Advanced Focused Wave Engine  2.25 Lbs Thrust

By using these plans you acknowledge that building and operating jet engines is inherently dangerous, and that running a jet engine could cause severe bodily harm, fire, property destruction, and even death; the author is not responsible for anything that may result from the use of these plans.

All dimensions in inches, and are for inside dimensions.

Propane fuel injector should be made from stainless steel with approximately 1/8" inside diameter, and should be long enough so that no flammable fuel line is near the engine or in range of intense radiant heat.

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The Advanced Focused Wave Engine (FWE) is the result of many hours of prototyping testing and fine-tuning the original FWE designed by Larry Cottrill. The changes from the original design allow the engine to produce 2.25 pounds steady thrust, compared to approximately 1.25 pounds thrust of the original design.

The most important thing is there should be absolutely no protrusion of the intake into the combustion chamber. The intake should be welded in place so that it is flush with the inside of the engine. If there is any protrusion it should be filed or ground down before the end cap is welded in place. Even a slight protrusion will reduce the thrust towards the 1.25 LBS of the original engine.

Also it is very important to flare the intake to the given dimensions. Smaller or larger intake flares will lead to reduced thrust. It is also important to flare over the given length, if it is too short it will not take in air properly.

The engine should be made of stainless steel if possible, since mild steel will erode away from running the engine, and will have a fairly short lifespan.

It is possible to fuel this engine on liquid fuel, and plans for converting it to run on liquid fuel for RC or control line vehicles will be available soon using several RC airplane fuel system components. The engine produces significantly more power with pure methanol than on propane.

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