



*: nur beim ersten Flug des Tages
Schnee, Eis, Raureif immer vollständig entfernen

1 Kabine

Notwendige Papiere Vorhanden
Bord-, Flughandbuch, Checklisten, Abfangverfahren
 Notausrüstung Prüfen, gesichert
 Ruderverriegelung Entfernen
 Tankwahlschalter BEIDE
 Deckenschalter Alle AUS
 BATT MASTR AN
 PFD Prüfen
 Kraftstoffvorrat Prüfen

• bei Flügen in der Nacht

Innenbeleuchtung AN, Prüfen
Externen Lichter Alle AN, Prüfen
Taschenlampe Mitführen, Prüfen

BATT MASTR AUS
 ELT ARMED
 *Landeklappen 40°
 Peilstab, *Drain-Becher Entnehmen

2 Rechte Flügelhinterseite

Landeklappen Prüfen
 Querruder Freigängig, Zustand prüfen
 Randbogen, Positionsleuchte Prüfen

3 Rechte Flügelvorderkante

Flügel-Verankerung Lösen
 Tankbelüftung Frei
 Kraftstoffvorrat mit Peilstab prüfen
 Tankdeckel Schliessen
 Reifen Prüfen
 Flügelvorderkante Prüfen
 *Flächentank Drainen

4 Flugzeugnase

Ölstand (min. 6 QUarts) Prüfen
 Sichtkontrolle Motorraum Durchführen
 Motorabdeckung Prüfen
 Propeller Prüfen
 Alternator Keilriemen Spannung prüfen
 Triebwerk-Kühllufteintritte Prüfen
 Luftfilter Prüfen
 Landescheinwerfer Unbeschädigt
 Bugrad, Reifen, Federbein Prüfen
 *Spritfilter-Ablaßventil Drainen

5 Linke Flügelvorderkante

Lüftungsöffnung Frei
 Kraftstoffvorrat mit Peilstab prüfen
 Tankdeckel Schliessen
 Reifen Prüfen
Bremsen, Rutschmarkierung, Reifenprofil
 *Flächentank (5) Drainen
 Flügel-Verankerung Lösen
 Pitot-Schutz Entfernen
 Pitotrohr Prüfen
 Flügelvorderkante, Strebe Prüfen
 Tankbelüftung Prüfen
 Überziehwarnung Prüfen
Sauberkeit und Funktion
 OAT Sensor Frei

6 Linke Flügelhinterseite

Randbogen, Positionsleuchte Prüfen
 Querruder Freigängig, Zustand prüfen
 Landeklappen Prüfen

7 Leitwerk

Öffnungen für statischen Druck Prüfen
 Seitenrudereinstellvorrichtung Entfernen
 Heckverankerung Lösen
 Flugzeug-Unterseite Prüfen
 Ruder Freigängig
 Ruder, Trimmung Zustand prüfen
Anschlüsse, Steuerseile, Anschlagsschrauben
 Positionsleuchte Unbeschädigt
 Beacon Unbeschädigt
 Antennen Prüfen
 Gepäckraumtür Prüfen, verriegeln

COCKPIT Checklist

Preflight-Inspection Completed
 Hobbs Hour..... Note
 Seats, Seatbelts..... Locked
 Overhead switches All OFF
 elec. Switches, Avionic OFF
 Flight Controls, Trim..... Checked
 Static, Pitot Drained
 Alternate Static..... OFF
 Flaps..... UP

STARTING ENGINE Checklist

BATT MASTR, ALTR ON
 Strobe Lights FIN
 Annunciator Panel Checked
 Carburetor Heat..... OFF
 Fuel Selector..... Lowest Tank
 Door Unlatched

ENGINE START

Brakes Set
 • if Start with External Power
 Battery, Elec. Equipment OFF
 Ext. Power..... Connect, then ON
Mixture RICH
Throttle..... OPEN 6 mm
hot engine: 1 cm
Fuel Pump..... ON
Mags L / L & R as req.
Prime As required
Prop area..... Clear
Ignition START
 • if cold Engine does not start ≤ 10 sec
 Prime..... as required
 Ignition..... START
Throttle..... 1000 RPM
Oil pressure Check
 • if Start with External Power
 Throttle Lowest possible RPM
 Ext. Power..... OFF, then disconnect
Mags L & R ON
Annunciator Panel Check
Mixture As required
 Horizont Standby Battery Check
 Gyro Warn. Flag..... Not dispalyed
 STBY PWR Press ≥ 4 sec.
 • if amber LED stops flashing
 Test light..... Check

AFTER START Checklist

Fuel Pump OFF
 Radio Master..... ON
 A/P / FD Master ON
 Transponder ID ____, GND / ALT
VFR US: 1200, Europe: 7000
 Altimeters (2) ____, __ ft
QNH, Elevation
 Gyro-instruments Checked
 Fuel Computer..... Set
 Fuel Selector..... Other tank
 Circuit breakers Checked
 Door Closed

TAXI Checklist

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

ENGINE CHECK

Brakes Set
Doors, windows..... Closed
Engine-Instruments Check
Mixture..... Full RICH
Throttle..... 2000 RPM
Ammeter (MFD) Check
Mags (2) Check, BOTH
RPM drop ≤ 175, diff. ≤ 50
Carburetor heat Check, OFF
Vacuum Gauge..... CHK
4,9 - 5,1 inch
Throttle..... IDLE, then 1000 RPM
Circuit breakers..... Check

TAKE-OFF Checklist

Tracking/Timing..... START
 Flaps UP / 25°
 Trim..... T/O Set
Mixture..... Set
>3000 ft: Full Pwr, then LEAN for max RMP
 Transponder GND / ALT
 Air condition (Fan) OFF
 Fuel Pump ON
 Fuel Selector..... Fullest Tank
 ----- immediately prior line up -----
Lights..... As required
Pitot Heat..... As required

V_R 55 kts

CLIMB Checklist

Flaps UP
 Fuel Pump OFF
 Lights As required
 ----- when passing Transition Altitude -----
 Altimeters (2) Standard, ___ ft

APPROACH Checklist

Air condition (Fan) OFF
 Carburetor heat As required
 Mixture Enriched
 Landing light ON
 Fuel Pump ON
 Fuel Selector Fullest tank
 Approach Briefing Completed
 Altimeters (2) ___, ___ ft
 QNH, Altitude

LANDING Checklist

Flaps ___
 Carburetor heat ON
 Mixture RICH

GO-AROUND

Throttle Full OPEN
 Flaps 10°
 Carburetor heat OFF
 continue with CLIMB Checklist

AFTER LANDING Checklist

Flaps UP
 Trim T/O Set
 Carburetor heat OFF
 Pitot Heat OFF
 Lights As required
 Fuel Pump OFF

ENGINE SHUTDOWN

Throttle 1000 RPM
 Air condition (Fan) OFF
 FD / A/P MASTR OFF
 Avionic OFF
 Mixture CUTOFF
 Electrical switches All OFF
 Overhead switches All OFF
 turn off all switches from right to left

PARKING Checklist

Parking Brake As required
 Rudder Locked
 Tracking/Timing Stop
 Hobbs Hour Note
 Pitot-Cover Attached

Reference speed

Clappen	V _{REF}	Training
UP	65 kts	70 kts
10°		
25°	64 kts	65 kts
40°	59 kts	60 kts

Targetspeed for Final

$V_{TGT} = V_{REF} + \frac{1}{2} \text{ Headwind} + \text{Gusts}$
 (min 5 kts, max 15 kts)

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

Mixture setting (leaning)

Taxiing: lean until 25-50 RPM rise or RPM drops.
 Cruise with exhaust gas temperature (EGT):

lean Mixture until peak EGT. Thereafter turn Mixture clockwise until EGT drops app. 100°F below peak („rich-of-Peak“)

Cruise with „Lean-assist“:

set power (RPM), then select MFD Engine - Lean Assist

Descent (rule of thumb):

2 turns clockwise per 1000 ft or per 3 NM distance to destination

Autopilot Limitations:

- maximum Flaps: 10°
- minimum operating height (AGL): during approach 200 ft, else 800 ft
- maximum airspeed: 135 kts
- minimum airspeed: 76 kts

Short/Soft Field Takeoff

Flaps 25°

• if Soft Field Takeoff

Elevator during Taxi FULL BACK

Trim NOSE DOWN

do not stop prior T/O

Accelerate TAIL LOW

level off in Ground Effect and accelerate.

V_R 52 kts

until clear of obstacles

Climb

Flaps/Speed (Best Angle) ... 10°/63 kts

Flaps/Speed (Best Rate) UP/79 kts

Enroute 87 kts

Engine Fire during Engine Start

Starter..... Keep ON
 Mixture CUTOFF
 Throttle..... Full OPEN
 Fuel Pump..... OFF
 Fuel Selector..... OFF

Brakes Off as required
 Fire extinguisher Take along
 Aircraft Evacuate

Engine Fire in Flight**Land as soon as possible**

Fuel Selector..... OFF
 Throttle IDLE
 Mixture..... CUTOFF
 Fuel Pump OFF
 Cabin heat, Defroster OFF

Normale Checklist included

Speed..... 76 kts
 Landing site Select

Range appr. 1,9 NM / 1000 ft

Ignition (2) OFF
 Radio Transmit Mayday
 Transponder 7700
 Air condtion (Fan) OFF
 Altimeters (2) ____, __ ft
QNH, Altitude

• when landing is assured:

BATT MASTR, ALTR OFF
 ELT..... ON
 Flaps As required

40° recommended

Speed..... 66 kts
 Seatbelts Tighten

Oil pressure low

♦ Oil temperatur normal:

Land at nearest suitable airfield**Prepare for engine failure**

♦ Oil temperatur hoch:

a. **Oil temperatur high** apply**Wing Fire**

External Lights All OFF
 Pitot heat OFF
 Slip..... Perform

*keep flames away from fuel tank, cabin***Land as soon as possible***land with Flaps 0°: V_{REF} 70 kt***Smoke In Cabin / Electrical Fire****Land as soon as possible**

BATT MASTR, ALTR OFF
 Cabin air ON
 Cabin heat OFF
 Fire extinguisher As required

Carbon monoxide high*CO-Sticker has black spots*

Cabin heat..... OFF
 Cabin air ON
 Vents..... Open
 Window..... Open

Land at nearest suitable airfield**Spin Recovery**

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

Oil temperatur high

Throttle Reduce power
Land as soon as possible
Prepare for engine failure

Engine Failure in Takeoff

Throttle IDLE

◆ Aircraft on ground:

Brakes Apply
 Mixture CUTOFF
 Ignition OFF
 Master (Bat, Alt) OFF

◆ Aircraft in Flight:

Speed 66 kts
 Landing site Select
 Ignition (2) OFF
 Fuel Selector OFF
 Mixture CUTOFF
 BATT MASTR, ALTR OFF
 Flaps As required
40° recommended

Speed 66 kts
 Seatbelts Tighten

Engine Failure in Flight

Speed 76 kts

Landing site Select

Range appr. 1,9 NM / 1000 ft

Fuel Selector Full Tank

Fuel Pump ON

Mixture RICH

Carburetor heat ON

Engine instruments Check

• if no fuel flow indicated:

Fuel Selector Other Tank

reaction may take up to 10 seconds◆ if engines starts:

Carburetor heat OFF

Fuel Pump OFF

Mixture As required

◆ if engines does not start:

Throttle IDLE

Ignition (2) OFF

Fuel Selector OFF

Mixture CUTOFF

Radio Transmit Mayday

Transponder 7700

• when landing assured:

BATT MASTR, ALTR OFF

Flaps As required

40° recommended

Speed 66 kts

Seatbelts Tighten

Engine rough

Carburetor heat ON

• if after one minute engine rough:

Carburetor heat OFF

Mixture Readjust

for smooth engine operation

Fuel Pump ON

Fuel Selector Other tank

Engine instruments Check

Ignition (MAG) Check on L

• if engine rough:

Ignition (MAG) Check on R

• if engine rough:

Ignition (MAG) BOTH

• if engine runs satisfactory on one magneto:

1. Ignition (MAG) Keep present

2. Throttle Reduce

3. Mixture RICH

Land at nearest suitable airfield**Prepare for engine failure****Door open**

Speed 87 kts

Vents Close

Storm window Open

◆ Side and upper latches open:

pull on armrest while moving side

latch handle to latched position

Upper latch Latch

◆ Side latch open:

pull on armrest while moving latch

handle to latched position

◆ Upper latch open:

Upper latch Latch

Electrical Failures*Low Bus Voltage Light illuminated (<25 V)*

Ammemeter Check

◆ **Generator-Warninglight on /****Ammeter shows 0:**

ALTR..... OFF

Electrical Equipment OFF

reduce to minimum

ALT circuit breaker Check

reset once as required

• after 1 second:

ALTR..... ON

• if power **not** restored:

ALTR..... OFF

Electrical equipment..... OFF

*leave only essential equipment on***Land at nearest suitable airfield****Prepare for total electrical failure**◆ **Electrical overload:**

ALTR..... ON

BATT MASTR..... OFF

◆ Ammeter load reduced:

Electrical equipment..... OFF

*leave only essential equipment on***Land at nearest suitable airfield**◆ Ammeter load **not** reduced:

ALTR..... OFF

BATT MASTR..... As required

Land at nearest suitable airfield**Prepare for total electrical failure****ENG Flooded Start***Normal Checklist Integrated*

Brakes Set

Mixture..... CUTOFF

Throttle Full OPEN

Fuel Pump OFF

Mags L / L & R as req.

Prop Area Clear

Ignition START

• if Engine fires

Mixture..... FULL RICH

Throttle 800-1200 RPM

Oil pressure Check

Mags L & R ON

Annunciator Panel Check

Mixture..... As required

Horizont Standy Battery Check

Gyro Warn. Flag Not dispalyed

STBY PWR Press ≥ 4 sec.

• if amber LED stops flashing

Test light Check

Fuel pressure low

Fuel Pump ON

Fuel Selector..... Fullest tank

Mixture Readjust