

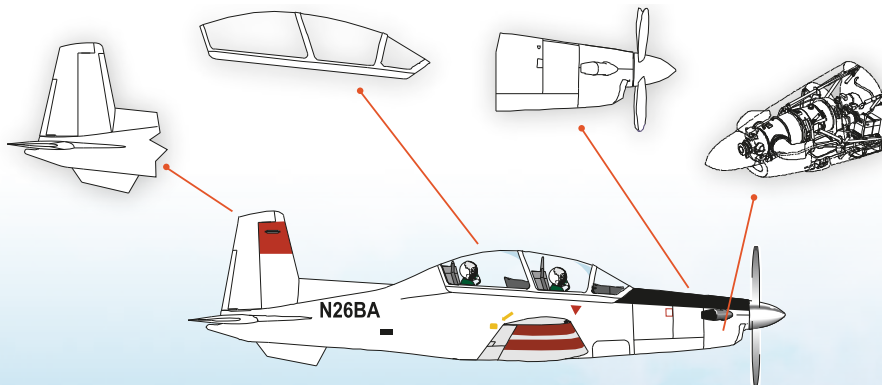
### The T-6 is not a PC-9.

The Pilatus PC-9 could not win the Joint Primary Aircraft Training System (JPATS) competition for the U.S. Air Force and Navy. However, Hawker Beechcraft Corporation used the PC-9 as its initial platform to determine what type of aircraft was needed to meet their requirements and to test the engineering, technical, safety and ergonomic innovations developed to create an entirely new aircraft that would be the most advanced primary trainer in the world. The result was the Beechcraft T-6.

### The Development

Hawker Beechcraft Corporation selected the Pilatus PC-9 as the baseline aircraft and test bed for the T-6 development. Over 500 demonstration and evaluation flights were flown with U.S. Navy and Air Force pilots to determine what changes were needed to successfully meet their requirements. The debriefings from those flights formed the basis of the requirements and design document. Hawker Beechcraft Corporation then used PC-9, serial #002, as an engineering test bed to evolve the PC-9 into the T-6. Changes were made in increments then test flown to ensure the change (i.e., a new windscreen) had the desired effect without major impact to the basic flight characteristics of the aircraft. These were the first changes made.

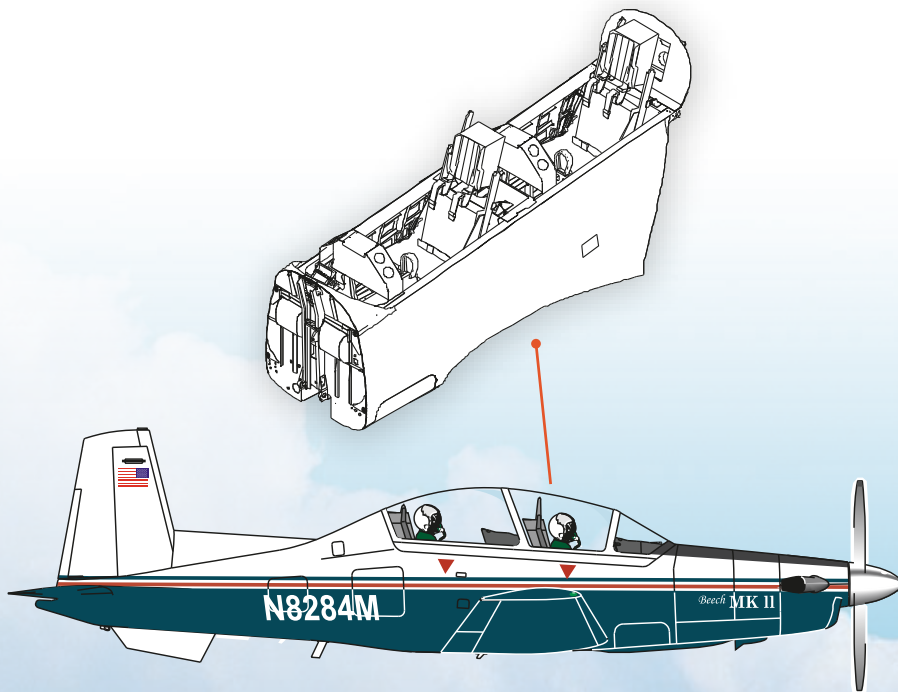
- New aft fuselage for improved flying qualities
- New canopy shape for pressurization
- New cowling to reduce maintenance time
- Integration of external shapes for enhanced handling characteristics
- PT-6A-68 engine integration
  - *Digital engine control for jet-like performance*
  - *Increased horsepower for excellent aerobatics*
  - *Continuous inertial separator for foreign object damage protection*



## Second Prototype - PT-2

The second prototype, PT-2, was a synthesis of all of the proven changes made to the first prototype. It was flown 200 hours to verify that the T-6 was an improvement over the PC-9 in all ways. A full maintainability audit on PT-2 was then completed. Based on the test flights and maintainability audit, additional changes were incorporated to make the T-6 safer, more accessible to a wider range of body sizes, and easier to maintain.

- Single-point refueling for minimum turnaround time
- Zero altitude/zero airspeed ejection seat for maximum student safety
- Bird-strike canopy for pilot protection in low-altitude training environment
- Fuselage enhancements
  - Cockpit redesigned to accommodate widest range of pilot body sizes
  - Pressurization and larger air conditioner for crew comfort
  - Large aft fuselage avionics bays to reduce maintenance man-hours
  - Improved seat installation hardware to expedite replacement

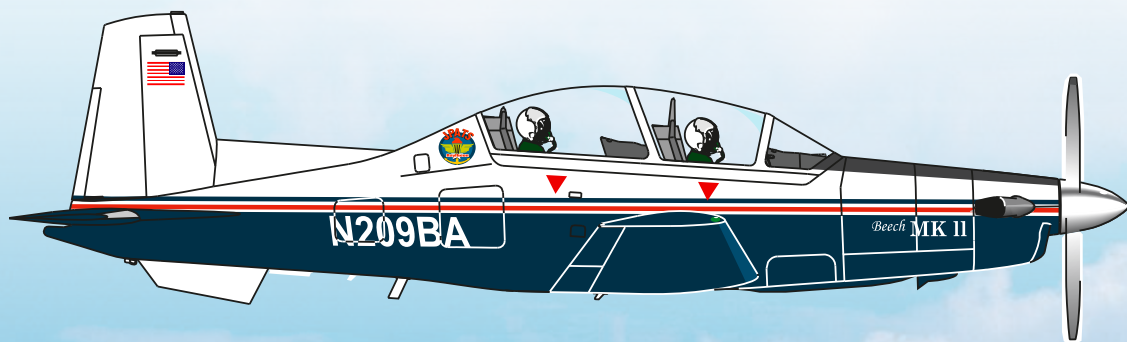


Second Prototype – PT-2

### Third Prototype - PT-3

Based on experience with PT-2, an operations evaluation aircraft, PT-3, was developed. During evaluation and testing of PT-3, further improvements were made to the aircraft that evolved the T-6 far beyond its PC-9 origins. The T-6 shares **no** parts in common with the PC-9.

- Active-matrix LCD displays that improved sunlight readability
- State-of-the-art avionics for maximum training benefit and lower life-cycle costs
- Environmentally friendly HFC air-conditioning system
- Avionics mounted one deep in aft bay to speed maintenance on the line
- Replacement of safety wire with captive nut plates to eliminate foreign-object damage (FOD) hazard
- Wing rotated forward 1.5 degrees nose up to improve visibility for instructor



Third Prototype – PT-3



## T-6 – An Entirely New Aircraft

The final production aircraft was the product of a meticulous, logical process that removed risk from the performance and configuration of the T-6 with:

- Onboard oxygen-generating system to improve aircraft availability
- Maintenance-free hydraulic accumulator
- New hydraulics system, wheel and brakes to reduce maintenance man-hours
- Advanced surface sealing for optimal corrosion protection
- 18,720-hour fatigue life design – highest in its class
- Landing gear designed to withstand a 13-feet-per-second sink rate
- Removable vertical stabilizer to reduce maintenance workload
- ON-condition engine hot-section inspections
- 4,500-hour time between engine overhaul – highest in its category
- Wing enhancements
  - *Integral aerobatic fuel tanks for reduced maintenance*
  - *Exposed wing spar to facilitate inspectability*
  - *Removable bird-strike leading edge to reduce repair costs*
  - *+7 to -3.5 G capability to maximize training*
  - *Designed with consideration of future external stores*

As a result of its thorough, painstaking development, the T-6 is the most effective training platform in the world. It is an entirely new aircraft with capabilities far greater than other primary trainers.



Hawker Beechcraft Corporation  
201 S. Greenwich  
Wichita, Kansas  
67207 USA  
+1.316.676.8194  
+1.316.676.5483 fax

Litho in USA

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