

### **FUEL REPORT**

Sample Rating Trend

#### NORMAL

# KIOTI CS2210h YY8200111

Tank Diesel Fuel Fluid NOT GIVEN (--- GAL)

#### DIAGNOSIS

#### Recommendation

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

The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample. 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 level is acceptable for ULSD specification.

				Oct2023		
SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KT0000662		
Sample Date		Client Info		31 Oct 2023		
Machine Age	hrs	Client Info		28		
Sample Status				NORMAL		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		0.836		
Fuel Color	text	*Visual Screen		Red		
ASTM Color	scalar	*ASTM D1500		L4.0		
Visc @ 40°C	cSt	ASTM D445		2.66		
Pensky-Martens Flash Point	°C	*PMCC Calculated		56		
SULFUR CONTER	NT	method	limit/base	current	history1	history2
			innibado		inotory i	motory
Sulfur	ppm	ASTM D5185m		2		
Sulfur (UVF)	ppm	ASTM D5453		6		
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		157		
5% Distillation Point	°C	ASTM D86		188		
10% Distill Point	°C	ASTM D86		201		
15% Distillation Point	°C	ASTM D86		211		
20% Distill Point	°C	ASTM D86		221		
30% Distill Point	°C	ASTM D86		237		
40% Distill Point	°C	ASTM D86		252		
50% Distill Point	°C	ASTM D86		266		
60% Distill Point	°C	ASTM D86		281		
70% Distill Point	°C	ASTM D86		296		
80% Distill Point	°C	ASTM D86		312		
85% Distillation Point	°C	ASTM D86		321		
90% Distill Point	°C	ASTM D86		332		
95% Distillation Point	°C	ASTM D86		347		
Final Boiling Point	°C	ASTM D86		356		
Distillation Residue	%	ASTM D86		1.4		
Distillation Loss	%	ASTM D86		0.7		
IGNITION QUALIT	ΓY	method	limit/base	current	history1	history2
API Gravity		ASTM D7777		37.8		
Cetane Index		ASTM D4737	<40.0	51.2		
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	0.006		
ppm Water	ppm	ASTM D6304	<500	63.6		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	3.1		



491,520 T

Particle Count

## **FUEL REPORT**

FLUID CLEANLINESS method

T26

T <sup>0</sup>	T <sup>26</sup>							
0-	-24	Particles >4µm	I	ASTM D7647	>2500	1509		
0 Severe	22 80	Particles >6µm	I	ASTM D7647	>640	506		
Abnormal	-20 4406:1999	Particles >14µm	1	ASTM D7647	>80	74		
0	-16 Cle	Particles >21µm	1	ASTM D7647	>20	21		
0-	-14 m	Particles >38µm		ASTM D7647		1		
0-	-12 8	Particles >71µm		ASTM D7647		0		
	-10 G	Oil Cleanliness				18/16/13		
2		Oli Cleaniness	I	SO 4406 (c)	>10/10/13	10/10/13		
<sup>6</sup> 4μ 6μ 14μ 21μ 38μ	$71\mu$	HEAVY METALS		method				history2
Water (KF)		Aluminum	ppm /	STM D5185m	~0.1	0		
0 T		Nickel						
0 - Severe				ASTM D5185m		0		
0 +		Lead		ASTM D5185m		0		
o		Vanadium		STM D5185m		0		
0		Iron		ASTM D5185m		0		
Abaamal		Calcium	ppm /	STM D5185m	<0.1	0		
Abnormal		Magnesium	ppm /	ASTM D5185m	<0.1	0		
12	/23	Phosphorus	ppm /	ASTM D5185m	<0.1	<1		
0ct31/23	0ct31/23	Zinc	ppm /	ASTM D5185m	<0.1	0		
Viscosity @ 40°C		SAMPLE IMAGES	S	method	limit/base	current	history1	history2
-						- de		
S		Color					no imago	no imogo
		Color					no image	no image
3 - Abnomal								
Ab								
2 Abnormal					1			no imago
		Pottom						
2		Bottom					no image	no image
2	31/23	Bottom					no image	noimage
	0ct31/23						no image	no image
2/	0ct31/23	GRAPHS	Irve			Pensky-Marten		-
2	0ct31/23	GRAPHS Fuel Distillation Cu	ırve	3 8	71 ر	Pensky-Marten		-
Particle Trend	30	GRAPHS Fuel Distillation Cu	irve		្នូ 7/ ខ្មុំ 61	]		-
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