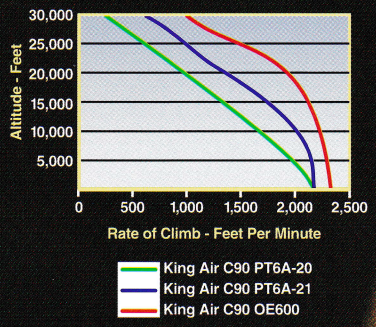
# Orenda Series

## V-8 Aero Engines

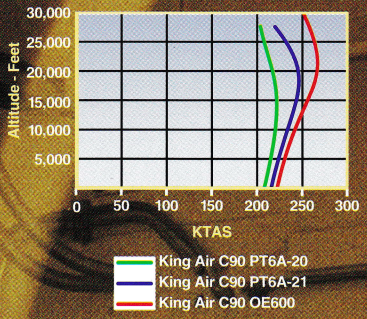

***Redefining the Economics of High Performance Aviation***

Orenda

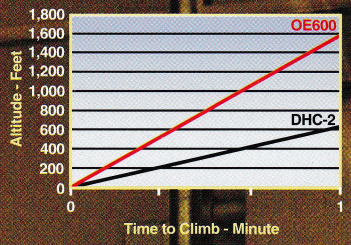
### King Air Climb Rate Comparison



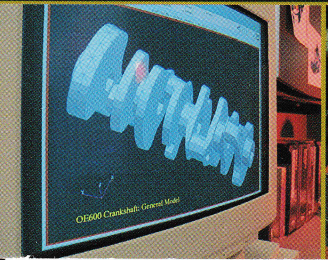

### King Air Cruise Speed Comparison

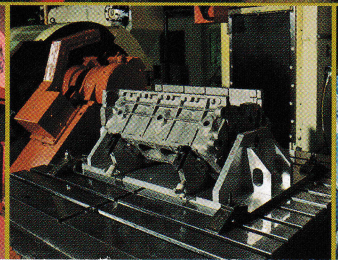


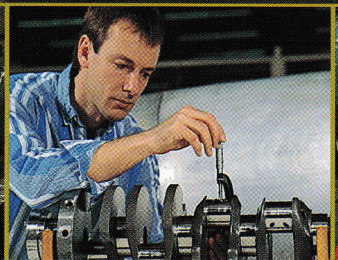

### OE600 Beaver Conversion: Climb

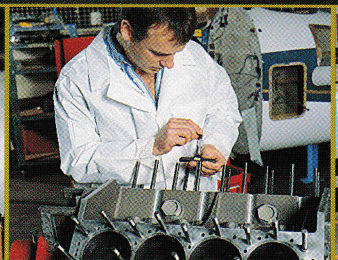



*From Orenda's Computer-Aided Design system (far left), to one of its 5-axis milling machines, only the most modern equipment is employed in the reciprocating engine program.*







## Certifiable Performance

The Orenda Series is a new line of liquid-cooled, eight-cylinder aluminum engines for general aviation applications. No other in-production reciprocating engines certificated by the FAA and Transport Canada are capable of producing between 500 hp and 750 hp.

## Liquid-cooled Reliability

Orenda has developed the world's most affordable powerplants for utility singles and cabin-class twins. Typical installations will be found in singles with gross weights typically in excess of 4,000 lb, and twins up to 12,000 lb. In each instance, expect to see increased climb rates, and improved performance at altitude. Why? While a turbine engine displays constant power degradation as altitude increases, the turbocharged Orenda V-8s maintain cruise power all the way up.

Liquid cooling also allows aerodynamically clean and compact installation, while maintaining constant operating temperatures for longer engine life. And the bottom end is designed for the toughest use, incorporating six-bolt main bearings on a dynamically-balanced crankshaft.

## Rational Economics

Trying to squeeze much more than 350 hp from a typical horizontally-opposed piston engine just doesn't work. But, the Orenda Series - with outputs between 500 hp and 750 hp - extends the affordable range, without the cost of moving up to turboprop power.

## Renewed Strength In The Sky

Stevens Aviation, one of the most respected aviation companies in the US, has been appointed the exclusive installation/modification center for the Orenda-powered King Air C90. Distribution partnerships have been finalised and STC's are underway for the Twin Commander, Air Tractor and the de Haviland Beaver and Otter aircraft. Other suitable candidates for STC retrofit include Piper Cheyennes and Navajos, Cessna 400 Series and several agricultural aircraft.

New aircraft, certificated and experimental, are also being developed around the now-available power of the aluminum alloy, liquid-cooled V-8 Orenda Series.

## Technically Speaking

- ***orthogonally opposed, 8-cylinder reciprocating engine***
- ***fuel-injected***
- ***liquid-cooled***
- ***turbocharged***

| | |
|---|---|
| ***Displacement:*** | ***495 cubic inches*** |
| ***Bore:*** | ***4.433"*** |
| ***Stroke:*** | ***4.000"*** |
| ***Dimensions:*** | ***59.5"(l) x 32"(w) x 32.5"(h)*** |
| ***Dry Weight With Accessories:*** | ***750 lb*** |
| ***Compression Ratio:*** | ***8:1*** |
| ***Fuel Consumption:*** | ***0.44 lb/HP/hr*** |
| ***Fuel Grade:*** | ***100 LL*** |
| ***Max. Crankshaft Speed:*** | ***4,400 RPM*** |
| ***Reduction Gearbox:*** | ***.4675:1*** |
| ***Power Output:*** | ***600 HP max. takeoff*** |
| | ***500 HP max. continuous*** |

## More Power

Learn how your aircraft program can benefit from the all-new Orenda Series engines. The powerplant that makes old aircraft better performers at one-third the cost of turboprops; the powerplant that makes new aircraft programs possible, reliable and affordable.

*Beginning with the King Air C90, a wide variety of retrofits and new designs will take advantage of Orenda Series power, economy and reliability.*

King Air C90


Cessna 400 Series


Otter

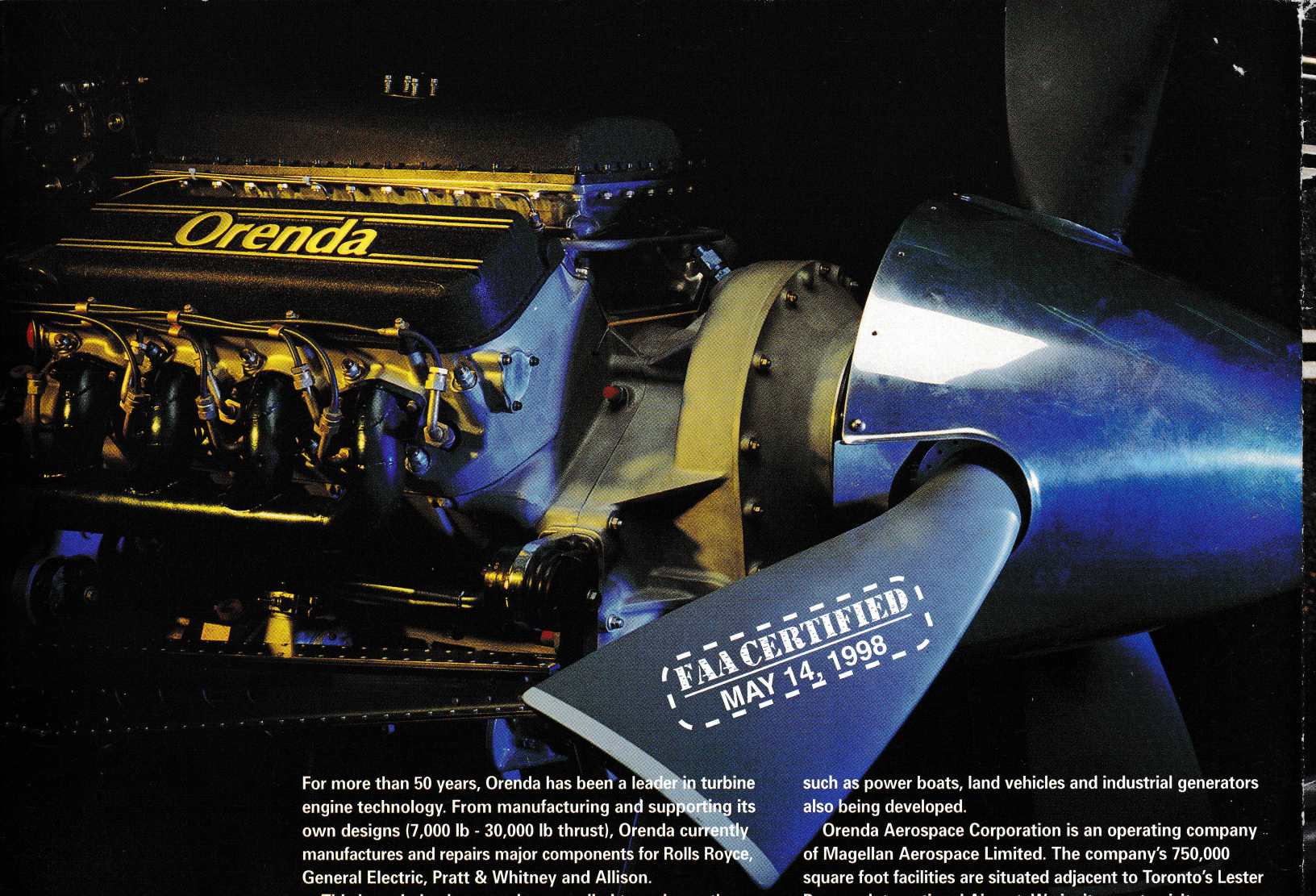

Piper Navajo


Lancair Tigress


Twin Commander


Air Tractor

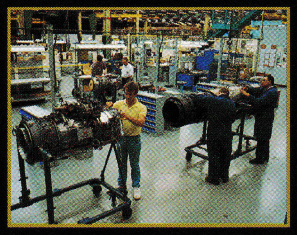

Beaver

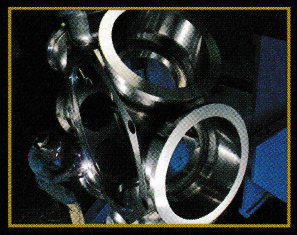



For more than 50 years, Orenda has been a leader in turbine engine technology. From manufacturing and supporting its own designs (7,000 lb - 30,000 lb thrust), Orenda currently manufactures and repairs major components for Rolls Royce, General Electric, Pratt & Whitney and Allison.

This knowledge has now been applied to reciprocating engines, a market in which the company is also taking an active role on the airframe side. The civilian and military applications are wide and varied, with alternate markets such as power boats, land vehicles and industrial generators also being developed.

Orenda Aerospace Corporation is an operating company of Magellan Aerospace Limited. The company's 750,000 square foot facilities are situated adjacent to Toronto's Lester Pearson International Airport. We invite you to visit us and see for yourself the building of a new generation of aviation powerplants.




*(l-r) Orenda Aerospace is deeply involved in computer-aided design, manufacture, and repair and overhaul of engines such as the J-85, seen here in the assembly area, the GE Aircraft Engines J79 combustion casing production, Rolls Royce Industrial Trent combustion case machining, and thermal fatigue testing at the company's Advanced Materials & Energy Systems division.*

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