LIEBHERR

FUEL REPORT

CORROSION	NORMAL
CONTAMINANTS	ABNORMAL
FUEL CONDITION	NORMAL

Machine Id
LIEBHERR LH80M 062114-1205
Component
Diesel Fuel
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We advise that you filter this fluid before use. 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

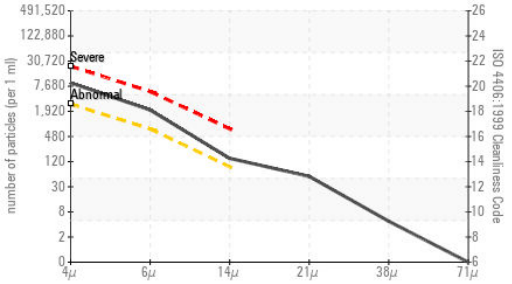
There is a high amount of particulates present in the fuel. The water content is negligible. There is no bacteria or fungus (yeast and/or mold) indicated in the sample.

FUEL CONDITION

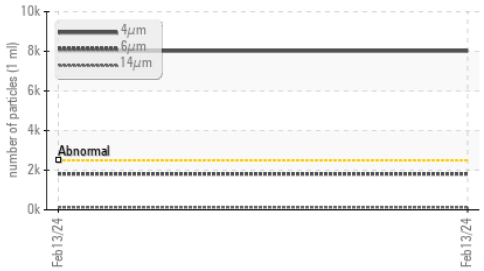
Sulfur value derived by ASTM D5453 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0286363	---	---
Sample Date		Client Info		13 Feb 2024	---	---
Machine Age	hrs	Client Info		25507	---	---
Sample Status				ABNORMAL	---	---
Aluminum	ppm	ASTM D5185m	<0.1	0	---	---
Nickel	ppm	ASTM D5185m	<0.1	0	---	---
Lead	ppm	ASTM D5185m	<0.1	0	---	---
Vanadium	ppm	ASTM D5185m	<0.1	0	---	---
Iron	ppm	ASTM D5185m	<0.1	0	---	---
Silicon	ppm	ASTM D5185m	<1.0	0	---	---
Sodium	ppm	ASTM D5185m	<0.1	<1	---	---
Potassium	ppm	ASTM D5185m	<0.1	0	---	---
Water	%	ASTM D6304	<0.05	0.002	---	---
ppm Water	ppm	ASTM D6304	<500	18	---	---
Particles >4µm		ASTM D7647	>2500	▲ 8019	---	---
Particles >6µm		ASTM D7647	>640	▲ 1812	---	---
Particles >14µm		ASTM D7647	>80	▲ 127	---	---
Particles >21µm		ASTM D7647	>20	▲ 47	---	---
Particles >38µm		ASTM D7647	>4	4	---	---
Particles >71µm		ASTM D7647	>3	0	---	---
Oil Cleanliness		ISO 4406 (c)	>18/16/13	▲ 20/18/14	---	---
% Gasoline	%	*In-House	<0.50	0.0	---	---
% Biodiesel	%	*In-House	<20.0	0.0	---	---
Calcium	ppm	ASTM D5185m	<0.1	0	---	---
Magnesium	ppm	ASTM D5185m	<0.1	0	---	---
Phosphorus	ppm	ASTM D5185m	<0.1	0	---	---
Zinc	ppm	ASTM D5185m	<0.1	0	---	---
Specific Gravity		*ASTM D1298		0.854	---	---
Fuel Color	text	*Visual Screen		Purpl	---	---
ASTM Color	scalar	*ASTM D1500		L6.0	---	---
Visc @ 40°C	cSt	ASTM D445		3.04	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		58	---	---
Sulfur	ppm	ASTM D5185m		5	---	---
Sulfur (UVF)	ppm	ASTM D5453		11	---	---
Initial Boiling Point	°C	ASTM D86		161	---	---
10% Distill Point	°C	ASTM D86		218	---	---
20% Distill Point	°C	ASTM D86		237	---	---
30% Distill Point	°C	ASTM D86		249	---	---
40% Distill Point	°C	ASTM D86		262	---	---
50% Distill Point	°C	ASTM D86		274	---	---
60% Distill Point	°C	ASTM D86		287	---	---
70% Distill Point	°C	ASTM D86		300	---	---
80% Distill Point	°C	ASTM D86		314	---	---
90% Distill Point	°C	ASTM D86		335	---	---
Final Boiling Point	°C	ASTM D86		351	---	---
Distillation Residue	%	ASTM D86		1.4	---	---
Distillation Loss	%	ASTM D86		0.9	---	---
API Gravity		ASTM D7777		34.2	---	---
Cetane Index		ASTM D4737	<40.0	46.7	---	---

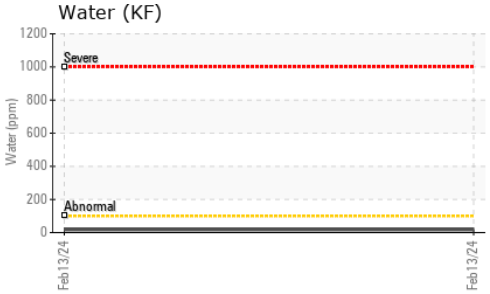
Particle Count



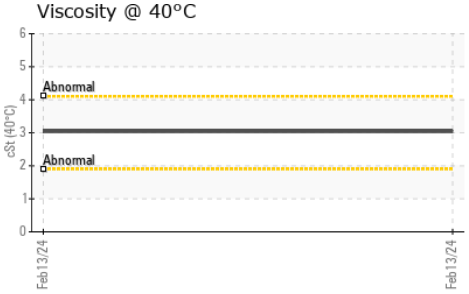
Particle Trend



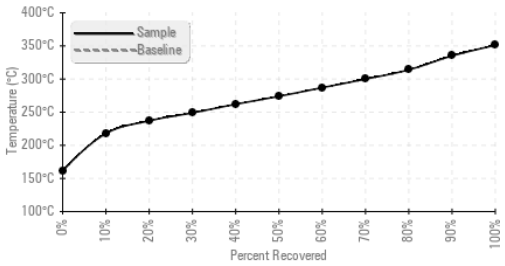
Water (KF)



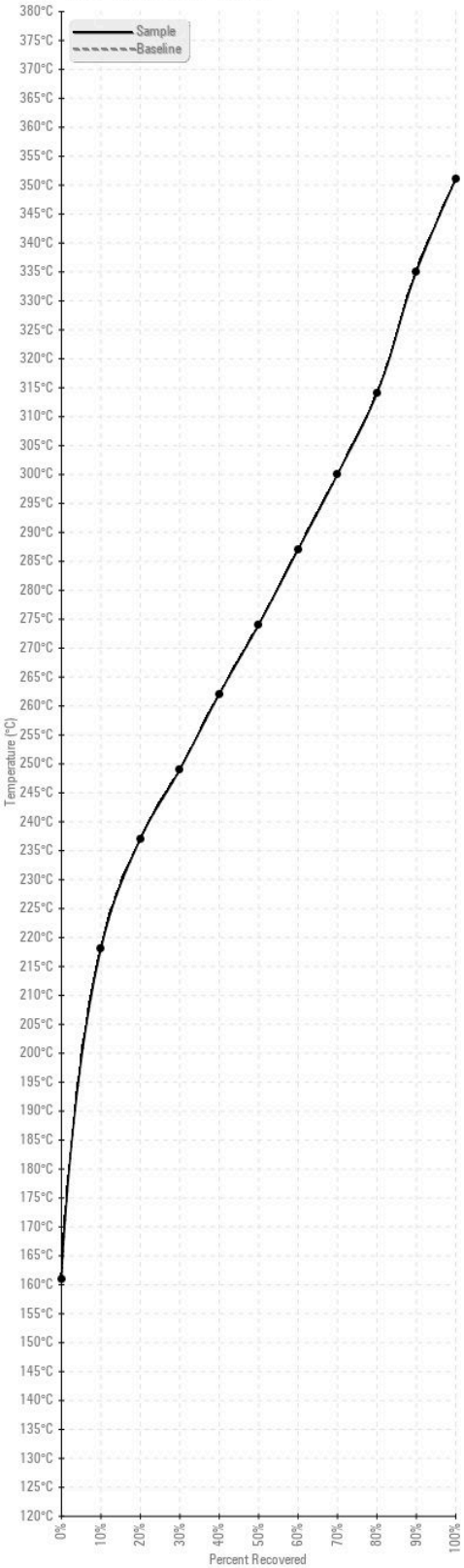
Viscosity @ 40°C



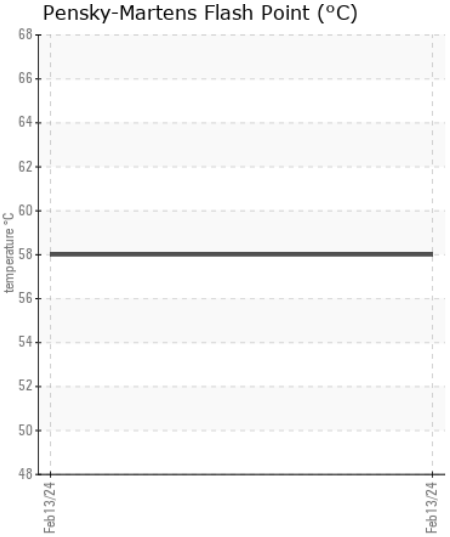
Fuel Distillation Curve



Fuel Distillation Curve



Pensky-Martens Flash Point (°C)



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0286363 **Received** : 26 Feb 2024
Lab Number : 06100576 **Tested** : 01 Mar 2024
Unique Number : 10898806 **Diagnosed** : 01 Mar 2024 - Doug Bogart
Test Package : DF-2 (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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