

FS 2004

Cloudy's Checklists

C. Jet-Engine

Airplanes, Helis etc



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I started working on checklists even since Flight Simulator 98, amazed by

- 1) the glaring omissions: if there is a control in your instrument panel, surely the checklist should mention it, especially if the control is mentioned in the real-life checklist and is indeed functional in Flight Simulator!
- 2) inconsistencies between similar actions in similar aircraft.
- 3) differences - sometimes significant - between checklist or reference values and the actual performance of the aircraft in Flight Simulator.

Also, FS2004's kneeboard can be useful for quick info, but given the limited real estate of our PC screens, I find reading checklists from the kneeboard annoying. Besides, in FS2004, when the kneeboard is on, many flight control functions are not available.

So I went for a final result in MS Word format which can be used as a printed booklet. It covers all the default FS2004 aircraft EXCEPT the Wright Flyer and the three Boeing airliners. A few outstanding propeller add-ons are also included. This document is meant to be colour-printed in A4 paper. You may print it either in large type at one sheet per page, or better in "booklet two-sided" format, 4 pages fitting into one A4 sheet.

I have tested my checklists with my Rational Panels, which are free for download in this site. If you use other panels you will find that one or two gauges which I mention may not be there: typically the digital trim. However, you can always edit and amend my checklist booklet to suit your tastes: you only need Microsoft® Word (or Office) 97 or higher versions. Note that some pages have intentionally been left blank, so that each aircraft starts on an even page, thus minimising the page turns needed for a flight. Finally, unless otherwise stated, the checklists are based on the performance at about 80% fuel load. Expect changes when the aircraft gets lighter later during a flight.

Document "A" covers historical aircraft. Document "B" modern piston-engine planes, and document "C" includes the turboprops, turbofans (the Lear only), helis and sailplanes.

Transponders and Tower communications are not covered.

Conventions

NORMAL TEXT check/verify

BOLD TEXT action/change

GREY TEXT denotes default values, in checklists for improved flight dynamics

 Gameboard, Macro 1: Radios, Lights, Heat and Deice, Alternators and Pumps

 Gameboard, Macro 3: Aircraft and Engine select

 Gameboard, Macro 2: Auto-Pilot and Externals

 Quadrant handles: Throttles, Propellers, Mixtures, Reversers, Feather, Prime

 Quadrant switches: Gear, Flaps, Cowl, Prop.Synch., Auto-Feather, Magnetos

 Hotas & Pedals: Flight Controls, Trims, Brakes, Spoilers, Tailwheel, Water Rudder

 Mouse: Calibrators and a few other screen clicks (exceptionally the PC keyboard)

 Screen: No manual action, just watch the screen

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AIRCRAFT CHECKLIST 408 Cessna C208 Caravan Amphibian

Checklist for both **land** and **water** take-off and landing.

AIRCRAFT BASIC SPECS

Engines n° and type	1 Turbo-Prop
MTOW	8,000 lb
Fuel usable capacity	332 gl Tanks: Left Main, Right Main
Range	860 nm, 5h 45'
T.off runway length	2,500 ft

BEFORE STARTING

 Landing Gear	GEAR DOWN (land) GEAR UP (water)
 Parking Brake	SET (land)
 Master Battery Switch	ON
 Annunciators ON	VOLT LOW, VACUUM LOW, OIL PRESS LOW, FUEL PRESS LOW
 Generator	OFF
 Avionics Master	OFF
 Inertial Separator (De-Ice)	OFF (Largely ineffective) – De-Ice Annun. OFF ICE WARNING is unaffected by this
 Pitot Heat	OFF
 Autopilot	OFF
 Fuel Gauges/Quantity	CHECK
 Fuel Tank Selector	BOTH
 Fuel Low Annunciators OFF	RESERVOIR, L & R FUEL, FUEL SELECT
 Fuel Cut-off	FUEL ON (pushed in)
 Emergency Power	NORMAL (all down)
 Power	IDLE
 Propeller	HIGH RPM
 Condition	CUTOFF
 Trim Tabs	NEUTRAL
 Flight Controls	FREE/Full travel
 Nav Lights	AS REQUIRED
 Instrument Panel Lights	AS REQUIRED
 Beacon	ON
 Fuel Pump	OFF – Annunciator OFF

STARTING (CTRL+E for autostart sequence)

Emergency Power	NORMAL (all down)
Power	IDLE
Propeller	HIGH RPM
Condition	MID (50%)
Fuel Pump & Annunciator	ON
Fuel Press Low annunciator	OFF
Fuel Flow	CHECK = 0
Starter Switch	HOLD UNTIL ENGINE STARTS
Starter and Ignition annunc.	ON THEN OFF
Ng % RPM	> 12%
Condition	LOW ~20%
Fuel Flow	> 80 PPH
ITT (Interstage Turb. Temp.)	<1,090 °C
Starter annunciator	OFF
Generator	ON
Volt Low & Gen Off annunc.	OFF
Fuel Pump & Annunciator	OFF
Ng % RPM	GREEN (>52%)
Fuel Pressure Low annunc.	OFF
Oil Pressure & annunciator	OFF in <30 sec.
Oil Temperature & Suction	CHECK

WARM UP AND TAXI

Fuel Tank Selector	SWITCH TANKS & CHECK
Temperatures & Pressures	CHECK
Gyro / Heading	CHECK / CALIBRATE
Altimeter	CHECK / CALIBRATE
Flight Instruments	CHECK
Brakes & Brake Pressure	CHECK (land only)
Parking Brake	APPLY (land only)
Propeller	EXERCISE (2-3 times, no more than 400RPM drop)
Inertial Separator (De-Ice)	AS REQUIRED (power drain & ineffective!)
Anti-Ice annunciator	CHECK AS PER ABOVE
Volt and Gen annunciators	CHECK OFF
Water Rudders	UP (land) DOWN (water)
Avionics Master	ON
Radios	SET AS PER FLIGHT PLAN
Autopilot	SET AND OFF
Wing Flaps	UP, FULL DOWN, VISUAL CHECK, UP
Taxi Lights	ON
Taxi Throttle and Speed	1,000 RPM - 15 KIAS 1,350 RPM - 20 KIAS
Gyro & Turn Co. dur. Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

Strobe	ON
Gear Lights	DOWN AMBER (land) UP BLUE (water)
Emergency Power	IDLE (NORMAL)
Power	IDLE
Propeller	FORWARD/HIGH
Condition	HIGH
Trim Tabs	NEUTRAL (IGNORE 'TO' MARK!)
Wing Flaps	10°-20° (land) 20° (water)
Pitot Heat	ON IF OAT < 4 °C
Landing Lights	ON
<i>Power Unit from now on</i>	<i>Torque = x100 FT-LBS</i>

TAKEOFF (sea level or low altitude)

Parking Brake	RELEASE (land)
Power	Full => 20 x TORQUE
Propeller	High =>1,900 PROP RPM
Water Rudders	CHECK UP (land) UP (water)
Decision (V1)	65 KIAS (land) 70 KIAS (water)
Rotate (ave.)	SOFTLY 70 KIAS (land) SOFT 75 KIAS (wtr.)
Attitude Angle	10°
Landing Gear (w/pos.climb)	RETRACT (land)
Gear Lights	CHECK UP BLUE
Airspeed (airborne & gear up)	80-90 KIAS
Wing Flaps	RETRACT TO 10° AT 85 KIAS
Landing Lights	OFF
Taxi Lights	OFF

CLIMB (once clear of obstacles)

Wing Flaps	RETRACT AT 95 KIAS AND VERIFY
Inertial Separator (De-Ice)	ONLY IF REQ'D (power drain & ineffective!)
Pitot Heat	ON IF OAT < 4 °C
Power	18 x THEN INCREASE TO 19 x TORQUE
Propeller	1,800 RPM (max. climb: 1,900 RPM)
Elevator Trim (ave.)	-02
Airspeed	115 KIAS (max. climb: 104 KIAS)
Climb (Vertical Speed)	800 FPM (max. climb: 1,000 FPM)
Temperatures & Pressures	CHECK

CRUISE

■ Typical Altitude	NORMAL	LOW CITY
■ Gyro / Heading	8,000 FT	600 FT
■ Altimeter	CHECK / CALIBRATE	
■ Power	SET / CALIBRATE	
■ Propeller	17.5 x TORQUE	10 x TORQUE
■ Condition	1,750 RPM	HIGH RPM
■ Wing Flaps	50 %	HIGH
■ Elevator Trim		SET: 20°
■ Inertial Separator (De-Ice)	-08	+ 07
■ Pitot Heat	ONLY IF REQ'D (power drain & ineffective!)	
■ Cruise Airspeed	ON IF OAT < 4 °C	
<i>Max Level Airspeed</i>	140 KIAS	78 KIAS
<i>Never Exceed Airspeed</i>	170 KIAS	
<i>Service Ceiling</i>	175 KIAS	
	16,000 FT	

DESCENT

■ Radios	CHECK FOR ATIS/AIRPORT INFO
■ Gyro / Heading	CHECK / CALIBRATE
■ Altimeter	SET / CALIBRATE
■ Fuel Quantity	CHECK
■ Fuel Tank Selector	BOTH
■ Power	Typically 8 x TORQUE
■ Propeller	16.5 (MID)
■ Condition	ENRICH AS NECESSARY
■ Elevator Trim	-02
■ Wing Flaps (initial)	10°
■ Airspeed	110 KIAS
■ Descent Rate (Vert. Speed)	-800 FPM

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

■ Propeller	FEATHERED
■ Elevator Trim	-25
■ Airspeed	76 KIAS
■ Descent Rate (Vert. Speed)	-900 FPM
■ Glide Ratio	1 : 8.5

APPROACH

- Radios
- Landing Gear
- Gear Lights
- Water Rudders
- Autopilot
- Landing Lights
- Taxi Lights
- Propeller
- Condition
- Wing Flaps (intermediate)

SET FOR APPROACH

DOWN (land)
DOWN AMBER (land) | **UP BLUE (water)**
 UP
 AS DESIRED
 ON
 ON
 HIGH RPM
 HIGH
 20°

FINAL AND LANDING

- Parking Brake
- Wing Flaps: Full Down at ...
- Final Approach Airspeed
- Autopilot
- Power (idle on touchdown)
- Inertial Separator (De-Ice)
- Touchdown Airspeed
- Reverse Thrust
- Stall Speed Clean*
- Stall Speed All Down*

Land: ease forward after flare | **Water: hold stick till stopped**

VERIFY OFF
100 KIAS
80 KIAS
OFF
8.5 x TORQUE
OFF – Anti-Ice annunciator OFF
80 KIAS
APPLY; OFF AT 50 KIAS (ld.) | 30 KIAS (wt.)
65 KIAS
52 KIAS

AFTER LANDING - TAXI

- Water Rudders
- Landing Lights
- Wing Flaps
- Propeller
- Condition
- Pitot Heat
- Fuel Pump
- Strobe
- Trim Tabs

CHECK UP (land) | **DOWN (water)**
OFF
UP AND NEUTRAL
MIN RPM
LOW ~20%
OFF
OFF
OFF
NEUTRAL

ENGINE SHUT-DOWN

 Parking Brake	APPLY (land)
 Taxi Lights	OFF
 Avionics Master	OFF
 Power	IDLE
 ITT	STABILIZED at min. temperature for 1 minute
 Propeller	FEATHERED
 Condition	CUTOFF
 Annunciators ON	VOLT LOW, VACUUM LOW, OIL PRESS LOW, FUEL PRESS LOW
 Fuel Tank Selector	OFF
 Annunciators ON	RESERVOIR FUEL LOW, FUEL SELECT OFF
 Fuel Cut-off	FUEL CUT (pulled out)
 Beacon	OFF
 Navigation Lights	OFF
 Instrument Panel Lights	OFF
 Generator	OFF – GEN OFF Annunciator ON
 Master Battery Switch	OFF

AIRCRAFT CHECKLIST

409 Cessna C208B Grand Caravan

AIRCRAFT BASIC SPECS

Engines n° and type	1 Turbo-Prop
MTOW	8,000 lb
Fuel usable capacity	332 gl Tanks: Left Main, Right Main
Range	950 nm, 6h 10'
T.off runway length	2,500 ft

BEFORE STARTING

■ Parking Brake	SET
■ Master Battery Switch	ON
■ Annunciators ON	VOLT LOW, VACUUM LOW, OIL PRESS LOW, FUEL PRESS LOW
■ Generator	OFF
■ Avionics Master	OFF
■ Inertial Separator	OFF – Ann. DE-ICE-PRESS OFF (this device is a power drain & ineffective!) AS REQUIRED AGAINST ICE WARNING
■ De-Ice (G13 switches both this device and the Inertial Separator!)	
■ Pitot Heat	OFF
■ Fuel Gauges/Quantity	CHECK
■ Fuel Tank Selector	BOTH
■ Fuel Low Annunciators OFF	RESERVOIR, L & R FUEL, FUEL SELECT
■ Fuel Cut-off	FUEL ON (pushed in)
■ Emergency Power	NORMAL (all down)
■ Power	IDLE
■ Propeller	HIGH RPM
■ Condition	CUTOFF
■ Trim Tabs	NEUTRAL
■ Flight Controls	FREE/Full travel
■ Nav Lights	AS REQUIRED
■ Instrument Panel Lights	AS REQUIRED
■ Beacon	ON
■ Fuel Pump	OFF – Annunciator OFF

STARTING (CTRL+E for autostart sequence)

Emergency Power	NORMAL (all down)
Power	IDLE
Propeller	HIGH RPM
Condition	MID (50%)
Fuel Pump & Annunciator	ON
Fuel Press Low annunciator	OFF
Fuel Flow	CHECK = 0
Starter Switch	HOLD UNTIL ENGINE STARTS
Starter and Ignition annunc.	ON THEN OFF
Ng % RPM	> 12%
Condition	LOW ~20%
Fuel Flow	> 80 PPH
ITT (Interstage Turb. Temp.)	<1,090 °C
Starter annunciator	OFF
Generator	ON
Volt Low & Gen Off annunc.	OFF
Fuel Pump & Annunciator	OFF
Ng % RPM	GREEN (>52%)
Fuel Pressure Low annunc.	OFF
Oil Pressure & annunciator	OFF in <30 sec.
Oil Temperature & Suction	CHECK

WARM UP AND TAXI

Fuel Tank Selector	SWITCH TANKS & CHECK
Temperatures & Pressures	CHECK
Gyro / Heading	CHECK / CALIBRATE
Altimeter	CHECK / CALIBRATE
Radar Altimeter	CHECK ON & SET BUG
Flight Instruments	CHECK
Brakes & Brake Pressure	CHECK
Parking Brake	APPLY
Propeller	EXERCISE (2-3 times, no more than 400RPM drop)
Inertial Separator	AS REQUIRED – Annunc. DE-ICE-PRESS (this device is a power drain & ineffective!)
De-Ice	AS REQUIRED AGAINST ICE WARNING
Volt and Gen annunciators	CHECK OFF
Avionics Master	ON
Radios	SET AS PER FLIGHT PLAN
Autopilot	SET AND OFF
Wing Flaps	UP, FULL DOWN, VISUAL CHECK, UP
Taxi Lights	ON
Taxi Throttle and Speed	1,000 RPM - 16 KIAS
Gyro & Turn Co. dur. Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

■ Strobe	ON
■ Emergency Power	IDLE (NORMAL)
■ Power	IDLE
■ Propeller	FORWARD/HIGH
■ Condition	HIGH
■ Trim Tabs	NEUTRAL (IGNORE 'TO' MARK!)
■ Wing Flaps	20°
■ Pitot Heat	ON IF OAT < 4 °C
■ Landing Lights	ON
<i>Power Unit from now on</i>	<i>Torque = x100 FT-LBS</i>

TAKEOFF (sea level or low altitude)

■ Parking Brake	RELEASE
■ Power	Full => 20 x TORQUE
■ Propeller	High => 1,900 PROP RPM
■ Decision (V1)	70 KIAS
■ Rotate (ave.)	SOFTLY 75 KIAS
■ Attitude Angle	10°
■ Airspeed (airborne)	85-95 KIAS
■ Wing Flaps	RETRACT TO 10° AT 85 KIAS
■ Landing Lights	OFF
■ Taxi Lights	OFF

CLIMB (once clear of obstacles) **Normal: Ratio 1:15** | **Steep: Ratio 1:11**

■ Wing Flaps	RETRACT AT 95 KIAS AND VERIFY	
■ Inertial Separator	ONLY IF REQ'D (power drain & ineffective!)	
■ De-Ice	AS REQUIRED AGAINST ICE WARNING	
■ Pitot Heat	ON IF OAT < 4 °C	
■ Power	18 x THEN INCREASE TO 19 x TORQUE	
■ Propeller	1,800 RPM (max. climb: 1,900 RPM)	
■ Elevator Trim (ave.)	Normal: +06	Steep: +12
■ Airspeed	120 KIAS	108 KIAS
■ Climb (Vertical Speed)	800 FPM	1,000 FPM
■ Temperatures & Pressures	CHECK	

CRUISE

■ Typical Altitude
■ Gyro / Heading
■ Altimeter
■ Power
■ Propeller
■ Condition
■ Wing Flaps
■ Elevator Trim
■ Inertial Separator
■ De-Ice
■ Pitot Heat
■ Cruise Airspeed
<i>Max Level Airspeed</i>
<i>Never Exceed Airspeed</i>
<i>Service Ceiling</i>

NORMAL

8,000 FT
CHECK / CALIBRATE
SET / CALIBRATE
17 x TORQUE
1,750 RPM
50 %
-06
ONLY IF REQ'D! (power drain & ineffective!)
AS REQUIRED AGAINST ICE WARNING
ON IF OAT < 4 °C
150 KIAS
170 KIAS
175 KIAS
24,000 FT

| LOW CITY

 600 FT
 10 x TORQUE
 HIGH RPM
 HIGH
 SET: 20°
 + 25
 83 KIAS

DESCENT

■ Radios
■ Gyro / Heading
■ Altimeter
■ Fuel Quantity
■ Fuel Tank Selector
■ Power
■ Propeller
■ Condition
■ Elevator Trim
■ Wing Flaps (initial)
■ Airspeed
■ Descent Rate (Vert. Speed)

CHECK FOR ATIS/AIRPORT INFO
CHECK / CALIBRATE
SET / CALIBRATE
CHECK
BOTH
Typically 8 x TORQUE
16.5 (MID)
ENRICH AS NECESSARY
+06
10°
113 KIAS
-800 FPM

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

■ Propeller	FEATHERED
■ Elevator Trim	-30
■ Airspeed	92 KIAS
■ Descent Rate (Vert. Speed)	-930 FPM
■ Glide Ratio	1 : 10

APPROACH

■ Radios	SET FOR APPROACH
■ Autopilot	AS DESIRED
■ Landing Lights	ON
■ Taxi Lights	ON
■ Propeller	HIGH RPM
■ Condition	HIGH
■ Wing Flaps (intermediate)	20°

FINAL AND LANDING

■ Parking Brake	VERIFY OFF
■ Wing Flaps: Full Down at ...	105 KIAS
■ Final Approach Airspeed	80 KIAS
■ Autopilot	OFF
■ Power (idle on touchdown)	8 x TORQUE
■ Inertial Separator	OFF – Anti-Ice annunciator OFF
■ Touchdown Airspeed	80 KIAS
■ Reverse Thrust	APPLY; OFF AT 40 KIAS
<i>Stall Speed Clean</i>	<i>60 KIAS</i>
<i>Stall Speed All Down</i>	<i>48 KIAS</i>

AFTER LANDING - TAXI

■ Landing Lights	OFF
■ Wing Flaps	UP AND NEUTRAL
■ Propeller	MIN RPM
■ Condition	LOW ~20%
■ De-Ice	OFF
■ Pitot Heat	OFF
■ Fuel Pump	OFF
■ Strobe	NEUTRAL
■ Trim Tabs	OFF

ENGINE SHUT-DOWN

 Parking Brake	APPLY
 Taxi Lights	OFF
 Avionics Master	OFF
 Power	IDLE
 ITT	STABILIZED at min. temperature for 1 minute
 Propeller	FEATHERED
 Condition	CUTOFF
 Annunciators ON	VOLT LOW, VACUUM LOW, OIL PRESS LOW, FUEL PRESS LOW
 Fuel Tank Selector	OFF
 Annunciators ON	RESERVOIR FUEL LOW, FUEL SELECT OFF
 Fuel Cut-off	FUEL CUT (pulled out)
 Beacon	OFF
 Navigation Lights	OFF
 Instrument Panel Lights	OFF
 Generator	OFF – GEN OFF Annunciator ON
 Master Battery Switch	OFF

AIRCRAFT CHECKLIST

410 Pilatus PC-12

Values valid for Flight1's model, checked with their checklists and other documents.

AIRCRAFT BASIC SPECS

Engines n° and type	1 Turbo-Prop
MTOW / Standard	9,921 lb / 8,930 w/2 pilots, 4 pass. & 80% fuel
Fuel usable capacity / Tanks	406 gal / Left Main, Right Main
Range	1,500 nm, 8h 20'
T.off ground roll flaps 15°	1,400 ft at sea level
Constant-speed propeller	1,700 RPM fully automated (no control, no gauge)

BEFORE STARTING

 Propeller (no Advance Ctrl.)	HIGH throughout unless otherwise stated
 Parking Brake	SET
 External Power Switch	OFF
 Battery Switch	OFF - EMERGENCY ON
 Generators 1 & 2	OFF (G13 only switches Generator 1)
 Avionics Bus	OFF
 Nonessential Bus	AUTO (down)
 Landing Gear	HANDLE DOWN
 Manual Override Lever	OFF (down) always unless Emergency
 Power	IDLE
 Condition	CUTOFF & FEATHERED
 Overhead CAWS Panel	SHOW – Hotas Throttle: Ctrl-UHF “Enlarge”
 Battery Switch	ON - EMERGENCY OFF – GEN & other Annunc. ON
 Volt Gauge	≥ 23.0 DC V (will descend to 21.0 when Starting)
 Gear Lights	THREE GREEN
 Standby Bus	ON
 Test Lamps	ON: Annunciators & Lights ON, then OFF
 Test AOM Markers	Test (down): AOM Lights ON, then Arm (up)
 Lights	ALL OFF
 De-Ice	ALL OFF
 ELT (Emerg. Location Transmitter)	TEST (down) then OFF (centre)
 Fuel Pumps LH & RH	ON – Blue Annunciators ON
 Nav Lights	AS REQUIRED
 Fuel Gauges/Quantity	CHECK EQUAL L & R LEVELS
 Fuel Tank Selector	BOTH Gauges unnecessary in real airc., but FS2004
 Fuel Valves	ON does not model auto-compensating pumps!
 Ignition	AUTO
 EIS Panel	TEST (button)
 Trim Tabs	NEUTRAL
 Flight Controls	FREE/Full travel
 Instrument Panel Lights	AS REQUIRED
 Beacon	ON
 Wing Flaps	UP

STARTING (CTRL+E for autostart sequence)

■ Test Fire	ON: Annunciators ON, then OFF
■ Power	IDLE
■ Condition	CUTOFF & FEATHERED
■ Fuel Pumps Annunciators	ON
■ Starter Button	HOLD 2 SEC. UNTIL ...
■ Ng % RPM	STABLE ~ 10 THEN IMMEDIATELY
■ Condition	GROUND IDLE (LOW) – Handle 40%p
■ Fuel Flow	≥ 50 PPH
■ ITT (Interstage Turb. Temp.)	NORMAL (400-800 °C)
■ Generator 1	ON - Annunciator OFF
■ Generator 2	ON - Annunciator OFF
■ DC Volt Battery, Gen 1 & 2	≥ 28V (CHARGING)
■ Fuel Pressure Annunciator	OFF
■ Fuel Totaliser (in ESI)	RESET
■ Oil Temperature	40-100 °C (GREEN)
■ Oil Pressure	> 5 PSI*10 – OIL QTY Annunciators OFF
■ Hydraulics Annunciator	OFF

WARM UP AND TAXI

■ Fuel Pumps LH & RH	AUTO – Annunciators OFF
■ Fuel Tank Selector	SWITCH TANKS & CHECK
■ Test Pusher	ON: Annunciators ON, then OFF
■ Temperatures & Pressures	CHECK
■ Ng % RPM	GREEN (>60%)
■ Avionics Bus	ON
■ Nonessential Bus	ON (up)
■ Standby Bus	OFF
■ Gyro / Heading	CHECK / CALIBRATE
■ Altimeter	CHECK / CALIBRATE
■ Radar Altimeter	=0 (EADI upper right corner)
■ Flight Instruments	CHECK
■ De-Ice Inertial Separator	OPEN (ON) - (ineffective)
■ De-Ice Boot (effective!)	AS REQUIRED – Annunciator ON - 20 Amp!
■ De-Ice Prop (■ all De-Ices!)	AS REQUIRED – Ann. & Beep ON (ineffective)
■ Pusher Ice Mode Annunciator	ON if De-Ice Prop and/or Inertial Separator are set
■ Radios	SET AS PER FLIGHT PLAN ➡ “Stall” alarm
■ Autopilot	SET AND OFF
■ Flight Director	ON – GREEN ON EADI
■ Taxi Lights	ON
■ Recognition Lights	ON
■ Logo and Wing Lights	ON IF DARK OUTSIDE
■ Doors and Cockpit Window	CLOSED – No Annunc. when Park. Brake OFF
■ Taxi Throttle and Speed	1,000 RPM - 16 KIAS (20 KIAS max)
■ Gyro & Turn Coor. dur. Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

Strobe	ON
Power	IDLE
Condition	FLIGHT IDLE (HIGH)
Trim Tabs	ELEV. +10, OTHERS NEUTRAL (GREEN)
Wing Flaps	SET: 15° (30° for short rwy) – CHECK GAUGE
De-Ice Probes	ON – ANNUNCIATORS MAY SHOW
Other Annunciators	NO RED LIGHTS
Landing Lights	ON - ALL 8 LIGHT SWITCHES ARE NOW ON
Overhead CAWS Panel	HIDE – Hotas Throttle: Ctrl-UHF “Enlarge”
Power Unit	<i>Torque(TRQ) = x100 FT-LBS</i>

TAKEOFF (sea level or low altitude)

Parking Brake	RELEASE
Power	Full => 35-44 x TORQUE
ITT (Interstage Turb. Temp.)	≤800 °C (transient 870 °C)
Ng % RPM	≤104 °C
Propeller Speed	1,700 RPM NP (1650-1870 RPM NP)
Decision (V1)	75 KIAS
Rotate	80 KIAS (73 KIAS if Flaps=30°)
Attitude Angle	10°
Brakes (at positive climb)	PRESS TO STOP WHEEL ROTATION
Landing Gear	RETRACT
Gear Lights	THREE RED, THEN OFF (not always)
Wing Flaps	IF 30°, RETRACT TO 15° AT 90 KIAS
Airspeed (airborne & gear up)	> 90 KIAS
Landing and Taxi Lights	OFF

CLIMB (once clear of obstacles) <10,000 ft | 10,000-20,000 ft | >20,000 ft

Wing Flaps	RETRACT AT 100 KIAS AND VERIFY		
De-Ice Inertial Separator	CLOSED (OFF) – PUSHER ICE MODE Ann. OFF		
De-Ice others	AS REQUIRED (PROBES ALWAYS ON)		
Power (very sensitive!)	34 x TRQ	31 x TRQ	26 x TRQ
Recommended: Elevator Trim	-02	0	+01
Recommended: Airspeed	160 KIAS	150 KIAS	135 KIAS
Recommended: Climb	1,500 FPM	1,300 FPM	1,000 FPM
Best Climb Rate: Elev. Trim	+04	+06	+09
Best Climb Rate: Airspeed	120 KIAS	115 KIAS	110 KIAS
Best Climb Rate: Climb	2,000 FPM	2,000 FPM	1,500 FPM
Autopilot and Yaw Damper	AS REQUIRED		
Altimeter	CALIBRATE ABOVE FL180 SET TO 29.92"		
ITT (Interstage Turb. Temp.)	≤760 °C (GREEN ARC)		
Temperatures & Pressures	CHECK		

AUTOPILOT

Bendix/King KFC 325 Digital Automatic Flight Control System (AFCS).

MODE CONTROLLER



DN/UP	Controls the vertical axis of the autopilot. The rocker switch function is dependent upon the autopilots active mode.
HDG	Toggles Heading Select mode. Heading info is from the Heading Bug on EHSI. => To select current Heading, open the EFIS Mode Controller and click on its Heading Bug.
NAV	Toggles Navigation mode. The Flight Director will track the EHSI selected primary navigation source.
APR	Toggles Approach mode. Tracks selected EHSI primary navig. sensor w/ approach accuracy.
BC	Toggles Approach Back-Course mode.
YD	Toggles Yaw Damper and rudder trim relief independent of the AP pitch and roll axes.
AP	Toggles autopilot. The Yaw Damper is automatically activated when the autopilot is engaged. However, the Yaw Damper remains engaged if the AP is pressed again.
ALT	Toggles Altitude Hold mode. Maintains pressure altitude existing at the moment of selection.
IAS	Toggles Indicated Airspeed Hold mode. Maintain2 the Indicated Airspeed existing at the moment of selection. The aircraft pitch command is varied by the Flight Director to maintain the selected airspeed during changing air conditions, power and/or configuration changes.
FD	Engages the Flight Director in Pitch Attitude Hold mode and Wings Level Mode. The pitch attitude of the Flight Director is synchronized to the current aircraft pitch attitude.
SOFT RIDE	Engages the Soft Ride mode. Soft Ride mode decreases the autopilot gains thus decreasing the aggressiveness of the autopilot resulting in a more comfortable ride in turbulent conditions.
HALF BANK	Engages the Half Bank mode. The autopilots maximum commanded bank angle is reduced to one half of the normal value. This mode is provided to increase passenger comfort.
TEST	Tests all the autopilot lights.

ALTITUDE ALERTER



AP: ON ALT : OFF

Hold Current Altitude	Click ALT in the AP panel
Hold Current Vertical Speed	Establish the desired Attitude and/or Vertical Speed Click Preselector knob to select "VS" Click above or below the knob to ensure that the Vertical Speed is 0 Click the ENG button (the "0" instructs AP to "take on" current aircraft VS)
Set a Vertical Speed	Click Preselector knob to select "VS" Click above/below the knob to enter a non-zero desired Vertical Speed in fpm Click the ENG button
Set an Altitude	Set a Vertical Speed as per above Click Preselector knob to select "ALT" Click above or below the knob to enter the desired Altitude in ft Click the ARM button With 1,000 ft to go, the Altitude alerter will sound (5 bips) With 300 ft to go, the Leveller alerter will sound (3 bips)

CRUISE @ 8,650 lb (70% fuel)

LOW		HIGH
12,000 FT		25,000 FT
CHECK / CALIBRATE		
CALIBRATE		CHECK 29.92"
24 x / 35 x TRQ		17 x / 29 x TRQ
FLIGHT IDLE (HIGH)		
-05 / -10		0 / -5
AS REQUIRED (PROBES ALWAYS ON)		
- CHECK ICE WARNING		
180 / 210 KIAS		145 / 180 KIAS
<i>228 KIAS</i>		
<i>236 KIAS</i>		
<i>33,000 FT</i>		

DESCENT

CHECK FOR ATIS/AIRPORT INFO
CHECK / CALIBRATE
CALIBRATE BELOW FL180 RESET TO LOCAL
CHECK
BOTH
AS REQUIRED (PROBES ALWAYS ON)
- CHECK ICE WARNING
Typically 6 x TORQUE
-04
DOWN IF NEEDED (BELOW 170 KIAS)
150 KIAS
-1,000 FPM

OPTIMAL GLIDE ENGINE OUT @ 8,800 lb = 75% fuel

FEATHERED (no panel control)
+20
98 KIAS
-630 FPM
1 : 16

APPROACH @ 7,800 lb

= 2 pilots, 4 passengers & 40% fuel

- Radios
- Autopilot
- Landing Lights
- Taxi Lights
- Landing Gear
- Gear Lights

- Wing Flaps (initial)
- Power
- Elevator Trim
- Descent Rate (Vert. Speed)

- Wing Flaps (3 NM from rwy)
- Power
- Elevator Trim

SET FOR APPROACH**AS DESIRED****ON****ON****DOWN (BELOW 170 KIAS)****LOCKED: THREE GREEN****15° AT 125 KIAS (BELOW 163 KIAS)****9.0 x TORQUE****0****-600 FPM****30° AT 100 KIAS (BELOW 130 KIAS)****14.5 x TORQUE****+1****OPEN IF UNPREPARED RWY SURFACE**

Inertial Separator

*NOTE: If you are not going to use Full Flaps, keep the above settings until touchdown***FINAL AND LANDING**

- Parking Brake
- Yaw Damper
- Wing Flaps: Full Down at ...
- Power (idle on touchdown)
- Elevator Trim
- Final Approach Airspeed
- Autopilot
- Touchdown Airspeed
- Reverse Thrust
- Reverse Propeller Speed

VERIFY OFF

OFF**90 KIAS**, typically 1 NM from rwy – **OPTIONAL****Full Flaps: 19 x TRQ** (30° Flaps: 14.5 x TRQ)**-5** (30° Flaps: +1)**84 KIAS****OFF****80 KIAS****APPLY; OFF AT 50 KIAS**

≤1650 RPM NP

*Stall Speed Clean**88 KIAS @ 9,000 lb - 78 KIAS @ 7,000 lb**Stall Speed All Down**\$62 KIAS @ 9,000 lb – 55 KIAS @ 7,000 lb***AFTER LANDING – TAXI**

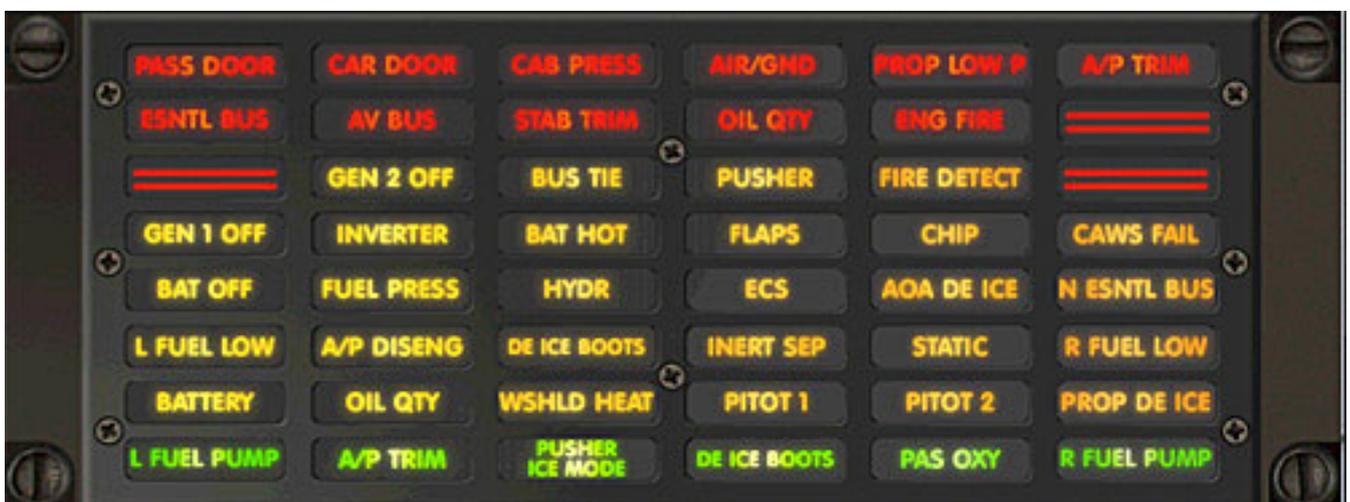
- Overhead COWS Panel
- Strobe
- Landing Lights
- Wing Flaps
- Condition
- De-Ice Systems
- Trim Tabs

SHOW – Hotas Throttle: Ctrl-UHF “Enlarge”**OFF****OFF****UP AND NEUTRAL****GROUND IDLE (LOW)****ALL OFF****NEUTRAL**

ENGINE SHUT-DOWN

■ Parking Brake	APPLY
■ Flight Director	OFF
■ Taxi Lights	OFF
■ Recognition Lights	OFF
■ Standby Bus	ON
■ Avionics Master	OFF – Annunciator ON
■ Power	IDLE
■ ITT	STABILIZED at low temperature for 1 minute
■ Condition	CUTOFF & FEATHERED
■ Generator 1 Annunciator	ON
■ Hydraulics Annunciator	ON (AFTER A FEW SECONDS)
■ Fuel Pressure Annunciator	ON
■ Fuel Tank Selector	OFF
■ Fuel Valves	OFF
■ Ignition	OFF
■ Fuel Pumps LH & RH	OFF
■ Beacon	OFF
■ Generator 1	OFF – (Annunciator was already ON)
■ Generator 2	OFF - Annunciator ON
■ Front Door +Cockpit Window	OPEN – Window opens in 2D Cloudy panel!
■ Logo and Wing Lights	OFF
■ Nonessential Bus	AUTO (down)
■ Standby Bus	OFF
■ External Power Switch	OFF
■ Navigation Lights	OFF
■ Instrument Panel Lights	OFF
■ Battery Switch	OFF

CAWS (Central Advisory and Warning System) overhead panel



PASS DOOR	Main entry door and/or handle is not locked.
CAR DOOR	Cargo door and/or handle is not locked
CAB PRESS	Cabin altitude above 10,700 ft or maximum pressure differential exceeded.
AIR/GND	Disparity between LH and RH AIR/GND inputs to Stick Pusher computers.
PROP LOW P	Propeller in low pitch (below min. in-flight pitch) w/aircraft not on ground.
A/P TRIM	Autopilot and/or auto trim failure.
ESNTL BUS	Voltage of the Bat, Gen 1, or Gen 2 busses less than 22 VDC.
AV BUS	avionic busbar 1 or 2 voltage less than 22 VDC
STAB TRIM	stabilizer trim is unsafe for takeoff (on ground only).
OIL QTY	low engine oil quantity (engine not running).
ENG FIRE	over temperature condition and/or possible engine fire.
GEN 2 OFF	Generator 2 is off-line.
BUS TIE	Generator 1 bus tie isolation relay is open.
PUSHER	Stall Warning/ Stick Pusher System malfunction.
FIRE DETECT	Malfunction in the engine fire detection circuit.
GEN 1 OFF	Generator 1 is off-line.
INVERTER	Inverter output less than 20 VAC.
BAT HOT	Battery over-temperature or temperature sensor disconnected.
FLAPS	Flap system failure (mechanical or electrical)
CHIP	Metal particles in the engine oil system.
CAWS FAIL	CAWS internal failure.
BAT OFF	A battery is off-line.
FUEL PRESS	Fuel pressure is less than 2 psi. Light goes off when greater than 3.5 psi.
HYDR	Low hydraulic pressure.
ECS	Environmental Control System malfunction.
AOA DE ICE	AOA deice malfunction.
N ESNTL BUS	Non-essential bus failure.
L FUEL LOW	Fuel quantity in left wing tank has reached 20 US gal.
A/P DISENG	Autopilot pitch and aileron servos disengaged.
DE ICE BOOTS	Pressure sequence failure.
INERT SEP	Inertial separator door operation failure.
STATIC	Static port heater failure.
R FUEL LOW	Fuel quantity in right wing tank has reached 20 US gal.
BATTERY	Battery over voltage or over current condition.
OIL QTY	Low engine oil quantity, engine running (non operative).
WSHLD HEAT	Windshield heating system failure.
PITOT 1	Pilot's pitot head heater failure.
PITOT 2	Copilot's pitot head heater failure.
PROP DE ICE	Propeller de ice system failure.
L FUEL PUMP	Left fuel boost pump is operating.
A/P TRIM	Autopilot trim is operating
PUSHER ICE MODE	The pusher computer is set to ice mode.
DE ICE BOOTS	Boots deice operating and pressure sequence correct.
PASS OXY	Adequate pressure of oxygen to the passenger masks.
R FUEL PUMP	Right fuel boost pump is operating.

AIRCRAFT CHECKLIST**512 de Havilland DHC-6 Twin Otter**

Values valid for the Premier model,, checked with their documentation and with flying tests in FS2004.

Fuel in tanks: L | R

AIRCRAFT BASIC SPECS

Engines n° and type	2 Turbo-Prop	Gls	200 200
MTOW	12,500 lb	Lbs	1340 1340
Fuel usable capacity	400 gl / 2680 lb		
Range	820 nm, 5h 15'		
T.off runway length	1,600 ft		

BEFORE STARTING

 Parking Brake	SET – Annunciator ON
 Battery Switch	ON
 Annunciators ON	L & R: OIL PRESS, FUEL FLOW, PARKING
 Annunciators OFF	L & R: FUEL QTY, PITOT, VOLT
 Generators	ON
 Nav Lights	ON
 Instrument Panel Lights	AS REQUIRED
 Beacon	OFF
 Strobe	OFF
 Landing Lights	OFF
 Taxi Light	OFF
 Anti-Ice (Wings and Props)	OFF — ICE WARNING unaffected by this
 Pitot De-ice	OFF — Annunciator OFF
 Avionics Switch	OFF
 Fuel Gauges/Quantity	CHECK — L FUEL QTY annunciators OFF
 Fuel Fire Valves	NORMAL
 Fuel Control	BOTH TANKS (switch in mid position) (*)
 Power (throttles)	IDLE
 Propellers	MID RPM
 Condition	CUTOFF (#)
 Trim Tabs	CHECK then set to NEUTRAL
 Flight Controls	FREE/Full travel
 Fuel Boost Pumps	Ignore: unoperative or automatic
 Cabin Doors	ALL CLOSED – Check icons
 Outside Air Temperature	NOTE
 Beacon	ON
 Engine Panel	ENLARGE – Hotas Throttle: Ctrl-UHF

(*) Switch on the bottom of the engine gauges panel: it allows to select where BOTH ENGINES take the fuel from (cannot be selected for each engine separately):

OFF | LEFT TANK | BOTH TANKS | RIGHT TANK | OFF

However, engines may not start if this is tampered with. Better leave it alone

(#) If quadrant lever does not move screen lever, switch to another turboprop plane and back again.

STARTING - for each engine: (CTRL+E for autostart sequence)

- Power
- Propeller
- Condition
- Starter Switch

IDLE
MID RPM
LOW IDLE (LEVER 50%)
HOLD UNTIL ENGINE STARTS THEN OFF.

If it fails, save flight then restore flight.

- Power
- Fuel Flow
- Propeller RPM
- Oil Temp. / T5 Temp.
- Oil Press. gauge & annun.
- Gas Generator RPM
- Condition

5 x TORQUE or 10% LEVER
 MONITOR \approx 0.9 - Annunciator still ON
 MONITOR $>$ 40%
 GREEN ARC \approx 70% / 6
 GREEN ARC (\geq 90 psi) - Annun. OFF in $<$ 30 sec.
 soon reaching 70%

HIGH IDLE

Power: NI Gas Generator = % RPM

WARM UP AND TAXI

- **Engine Panel**
- FS: Select Engines
- Instrument Air (Suction)
- Gyro / Heading
- Altimeter
- Flight Instruments
- Parking Brake
- Power (for testing)
- Fuel Flow
- Temperatures & Pressures
- Propellers
- Propellers
- Autofeather
- Anti-Ice (Wings and Props)
- Torque (both engines)
- Power (for warm up)
- Propellers
- Avionics Switch
- Radios
- Autopilot
- Taxi Lights
- Wing Flaps
- Taxi Throttle and Speed
- Taxi Auto Throttle
- Gyro & Turn Co. in Taxi

REDUCE – Hotas Throttle: Ctrl-UHF

ALL (E 1 2)

CHECK $>$ 4

CHECK / CALIBRATE

CHECK / CALIBRATE

CHECK

SET – Annunciator ON

25 x TORQUE | 45% LEVER | 85% PROP RPM

MONITOR \approx 1.9 – Annunciators OFF

GREEN ARCS

EXERCISE TWICE

FEATHER THEN BACK TO MID RPM

ON – Annunciator **SELECT**

AS REQUIRED — **ICE WARNING** unaffected

Anti-Ice should not reduce more than 6x

IDLE – Fuel Flow annunciators ON

HIGH RPM (no change in RPM with Power idle)

ON

SET AS PER FLIGHT PLAN

SET AND OFF

ON

UP, FULL DOWN, VISUAL CHECK, UP

4.5 x TORQUE – 19 KIAS

Set **KTS**, **click ARM-P**, **Parking Brake OFF.**

CHECK

PRE-TAKEOFF (on rwy ready to TO)

■ Power	IDLE
■ Propellers	FORWARD/HIGH
■ Condition	HIGH IDLE
■ Trim Tabs	NEUTRAL
■ Elevator Trim	+25
■ Wing Flaps	10° or 20° for full load or short runway
■ Pitot De-ice	ON IF OAT < 4 °C — Annunciator ON
■ Landing Lights	ON - (no annunciator)
■ Strobe	ON - (no annunciator)

TAKEOFF (sea level or low altitude)

■ Parking Brake	HOLD
■ Power	50 x TORQUE = RED LINE : T5 < RED AREA!
■ Propellers	High = 100% = RED LINE
■ Autofeather annunciator	Annunciator ARM
■ Parking Brake	RELEASE
■ Decision (V1)	85 KIAS
■ Rotate (ave.)	90 KIAS
■ Attitude Angle	7°
■ Airspeed (airborne)	≈110 KIAS

CLIMB (once clear of obstacles)

■ Wing Flaps	RETRACT AT 110 KIAS
■ Landing Lights	OFF - (no annunciator)
■ Taxi Lights	OFF - (no annunciator)
■ Anti-Ice (Power hog)	AS REQUIRED — ICE WARNING unaffected
■ Pitot De-ice	ON IF OAT < 4 °C — Annunciator ON
■ Power	48 x TORQUE (just below RED LINE)
■ Propellers	95% (max. GREEN ARC)
■ Elevator Trim	+12 or +23
■ Airspeed	151 or 135 KIAS
■ Climb (Vertical Speed)	900 or 1,100 FPM
■ Temperatures & Pressures	CHECK

	LOW	HIGH
CRUISE@ 9,600 lb (70%) fuel		
Typical Altitude	1,000 FT	8,000 FT
Gyro / Heading	CHECK / CALIBRATE	
Altimeter	CALIBRATE	
Power	42 x TORQUE (*)	
Propellers	MID RPM - 90%	
Condition	LOW IDLE	
Elevator Trim	+03	+05
Anti-Ice (Wings and Props)	ONLY IF REQ'D: THROTTLE TO REGAIN TORQUE	
	— ICE WARNING unaffected	
Pitot De-ice	ON IF OAT < 4 °C — Annunciator ON	
Cruise Airspeed	162 KIAS	158 KIAS
Autofeather	OFF — Annunciator OFF	
Max Level Airspeed	190 KIAS at FL10	
Never Exceed Airspeed	174 KIAS	
Service Ceiling	21,000 FT (FS sim: 28,000 FT)	
	parameters at FL100	
DESCENT@ 9,400 lb (60% fuel)		
Radios	CHECK FOR ATIS/AIRPORT INFO	
Gyro / Heading	CHECK / CALIBRATE	
Altimeter	CALIBRATE	
Fuel Quantity	CHECK	
Power	17 x TORQUE	
Propellers	MID RPM - 90%	
Condition	LOW IDLE	
Elevator Trim	+09	
Airspeed	146 KIAS	
Descent Rate (Vert. Speed)	-1,200 FPM	
Wing Flaps	10° ONLY IF NEEDED (AND < 145 KIAS)	
GLIDE WITH ALL ENGINES OUT (optimal glide ratio)		
Propellers	FEATHERED	
Elevator Trim	+26	
Airspeed	120 KIAS	
Descent Rate / Glide Ratio	-1480 FPM	
Glide Ratio	1 : 8	

(*) With Anti-Ice, need more Throttle to get the same Torque. Numbers do not change.
(Fuel consumption should increase but it does not ...)

APPROACH @ 9,400 lb (60% fuel)

■ Radios	SET FOR APPROACH
■ Autopilot	AS DESIRED
■ Pitot De-ice	ON — Annunciator ON
■ Landing Lights	ON - (no annunciator)
■ Taxi Lights	ON - (no annunciator)
■ Autofeather	ON – Annunciator SELECT
■ Propellers	HIGH RPM
■ Condition	HIGH IDLE
■ Wing Flaps	10° below 140 KIAS
■ Power	30 x TORQUE
■ Elevator Trim	-07 then down as flaps are lowered
■ Anti-Ice (Wings and Props)	ONLY IF REQ'D: THROTTLE TO REGAIN TORQUE
	— ICE WARNING unaffected by this
Airspeed	134 KIAS slowing
Wing Flaps (they raise nose!)	20° below 130 KIAS, 30° below 115 KIAS

FINAL AND LANDING

■ Parking Brake	VERIFY OFF
■ Wing Flaps: Full Down at ...	105 KIAS OR LESS
■ Power	35 x TORQUE
■ Elevator Trim	-33 (to mitigate full flaps)
■ Final Approach Airspeed	93 KIAS
■ Autopilot	OFF
■ Power (idle on touchdown)	30 x TORQUE
■ Touchdown Airspeed	85 KIAS
■ Reverse Thrust	APPLY; OFF AT 40 KIAS
■ Reverse Annunciators	Annunciators BETA RANGE
<i>Stall Speed Clean</i>	<i>80 KIAS</i>
<i>Stall Speed All Down</i>	<i>63 KIAS</i>

AFTER LANDING – TAXI

■ Landing Lights	OFF
■ Wing Flaps	UP AND NEUTRAL
■ Condition	LOW IDLE
■ Trim Tabs	NEUTRAL
■ Anti-Ice (Wings and Props)	OFF
■ Pitot De-ice	OFF — Annunciator OFF
■ Strobe	OFF

ENGINE SHUT-DOWN

 Parking Brake	APPLY — Annunciator
 Passengers Door (door 1)	OPEN
 Taxi Lights	OFF
 Avionics Switch	OFF
 Autofeather	OFF
 Power	IDLE — Annunciator FUEL FLOW
 Propellers	FEATHERED
 T5 Temperature	STABILIZED temperature for 1 minute
 Condition	CUTOFF — Annunciator OIL PRESS
 Beacon	OFF
 Navigation Lights	OFF
 Instrument Panel Lights	OFF
 Generators	OFF ONCE GG < 15%
 Battery Switch	OFF

AIRCRAFT CHECKLIST **514 Beechcraft King Air 300**

Values valid for the AFG realistic flight dynamics, checked with their checklist.@@@

Fuel in tanks LA | L | R | RA :

AIRCRAFT BASIC SPECS

Engines n° and type	2 Turbo-Prop	Gls 79.5 190 190 79.5
MTOW	14,000 lb	Lbs 533 1273 1273 533
Fuel usable capacity	539 gl	There is no tank control; Aux tanks are used first.
Range	1,960 nm, 10 hs	Fuel Crossfeed control is only available from the VC
T.off runway length	4,200 ft	

BEFORE STARTING

 Parking Brake	SET
 Overhead Annunciator Panel	SHOW – Hotas Throttle: Ctrl-UHF “Enlarge”
 Master Battery Switch	ON
 Annunciators ON	L & R DC GEN, L & R OIL PRESS LOW
 Overhead Annunciators ON	L & R FUEL PRES, L & R OIL PRES, L & R BLEED, #1 & #2 DC BUS
 Generators	OFF
 Avionics Master	OFF
 Nav Lights	AS REQUIRED
 Anti-Ice (mod. power drain)	AS REQUIRED — CHECK ICE WARNING
 Pitot Heat	OFF
 Fuel Gauges/Quantity	CHECK
 Fuel Low Annunciators	L FUEL LOW, R FUEL LOW annunciators OFF
 Power	IDLE
 Propellers	HIGH RPM
 Condition	CUTOFF
 Propeller Synchrophaser	OFF
 Trim Tabs	NEUTRAL
 Flight Controls	FREE/Full travel
 Instrument Panel Lights	AS REQUIRED
 Beacon	ON
 Cabin Door	CLOSE – Overhead Annunciator OFF

STARTING - for each engine: (CTRL+E for autostart sequence)

Power	IDLE
Propeller	HIGH RPM
Condition	HIGH IDLE
Ignition Starter Switch	HOLD UNTIL ENGINE STARTS
Ignition annunciator	ON (may fail if no engine running), THEN OFF
Ng (Gas Generator RPM)	> 12%
Condition	LOW IDLE
Fuel Flow	MONITOR
ITT and N1	MONITOR: rise in 10 sec., 1000°C max.
Ignition Starter and annunc.	OFF
Generator	ON – DC GEN & Ovhd. DC BUS Annunc. OFF
Fuel Pressure Low annunc.	OFF, including the overhead ones
Oil Pressure gauge & annun.	CHECK, OFF in <30 sec. incl. the overhead one
Oil Temperature gauge	CHECK
Condition	HIGH IDLE
	<i>Power: N1 Gas Generator = % RPM</i>

WARM UP AND TAXI

Master Warning	OFF
Gyro Suction (Pneum.Press.)	CHECK GREEN
FS: Select Engines	ALL (E 1 2) – CHECK WITH THROTTLE
Gyro / Heading	CHECK / CALIBRATE
Altimeter	CHECK / CALIBRATE
Flight Instruments	CHECK
Overhead Annunciator Panel	HIDE – Hotas Throttle: Ctrl-UHF “Enlarge”
Brakes & Brake Pressure	CHECK
Parking Brake	RE-APPLY IMMEDIATELY
Power (for testing)	1300 PROP RPM / ≈40% LEVER
Temperatures & Pressures	CHECK
Propellers	EXERCISE 2-3 times - < 400 RPM DROP
Feathering (manual)	CHECK THEN BACK TO HIGH RPM
Autofeather	ARM
Anti-Ice (mod. power drain)	AS REQUIRED — CHECK ICE WARNING
Anti-Ice & De-Ice annunc.'s	6 annunciators: CHECK AS PER ABOVE
Generators annunciators	OFF
Power (for warm up)	IDLE
Avionics Master	ON
Radios	SET AS PER FLIGHT PLAN
Autopilot	SET AND OFF
Taxi Lights	ON
Recognition Lights	ON
Wing Flaps	UP, FULL DOWN, VISUAL CHECK, UP
Taxi Throttle and Speed	IDLE (need brakes to keep below 20 KIAS!)
Gyro & Turn Co. in Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

Power	IDLE
Propellers	FORWARD/HIGH
Condition	HIGH IDLE
Trim Tabs	NEUTRAL
Wing Flaps	APPROACH (NEUTRAL IF LOW WEIGHT)
Pitot Heat	ON IF OAT < 4 °C
Strobe Lights	ON - Landing Lights Annunciator ON
Landing Lights	ON - Landing Lights Annunciator ON

TAKEOFF (sea level or low altitude)

Parking Brake	HOLD
Power	100% = ITT RED LINE (DON'T EXCEED!)
Propellers	High => 1,700 RPM = RED LINE
Autofeather annunciators	ON WITH FULL POWER
Parking Brake	RELEASE
Decision (V1)	105 KIAS
Rotate (ave.)	110 KIAS
Attitude Angle	10-15°
Landing Gear(w/posit.climb)	RETRACT
Gear Lights	OFF
Airspeed (airborne+gear up)	>125 KIAS

CLIMB (once clear of obstacles)

Wing Flaps	RETRACT AT 130 KIAS
Landing Lights	OFF - Landing Lights Annunciator OFF
Taxi Lights	OFF
Power	86% GAS RPM / 66 x TORQUE
Propellers	1,600 RPM
Propeller Synchrophaser	ON
Elevator Trim (ave.)	+17
Airspeed	160 KIAS at sea level 170 KIAS at FL100
Climb (Vertical Speed)	1,400 FPM at sea level 1,200 FPM at FL100
Temperatures & Pressures	CHECK
Anti-Ice (mod. power drain)	AS REQUIRED — CHECK ICE WARNING
Pitot Heat	ON IF OAT < 4 °C

CRUISE

■ Typical Altitude
■ Gyro / Heading
■ Altimeter
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ Anti-Ice (mod. power drain)
■ Pitot Heat
■ Cruise Airspeed
■ Autofeather
<i>Max Level Airspeed</i>
<i>Never Exceed Airspeed</i>
<i>Service Ceiling</i>

LOW

| HIGH

10,000 FT | **25,000 FT**
CHECK / CALIBRATE
CALIBRATE | ABOVE FL180 SET TO 29.92"
85% GAS RPM / 65 x TORQUE
1,500 RPM
LO IDLE
+10 | **+14**
ONLY IF REQUIRED — CHECK ICE WARNING
ON IF OAT < 4 °C
195 KIAS | **175 KIAS**
OFF
230 KIAS
265 KIAS
35,000 FT (FS2004: 42,000 FT)
parameters at FL100

DESCENT

■ Radios
■ Gyro / Heading
■ Altimeter
■ Fuel Quantity
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ Airspeed
■ Descent Rate (Vert. Speed)
■ Wing Flaps

CHECK FOR ATIS/AIRPORT INFO
CHECK / CALIBRATE
CALIBRATE - BELOW FL180 RESET TO LOCAL
CHECK
10 x TORQUE
1,500 RPM
LOW IDLE
+14
173 KIAS
-1,200 FPM
IF NEEDED, => Elev. Trim +18 & 158 KIAS)

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

■ Propellers
■ Elevator Trim
■ Airspeed
■ Descent Rate / Glide Ratio
■ Glide Ratio

FEATHERED
+29
130 KIAS
870 FPM
1 : 15

APPROACH

- Radios
- Landing Gear
- Gear Lights
- Autopilot
- Landing Lights
- Taxi Lights
- Autofeather
- Propellers
- Condition
- Anti-Ice (mod. power drain)
- Anti-Ice & De-Ice annunc.'s
- Wing Flaps

SET FOR APPROACH
DOWN
 LOCKED
AS DESIRED
ON – Annunciator ON
ON
ARM
HIGH RPM
HIGH IDLE
ONLY IF REQUIRED — CHECK ICE WARNING
ON
IF UP, SET TO APPROACH

FINAL AND LANDING

- Anti-Ice
- Parking Brake
- Wing Flaps: Full Down at ...
- Final Approach Airspeed
- Autopilot
- Power (idle on touchdown)
- Touchdown Airspeed
- Reverse Thrust
- Reverse Thrust Off
- Stall Speed Clean*
- Stall Speed All Down*

OFF— Anti-Ice and De-Ice Annunciators OFF
VERIFY OFF
140 KIAS OR LESS
105 KIAS
OFF
25 x TORQUE
100 KIAS (MORE IF HEAVY)
APPLY
OFF AT 50 KIAS
90 KIAS
83 KIAS

AFTER LANDING - TAXI

- Landing Lights
- Wing Flaps
- Condition
- Pitot Heat
- Strobe
- Trim Tabs

OFF – Annunciator OFF
UP AND NEUTRAL
LOW IDLE (gradually)
OFF
OFF
NEUTRAL

ENGINE SHUT-DOWN

 Parking Brake	APPLY
 Overhead Annunciator Panel	SHOW – Hotas Throttle: Ctrl-UHF “Enlarge”
 Taxi Lights	OFF
 Recognition Lights	OFF
 Avionics Master	OFF
 Autofeather	OFF
 Power	IDLE
For every engine:	
 Propellers	FEATHERED
 ITT	STABILIZED temperature for 1 minute
 Condition	CUTOFF
 Annunciators ON	L & R DC GEN, L & R OIL PRESS LOW
 Overhead Annunc. ON	L & R FUEL PRES, L & R OIL PRES, L & R BLEED, #1 & #2 DC BUS
 Propeller Synchrophaser	OFF
 Beacon	OFF
 Navigation Lights	OFF
 Generators	OFF ONCE N1 < 15%
 Generators annunciators ON	L & R DC GEN, Overhead ·1 & ·2 DC BUS
 Instrument Panel Lights	OFF
 Master Battery Switch	OFF
 Front Wheel Chock+Covers	ON w/BOTH ENGINES OFF & PARK BRAKE & BATTERY OFF

AIRCRAFT CHECKLIST

515 Beechcraft King Air 350

Fuel in tanks LA | L | R | RA :

AIRCRAFT BASIC SPECS

Engines n° and type	2 Turbo-Prop	Gls 79.5 190 190 79.5
MTOW	15,000 lb	Lbs 533 1273 1273 533
Fuel usable capacity	539 gal	There is no individual tank control, only crossfeed. Aux tanks are used first.
Range	1,750 nm, 9 hs	Crossfeed uses opposite tanks only
T.off runway length	4,200 ft	

BEFORE STARTING

 Parking Brake	SET
 Master Battery Switch	ON
 Annunciators ON	L & R DC GEN, L & R OIL PRESS LOW
 Generators	OFF
 Avionics Master	OFF
 Nav Lights	AS REQUIRED
 Anti-Ice (mod. power drain)	AS REQUIRED — CHECK ICE WARNING
 Pitot Heat	OFF
 Fuel Gauges/Quantity	CHECK
 Fuel Crossfeed	OFF (switch centred) – Annunciator OFF
 Fuel Low Annunciators OFF	L FUEL LOW, R FUEL LOW
 Power	IDLE
 Propellers	HIGH RPM
 Condition	CUTOFF
 Trim Tabs	NEUTRAL
 Flight Controls	FREE/Full travel
 Instrument Panel Lights	AS REQUIRED

STARTING - for each engine: (CTRL+E for autostart sequence)

Beacon	ON
Power	IDLE
Propeller	HIGH RPM
Condition	HIGH IDLE
Ignition Starter Switch	HOLD UNTIL ENGINE STARTS
Ignition annunciator	ON (only if other engine running!), THEN OFF
Ng (Gas Generator RPM)	> 12%
Condition	LOW IDLE (use mouse!)
Fuel Flow	MONITOR
ITT (Interstage Turb. Temp.)	MONITOR
Ignition Starter and annunc.	OFF
Generator	ON – DC GEN Annunciator OFF
Fuel Pressure Low annunc.	OFF
Oil Pressure gauge & annun.	CHECK, OFF in <30 sec.
Oil Temperature gauge	CHECK
Condition	HIGH IDLE
	<i>Power: NI Gas Generator = % RPM</i>

WARM UP AND TAXI

FS: Select Engines	ALL
Fuel Crossfeed	SWITCH TANKS & CHECK
Gyro / Heading	CHECK / CALIBRATE
Altimeter	CHECK / CALIBRATE
Flight Instruments	CHECK
Brakes & Brake Pressure	CHECK
Parking Brake	APPLY
Power (for testing)	1300 PROP RPM / TORQUE 40 x
Temperatures & Pressures	CHECK
Propellers	EXERCISE (2-3 times, no more than 400RPM drop)
Autofeather	ARM
Manual Feathering	CHECK THEN BACK TO HIGH RPM
Anti-Ice (mod. power drain)	AS REQUIRED — CHECK ICE WARNING
Anti-Ice & De-Ice annunc.'s	CHECK AS PER ABOVE
Generators annunciator	OFF
Power (for warm up)	IDLE
Avionics Master	ON
Radios	SET AS PER FLIGHT PLAN
Autopilot	SET AND OFF
Taxi Lights	ON
Wing Flaps	UP, FULL DOWN, VISUAL CHECK, UP
Taxi Throttle and Speed	IDLE (need brakes to keep below 20 KIAS!)
Gyro & Turn Co. in Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

■ Power	IDLE
■ Propellers	FORWARD/HIGH
■ Condition	HIGH IDLE
■ Trim Tabs	NEUTRAL
■ Wing Flaps	APPROACH (NEUTRAL IF LOW WEIGHT)
■ Pitot Heat	ON IF OAT < 4 °C
■ Strobe Lights	ON - Landing Lights Annunciator ON
■ Landing Lights	ON - Landing Lights Annunciator ON

TAKEOFF (sea level or low altitude)

■ Parking Brake	HOLD
■ Power	100% (≤ Full): DON'T EXCEED ITT RED LINE!
■ Propellers	High => 1,700 RPM = RED LINE
■ Autofeather annunciators	ON WITH FULL POWER
■ Parking Brake	RELEASE
■ Decision (V1)	105 KIAS
■ Rotate (ave.)	110 KIAS
■ Attitude Angle	10-15°
■ Landing Gear(w/posit.climb)	RETRACT
■ Gear Lights	OFF
■ Airspeed (airborne+gear up)	>125 KIAS

CLIMB (once clear of obstacles)

■ Wing Flaps	RETRACT AT 130 KIAS
■ Landing Lights	OFF
■ Taxi Lights	OFF
■ Anti-Ice (mod. power drain)	AS REQUIRED — CHECK ICE WARNING
■ Pitot Heat	ON IF OAT < 4 °C
■ Power	85% GAS RPM / 66 x TORQUE
■ Propellers	1,600 RPM
■ Propeller Synchrophaser	ON
■ Elevator Trim (ave.)	+30
■ Airspeed	170 KIAS at sea level 165 KIAS at FL100
■ Climb (Vertical Speed)	1,400 FPM at sea level 1,000 FPM at FL100
■ Temperatures & Pressures	CHECK

CRUISE

■ Typical Altitude
■ Gyro / Heading
■ Altimeter
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ Anti-Ice (mod. power drain)
■ Pitot Heat
■ Cruise Airspeed
■ Autofeather
<i>Max Level Airspeed</i>
<i>Never Exceed Airspeed</i>
<i>Service Ceiling</i>

LOW

| HIGH

10,000 FT		20,000 FT
CHECK / CALIBRATE		
CALIBRATE		ABOVE FL180 SET TO 29.92"
85%		
1,500 RPM		
LO IDLE		
+13		+18
ONLY IF REQUIRED		— CHECK ICE WARNING
ON IF OAT < 4 °C		
195 KIAS		185 KIAS
OFF		
230 KIAS		
270 KIAS		
35,000 FT (FS2004: 42,000 FT)		
parameters at FL100		

DESCENT

■ Radios
■ Gyro / Heading
■ Altimeter
■ Fuel Quantity
■ Fuel Crossfeed
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ Airspeed
■ Descent Rate (Vert. Speed)
■ Wing Flaps

CHECK FOR ATIS/AIRPORT INFO
CHECK / CALIBRATE
CALIBRATE - BELOW FL180 RESET TO LOCAL CHECK
OFF (centre) OR AS REQUIRED
10 x TORQUE
1,500 RPM
LOW IDLE
+26
165 KIAS
-1,200 FPM
ONLY IF NEEDED (AND BELOW 200 KIAS)

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

■ Propellers
■ Elevator Trim
■ Airspeed
■ Descent Rate / Glide Ratio
■ Glide Ratio

FEATHERED
+70
130 KIAS
870 FPM
1 : 15

APPROACH

■ Radios	SET FOR APPROACH
■ Landing Gear	DOWN
■ Gear Lights	LOCKED
■ Autopilot	AS DESIRED
■ Landing Lights	ON – Annunciator ON
■ Taxi Lights	ON
■ Autofeather	ARM
■ Propellers	HIGH RPM
■ Condition	HIGH IDLE
■ Anti-Ice (mod. power drain)	ONLY IF REQUIRED — CHECK ICE WARNING
■ Anti-Ice & De-Ice annunc.'s	ON
■ Wing Flaps	APPROACH

FINAL AND LANDING

■ Anti-Ice	OFF
■ Anti-Ice & De-Ice annunc.'s	OFF
■ Parking Brake	VERIFY OFF
■ Wing Flaps: Full Down at ...	150 KIAS OR LESS
■ Final Approach Airspeed	105 KIAS
■ Autopilot	OFF
■ Power (idle on touchdown)	25 x TORQUE (OR IDLE)
■ Touchdown Airspeed	100 KIAS (MORE IF HEAVY)
■ Reverse Thrust	APPLY
■ Reverse Thrust Off	OFF AT 50 KIAS
<i>Stall Speed Clean / All Down</i>	<i>90 KIAS / 75KIAS</i>

AFTER LANDING - TAXI

■ Landing Lights	OFF – Annunciator OFF
■ Wing Flaps	UP AND NEUTRAL
■ Condition	LOW IDLE (gradually)
■ Pitot Heat	OFF
■ Strobe	OFF
■ Trim Tabs	NEUTRAL

ENGINE SHUT-DOWN

 Parking Brake	APPLY
 Taxi Lights	OFF
 Avionics Master	OFF
 Autofeather	OFF
 Power	IDLE
For every engine:	
 Propellers	FEATHERED
 ITT	STABILIZED temperature for 1 minute
 Condition	CUTOFF
 Annunciators ON	L & R DC GEN, L & R OIL PRESS LOW
 Fuel Crossfeed	OFF (switch centred) – Annunciator OFF
 Propeller Synchrophaser	OFF
 Beacon	OFF
 Navigation Lights	OFF
 Generators	OFF ONCE N1 < 15%
 Generators annunciators ON	ON
 Instrument Panel Lights	OFF
 Master Battery Switch	OFF

AIRCRAFT CHECKLIST

523 Shorts 330 / Sherpa

Fuel in tks: LA | Front | Aft | RA

AIRCRAFT BASIC SPECS

Engines n° and type	2 Turbo-Prop	Gls 20 348 348 20
MTOW	22,900 lb	Lbs 134 2331 2331 134
Fuel usable capacity	736 gl / 4931 lb	Aux and Aft tanks are used first
Range	915 nm, 5h 20'	
T.off runway length	2,200 ft	

BEFORE STARTING

 Parking Brake	SET
 Battery Switch	ON
 Annunciators ON	L & R: OIL PRESS, GENER., FUEL, XFDEED
 Alternators	OFF (resetting a Flight they are OFF!)
 Landing Lights	OFF – Annunciator OFF
 Taxi Light	OFF – Annunciator OFF
 Beacon	OFF
 Nav Lights	ON
 De-Ice Wings and Props	ON (De-Ice Wings annunc.) then OFF (ineffect.)
 Pitot De-ice	OFF
 Avionics Switch	ON
 Fuel Gauges/Quantity	CHECK (FL.LEVEL annunc.show FUEL PRESSURE!)
 X Feed (*)	OFF (switch down) – Annunciator OFF
 Crossfeed Flow (**)	OFF (switch in mid position) (no annunciator)
 Avionics Switch	OFF
 Power	IDLE
 Propellers	HIGH RPM
 Condition	CUTOFF
 Trim Tabs	CHECK then set to NEUTRAL
 Flight Controls	FREE/Full travel
 Instrument Panel Lights	AS REQUIRED
 Fuel Pumps (***)	OFF (down) (no annunciator)
 Doors	ALL CLOSED – Annunciator OFF
 Outside Air Temperature	NOTE

(*) This valve, located in the large Fuel panel, should draw from Front tank when fuel is too low in the Aft one: however, this valve is inoperative in this aircraft.

(**) In theory, OFF draws from all tanks, while Left draws only from LA and Right from RA. Actually: **OFF draws from all tanks, while LA and RA are fuel cutoffs.**

(***) **These valves, located in the large Fuel panel, are inoperative in this aircraft.**

STARTING - for each engine: (CTRL+E for autostart sequence)

Beacon	ON
Power	IDLE
Propeller	HIGH RPM
Condition	HIGH IDLE
Starter Switch	HOLD UNTIL ENGINE STARTS
Ng (Gas Generator RPM)	soon reaching >70%
Condition	LOW IDLE
Fuel Flow	MONITOR
ITT (Interstage Turb. Temp.)	MONITOR
Starter Switch	OFF
Alternator	ON – Annunciator OFF
Fuel Pressure Low annunc.	OFF
Oil Pressure gauge & annun.	CHECK ≥ 90 psi - Annunciator OFF in <30 sec.
Oil Temperature & Suction	CHECK
Condition	HIGH IDLE
	<i>Power: NI Gas Generator = % RPM</i>

WARM UP AND TAXI

FS: Select Engines	ALL
Gyro / Heading	CHECK / CALIBRATE
Altimeter	CHECK / CALIBRATE
Flight Instruments	CHECK
Brakes & Brake Pressure	CHECK (use taxi and brakes gauge)
Parking Brake	APPLY
Power (for testing)	TORQUE 35 x / 55% PROP RPM
Temperatures & Pressures	CHECK
Propellers	EXERCISE TWICE
Manual Feathering	CHECK THEN BACK TO HIGH RPM
Autofeather	ARM
De-Ice Wings and Props	AS REQUIRED – ICE WARNING unaffected
De-Ice Wings annunciator	CHECK AS PER ABOVE (no other De-Ice ann.)
Alternators annunciator	OFF
Power (for warm up)	IDLE
Avionics Switch	ON
Radios	SET AS PER FLIGHT PLAN
Autopilot	SET AND OFF
Taxi Lights	ON – Taxi Lights Annunciator ON
Wing Flaps	UP, FULL DOWN, VISUAL CHECK, UP
Taxi Throttle and Speed	IDLE (need brakes to keep below 20 KIAS!)
Gyro & Turn Co. in Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

Power	IDLE
Propellers	FORWARD/HIGH
Condition	HIGH IDLE
Trim Tabs	NEUTRAL
Wing Flaps	5° or 15° for full load or short runway
Pitot De-ice	ON IF OAT < 4 °C (no annunciator)
Landing Lights	ON - Landing Lights Annunciator ON
Strobe	ON - (no annunciator)

TAKEOFF (sea level or low altitude)

Parking Brake	HOLD
Power	100% (≤ Full): DON'T EXCEED ITT RED LINE!
Propellers	High => 90% = RED LINE
Autofeather annunciators	ON WITH FULL POWER
Parking Brake	RELEASE
Decision (V1)	110 KIAS
Rotate (ave.)	120 KIAS
Attitude Angle	10°
Landing Gear(w/posit.climb)	RETRACT
Gear Lights	OFF
Airspeed (airborne+gear up)	>135 KIAS

CLIMB (once clear of obstacles)

Wing Flaps	RETRACT AT 140 KIAS
Landing Lights	OFF – Annunciators OFF
De-Ice Wings and Props	ONLY IF REQUIRED – ICE WARNING unaffected
De-Ice Wings annunciator	CHECK AS PER ABOVE (no other De-Ice ann.)
Pitot De-ice	ON IF OAT < 4 °C (no annunciator)
Power	87% GAS RPM / 37 x TORQUE (min. yellow)
Propellers	85% (max. green)
Elevator Trim (ave.)	+05
Airspeed	165 KIAS
Climb (Vertical Speed)	1,200 FPM
Temperatures & Pressures	CHECK

CRUISE@ 3,450 lb (70%) fuel

■ Typical Altitude
■ Gyro / Heading
■ Altimeter
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ De-Ice Wings and Props
■ De-Ice Wings annunciator
■ Pitot De-ice
■ Cruise Airspeed
■ Autofeather
<i>Max Level Airspeed</i>
<i>Never Exceed Airspeed</i>
<i>Service Ceiling</i>

LOW | HIGH

9,000 FT | **18,000 FT**
CHECK / CALIBRATE
CALIBRATE | ABOVE FL180 SET TO 29.92"
85% GAS RPM (max. green)
 85% (max. green)
LO IDLE
+01
ONLY IF REQUIRED
 – **ICE WARNING** unaffected
 CHECK AS PER ABOVE (no other De-Ice ann.)
ON IF OAT < 4 °C (no annunciator)
170 KIAS | **166 KIAS**
OFF (Annunciators OFF)
197 KIAS at FL10
240 KIAS
21,000 FT
 parameters at FL100

DESCENT@ 2,960 lb (60% fuel)

■ Radios
■ Gyro / Heading
■ Altimeter
■ Fuel Quantity
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ Airspeed
■ Descent Rate (Vert. Speed)
■ Wing Flaps

CHECK FOR ATIS/AIRPORT INFO
CHECK / CALIBRATE
CALIBRATE - BELOW FL180 RESET TO LOCAL
CHECK
74% GAS RPM / 30 x TORQUE
 85% (max. green)
 LOW IDLE
+06
 150 KIAS
 -1,300 FPM
5° ONLY IF NEEDED (AND < 155 KIAS)

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

■ Propellers	FEATHERED
■ Elevator Trim	+26
■ Airspeed	101 KIAS
■ Descent Rate / Glide Ratio	-1300 FPM
■ Glide Ratio	1 : 8

APPROACH @ 2,960 lb (60% fuel)

■ Radios	SET FOR APPROACH
■ Landing Gear	DOWN
■ Gear Lights	LOCKED
■ Autopilot	AS DESIRED
■ Landing Lights	ON – Annunciator ON
■ Taxi Lights	ON – Annunciator ON
■ Autofeather	ARM
■ Propellers	HIGH RPM
■ Condition	HIGH IDLE
■ Power	77% GAS RPM
■ Elevator Trim	+04
■ De-Ice Wings and Props	AS REQUIRED – ICE WARNING unaffected
■ De-Ice Wings annunciator	CHECK AS PER ABOVE (no other De-Ice ann.)
■ Pitot De-ice	ON (no annunciator)
■ Wing Flaps	5° below 155 KIAS, 15° below 145 KIAS

FINAL AND LANDING

■ Parking Brake	VERIFY OFF
■ Wing Flaps: Full Down at ...	130 KIAS OR LESS (Full flaps => nose down!)
■ Power	81% GAS RPM
■ Elevator Trim	-25 (to mitigate full flaps)
■ Final Approach Airspeed	102 KIAS
■ Autopilot	OFF
■ Power (idle on touchdown)	85% GAS RPM
■ Touchdown Airspeed	80 KIAS (do not flare)
■ Reverse Thrust	APPLY; OFF AT 50 KIAS
<i>Stall Speed Clean / All Down</i>	<i>84 KIAS / 72KIAS</i>

AFTER LANDING – TAXI

■ Landing Lights	OFF – Annunciator OFF
■ Wing Flaps	UP AND NEUTRAL
■ Condition	LOW IDLE
■ De-Ice Wings and Props	OFF
■ De-Ice Wings annunciator	OFF (no other De-Ice annunciator)
■ Pitot De-ice	OFF (no annunciator)
■ Trim Tabs	NEUTRAL
■ Strobe	OFF

ENGINE SHUT-DOWN

■ Parking Brake	APPLY – Check pressure
■ Passenger Door (door 1)	OPEN – Annunciator ON (“ENTRY DOOR”)
■ Taxi Lights	OFF – Annunciator OFF
■ Avionics Switch	OFF
■ Autofeather	OFF
■ Power	IDLE
■ Propeller	FEATHERED
■ ITT	STABILIZED temperature for 1 minute
■ Condition	CUTOFF
■ Annunciators ON	L & R: OIL PRESS, GENER., FUEL PRESS
■ Beacon	OFF
■ Navigation Lights	OFF
■ Instrument Panel Lights	OFF
■ Alternators	OFF ONCE N1 < 15%
■ Alternators annunciators	ON
■ Battery Switch	OFF
■ Propellers	No visual change

AIRCRAFT CHECKLIST

544 Bombardier 415 Amphibian

Checklist for both **land** and **water** take-off and landing.

AIRCRAFT BASIC SPECS

Engines n° and type	2 Turbo-Prop
MTOW	43,800 lb 37,800 lb (water)
Fuel usable capacity	3,597 gl Tanks: Left Main, Centre 1, Right Main. There is no individual tank control, only crossfeed. The three tanks are used simultaneously. Those in the wings, much smaller, will empty first.
Range	1,320 nm, 7h 50's
T.off runway length	2,700 ft

BEFORE STARTING

 Landing Gear	GEAR DOWN (land) GEAR UP (water)
 Parking Brake	SET (land)
 Master Battery Switch	ON
 Annunciators ON	L & R DC GEN, L & R OIL PRESS LOW
 Generators	OFF
 Avionics Master	OFF
 Nav Lights	AS REQUIRED
 Pitot Heat	OFF
 Fuel Gauges/Quantity	CHECK; Fuel <=60%, rest is water capacity!
 Fuel Crossfeed	OFF (switch centred) – Annunciator OFF
 Fuel Crossfeed Annunciator	OFF
 Fuel Low Annunciators OFF	L FUEL LOW, R FUEL LOW
 Power	IDLE
 Propellers	HIGH RPM
 Condition	CUTOFF
 Trim Tabs	NEUTRAL
 Flight Controls	FREE/Full travel
 Instrument Panel Lights	AS REQUIRED
 Beacon	ON
 Anti-Ice (power drain)	AS REQUIRED – ICE WARNING unaffected
 Anti-Ice Annunciators	CHECK

STARTING - for each engine: (CTRL+E for autostart sequence)

Power	IDLE
Propeller	HIGH RPM
Condition	MID (50%)
Fuel Press Low annunciator	OFF
Fuel Flow	CHECK = 0
Ignition Starter Switch	HOLD UNTIL ENGINE STARTS
Ignition annunciator	ON THEN OFF
Ng (Gas Generator RPM)	> 12%
Condition	LOW IDLE (use mouse!)
Fuel Flow	MONITOR
ITT (Interstage Turb. Temp.)	MONITOR
Ignition Starter and annunc.	OFF
Generator	ON – DC GEN Annunciator OFF
Generators annunciators	OFF
Fuel Pressure Low annunc.	OFF
Oil Pressure gauge & annun.	CHECK, OFF in <30 sec.
Oil Temperature gauge	CHECK
Condition	HIGH IDLE

WARM UP AND TAXI

	<i>Power: x100 TORQUE / % NI RPM</i>
FS: Select Engines	ALL
Temperatures & Pressures	CHECK
Fuel Crossfeed	SWITCH TANKS & CHECK
Gyro / Heading	CHECK / CALIBRATE
Altimeter	CHECK / CALIBRATE
Flight Instruments	CHECK
Brakes & Brake Pressure	CHECK (land only)
Parking Brake	APPLY (land only)
Power (for testing)	1,150 PROP RPM
Temperatures & Pressures	CHECK
Propellers	EXERCISE (2-3 times, no more than 400RPM drop)
Feathering (manual)	CHECK THEN BACK TO HIGH RPM
Autofeather	ARM
Anti-Ice (power drain)	AS REQUIRED – ICE WARNING unaffected
Anti-Ice & De-Ice annunc.'s	CHECK AS PER ABOVE
Generators annunciators	OFF
Power (for warm up)	IDLE
Avionics Master	ON
Radios	SET AS PER FLIGHT PLAN
Autopilot	SET AND OFF
Wing Flaps	UP, FULL DOWN, VISUAL CHECK, UP
Taxi Throttle and Speed	IDLE - 20 KIAS 1,250 RPM - 20 KIAS
Gyro & Turn Co. in Taxi	CHECK

PRE-TAKEOFF (on rwy ready to TO)

Strobe	ON
Gear Lights	DOWN GREEN (land) UP (water)
Power	IDLE
Propellers	FORWARD/HIGH
Condition	HIGH IDLE
Elevator Trim	+25
Wing Flaps	10°-20°
Pitot Heat	ON IF OAT < 4 °C
Landing Lights	ON - Landing Lights Annunciator ON
Power Units	<i>x100 TORQUE / % NI RPM</i>

TAKEOFF (sea level or low altitude, values with Anti-Ice ON)

Parking Brake	HOLD (land)
Power	FULL, but don't exceed ITT's RED LINE
Propellers	2/3 => 1,700 RPM (RED LINE)
Autofeather annunciators	ON WITH FULL POWER
Parking Brake	RELEASE (land)
Decision (V1)	85 KIAS (land) 95 KIAS (water)
Rotate (ave.)	95 KIAS (land) 105 KIAS (water)
Attitude Angle	10°-15°
Landing Gear(w/posit.climb)	RETRACT (land)
Gear Lights	OFF
Airspeed (airborne+gear up)	>90 KIAS
Landing Lights	OFF

CLIMB (once clear of obstacles)

Wing Flaps	RETRACT AT 110 KIAS AND VERIFY
Anti-Ice (severe power drain)	ONLY IF REQUIRED – ICE WARNING unaff.
Pitot Heat	ON
Power	70 x TORQUE / 90% GAS RPM
Propellers	1,650 RPM = MID
Elevator Trim (ave.)	+32
Airspeed	143 KIAS
Climb (Vertical Speed)	1,000 FPM (up to 2,000 FPM)
Temperatures & Pressures	CHECK

CRUISE (values without Anti-Ice)

■ Typical Altitude
■ Gyro / Heading
■ Altimeter
■ Power
■ Propellers
■ Condition
■ Wing Flaps
■ Elevator Trim
■ Anti-Ice (power drain)
■ Pitot Heat
■ Cruise Airspeed
<i>Max Level Airspeed</i>
<i>Never Exceed Airspeed</i>
<i>Service Ceiling</i>

NORMAL

8,000 FT	WATER DROP
CHECK / CALIBRATE	600 FT AGL
SET / CALIBRATE	
60 x TORQUE / 83% N1	43 x TORQUE / 77%
1,500 RPM	HIGH RPM
LO IDLE	HIGH
UP	SET: 10°
+06	+17
AS REQUIRED – ICE WARNING unaffected	
ON IF OAT < 4 °C	
168 KIAS	134 KIAS
212 KIAS	
260 KIAS	
15,000 FT (FS2004: 44,000 FT)	

DESCENT

■ Radios
■ Gyro / Heading
■ Altimeter
■ Fuel Quantity
■ Fuel Crossfeed
■ Anti-Ice (power drain)
■ Anti-Ice Annunciators
■ Power
■ Propellers
■ Condition
■ Elevator Trim
■ Wing Flaps (initial)
■ Airspeed
■ Descent Rate (Vert. Speed)
■ Autofeather

parameters at FL80

CHECK FOR ATIS/AIRPORT INFO
CHECK / CALIBRATE
SET / CALIBRATE
CHECK
OFF (centre) OR AS REQUIRED
AS REQUIRED – ICE WARNING unaffected
ON
10 x TORQUE
1,500 RPM
LOW IDLE
+29
10°
122 KIAS
-1,000 FPM
ARM

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

■ Fuel Level	<= 30%
■ Propellers	FEATHERED
■ Elevator Trim	+50
■ Airspeed	110 KIAS
■ Descent Rate / Glide Ratio	-800 FPM
■ Glide Ratio	1 : 14

APPROACH

Radios
 Landing Gear
 Gear Lights
 Autopilot
 Landing Lights
 Autofeather
 Propellers
 Condition
 Anti-Ice (power drain)
 Anti-Ice & De-Ice annunc.'s
 Wing Flaps

SET FOR APPROACH

DOWN (land)
DOWN GREEN (land) | **UP (water)**
AS DESIRED
ON – Annunciator ON
 ARMED
HIGH RPM
HIGH IDLE
AS REQUIRED – **ICE WARNING** unaffected
 ON
20° BELOW 120 KIAS, 30° BELOW 110 KIAS

FINAL AND LANDING

Anti-Ice
 Parking Brake
 Wing Flaps: Full Down at ...
 Final Approach Airspeed
 Autopilot
 Power (idle on touchdown)
 Elevator Trim (ave.)
 Touchdown Airspeed
 Reverse Thrust
 Reverse Thrust Off
Stall Speed Clean
Stall Speed All Down

Land: ease forward after flare | Water: hold stick till stopped

ON (power drain and ineffective!)
 VERIFY OFF
100 KIAS OR LESS
90 KIAS
OFF
50 x TORQUE / 85% N1 RPM
+20
85 KIAS (MORE IF HEAVY)
APPLY
AT 50 KIAS (land) | **AT 30 KIAS (water)**
67 KIAS
55 KIAS

AFTER LANDING - TAXI

Landing Lights
 Anti-Ice
 Anti-Ice & De-Ice annunc.'s
 Wing Flaps
 Propellers
 Condition
 Pitot Heat
 Trim Tabs
 Strobe

OFF – Annunciator OFF
OFF
OFF
UP AND NEUTRAL
MIN RPM
LOW IDLE (use mouse!)
OFF
NEUTRAL
OFF

ENGINE SHUT-DOWN

	Parking Brake	APPLY (land)
	Avionics Master	OFF
	Autofeather	OFF
	Power	IDLE
	For every engine:	
	Propellers	FEATHERED
	ITT	STABILIZED at min. temperature for 1 minute
	Condition	CUTOFF
	Annunciators ON	L & R DC GEN, L & R OIL PRESS LOW
	Fuel Crossfeed	OFF (switch centred) – Annunciator OFF
	Beacon	OFF
	Navigation Lights	OFF (they set off the Panel Lights as well)
	Instrument Panel Lights	OFF
	Generators	OFF ONCE N1 < 15%
	Generators annunciators	ON
	Master Battery Switch	OFF

AIRCRAFT CHECKLIST

601 FIAT G-91 R1 / R3

(R1 & R3 only differ in armament; same aircraft.cfg. Find differences below as [R1-PAN](#) & [R3](#))

AIRCRAFT BASIC SPECS

Engines n° and type	1 Turbojet
MTOW	12,100 / 12,500 lb
Fuel usable capacity	423 / 698 gls Tanks: LAux, Centre1, Centre2, Raux
Range	346 / 570 nm, 51 min. / 1h 25'
T.off runway length	2,600 ft (verify: manual says 790m).

BEFORE STARTING

 Parking Brake	(Open a small SPOT window for external checks)
 Brake chute	SET – EMER WHEEL BRAKE out
 BATTERY Switch	OFF – Check in SPOT window
	ON – Annunciator BATTERY OUT (Low battery voltage) and others: see below
 CONSOLE & INSTRUM. LIGHTS	AS REQUIRED (Dawn, Dusk, Night)
 Landing Gear	DOWN – 3 annunciators LDG. GR. POSITION
 Power	MINIMUM (thrust lever all down)
 Fuel (L.P. valve) Lever	CLOSED (Down)
 Accelerometer	RESET (click on button) – Red handles OFF
 AILERON SERVO	OFF – Annunciator LOW (Hydraulic) PRESS.
EMERGENCY PRES.	
 ELEVATOR SERVO	OFF – Annunciator ELEVATOR SERVO RELEASE
RELEASE PRESS.	
 Fuel ALL TANKS Switch	DOWN – Annunciator FUEL (aux.)QUANTITY OFF
 Fuel FILL if levels low	CLICK – Annunciator FUEL (Low) OFF
 Oil Pressure	LOW – Annunciator OIL (Oil pressure warning)
 Engine Start Panel	Display (click on mock panel)
 ENGINE HP FUEL SYST.	NORMAL (Down) – Ann. EMERG ON (Fuel valve)
 FUEL BOOSTER PUMP	OFF (Down)
 H.E. IGNITION Switch	CLOSED
 Engine Start Panel	Hide (click on icon or in mock panel)
 PRIM INVERTER (Avionic)	OFF – Annunciator Avionic circuit lamp
 SEC INVERTER (Electr.)	OFF – Annunciator Pitot circuit (unrelated to Pitot!)
 GENERATOR Switch	OFF – Annunciator GENERATOR OUT
 Strobe Lights	OFF – Check in SPOT window
 Nav Lights	OFF (Down) – Check in SPOT window
 LANDING & TAXI LIGHT	OFF – White annunciators OFF
 PITOT HEAT	OFF
 YAW DAMPER	OFF
 Radio Stack	Display (Transponder not included in these checklists)
 NAV & ADF IDENT switch.	OFF
 COMM	OFF
 Radio Stack	Hide

■ Flight Controls**FREE/Full travel**

Notes: 1. The above has used ALL the controls and switches except the STARTER..

2. Many functions are inoperative in Virtual Cockpit, but all are operative in the 2D panel.

STARTING

- Strobe Lights
- Power
- Fuel (L.P. valve) Lever
- Engine Start Panel
- ENGINE HP FUEL SYST.
- FUEL BOOSTER PUMP
- Starter Cap
- Starter Button
- Power (PERCENT R.P.M.)

- BATTERY Switch**
- Power
- Starter Cap
- Engine Start Panel
- PRIM INVERTER (Avionic)
- SEC INVERTER (Electr.)

- GENERATOR Switch
- Hydraulic Pressure
- HYDRAULIC SYSTEM

- AILERON SERVO EMERGENCY PRES..**
- ELEVATOR SERVO RELEASE PRESS.**
- Oil Pressure Lamp
- OIL TEMP
- OIL PRESS
- JET °C Temperature
- Amperometer
- VOLT Meter(after few min.)
- BATTERY VOLTAGE
- Test Circuit
- Canopy

(2D view with main panel selected!)

ON – Check in SPOT window

IDLE – **Strictly follow the SEQUENCE below**

1. OPEN (Up)

2. Display (click on mock panel)

3. EMER (Up)

4. ON (Up) – Ann. **EMERG ON (Fuel valve)** OFF

5. UP – **Red Starter Button** shows

6. HOLD for 2 sec. only – wait for engine start

When eng. starts, jumps to **RPM Red mark**.

If eng. does not start, follow **magenta step** below

OFF & ON – Restart **SEQUENCE above**

1/4+=>43% RPM, just after Yellow mark

DOWN (click the rim) – **Red Starter Button** hides

Hide (click on icon or in mock panel)

ON (Up) – Annunciator **Avionic circuit lamp** OFF

ON (Up) – Annunciator **Pitot circuit** OFF.

Keeping the Secondary Inverter OFF with engine running causes total electrical failure in about 2minutes!

ON – Radar Altimeter shows up

Annunciator **LOW (Hydr.) PRESS** OFF

NORMAL+EMERG.+HYDR.PRESS: **green mk.**

If Annunc. ON **but** NORMAL null, restart engine.

Or else, follow **magenta step** below.

ON (click twice) – Ann. **LOW (Hydr.) PRESS** OFF,

NORMAL+EMERG.+HYDR.PRESS: **green mk.**

ON – Annunc. **ELEVATOR SERVO RELEASE** OFF

NORMAL – Annunciator **OIL (Oil press.)** OFF

>=30°C – in **green range** – in **<30 sec.**

NORMAL – in **green range** in **<30 sec.**

MONITOR – will soon reach 600°Cp

0.3-0.6A or at least needle in the **green range**

25-28V – Needle in the **green range**

Annunciator **BATTERY OUT** OFF

CLICK – Annunciator **FIRE** goes on then OFF

OPEN – Annunc. **CANOPY UNSAFE FOR FLIGHT**

(*) Key command toggles full up/down; clicking +/- on dial allows partial settings.

WARM UP AND TAXI

- Fuel ALL TANKS Switch
- Temperatures & Pressures
- Gyro / Heading
- Altimeter
- Nav Lights
- Flight Instruments
- Foot Brakes
- Parking Brake
- Canopy
- Spoilers
- Flaps (handle in quadrant)
- Power
- Rudder and Aileron Trims
- Elevator Trim
- PITOT HEAT
- YAW DAMPER
- Radios
- LANDING & TAXI LIGHT
- Taxi Throttle and Speed
- Gyro & Turn Coord. in Taxi

Power: Throttle(approx.)=% N1 Turb.(precise)
 DOWN – Annunciator **FUEL(aux.)QUANTITY OFF**
CHECK (JET temperature, Oil TEMP & PRESS)
CHECK / CALIBRATE
CHECK / CALIBRATE
ON (Up) – Check in SPOT window
CHECK
CHECK
APPLY (again)
CLOSED – Annunciator **CANOPY UNSAFE OFF**
DEPLOY & RETRACT – Airbrake indicator (*)
DOWN & UP – Flap indicator & SPOT window
3/4=>80% then IDLE=35% – Red mark
NEUTRAL
NEUTRAL / +15 = 1 notch up (due to gt. fuel)
ON then OFF
ON then OFF
SET AS PER FLIGHT PLAN
ON – *White* annunciators ON
≈40%, RPM Yellow mark - 15-20 KIAS
CHECK

PRE-TAKEOFF (on rwy ready to TO)

- Radio Stack
- Power Pre-Test
- Power Test
- Spoilers
- Flaps (handle in quadrant)
- Pitot Heat

Hide
40%, on the RPM Yellow mark – Stable 15”
FULL: 98% in ≤9”, then IDLE – Red mk.
RETRACTED – Airbrake indicator up
MID – Flap indicator 50%. Check SPOT window
ON

TAKEOFF (sea level or low altitude)

- Parking Brake
- Power

- Parking Brake
- Rotate
- Take off
- Landing Gear(w/posit.climb)
- Flaps
- Yaw Damper

HOLD
T/O=100% – Yellow mark. Do not exceed 101%:
throttle full causes unrecoverable compressor stall!
JPT: 755 MAX
RELEASE
125 / 130 KIAS
140 / 148 KIAS
RETRACT AT < 195 KIAS – Ann.**LDG.GR.** OFF
UP BETW.160 & 195 KIAS – Flap indicator 0%
ON

CLIMB (once clear of obstacles)	at sea level above FL100
LANDING & TAXI LIGHT	OFF – White annunciators OFF
Power	90%
Elevator Trim (ave.)	-15 -18 / -16
Climb (Vertical Speed)	+5,500 FPM +4,000 FPM
Airspeed	400 KIAS 400 to 380 / 390 to 350 KIAS
Altimeter	CALIBRATE ABOVE FL180 SET TO 29.92"
Temperatures & Pressures	CHECK (JET temperature, Oil TEMP & PRESS)
YAW DAMPER	OFF before Aerobatics

CRUISE

Typical Altitude	20,000 FT
Gyro / Heading	CHECK / CALIBRATE
Power	$\frac{3}{4}(+) \Rightarrow 90\%$. Only two minutes up to 105%, or else unrecoverable compressor stall!
Elevator Trim	-14 / -16
Economical Cruise Airspeed	406 / 400 KIAS
Engine Start Panel	Display (click on mock panel)
FUEL BOOSTER PUMP	OFF (Down)
Jet Temperature	BETWEEN 200 AND 750°C
PITOT HEAT	ON
YAW DAMPER	ON
Accelerometer	RESET (click on button) – Red handles OFF
OIL TEMP & PRESS	CHECK – Needles in green range
VOLT Meter & Amperomet.	Needles in the green range
Max Load Factor	7 g at FL50, 4 g at FL200
Max Level Airspeed at FL20	M. 0.85=590 KIAS (Red mk): 596 => compr. stall!
Never Exceed Airspeed	M. 0.9: 370 KIAS at FL300, 450 KIAS at FL200, 500 KIAS at FL150, 540 KIAS at FL100, 600 KIAS below FL50
Service Ceiling	41,000 FT

DESCENT

Radios	@ 1,000 lb (40%) fuel
Gyro / Heading	CHECK FOR ATIS/AIRPORT INFO
Altimeter	CHECK / CALIBRATE
Fuel Quantity	CALIBRATE - BELOW FL180 RESET TO LOCAL CHECK
Power	IDLE — From 48% at FL200 to 42% at FL40
Jet Temperature	KEEP IT ABOVE 200°C
Flaps (below FL50)	MID BELOW 200 KIAS – Flap indicator 50%
	Altitudes FL:
Elevator Trim	200-150 100-50 below 50 with Flaps
Airspeed	-02 -05 +36 294 305 165 KIAS
Descent Rate (Vert. Speed)	-3,000 -3,000 1,500 FPM
OIL TEMP & PRESS	CHECK – Needles in green range

GLIDE WITH ENGINE OUT @ 1,000 lb (40%) fuel (optimal glide ratio)

■ Elevator Trim	+80 (max.)
■ Airspeed	135 KIAS
■ Descent Rate (Vert. Speed)	-1600 FPM
■ Glide Ratio	1 : 8.5

APPROACH

■ Radios	
■ PITOT HEAT	
■ YAW DAMPER	
■ Landing Gear	
■ LANDING & TAXI LIGHT	
■ Maneuvring Airspeed	
■ Spoilers	

■ FUEL BOOSTER PUMP	
■ Power	
■ OIL TEMP & PRESS	
■ Elevator Trim	
■ Flaps: Full Down at ...	
■ Elevator Trim	
■ Airspeed	

@ 1,000 lb (40%) fuel — for 2,000 lb incr. all 5 KIAS

SET FOR APPROACH

ON

ON

DOWN AT < 195 KIAS – Ann. **LDG.GR.POS.** ON

ON – *White* annunciators ON

<180 KIAS (yellow mark)

DEPLOYED AS NEEDED BELOW 200 KIAS.

– Click and Check the Airbrake indicator

ON (Up)

1/2=>60%

CHECK – Needles in **green range**

+30

170 KIAS – Flap indicator 100%

+40

145 KIAS

FINAL AND LANDING

PITOT HEAT

■ Parking Brake	
■ Spoilers	
■ Final Approach Airspeed	
■ Descent Rate (Vert. Speed)	
■ Power	
■ Jet Temperature	
■ Elevator Trim	
■ Power over Runway	
■ Touchdown Airspeed	
■ Spoilers (on touchdown)	
■ Brake chute	

■ Gear brakes

Stall Speed Clean / All Down

ON

VERIFY OFF

AS NEEDED

140 KIAS

-750 FPM

1/2(-)=>58% (accurate!)

ABOVE 200°C

+45

50% then idle on touchdown

>130 KIAS

FULLY EXTENDED – Airbrake indicator down

EXTEND IF NEEDED (BELOW 150 KIAS) –

This is accomplished using the Reverser

AS NEEDED

110 KIAS / 100 KIAS

AFTER LANDING - TAXI

- Brake chute
- Spoilers
- Flaps
- YAW DAMPER
- Trim Tabs
- Strobe Lights

DETACH – Just turn Reverser OFF

RETRACT

UP – Flap indicator 0%

OFF

NEUTRAL

OFF – Check in SPOT window

ENGINE SHUT-DOWN

Parking Brake

- PITOT HEAT
- LANDING & TAXI LIGHT
- Canopy
- Power
- Engine Start Panel
- FUEL BOOSTER PUMP
- ENGINE HP FUEL SYST.
- Fuel Lever
- GENERATOR Switch
- BATTERY VOLTAGE
- PRIM INVERTER (Avionic)
- SEC INVERTER (Electr.)
- Nav Lights
- Hydraulic Pressure
- AILERON SERVO
- ELEVATOR SERVO
- Instrument Panel Lights
- BATTERY Switch

APPLY

OFF

OFF – White annunciators OFF

OPEN – Annunc. CANOPY UNSAFE FOR FLIGHT

IDLE – RPM STABILIZED FOR 30 SEC.

Display (click on mock panel)

OFF (Down) – Annunc. EMERG ON (Fuel valve)

OFF (Down) – Engine stops

CLOSED (Down)

OFF – Annunciator GENERATOR OUT

Annunciator **BATTERY OUT** (after a few min.)

OFF – Annunciator Avionic circuit lamp

OFF – Annunciator Pitot circuit (unrelated to Pitot!)

OFF (Down) – Check in SPOT window

0 – Annunciator **LOW (hydraulic) PRESS (*)**

OFF

OFF – Annunciator ELEVATOR SERVO RELEASE

OFF

OFF – All the Annunciators OFF

(*) The real-life checklist prescribes setting on the AILERON SERVO EMERGENCY PRESSURE, then releasing it by fully travelling control surfaces. Unfortunately, this pressure never discharges in the simulation.

Note: when changing or refreshing aircraft or changing resetting flight, Pause and set back to ON these switches: Fuel Lever, Engine HP, Fuel Booster and Secondary Inverter.

AIRCRAFT CHECKLIST

602 Bombardier Learjet 45

AIRCRAFT BASIC SPECS

Engines n° and type	2 Turbo-Fan
MTOW	20,000 lb
Fuel usable capacity	896 gl Tanks: Left Main, Centre 1, Right Main
Range	2,120 nm, 6h 40'
T.off runway length	4,700 ft

BEFORE STARTING

 Parking Brake	SET
 Battery Switch	ON
 Annunciators ON	L & R FUEL PRESS, L & R OIL PRESS, EMER BATT
 Instrument Panel Lights	AS REQUIRED
 Avionics Master	OFF
 Pitot Heat	OFF
 De-Ice	AS REQUIRED – ICE WARNING unaffected
 Nav Lights	OFF
 Landing and Taxi Lights	OFF
 Fuel Quantity - EICAS	CHECK
 Fuel Valves (for ea. engine)	OFF
 Fuel Flow	ON
 Generators	OFF
 Fuel Crossfeed(Tank Select.)	ON
 Power	MINIMUM (thrust lever all down)
 Trim Tabs	NEUTRAL
 Flight Controls	FREE/Full travel
 Autopilot(AP)	OFF
 Autothrottle(MCR & IAS)	OFF
 Spoilers	RETRACTED
 Wing Flaps	UP NEUTRAL; CHECK UP

STARTING - for each engine: (CTRL+E for autostart sequence)

Beacon	ON
 Power	IDLE
 Fuel Valve	ON
 Condition	HIGH (Ctrl-Shft-F4: no panel control!)
 Starter Switch	HOLD UNTIL ENGINE STARTS
 N1 and ITT - EICAS	N1 increases as N2 increases, then ITT jumps
 Fuel Press & Oil Press Ann.	OFF
 Fuel Flow - EICAS	MONITOR
 ITT (Interstage Turb. Temp.)	MONITOR
 Oil Press. & Temp - EICAS	CHECK OK in <30 sec.
 Generator	ON
 Annunciators OFF	FUEL PRESS, OIL PRESS, EMER BATT

WARM UP AND TAXI

FS: Select Engines
Fuel Crossfeed
Temper. & Pressures-EICAS
Gyro / Heading
Altimeter
Nav Lights
Flight Instruments
Brakes & Brake Pressure
Parking Brake
De-Ice
Power (for warm up)
Avionics Master
Radios
Autopilot & Autothrottle
Flight Director
Wing Leveller
Taxi Lights
Taxi Throttle and Speed
Gyro & Turn Co. in Taxi

Power: Throttle(approx.)=% N1 Turb.(precise)

ALL
SWITCH TANKS, CHECK, BACK ON
CHECK
CHECK / CALIBRATE
CHECK / CALIBRATE
ON
CHECK
CHECK
APPLY
ON – ICE WARNING unaffected
IDLE=50% N1
ON
SET AS PER FLIGHT PLAN
SET AND OFF
ON (sets Wing Leveller ON)
OFF
ON
CUT OFF=40% N1 - 16 KIAS
CHECK

PRE-TAKEOFF (on rwy ready to TO)

Strobe
Power
Trim Tabs
Wing Flaps
Wing Flaps - EICAS
Pitot Heat
Landing Lights

ON
MINIMUM
NEUTRAL
SET: 8° (20° for short rwy)
VERIFY 08 (or 20)
ON
ON

TAKEOFF (sea level or low altitude)

Parking Brake
Power
Parking Brake
Spoilers
Decision (V1)
Rotate (ave.)
Attitude Angle
Angle of Attack
Landing Gear(w/posit.climb)
Gear Lights and Annunciator
Airspeed (airborne+gear up)
Wing Flaps

HOLD
IDLE=45% N1, LET SPOOL UP,
THEN T/O=86% N1
RELEASE
ARM (for emergency abort)
115 KIAS
125 KIAS
10°-15°
< .4
RETRACT
RED THEN OFF
>140 KIAS
IF SET TO 20° RETRACT TO 8°

CLIMB (once clear of obstacles) at sea level | above FL100

 Spoilers	RETRACT ARM
 Wing Flaps	RETRACT AT 170 KIAS
 Wing Flaps - EICAS	VERIFY 00
 Yaw Damper	AS REQUIRED
 Taxi Lights	OFF
 Landing Lights	OFF
 Power	MCR⁻=63% N1 71% N1
 Elevator Trim (ave.)	-20 -25
 Airspeed	245 KIAS 270 KIAS
 Climb (Vertical Speed)	+1,900 FPM +1,500 FPM
 Attitude Angle	5°
 Altimeter	CALIBRATE ABOVE FL180 SET TO 29.92"
 Temperatures & Pressures	CHECK

CRUISE

 Typical Altitude	LOW HIGH
 Gyro / Heading	15,000 FT 30,000 FT
 Power	CHECK / CALIBRATE
 Elevator Trim	MCR=68% N1 MCR+=72% N1
 Pitot Heat	-42 -25
 De-Ice	ON
 Cruise Airspeed	ON – ICE WARNING unaffected
<i>Max Level Airspeed</i>	320 KIAS or Mach.61 280 KIAS or Mach.72
<i>Never Exceed Airspeed</i>	(easily exceeds the Never Exceed Airspeed below)
<i>Service Ceiling</i>	335 KIAS or Mach.63 320 KIAS or Mach .81
	50,000 FT

DESCENT

 Radios	above FL120 below FL120
 Gyro / Heading	CHECK FOR ATIS/AIRPORT INFO
 Altimeter	CHECK / CALIBRATE
 Fuel Quantity	CALIBRATE - BELOW FL180 RESET TO LOCAL
 Fuel Crossfeed	CHECK
 Power	ON or L/R STBY AS NEEDED TO BALANCE
 Elevator Trim	IDLE=51% N1 CUT OFF=45% N1
 Airspeed	-18 -20
 Descent Rate (Vert. Speed)	240 KIAS
 Wing Flaps (initial)	-1,500 FPM
 Wing Flaps - EICAS	8° (BELOW 250 KIAS)
	VERIFY 08

GLIDE WITH ALL ENGINES OUT (optimal glide ratio)

 Elevator Trim	+03
 Airspeed	160 KIAS
 Descent Rate (Vert. Speed)	-1,100 FPM
 Glide Ratio	1 : 14

APPROACH

- Radios
- Manoeuvring Airspeed
- Autopilot
- Landing and Taxi Lights
- Wing Flaps (intermediate)
- Landing Gear
- Gear Lights / Annunciator
- Elevator Trim

SET FOR APPROACH
20,000 lbs: 200 KIAS | 13,000 lbs: 150 KIAS
AS DESIRED
ON
20° BELOW 200 KIAS; VERIFY EICAS
DOWN (BELOW 200 KIAS)
RED THEN GREEN / RED THEN OFF
00

FINAL AND LANDING

- Parking Brake
- Spoilers
- Wing Flaps: Full Down at ...
- Final Approach Airspeed
- Descent Rate (Vert. Speed)
- Autopilot
- Power (**min.** on touchdown)
- Elevator Trim
- Touchdown Airspeed
- Spoilers
- Reverse Thrust
- Stall Speed Clean / All Down*

VERIFY OFF
ARM
140 KIAS; VERIFY EICAS FLAPS 40
130 KIAS
-730 FPM
OFF
CUT OFF=46% N1
+14
20,000 lbs: 130 KIAS | 13,000 lbs: 115 KIAS
AUTO-EXTENDED UPON TOUCHDOWN
APPLY; OFF AT 60 KIAS
105 KIAS / 97 KIAS

AFTER LANDING - TAXI

- Landing Lights
- Spoilers
- Wing Flaps
- Trim Tabs
- Strobe

OFF
RETRACT
UP AND NEUTRAL
NEUTRAL
OFF

ENGINE SHUT-DOWN

- Parking Brake
- Flight Director
- Pitot Heat & De-Ice
- Taxi Lights
- Avionics Master
- Power
- ITT
- Fuel Crossfeed
- Fuel Valves (one at a time)
- Fuel Flow
- Beacon & Navigation Lights
- Instrument Panel Lights
- Generators
- Annunciators ON
- Battery Switch

APPLY
OFF
OFF
OFF
OFF
MINIMUM
STABILIZED FOR 1 MINUTE
ON
OFF (=> engines off)
OFF
OFF
OFF
OFF AUTOMATICALLY ONCE N1 < 15%
L & R FUEL PRESS, L & R OIL PRESS, EMER BATT
OFF

AIRCRAFT CHECKLIST

711 Schweizer SGS 2-32

AIRCRAFT BASIC SPECS

MTOW	1,100 lb
Landing runway length	1,000 ft

BEFORE FLYING

■ Parking Brake	SET
■ Master Battery Switch	ON
■ Amp. Light	ON
■ Trim Tabs	NEUTRAL
■ Flight Controls	FREE/Full travel
■ Instrument Panel Lights	AS REQUIRED
■ Altimeter	CALIBRATE
■ Radio	SET AS PER FLIGHT PLAN
■ Dive Brakes	CLOSED

CRUISE SETTINGS

■ Typical Altitude	8,000 FT
■ Altimeter	CALIBRATE
■ Dive Brakes	CLOSED
■ Auto-Elevator Trim	AS DESIRED
■ Rudder Trim	AS NEEDED (see below Cruise alternatives)
<i>Max Level Airspeed</i>	<i>150 MPH</i>
<i>Never Exceed Airspeed</i>	<i>158 MPH</i>
<i>Service Ceiling</i>	<i>25,000 FT</i>

THERMAL SPIRALLING **30° Bank | 45° Bank**

■ Elevator Trim	+65 +81
■ Airspeed	58 62 MPH
■ Vertical Speed	+600 +500 FPM

CRUISE GLIDE

■ Elevator Trim	+40
■ Airspeed	63 MPH <= comfortable
■ Descent Rate (Vert. Speed)	-200 FPM
■ Glide Ratio	1 : 28 <= very good

OPTIMAL GLIDE

■ Elevator Trim	+55
■ Airspeed	55 MPH
■ Descent Rate (Vert. Speed)	-165 FPM
■ Glide Ratio	1 : 30 <= maximum

LONGEST GLIDE

■ Elevator Trim	+70
■ Airspeed	50 MPH
■ Descent Rate (Vert. Speed)	-150 FPM <= minimum
■ Glide Ratio	1 : 29 <= near optimal

CRUISE DESCENT

- Radios
- Altimeter
- Dive Brakes
- Rudder Trim
- Elevator Trim
- Airspeed
- Descent Rate (Vert. Speed)
- Glide Ratio

APPROACH DESCENT

- Dive Brakes
- Elevator Trim
- Airspeed
- Descent Rate (Vert. Speed)
- Glide Ratio

FAST DESCENT

- Dive Brakes
- Elevator Trim
- Airspeed
- Descent Rate (Vert. Speed)
- Glide Ratio

FINAL AND LANDING

- Parking Brake
- Dive Brakes
- Elevator Trim
- Final Approach Airspeed
- Touchdown Airspeed
- Stall Speed*

AFTER LANDING

- Parking Brake
- Dive Brakes
- Auto-Elevator Trim
- Elevator Trim
- Rudder Trim

SHUT-DOWN

- Radio
- Instrument Panel Lights
- Master Battery Switch

from Cruise altitude, Dive Brakes Up

**CHECK FOR ATIS/AIRPORT INFO
SET / CALIBRATE**

CLOSED

Normally **NEUTRAL**

+20 (as always, Auto as desired)

85 MPH <= slightly high

-350 FPM <= twice the cruise glide value

1 : 21

Dive Brakes Half

HALF OPEN

+37

63 MPH

-730 FPM <= almost 4 times the cruise glide

1 : 7.5 <= 1/4th of the cruise glide

Dive Brakes Open

FULL OPEN

+35

62 MPH

-1,300 FPM <= very high yet controllable

1 : 4 <= minimal

VERIFY OFF

Mostly HALF or CLOSED.

Touchdown: AS NEEDED.

+37

62 MPH

52 MPH: *don't flare!*

47 MPH (*Fs2004 40 MPH:stall is impossible!!*)

APPLY

CLOSE

MANUAL (click AUTO if set)

NEUTRAL (double-click the Auto-trim gauge)

NEUTRAL

OFF

OFF

OFF

AIRCRAFT CHECKLIST

712 Schleicher ASW28

AIRCRAFT BASIC SPECS

MTOW	1,400 lb
Landing runway length	1,000 ft

BEFORE FLYING

■ Master Battery Switch	ON
■ Trim Tabs	NEUTRAL
■ Flight Controls	FREE/Full travel
■ Instrument Panel Lights	AS REQUIRED
■ Altimeter	CALIBRATE
■ Radio	SET AS PER FLIGHT PLAN
■ Dive Brakes	CLOSED
■ Check VET Release Altit.	1,500 FT

CRUISE SETTINGS

■ Typical Altitude	8,000 FT
■ Altimeter	CALIBRATE
■ Dive Brakes	CLOSED
■ Auto-Elevator Trim	AS DESIRED
■ Rudder Trim	AS NEEDED (see below Cruise alternatives)
<i>Never Exceed Airspeed</i>	<i>158 KTS</i>
<i>Service Ceiling</i>	<i>25,000 FT</i>

THERMAL SPIRALLING 30° Bank | 45° Bank

■ Elevator Trim	+65 +81
■ Airspeed	58 62 KTS
■ Vertical Speed	+600 +500 FPM

CRUISE GLIDE

■ Elevator Trim	-10
■ Airspeed	65 KTS <= comfortable
■ Descent Rate (Vert. Speed)	-160 FPM
■ Glide Ratio	1 : 40 <= very good

OPTIMAL GLIDE

■ Elevator Trim	+15
■ Airspeed	54 KTS
■ Descent Rate (Vert. Speed)	-120 FPM
■ Glide Ratio	1 : 45 <= maximum

LONGEST GLIDE

■ Elevator Trim	+40
■ Airspeed	48 KTS
■ Descent Rate (Vert. Speed)	-110 FPM <= minimum
■ Glide Ratio	1 : 43 <= near optimal

CRUISE DESCENT

- Radios
- Altimeter
- Dive Brakes
- Rudder Trim
- Elevator Trim
- Airspeed
- Descent Rate (Vert. Speed)
- Glide Ratio

APPROACH DESCENT

- Dive Brakes
- Elevator Trim
- Airspeed
- Descent Rate (Vert. Speed)
- Glide Ratio

FAST DESCENT

- Dive Brakes
- Elevator Trim
- Airspeed
- Descent Rate (Vert. Speed)
- Glide Ratio

FINAL AND LANDING

- Dive Brakes
- Elevator Trim
- Final Approach Airspeed
- Touchdown Airspeed
- Stall Speed*

AFTER LANDING

- Wheel Brake (both toes!)
- Dive Brakes
- Auto-Elevator Trim
- Elevator Trim
- Rudder Trim

SHUT-DOWN

- Radio
- Instrument Panel Lights
- Master Battery Switch

from Cruise altitude, Dive Brakes Up

**CHECK FOR ATIS/AIRPORT INFO
SET / CALIBRATE**

CLOSED

Normally **NEUTRAL**

-40 (as always, Auto as desired)

85 KTS <= slightly high

-300 FPM <= twice the cruise glide value

1 : 21

Dive Brakes Half

HALF OPEN

-20

70 KTS

-700 FPM <= almost 4 times the cruise glide

1 : 10 <= 1/4th of the cruise glide

Dive Brakes Open

FULL OPEN

-15

71 KTS

-1,300 FPM <= very high yet controllable

1 : 4 <= minimal

Mostly HALF or CLOSED.

Touchdown: AS NEEDED.

-20

62 MPH

52 MPH: *don't flare!*

38 MPH

AS NEEDED

CLOSE

MANUAL (click AUTO if set)

NEUTRAL (double-click the Auto-trim gauge)

NEUTRAL

OFF

OFF

OFF

AIRCRAFT CHECKLIST**714 Robinson R-22 Beta II****AIRCRAFT BASIC SPECS**

Engines n° and type	1 Prop-Piston-Fixed
MTOW	1,370lb
Fuel usable capacity	29.7 gal Tanks: Left Main, Right Main
Range	200 nm, 2h 15'

BEFORE STARTING

■ Master Battery Switch	ON
■ Alternator Switch	ON
■ Alternator Light	OFF
■ Nav Lights	AS REQUIRED
■ Magnetos / Ignition	OFF
■ Carburettor Heat	OFF
■ Fuel Gauges/Quantity	CHECK
■ Fuel Valve	ON
■ Fuel Selector	BOTH
■ Rotor Governor Switch	OFF
■ Rotor Governor Light	ON
■ Rotor Clutch Switch	OFF
■ Rotor Clutch Light	ON then OFF
■ Collective	Min.
■ Throttle (RPM knob)	CRACKED (min)
■ Mixture	IDLE CUTOFF
■ Flight Controls	FREE/Full travel

STARTING (CTRL+E for autostart sequence)

■ Strobe	ON
■ Mixture	FULL RICH (or less if above 3,000 FT)
■ Throttle (RPM knob)	OPEN 20 %
■ Starter Switch / Magneto	START
■ Engine RPM	HIGH
■ Rotor Clutch Switch	Immediately ON
■ Rotor Clutch Light	ON then OFF
■ Oil Pressure and Temperature	CHECK

WARM UP AND TAXI

■ Fuel Valve	SWITCH TANKS+CHECK
■ Gyro / Heading	CALIBRATE
■ Altimeter	CALIBRATE
■ Flight Instruments	CHECK
■ Throttle	12" Hg MAN.PRES. (throttle 30%)
■ Temperatures & Pressures	CHECK
■ Magnetos: Maximum Drops	5% RPM
■ Radios	SET AS PER FLIGHT PLAN
■ Landing Lights	ON (no Taxi lights)

PRE-TAKEOFF

Collective	Min.
Mixture	FULL RICH (or less if above 3,000 FT)
Rotor Governor Switch	ON for automatic throttle (assumed below)
Rotor Governor Light	OFF

TAKEOFF (sea level or low altitude)

Collective	Raise - 17" Hg MAN. PRES.
Airspeed	60 KIAS once airborne and forward moving
Landing Lights	OFF

CLIMB (once clear of obstacles)

Collective	maintain 55 KIAS
Climb (Vertical Speed)	+1,300 FPM
Throttle (governor)	19-22" Hg MAN.PRES.
Rotor Trim	50%
Mixture: Lean above ...	3,000 FT for max. RPM

CRUISE

Typical Altitude	NORMAL	LOW CITY
Gyro / Heading	5,000 FT	600 FT
Altimeter	CHECK / CALIBRATE	
Collective	SET / CALIBRATE	
Cruise Airspeed (*)	22" Hg MAN.PRES.	15" Hg MAN.PRES.
Mixture	88 KIAS	60 KIAS
<i>Max Level Airspeed</i>	LEAN for max. RPM	FULL RICH
<i>Never Exceed Airspeed</i>	90 KIAS	
<i>Service Ceiling</i>	102 KIAS	
<i>(*) 2 persons and 80% fuel load</i>	14,000 FT translational, 9,500 FT hovering	

DESCENT

Radios	CHECK FOR ATIS/AIRPORT INFORMAT.
Gyro / Heading	CHECK / CALIBRATE
Altimeter	SET / CALIBRATE
Fuel Quantity	CHECK
Fuel Selector	BOTH
Carburettor Heat	ON
Collective	20" Hg MAN.PRES.
Mixture	ENRICH AS NECESSARY
Airspeed	90 KIAS
Descent Rate (Vert. Speed)	-500 FPM

AUTOROTATION / GLIDE

Does not work, as observed in Avsim review

APPROACH

■ Radios	SET FOR APPROACH
■ Landing Lights	ON
■ Mixture	FULL RICH
■ Collective	14" Hg MAN. PRES.
■ Airspeed	60 KIAS

FINAL AND LANDING

■ Carburettor Heat	OFF
■ Final Approach Airspeed	15 KIAS
■ Collective on touchdown	13-15" Hg MAN. PRES.
■ Touchdown Airspeed	< 10 KIAS

AFTER LANDING - ENGINE SHUT-DOWN

■ Collective	Min.
■ Landing Lights	OFF
■ Rotor Trim	OFF
■ Rotor Governor Switch	OFF
■ Rotor Governor Light	ON
■ Rotor Clutch Switch	OFF
■ Rotor Clutch Light	ON then OFF
■ Throttle (RPM knob)	Min.
■ Mixture	IDLE CUT-OFF
■ Low RPM Light	ON
■ Magnetos	OFF AFTER ENGINE STOPS
■ Fuel Selector	LEFT (to prevent crossfeed)
■ Fuel Valve	OFF
■ Rotor Brake	APPLY UNTIL ROTOR STOPS
■ Strobe	OFF
■ Navigation Lights	OFF
■ Instrument Panel Lights	OFF
■ Alternator	OFF
■ Master Battery Switch	OFF