

We are pleased to announce that after five years of extensive research and testing we have received FAA STC/PMA approval for the modification of Teledyne Continental E-225-8 series engine and FAA STC/PMA for the installation of the modified E-225-8 engine in Beechcraft Bonanza models C-35, D-35, E-35, F-35, G-35.

I MODIFICATION UPGRADE:

- a. Enlarging case thru bolt holes from 7/16 to ½ inch to accommodate new thru bolts.
- b. Modification of the intake system flanges from two studs to four studs
- c. Push rod and push rod housing
- d. Installation of new Continental or Superior Millennium IO470N cylinders
- e. Modification of some cylinder baffles
- f. Four stud exhaust collector system
- g. Installation of an air exhaust vent behind the oil tank on the left hand cowl door

II TEST RESULTS:

1. Flight tests in high ambient temperatures revealed the following:
 - a. Shorter take off runs
 - b. Increased rate of climb
 - c. Higher cruise speed available at cruising altitudes
 - d. Dramatic decrease in cylinder head temperatures
 - e. Oil temperatures decreased
 - f. Minimum oil burn. One quart in twenty-five hours
2. Static test results
 - a. Propeller and rotating mass vibration test meets FAA standards
Maximum stress level is well below the allowable for infinite life
Stress actually declined at high RPM
 - b. Sea level performance graph indicated 260 hp 2650 rpm and 30 inches of manifold pressure
 - c. Detonation test revealed better than original specifications
 - d. Fuel flow test date unchanged from original at given RPMs
3. Final tear down for inspection by FAA
 - a. Bearings and rotating parts showed little or no wear
 - b. All rotating parts were within service limit.
 - c. Predictable longer cylinder life as result of lower temperature

III BENEFITS:

- a. This modification does not require change of the propeller, carburetor or engine accessories
- b. Keep original nose bowl and engine mount fittings
- c. Use of 100 low lead fuel
- d. Shorter take off runs
- e. A minimum increase of 30hp which will increase rate of climb
- f. Better cruise speeds

- g. A dramatic decrease in cylinder head
- h. Less plug fouling occurs due to the higher compression ratio