

# Beechcraft Baron 95-BE55 – Summary Guide - N7755K



## Powerplants

Two Continental IO-470-L, six-cylinder, horizontally-opposed, fuel-injected engines, each rated at 260 HP at 2625 RPM

- Conventional full pressure, wet sump system
- Oil Min operating quantity 9 quarts, max capacity 12 quarts

## Propellers

Hartzell 3-blade constant speed Full Feathering Propellers

- Pitch stops determine governing range
- Unfeathering accumulators serviced with Nitrogen 135 psi
- Locking pins keep props out of feather at shutdown



## Speeds (IAS kts)

<b>V<sub>so</sub> – 68kts</b>	<b>V<sub>xse</sub> - 91kts</b>	<b>V<sub>fe</sub> Approach – 153kts</b>
<b>V<sub>mc</sub> – 78kts</b>	<b>V<sub>yse</sub> – 99kts</b>	<b>V<sub>fe</sub> Full -122kts</b>
<b>V<sub>r</sub> – 84kts</b>	<b>V<sub>y</sub> – 107kts</b>	<b>V<sub>a</sub> – 157kts</b>
<b>V<sub>x</sub> – 84kts</b>	<b>V<sub>g</sub> – 120kts</b>	<b>V<sub>no</sub> – 183kts</b>
<b>V<sub>se</sub> – 84kts</b>	<b>V<sub>le</sub> – 153kts</b>	<b>V<sub>ne</sub> – 224kts</b>

**Emergency Descent Max Speed – 153kts**

**Crosswind Maximum Demonstrated – 22kts**

## Fuel System

Simple ON-OFF-CROSSFEED arrangement – Cross-feed used only during single-engine operation.

- Fuel system capacity - 142 gallons, 136 useable 100LL. Fuel level sight gauge (40 – 65 gal/side). Each wing tank system serviced by single filler
- 3 drains on each side (2 in front, 1 in back under flap).
- Fuel pumps – 2 engine driven pumps and 2 aux pumps

## Fuel System Limitations

- Take off on Mains
- Take off with at least 13 gallons in each tank (> yellow)
- Maximum slip duration 30 seconds
- Cross-feed used only in emergency and level flight



## Starter Limitations

On 30 seconds – wait 4 minutes

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## Auxiliary Fuel Pumps

HI pressure used before start and for engine- driven fuel pump failure

- LO pressure used for high ambient temperatures to reduce pressure fluctuations. Use on takeoff only above 90°

## Engine Indicators

- Take-off and Maximum Continuous Power – Full Throttle and 2625 rpm (applies one or two engines)
- Cruise Climb Power – 25.0 in Hg at 2500 rpm
- Maximum Cruise Power – 24.5 in Hg at 2450 rpm

Tachometer (RPM) (Tach-generator)

- Manifold Absolute Pressure (MAP) – Before start indicates ambient pressure
- CHT and Oil Temp – Electrically-powered transducers

## Electrical System

Battery –24V battery – Located beneath floor of nose baggage compartment

- Alternators - Two 50A, 24V belt-driven alternators. Controlled by two voltage regulators selectable by switch below pilot subpanel. Output indicated by loadmeters, should be less than .2 after two minutes at 1000 – 1200 RPM after start
- ALTERNATOR warning lights indicate failure

## External Power

Located on outboard side of left engine nacelle. Power unit should be capable of delivering 300A. Turn electrical systems OFF prior to connecting external power unit Once connected, turn BAT switch ON.

Total electrical load of twin-engine airplanes usually limited to 80% of combined output. Includes paralleling features that distribute electrical system demands between power sources.

If only one generating system is operating, the electrical load may exceed the output rating of the remaining alternator, so the pilot must monitor the electrical system.

## Engine Cooling

Air-cooled engines

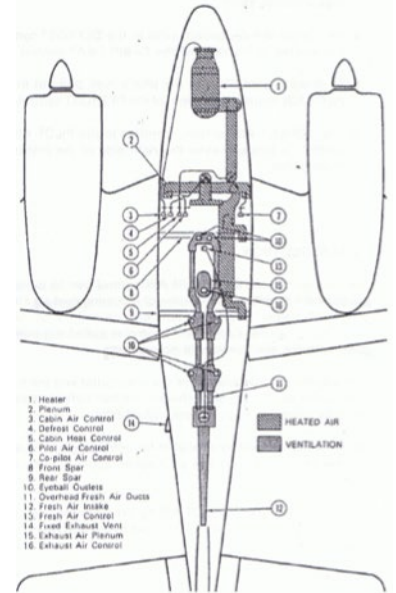
- Cowl flaps manually controlled by lever located on lower center console. Closed when lever is in UP position, open when lever is DOWN. Generally, cowl flaps are OPEN for ground operations or climbs, and progressively CLOSED for cruise and descent.
- Engine Baffling helps contain airflow over the engine to direct cooling.
- Oil Cooling Vent is located on the front of each engine.



## Environmental System

Combustion heater located in nose cone is a 50,000 btu unit

- Heat-actuated CB located on heater
- 3-position switch: BLOWER – OFF – HEATER
- Blower automatically shuts off when landing gear is retracted or CABIN AIR T-Handle is pulled approximately halfway out
- CABIN AIR T-Handle regulates intake air - push control full forward for max intake air volume
- CABIN HEAT control regulates temperature of heated air - pull control to increase temperature of heated air
- DEFROST – Push for windshield defrosting.
- PILOT AIR – Pull out to direct heated air to pilot’s feet.
- COPILOT AIR – Directs air to co-pilot’s feet and right rear passenger seat.
- To provide unheated air to same cabin outlets as heated air, push CABIN AIR and CABIN HEAT controls full forward
- Individual Fresh Air Outlets – Master control in overhead panel – Volume of air regulated at each outlet
- Fuel for the heater comes from the left tank. Approximately (1) gallon per hour is planned,



## Weight and Balance – N7755K specific W&B

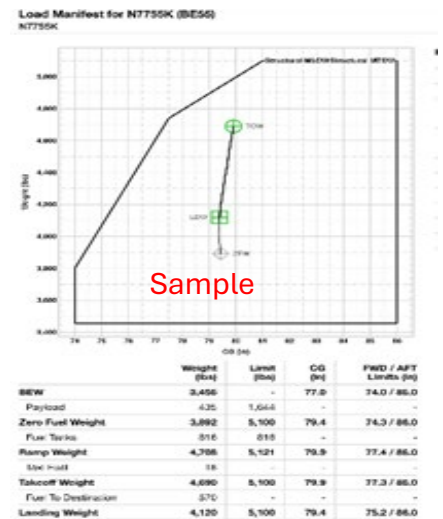
- Basic empty weight (3456 lbs)
- Useful Load (1643 lbs, 827 lbs with full fuel)
- Max ramp weight (5121 lbs) Maximum take-off weight (5100 lbs)
- Maximum landing weight (5100 lbs)
- No zero-fuel weight limitation or restriction

## Cargo Limitations

- Nose 300 lbs
- Rear 400 lbs
- Extended Rear 120 lbs

## Flaps

- Flap lever on N7755K is on the left mid-panel
- Settings for 0° 15° or 30° (approach flap setting is 15° limit for 153kts IAS), full flaps max 122kts (IAS)



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N7755K is not FIKI (certified for flight into known icing)



### De-ice systems

- No surface de-ice or boot system on N7755K
- No prop de-ice boots or alcohol system on N7755K

### Other

- PITOT HEAT Left wing (switch on pilot lower panel)
- Heated fuel vents controlled by FUEL VENT switch
- Defrost for windscreen

### Landing Gear

Adjustable linkage connected to an actuator assembly located under front seats. Actuator driven by an electric motor. The landing gear may be electrically retracted and extended, and may be extended manually.

- Control switch is a 2-position switch on right side of center console
- Gear position lights – 3 green lights, one red in-transit light – Dimmed when nav lights are turned on
- Gear warning horn – Either or both throttles retarded to below approx 13" MAP
- Main strut safety switch to prevent gear retraction on the ground.



Bear in mind that newer Barons (built after 1983) have switched positions for the flap and landing gear switches, leading to confusion for pilots that fly both newer and older models. The landing gear switch looks and feels like a wheel, and the flap looks and feels like a flap.

To prevent accidental retraction on the ground I recommend one of the following after pulling off the runway and stopping the airplane:

- Grab the flap handle and say "This is the flaps and not the gear", visually verify that fact, and then raise the flaps - OR -
- Grab the flap handle and say "Looks like a flap, feels like a flap", visually verify you have the flaps, and raise them

### Landing Gear Manual Extension

Reduce airspeed before attempting manual extension of the landing gear.

- LDG GR MOTOR Circuit Breaker – PULL
- Landing Gear Handle – DOWN
- Remove cover from handcrank at rear of front seats.
- Engage handcrank and turn counterclockwise as far as possible (approximately 50 turns) If electrical system is operative, check landing gear position light and warning horn (check LDG GR RELAY circuit breaker engaged.)

## CRITICAL PRE-FLIGHT INSPECTION

Here is a picture of an emergency gear handle which is covered (trapped) by the forward spar cover. Should you have a gear extension failure and the handle is trapped like this, there is no way to manually extend the gear. Always check that the handle can be engaged as part of your preflight cockpit checks.

Certain models will have a spar cover that can be improperly installed and “trap” the emergency gear handle inside the cover. This would prevent the handle from being accessed when needed.



### Beechcraft Specific Preflight Item

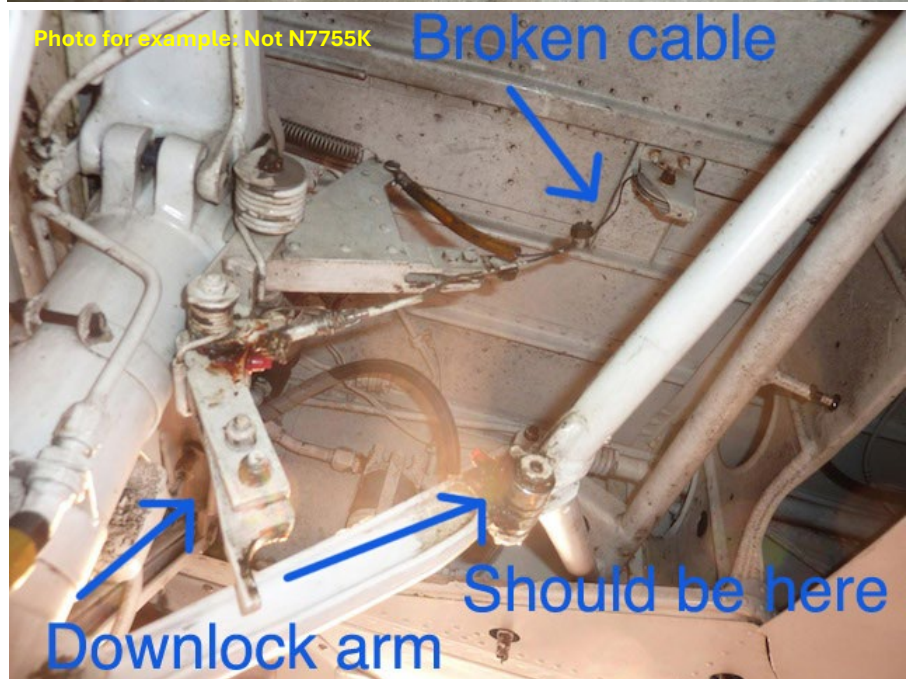
There are a few things specific to the Beechcraft line that should be checked on preflight inspection.

- Gear uplock springs
- Gear uplock rollers
- Gear down-lock lever and cable
- Emergency gear extension handle (locked behind pilot/copilot seats)
- Locking nuts securing connecting rods to elevator trim tabs should turn freely
- Emergency Gear Handle (note picture above right)

### Hydraulic System

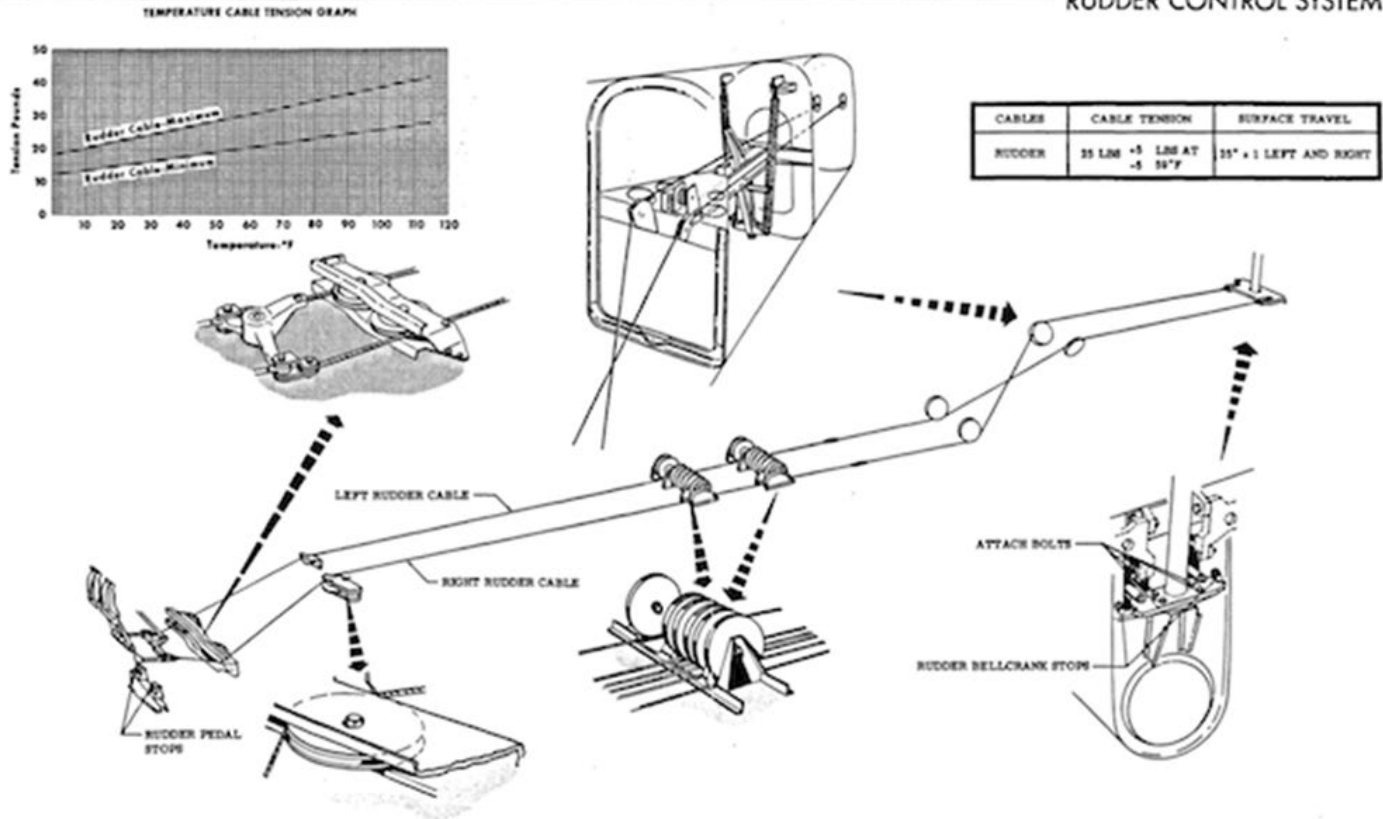
Only hydraulic system on the Baron controls the brakes. Brakes installed only on pilot’s side.

- Parking brake T-handle located just left of elevator trim wheel. Pull handle and depress brakes until firm.
- Hydraulic fluid reservoir accessible through nose baggage door. Dipstick attached to reservoir cap.

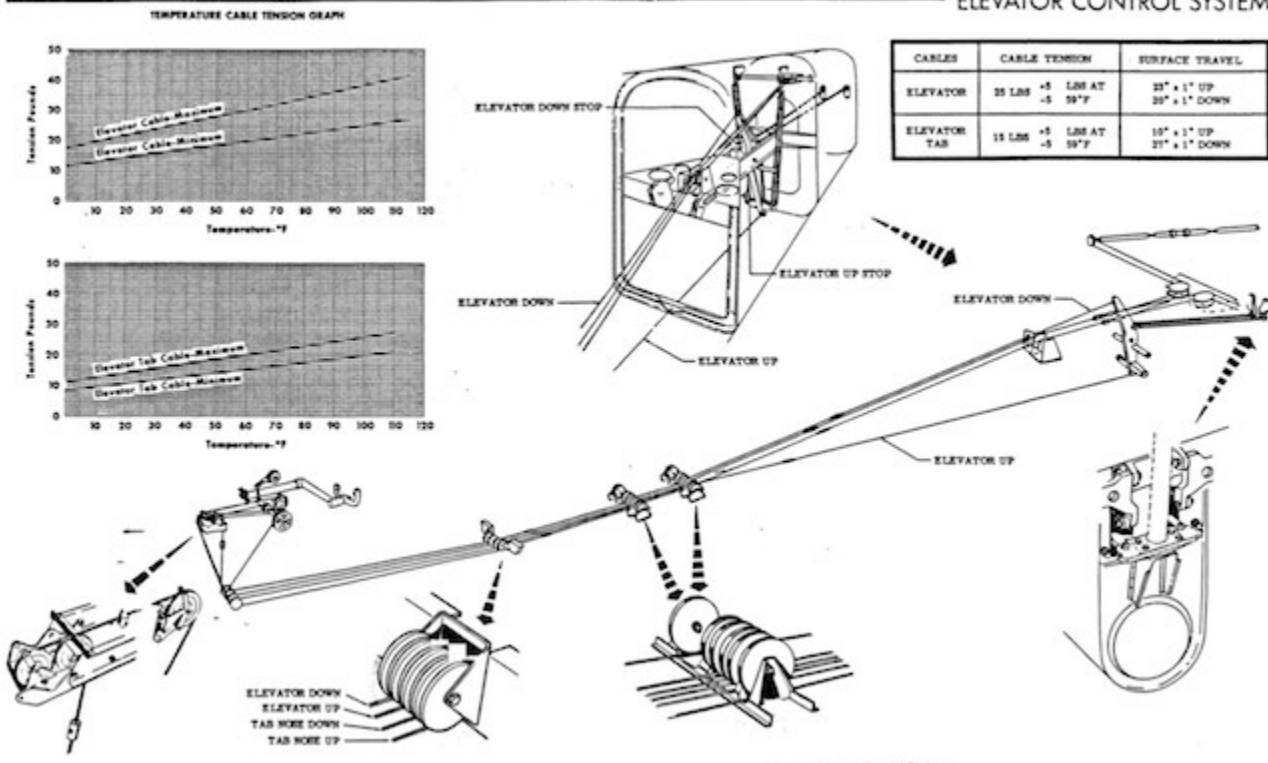


Control Surfaces

RUDDER CONTROL SYSTEM



ELEVATOR CONTROL SYSTEM



Panel and Other pictures

