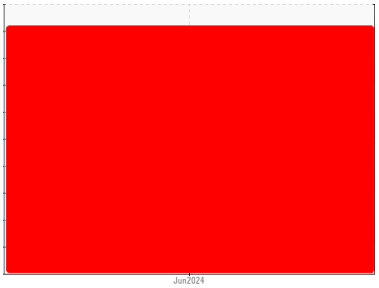
FUEL REPORT

Sample Rating Trend



WATER

Area
CITY OF ROCK HILL [17783]
Machine Id
[CITY OF ROCK HILL] CITY HALL
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (10000 GAL)

DIAGNOSIS

Recommendation
We advise that you follow the water drain-off procedure for this component, and use off-line filtration to improve the cleanliness of the system fluid. We recommend you service and check the fuel filters for mucous-like deposits. Check with fuel supplier for biocides available to destroy the microorganisms in the fuel system. There is too much contamination present in this sample to perform a particle count.

Corrosion
The iron level is abnormal.

Contaminants
Excessive free water present. There is a high amount of visible silt present in the sample. High concentration of visible dirt/debris present in the fuel. There is no bacteria or fungus (yeast and/or mold) present in the sample.

Fuel Condition
The water concentration level is much higher than acceptable for this fluid. Sulfur value derived by ASTM D5453 method for ULSD validation.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0957746**	---	---
Sample Date		Client Info		**25 Jun 2024**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Sample Status				**SEVERE**	---	---

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Fuel Color	text	*Visual Screen	Yllow	**Red**	---	---
ASTM Color	scalar	*ASTM D1500		**L5.0**	---	---
Visc @ 40°C	cSt	ASTM D445	3.0	**2.4**	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	**60.3**	---	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	10	**47**	---	---
Sulfur (UVF)	ppm	ASTM D5453		**58**	---	---

DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	**171**	---	---
5% Distillation Point	°C	ASTM D86		**195**	---	---
10% Distill Point	°C	ASTM D86	201	**205**	---	---
15% Distillation Point	°C	ASTM D86		**212**	---	---
20% Distill Point	°C	ASTM D86	216	**220**	---	---
30% Distill Point	°C	ASTM D86	230	**235**	---	---
40% Distill Point	°C	ASTM D86	243	**248**	---	---
50% Distill Point	°C	ASTM D86	255	**261**	---	---
60% Distill Point	°C	ASTM D86	267	**274**	---	---
70% Distill Point	°C	ASTM D86	280	**287**	---	---
80% Distill Point	°C	ASTM D86	295	**302**	---	---
85% Distillation Point	°C	ASTM D86		**313**	---	---
90% Distill Point	°C	ASTM D86	310	**323**	---	---
95% Distillation Point	°C	ASTM D86		**342**	---	---
Final Boiling Point	°C	ASTM D86	341	**360**	---	---

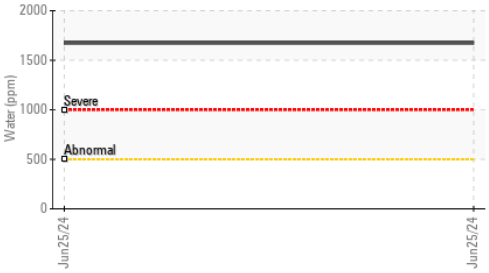
IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777	37.7	**36**	---	---
Cetane Index		ASTM D4737	<40.0	**47**	---	---

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	**<1**	---	---
Sodium	ppm	ASTM D5185m	<0.1	**1**	---	---
Potassium	ppm	ASTM D5185m	<0.1	**<1**	---	---
Water	%	ASTM D6304	<0.05	▲ **0.167**	---	---
ppm Water	ppm	ASTM D6304	<500	▲ **1673**	---	---
% Gasoline	%	*In-House	<0.50	**0.0**	---	---
% Biodiesel	%	*In-House	<20.0	**0.0**	---	---

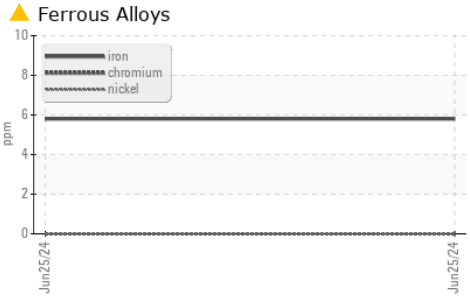
MICROBIAL		method	limit/base	current	history1	history2
Bacteria	CFU/ml	WC-Method	>=100000	**0**	---	---
Yeast	CFU/ml	WC-Method	>=100000	**0**	---	---
Mold	Colonies	WC-Method	MODER	**---**	---	---

FUEL REPORT

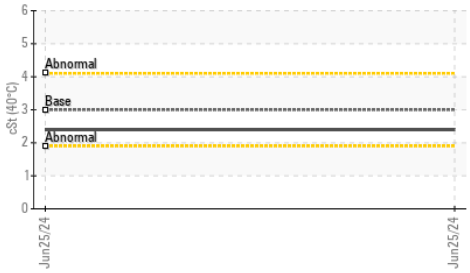
Water (KF)



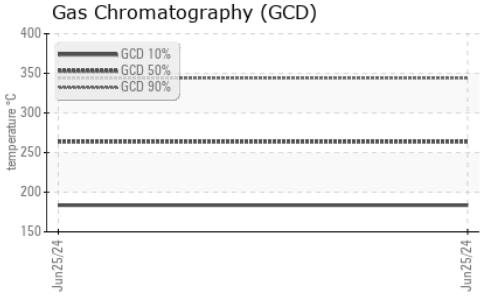
Ferrous Alloys



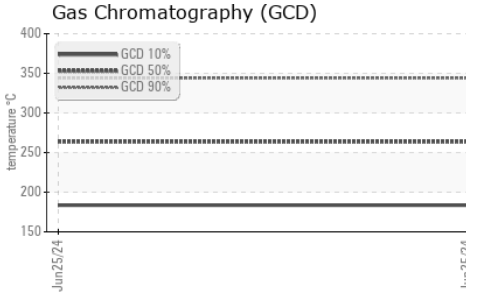
Viscosity @ 40°C



Gas Chromatography (GCD)



Gas Chromatography (GCD)

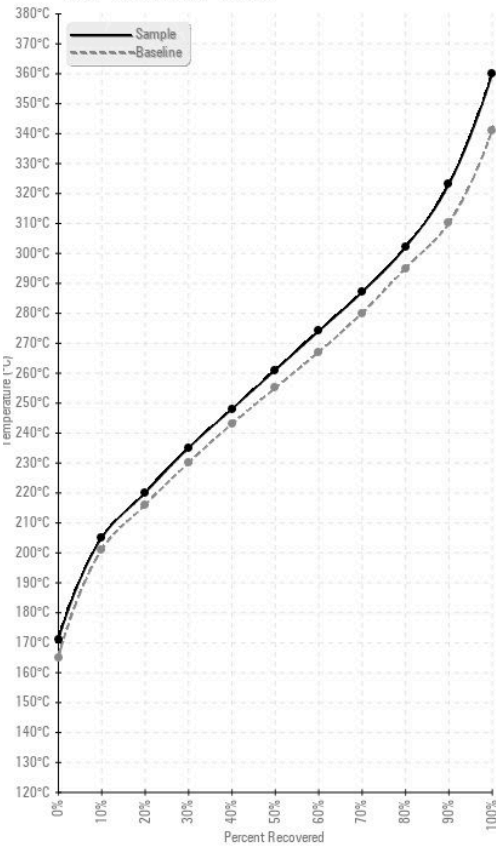


HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	1	---	---
Nickel	ppm	ASTM D5185m	<0.1	0	---	---
Lead	ppm	ASTM D5185m	<0.1	0	---	---
Vanadium	ppm	ASTM D5185m	<0.1	<1	---	---
Iron	ppm	ASTM D5185m	<0.1	▲ 6	---	---
Calcium	ppm	ASTM D5185m	<0.1	2	---	---
Magnesium	ppm	ASTM D5185m	<0.1	0	---	---
Phosphorus	ppm	ASTM D5185m	<0.1	2	---	---
Zinc	ppm	ASTM D5185m	<0.1	8	---	---

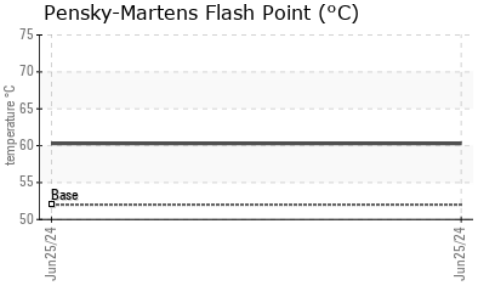
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

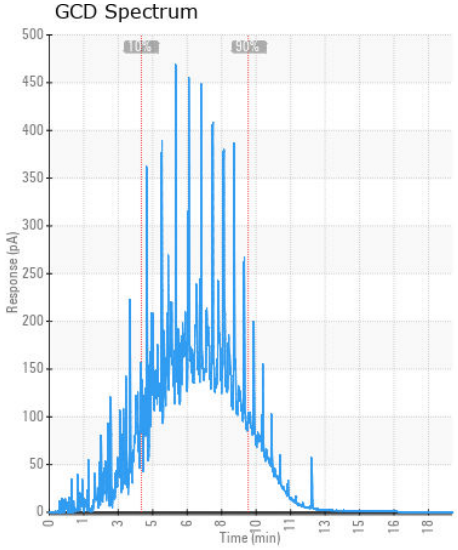
Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



GCD Spectrum



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0957746 **Received** : 25 Jun 2024
Lab Number : 06220302 **Tested** : 02 Jul 2024
Unique Number : 11098499 **Diagnosed** : 02 Jul 2024 - Doug Bogart
Test Package : DF-2 (Additional Tests: Bacteria, Fuel, Screen)

Certificate L2367

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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