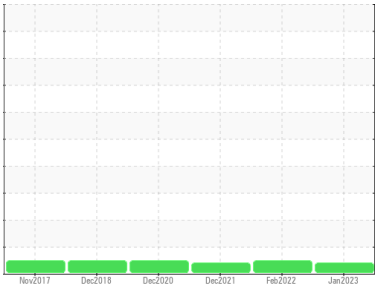
FUEL REPORT

Sample Rating Trend



VIS DEBRIS

Machine Id
USF MDH
Component
Diesel Fuel
Fluid
OFF-ROAD (2000 GAL)

DIAGNOSIS

Recommendation
We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. All other laboratory tests indicate that this sample meets specifications for No.2 diesel fuel, low sulfur.

Corrosion
All metal levels are normal indicating no corrosion in the system.

Contaminants
Moderate concentration of visible dirt/debris present in the fuel. There is no Bacteria, Yeast and/or Fungus indicated in the sample. The water content is negligible.

Fuel Condition
Sulfur value derived by ASTM D4294 method for ULSD validation.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WCDF04294**	WCDF04372	WCDF04447
Sample Date		Client Info		**27 Jan 2023**	03 Feb 2022	14 Dec 2021
Machine Age	mls	Client Info		**0**	0	0
Sample Status				**ATTENTION**	NORMAL	ABNORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history1	history2
Specific Gravity		*ASTM D1298		**0.839**	---	0.844
Fuel Color	text	*Visual Screen		**Orang**	---	Red
ASTM Color	scalar	*ASTM D1500		**1.0**	3.0	L4.0
Visc @ 40°C	cSt	ASTM D445		**2.46**	2.46	2.5
Pensky-Martens Flash Point	°C	*PMCC Calculated		**61**	---	61
Cloud Point	°C	ASTM D5771		**-12**	---	-14

SULFUR CONTENT		method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185m		**0**	108	70
Sulfur (UVF)	ppm	ASTM D5453		**39**	78	100

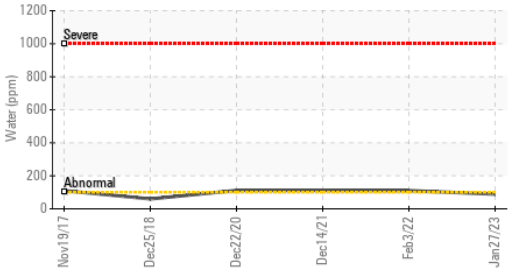
DISTILLATION		method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D86		**169**	---	164
5% Distillation Point	°C	ASTM D86		**192**	---	195
10% Distill Point	°C	ASTM D86		**202**	---	205
15% Distillation Point	°C	ASTM D86		**209**	---	213
20% Distill Point	°C	ASTM D86		**217**	---	220
30% Distill Point	°C	ASTM D86		**232**	---	233
40% Distill Point	°C	ASTM D86		**244**	---	245
50% Distill Point	°C	ASTM D86		**259**	---	258
60% Distill Point	°C	ASTM D86		**273**	---	271
70% Distill Point	°C	ASTM D86		**287**	---	285
80% Distill Point	°C	ASTM D86		**303**	---	301
85% Distillation Point	°C	ASTM D86		**312**	---	310
90% Distill Point	°C	ASTM D86		**324**	---	321
95% Distillation Point	°C	ASTM D86		**342**	---	338
Final Boiling Point	°C	ASTM D86		**349**	---	343
Distillation Residue	%	ASTM D86		**1.4**	---	1.4
Distillation Loss	%	ASTM D86		**0.7**	---	0.4

IGNITION QUALITY		method	limit/base	current	history1	history2
API Gravity		ASTM D7777		**37.2**	---	36.2
Cetane Index		ASTM D4737	<40.0	**48.6**	---	46.6

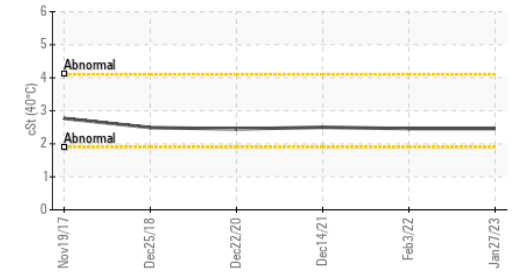
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	<1.0	**0**	0	0
Sodium	ppm	ASTM D5185m	<0.1	**0**	0	0
Potassium	ppm	ASTM D5185m	<0.1	**0**	0	<1
Water	%	ASTM D6304	<0.05	**0.008**	0.011	0.011
ppm Water	ppm	ASTM D6304	<500	**88.9**	110.1	111.5
% Gasoline	%	*In-House	<0.50	**0.0**	0.0	0.0
% Biodiesel	%	*In-House	<20.0	**0.0**	0.8	0.0

FUEL REPORT

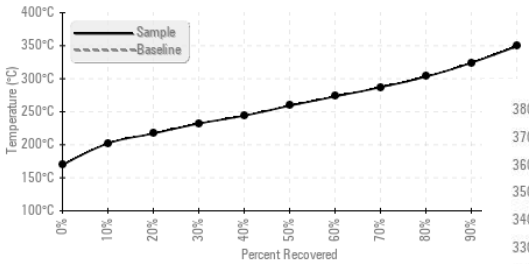
Water (KF)



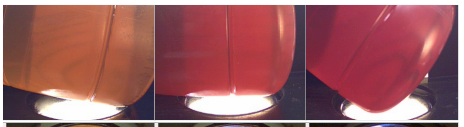
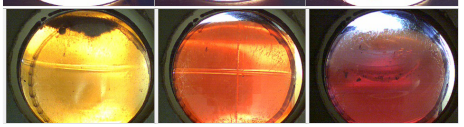
Viscosity @ 40°C



Fuel Distillation Curve

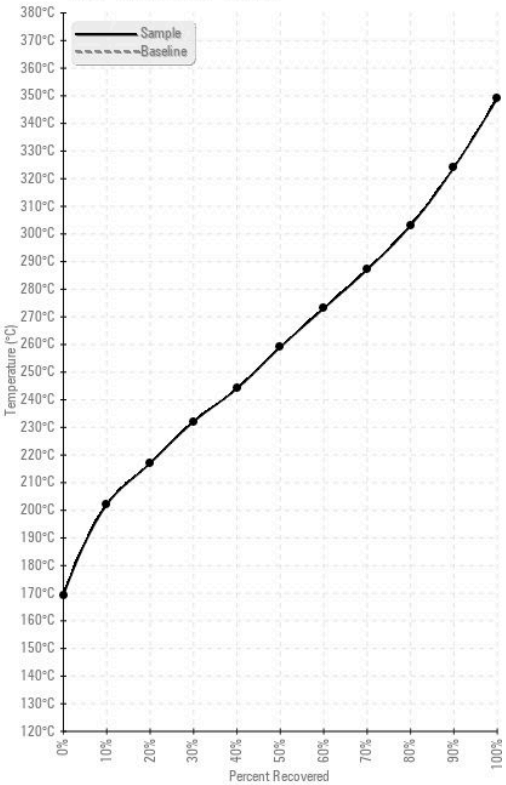


HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185m	<0.1	**0**	<1	0
Nickel	ppm	ASTM D5185m	<0.1	**0**	0	0
Lead	ppm	ASTM D5185m	<0.1	**0**	0	0
Vanadium	ppm	ASTM D5185m	<0.1	**0**	0	0
Iron	ppm	ASTM D5185m	<0.1	**<1**	2	1
Calcium	ppm	ASTM D5185m	<0.1	**0**	0	0
Magnesium	ppm	ASTM D5185m	<0.1	**0**	0	<1
Phosphorus	ppm	ASTM D5185m	<0.1	**4**	3	5
Zinc	ppm	ASTM D5185m	<0.1	**0**	0	0

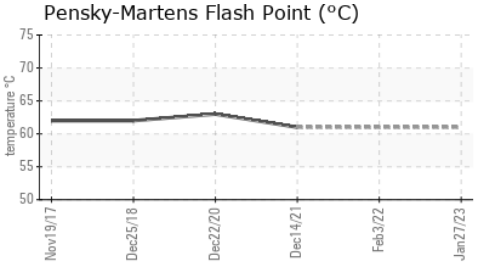
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WCDF04294 **Recieved** : 01 Feb 2023
Lab Number : 05756539 **Diagnosed** : 08 Feb 2023
Unique Number : 10321146 **Diagnostician** : Doug Bogart
Test Package : DF-2 (Additional Tests: CldPt, 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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