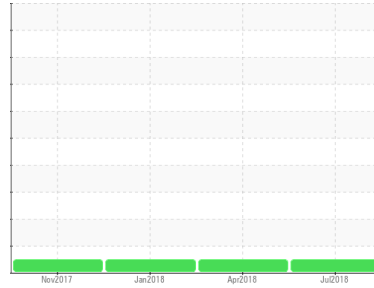




FUEL REPORT

Sample Rating Trend

NORMAL



Machine Id
M71106A

Component
Diesel Fuel
Fluid

No.2 DIESEL FUEL (ULTRALOW SULPHUR) (--- GAL)

DIAGNOSIS

Recommendation

Laboratory test indicate that this fuel is suitable for use and meets all test requirements. Resample at the next service interval to monitor.

Corrosion

{not applicable}

Contaminants

ISO Cleanliness Code (ISO 4406:1999): 17/15/11;
Cumulative particle counts >4µm = 788, >6µm = 162, >14µm = 12, >21µm = 4, >38µm = 0, >71µm = 0. There is no Bacteria, Yeast and/or Fungus present in the sample. The water content is negligible.

Fuel Condition

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	history 1	history 2
Sample Number	Client Info			PP	PP	PP
Sample Date	Client Info			19 Jul 2018	17 Apr 2018	24 Jan 2018
Machine Age	hrs	Client Info		0	0	0
Sample Status				NORMAL	NORMAL	NORMAL

PHYSICAL PROPERTIES		method	limit/base	current	history 1	history 2
Specific Gravity		ASTM D1298*	0.839	0.854	---	---
Fuel Color	text	Visual Screen*	Yellow	Yellow	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	3.0	3.0	3.0	2.6
Pensky-Martens Flash Point	°C	ASTM D7215*	52	66	70	68
Cloud Point	°C	ASTM D2500*		-15	---	---

SULFUR CONTENT		method	limit/base	current	history 1	history 2
Sulfur	ppm	ASTM D5185(m)	10	4	3	5

DISTILLATION		method	limit/base	current	history 1	history 2
Initial Boiling Point	°C	ASTM D2887*	165	170	---	---
5% Distillation Point	°C	ASTM D2887*		202	---	---
10% Distill Point	°C	ASTM D2887*	201	214	---	---
15% Distillation Point	°C	ASTM D2887*		222	---	---
20% Distill Point	°C	ASTM D2887*	216	230	---	---
30% Distill Point	°C	ASTM D2887*	230	244	---	---
40% Distill Point	°C	ASTM D2887*	243	255	---	---
50% Distill Point	°C	ASTM D2887*	255	267	---	---
60% Distill Point	°C	ASTM D2887*	267	280	---	---
70% Distill Point	°C	ASTM D2887*	280	293	---	---
80% Distill Point	°C	ASTM D2887*	295	308	---	---
85% Distillation Point	°C	ASTM D2887*		318	---	---
90% Distill Point	°C	ASTM D2887*	310	329	---	---
95% Distillation Point	°C	ASTM D2887*		345	---	---
Final Boiling Point	°C	ASTM D2887*	341	354	---	---
Distillation Residue	%	ASTM D86(e)*	3.0	1.4	---	---
Distillation Loss	%	ASTM D86(e)*	3.0	0.7	---	---

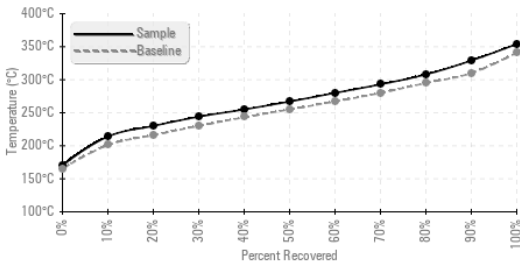
IGNITION QUALITY		method	limit/base	current	history 1	history 2
API Gravity		ASTM D1298*	37.7	34.2	---	---
Cetane Index		ASTM D4737*	<40.0	45.3	---	---

CONTAMINANTS		method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185(m)	<1.0	0	0	0
Sodium	ppm	ASTM D5185(m)	<0.1	<1	0	0
Potassium	ppm	ASTM D5185(m)	<0.1	1	1	<1
Water	%	ASTM D6304*	<0.05	0.005	---	---
ppm Water	ppm	ASTM D6304*	<500	58.2	---	---
Sediment	%	ASTM D1796(e)*	<0.05	0.009	---	---

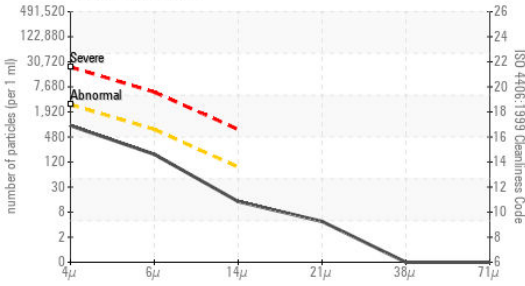


FUEL REPORT

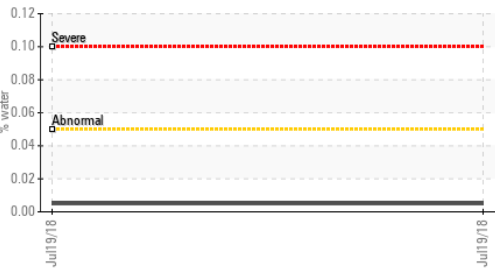
Fuel Distillation Curve



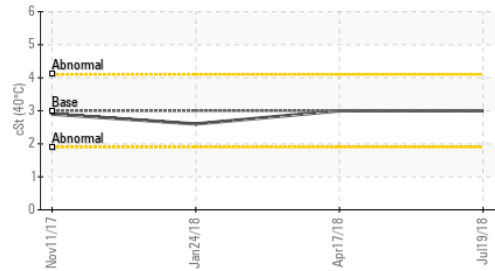
Particle Count



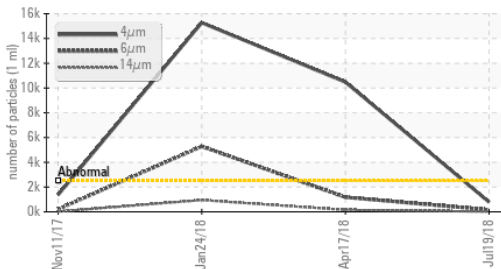
Water



Viscosity @ 40°C



Particle Trend



FLUID CLEANLINESS	method	limit/base	current	history 1	history 2
Particles >4µm	ASTM D7647	>2500	788	10472	15273
Particles >6µm	ASTM D7647	>640	162	1176	5280
Particles >14µm	ASTM D7647	>80	12	154	947
Particles >21µm	ASTM D7647	>20	4	72	397
Particles >38µm	ASTM D7647	>4	0	7	34
Particles >71µm	ASTM D7647	>3	0	1	5
Oil Cleanliness	ISO 4406 (c)	>18/16/13	17/15/11	21/17/14	21/20/17

MICROBIAL	method	limit/base	current	history 1	history 2
Bacteria	CFU/ml ASTM D6469*	>=100000	0	---	---
Yeast	CFU/ml ASTM D6469*	>=100000	0	---	---
Mold	Colonies ASTM D6469*	MODER	NONE	---	---

HEAVY METALS	method	limit/base	current	history 1	history 2
Aluminum	ppm ASTM D5185(m)	<0.1	0	0	0
Nickel	ppm ASTM D5185(m)	<0.1	0	0	0
Lead	ppm ASTM D5185(m)	<0.1	0	0	0
Vanadium	ppm ASTM D5185(m)	<0.1	0	0	0
Iron	ppm ASTM D5185(m)	<0.1	0	<1	<1
Calcium	ppm ASTM D5185(m)	<0.1	0	0	0
Magnesium	ppm ASTM D5185(m)	<0.1	<1	<1	<1
Phosphorus	ppm ASTM D5185(m)	<0.1	0	0	0
Zinc	ppm ASTM D5185(m)	<0.1	0	0	0

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



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 HIBERNIA MGMT & DEVELOPMENT CO. LTD
Sample No. : PP
Lab Number : 02229646
Unique Number : 4720795
Test Package : FUEL (Additional Tests: Bacteria, CC Flash, CldPt, GasChr, GC-PercFuel, PrtCount, Sediment)
 Received : 20 Jul 2018
 Diagnosed : 27 Jul 2018
 Diagnostician : Kevin Marson
 Contact: Sam Nash
 samantha.m.nash@exxonmobil.com
 T: (709)722-3766

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.