

## Beech Bonanza - BE-S35

### 9003S - Main Checklist

#### Preflight

- Operating Handbook - IN PLANE
- Weight & Balance - CHECKED
- Parking Break - SET
- Control Wheel Lock - REMOVE
- Ignition Switch - OFF
- Avionics Power Switch(es) - OFF
- Flaps - UP
- Master Switch - ON
- Fuel Quantity Indicators - CHECK
  - Must be visually verified
- Low-Vacuum Warn Light - CHECK
- Avionics Power Switch(es) - ON
- Avionics Power Switch(es) - OFF
- Master Switch - OFF
- Fuel Selector - SELECT TANK
- Baggage Door - CLOSE / LATCH

#### Empennage

- Rudder Gust Lock - REMOVE
- Tail Tie Down - DISCONNECT
- Control Surfaces - MOVEMENT
- Undercarriage/Antennas - CHECK
- Tail Light / Wicks - CHECK

#### Wings

- Aileron - MOVEMENT / SECURE
- Wing Tie-Down - DISCONNECT
- Main Wheel Tire - => 30 PSI
- Fuel Sump Drain - CHECK
- Fuel Qty - CHECK VISUALLY
- Fuel Filler Cap - SECURE
- Left Wing - PITOT / VENT

#### Nose

- Engine Oil - > 5QT / 7 for X-Cowling - Secure
- Prop & Spinner - NICKS/SECURE
- Engine/Oil Inlets - UNRESTRICTED
- Nose Wheel/Strut - => 40 PSI
- Static Source Opening - CLEAR
- Nose Sump - CHECK

#### Engine Pre-Start

- Seats/Belts/Harness - SECURE
- Gear Handle - DOWN
- Gear Crank - FREE/FOLDED
- Brakes - TEST/SET
- Avionics Pwr Switch(es) - OFF
- Panel Lights - OFF DAYTIME
- Circuit Breakers - CHECK IN
- Electric Equip / A/P - OFF
- Radios - OFF
- Fuel Selector - FULLEST > 13g
- Battery/Alternator Switches-ON
- Flaps - UP / HANDLE CNTRD
- Cowl Flaps - OPEN
- Green Down Lights - 3 GREEN**
- Fuel - CHECK QUANTITY
- Beacon - ON

#### Engine Start (COLD)

- Mixture - FULL RICH
- Prop - FULL FORWARD (hi rpm)
- Throttle - PUSH OPEN 2 INCHES
- Aux Fuel Pump - ON
  - (until FLOW PEAKS, then OFF)
- Throttle - PULL CLOSED
- Throttle - OPEN 6 HALF TURNS
- Prop Area - CALL CLEAR
- Ignition Switch - START
- Throttle - ADJUST 1000 RPM
- Oil Pressure - CHECK
- Voltmeter - VERIFY > 13.5
- Avionics Pwr Switch(es) - ON
- JPI Fuel - AUTO/full or STEP for remaining fuel.
- ATIS - TUNE
- Nav Lights - As needed
- Engine < 1200 RPM until temp > 75 F (in green)

#### Engine Start (HOT)

- Fuel Pump - 30s (until MP moves)
- Mixture - IDLE / CUTOFF
- Throttle - FULL OPEN
- Starter - ENGAGE
- As Engine Starts - MIXTURE FULL
- Throttle - ADJUST 1000 RPM
- Oil Pressure - CHECK
- Voltmeter - VERIFY > 13.5

#### Pre-Takeoff

- Parking Break - SET
- Seats/Belts/Harness - SECURE
- Cabin Doors - CLOSE/LATCH
- Flight Controls - FREE/CORRECT
- Flight Inst - CHECK / SET
- Radios/Xpdr/Avionics - SET
- Flight Plan - PROGRAMMED
- Fuel Qty - CHECK
- Mixture - RICH (< 3K)
- Fuel Selector - RECHECK FULL
- Trim - SET (3 up for front only)
- Aux Fuel Pump - CHECK OFF
- Throttle - 1700 RPM
- Magnetos-R/L < 150 & 50 diff
- 1700 RPM... Exercise Prop 1x 300 rpm drop
- Suction - Approx 5inHg
- Engine Inst/Ammeter -CHECK
- Throttle - Check Idle, set 1000
- Throttle Friction Lock - ADJUST
- Autopilot - OFF
- Flaps - SET FOR TAKEOFF
- Cowl Flap - Recheck OPEN
- Window - CLOSED
- Door - RECHECK CLOSED
- Parking Brake - RELEASE

#### Normal Takeoff

- On Runway Checklist
- Time - NOTE
- Landing Light - ON
- DG - Check ok on Rwy Hdg
- Flaps - 0 DEGREES
- Throttle - FULL OPEN 2700
- Brakes - RELEASE
- Engine Instruments - CHECK
- Airspeed - ALIVE
- Rotate - 70 - 74 KTS
- Brakes/Wheels - TAP
- Landing Gear - RETRACT
- Climb Speed - Vy - 90 KTS
- Power - REDUCE mp/prop (25)
- Temps - MONITOR cht/egt/oil
- Cowl Flaps - OPEN (at cruise)

#### Short Field Takeoff

- Flaps - 25 DEGREES (2nd notch)
- Carb Heat - COLD
- Brakes - APPLY
- Mixture - FULL RICH < 3000
- Throttle - FULL OPEN
- Brakes - RELEASE
- Elevator - TAIL LOW
- Accelerate - 60-65 MPH
- Elevator - BACK PRESSURE
- Rotate - CLIMB ATTITUDE
- Accelerate - 85 MPH
- Accelerate - 100 MPH
- Obstacles - CLEARED
- Flaps - RETRACT SLOWLY

#### Normal Landing

- Seatbelts, Etc. - SECURE
- Landing light - ON
- Mixture - FULL RICH
- Fuel: Pump - ON / FULLEST TANK
- Gear - DOWN < 143 KTS
- Airspeed - (flaps up) 100 KTS
- Flaps - AS DESIRED < 103 KTS
- Airspeed - (flaps dn) 100 KTS
- Prop - SET - (forward when short)

#### Short Field Landing

- Same as Normal, thence...
- Low Safe Airspeed 69kt / 79mph
- Braking - APPLY HEAVILY

#### Post Landing

- EXIT RUNWAY FIRST
- Flaps - UP
- Landing Light - OFF
- Transponder - OFF
- Mags Grounded - CHECK
- Mixture - LEAN FOR TAXI
- Contact Ground Control

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## 9003S -

### ENGINE FAILURE TAKEOFF

- Throttle - IDLE
- Brakes - APPLY
- Flaps - RETRACT
- Mixture - IDLE / CUTOFF
- Ignition Switch - OFF
- Avionics Switch(es) - OFF
- Master Switch - OFF
- Fuel Selector - OFF

### ENGINE FAIL ON CLIMB

- Airspeed - 105 KTS
- Mixture - IDLE / CUTOFF
- Fuel Shutoff Valve - OFF
- Ignition Switch - OFF
- Flaps - AS REQUIRED
- Master Switch - OFF
- Land - LOWEST SAFE SPEED

### ENGINE RESTART

- Airspeed - BEST GLIDE 105 KTS
- Fuel Selector - SWITCH
- Mixture - FULL RICH
- Fuel Pump - ON
- Ignition Switch - START  
(Check left/right/both)

### FORCED LANDING - NO ENG

- Belts, Etc. - SECURE
- Airspeed - 74 - 78 KTS
- Mixture - IDLE / CUTOFF
- Fuel Selector Valve - OFF
- Ignition Switch - OFF
- Flaps - AS REQUIRED
- Gear - AS NEEDED
- Master Switch - OFF
- Doors - UNLATCH
- Touchdown - SLIGHTLY TAIL LOW
- Brakes - APPLY HEAVILY

### ENGINE FIRE

- Mixture - IDLE / CUTOFF
- Fuel Selector Valve - OFF
- Master Switch - OFF
- Cabin Heat/Air - OFF
- Airspeed - INCREASE AS NECESSARY TO EXTINGUISH
- Forced Landing - EXECUTE

### SPIN RECOVERY

- AILERONS - NEUTRAL
- THROTTLE CLOSED
- OPPOSITE RUDDER
- STICK FORWARD-BREAK STALL
- RUDDER NEUTRAL
- RECOVER FROM DIVE

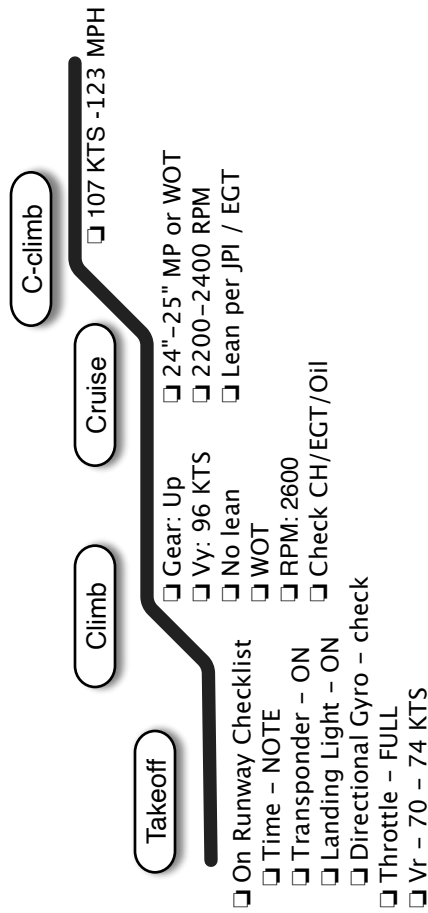
### GEAR TROUBLESHOOTING

- Verify Gear Handle - DOWN
- Gear Light Mechanical Iris - OPEN
- Check Circuit Breaker - IN
- Mech Gear Indicator - DOWN
- Swap "down" lamp Assemblies
- Confirm Override Switch Position

### EMERG GEAR EXTEND

- Landing Gear Circuit Bkr - OFF
- Unfold & engage gear handcrank
- Crank 50 turns counter clockwise
- Verify down w/light and indicator
- When down, leave until repaired

Fuel: 80 gal / 74 Usable  
 Per Tank: 40g / 37 usable  
 Tab slot - 35g  
 Tab bottom - 30g  
 Max Xwind - 17 KTS / 20 MPH  
 JPI Flow: ≈ 12 gph cruise  
 Lean: < 1500 EGT



### Descent

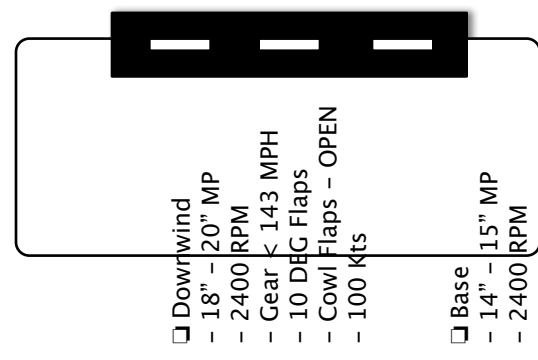
- Plan 5mi/1K'
- Reduce MP 1" / 1K
- Mixture - Per EGT
- Pitch 600 FPM
- 100 KTS
- Cowl Flaps - OPEN

### Init Appr

- Pump - ON
- To LOC - 20"/2400
- At LOC - 18"/2400
- At GS - Gear DOWN
- Flaps - 1st
- Descent - 5x GndSp
- 90 - 100 KTS

### GS Intercept

- Flaps - Full
- Prop - FWD
- Power - BACK



Speed	Kts	MPH
Vr	71	82
Cruise	130	150
Vy	96	110
Vx	76	87
Va	134	154
Vne	197	227
Appr	70	80
Vle	145	167
Vfe	117	135
Vs	63	73
Vso	54	60
C-climb	107	123
E Desc	145	167
Glide	105	122
E Appr	78	90

- Final
- Pwr 12" - 15"
- 90-100 KTS over fence
- Full Flaps (optional)
- Power out

## Beech Bonanza - BE-S35

### 9003S - Supplemental

#### Century 2000 Autopilot - Climbout

- Establish 700 FPM Climb
- Heading Bug - ON DESIRED COURSE
- Century 2000 - ON
- Alt Button - PRESS (at target altitude.)

#### Century 2000 Autopilot - Cruise

- Century 2000 - ON
- HDG Button - PRESS (to follow the Aspen HDG bug)
- NAV Button - PRESS (to follow signal currently driving Aspen HSI)

#### GPSS Operation

- CNX80 - Select Route
- Aspen - PUSH GPSS button
- Century 2000 HDG button - PUSH (on)
- Climb/Descent/Altitude - As usual

#### Century 2000 Autopilot - Approach

- Mode - SWITCH from NAV or GPSS to APPROACH
- ALT & GS Lights - VERIFY ON
- Upon ALT light Off - GEAR DOWN