DF II WEAR CHECK

FUEL REPORT

CORROSION	NORMAL
CONTAMINANTS	ATTENTION
FUEL CONDITION	NORMAL

Machine Id
DUKE HOSP ALBERT EYE 4000 GAL
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

RECOMMENDATION

All other laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel.

CORROSION

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

CONTAMINANTS

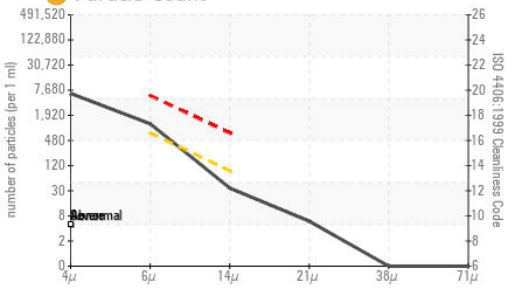
There is a moderate amount of silt (particulates < 14 microns in size) present in the fuel. There is no bacteria or fungus (yeast and/or mold) indicated in the sample. The water content is negligible.

FUEL CONDITION

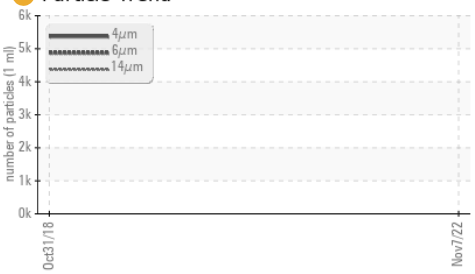
Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC05687544	WC04583515	---
Sample Date		Client Info		07 Nov 2022	31 Oct 2018	---
Machine Age	hrs	Client Info		0	0	---
Sample Status				ATTENTION	NORMAL	---
Aluminum	ppm	ASTM D5185m	<0.1	0	0	---
Nickel	ppm	ASTM D5185m	<0.1	0	0	---
Lead	ppm	ASTM D5185m	<0.1	0	<1	---
Vanadium	ppm	ASTM D5185m	<0.1	0	0	---
Iron	ppm	ASTM D5185m	<0.1	0	<1	---
Silicon	ppm	ASTM D5185m	<1.0	0	<1	---
Sodium	ppm	ASTM D5185m	<0.1	0	0	---
Potassium	ppm	ASTM D5185m	<0.1	0	0	---
Water	%	ASTM D6304	<0.05	0.005	0.007	---
ppm Water	ppm	ASTM D6304	<500	56.6	70	---
Particles >4µm		ASTM D7647		5606	---	---
Particles >6µm		ASTM D7647	>640	1056	---	---
Particles >14µm		ASTM D7647	>80	31	---	---
Particles >21µm		ASTM D7647	>20	5	---	---
Particles >38µm		ASTM D7647	>4	0	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>--/16/13	20/17/12	---	---
% Gasoline	%	*In-House	<0.50	0.0	0.0	---
% Biodiesel	%	*In-House	<20.0	0.0	0.7	---
Calcium	ppm	ASTM D5185m	<0.1	3	0	---
Magnesium	ppm	ASTM D5185m	<0.1	0	0	---
Phosphorus	ppm	ASTM D5185m	<0.1	2	<1	---
Zinc	ppm	ASTM D5185m	<0.1	0	0	---
Specific Gravity		*ASTM D1298	0.839	0.842	0.843	---
Fuel Color	text	*Visual Screen	Yllow	Red	Red	---
ASTM Color	scalar	*ASTM D1500		L4.0	L5.5	---
Visc @ 40°C	cSt	ASTM D445	3.0	2.53	2.49	---
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	68	62	---
Sulfur	ppm	ASTM D5185m	10	0	7	---
Sulfur (UVF)	ppm	ASTM D5453		13	13	---
Initial Boiling Point	°C	ASTM D86	165	172	166	---
10% Distill Point	°C	ASTM D86	201	204	202	---
20% Distill Point	°C	ASTM D86	216	218	218	---
30% Distill Point	°C	ASTM D86	230	233	231	---
40% Distill Point	°C	ASTM D86	243	246	245	---
50% Distill Point	°C	ASTM D86	255	259	259	---
60% Distill Point	°C	ASTM D86	267	273	273	---
70% Distill Point	°C	ASTM D86	280	288	288	---
80% Distill Point	°C	ASTM D86	295	305	305	---
90% Distill Point	°C	ASTM D86	310	326	326	---
Final Boiling Point	°C	ASTM D86	341	349	352	---
Distillation Residue	%	ASTM D86	3.0	1.4	1.4	---
Distillation Loss	%	ASTM D86	3.0	0.9	0.8	---
API Gravity		ASTM D7777	37.7	36.6	36.4	---
Cetane Index		ASTM D4737	<40.0	47.9	47.2	---

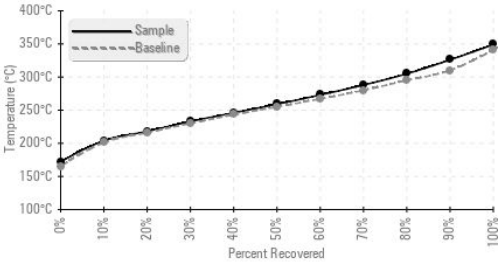
Particle Count



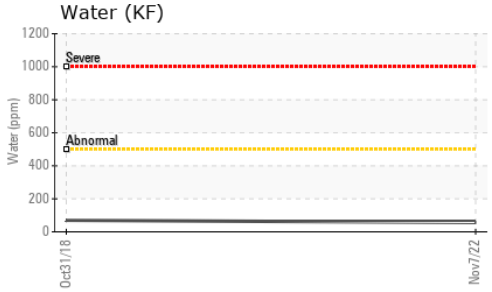
Particle Trend



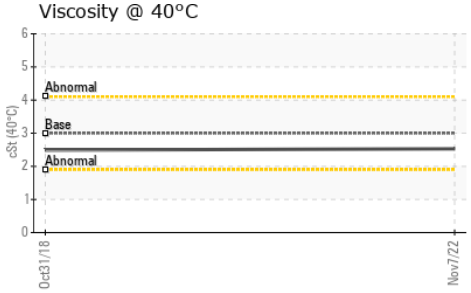
Fuel Distillation Curve



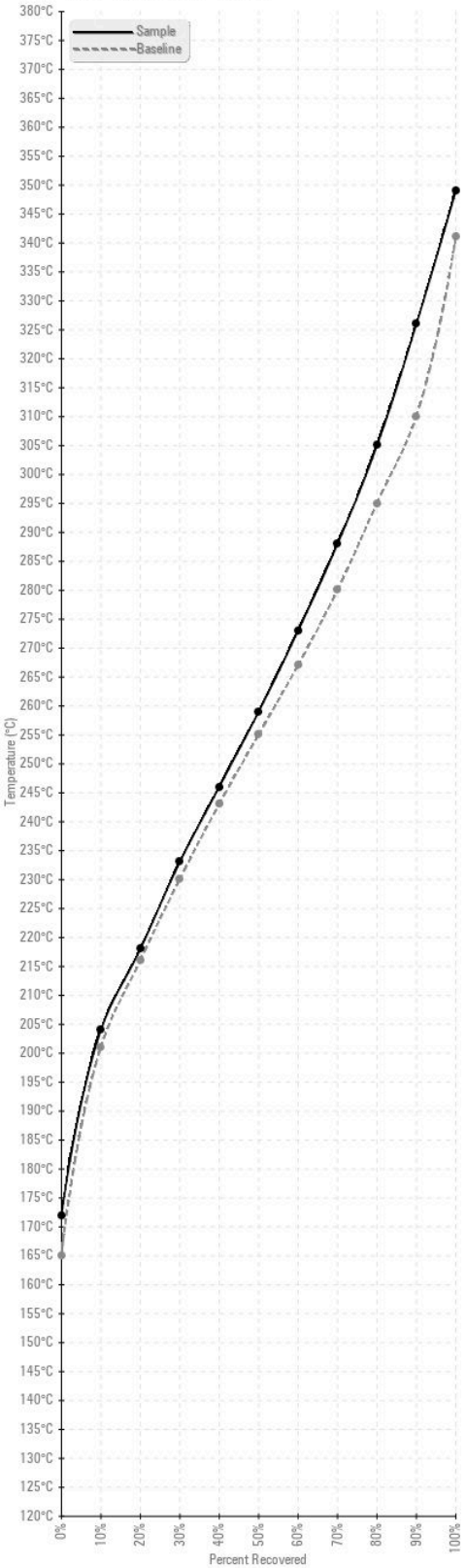
Water (KF)



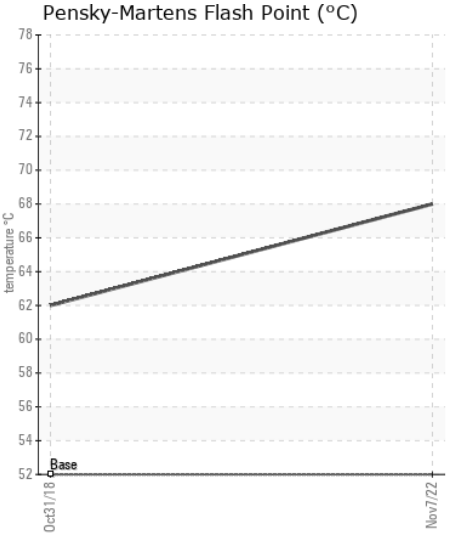
Viscosity @ 40°C



Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC05687544 **Received** : 07 Nov 2022
Lab Number : 05687544 **Tested** : 11 Nov 2022
Unique Number : 10207116 **Diagnosed** : 17 Nov 2022 - Doug Bogart
Test Package : DF-2 (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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