# Engine Stake Holder needs

## Engine Thrust

The engine shall produce 14 lbf of thrust.

## Engine Operational Hours

The engine shall operate for 25 hours without maintenance.

## Engine Envelope

The engine shall fit within x" envelope.

## Engine Weight

The engine shall weight less than 20 lbs.’

## Engine Fuel Consumption

The engine shall have a fuel consumption of less than 8 lbs/min.

## CFR

### SN-8 CFR 33.5

The engine shall have Instruction manual for installing and operating the engine

### SN09 CFR 33.62

A stress analysis must be performed on each turbine engine showing the design safety margin of each turbine engine rotor, spacer, and rotor shaft.

### SN-10 CFR 33.89

The operation test must include testing found necessary by the Administrator to demonstrate -  
  
(1) Starting, idling, acceleration, overspeeding, ignition, functioning of the propeller (if the engine is designated to operate with a propeller);  
  
(2) Compliance with the engine response requirements of § 33.73; and  
  
(3) The minimum power or thrust response time to 95 percent rated takeoff power or thrust, from power lever positions representative of minimum idle and of minimum flight idle, starting from stabilized idle operation, under the following engine load conditions:  
  
(i) No bleed air and power extraction for aircraft use.  
  
(ii) Maximum allowable bleed air and power extraction for aircraft use.  
  
(iii) An intermediate value for bleed air and power extraction representative of that which might be used as a maximum for aircraft during approach to a landing.  
  
(4) If testing facilities are not available, the determination of power extraction required in paragraph (a)(3)(ii) and (iii) of this section may be accomplished through appropriate analytical means.  
  
(b) The operation test must include all testing found necessary by the Administrator to demonstrate that the engine has safe operating characteristics throughout its specified operating envelope.