

Area

# FUEL REPORT

Sample Rating Trend

ISO

**ILNR B2B CUMMINS] C-1-G** Component **Bulk Tank Diesel Fuel** Fluid **DIESEL FUEL No. 2 (--- GAL)** 

#### 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 a moderate 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. Sulfur level is acceptable for ULSD specification.

SAMPLE INFORM	<b>IATION</b>	method	limit/base	current	history1	history2
Sample Number		Client Info		WC0914196		
Sample Date		Client Info		27 Mar 2024		
Machine Age	hrs	Client Info		0		
Sample Status				ATTENTION		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
Fuel Color	text	*Visual Screen		Red		
ASTM Color	scalar	*ASTM D1500		L4.0		
Visc @ 40°C	cSt	ASTM D445	4.1	2.46		
Pensky-Martens Flash Point	°C	*PMCC Calculated		62.7		
SULFUR CONTER	NT	method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		0		
Sulfur (UVF)	ppm	ASTM D5453		8		
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		174		
5% Distillation Point	°C	ASTM D86		196		
10% Distill Point	°C	ASTM D86		206		
15% Distillation Point	°C	ASTM D86		214		
20% Distill Point	°C	ASTM D86		221		
30% Distill Point	°C	ASTM D86		236		
40% Distill Point	°C	ASTM D86		249		
50% Distill Point	°C	ASTM D86		262		
60% Distill Point	°C	ASTM D86		276		
70% Distill Point	°C	ASTM D86		290		
80% Distill Point	°C	ASTM D86		305		
85% Distillation Point	°C	ASTM D86		316		
90% Distill Point	°C	ASTM D86		327		
95% Distillation Point	°C	ASTM D86		345		
Final Boiling Point	°C	ASTM D86		363		
IGNITION QUALIT	ΓY	method	limit/base	current	history1	history2
API Gravity		ASTM D7777		35		
Cetane Index		ASTM D4737	<40.0	47		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	0		
Sodium	ppm	ASTM D5185m	<0.1	1		
Potassium	ppm	ASTM D5185m	<0.1	0		
Water	%	ASTM D6304	<0.05	0.008		
ppm Water	ppm	ASTM D6304	<500	87		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	0.0		



# **FUEL REPORT**

91,520 22,880 30,720 Severe 7,680 480 480 1920 480 1920 480 480 1920 480 480 480 480 480 480 480 480 480 48	-26 -24 -22 ISO -20 04406:1999 Cleanline -16 Cleanline	Particles > Particles > Particles >
7.680 Anomal 1.920 480 120 30 8 2	+20 4406:1999 Cleanlii	Particles > Particles >
Aboomal 1,920 480 120 30 8 2	-18 -16 -14	
480 120 30 8 2	14 Clean	Dortiolog
30		Particles >
8		Particles :
2	-12 SC Code	Particles :
0 4 <sub>4</sub> 6 <sub>4</sub> 14 <sub>4</sub> 21 <sub>4</sub> 38 <sub>4</sub>	-8	Oil Cleanl
		HEAVY
Particle Trend		Aluminum
- 3k - <sup>4μm</sup>		Nickel
<sup>2</sup> / <sub>35</sub> 2k	1	Lead
E 31 d Command 6μm		Vanadium
jo Jaq1k		Iron
		Calcium
0k		Magnesiu
Mar27/24	Mar27/24	Phosphor
Ma	Ma	Zinc
Water (KF)		SAMPL
1000 - Severe		<b>.</b> .
E 800 -		Color
600		
400		
200 Abnormal		Bottom
24 10	24	
Mar27/24	Mar27/24	GRAPH
Viscosity @ 40°C		Fuel Dis
6 T	1	<sup>380°C</sup> [s
5 - Jaseo mai		360°C
		340°C -
(2 ) (3 ) (4 ) (		320°C -
<sup>2</sup> 2 Abnomal	-	300°C -
1-		
24 		280°C -
Mar27/24	Mar27/24 stature ("u)	260°C -
	iempe	240°C -
Gas Chromatography (GCD)		220°C
350 GCD 10%		200°C
11111111111111111111111111111111111111		180°C
9 300		160°C
Ê 250 -		140°C -
200		
150		120°C +
Mar27/24	Mar27/24	-
Ma	Mai	
	atory	: WearCheck
Samp	le No. lumber	: WC091419 : 06138208

FLUID CLEANLI	NESS	method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	1643		
Particles >6µm		ASTM D7647	>640	<b>—</b> 739		
Particles >14µm		ASTM D7647	>80	91		
Particles >21µm		ASTM D7647	>20	26		
Particles >38µm		ASTM D7647	>4	1		
Particles >71µm		ASTM D7647	>3	0		
Oil Cleanliness		ISO 4406 (c)	>18/16/13	<b>e</b> 18/17/14		
HEAVY METALS	S	method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	0		
Nickel		ASTM D5185m	<0.1	0		
Lead		ASTM D5185m	<0.1	0		
Vanadium		ASTM D5185m		0		
Iron		ASTM D5185m	<0.1	0		
Calcium		ASTM D5185m		0		
Magnesium		ASTM D5185m	<0.1	0		
Phosphorus		ASTM D5185m		0		
Zinc				0		
		ASTM D5185m	<0.1			
SAMPLE IMAGE	ES	method	limit/base	current	history1	history2
Color					no image	no image
Bottom					no image	no image
GRAPHS						
Fuel Distillation C	Curve		0	Pensky-Marter	ns Flash Point (	°C)
Sample			e al	70		
CBaseline			temperature	60 -		
C			ter la	50		
c -		/		Mar27/24		Mar27/24
c -		1		Mar2		Mar2
		1		GCD Spectrum	ı	
C -	/		7			
C	1		6	00-		
c	[]					
c				00+		
			Response (pA)	00-		
°			Suods 3	00-		
c 🖌						
c -			2	00		
c -			1	00-		
				0	N.	
	+ + + %04 Percent Recovered	70% + 80% +	90%		91 1 Time (min)	21 25 26 26 28
	01 14"	A				
WearCheck USA - 50 NC0914196	01 Madison Receiv					JEL SYSTEMS 6 CLASSIC RE
06138208	Tested		Apr 2024 Apr 2024		1076	APEX, NC
10062016	Diagne		Apr 2024	oue Decert		



 Carry, NC 27513
 VITAL FUEL SYSTEMS

 : 03 Apr 2024
 1076 CLASSIC RD

 : 15 Apr 2024
 APEX, NC

 : 15 Apr 2024 - Doug Bogart
 US 27539

 Contact: SERVICE
 1369.

 service@vitalfuelsystems.com
 T: (919)629-8180

 eptance decision rule (JCGM 106:2012)
 F: (919)303-7399

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Unique Number : 10963016

Test Package : DF-2 (Additional Tests: Fuel, Screen )

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Diagnosed

Report Id: VITAPE [WUSCAR] 06138208 (Generated: 04/15/2024 21:54:26) Rev: 1

Certificate L2367

Contact/Location: SERVICE ? - VITAPE

Page 2 of 2