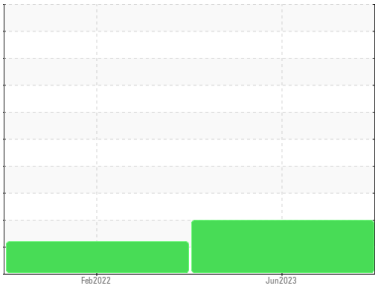
FUEL REPORT

Sample Rating Trend



ISO

Machine Id
Kohler 80kw
Component
Diesel Fuel
Fluid
NOT GIVEN (650 GAL)

DIAGNOSIS

Recommendation
Recommend pre-filtering before use. 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
There is a high amount of particulates 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.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number		Client Info		**WC0829178**	WC0658741	---
Sample Date		Client Info		**13 Jun 2023**	01 Feb 2022	---
Machine Age	hrs	Client Info		**737**	0	---
Sample Status				**MARGINAL**	ATTENTION	---

PHYSICAL PROPERTIES		method	limit/base	current	history 1	history 2
Specific Gravity		*ASTM D1298		**0.843**	0.843	---
Fuel Color	text	*Visual Screen		**Red**	Red	---
ASTM Color	scalar	*ASTM D1500		**1.0**	L4.0	---
Visc @ 40°C	cSt	ASTM D445		**2.53**	2.56	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		**65**	65	---
Cloud Point	°C	ASTM D5771		**-13**	-13	---
Pour Point	°C	ASTM D5950		**-35**	-37	---

SULFUR CONTENT		method	limit/base	current	history 1	history 2
Sulfur	ppm	ASTM D5185m		**467**	370	---
Sulfur (UVF)	ppm	ASTM D5453		**367**	425	---

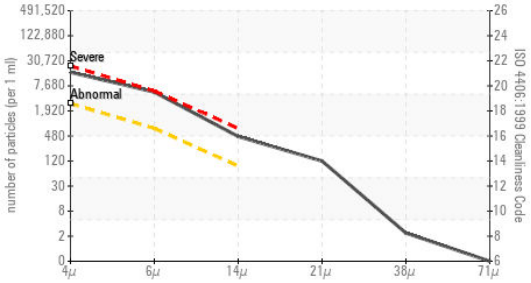
DISTILLATION		method	limit/base	current	history 1	history 2
Initial Boiling Point	°C	ASTM D86		**170**	169	---
5% Distillation Point	°C	ASTM D86		**191**	193	---
10% Distill Point	°C	ASTM D86		**202**	203	---
15% Distillation Point	°C	ASTM D86		**211**	211	---
20% Distill Point	°C	ASTM D86		**219**	219	---
30% Distill Point	°C	ASTM D86		**233**	234	---
40% Distill Point	°C	ASTM D86		**247**	248	---
50% Distill Point	°C	ASTM D86		**260**	261	---
60% Distill Point	°C	ASTM D86		**274**	274	---
70% Distill Point	°C	ASTM D86		**288**	288	---
80% Distill Point	°C	ASTM D86		**303**	303	---
85% Distillation Point	°C	ASTM D86		**312**	312	---
90% Distill Point	°C	ASTM D86		**323**	323	---
95% Distillation Point	°C	ASTM D86		**339**	339	---
Final Boiling Point	°C	ASTM D86		**348**	350	---
Distillation Residue	%	ASTM D86		**1.4**	1.4	---
Distillation Loss	%	ASTM D86		**0.8**	0.5	---

IGNITION QUALITY		method	limit/base	current	history 1	history 2
API Gravity		ASTM D7777		**36.4**	36.4	---
Cetane Index		ASTM D4737	<40.0	**47.5**	47.4	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	<1.0	**0**	0	---
Sodium	ppm	ASTM D5185m	<0.1	**0**	0	---
Potassium	ppm	ASTM D5185m	<0.1	**<1**	0	---
Water	%	ASTM D6304	<0.05	**0.003**	0.003	---
ppm Water	ppm	ASTM D6304	<500	**30.7**	35.1	---
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	---
% Biodiesel	%	*In-House	<20.0	**0.0**	0.0	---

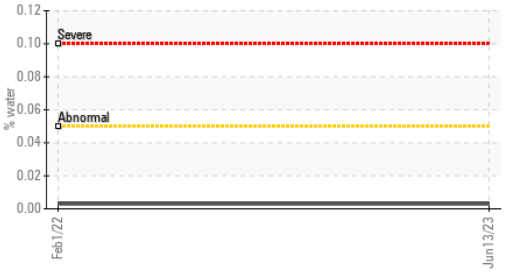
FUEL REPORT

Particle Count



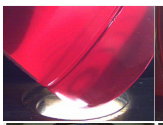
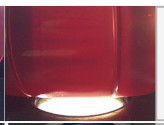
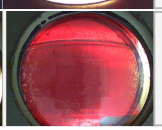
Particle Trend

Water



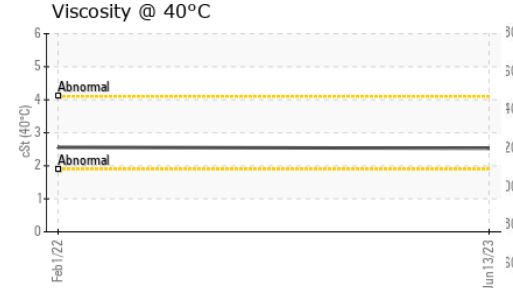
FLUID CLEANLINESS	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>2500	▲ **14150**	---	---
Particles >6µm	ASTM D7647	>640	▲ **4750**	---	---
Particles >14µm	ASTM D7647	>80	▲ **410**	---	---
Particles >21µm	ASTM D7647	>20	▲ **106**	---	---
Particles >38µm	ASTM D7647	>4	**2**	---	---
Particles >71µm	ASTM D7647	>3	**0**	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	▲ **21/19/16**	---	---

HEAVY METALS		method	limit/base	current	history 1	history 2
Aluminum	ppm	ASTM D5185m	<0.1	**0**	<1	---
Nickel	ppm	ASTM D5185m	<0.1	**<1**	0	---
Lead	ppm	ASTM D5185m	<0.1	**0**	0	---
Vanadium	ppm	ASTM D5185m	<0.1	**0**	0	---
Iron	ppm	ASTM D5185m	<0.1	**0**	0	---
Calcium	ppm	ASTM D5185m	<0.1	**0**	1	---
Magnesium	ppm	ASTM D5185m	<0.1	**0**	0	---
Phosphorus	ppm	ASTM D5185m	<0.1	**1**	7	---
Zinc	ppm	ASTM D5185m	<0.1	**0**	0	---

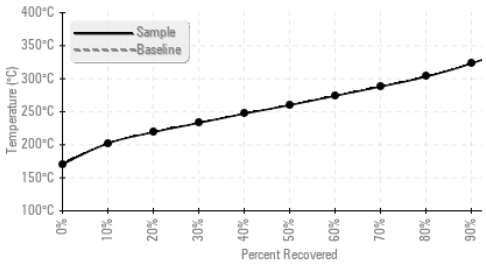
SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					*no image*
Bottom					*no image*

GRAPHS

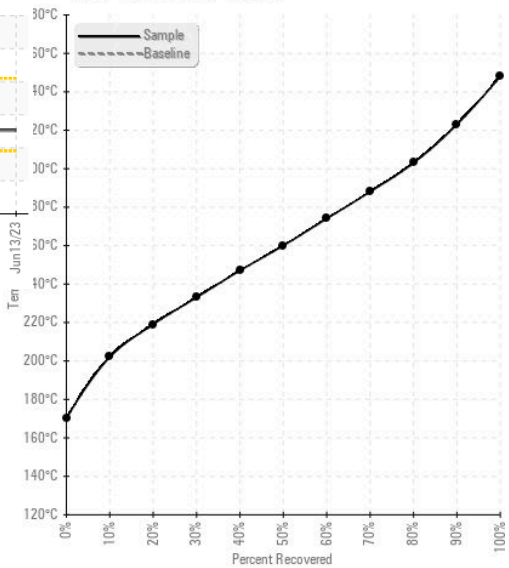
Viscosity @ 40°C



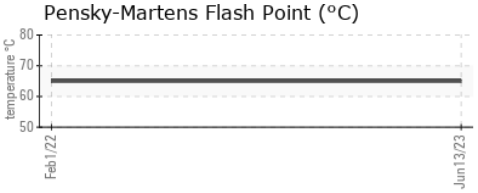
Fuel Distillation Curve



Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0829178 **Received** : 21 Jun 2023
Lab Number : 05880410 **Diagnosed** : 05 Jul 2023
Unique Number : 10525513 **Diagnostician** : Doug Bogart
Test Package : DF-3 (Additional Tests: Screen)

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)

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