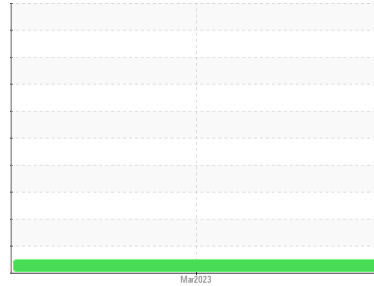




FUEL REPORT

Area
SAPP BROS PETROLEUM
 Machine Id
CATERPILLAR Fidelity DH2 A3/4
 Component
Diesel Fuel
 Fluid
{not provided} (--- GAL)

Sample Rating Trend



NORMAL



DIAGNOSIS

Recommendation

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

The water content is negligible. There is no Bacteria, Yeast and/or Fungus indicated in the sample. There is no indication of any contamination in the fuel.

Fuel Condition

Sulfur value derived by ASTM D4294 method for ULSD validation. Sulfur level is acceptable for ULSD specification.

SAMPLE INFORMATION		method	limit/base	current	history 1	history 2
Sample Number	Client Info			SBP0004160	---	---
Sample Date	Client Info			07 Mar 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Sample Status				NORMAL	---	---

PHYSICAL PROPERTIES		method	limit/base	current	history 1	history 2
Specific Gravity		*ASTM D1298		0.833	---	---
Fuel Color	text	*Visual Screen		Red	---	---
ASTM Color	scalar	*ASTM D1500		L4.0	---	---
Visc @ 40°C	cSt	ASTM D445		2.2	---	---
Pensky-Martens Flash Point	°C	*PMCC Calculated		61	---	---
Cloud Point	°C	ASTM D5771		-15	---	---
Pour Point	°C	ASTM D5950		-54	---	---

SULFUR CONTENT		method	limit/base	current	history 1	history 2
Sulfur	ppm	ASTM D5185m		0	---	---
Sulfur (UVF)	ppm	ASTM D5453		9	---	---

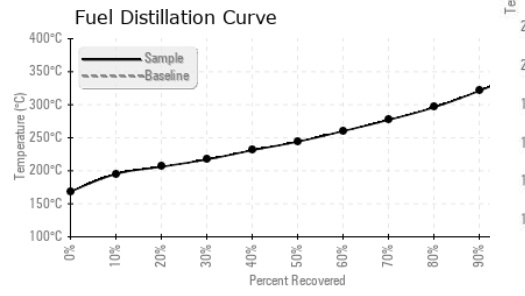
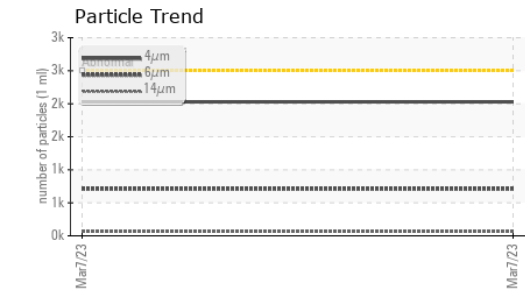
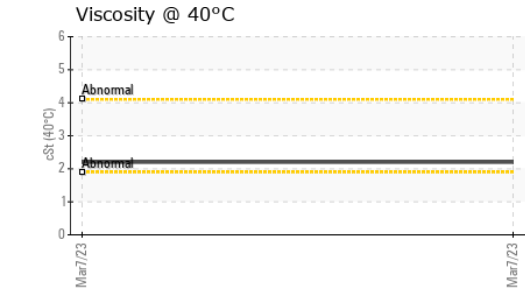
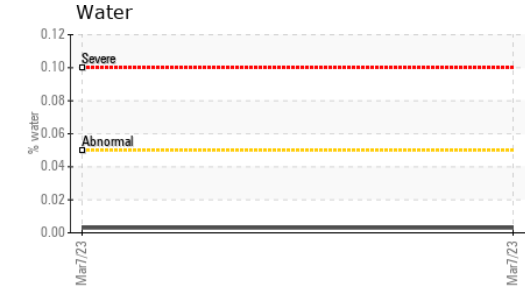
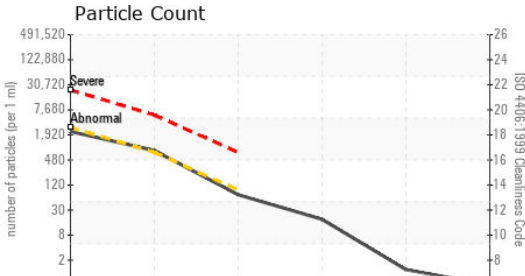
DISTILLATION		method	limit/base	current	history 1	history 2
Initial Boiling Point	°C	ASTM D86		168	---	---
5% Distillation Point	°C	ASTM D86		188	---	---
10% Distill Point	°C	ASTM D86		195	---	---
15% Distillation Point	°C	ASTM D86		201	---	---
20% Distill Point	°C	ASTM D86		206	---	---
30% Distill Point	°C	ASTM D86		217	---	---
40% Distill Point	°C	ASTM D86		231	---	---
50% Distill Point	°C	ASTM D86		244	---	---
60% Distill Point	°C	ASTM D86		260	---	---
70% Distill Point	°C	ASTM D86		277	---	---
80% Distill Point	°C	ASTM D86		296	---	---
85% Distillation Point	°C	ASTM D86		307	---	---
90% Distill Point	°C	ASTM D86		321	---	---
95% Distillation Point	°C	ASTM D86		340	---	---
Final Boiling Point	°C	ASTM D86		349	---	---
Distillation Residue	%	ASTM D86		1.4	---	---
Distillation Loss	%	ASTM D86		0.5	---	---

IGNITION QUALITY		method	limit/base	current	history 1	history 2
API Gravity		ASTM D7777		38.4	---	---
Cetane Index		ASTM D4737	<40.0	47.7	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m	<1.0	0	---	---
Sodium	ppm	ASTM D5185m	<0.1	0	---	---
Potassium	ppm	ASTM D5185m	<0.1	2	---	---
Water	%	ASTM D6304	<0.05	0.003	---	---
ppm Water	ppm	ASTM D6304	<500	32.9	---	---
% Gasoline	%	*In-House	<0.50	0.0	---	---
% Biodiesel	%	*In-House	<20.0	0.0	---	---



FUEL REPORT

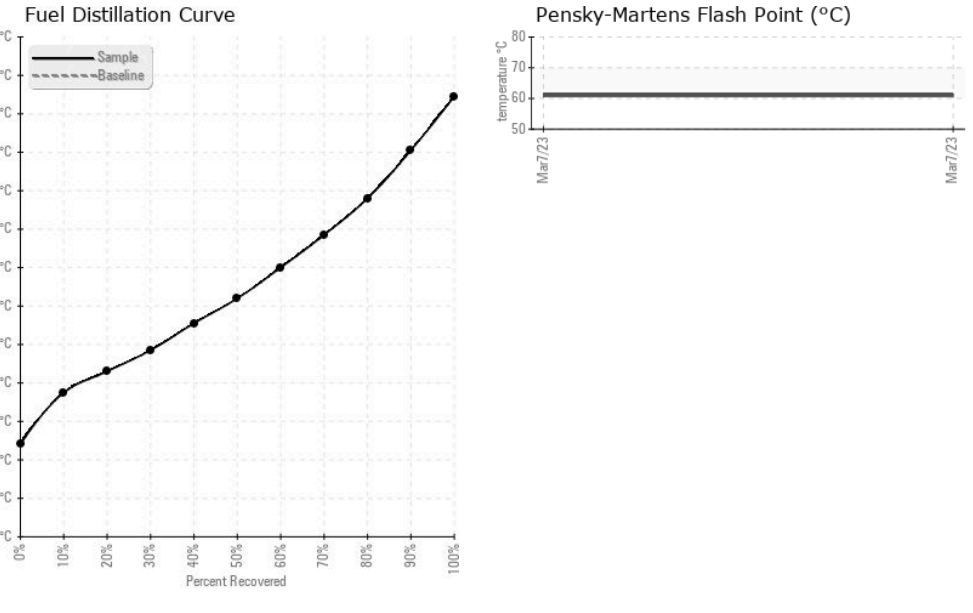


FLUID CLEANLINESS	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>2500	2029	---	---
Particles >6µm	ASTM D7647	>640	711	---	---
Particles >14µm	ASTM D7647	>80	62	---	---
Particles >21µm	ASTM D7647	>20	16	---	---
Particles >38µm	ASTM D7647	>4	1	---	---
Particles >71µm	ASTM D7647	>3	0	---	---
Oil Cleanliness	ISO 4406 (c)	>18/16/13	18/17/13	---	---

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

SAMPLE IMAGES	method	limit/base	current	history 1	history 2
Color					
Bottom					

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : SBP0004160 **Received** : 13 Mar 2023
Lab Number : **05790190** **Diagnosed** : 20 Mar 2023
Unique Number : 10374861 **Diagnostician** : Doug Bogart
Test Package : DF-3 (Additional Tests: Screen)

Sapp Bros. Petroleum - Omaha - OMA
 9915 South 148th
 OMAHA, NE
 US 68138
 Contact: Service Manager

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)