. The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample.

Fuel Condition

Sulfur value derived by ASTM D5453 method for ULSD validation.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**WC0783059**	WC0675459	WCDF00126
Sample Date		Client Info		**19 Jun 2023**	02 Dec 2022	24 Apr 2021
Machine Age	hrs	Client Info		**312**	284	0
Sample Status				**MARGINAL**	NORMAL	ABNORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history 1	history 2
Specific Gravity		*ASTM D1298	0.839	**0.845**	0.845	---
Fuel Color	text	*Visual Screen	Yllow	**Red**	Red	---
ASTM Color	scalar	*ASTM D1500		**L4.5**	L4.5	L6.5
Visc @ 40°C	cSt	ASTM D445	3.0	**2.53**	2.5	2.49
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	**62**	63	---
Cloud Point	°C	ASTM D5771		**-12**	-12	---
Pour Point	°C	ASTM D5950		**-31**	-32	---

SULFUR CONTENT		method	limit/base	current	history 1	history 2
Sulfur	ppm	ASTM D5185m	500	**447**	418	528
Sulfur (UVF)	ppm	ASTM D5453		**340**	323	345

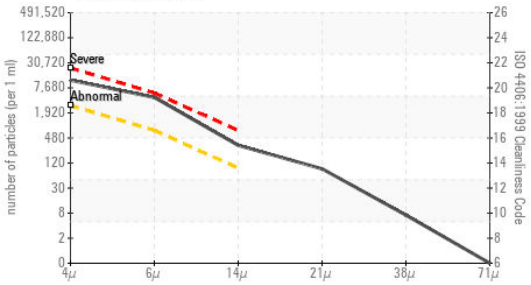
DISTILLATION		method	limit/base	current	history 1	history 2
Initial Boiling Point	°C	ASTM D86	165	**166**	167	---
5% Distillation Point	°C	ASTM D86		**191**	192	---
10% Distill Point	°C	ASTM D86	201	**202**	203	---
15% Distillation Point	°C	ASTM D86		**211**	212	---
20% Distill Point	°C	ASTM D86	216	**219**	221	---
30% Distill Point	°C	ASTM D86	230	**233**	235	---
40% Distill Point	°C	ASTM D86	243	**247**	248	---
50% Distill Point	°C	ASTM D86	255	**261**	262	---
60% Distill Point	°C	ASTM D86	267	**275**	275	---
70% Distill Point	°C	ASTM D86	280	**289**	289	---
80% Distill Point	°C	ASTM D86	295	**305**	305	---
85% Distillation Point	°C	ASTM D86		**314**	314	---
90% Distill Point	°C	ASTM D86	310	**325**	325	---
95% Distillation Point	°C	ASTM D86		**341**	340	---
Final Boiling Point	°C	ASTM D86	341	**351**	349	---
Distillation Residue	%	ASTM D86	3.0	**1.4**	1.4	---
Distillation Loss	%	ASTM D86	3.0	**0.5**	0.7	---

IGNITION QUALITY	method	limit/base	current	history 1	history 2
API Gravity	ASTM D7777	37.7	**36.0**	36.0	---
Cetane Index	ASTM D4737	<40.0	**46.7**	47.0	---

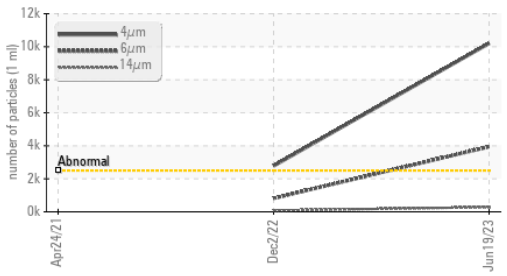
CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	<1.0	**<1**	0	0
Sodium	ppm	ASTM D5185m	<0.1	**0**	<1	<1
Potassium	ppm	ASTM D5185m	<0.1	**<1**	0	0
Water	%	ASTM D6304	<0.05	**0.004**	0.004	0.006
ppm Water	ppm	ASTM D6304	<500	**43.7**	41.0	61.0
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	0.0
% Biodiesel	%	*In-House	<20.0	**0.0**	0.0	1.9

FUEL REPORT

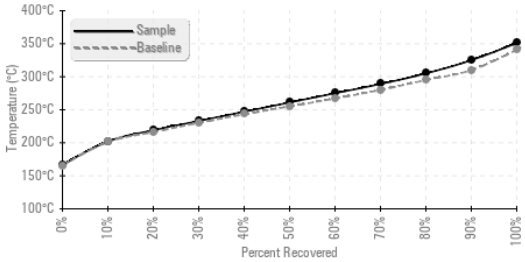
Particle Count



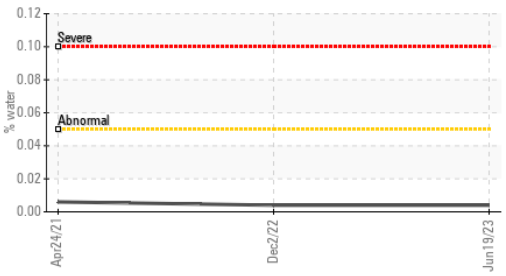
Particle Trend



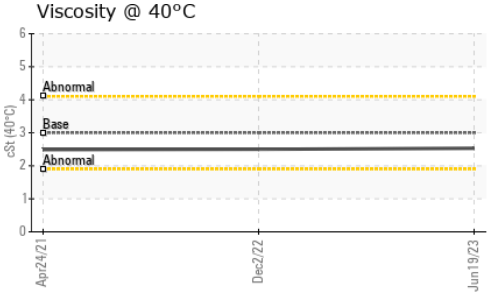
Fuel Distillation Curve



Water

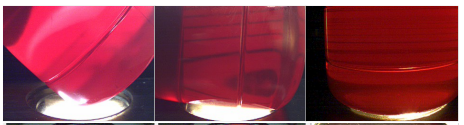
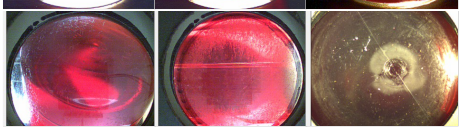


Viscosity @ 40°C



FLUID CLEANLINESS	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>2500	▲ **10202**	2776	---
Particles >6µm	ASTM D7647	>640	▲ **3945**	815	---
Particles >14µm	ASTM D7647	>80	▲ **281**	81	---
Particles >21µm	ASTM D7647	>20	▲ **77**	22	---
Particles >38µm	ASTM D7647	>4	▲ **6**	2	---
Particles >71µm	ASTM D7647	>3	**0**	0	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ **21/19/15**	19/17/14	---

HEAVY METALS		method	limit/base	current	history 1	history 2
Aluminum	ppm	ASTM D5185m	<0.1	**0**	0	<1
Nickel	ppm	ASTM D5185m	<0.1	**<1**	0	<1
Lead	ppm	ASTM D5185m	<0.1	**0**	0	0
Vanadium	ppm	ASTM D5185m	<0.1	**0**	0	0
Iron	ppm	ASTM D5185m	<0.1	**0**	0	0
Calcium	ppm	ASTM D5185m	<0.1	**<1**	0	<1
Magnesium	ppm	ASTM D5185m	<0.1	**<1**	0	0
Phosphorus	ppm	ASTM D5185m	<0.1	**1**	4	0
Zinc	ppm	ASTM D5185m	<0.1	**<1**	0	0

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0783059 **Received** : 21 Jun 2023
Lab Number : 05880409 **Diagnosed** : 05 Jul 2023
Unique Number : 10525512 **Diagnostician** : Doug Bogart
Test Package : DF-3 (Additional Tests: Screen)

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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Report Id: BITCAR [WUSCAR] 05880409 (Generated: 07/05/2023 10:06:04) Rev: 1

Submitted By: ROBERT MCARTHUR