



Machine Id
LIEBHERR LH50M 118290-1216
 Component
Tank Diesel Fuel
 Fluid
No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)



DIAGNOSIS

Recommendation

We advise that you check all areas where contaminants can enter the system. Laboratory test indicate that this fuel is suitable for use and meets all test requirements. We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We advise that you filter this fluid before use. Resample in 30-45 days to monitor this situation.

Corrosion

(not applicable)

Contaminants

There is a high amount of particulates (2 to 100 microns in size) present in the fuel. The water content is negligible.

Fuel Condition

The fuel is still serviceable provided that the contaminant(s) can be reduced to acceptable levels. All laboratory tests indicate that this sample meets specifications for No.2 ultra-low-sulfur diesel fuel (US EPA/CGSB-3.517-3 type B).

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		LH0260108	---	---
Sample Date	Client Info		11 Aug 2023	---	---
Machine Age	hrs	Client Info	19400	---	---
Sample Status			SEVERE	---	---

PHYSICAL PROPERTIES

	method	limit/base	current	history1	history2
Specific Gravity	ASTM D1298*	0.839	0.856	---	---
Fuel Color	text	Visual Screen*	Red	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	---	---
Pensky-Martens Flash Point	°C	ASTM D7215*	52	---	---

SULFUR CONTENT

	method	limit/base	current	history1	history2
Sulfur	ppm	ASTM D5185(m)	10	---	---

DISTILLATION

	method	limit/base	current	history1	history2
Initial Boiling Point	°C	ASTM D2887*	165	---	---
5% Distillation Point	°C	ASTM D2887*	205	---	---
10% Distill Point	°C	ASTM D2887*	201	---	---
15% Distillation Point	°C	ASTM D2887*	221	---	---
20% Distill Point	°C	ASTM D2887*	216	---	---
30% Distill Point	°C	ASTM D2887*	230	---	---
40% Distill Point	°C	ASTM D2887*	243	---	---
50% Distill Point	°C	ASTM D2887*	255	---	---
60% Distill Point	°C	ASTM D2887*	267	---	---
70% Distill Point	°C	ASTM D2887*	280	---	---
80% Distill Point	°C	ASTM D2887*	295	---	---
85% Distillation Point	°C	ASTM D2887*	313	---	---
90% Distill Point	°C	ASTM D2887*	310	---	---
95% Distillation Point	°C	ASTM D2887*	341	---	---
Final Boiling Point	°C	ASTM D2887*	341	---	---

IGNITION QUALITY

	method	limit/base	current	history1	history2
API Gravity	ASTM D1298*	37.7	33	---	---
Cetane Index	ASTM D4737*	<40.0	44	---	---

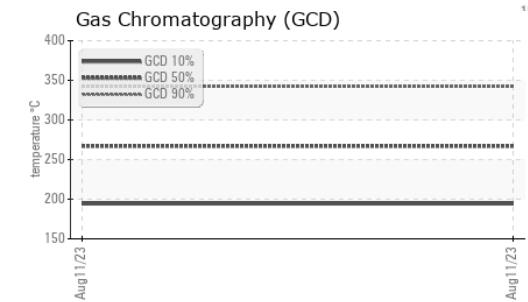
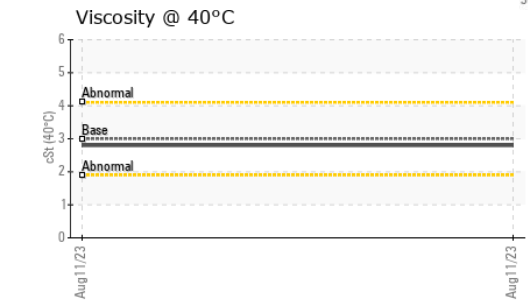
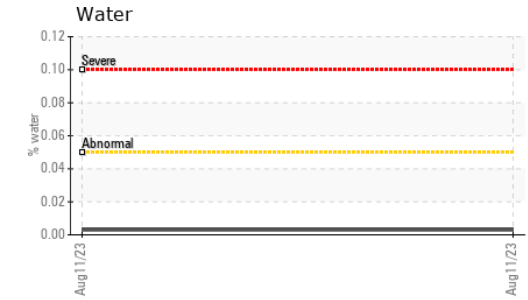
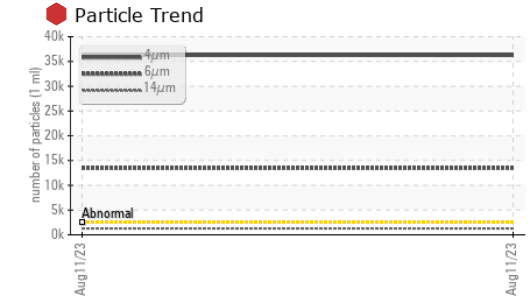
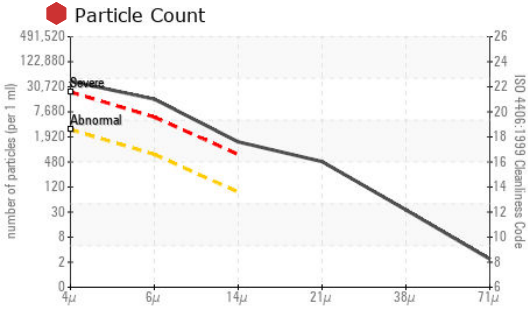
CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	<1.0	---	---
Sodium	ppm	ASTM D5185(m)	<0.1	---	---
Potassium	ppm	ASTM D5185(m)	<0.1	---	---
Water	%	ASTM D6304*	<0.05	---	---
ppm Water	ppm	ASTM D6304*	<500	---	---

FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>2500	36247	---	---
Particles >6µm	ASTM D7647	>640	13463	---	---
Particles >14µm	ASTM D7647	>80	1278	---	---
Particles >21µm	ASTM D7647	>20	431	---	---
Particles >38µm	ASTM D7647	>4	30	---	---
Particles >71µm	ASTM D7647	>3	2	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	22/21/17	---	---

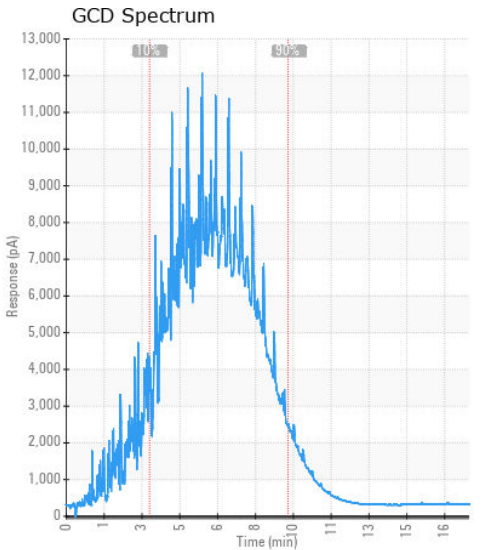
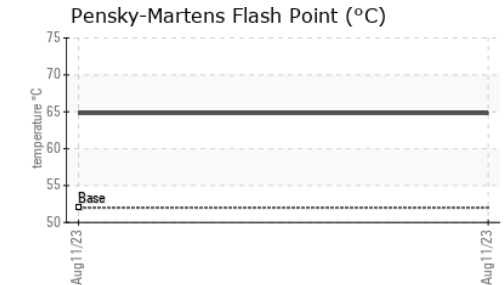
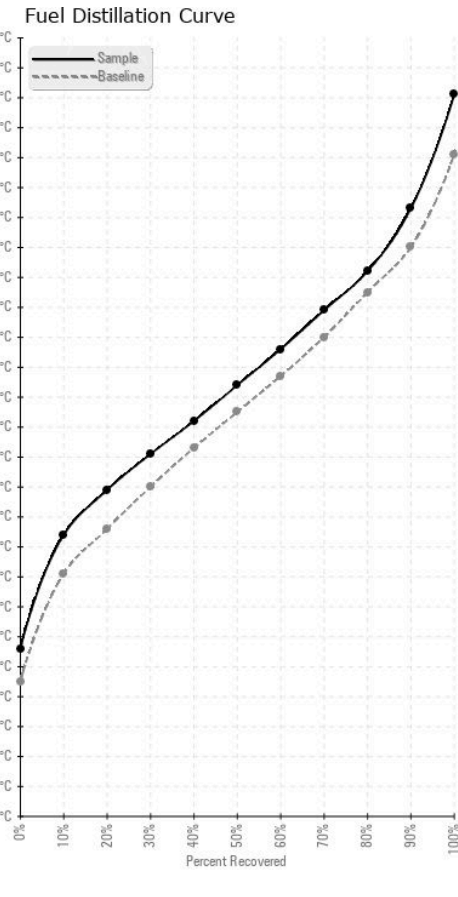
FUEL REPORT



HEAVY METALS		method	limit/base	current	history1	history2
Aluminum	ppm	ASTM D5185(m)	<0.1	0	---	---
Nickel	ppm	ASTM D5185(m)	<0.1	0	---	---
Lead	ppm	ASTM D5185(m)	<0.1	0	---	---
Vanadium	ppm	ASTM D5185(m)	<0.1	0	---	---
Iron	ppm	ASTM D5185(m)	<0.1	<1	---	---
Calcium	ppm	ASTM D5185(m)	<0.1	<1	---	---
Magnesium	ppm	ASTM D5185(m)	<0.1	0	---	---
Phosphorus	ppm	ASTM D5185(m)	<0.1	0	---	---
Zinc	ppm	ASTM D5185(m)	<0.1	<1	---	---

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

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0260108 **Received** : 16 Aug 2023
Lab Number : 02576302 **Diagnosed** : 24 Aug 2023
Unique Number : 5629362 **Diagnostician** : Kevin Marson
Test Package : FUEL (Additional Tests: CC Flash, GC-PercFuel, PrtCount)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

Weyerhaeuser
 1000 Jones road
 Kenora, ON
 CA P9N 3X8
 Contact: Rene Gagne
 rene.gagne@weyerhaeuser.com
 T: (807)548-7277
 F: (807)548-7201