

### FUEL REPORT



#### Machine Id

## KIOTI 86822 (S/N U46200185)

Component Diesel Fuel

Fluid No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- 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. 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.

SAMPLE INFORM	1ATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		KT0000353			
Sample Date		Client Info		28 Mar 2024			
Machine Age	hrs	Client Info		292			
Sample Status				NORMAL			
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2	
Specific Gravity		*ASTM D1298	0.839	0.845			
Fuel Color	text	*Visual Screen	Yllow	Red			
ASTM Color	scalar	*ASTM D1500		L4.0			
Visc @ 40°C	cSt	ASTM D445	3.0	2.53			
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	64.4			
SULFUR CONTER	ΝT	method	limit/base	current	history1	history2	
Sulfur	ppm	ASTM D5185m	10	0			
Sulfur (UVF)	ppm	ASTM D5453		7			
DISTILLATION		method	limit/base	current	history1	history2	
Initial Boiling Point	°C	ASTM D86	165	163			
5% Distillation Point	°C	ASTM D86		195			
10% Distill Point	°C	ASTM D86	201	208			
15% Distillation Point	°C	ASTM D86		218			
20% Distill Point	°C	ASTM D86	216	226			
30% Distill Point	°C	ASTM D86	230	240			
40% Distill Point	°C	ASTM D86	243	254			
50% Distill Point	°C	ASTM D86	255	267			
60% Distill Point	°C	ASTM D86	267	279			
70% Distill Point	°C	ASTM D86	280	292			
80% Distill Point	°C	ASTM D86	295	307			
85% Distillation Point	°C	ASTM D86		315			
90% Distill Point	°C	ASTM D86	310	325			
95% Distillation Point	°C	ASTM D86		340			
Final Boiling Point	°C	ASTM D86	341	351			
Distillation Residue	%	ASTM D86	3.0	1.4			
Distillation Loss	%	ASTM D86	3.0	0.5			
IGNITION QUALIT	ΓY	method	limit/base	current	history1	history2	
API Gravity		ASTM D7777	37.7	36.0			
Cetane Index		ASTM D4737	<40.0	48.0			
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	0.003			
ppm Water	ppm	ASTM D6304	<500	35			
% Gasoline	%	*In-House	<0.50	0.0			
% Biodiesel	%	*In-House	<20.0	1.1			



491,520 122,880

122,000 -30,720 6 1,920 7

1200

1000-800 Water (ppm) 600

400 200

cSt (40°C) Base

Par 3

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400 350 .....

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150

50

# **FUEL REPORT**

article Count	FLUID CLEANLI	NESS	method	limit/base	current	history1	history2	
+24	Particles >4µm		ASTM D7647	>2500	1805			
-22 23 +	Particles >6µm		ASTM D7647		681			
normal +20 66	Particles >14µm		ASTM D7647	>80	96			
vere -22 [S0 4406:1999 Clean/Inress Code -14 10:1999 Clean/Inress Code -14 11:1999 Clean/Inress Code -14 11:1999 Clean/Inress Code -14 11:1999 Clean/Inress Code -110	Particles >21µm		ASTM D7647	>20	26			
+14 Inn	Particles >38µm		ASTM D7647		0			
	Particles >71µm		ASTM D7647	>3	0			
	Oil Cleanliness		ISO 4406 (c)		18/17/14			
6μ 14μ 21μ 38μ 71μ	HEAVY METALS	;	method	limit/base	current	history1	history2	
/ater (KF)	Aluminum	ppm	ASTM D5185m	<0.1	0			
evere	Nickel	ppm	ASTM D5185m		<1			
	Lead	ppm	ASTM D5185m		0			
	Vanadium	ppm	ASTM D5185m		0			
bnormal	Iron	ppm	ASTM D5185m		0			
	Calcium	ppm	ASTM D5185m		0			
	Magnesium	ppm	ASTM D5185m		0			
24	Phosphorus	ppm	ASTM D5185m		0			
Mar28/24	Zinc	ppm	ASTM D5185m		0			
iscosity @ 40°C	SAMPLE IMAGE	S	method	limit/base	current	history1	history2	
bnomal	Color					no image	no image	
bnormai Har29/29/24	Bottom					no image	no image	
Ma	GRAPHS							
article Trend	380°C T	Fuel Distillation Curve			Pensky-Martens Flash Point (°C) ⇔ <sup>80</sup> ]			
4μm 6μm 14μm	360°C  Sample    340°C Baseline    320°C  -    300°C  -			temperature	0		- IN	
	280°C -		1		GCD Spectrum			
24		1	and the second se	70				
GCD 10%	2260°C 220°C 220°C 200°C			60 50 ਦਿੱਖ 40				
GCD 50%	180°C -			20 10				
	140°C -							
Mai28/24 +	120°C	ercent Recovere		90%	<u>1</u> 0 % 2 % 7 0	11 <u>9</u> Time (min) 5 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	21 25 26 28	
Laboratory Sample No. Lab Number Unique Number	: 10952309 : DF-2 ( Additional Tes ; contact Customer Serv	Rece Teste Diage sts: Fuel, vice at 1-8	ived : 28 ed : 10 nosed : 10 Screen )	3 Mar 2024 ) Apr 2024 Apr 2024 - Do 9.	ug Bogart	1 MO Contact	<b>S HOLLINGEF</b> 13 W MAIN S UNTVILLE, P/ US 1755 US 1755 5 JEFF AUKEF @eblings.com	

\* - 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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Contact/Location: JEFF AUKER - EBLMOU Page 2 of 2

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