

### **FUEL REPORT**

#### Sample Rating Trend



# KIOTI PA4PA0320

Component Diesel Fuel Fluid FARM FUEL (--- 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 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.

				Jan2024		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		КТ0000960		
Sample Date		Client Info		12 Jan 2024		
Machine Age	hrs	Client Info		94		
Sample Status				NORMAL		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		0.837		
Fuel Color	text	*Visual Screen		Red		
ASTM Color	scalar	*ASTM D1500		L4.5		
Visc @ 40°C	cSt	ASTM D445		2.38		
Pensky-Martens Flash Point	°C	*PMCC Calculated		57		
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	innitiouse	158		
5% Distillation Point	°C	ASTM D86		185		
10% Distill Point	°C	ASTM D86		196		
15% Distillation Point		ASTM D86		205		
20% Distill Point	°C	ASTM D86		203		
30% Distill Point	°C	ASTM D86		212		
40% Distill Point	°C	ASTM D86		227		
50% Distill Point	°C	ASTM D86		255		
60% Distill Point	°C	ASTM D86		255		
70% Distill Point	°C	ASTM D86		284		
80% Distill Point	°C	ASTM D86		301		
85% Distillation Point	-	ASTM D86		311		
90% Distill Point	°C	ASTM D86		323		
95% Distillation Point		ASTM D86		340		
Final Boiling Point	°C	ASTM D86		352		
Distillation Residue	%	ASTM D86		1.4		
Distillation Loss	%	ASTM D86		0.4		
IGNITION QUALI	ΓY	method	limit/base	current	history1	history2
API Gravity		ASTM D7777		37.6		
Cetane Index		ASTM D4737	<40.0	48.1		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	<1		
Sodium	ppm	ASTM D5185m	<0.1	0		
Potassium	ppm	ASTM D5185m	<0.1	0		
Water	%	ASTM D6304	< 0.05	0.005		
ppm Water	ppm	ASTM D6304	<500	51		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	0.0		



## **FUEL REPORT**

Particle Count	<b>T</b> 26	FLUID CLEANLI	NESS	method				history2
880 -	-24	Particles >4µm		ASTM D7647	>2500	2474		
720 Severe	-22 ISO -20 4406:1999 0	Particles >6µm		ASTM D7647	>640	691		
680 Abnormal 920	-20 66	Particles >14µm		ASTM D7647	>80	66		
480-	-16 Clean	Particles >21µm		ASTM D7647	>20	22		
120-	-14 animes	Particles >38µm		ASTM D7647	>4	2		
30	-12 %	Particles >71µm		ASTM D7647	>3	0		
8	-8	Oil Cleanliness		ISO 4406 (c)		18/17/13		
0 4μ 6μ 14μ 21μ 38μ	71µ	HEAVY METALS	;	method	limit/base	current	history1	history2
Water (KF)		Aluminum	ppm	ASTM D5185m	<0.1	0		
000 - Severe		Nickel	ppm	ASTM D5185m	<0.1	0		
800 -		Lead	ppm	ASTM D5185m	<0.1	0		
600		Vanadium	ppm	ASTM D5185m	<0.1	<1		
400 -		Iron	ppm	ASTM D5185m	<0.1	0		
		Calcium	ppm	ASTM D5185m	<0.1	0		
Abnormal		Magnesium	ppm	ASTM D5185m	<0.1	0		
525	2/24	Phosphorus	ppm	ASTM D5185m	<0.1	0		
Jan 12/24	Jan12/24	Zinc	ppm	ASTM D5185m	<0.1	0		
Viscosity @ 40°C		SAMPLE IMAGE	S	method	limit/base	current	history1	history2
6 5 4 4 6 3 3 3 4 3 4 5 3 4 4 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Color					no image	no image
2 - <b>Abboomal</b> 1	Jan 12/24	Bottom					no image	no image
Jan 1	Jan1	GRAPHS						
Particle Trend		Fuel Distillation C	urve			Pensky-Marten	s Flash Point (	°C)
3k 4μm	30	Sample			ູ ວິ			
3κ - Ο αποτοποιο 6μm	50	°CBaseline			erature 0			
	40	°C			temper	0		
2 2 k	20	°C -			1			
1k 1k		•0		/		Jan 12/24		
1k -				/				
0k	30 st	°C -		/				
Jan 12/24	Jan 12/24	°C	/					
	10	°C	/					
Fuel Distillation Curve	년 220	°C .						
D°C Sample								
0°CBaseline	200							
D°C	180	°° /						
D°C	160	°C 🖌						
0°C	140	°C -						
D°C	120							
0°% 30°% 30°% 30°% 30°% 30°% 30°% 30°% 3	20 6	0% 10% 20% 30%	ercent Recovered	70% -	90%			
	le No. umber	: WearCheck USA - : KT0000960 : 06062283 : 10833665	501 Madia Recieved Diagnose Diagnost	l : 16. ed : 23.	ry, NC 2751 Jan 2024 Jan 2024 Jg Bogart	3		AILER SALE _AHOMA HW CHESTER, T US 3739

Contact/Location: MITCHELL C. - PENWINTN