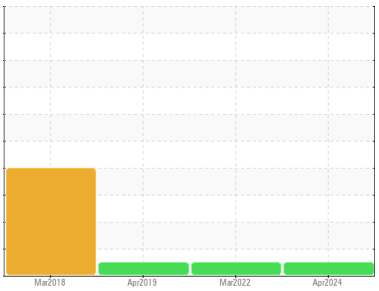
FUEL REPORT

Sample Rating Trend



NORMAL

Machine Id
HFMG MALABAR
Component
Diesel Fuel
Fluid
No.2 DIESEL FUEL (LOW-SULPHUR) (750 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
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.

Fuel Condition
Sulfur value derived by ASTM D5453 method for ULSD validation.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WCDF4606**	WCDF04408	WCDF00784
Sample Date		Client Info		**18 Apr 2024**	07 Mar 2022	03 Apr 2019
Machine Age	mls	Client Info		**0**	0	0
Sample Status				**NORMAL**	NORMAL	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298	0.839	**---**	0.842	0.845
Fuel Color	text	*Visual Screen	Yllow	**Red**	Red	Red
ASTM Color	scalar	*ASTM D1500		**L5.0**	L5.0	L5.5
Visc @ 40°C	cSt	ASTM D445	3.0	**2.68**	2.64	2.59
Pensky-Martens Flash Point	°C	*PMCC Calculated	52	**73.6**	71	69
Cloud Point	°C	ASTM D5771		**-11**	-11	---

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m	250	**0**	12	4
Sulfur (UVF)	ppm	ASTM D5453		**20**	15	20

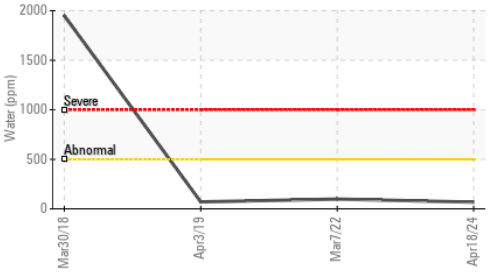
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86	165	**186**	41	170
5% Distillation Point	°C	ASTM D86		**205**	200	195
10% Distill Point	°C	ASTM D86	201	**213**	208	206
15% Distillation Point	°C	ASTM D86		**220**	216	213
20% Distill Point	°C	ASTM D86	216	**228**	222	221
30% Distill Point	°C	ASTM D86	230	**241**	236	234
40% Distill Point	°C	ASTM D86	243	**253**	250	247
50% Distill Point	°C	ASTM D86	255	**265**	263	260
60% Distill Point	°C	ASTM D86	267	**279**	276	274
70% Distill Point	°C	ASTM D86	280	**292**	290	288
80% Distill Point	°C	ASTM D86	295	**307**	306	304
85% Distillation Point	°C	ASTM D86		**317**	315	313
90% Distill Point	°C	ASTM D86	310	**328**	325	324
95% Distillation Point	°C	ASTM D86		**344**	341	340
Final Boiling Point	°C	ASTM D86	341	**358**	349	349
Distillation Residue	%	ASTM D86	3.0	**---**	1.4	1.4
Distillation Loss	%	ASTM D86	3.0	**---**	0.6	0.3

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777	37.7	**36**	36.6	36.0
Cetane Index		ASTM D4737	<40.0	**49**	48.5	47.1

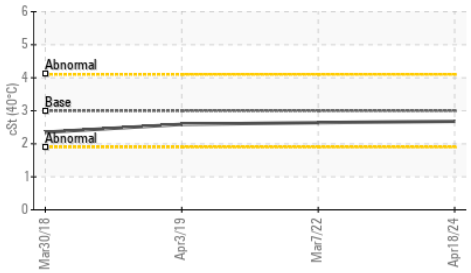
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	**0**	0	0
Sodium	ppm	ASTM D5185m	<0.1	**<1**	0	0
Potassium	ppm	ASTM D5185m	<0.1	**0**	1	0
Water	%	ASTM D6304	<0.05	**0.006**	0.009	0.007
ppm Water	ppm	ASTM D6304	<500	**67**	98.2	70
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	0.0
% Biodiesel	%	*In-House	<20.0	**0.0**	0.0	1.0

FUEL REPORT

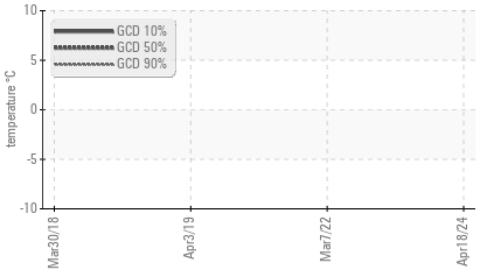
Water (KF)



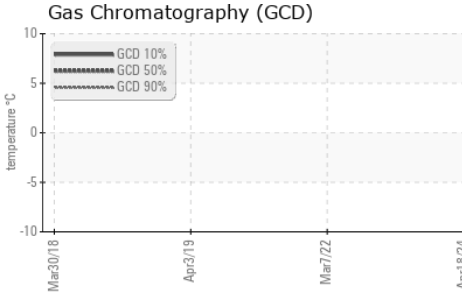
Viscosity @ 40°C



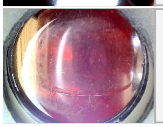
Gas Chromatography (GCD)



Gas Chromatography (GCD)

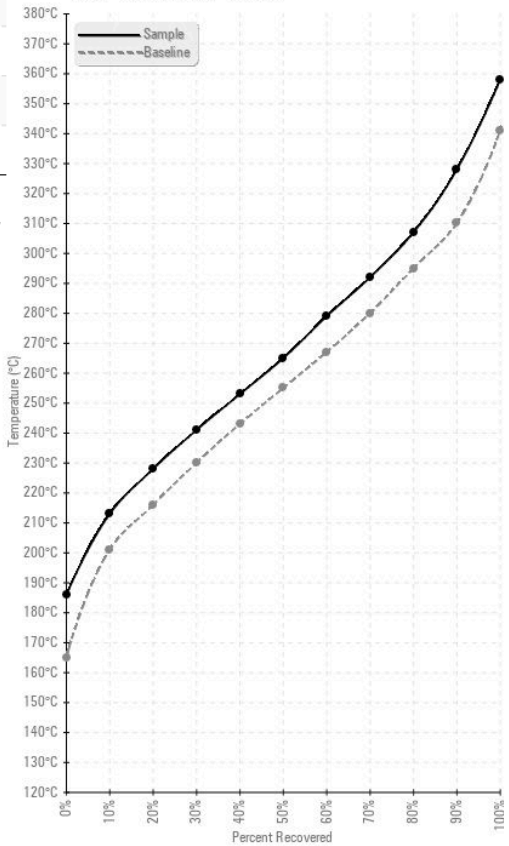


HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	**0**	<1	0
Nickel	ppm	ASTM D5185m	<0.1	**0**	0	0
Lead	ppm	ASTM D5185m	<0.1	**0**	0	<1
Vanadium	ppm	ASTM D5185m	<0.1	**0**	0	0
Iron	ppm	ASTM D5185m	<0.1	**0**	<1	<1
Calcium	ppm	ASTM D5185m	<0.1	**0**	0	0
Magnesium	ppm	ASTM D5185m	<0.1	**0**	0	0
Phosphorus	ppm	ASTM D5185m	<0.1	**3**	3	0
Zinc	ppm	ASTM D5185m	<0.1	**0**	0	0

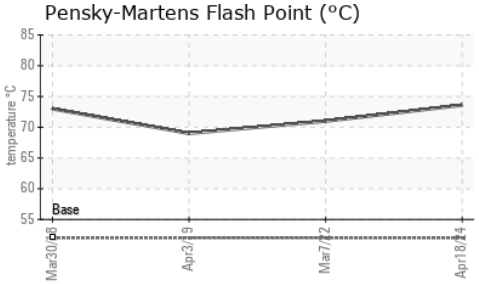
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS

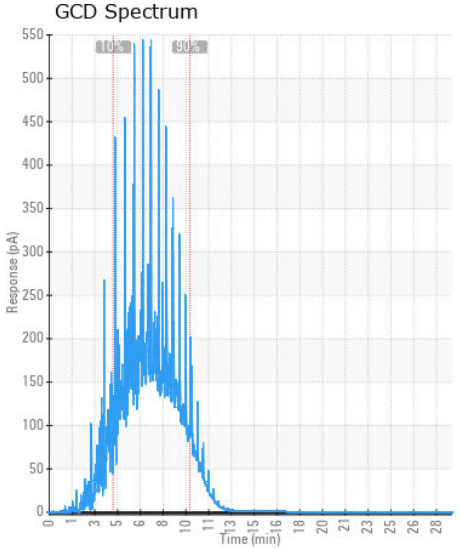
Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



GCD Spectrum



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WCDF4606 **Received** : 23 Apr 2024
Lab Number : 06158220 **Tested** : 06 May 2024
Unique Number : 10993643 **Diagnosed** : 06 May 2024 - Doug Bogart
Test Package : DF-2 (Additional Tests: CldPt, Fuel, PrtCount, Screen)

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)

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