

**Flight Checklist for Normal Operations**

Massgebend ist das AFM (Parameters, Restrictions, Emergency, etc.)

**COCKPIT PREPARATION BEFORE STARTING ENGINE**

1	Aircraft + Cockpit Inspection	COMPLETED	1
2	Seats	ADJUSTED + LOCKED	2
3	Seat Belts, Shoulder Harnesses	ADJUSTED + FASTENED	3
4	Parking Brake	SET	4
5	Electric Switches	OFF	5
6	Aspen Switch	OFF	6
7	Avionics Power Switch	OFF	7
8	Battery, Alternator	ON	8
9	Circuit Breakers	IN	9
10	Annunciator Light	CHECKED ON	10
11	Fuel Quantity	CHECKED	11
12	Fuel Selector	BOTH	12
13	Mixture	RICH	13
14	Carburetor Heater	OFF	14
15	Elevator Trim	SET for TAKE-OFF	15
16	Flaps	UP	16

**STARTING ENGINE**

1	Priming	AS REQUIRED	1
2	Throttle	0,5 CM OPEN	2
3	Propeller Area	FREE	3
4	Starter	ENGAGED	4
5	Oil Pressure	RAISED	5
6	Throttle	1000 - 1200 RPM	6
7	Primer	SECURED	7

**AFTER ENGINE START CHECK**

1	Oil Pressure	CHECKED	1
2	Alternator Output	CHECKED	2
3	Annunciator Light	OFF	3

**BEFORE TAXI**

1	Ventilation, Heater	AS REQUIRED	1
2	Aspen + Flarm Switches	ON	2
3	Avionics Power Switch	ON	3
4	Avionics	SET + PRESELECTED	4
5	Flight Instruments	SET	5
6	Taxi Light	ON	6

**TAXI CHECK**

1	Brakes, Steering	CHECKED	1
2	Gyro Instruments	CHECKED	2

Motorfluggruppe Langenthal	<b>Checklist Cessna 172</b>	v1.8 Jan18	<b>2</b>
<b>RUN-UP</b>			
1	Parking Brake	SET	1
2	Taxi Light	OFF	2
3	Engine Temperature	GREEN	3
4	Throttle	1700 RPM	4
5	Alternator Output	CHECKED	5
6	Engine Instruments	CHECKED GREEN	6
7	Annunciator Light	CHECKED OFF	7
8	Magnetos	CHECKED (Drop RPM < 125 / Diff < 50)	8
9	Carburetor Heater	CHECKED	9
10	Mixture	CHECKED	10
11	Throttle	IDLE (500 - 700 RPM)	11
12	Throttle	1000 RPM	12
<b>DEPARTURE CHECK</b>			
1	Seat Belts, Shoulder Harnesses	FASTENED	1
2	Fuel Quantity	CHECKED	2
3	Fuel Selector	BOTH	3
4	Mixture	RICH / AS REQUIRED	4
5	Carburetor Heater	OFF	5
6	Magnetos	BOTH	6
7	Primer	SECURED	7
8	Throttle Friction Lock	SET	8
9	Avionics	SET	9
10	Flight Instruments	SET	10
11	Elevator Trim	TAKE-OFF	11
12	Flaps	SET, 1st STEP	12
13	Controls	FREE and CORRECT	13
14	Doors, Windows	CLOSED	14
<b>DEPARTURE BRIEFING</b>			
1	Surface Wind, $V_x$ 60 KIAS $V_y$ 76 KIAS		
2	Routing, Altitude, Restrictions		
3	Emergencies, Best Glide 65 KIAS		
<b>LINE-UP</b>			
1	Approach Sector, Runway	CHECKED FREE	1
2	Lights (Landing Light, Rotating Beacon)	ON	2
3	Wind, Runway Heading	CHECKED	3
4	Transponder	SET 7000 or ACCORDING ATC	4
<b>TAKE-OFF</b>			
1	Brakes	RELEASED	1
2	Power	FULL OPEN, RPM CHECKED	2
3	Speed	RISING	3

**CLIMB CHECK**

1	Flaps	UP (> 60 KIAS)	1
2	Power	CHECKED	2

**CRUISE CHECK**

1	Flight / Engine Instruments	CHECKED	1
2	Cruise Power Setting	ACCORDING AFM	2
3	Mixture Setting / Fuel	CHECKED	3

**DESCENT CHECK**

1	ATIS	RECEIVED	1
2	Flight Instruments, Avionics	SET	2
3	Cabin	CHECKED	3

**APPROACH BRIEFING**

- 1 Runway in Use
- 2 Routing, Altitude, Restrictions
- 3 Missed Approach Procedure
- 4 Surface Wind, Final Approach Speed

**APPROACH PREPARATION**

1	Altimeters	SET	1
2	Landing Light	CHECKED ON	2
3	Fuel Quantity	CHECKED	3
4	Fuel Selector	BOTH	4
5	Mixture	RICH	5
6	Carburetor Heater	AS REQUIRED	6
7	Flaps	AS REQUIRED Flaps 1 < 110 KIAS Flaps 2/3 < 85 KIAS	7

**FINAL CHECK**

1	Flaps	SET	1
2	Final Approach Speed	ESTABLISHED	2
3	Brakes (pressure)	CHECKED	3
4	Carburetor Heater	OFF	4

**GO AROUND**

1	Throttle	FULL POWER	1
2	Carburetor Heater	OFF	2
3	Attitude	ROTATE (> 60 KIAS)	3
4	Flaps	UP (slowly retract)	4

**AFTER LANDING**

1	Landing Light, Rotating Beacon	OFF	1
2	Flaps	UP	2

### ENGINE SHUT DOWN

1	Electrical Consumers	OFF	1
2	Avionics	121.500 CHECKED	2
3	Aspen Switch	OFF	3
4	Avionics Power Switch	OFF	4
5	Mixture	CUT OFF	5
6	Ignition	OFF	6
7	Alternator, Battery	OFF	7
8	Flight Time Counter	NOTED	8

### SPEEDS FOR OPERATION AT MAXIMUM TAKE-OFF MASS (MTOM)

Rotate / Lift Off	Flaps 1	(45) / 54	KIAS
Best Angle $v_x$ (Sea Level / 10000 ft)	Flaps up	60 / 65	KIAS
Best Rate $v_y$ (Sea Level / 10000 ft)	Flaps up	76 / 71	KIAS
Cruise Climb (above 2000 ft AGL)	Flaps up	90	KIAS
Approach	Flaps 1	80	KIAS
Final Approach (Short Field / Normal)	Flaps 3	61 / 65	KIAS
Go Around / Touch And Go before	Flaps up	> 60	KIAS
Best Glide	Flaps up	65	KIAS
Best Glide	Flaps 1	60	KIAS
Maneuvering Speed $v_A$		99	KIAS
Max. Demonstrated Crosswind		15	KT

### POWER SETTINGS

Take-Off and Climb	Full Power
Cruise and Descend up to 5000 ft AMSL	2300 RPM
Cruise and Descend above 5000 ft AMSL	2400 RPM
Approach Descend	2200 RPM
Circuit	2000 RPM

### LOADING HB-CIA

MTOM	1089 kg
	Max. Cabin Load remaining
Empty (including 4 USG unusable fuel)	703 kg => 386 kg
Usable Fuel, 50 USG	136 kg => 250 kg

### PRIMING TABLE

Engine Cold	-10 °C	0 °C	+10 °C	+20 °C	+30 °C
Primer Pump	3-4	1-2	0	0	0
Throttle	0	0	2	1-2	1
Engine Hot	-10 °C	0 °C	+10 °C	+20 °C	+30 °C
Primer Pump	0	0	0	0	0
Throttle	1-3	1	0-1	0	0

## Flight Checklist for Emergency

Massgebend ist das AFM

# **FIRE ON GROUND**

<b>1 Starter</b>	<b>CRANKING ENGINE</b>	<b>1</b>
<b>IF ENGINE STARTS</b>		
<b>2 Power</b>	<b>1700 RPM for a few minutes</b>	<b>2</b>
<b>3 Engine</b>	<b>SHUT DOWN and inspect</b>	<b>3</b>
<b>IF ENGINE FAILS TO START</b>		
<b>4 Throttle</b>	<b>FULL OPEN</b>	<b>4</b>
<b>5 Mixture</b>	<b>IDLE CUT OFF</b>	<b>5</b>
<b>6 Starter</b>	<b>CRANKING continue</b>	<b>6</b>
<b>7 Fire Extinguisher</b>	<b>OBTAIN</b>	<b>7</b>
<b>8 Battery, Alternator</b>	<b>OFF</b>	<b>8</b>
<b>9 Ignition</b>	<b>OFF</b>	<b>9</b>
<b>10 Fuel Selector Valve</b>	<b>OFF</b>	<b>10</b>
<b>11 Pax and Crew</b>	<b>EVACUATE</b>	<b>11</b>

# **FIRE IN FLIGHT**

## **ELECTRICAL FIRE (Smoke in cabin)**

<b>1 Battery, Alternator</b>	<b>OFF</b>	<b>1</b>
<b>2 Vents/Cabin Air/Heat</b>	<b>CLOSED</b>	<b>2</b>
<b>3 Fire Extinguisher</b>	<b>ACTIVATE (if available)</b>	<b>3</b>
<b>4 All Other Switches (except ignition)</b>	<b>OFF</b>	<b>4</b>

## **ENGINE FIRE**

<b>1 Mixture</b>	<b>IDLE CUT OFF</b>	<b>1</b>
<b>2 Fuel Selector Valve</b>	<b>OFF</b>	<b>2</b>
<b>3 Battery, Alternator</b>	<b>OFF</b>	<b>3</b>
<b>4 Cabin Heat and Air</b>	<b>OFF (except overhead vents)</b>	<b>4</b>
<b>5 Airspeed</b>	<b>100 KIAS (try to find an airspeed which provides an incombustible mixture)</b>	<b>5</b>

## **PREPARE FOR POWER OFF EMERGENCY LANDING**

## ***ENGINE POWER LOSS IN FLIGHT***

### **RESTART PROCEDURES**

<b>1 Attitude</b>	<b>65 KIAS</b>	<b>1</b>
<b>2 Carburetor Heater</b>	<b>ON</b>	<b>2</b>
<b>3 Fuel Selector Valve</b>	<b>BOTH</b>	<b>3</b>
<b>4 Mixture</b>	<b>RICH</b>	<b>4</b>
<b>5 Magnetos</b>	<b>BOTH</b>	<b>5</b>
<b>6 Primer</b>	<b>IN and LOCKED</b>	<b>6</b>

## ***EMERGENCY LANDING***

**TRIM FOR BEST GLIDE 65 KIAS (FLAPS UP) 60 KIAS (FLAPS DOWN)  
LOCATE SUITABLE FIELD  
WHEN THE LANDING FIELD CAN EASILY BE REACHED**

<b>1 Seat Belts, Shoulder Harnesses</b>	<b>FASTENED</b>	<b>1</b>
<b>2 Mixture</b>	<b>IDLE CUT OFF</b>	<b>2</b>
<b>3 Fuel Selector Valve</b>	<b>OFF</b>	<b>3</b>
<b>4 Ignition</b>	<b>OFF</b>	<b>4</b>
<b>5 Flaps</b>	<b>AS DESIRED</b>	<b>5</b>
<b>6 Battery, Alternator</b>	<b>OFF</b>	<b>6</b>
<b>7 Doors</b>	<b>UNLATCH prior touchdown</b>	<b>7</b>
<b>8 Touchdown</b>	<b>SLIGHTLY TAIL LOW</b>	<b>8</b>

## ***RADIO FAILURE***

<b>1 Radio</b>	<b>ON</b>	<b>1</b>
<b>2 Volume</b>	<b>TEST</b>	<b>2</b>
<b>3 Frequency</b>	<b>CHECKED</b>	<b>3</b>
<b>4 Headset / Mike Plugs</b>	<b>CHECKED</b>	<b>4</b>

### **IF NO RADIO CONTACT**

<b>5 Transponder</b>	<b>7600 (if necessary)</b>	<b>5</b>
<b>6 Procedure</b>	<b>ACCORDING AIP</b>	<b>6</b>