

HISTORY OF THE INTERNAL COMBUSTION ENGINE

Although various forms of internal combustion engines were developed before the 19th century, their use was hindered until the commercial drilling and production of petroleum began in the mid-1850s.

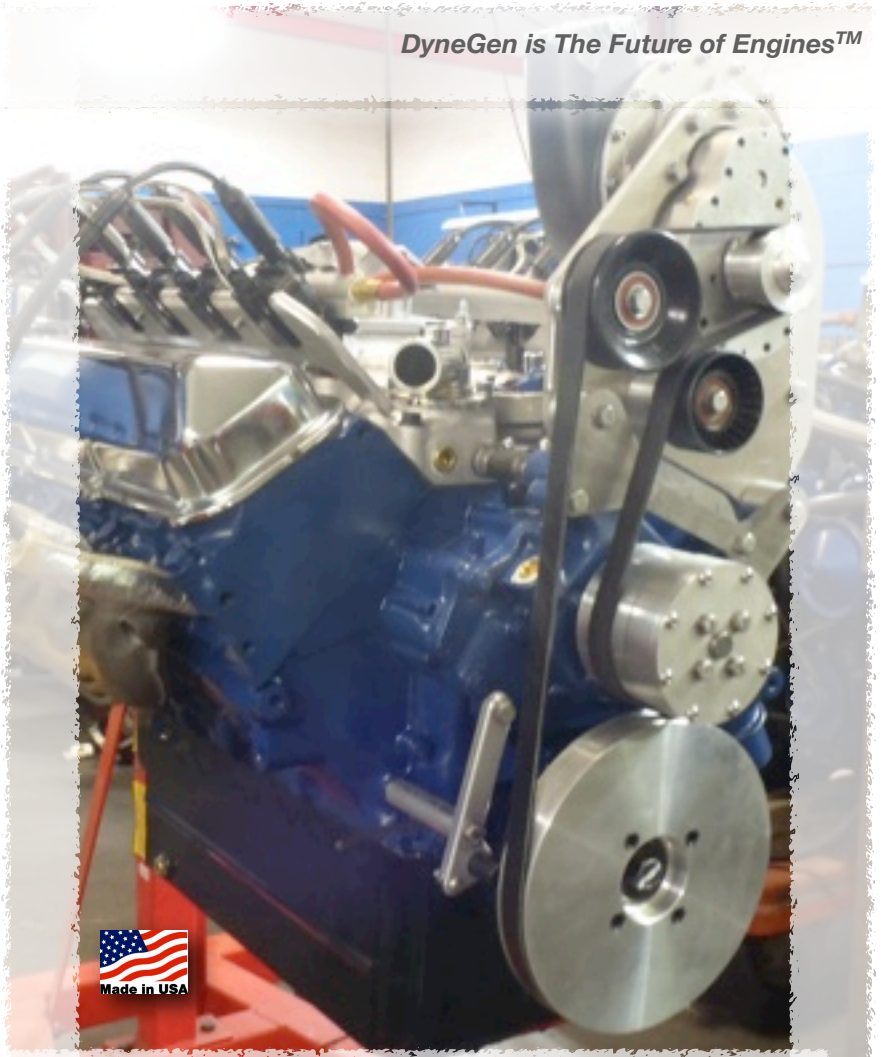
1794: Robert Steele built a compressionless engine whose principle of operation would dominate for nearly a century

1884: British engineer Edward Butler constructed the first petrol (gasoline) ICE and invented the spark plug

1905: Alfred Buchi patents the turbocharger and starts producing the first examples

1925: The first use of direct gasoline injection on a spark-ignition engine

2000: New buzz word: "Alternative Fuels...and engines"



DyneGen is The Future of Engines™

DyneGen 
The Future of Engines™

...and then came DyneGen

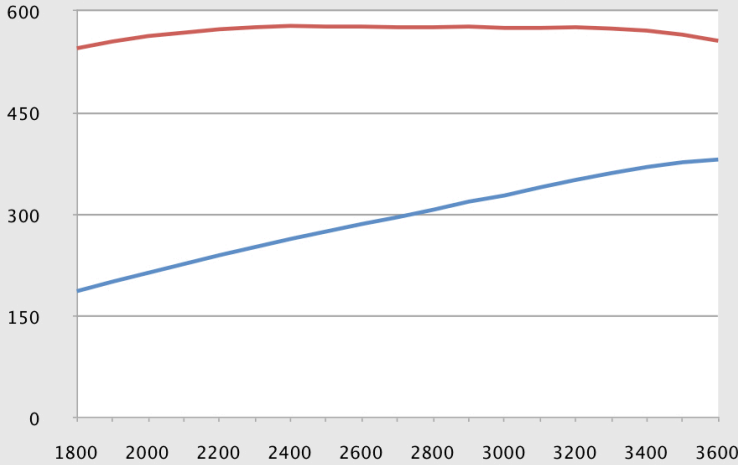
DyneGen is an advanced engine technology company focused on the design and production of high performance engines optimized for use with alternative fuels.

The DyneGen family of new energy ICE products spans the alternative fuel spectrum - from the more common (CNG and propane) to the more esoteric (syn-gas and bio diesel) and everything in between. So, sit back and fasten your seat belt - you are about to watch DyneGen make HISTORY...



Dyno results of a DyneGen 9.4L fuel injected, naturally aspirated engine, operating on CNG

Speed rpm	Power HP	Torque lbft
1800	187	545
1900	201	555
2000	214	563
2100	227	568
2200	240	573
2300	252	576
2400	264	578
2500	275	577
2600	286	577
2700	296	576
2800	307	576
2900	319	577
3000	328	575
3100	340	575
3200	351	576
3300	361	574
3400	370	571
3500	377	565
3600	381	556



With the computer controller, we were able to tune the **naturally aspirated** engine to have an almost "flat line" torque curve over the customer-specified operating range

PERFORMANCE RELIABILITY AND DESIGN FLEXIBILITY

We have combined our own history of *high performance knowledge* coupled with proven *industrial engine experience* to create new natural gas engines. We have a track-record of providing **dependability** (over 250 million hours) in the field with **24/7/365 operation** on natural gas (well-head gas). DyneGen engines have the remarkable ability to produce diesel-like power while running clean on natural gas. Sizes range from 7.5L to 12L.

Exceptional Dyno results prove that our 9.4L naturally aspirated, spark ignited, **port fuel injected** engine, running on CNG will challenge *any* product in the naturally aspirated natural gas market. Add our super-charger and...
look out diesels!



PERFORMANCE TESTING

Preliminary dynamometer test results (on our naturally-aspirated 9.4L engine) matched and/or exceeded those of a well-known diesel engine converted to run on natural gas. **Next step:** Test a *true* port fuel injected, super-charged 9.4L engine *that will challenge turbo diesels with much larger displacements*

FUEL EFFICIENCY

Our engine **rotating assembly** is a fraction of the weight of those installed in comparably sized diesel engines. This characteristic, along with specifically designed cylinder heads and pistons for lean burn natural gas applications, make DyneGen engines inherently more fuel efficient, which directly translates to a *minimum of 15% fuel saving*

EMISSIONS TESTING

Preliminary emissions tests (9.4L engine with catalytic converter in a rich burn application) fell well within current EPA requirements for non-certified product. Full emissions testing is scheduled for the naturally aspirated and super-charged models (catalytic converter and lean burn applications)