

## **FUEL REPORT**



#### Machine Id **YX9700021** Component **Diesel Fuel** Fluid **DIESEL FUEL No. 1 (--- QTS)**

#### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. All 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 no bacteria or fungus (yeast and/or mold) indicated in the sample. The water content is negligible. There is no indication of any contamination in the fuel. The amount and size of particulates present in the system are acceptable.

#### **Fuel Condition**

Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur value derived by ASTM D5453 method for ULSD validation.

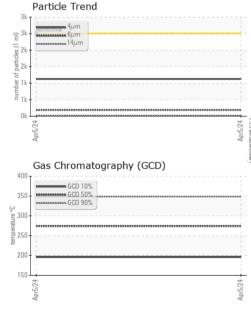
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KT0001575		
Sample Date		Client Info		05 Apr 2024		
Machine Age	hrs	Client Info		559		
Sample Status				NORMAL		
-				-		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
ASTM Color	scalar	*ASTM D1500		L4.0		
Visc @ 40°C	cSt	ASTM D445	2.4	2.94		
Pensky-Martens Flash Point	°C	*PMCC Calculated		66.1		
SULFUR CONTER	NT	method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		0		
Sulfur (UVF)	ppm	ASTM D5453		11		
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		179		
5% Distillation Point	°C	ASTM D86		207		
10% Distill Point	°C	ASTM D86		217		
15% Distillation Point	°C	ASTM D86		224		
20% Distill Point	°C	ASTM D86		232		
30% Distill Point	°C	ASTM D86		246		
40% Distill Point	°C	ASTM D86		258		
50% Distill Point	°C	ASTM D86		270		
60% Distill Point	°C	ASTM D86		282		
70% Distill Point	°C	ASTM D86		295		
80% Distill Point	°C	ASTM D86		308		
85% Distillation Point	°C	ASTM D86		318		
90% Distill Point	°C	ASTM D86		328		
95% Distillation Point	°C	ASTM D86		345		
Final Boiling Point	°C	ASTM D86		360		
IGNITION QUALIT	ΓY	method	limit/base	current	history1	history2
API Gravity		ASTM D7777		33		
Cetane Index		ASTM D4737	<40.0	44		
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	0		
Water	%	ASTM D6304	< 0.05	0.002		
ppm Water	ppm	ASTM D6304	<500	23		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	0.0		



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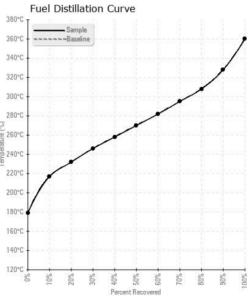
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8-			-		-22 (\$0 4406:1999 Cleanliness Code -18 999 Cleanliness Code -14 -12 code -10 -10
2-					-8
0 4µ	6µ	14µ	21µ	38µ	71µ
	ter (KF)				
Wa	ter (KF)				
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Wa 1200 1000 800 600 400					
Wa 1200 1000 800 400 200 Abn	NC.				
Wa 1200 1000 800 600 200 Abn	NC.				V. J. J. V.





FLUID CLEANLIN	ESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	1127		
Particles >6µm		ASTM D7647	>640	190		
Particles >14µm		ASTM D7647	>80	18		
Particles >21µm		ASTM D7647	>20	5		
Particles >38µm		ASTM D7647	>4	0		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>18/16/13	17/15/11		
HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	0		
Nickel	ppm	ASTM D5185m	<0.1	0		
Lead	ppm	ASTM D5185m	<0.1	0		
Vanadium	ppm	ASTM D5185m	<0.1	0		
Iron	ppm	ASTM D5185m	<0.1	0		
Calcium	ppm	ASTM D5185m	<0.1	0		
Magnesium	ppm	ASTM D5185m	<0.1	0		
Phosphorus	ppm	ASTM D5185m	<0.1	2		
Zinc	ppm	ASTM D5185m	<0.1	0		
SAMPLE IMAGES	3	method	limit/base	current	history1	history2
Color				no image	no image	no image
Bottom				no image	no image	no image

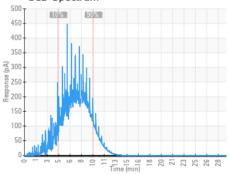
GRAPHS



### Pensky-Martens Flash Point (°C)



#### GCD Spectrum



**BOBCAT OF MANDAN** Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 : KT0001575 Received 4209 MEMORIAL HWY Sample No. : 19 Apr 2024 Lab Number : 06155445 Tested : 02 May 2024 MANDAN, ND US 58554 Unique Number : 10990868 Diagnosed : 02 May 2024 - Doug Bogart Test Package : DF-2 (Additional Tests: Fuel, Screen) Contact: MIKE PAGE Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. michael@bobcatofmandan.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (701)541-4057 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F:

Report Id: BOBMAN [WUSCAR] 06155445 (Generated: 05/02/2024 15:49:16) Rev: 1

Contact/Location: MIKE PAGE - BOBMAN