



**COCKPIT Checklist**

Preflight-Inspection ..... Completed  
 Seats, Seatbelts..... Locked  
 Flight Controls, Trim..... Checked  
 elec. Switches, Avionic ..... OFF  
 Alternate Air..... Pushed  
 TKS-Deicing..... OFF  
 Gear lever..... DOWN  
 Emer. Gear Extension..... Pushed  
 Alternate Static..... Pushed  
 Doors..... Closed

**STARTING ENGINE Checklist**

 Batterie..... ON  
 Beacon ..... ON  
 Gear Indication ..... TEST, 3 Green  
 Fuel Selector.....Lowest Tank

**ENGINE START**

Brakes ..... Set  
 Prop ..... Full Forward

• **if cold engine:**

Throttle..... ¼ Open  
 Fuel Pump..... ON  
 Mixture ..... RICH

• **after 3-5 seconds:**

Mixture ..... CUTOFF

• **if warm engine:**


Throttle..... Full OPEN  
 Fuel Pump..... ON  
 Mixture ..... RICH

• **after 1 second**

Mixture ..... CUTOFF

 Fuel Pump..... OFF  
 Prop area..... Clear  
 Ignition ..... START

• **when engine starts:**

Mixture ..... RICH  
 Throttle..... 1100 RPM  
 Generator..... ON  
 Oil pressure ..... Check

**AFTER START Checklist**

Fuel Selector..... Fulllest Tank  
 Flaps ..... TAKE-OFF  
 Avionic, Horizon ..... ON, set  
 Ⓢ, EFIS, AP Master, Radio Master, Horizon  
 Altimeters (2) ..... \_\_\_\_, \_\_ ft  
 QNH, Elevation  
 Transponder ..... ID \_\_\_\_, GND / ALT  
 VFR: 7000  
 Shadin Fuel ..... Set  
 Standby Horizon..... Checked  
 Anunciator Panel..... Checked  
 Fuel Computer ..... Set  
 OAT Indication..... ON  
 Lights..... As required  
 Circuit breakers ..... Checked

**Shadin Fuel**

Rotating knob	FUEL TO DEST FUEL RESERVE ENDURANCE
V change	ADD press+hold
A +	USED
L -	REM
U enter	ENTER, then REM
E Full	FULL press+hold, then REM

**TAXI Checklist**

Brakes ..... Checked  
 Flight-Instruments..... Checked  
 Dep., Emer. Briefing ..... Completed

**ENGINE CHECK**

Brakes ..... Set  
 Doors, windows..... Closed  
 Engine-Instruments..... Check  
 Throttle ..... 2000 RPM  
 Voltmeter..... Check  
 Prop Governor ..... Check twice  
 Alternate Air..... Check  
 Ignition ..... Check, BOTH  
 RPM drop ≤ 175, differential ≤ 50  
 Suction ..... Check  
 Throttle ..... IDLE, then 1100 RPM  
 Circuit breakers ..... Check

**TAKE-OFF Checklist**

Trim..... T/O Set  
 Mixture ..... Full RICH  
 Prop ..... Full Forward  
 Flaps ..... ● TAKE-OFF  
 ⚙ Fuel Pump ..... ON  
 TKS Deicing ..... As required  
 Transponder ..... GND / ALT  
 ----- immediately prior line up -----  
 Lights ..... As required  
 🛩 Pitot Heat..... As required

**CLIMB Checklist**

Gear ..... UP  
 ⚙ Fuel Pump ..... OFF  
 Lights ..... As required  
 Flaps ..... ● RETRACTED  
 ----- when passing Transition Altitude -----  
 Altimeters (2) ..... Standard, \_\_\_ ft

**APPROACH Checklist**

Fuel Selector..... Fullest tank  
 Mixture ..... Enriched  
 🛩 Landing light ..... ON  
 ⚙ Fuel Pump ..... ON  
 Approach Briefing ..... Completed  
 Altimeters (2) ..... \_\_\_, \_\_\_ ft  
 QNH, Altitude

**LANDING Checklist**

Mixture ..... RICH  
 Prop ..... Full FORWARD  
 Flaps ..... ● LANDING  
 Gear ..... DOWN, 3 Green

**GO-AROUND**

Throttle ..... Full OPEN  
 Flaps ..... ● TAKE-OFF  
 ----- continue with CLIMB Checklist -----

**AFTER LANDING Checklist**

Trim..... T/O Set  
 Flaps ..... ● RETRACTED  
 Lights ..... As required  
 🛩 Pitot Heat..... OFF  
 ⚙ Fuel Pump ..... ON  
 TKS Deicing ..... OFF

**ENGINE SHUTDOWN**

Throttle ..... 1100 RPM  
 Avionic, Horizon ..... OFF  
 Ⓢ, EFIS, AP Master, Radio Master, Horizon  
 Mixture..... CUTOFF  
 ⚡ Batterie..... OFF  
 Ignition ..... OFF  
 Electrical switches ..... All OFF

**PARKING Checklist**

Parking Brake ..... As required  
 Rudder..... Locked  
 Pitot-Cover ..... Attached

Reference speed	
Flaps	V <sub>REF</sub>
● RETRACTED (0°)	90 kts
● TAKE-OFF (10°)	85 kts
● LANDING (40°)	80 kts

**Targetspeed for Final**

$$V_{TGT} = V_{REF} + \frac{1}{2} \text{ Headwind} + \text{Gusts}$$

(min 5 kts, max 15 kts)

max. demonstrated Crosswindcomponent:  
 25 kts (T/O, Ldg)


**Autopilot Limitations:**

- minimum operating height (AGL):  
 climb, cruise: 1000 ft, approach 200 ft
- maximum airspeed: 175 kts

**Engine Fire during Engine Start**

Mixture ..... CUTOFF  
 Ignition ..... Weiter START  
 Gashebel ..... Vollgas  
 Fuel Selector..... AUS

- if Fire does not extinguish:

 Battery..... OFF  
 Ignition ..... OFF  
 Brakes ..... Release as req.  
 Fire Extinguisher..... Take along  
 Aircraft ..... Evacuate

**Wing Fire**

External Lights ..... All OFF  
 Pitot-Heat ..... OFF  
 Slip..... Perform

*keep flames away from fuel tank, cabin*

**Land as soon as possible**

**Smoke In Cabin / Electrical Fire**


**Land as soon as possible**

 Battery..... OFF  
 Generator..... OFF  
 Electrical Equipment..... All OFF

*leave Ignition on*

Demisting ..... FIRE CUTOFF  
 Cabin Temp..... FIRE CUTOFF  
 Fire Extinguisher..... Use as req.

- if electric power required:

 Battery..... ON  
 Circuit breakers..... Check  
*do not reset*


Electrical Equipment ..... ON  
*turn on required equipment one after the other*

- if Fire is confirmed extinguished:


Cabin Air ..... As required

*Air Outlets, Cabin Air Flow*

**Engine Fire in Flight**

Fuel Selector..... OFF  
 Mixture..... CUTOFF  
 Fuel Pump..... OFF  
 Throttle ..... Full OPEN  
 Demisting ..... FIRE CUTOFF  
 Cabin Temp..... FIRE CUTOFF

- when engine stops:

Ignition ..... OFF  
 Generator..... OFF

**Land as soon as possible**


*Normal Checklist included*

Throttle ..... IDLE  
 Speed..... 92 kts  
 Landing site ..... Select

*Range appr. 1,25 NM / 1000 ft*

Radio ..... Transmit Mayday  
 Transponder ..... 7700  
 Gear ..... As required  
 Flaps ..... As required

*Landing recommended*

Speed..... 70/76 kts  
 Seats ..... Upright, locked  
 Seatbelts ..... Tighten  
 Landing light ..... ON

- when landing is assured:

ELT ..... MAN  
 Touchdown... lowest poss. speed  
 Brakes ..... Apply heavily

**Oil pressure low**

*Oil annunciator on*

*Oil pressure indication in red low range*

Throttle ..... Reduce power  
*as far as possible*

- ◆ Oil-Temperature normal:

**Land at nearest suitable airfield**

- ◆ Oil-Temperature high:

Throttle ..... Reduce power

**Land as soon as possible**

**Prepare for engine failure**

**Engine Failure during Takeoff**

Throttle..... IDLE

◆ Aircraft on ground:

Brakes .....Apply

Mixture ..... CUTOFF

Ignition ..... OFF

⚡ Battery ..... OFF

Fuel Selector ..... OFF

◆ Aircraft in Flight:

Speed ..... 70 / 76 kts

Landing site..... Select

Mixture ..... Full RICH

Fuel Selector .....Other Tank

⊗ Fuel Pump..... ON

• if engine does not start:

Mixture ..... CUTOFF

Fuel Selector ..... OFF

⊗ Fuel Pump..... OFF

Gear.....As required

Ignition ..... OFF

⚡ Battery ..... OFF

Seatbelts .....Tighten

**Engine Failure during Flight**

Speed..... 92 kts

Landing site .....Select

*Range appr. 1,25 NM / 1000 ft*

⚡ Battery..... ON

⊗ Fuel Pump ..... ON

Mixture..... CUTOFF

## • if in icing conditions:

Alternate Air..... Pull out

Fuel quantity .....Check

Fuel Selector..... Other Tank

Ignition ..... BOTH

## • if prop does not turn:

Ignition ..... START

• if prop turns:

Mixture..... Slowly advance

until engine starts

• if engine does not start:

Throttle ..... IDLE

Mixture..... CUTOFF

Fuel Selector..... OFF

Ignition ..... OFF

Radio ..... Transmit Mayday

Transponder ..... 7700

Gear ..... As required

Flaps ..... As required

*Landing recommended*

Speed..... 70/76 kts

Seats ..... Upright, locked

Seatbelts ..... Tighten

## • when landing is assured:

ELT ..... MAN

⚡ Battery..... OFF

**Spin Recovery**

Flaps..... ●RETRACTED

Throttle..... IDLE

Aileron..... Neutral

Rudder.....Apply and hold

opposite direction of rotation

*Maximum deflection**Use turn coordinator if disorientation precludes determination of direction of rotation.*

Elevator ..... Move briskly forward

*Move elevator briskly forward to break the stall*

Rudder, Elevator .....Hold

until rotation stops

*Premature relaxation may extend recovery*

## • when rotation stops:

Rudder ..... Neutralize

Flightpath..... Recover smoothly

**Engine rough**

Mixture..... Readjust

*for smooth engine operation*• if engine remains rough:

RPM ..... Readjust

*for smooth engine operation***Land at nearest suitable airfield****Emergency Descent**

Throttle ..... IDLE

Speed  $V_{LO}$ ..... 129 kts

Gear .....Down


Speed  $V_{LE}$  ..... 139 kts

## • after prolonged descent:

Throttle ..... Advance slowly

*due to low cylinder head temperature*

**Alternator Failure***ALTr annunciator illuminated*

 **Generator** ..... ON  
**Voltmeter** ..... Check

 **Generator** ..... OFF, then ON

- ◆ if Voltmeter in **green** range:

Continue flight

(END)

- ◆ if Voltmeter in **red/yellow** range:

 **Generator** ..... OFF

**Battery discharge** ..... Check

**Electrical equipment** ..... OFF

*leave only essential equipment on*

**Land at nearest suitable airfield**

*max. endurance appr. 50 minutes*

**Prepare for total electrical failure**

**Total electrical failure**

**Circuit breaker** ..... Check

- if circuit breaker(s) popped:

**Circuit breaker(s)** ..... Reset once  
*only for essential equipment*

- if circuit breaker(s) pops again:  
**System inoperative**

**Radio Master Switch Failure**

- if radio navigation equipment cannot be powered due failure:

**R.M.SWITCH** circuit breaker ..... OFF  
*powers radio navigation equipment*

**Flight** ..... Continue normally

- prior engine shutdown:  
**R.M.SWITCH** circuit breaker ..... ON

**Fuel flow low**

 **Fuel Pump** ..... ON

**Fuel indications** ..... Check

*Fuel Flow, Fuel Quantity*

**Fuel Selector** ..... Other Tank

**Carbon monoxide high**

*CO-Sticker has black spots*

**Cabin Air** ..... ON, +

*Air Vents, Air Outlets, Cabin Air Flow*

**Window** ..... Open

**Land at nearest suitable airfield**

**Inadvertent Icing Encounter**

*Flight into icing conditions prohibited*

*Turn back/change altitude/leave icing conditions*

**Cabin Heat** ..... Full WARM

 **Pitot-Heat** ..... ON

**Demist** ..... ON

**Alternate Air** ..... ON

**Throttle** ..... Increase power

*to prevent ice buildup on propeller blades*

*avoid red range*

**Land at nearest suitable airfield**

- if fast/significant ice buildup:

**Land as soon as possible**

**Flaps** ..... ● RETRACTED

**RPM** ..... Change periodically

*to minimize ice accumulation on prop*

- if ice build-up at wing leading edge:

**Approach Speed** ..... + 10 kts

**Stall Speed  $V_s$**  ..... Increased

**Landedistance** ..... Increased

- if ice build-up at Elevator:

**Flaps** ..... ≤ ● TAKE-OFF

**Pitot- Static Failure**

*Wrong indication during flight*

 **Pitot-Heat** ..... ON

**Alternate Static Air** ..... ON

**Air Vents** ..... Open

**Cabin Air** ..... Increase Airflow

*Pitot- and Static error neglectable*

- if failure remains:

**Approach Speed** ..... Increase

*Stall warning should not trigger*

**Prop. Governor Failure**

**Oil pressure** ..... Check

**Oil temperature** ..... Check

**Throttle** ..... As required

**Speed** ..... Reduce

**Avoid sudden power changes**

**Caution: max. 2575 RPM**

**Door jammed**

*Cabin doors cannot be opened*

- if airplane needs to be evacuated:

**Back window(s)** ..... Kick out

*kick upper part with feet*

**Gear does not retract**

Speed  $V_{LO}$ .....  $\leq 129$  kts

◆ **3 Green Gear Lights on:**

Gear lever..... UP  
 LDG GEAR circuit breaker ...Check  
 Emergency Gear lever ..... Check if completely pushed in

• if gear does not retract:

Gear lever ..... DOWN  
 Gear indication .....3 GREEN

**Flight with extended Gear** apply

◆ **Red Gear Light on:**

**Red Gear Light on** apply

◆ **1/2 Green Gear Lights on, Red Light off:**

**Gear does not extend** apply

**Gear does not extend**

*Gear indication  $\leq 2$  Green*

⚡ Battery..... ON

Gear lever..... DOWN

LDG GEAR circuit breaker .....Check

Gear indication ..... TEST

Flaps..... ● TAKE-OFF

Speed ..... 97 kts

◆ **Red Gear Light on:**

**Red Gear Light on** apply

◆ **3 Green Gear Lights on,**

**Red Light off:**

Flaps..... ● RETRACTED

**Flight with extended Gear** apply

◆ **less than 3 Green Gear Lights on:**

**Manual Gear Extension** apply

**Flight with extended Gear**

Speed  $V_{LE}$ .....  $\leq 139$  kts

Fuel consumption .....Increased

**Land at nearest suitable airfield**

**Red Gear Light on**

*Red Gear Light illuminated*

LDG GEAR circuit breaker .....Pull

Gear lever..... DOWN

LDG GEAR circuit breaker ..Drücken

Gear indication .....Check

◆ **3 Green Gear Lights on:**

**Flight with extended Gear** apply

◆ **less than 3 Green Gear Lights on:**

**Manual Gear Extension** apply

**Manual Gear Extension**

Gear lever..... UP

Flaps ..... ● TAKE-OFF

Speed..... 97 kts

LDG GEAR circuit breaker .....Ziehen

Gear lever..... DOWN

LDG GEAR circuit breaker .....Push

Emergency Gear lever ..... PULL

Gear indication .....Check

◆ **only 1 Green Gear Light on:**

LDG GEAR circuit breaker .....Push

Emergency Gear lever .....Push

Gear lever..... UP

Perform landing with Gear UP and on soft surface (if possible)

**Landing with no/defective Gear** apply

◆ **only 2 Green Gear Lights on:**

Rudder.....Apply moderate yawing



• **less than 3 Green Gear Lights and/or red Gear Light on:**

**Landing with no/defective Gear** apply

◆ **3 Green Gear Lights on, red Gear Light off:**

**Landing with no/defective Gear** apply

**Landing with no/defective Gear***Normal Checklist included*


Heavy equipment ..... Secure  
 Fuel Selector..... Fullest Tank  
 Mixture ..... RICH  
 Landing light ..... ON  
 Fuel Pump ..... ON  
 Altimeters (2) ..... \_\_\_\_, \_\_ ft  
*QNH, Altitude*  
 Gear position ..... Verify externally  
*by ATC (Tower)*

**◆ Gear extended, locked:**

LDG GEAR circuit breaker ..... Push  
 Gear lever ..... DOWN  
 Emergency Gear lever ..... Push  
**Precautionary Landing** apply

Approach Briefing ..... Completed  
 Seats ..... Upright, locked  
 Seatbelts ..... Tighten  
 Prop ..... Full FORWARD  
 Flaps ..... • LANDING  
 Speed ..... 65-70 kts

## • when landing is assured:

Mixture ..... CUTOFF  
 Ignition ..... OFF  
 Battery ..... OFF  
 Fuel Selector ..... OFF  
 Face ..... Cushion

**◆ if Main Gear defective:**

Brakes ..... As required

**◆ if Nose Gear defective:**



• after landing of nose gear:

Brakes ..... As required

**Precautionary Landing / Ditching***Normal Checklist included*


Heavy equipment..... Secure  
*jettison as required*

**Life vests ..... Put on**

Fuel Selector ..... Fullest Tank  
 Mixture ..... RICH  
 Landing light ..... ON  
 Fuel Pump ..... ON  
 Approach Briefing ..... Completed  
 Altimeters (2) ..... \_\_\_\_, \_\_ ft  
*QNH, Altitude*

Seats ..... Upright, locked  
 Seatbelts ..... Tighten  
 Landing site ..... Select, overfly  
 Prop ..... Full FORWARD  
 Flaps ..... • LANDING  
 Speed ..... 70 / 76 kts  
 Gear ..... Down, 3 GREEN

## • when landing is assured:

ELT ..... MAN  
 Battery ..... OFF  
 Mixture ..... CUTOFF  
 Fuel Selector ..... OFF  
 Ignition ..... OFF  
 Face ..... Cushion  
 Touchdown ..... lowest poss. speed

**No Flap Landing**

*Flaps up and locked*

**Flaps circuit breaker ..... Check**

- if circuit breaker(s) popped:
  - Circuit breaker ..... **Reset once**
  - Flaps ..... **Move**
- if Flaps **do not** move:

*Normal Checklist included*

**Fuel Selector ..... Fullest Tank**

**Mixture ..... Enriched**

 **Landing light ..... ON**

 **Fuel Pump ..... ON**

**Approach Briefing ..... Completed**

**Altimeters (2) .....     ,      ft**  
*QNH, Altitude*

**Seats ..... Upright, locked**

**Seatbelts ..... Tighten**

**Speed ..... 80 kts**

*Landing distance increased by 60%*

**Mixture ..... RICH**

**Flaps ..... ● RETRACTED**

**Prop ..... Full FORWARD**

**Gear ..... Down, 3 GREEN**

**Landing without Aileron control**

*Normal Checklist included*

**Autopilot ..... OFF**

**Bank ..... Control with Rudder**

**Speed ..... ≥ 70 kts**

**Flaps ..... ● RETRACTED**

*Landing distance increased by 60%*

**Speed ..... 80 kts**

**Cabin ..... Prepare**

**Fuel Selector ..... Fullest Tank**

**Mixture ..... Enriched**

 **Landing light ..... ON**

 **Fuel Pump ..... ON**

**Approach Briefing ..... Completed**

**Altimeters (2) .....     ,      ft**  
*QNH, Altitude*

**Seats ..... Upright, locked**

**Seatbelts ..... Tighten**

**Mixture ..... RICH**

**Prop ..... Full FORWARD**

**Gear ..... Down, 3 GREEN**

**Landing without Stabilator control**

*Control aircraft with Elevator Trim and Throttle, plan a long final*

*Normal Checklist included*

**Autopilot ..... OFF**

**Cabin ..... Prepared**

**Fuel Selector ..... Fullest Tank**

**Mixture ..... Enrich**

 **Landing light ..... ON**

 **Fuel Pump ..... ON**

**Approach Briefing ..... Completed**

**Altimeters (2) .....     ,      ft**  
*QNH, Altitude*

**Seats ..... Upright, locked**

**Seatbelts ..... Tighten**

**Speed ..... 80 kts**

**Mixture ..... RICH**

**Prop ..... Full FORWARD**

**Flaps ..... ● LANDING**

**Fahrwerk ..... Down, 3 GREEN**

**Horizontal flight ..... Achieve**  
**with Elevator trim and throttle**

**Throttle ..... As required**

**Rate of descent < 500 ft/min**

**Elevator trim ..... Do NOT change**

- for landing:

**Flare out ..... witch pitch trim**

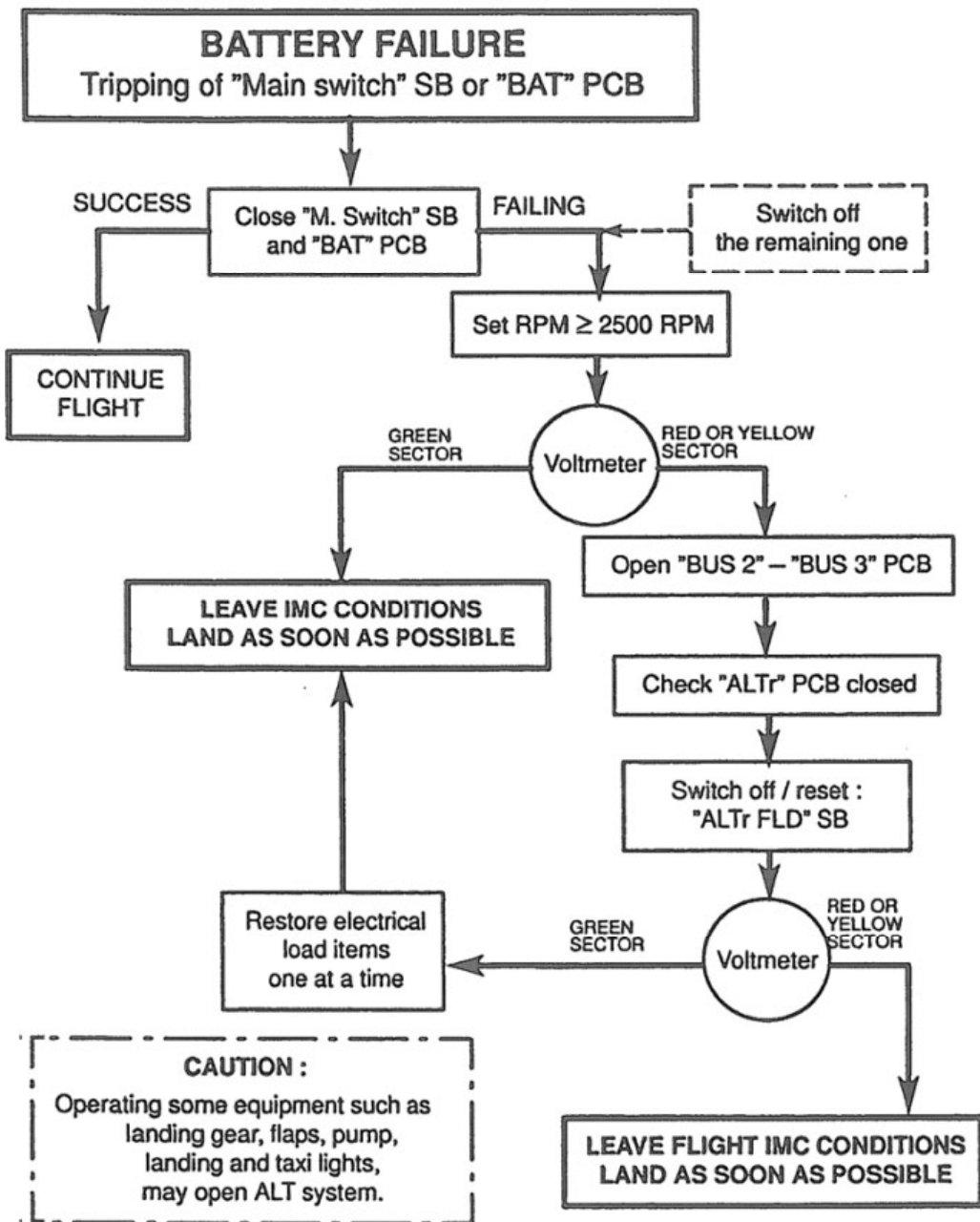
- after touchdown:

**Throttle ..... Reduce to Idle**



KEY: PCB : Pull-off type circuit breaker

SB : Switch-breaker



NOTE: WHEN BUS 3 "PULL-OFF" TYPE CIRCUIT BREAKER TRIPS, LANDING GEAR ELECTRICAL CONTROL BECOMES INOPERATIVE AND THE LANDING GEAR MUST BE EXTENDED USING EMERGENCY SYSTEM

KEY: CB : Circuit breaker

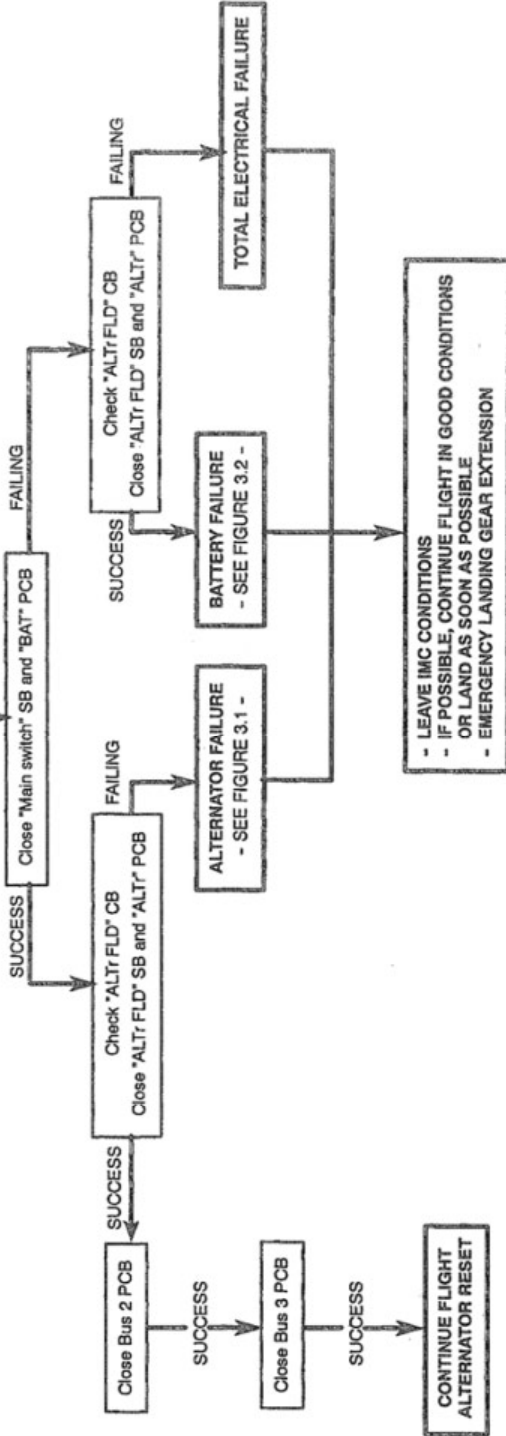
PCB : Pull-off type circuit breaker

SB : Switch-breaker

Bus : Bus bar

**TOTAL ELECTRICAL FAILURE**  
- All electrical equipment inoperative  
- Tripping of some CB

Switch off :  
- "Main switch" and "ALTr FLD" SBs  
Open :  
- "BAT" and "ALTr FLD" PCBs  
- "Bus 2" and "Bus 3" PCBs



NOTE :  
If closing of "Bus 2" or "Bus 3" PCB makes "ALTr" PCB or "ALTr FLD" SB open, pull faulty Bus PCB and close "ALTr FLD" SB.