



## 4. NORMAL PROCEDURES # 1/2

### 4.2 Recomm. speeds for normal procedures

Climbing speed up to 50 ft (flaps in take-off pos. - 15°)	55 KIAS 63 mph 102 km/h
Best rate-of-climb speed VY (flaps in take-off pos. - 15°)	55 KIAS 63 mph 102 km/h
Best rate-of-climb speed VY (flaps retracted - 0°)	62 KIAS 71 mph 115 km/h
Best angle-of-climb speed VX (flaps in take-off pos. - 15°)	52 KIAS 60 mph 96 km/h
Best angle-of-climb speed VX (flaps retracted - 0°)	54 KIAS 62 mph 100 km/h
Approaching speed for normal landing (flaps in landing position - 50°)	48 KIAS 55 mph 89 km/h

### 4.5.1 Before engine starting

1. Pre-flight check and check on weight and centre of gravity position done
2. Safety harnesses check, fasten
3. Control stick free
4. Rudder pedals free
5. Wing flaps function check
6. Trim tab function check
7. Parking brake handle release brakes
8. Brakes function check
9. Ignition OFF
10. Canopy close

### 4.5.2 Engine starting

1. Master switch ON
2. Fuel gauge indicators check of fuel quantity
3. FUEL SELECTOR LEFT

Pull the safety button on the fuel selector, turn the handle to the left and then release safety button. Now the handle can be freely moved between left and right position. Safety button prevents unintentionally switch the selector to OFF position.

4. Electric fuel pump (if installed) ON
5. THROTTLE lever idle
6. Choke as necessary  
(open by pulling up and lock by turning)
7. Space in the propeller area free
8. BEACON (if installed) ON (if necessary)
9. Ignition START

(see CAUTION) after starting up BOTH

#### CAUTION

Activate starter for 10 sec. As a maximum, then let it cool down for 2 minutes. After starting up engine, do not carry out sudden rpm changes, after power decrease wait for about 3 s in order to reach constant rpm before reacceleration.

10. THROTTLE lever as necessary (see NOTE)
11. Oil pressure up to 10s min. pressure
12. Electric fuel pump (if installed) OFF

#### NOTE

After starting up engine, adjust throttle for smooth engine running at about 2500 RPM. Check oil pressure. Pressure must increase within 10s. Increase engine RPM until oil pressure is stabilised over 2 bar (29 PSI). Electric fuel pump operates during engine starting period only. It is not intended for long continuous operation for long time.

13. Engine instruments check
14. Choke as necessary
15. Engine warming up see NOTE

#### NOTE

Begin warming up with engine running at 2000 RPM. for about 2 minutes, continue at 2500 RPM. Warming time depends on outside air temperature until oil temperature reaches 50 °C (122 °F).

### 4.5.2 Engine starting (contin.)

16. FUEL SELECTOR RIGHT  
Verify proper engine feeding from the right tank for approx. 1 minute.
17. FUEL SELECTOR LEFT

#### NOTE

Start engine with the fuel selector set to to LEFT. If you would start the engine with the fuel selector set to RIGHT and the left tank is full, than fuel bleed from the left tank vent may occur (and pollute environment) because a fuel return hose is led only into the left tank and returning fuel will overflow the left tank.

18. Radiostation/avionics ON
19. Other electrical equipment ON as necessary

### 4.5.3 Before taxiing

1. Transponder (if installed) SBY
2. Outside lights (if installed) as necessary

### 4.5.4 Taxiing

1. THROTTLE lever as necessary
2. Brakes check by depressing
3. Rudder pedals function check
4. Direction of taxiing control by rudder pedals (these are mechanically connected with nose wheel control), possibly by slacking up left and right wheel of the main landing gear.

### 4.5.5 Before take-off

1. Brakes brake
2. Ignition check carry out, see NOTE

#### NOTE

Carry out ignition check in the following way :

Set engine speed to 4000 RPM. Switch ignition gradually to L, BOTH, R position and return to BOTH.. RPM drop with one ignition circuit switched off must not exceed 300 RPM. Maximum RPM difference at using one of the L or R circuits is 120 RPM.

3. Engine instruments check
4. Control stick free
5. Wing flaps take-off pos. (15°)
6. Trim NEUTRAL
7. Fuel gauge indicator check on fuel quantity
8. Fuel selector check LEFT
9. Carburettor preheater (if instal.) check function  
then OFF

#### NOTE

If CARBURETTOR PREHEATER is switched ON, then engine RPM drop reaches approximately 50 RPM

10. Engine instruments check
11. Flight instruments check
12. Radiostation / avionics check, set
13. Ignition check BOTH
14. Choke close (in inserted position)
15. Master switch check ON
16. Safety harnesses tighten up
17. Canopy closed
18. Transponder (if installed) ON or ALT



## 4. NORMAL PROCEDURES # 2/2

### 4.5.6 Take-off

1. THROTTLE lever max. take-off power
2. During take-off run smoothly lighten up the nose landing gear until airplane take-off occurs.
3. Airspeed 55 KIAS / 63 mph / 102 km/h
4. Brakes brake
5. After reaching 150 ft, set flaps to retracted pos. (0°)
6. Trim as necessary

#### WARNING

Take-off is prohibited:

- if engine running is irregular
- if choke is open
- if values of engine instruments are not within the required range

### 4.5.7 Climb

1. Throttle lever max. continuous power
2. Airspeed IAS  
VY = 62 KIAS / 71 mph / 115 km/h for the best rate of climb or  
VX = 54 KIAS / 62 mph / 100 km/h for the best angle of climb
3. Engine instruments check
4. Trim as necessary

### 4.5.8 Cruise

1. THROTTLE lever as necessary
2. Airspeed max. 103 KIAS / 118 mph / 190 km/h
3. Engine instruments check
4. Fuel quantity check

#### CAUTION

Fuel gauges display true fuel quantity only on ground and in a level flight. To read true fuel quantity after transition from climb/descent wait approx. 2 minutes to fuel to level.

#### NOTE

It is recommended to alternately switch the tanks during cruise to equally consume fuel from both tanks and minimize airplane tendency to bank with unbalanced tanks. Do not fly with the fuel selector set to RIGHT if the left tank is full to avoid fuel bleed from left tank vent. When the left tank fuel gauge indicates approx. 1/8 of fuel quantity (needle in the middle between 1/4 and 0) then switch to the right tank to consume remaining fuel and then switch back the left tank to complete the flight at left tank. If the engine conks out due to fuel consumption from either tank, then immediately switch the fuel selector to other tank and engine run will be recovered within 7 seconds.

5. Carburettor preheater (if installed) as necessary

### 4.5.9 Descent

1. THROTTLE lever as necessary
2. Trim as necessary
3. Engine instruments check
4. CARBURETTOR PREHEATER as necessary (if installed)

#### CAUTION

At long approaching and descending from high altitude it is not suitable to reduce throttle to minimum for the reason of possible engine undercooling and subsequent loss of power. perform descending at increased idle and check observance of the allowed values on engine instruments.

### 4.5.10 Before landing

1. Fuel quantity check
- CAUTION**
- Fuel gauges display true fuel quantity only on ground and in a level flight. To read true fuel quantity after transition from climb/descent wait approx. 2 minutes to fuel to level.
2. FUEL SELECTOR LEFT
  3. Engine instruments check
  4. Brakes check  
by depressing pedals  
tighten up
  5. Safety harnesses check
  6. Free area of landing check
  7. CARBURETTOR PREHEATER ON (if installed)
  8. Approaching speed 59 KIAS / 68 mph / 110 km/h
  9. Flaps take-off pos. (15°)
  10. Trim as necessary

#### FINAL

11. Flaps landing (30° or 50°)
12. Maintain airspeed 48 KIAS / 55 mph / 90 km/h
13. Trim as necessary
14. CARBURETTOR PREHEATER ON (if installed)

### 4.5.11 Bailed landing

1. THROTTLE lever max. take-off power
2. Flaps take-off pos. (15°)
3. Airspeed 55 KIAS / 63 mph / 102 km/h
4. Flaps in 150 ft retracted pos. (0°)
5. Trim as necessary
6. THROTTLE lever max. continuous power
7. Instruments check
8. Climb at airspeed 62 KIAS / 71 mph / 115 km/h

### 4.5.12 Landing

1. THROTTLE lever idle
2. Touch-down on main landing gear wheels carry out
3. Brakes after nose landing gear wheel touch-down as necessary

### 4.5.13 After landing

1. Flaps retracted pos. (0°)
2. Trim NEUTRAL
3. Outside lights (if installed) OFF
4. Transponder (if installed) OFF

### 4.5.14 Engine shut-off

1. THROTTLE lever idle
2. Engine instruments check
3. Radiostation / avionics OFF
4. Other electrical equipment OFF
5. Ignition OFF
6. BEACON (if installed) OFF
7. Master switch OFF

### 4.5.15 Airplane parking

1. Ignition check OFF
2. Master switch check OFF
3. FUEL SELECTOR OFF

Pull the safety button on the fuel selector, turn the handle to the OFF position and then release safety button. Now the handle is blocked in the OFF position. Safety button prevents unintentionally switch the selector from the OFF position.

4. PARKING BRAKE handle (if installed) brake as necessary
5. Canopy close, lock as necessary.

#### NOTE

It is recommended to use parking brake (if installed) for short-time parking only, between flights during a flight day. After ending the flight day or at low temperatures of ambient air, do not use parking brake, but use the wheel chocks instead.