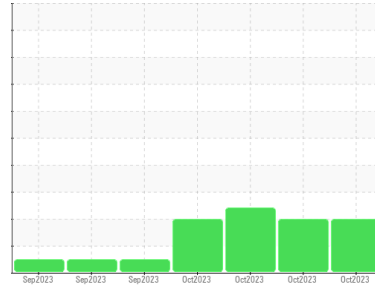




FUEL REPORT

Sample Rating Trend



ISO



Area
[LP29159]
 Machine Id
T3Y00201 - DELIVERY TRUCK
 Component
Diesel Fuel
 Fluid
DISEL FUEL No. 2 (--- QTS)

DIAGNOSIS

Recommendation

We advise that you filter this fluid before use. All other laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel. Appended tests performed at subcontracted ISO 17025 laboratory.

Corrosion

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

Contaminants

There is a high amount of particulates present in the fuel. ASTM D482 Ash Content high at 0.048%. 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. Sulfur level is acceptable for ULSD specification.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			WC0863790	WC0863789	WC0863788
Sample Date	Client Info			16 Oct 2023	10 Oct 2023	07 Oct 2023
Machine Age	hrs	Client Info		0	0	0
Sample Status				ATTENTION	ATTENTION	ATTENTION

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		0.837	0.838	0.838
Fuel Color	text	*Visual Screen		Red	Red	Red
ASTM Color	scalar	*ASTM D1500		L4.5	L4.5	L4.5
Visc @ 40°C	cSt	ASTM D445	4.1	2.37	2.37	2.42
Pensky-Martens Flash Point	°C	*PMCC Calculated		58	58	58

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		5	0	0
Sulfur (UVF)	ppm	ASTM D5453		10	10	10

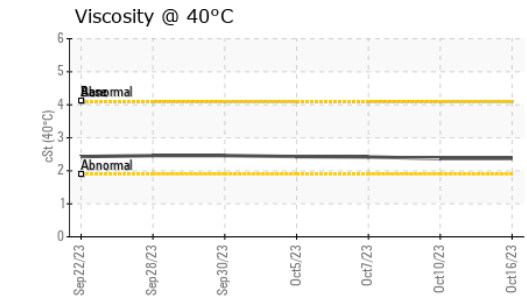
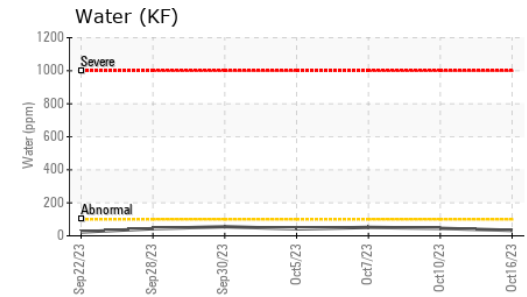
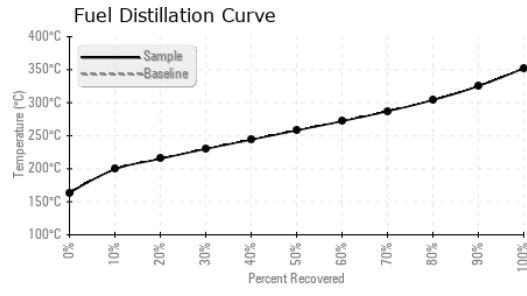
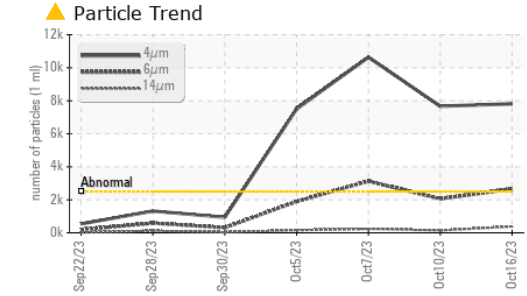
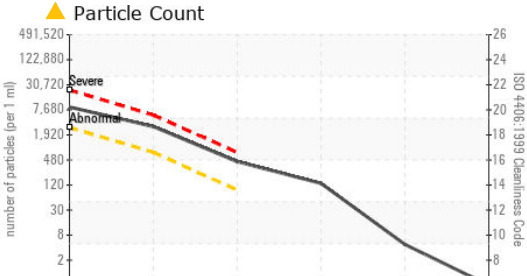
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		163	161	162
5% Distillation Point	°C	ASTM D86		190	185	187
10% Distill Point	°C	ASTM D86		199	196	198
15% Distillation Point	°C	ASTM D86		208	205	207
20% Distill Point	°C	ASTM D86		215	212	214
30% Distill Point	°C	ASTM D86		230	228	230
40% Distill Point	°C	ASTM D86		244	242	244
50% Distill Point	°C	ASTM D86		258	255	258
60% Distill Point	°C	ASTM D86		272	270	272
70% Distill Point	°C	ASTM D86		287	286	287
80% Distill Point	°C	ASTM D86		304	303	304
85% Distillation Point	°C	ASTM D86		314	313	313
90% Distill Point	°C	ASTM D86		325	325	325
95% Distillation Point	°C	ASTM D86		342	343	342
Final Boiling Point	°C	ASTM D86		352	352	351
Distillation Residue	%	ASTM D86		1.4	1.4	1.4
Distillation Loss	%	ASTM D86		0.8	0.8	0.7

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		37.6	37.4	37.4
Cetane Index		ASTM D4737	<40.0	49.1	48.1	48.6

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	<1	<1	<1
Sodium	ppm	ASTM D5185m	<0.1	1	<1	<1
Potassium	ppm	ASTM D5185m	<0.1	<1	2	2
Water	%	ASTM D6304	<0.05	0.003	0.004	0.005
ppm Water	ppm	ASTM D6304	<500	33.0	45.4	51.3
% Gasoline	%	*In-House	<0.50	0.0	0.0	0.0
% Biodiesel	%	*In-House	<20.0	0.5	0.0	0.0



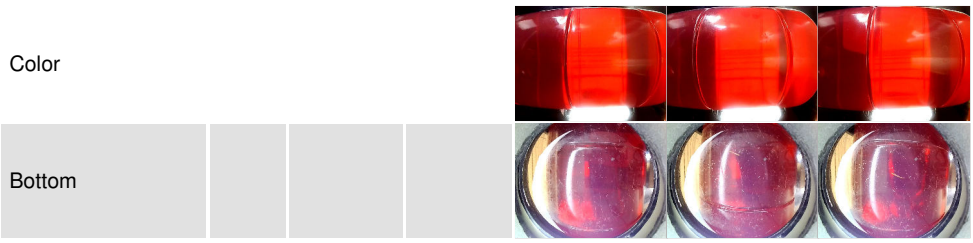
FUEL REPORT



FLUID CLEANLINESS	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	▲ 7812	▲ 7668	▲ 10639
Particles >6µm	ASTM D7647	>640	▲ 2665	▲ 2061	▲ 3127
Particles >14µm	ASTM D7647	>80	▲ 385	▲ 140	▲ 239
Particles >21µm	ASTM D7647	>20	▲ 116	▲ 33	▲ 84
Particles >38µm	ASTM D7647	>4	4	0	▲ 10
Particles >71µm	ASTM D7647	>3	0	0	1
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ 20/19/16	▲ 20/18/14	▲ 21/19/15

HEAVY METALS	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m <0.1	0	0	0
Nickel	ppm	ASTM D5185m <0.1	0	0	0
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	0	0	0
Magnesium	ppm	ASTM D5185m <0.1	0	0	0
Phosphorus	ppm	ASTM D5185m <0.1	0	0	0
Zinc	ppm	ASTM D5185m <0.1	0	0	0

SAMPLE IMAGES	method	limit/base	current	history1	history2
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Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0863790 **Received** : 18 Oct 2023
Lab Number : **05982684** **Diagnosed** : 28 Nov 2023
Unique Number : 10699979 **Diagnostician** : Doug Bogart
Test Package : DF-2 (Additional Tests: Screen)

CARTER MACHINERY COMPANY INC
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 SALEM, VA
 US 24153
 Contact: TREVOR KIRSTE
 trevor_kirste@cartermachinery.com
 T:
 F: (540)387-1814

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)