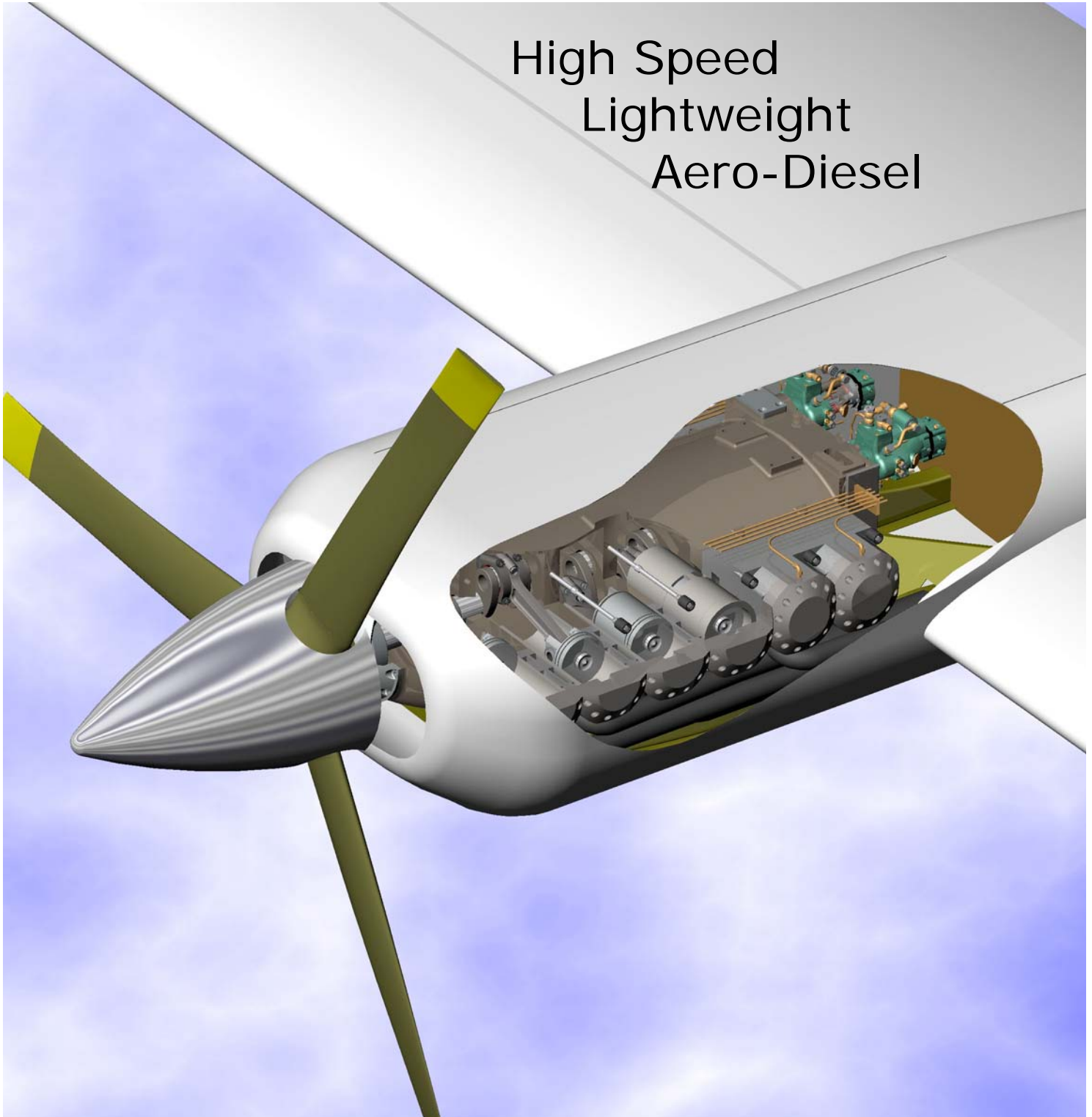
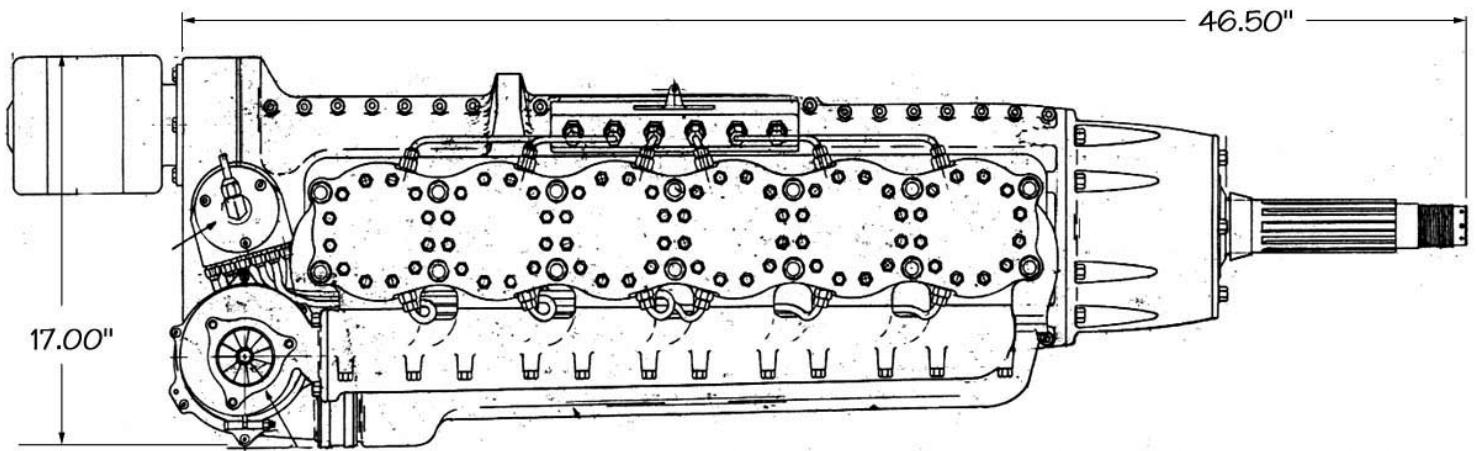


High Speed
Lightweight
Aero-Diesel





SPECIFICATIONS

TYPE: TWO CYCLE HEAVY FUEL ENGINE

CONFIGURATION: TWELVE CYLINDER HORIZONTALLY OPPOSED, LOOP CHARGED

BORE AND STROKE: 3.875" X 4.530" (4.475" X 4.530" GROWTH VERSION)

DISPLACEMENT: 55CID/CYL X 12 = 660 CID TOTAL (71CID X 12 = 855 CID GROWTH)

COMBUSTION SOURCE: DIRECT CYLINDER INJECTION

COMBUSTION SYSTEM: HYBRID DISPLACER TYPE IDI SYSTEM

FUELS: MULTI-FUEL (JET-A, JP-8, DF-1, DF-2)

LUBRICATION: 8 QTS DRY SUMP

PROPELLER REDUCTION: DIRECT DRIVE OR PLANETARY 1:68:1

SCAVENGE/BOOST ASSIST: CENTRIFUGAL TURBOCHARGER

OPERATING SPEED, GEARED: 4500 RPM TAKEOFF, 2500 RPM CRUISE

OPERATING SPEED, DIRECT DRIVE: 2700 RPM TAKEOFF, 2300 RPM CRUISE

FIREWALL FORWARD WEIGHT: 550-600 LBS, ACCESSORY DEPENDANT

FIRING FREQUENCY: 0-30-60-90-120-150-180-210-240-270-300-330-360°

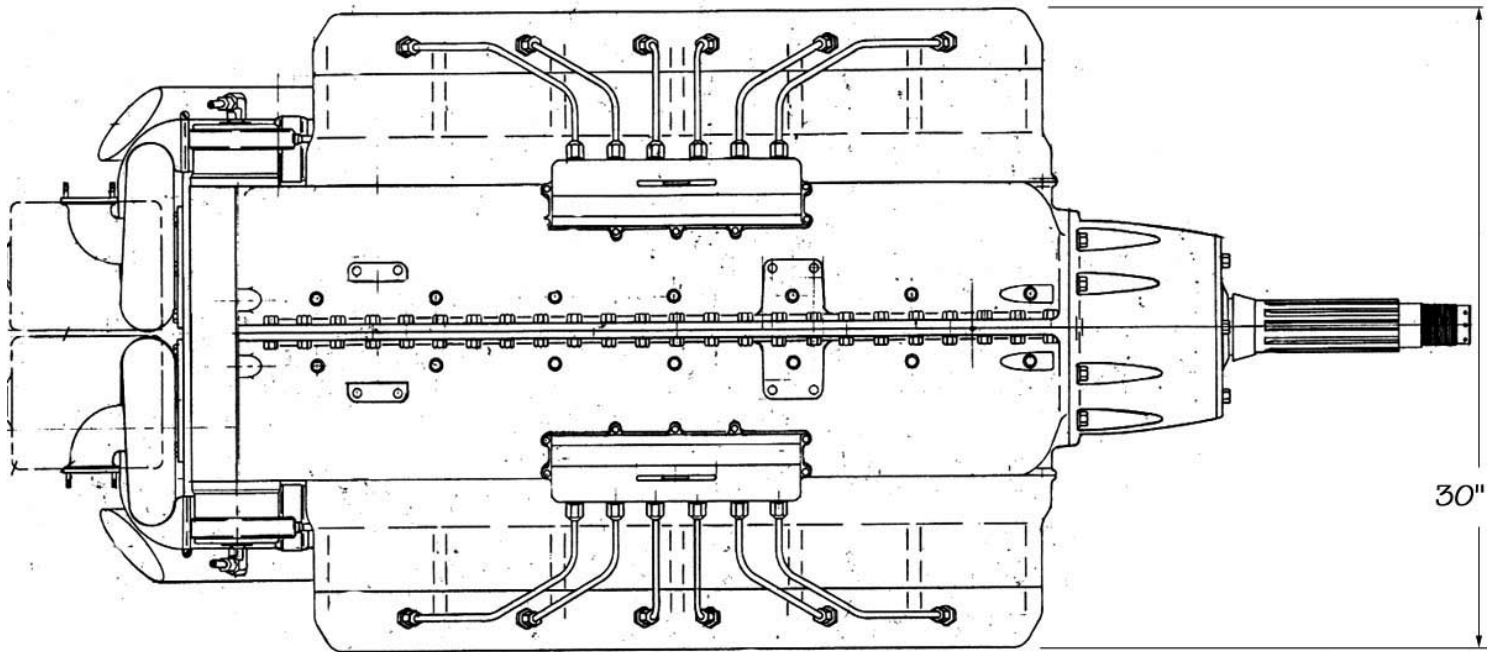
PERFORMANCE

POWER RATING: 350 - 450 HP (550 – 700 HP GROWTH)

BRAKE SPECIFIC FUEL CONSUMPTION: 0.45LBS/HP-HOUR

BRAKE MEAN EFFECTIVE PRESSURE: 90 PSI X 2

ESTIMATED SERVICE CEILING: FL260



GENERAL ENGINE DESIGN FEATURES

- LOW SPECIFIC WEIGHT RATIO (1.0LBS/HP)
- MULTI-FUEL KEROSENE BASED CI COMBUSTION SYSTEM (IE: INSENSITIVE TO VARIATIONS IN FUEL VISCOSITY, LUBRICITY, AND CETANE)
- MODEST PEAK TO MEAN EFFECTIVE PRESSURE RATIO (IE. NO DIESEL KNOCK)
- HIGH FIRING FREQUENCY RESULTING IN SMOOTH POWER DELIVERY
- PNEUMATIC AIR START SYSTEM
- SELF-SUSTAINING TURBO-SUPERCHARGER WITH STARTER/GENERATOR
- SINGLE LEVER CONTROL (IE: NO MIXTURE LEVER REQUIRED)
- OVERALL SPECIFIC VOLUME AND WEIGHT RATIO COMPARABLE TO EXISTING TURBOCHARGED GASOLINE AIRCRAFT ENGINES.
- FORM AND FIT REPLACEMENT FOR TSIO-520/550 AND TIO-540/541 ENGINES

