

FUEL REPORT

Sample Rating Trend

Machine Id

KIOTI DR4710SEHB 8073 (S/N YGG500228) Component Diesel Fuel

Fluid

DIESEL FUEL No. 2 (--- GAL)

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 < 6 microns in size) 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	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KT0000968		
Sample Date		Client Info		01 Apr 2024		
Machine Age	hrs	Client Info		62		
Sample Status				ATTENTION		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
Fuel Color	text	*Visual Screen		Yllow		
ASTM Color	scalar	*ASTM D1500		L1.5		
Visc @ 40°C	cSt	ASTM D445	4.1	2.33		
Pensky-Martens Flash Point	°C	*PMCC Calculated		63.3		
SULFUR CONTER	NT	method	limit/base	current	history1	history2
Sulfur		ASTM D5185m		0		
Sulfur (UVF)	ppm ppm	ASTM D5185III ASTM D5453		7		
()	ppiii	AUTIVI DU400		1		
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		173		
5% Distillation Point	°C	ASTM D86		190		
10% Distill Point	°C	ASTM D86		197		
15% Distillation Point	°C	ASTM D86		204		
20% Distill Point	°C	ASTM D86		211		
30% Distill Point	°C	ASTM D86		226		
40% Distill Point	°C	ASTM D86		241		
50% Distill Point	°C	ASTM D86		256		
60% Distill Point	°C	ASTM D86		271		
70% Distill Point	°C	ASTM D86		286		
80% Distill Point	°C	ASTM D86		304		
85% Distillation Point	°C	ASTM D86		314		
90% Distill Point	°C	ASTM D86		324		
95% Distillation Point	°C	ASTM D86		338		
Final Boiling Point	°C	ASTM D86		353		
IGNITION QUALI	ΓY	method	limit/base	current	history1	history2
API Gravity		ASTM D7777		38		
Cetane Index		ASTM D4737	<40.0	51		
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	62		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	4.5		



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Particle Count	FLUID CLEANLIN	ESS	method	limit/base	current	history1	histo
0	Particles >4µm	/	ASTM D7647	>2500	e 2542		
0 Severe 22 2 0 Abnormal 20 0 0 18 0 0 18 0 18 18 16 14 12	Particles >6µm	1	ASTM D7647	>640	297		
Abnormal -18	Particles >14µm	1	ASTM D7647	>80	24		
16 0	Particles >21µm	1	ASTM D7647	>20	6		
	Particles >38µm	1	ASTM D7647	>4	1		
8	Particles >/1µm		ASTM D7647		0		
-8	Oil Cleanliness	I	ISO 4406 (c)	>18/16/13	19/15/12		
$2\frac{1}{4\mu}$ 6μ 14μ 21μ 38μ 71μ	HEAVY METALS		method	limit/base	current	history1	histo
Particle Trend	Aluminum	ppm	ASTM D5185m	<0.1	0		
	Nickel	ppm /	ASTM D5185m	<0.1	0		
14μm	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	<1		
Apr1/24 Apr1/24	Phosphorus	ppm /	ASTM D5185m	<0.1	0		
Ap Ap	Zinc	ppm	ASTM D5185m	<0.1	0		
Water (KF)	SAMPLE IMAGES	5	method	limit/base	current	history1	histo
- Severe	Color					no image	no imag
Abnormal b2/1/104	Bottom					no image	no imaţ
Apr	GRAPHS						
Viscosity @ 40°C	Fuel Distillation Cur	rve			Pensky-Marten	ıs Flash Point (°C)
6 T	- 380°C Sample			÷	⁸⁰ T		
5-	360°CBaseline				70		
4 - Base mal	340°C -				60 -		
3-	320°C -			1	50 47		
2 - Abnormal			/		Apr1/24		
1	300°C -		/		GCD Spectrum	1	
	_ 280℃ - ⊇	1	/	8			
Apr1/24 Apr1/24	≗ 260°C -	/		7	00-		
	E 240°C -			6	00-		
Gas Chromatography (GCD)	.º 220°C			25	00-		
GCD 10%	200°C			Response (pA)	00		
- GCD 50%				r espon	00		
	180°C						
-	160°C -			2	00-		
	140°C -			1	00		
	120°C					111 113 115 116 118 118 20	21 23 25 26
	0% 10% 20% 30%	50%	70% 80%	90% 100%	-	12 Time (min)	5 5 5 5
24 + T	Perc	ent Recovered					
Apr1/24 -							
April 24 -							

* - 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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