

XCOR \$11000 Steam Engine Prize

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From: <http://www.xcor.com/steamengine.html>

Discussion forum: <http://www.xcor.com/phpBB2/>

Reg form and rules:

<http://www.xcor.com/SteamEnginePrizeRegistration.doc>

Interface diagram:

<http://www.xcor.com/PDF/PrizePumpInterfaceSimplified1.pdf>

The XCOR Steam Engine Prize

\$11,000.00 total prize money for three places

What it is: The XCOR Steam Engine Prize is being offered to anyone who delivers a "steam engine" that meets the requirements of the rules.

Third place is USD \$2,500.00 to the first person or organization that meets all the requirements listed in the rules. The \$3,500.00 Second Place prize will be awarded to the first person or organization that delivers a machine that meets all the third place requirements plus the additional second place requirements. The \$5,000.00 First Place prize will be won by the first person or organization who delivers a machine that meets all the above requirements plus the additional first place requirement.

Who are we and why are we doing it? XCOR Aerospace, Inc., has developed such a machine, but we want to explore alternatives available in the large number of inventive and creative people who inhabit the world of live steam.

The Rules: The steam engine shall be a four cylinder piston machine that operates four water pump modules (provided by XCOR). The engine shall be compatible with the interface drawing provided. The engine can be of any configuration (in-line, Vee, radial, etc), any materials in accordance with the interface drawing, and any type of valve train (poppet, slide, sleeve, etc). The engine shall be self-starting with the application of drive gas (water steam or compressed air) at 500 psi. Exhaust is to ambient. Inlet valve cutoff shall be no more than 60% of full stroke. Machine total lifetime shall be no less than one

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hour with overhauls not more frequent than every 10 minutes of operation. Machine speed shall be not less than 3,600 RPM, and weight shall not exceed 10 kg not including modules. Prizes may be won in any order.

Third Place: The First and Second place winners are disqualified from winning Third place. The Third place prize will be awarded to whoever provides a machine that meets the rules first.

Second Place: The First and Third Place winners are disqualified from winning Second Place. The requirements to win Second Place are the same as for Third Place, except the speed shall be not less than 7,200 RPM, and the exhaust shall be collected in a manifold with attachable fitting(s).

First Place: The Second and Third Place winners are disqualified from winning first place. Requirements to win First Place are the same as for Second Place, except the weight shall not exceed five kg (excluding the pump modules).

The fine print: The prizes will be awarded after performance demonstration at XCOR's facilities. XCOR will provide 500 psi air, steam, or nitrogen drive gas and the water pump modules. Pump piston bore and stroke are 1.242 x 1.10 inches and water outlet pressure will be 850 psi average (26 KW for 3rd prize, 52 KW 2nd and 1st). The motor may have two cylinders instead of four if double acting. Prizes are payable in US dollars to anyone worldwide. Prize-winning hardware and rights to manufacture will become property of XCOR Aerospace, Inc. You must register as a contestant in order to win. Registered contestants will receive interface drawing information. Judges' decisions are final. Contest ends Mar 31st 2006 unless extended by XCOR Aerospace, Inc. P.O. Box 1163, Mojave, CA 93502. Phone 661-824-4714.