

FUEL REPORT

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Sample Rating Trend

NORMAL

KIOTI CS2210 N186A1638

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

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

				Aug2023		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		KT0000575		
Sample Date		Client Info		13 Aug 2023		
Machine Age	hrs	Client Info		18		
Sample Status				NORMAL		
PHYSICAL PROP	ERTIES	method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		0.843		
Fuel Color	text	*Visual Screen		Red		
ASTM Color	scalar	*ASTM D1500		L4.0		
Visc @ 40°C	cSt	ASTM D445		2.43		
Pensky-Martens Flash Point	°C	*PMCC Calculated		58		
SULFUR CONTEN	ΝT	method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		8		
Sulfur (UVF)	ppm	ASTM D5453		6		
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		162		
5% Distillation Point	°C	ASTM D86		193		
10% Distill Point	°C	ASTM D86		205		
15% Distillation Point	°C	ASTM D86		213		
20% Distill Point	°C	ASTM D86		220		
30% Distill Point	°C	ASTM D86		234		
40% Distill Point	°C	ASTM D86		246		
50% Distill Point	°C	ASTM D86		258		
60% Distill Point	°C	ASTM D86		269		
70% Distill Point	°C	ASTM D86		283		
80% Distill Point	°C	ASTM D86		297		
85% Distillation Point	°C	ASTM D86		306		
90% Distill Point	°C	ASTM D86		318		
95% Distillation Point	°C	ASTM D86		335		
Final Boiling Point	°C	ASTM D86		346		
Distillation Residue	%	ASTM D86		1.4		
Distillation Loss	%	ASTM D86		0.8		
IGNITION QUALIT	ΓY	method	limit/base	current	history1	history2
API Gravity		ASTM D7777		36.4		
Cetane Index		ASTM D4737	<40.0	46.8		
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	0		
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	56.0		
% Gasoline	%	*In-House	<0.50	0.0		
% Biodiesel	%	*In-House	<20.0	0.0		



491,520 T

Particle Count

FUEL REPORT

T²⁶

FLUID CLEANLINESS method limit/base

380 -	24	Particles >4µm		ASTM D7647	>2500	1272		
720 Severe	-22 8	Particles >6µm		ASTM D7647		232		
Abnormal	-20 406:1	Particles >14µm		ASTM D7647		14		
480	-20 4406:1999 -18 1999 Cla	Particles >21µm		ASTM D7647		4		
120-	-14 lin	Particles >38µm		ASTM D7647		0		
30-	-12 C	Particles >71µm		ASTM D7647		0		
	-10 6	Oil Cleanliness		ISO 4406 (c)		17/15/11		
	6			()				
⁻ 4μ 6μ 14μ 21μ 38μ	71µ	HEAVY METALS		method	limit/base	current	history1	history2
Water		Aluminum	ppm	ASTM D5185m	<0.1	0		
10 Severe		Nickel	ppm	ASTM D5185m	<0.1	<1		
.08		Lead	ppm	ASTM D5185m	<0.1	<1		
20		Vanadium	ppm	ASTM D5185m	<0.1	0		
.04		Iron	ppm	ASTM D5185m	<0.1	0		
		Calcium	ppm	ASTM D5185m	<0.1	0		
.02		Magnesium		ASTM D5185m	<0.1	0		
00. 22	/23	Phosphorus	ppm	ASTM D5185m	<0.1	<1		
Aug13/23	Aug13/23	Zinc		ASTM D5185m		0		
	4						la la tarra di a	late to a O
Viscosity @ 40°C		SAMPLE IMAGES	5	method	limit/base	current	history1	history2
5 - Abnormal		Color					no image	no image
² 2 Abnomal							no image	no image
	13/23	Bottom					no image	no image
Aug13/23	Aug13/23						no image	no image
Aug 13/23	Aug13/23	GRAPHS	IFVE			Pensky-Marte		-
Particle Trend		GRAPHS Fuel Distillation Cu	ırve		2	Pensky-Marte	ns Flash Point (-
Particle Trend	30	GRAPHS Fuel Distillation Cu	ırve		ature °C	⁷⁰ T -		-
Particle Trend	30	GRAPHS Fuel Distillation Cu	ırve		mpeadure °C	50		-
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Particle Trend	30 50 ‡0	GRAPHS Fuel Distillation Cu	ırve		temperature	70 50 50		°C)
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Particle Trend 3k 2k 2k 14μm 14μm 14μm	30 30 40 20 30 522E [Bhy	GRAPHS Fuel Distillation Cu	ırve		temperature	70 50 50		°C)
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Particle Trend	30 50 20 50 50 50 50 50 50 50 50 50 50 50 50 50	GRAPHS Fuel Distillation Cu	JITVE		temperature	70 50 50		°C)
Particle Trend	30 50 70 70 70 70 70 70 70 70 70 70 70 70 70	GRAPHS Fuel Distillation Cu				70 50 50		°C)
Particle Trend	50 50 50 50 50 50 50 50 50 50 50 50 50 5	GRAPHS Fuel Distillation Cu	Jrve	70%	temperature	70 50 50		°C)
Particle Trend	30 50 50 50 50 50 50 50 50 50 50 50 50 50	GRAPHS Fuel Distillation Cu	50%- 60%-	20%		70 50 50		°C)
Particle Trend	atory by le No. lumber Package	GRAPHS Fuel Distillation Cu Construction Cu Co	signosti Diagnosti ests: Scree	on Ave., Ca : 11 / d : 17 / cian : Dou en)	ry, NC 2751 Aug 2023 Aug 2023 ig Bogart	3 3	ns Flash Point (EDINBU 6941 T	PC) RG TRACTOF ALLMAGE RE DTSTOWN, OF US 44272 Contact: DAN

Contact/Location: DAN ? - EDIROO

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