

Technical Information

Tests

ASTM D86 & D1796 tests run on diesel fuel before and after using Syntek Engine Boost 2.0. The BTU/Gallon results show an increase in BTUs from 137,480 to 137,630 and from 137,420 to 139,620. This increase in BTUs results in a more complete and cleaner fuel burn.



Fuel Analysis Results

Fuel Tested:
#2 Diesel Fuel Flying J, Salt Lake City Utah
Test #: 17508

Not Treated

Test	Method	Result	Condition
Gravity, A.P.I. Hydrometer on Fuels	D-287	37.3	NORMAL
Initial Boiling Point	D-86	348	NORMAL
10PCT		375	NORMAL
50PCT		469	NORMAL
90PCT		596	NORMAL
ENDPNT		662	NORMAL
RETPCT		100%	NORMAL
Cetane Index, Calculated	D-976	45.9	NORMAL
Water	D-1796	<.05	NORMAL
Sediment	D-1796	<.05	NORMAL
Sulfur Determination		.031	NORMAL
BTU		137420	NORMAL

Treated Fuel with Engine Boost 2.0

Test	Method	Result	Condition
Gravity, A.P.I. Hydrometer on Fuels	D-287	35.9	NORMAL
Initial Boiling Point	D-86	335	NORMAL
10PCT		362	NORMAL
50PCT		461	NORMAL
90PCT		578	NORMAL
ENDPNT		635	NORMAL
RETPCT		98	NORMAL
Cetane Index, Calculated	D-976	41.8	NORMAL
Water	D-1796	<.05	NORMAL
Sediment	D-1796	<.05	NORMAL
Sulfur Determination		.035	NORMAL
BTU		139620	NORMAL

Conclusion

- Treated fuel has an API Gravity result of .5% allowing the fuel to burn more clean and complete.
- BTU rating increased 2200 parts, allowing a more complete burn of the fuel in the combustion chamber and a possible decrease in Exhaust Temperature.
- Note decrease in Cetane. This will allow for lower Exhaust Temperatures.



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Fuel Analysis Results

BTU: (British thermal units) - the amount of heat necessary to rise one (1) pound of water one (1) degree Fahrenheit) per gallon, they are able to deliver more power per gallon. This is critical to diesel engine fuel economy. A given fuel may meet 1D of 2D specifications, but if the Btu rating is too low, then decreased fuel mpg will result. (Average diesel fuel 130,000 BTU's. Premium Diesel Fuels 137,000 to 145,000 BTU's)

Fuel Tested:

#2 Diesel Low Sulfur fuel "from Flying J Corp".

Fuel Not Treated

Test	Method	Result	Condition
Gravity, A.P.I.		37.2	NORMAL
Hydrometer on Fuels			
Initial Boiling Point	D-86	344	NORMAL
10PCT		376	NORMAL
50PCT		470	NORMAL
90PCT		586	NORMAL
ENDPNT		642	NORMAL
RETPCT		98	NORMAL
Cetane Index, Calculated		45.1	NORMAL
Water	D-1796	<.05	NORMAL
Sediment	D-1796	<.05	NORMAL
Sulfur Determination		.031	NORMAL
BTU/Gallon		137480	NORMAL

Treated Fuel with Engine Boost 2.0 Fuel Additive Test #FJF1035

Test	Method	Result	Condition
Gravity, A.P.I.		36.4	NORMAL
Hydrometer on Fuels			
Initial Boiling Point	D-86	356	NORMAL
10PCT		386	NORMAL
50PCT		470	NORMAL
90PCT		588	NORMAL
ENDPNT		646	NORMAL
RETPCT		98	NORMAL
Cetane Index, Calculated		43.9	NORMAL
Water	D-1796	<.05	NORMAL
Sediment	D-1796	<.05	NORMAL
Sulfur Determination		.035	NORMAL
BTU/Gallon		137630	NORMAL

Conclusion

- Treated fuel has an API Gravity result of .6% allowing the fuel to burn more clean and complete.
- BTU rating increased 150 parts, allowing a more complete burn of the fuel in the combustion chamber and a possible decrease in Exhaust Temperature.
- No increase in Cetane rating, in fact a decrease was noted.