

BE 76 Duchess Checklist

BEFORE STARTING ENGINE

Preflight – COMPLETE
Passenger Brief-COMplete
Cabin Door – SECURED
Control Locks - REMOVE
Seats/Seatbelts - CHECK
Brakes - SET
Fuel Selector - ON
Landing Gear Switch - DOWN
Mixtures - FULL FORWARD
Propellers FULL FORWARD
Throttles - OPEN 1/4 INCH
All Switches - OFF
Circuit Breakers - IN
Avionics Master - OFF
Aux Fuel Pumps - OFF
Battery Master- ON
Landing Gear Position
Indicator Lights - GREEN
LIGHTS ON
Warning Lights – TEST
Cowl Flaps – OPEN/LOCKED
Fuel Quantity - CHECK
Carb Heat - OFF
Strobe Lights – ON

STARTING ENGINES

Propellers – CLEAR
Auxiliary Fuel Pumps - ON

Magneto – on 1st engine -
TURN TO “BOTH” AND
PUSH TO PRIME 5sec
Left Engine - START
Throttle – 1000 – 1200 RPM
Oil Pressure – CHECK
(above red radial line within
30 seconds)
Vacuum –“DOT” NOT Visible
Alternator Switch – ON

Repeat checklist - 2nd engine

BEFORE TAXIING

Mixtures – LEAN FOR TAXI
Avionics Master Switch - ON
Avionics – SET
Wing Flaps – UP
Aux Fuel Pumps – OFF, then
ON (Check Fuel Pressure)
Lights - AS REQUIRED
Obtain ATIS/ASOS/AWOS
Altimeter - SET
Cabin Temp -AS REQUIRED
Cabin Air - AS REQUIRED

TAXIING

Throttles - AS REQUIRED
Brakes - CHECK
Flight Instruments – CHECK

BEFORE TAKEOFF

Brakes – HOLD
Radios – SET
Flight Instruments -CHECK
& SET
Engine Instruments -CHECK
(Starter Engaged Warning
Light -should NOT be lit)
Fuel Selectors – ON
Flight Controls – FREE &
CORRECT
Electric Trim – CHECK
OPERATION
Autopilot – CHECK
OPERATION
Trim -SET FOR TAKEOFF
Mixtures - RICH
Throttles - 2200 RPM
Props – EXERCISE (100-
200 RPM drop)
Magnets - CHECK
175 RPM maximum drop
max difference of 50 RPM
Carb Heat – CHECK
Throttles 1500 RPM
Props – FEATHER CHECK
(Do not exceed 500 RPM
drop; Repeat 3-4 times in
cold weather)
Gyro Pressure & Loadmeters
- CHECK
Engine Inst. - CHECK
Throttles - IDLE
Fuel Quantity - CHECK
Fuel Selectors – RECHECK
ON
Aux Fuel Pumps – CHECK
ON
Flight Instruments – SET
Radios/transponder - SET
Lights - AS REQUIRED
Doors/Windows - CLOSED
Seat Belts - SECURE
Brakes – RELEASE

EMERGENCY BRIEF

On the Runway
After Liftoff Gear Down
After Liftoff Gear UP

TAKEOFF

Flaps – UP
Mixtures – SET for field
elevation
Throttle – FULL 2700 RPM
Engine Inst. – CHECK
Vmc Speed – 65 KIAS
Elevator Control – ROTATE
71 KIAS

AFTER TAKEOFF

Brakes - APPLY momentarily
Landing Gear – RETRACT
Red light off – CHECK
Best Angle Climb - 71 KIAS
Best Rate Climb - 85 KIAS

CRUISE CLIMB

Power - 2500 RPM & 25”MP
Airspeed – 95-120
Mixtures - ADJUST as
needed
Cowl Flaps - AS REQUIRED
Heading Ind. - COMPASS

CRUISE

Cruise Power 2300-2500 RPM
20-24”MP
Recommended 24”, 2300
Aux Fuel Pumps -OFF
*MONITOR PRESSURE

Mixtures – AS REQUIRED
Cowl Flaps - AS REQUIRED
Trim Tabs – ADJUST

DESCENT - LANDING

ACCGUMPS

Aux. Fuel Pumps - ON
Cowl Flaps – AS REQ
Carb Heat – AS REQ
(Gas) Fuel Selectors – ON
(Undercarriage) Gear - DOWN
(below 140 KIAS)
- Green Down lights - ON
- Red Unlocked light - OFF
Mixture – GRADUAL RICHEN
Propellers - FULL FORWARD
Seat Belts - SECURE
Wing Flaps - DOWN 10 & 20
(below 120KIAS)
Wing Flaps - DOWN 35
(below 110KIAS)
Min Approach – 85KIAS
BLUE LINE

GO AROUND

Power – FULL & 2700 RPM
Mixture - AS REQUIRED
Airspeed – 71 kts
Wing Flaps – UP
(when clear of obstacles &
Positive Rate)
Landing Gear - RETRACT
(Positive Rate)
Pitch for Blue Line + 10kts
Trim - FOR CLIMB
Cowl Flaps – AS REQ'D
Carb Heat - OFF

AFTER LANDING – TAXI

Landing & Taxi Lights-AS
REQ'D
Cowl Flaps – OPEN
Carb Heat - OFF
Wing Flaps – UP
Mixture – LEAN FOR TAXI

SHUT DOWN

Tansponder – VFR
Aux Fuel Pumps – OFF
Avionics Master - OFF
Electrical Equipment – OFF
Props – HIGH RPM
Throttles – 1000 RPM
Mixtures - IDLE CUT-OFF
Magneto Switches – OFF
(after engine stops)
Batt and Alternators – OFF
HOBBS/TACH TIME
Control Lock - INSTALL
Cabin Door – CLOSE

Vr – 71
Vx – 71
Vxse – 85
Vy – 85
Vyse – 85
Vso –60
Vs1 – 70
Best Glide – 82-95
Vmc – 65
Vsse – 71
Va – 132 – Max Gross
Va – 116 – 3000lbs
Vle – 140
Vlr -112
Vno – 154
Vne - 194
X wind – 25

** All SPEEDS KIAS**

EMERGENCY Checklist – BE 76

ENGINE FAILURE IN FLIGHT

Zero Side Slip - ESTABLISH
Mixtures - FULL
Propellers - FORWARD
Throttles - FULL
Landing Gear - RETRACT
Flaps - UP
Inop Engine – DETERMINE
(Verify by moving throttle)

IF ALTITUDE/AIRSPEED PERMIT

Fuel Flow - CHECK
If deficient, turn aux pumps
to ON
Fuel Selectors - ON
(Verify)
Fuel Quantity - CHECK
Oil Press and Temp – CHECK
(Shutdown engine if Oil
Pressure is low)
Magnetos -CHECK ON
Mixture - ADJUST UNTIL
FIRE

IF NO RESTART

SECURING INOP ENGINE

Throttle – CLOSE
Propeller - FEATHER
Mixture - IDLE CUT-OFF
Fuel Selector - OFF
Auxiliary Fuel Pump - OFF
Magnetos - OFF
Alternator Switch - OFF
Cowl Flap - CLOSE

OPERATIVE ENGINE

Power - AS REQUIRED
Mixture - AS REQUIRED
Fuel Selector - AS
REQUIRED
Crossfeed as necessary to
maintain balance
Auxiliary Fuel Pump - ON
Cowl Flap - AS REQUIRED
Electrical Load - DECREASE
**LAND AS SOON AS
PRACTICAL**

AIR START

AFTER FEATHERING

WITH FEATHERING ACCUMULATORS

Fuel Selector - MAIN TANK
Throttle - FORWARD 1"
Auxiliary Fuel Pump – ON
Magnetos Switches – BOTH
Prop Control – Move Full
FWD until engine
WINDMILLS, then back to
MIDRANGE
(Use starter momentarily if
AIRSPEED is BELOW 100
kts)

***If prop does not unfeather
or engine doesn't turn,
proceed to WITHOUT
UNFEATHERING
ACCUMULATORS***

Mixture – FULL RICH

***if engine fails to run, clear
engine by allowing
windmill with mixture
FULL LEAN; when engine
fires, advance to FULL
RICH***

Aux Fuel Pump - OFF
Alternator – ON
Oil Pressure and Oil Temp -
CHECK
Warm Up Engine (approx
2000RPM & 15"MP)

**- After CHT reaches 200°F
with gradual Mixture
enrichment**

Power – ADJUST
Cowl Flap - AS REQUIRED

WITHOUT UNFEATHERING ACCUMULATORS

15 TURNS
Fuel Selector – ON
Throttle - FORWARD 1"
Aux Fuel Pump – ON
Mag/Start Switch – ON
Mixture – FULL RICH
Prop Control – MOVE
FORWARD OF
FEATHERING DETENT TO
MIDRANGE
Mag/Start Switch – START &
PUSH TO PRIME
*hold on START until
windmilling begins and
continue to prime as req'd*

**(If air start is unsuccessful,
return prop to feather and
secure Engine)**

Aux Fuel Pump – OFF (when
reliable power has been
regained)
Alternator Switch – ON
Oil Pressure & Temp –
CHECK
Warm Up Engine (approx
2000RPM & 15"MP)

**- After CHT reaches 200°F
with gradual Mixture
enrichment**

Set Power & Trim as needed

EMERGENCY DESCENT

Cowl Flaps – CLOSED
Throttles – IDLE
Props – Full FWD
Landing Gear – DOWN
Airspeed – 140 kts

After specified altitude is
acquired-GEAR UP

PREFLIGHT Checklist – Duchess BE 76

PREFLIGHT INSPECTION

INTERIOR

Control Lock - REMOVE
All Switches – OFF
Trim Tabs - (3) NEUTRAL
Flush-type Fuel
 Drain/Emergency Gear
 Extension Tool - OBTAIN
Landing Gear Switch - DOWN
Battery Switch - ON
Flaps - DOWN 35
Fuel - CHECK QUANTITY
(Ensure Pitot Tube Cover is
Removed)
Pitot Heat - ON 20sec, OFF
Exterior Lights - CHECK
Battery Switch - OFF

EXTERIOR

Left Flap - CHECK
Fuel Vent - CHECK
L Aileron - CHECK/FREE
Wing Tip – CHECK
Pitot – CLEAR
Stall Warning Vane - FREE
Fuel Tank Quantity -CHECK
Fuel Cap - SECURE
Tie Down/Chock – REMOVE
Wing Tank Sump – DRAIN
Fuel Selector – DRAIN
Engine Cowling – CHECK
Air Intakes – CLEAR
Prop and Spinner - EXAMINE
Oil Level - CHECK
 (Min 6 qts)
Cowl Flap - CHECK
Left Main Gear
 Strut - CHECK
 Doors - CHECK
 Tire - CHECK
 Wheel Well - CHECK
 Brake/line – CHECK
Crossfeed Drains –(2)DRAIN
Nose Cowling/Cone-SECURE
Heater Air Intake – CLEAR
Heater Vents - CLEAR
Nose Gear
 Strut - CHECK
 Doors - CHECK
 Tire - CHECK
 Wheel Well - CHECK
Chock - REMOVE

Crossfeed Drains –(2)DRAIN
Right Main Gear
 Strut - CHECK
 Doors - CHECK
 Tire - CHECK
 Wheel Well - CHECK
 Brake/line – CHECK
Engine Cowling – CHECK
Air Intakes – CLEAR
Prop and Spinner - EXAMINE
Oil Level - CHECK
 (Min 6 qts)
Cowl Flap - CHECK
Fuel Selector - DRAIN
Wing tank Sump - DRAIN
Tie Down/Chock - REMOVE
Main Tank Quantity - CHECK
Fuel Cap – SECURE
Stall Warning Vane - FREE
Wing Tip - CHECK
R Aileron - CHECK/FREE
R Flap - CHECK SECURITY
Battery Vents - CLEAR
Static Port – CLEAR
ELT - ARMED
R Fuselage - CHECK
Tail Tie Down - REMOVE
Horizontal Stabilizer CHECK
Vertical Stabilizer - CHECK
Elevator/Trim Tab - CHECK
Rudder - CHECK/FREE
Cabin Air Inlet - CHECK
Static Port - CLEAR
Cabin Air Outlet - CHECK
Antennas - CHECK
Aft Utility Door - CHECK

PREFLIGHT COMPLETE