



FUEL REPORT

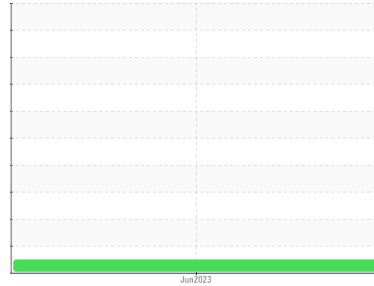
Sample Rating Trend

NORMAL



Machine Id
80kW Roxobor health & rehab

Component
Bottom Diesel Fuel
Fluid
NOT GIVEN (--- GAL)



DIAGNOSIS

Recommendation

All laboratory tests indicate that this sample meets specifications for No.2 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.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number	Client Info			WC0783061	---	---
Sample Date	Client Info			19 Jun 2023	---	---
Machine Age	hrs	Client Info		2271	---	---
Sample Status				NORMAL	---	---

PHYSICAL PROPERTIES		method	limit/base	current	history 1	history 2
Specific Gravity		*ASTM D1298		0.840	---	---
Fuel Color	text	*Visual Screen		Red	---	---
ASTM Color	scalar	*ASTM D1500		L4.0	---	---
Visc @ 40°C	cSt	ASTM D445		2.53	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		59	---	---
Cloud Point	°C	ASTM D5771		-12	---	---
Pour Point	°C	ASTM D5950		-22	---	---

SULFUR CONTENT		method	limit/base	current	history 1	history 2
Sulfur	ppm	ASTM D5185m		19	---	---
Sulfur (UVF)	ppm	ASTM D5453		24	---	---

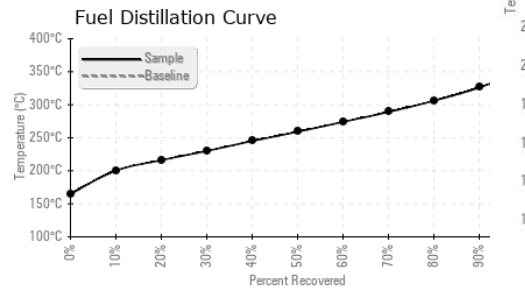
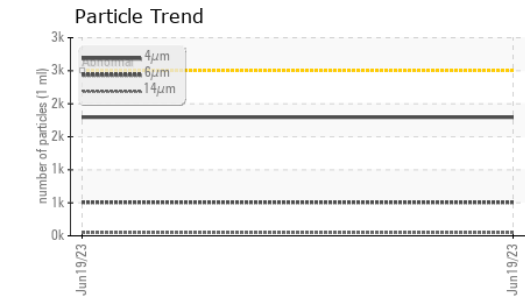
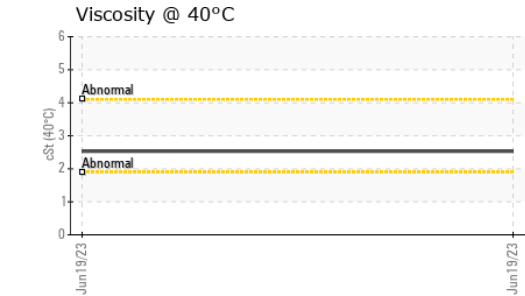
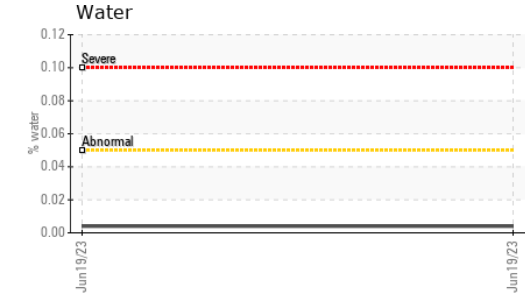
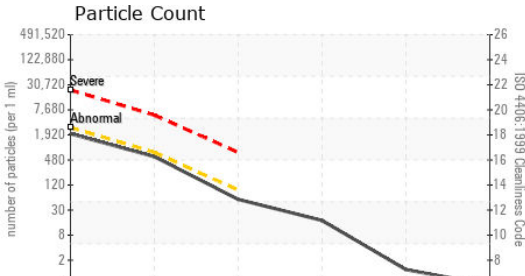
DISTILLATION		method	limit/base	current	history 1	history 2
Initial Boiling Point	°C	ASTM D86		164	---	---
5% Distillation Point	°C	ASTM D86		189	---	---
10% Distill Point	°C	ASTM D86		200	---	---
15% Distillation Point	°C	ASTM D86		208	---	---
20% Distill Point	°C	ASTM D86		216	---	---
30% Distill Point	°C	ASTM D86		230	---	---
40% Distill Point	°C	ASTM D86		245	---	---
50% Distill Point	°C	ASTM D86		259	---	---
60% Distill Point	°C	ASTM D86		274	---	---
70% Distill Point	°C	ASTM D86		289	---	---
80% Distill Point	°C	ASTM D86		306	---	---
85% Distillation Point	°C	ASTM D86		315	---	---
90% Distill Point	°C	ASTM D86		326	---	---
95% Distillation Point	°C	ASTM D86		343	---	---
Final Boiling Point	°C	ASTM D86		352	---	---
Distillation Residue	%	ASTM D86		1.4	---	---
Distillation Loss	%	ASTM D86		0.7	---	---

IGNITION QUALITY		method	limit/base	current	history 1	history 2
API Gravity		ASTM D7777		37.0	---	---
Cetane Index		ASTM D4737	<40.0	48.2	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
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	0.004	---	---
ppm Water	ppm	ASTM D6304	<500	43.9	---	---
% Gasoline	%	*In-House	<0.50	0.0	---	---
% Biodiesel	%	*In-House	<20.0	1.6	---	---



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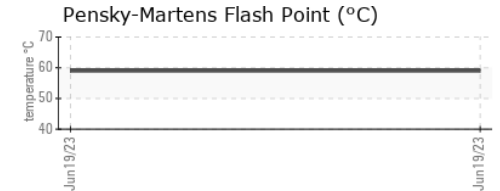
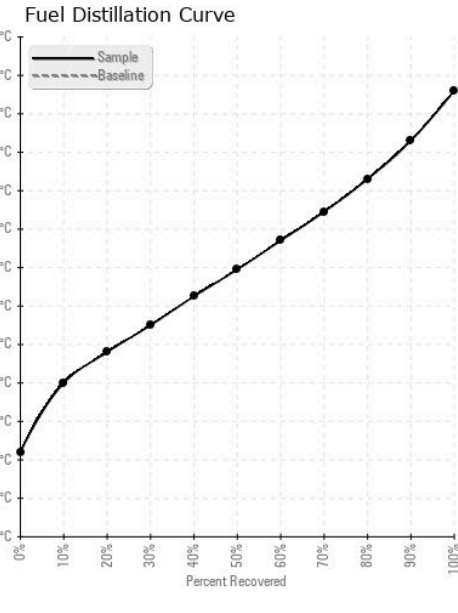


FLUID CLEANLINESS	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>2500	1795	---	---
Particles >6µm	ASTM D7647	>640	507	---	---
Particles >14µm	ASTM D7647	>80	48	---	---
Particles >21µm	ASTM D7647	>20	15	---	---
Particles >38µm	ASTM D7647	>4	1	---	---
Particles >71µm	ASTM D7647	>3	0	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	18/16/13	---	---

HEAVY METALS	method	limit/base	current	history 1	history 2
Aluminum	ppm	ASTM D5185m <0.1	0	---	---
Nickel	ppm	ASTM D5185m <0.1	<1	---	---
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	<1	---	---
Magnesium	ppm	ASTM D5185m <0.1	0	---	---
Phosphorus	ppm	ASTM D5185m <0.1	2	---	---
Zinc	ppm	ASTM D5185m <0.1	0	---	---

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color				no image	no image
Bottom				no image	no image

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0783061 **Received** : 21 Jun 2023
Lab Number : **05880408** **Diagnosed** : 05 Jul 2023
Unique Number : 10525511 **Diagnostician** : Doug Bogart
Test Package : DF-3 (Additional Tests: Screen)

ALTERNATIVE POWER
 1000 NORTHGATE CT
 MORRISVILLE, NC
 US 27560
 Contact: ROBERT MCARTHUR
 rmcARTHUR@bittingelectric.com
 T: (919)467-9417
 F:

Certificate L2367
 To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - 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)