



**CAVOK Aviation Training Ltd.**

**Flight Procedures**  
***Tecnam P2002-JF type***

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## 1. Foreword

This guide has been prepared to provide pilots with information for the flight procedures based on the Aircraft Flight Manual. It is the responsibility of the pilot to study carefully the AFM, a deep knowledge of airplane features and limitations is essential for operating the airplane safely. Subtle differences in this document compared to the AFM are company based procedures that ensures the improvement of flight safety. The content of this document is approved by the Head of Training.

## 2. Flight preparation

### 2.1. Aircraft weight and CG definition, performance calculation

Based on the calculation method in the AFM define the aircraft **take-off weight** and CG position according the actual traffic load and ramp fuel. Also define the **landing weight** and CG position calculating with the estimated fuel consumption.

**Section 5 PERFORMANCES** in the **AFM** provides all necessary data for an accurate and comprehensive planning of flight activity from take-off to landing. Given information in that section is sufficient to plan the flight with the required precision and safety.

## 3. Pre-flight check

This chapter is an extract from **AFM Section 4 NORMAL PROCEDURES**. For detailed information about pre-flight inspections refer to that section.

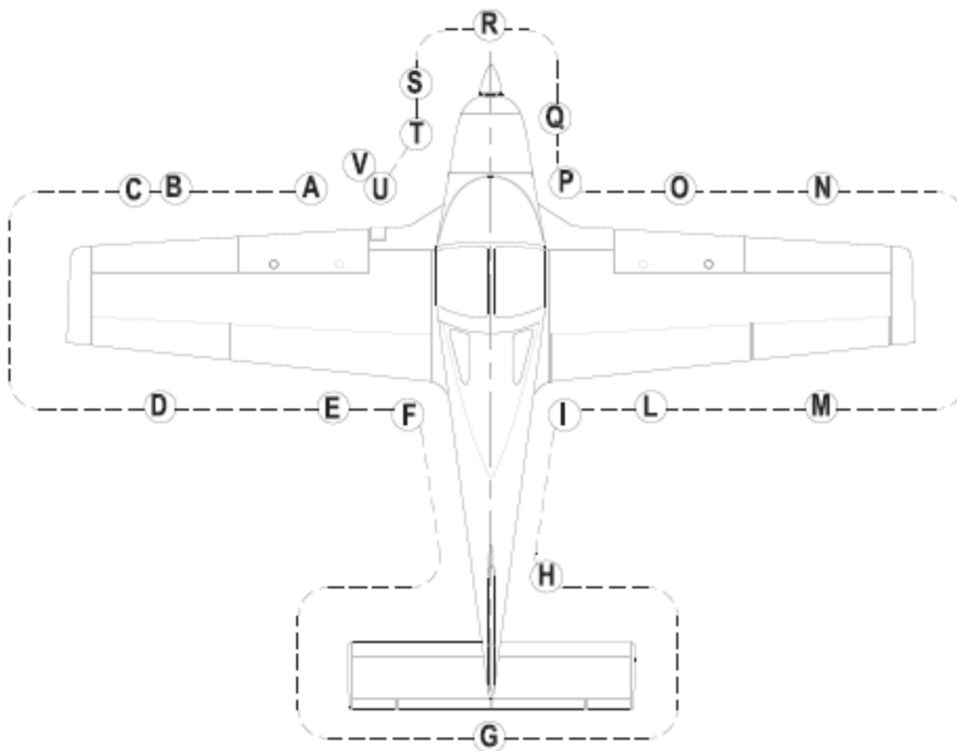
### 3.1. In the cockpit

- Check the **A/C documentation**
- Check **safety belts** condition

- Verify that **ignition** is in **OFF** and the start **key** is not inserted to the starter switch, it shall be placed onto the top of dashboard
- Master switch ON, check Voltmeter (10-12V), check Ammeter (red), check the fuel quantities and compare it with the planned fuel amount
- Extend the flaps to FULL (in order to check outside)
- Master switch OFF
- Check ELT
- Check necessary cabin accessories (first aid kit, canopy hammer, fire extinguisher)

### 3.2. Aircraft walk-around:

To perform the aircraft walk-around, carry out the checklist according to the station shown below:





**A. Left fuel filler cap:**

- Check visually for desired fuel level
- Drain the left fuel tank by drainage valve using a cup to collect fuel. Drainage operation must be carried out with the aircraft parked on a level surface)
- Check for water or other contaminants
- Close filler cap

**B. Remove protection plug (if provided) and check the Pitot tube and the static ports mounted on left wing are unobstructed. Do not blow inside vents.**

**C. Left side leading edge and wing skin:**

- Visual inspection

**D. Left aileron, trim tab and hinges:**

- Visual inspection, check free play
- Friction
- Left tank vent: check for obstructions

**E. Left flap and hinges:**

- Visual inspection

**F. Left main landing gear:**

- Check inflation, tire condition, alignment, fuselage skin condition

**G. Horizontal tail and tab:**

- Visual inspection, check free play, friction

**H. Vertical tail, rudder and trim tab:**

- Visual inspection, check free play, friction

**I. Right main landing gear:**



- Check inflation, tire condition, alignment, fuselage skin condition

**L. Right flap and hinges:**

- Visual inspection

**M. Right aileron, trim tab and hinges:**

- Visual inspection, check free play, friction
- Right side tank vent: check for obstructions

**N. Right leading edge and wing skin:**

- Visual inspection

**O. Right fuel filler cap:**

- Check visually for desired fuel level
- Drain the right fuel tank by the drainage valve using a cup to collect fuel. Drainage operation must be carried out with the aircraft parked on a level surface
- Check for water or other contaminants
- Close filler cap

**P. Set the fuel selector valve to OFF. Drain circuit using a cup to collect fuel by opening the specific drainage valve (part of the gascolator). Check for water or other contaminants.**

**Q. Nose wheel strut and tire:**

- Check inflation, tire and rubber shock absorber discs condition

**R. Propeller and spinner condition:**

- Check for nicks, cracks, dents and other defects, propeller should rotate freely
- Check fixing and lack of play between blades and hub

**S. Open engine cowling:**

- Check no foreign objects are present.



- Verify coolant level in the overflow bottle: level must be between min. and max. mark. Replenish if required.
- *Only before the first flight of the day:*
  - a. *Verify coolant level in the expansion tank, replenish as required up to top (level must be at least 2/3 of the expansion tank).*
  - b. *Turn the propeller by hand to and from, feeling the free rotation of 15° or 30° before the crankshaft starts to rotate. If the propeller can be turned between the dogs with practically no friction at all, further investigation is necessary. Turn propeller by hand in direction of engine rotation several times and observe engine for odd noises or excessive resistance and normal compression.*
  - c. *Carburetors: check the throttle cable condition and installation.*
  - d. *Exhaust: inspect for damages, leakage and general condition*
- Check radiators. There should be no indication of leakage of fluid and they have to be free of obstructions.
- Check oil level and replenish as required. Prior to oil check, having magnetos switched off turn the propeller by hand in direction of engine rotation several times to pump oil from the engine into the oil tank, or let the engine idle for 1 minute. This process is finished when air is returning back to the oil tank and can be noticed by a murmur from the open oil tank. Prior to long flights oil should be added so that the oil level reaches the “max” mark.
- Inspect fuel circuit for leakages
- Check integrity of silent-block suspensions
- Check connection and integrity of air intake system, visually inspect that ram air intake is unobstructed
- Check that all parts are secured or safetied

**T.** Close engine cowling, check for proper alignment of cam-locks

**U.** Visual inspection of the Landing and Strobe Light





V. Remove tow bar and chocks, stow on board pitot, static ports and stall warning protective covers

### 3.3. Cockpit preparation before engine starting

- Seat position and safety belts adjustment
- Flight controls: operate until their stop checking for movement, smoothness, free play and friction.
- Parking brake: apply brakes then engage
- Throttle friction: adjust
- Circuit Breakers: check all IN
- Master switch: ON, Check generator light ON and Voltage (at least 10.5 V)
- Electric fuel pump: ON, (check for audible pump noise and fuel pressure build up)
- Electric fuel pump: OFF
- Avionic Master switch (if installed): ON, instruments check, then set in OFF position
- Flap control: cycle fully extended and then set T/O
- Pitch Trim: cycle fully up and down, from both left and right controls, check for trim disconnect switch operation.
- Pitch trim: set neutral
- Nav. light & Strobe light: ON
- Fuel quantity: compare the fuel telelevels read with fuel quantity visually checked into the tanks (see Pre-flight inspection – External inspection)
- Canopy: closed and locked



#### 4. Traffic circuit description

This chapter is an extract from **AFM Section 4 NORMAL PROCEDURES** containing information about the flight procedures for each phase of a normal traffic circuit. For detailed information refer to that section. As a visual aid a simple traffic circuit illustration can be found on page 18.

It is important to remark that RPM values in this document are propeller RPM values. **RPM indicator** in the cockpit panel **is measuring the propeller RPM** not the engine RPM. Engine RPM value divided by 2,4286 is equal to prop RPM.

##### 4.1. Engine start up

- Master switch ON
- Engine throttle: idle
- Choke: as needed (ON for cold start, OFF for hot start)
- Fuel selector valve: select the tank with less fuel
- Electric fuel pump: ON
- Propeller area: call for CLEAR and visually check
- Magnetos: BOTH
- Magnetos: START
- Check oil pressure rise within 10 sec. (maximum cold value 7 bar)
- Generator switch "ON"
- Ammeter check "green".
- Voltmeter: check more than 14V
- Engine instruments: Check
- Choke: OFF
- Throttle: 1000-1200 rpm
- Electric fuel pump: OFF
- Check fuel pressure (min 2.2 psi)



#### 4.2. Before taxi

- Radio and avionics: ON
- Transponder: ON STBY (set code 7000)
- Cabin canopy: Check closed and locked
- Parking brake: OFF to taxi

*RT: Gödöllő Info, HA-VOE after start up taxi from the CAVOK hangar to the holding point of RWY 13; 31*

#### 4.3. Taxi out

- Brakes – Check
- Steering – Check
- Control stick – Fully pulled

Taxi slow! Use minimal power in straight lines, apply more power for initiating taxi and for the turns only. Do not fight the throttle with the brakes, decrease it to slow down instead.

#### 4.4. Engine run-up

Ignition magnetos check:

- Engine warm, parameters in green
- Set RPM 1700
- Ignition switch LEFT, BOTH, RIGHT, BOTH - The drops shall not be higher than 130 RPM / side and the difference between the two side shall be less than 50 RPM. The engine shall run smooth with either circuit.

Carburetor heating check:

- Set RPM 1700, pull knob fully out, it shall drop 100 RPM and the carb temp shall rise. Push it back, all parameters should restore to the previous value.



#### Engine run-up test:

Should be performed only before the first flight of the day, or if the plane was stopped for more than 4 hours. Before running up the engine, verify that pressures and temperatures are in the operative range.

- Full power on ground – Check appr. 2100 RPM (5100 Engine RPM)
- Idle – Check appr. 570 - 660 RPM (1400 - 1600 Engine RPM)

#### Check oil pressure

- above 1400 RPM: 2 - 5 bar
- below 1400 RPM: 0,8 bar

#### **4.5. Before T/O at the holding point**

- Warm engine and oil pressure – Verify
- Fuel quantity – sufficient for the task according to fuel requirements
- Fuel selector valve – Fullest tank
- Fuel pump – ON
- Cabin canopy – Check closed and locked on three points
- Seat belts – Fasten
- Flaps control – Set T/O position (15°)
- Flight controls - Check free and logical movements
- Pitch trim – Check neutral
- Parking brake – Verify OFF
- Carburetor heat: Verify OFF
- Altimeter – Set for QNH (threshold elevation)
- Align directional giro with the magnetic compass
- Check for any possible arriving traffic on final
- Check the runway for any departing traffic, crossing vehicle or people
- Report to the instructor – Ready for departure



*RT: Gödöllő info, HA-VOE at the holding point of rwy 13; 31 lining up and taking-off, task: LH; RH traffic circuit; airspace work; cross-country flight with destination XXXX*

#### 4.6. When the RWY is clear or T/O cleared

- Landing light – ON
- Transponder – set ALT mode (7000) in case of cross-country flight
- Line up the plane

#### 4.7. Take-off

Release the brake. Slightly pull the control stick to ease up the nose gear. Increase full power simultaneously, keep the aircraft on runway centerline using the wheel steering and the rudder. Rotate the A/C smoothly at 42 KIAS. Start accelerating in a shallow climb and maintain **60** KIAS.

#### 4.8. Climbing

- Maintain **60** KIAS with pitch attitude
- At 200 ft AAL
  - Fuel pump – OFF
  - Fuel pressure – Check green arc
  - Landing light – OFF
  - Flaps – 0°
- Reduce the power to **2200** RPM
- Trim the A/C for climb



#### 4.9. Turning to crosswind leg

At reaching 500 ft AAL turn to the crosswind leg. The speed in the turn shall be **65 KIAS** so lower the nose to reach and maintain **65 KIAS**, during the turn fly the attitude accordingly until the nose points to the new direction. When the turn is completed raise the nose again for the **60 KIAS** equivalent attitude. This turn normally less than 90° because of the wind correction.

#### 4.10. Turning to downwind leg

This turn shall be initiated when the landing threshold mark can be seen looking 30° behind the lateral axis. Take care of the wind correction on the downwind leg if there is crosswind so that the A/C flies parallel to the RWY centerline.

#### 4.11. Transition to level flight

Shortly before reaching 1000 ft AAL lower the nose to maintain the circuit height. Let the A/C to accelerate through **75 KIAS** and then set **1800-1900 RPM** and trim the plane for level flight.

#### 4.12. Downwind leg

Fly the aircraft parallel to the RWY centerline, correct for cross wind as necessary. At the beginning of downwind, check fuel and engine parameters. Change fuel tank if necessary. When passing abeam of threshold, before the base turn: pull the carburetor heat, switch on the electric fuel pump and adjust power. Announce intention on the radio.

*RT: Gödöllő info, HA-VOE before turning LH; RH base for RWY 31; 13 for touch and go; full stop landing*

#### 4.13. Turning to base leg

The place for the base turn is when the threshold mark is 35° behind the lateral



axis. This turn is a level turn and normally **more than 90° due** to the wind correction on the base leg. Before the turn pull the carburetor heating and switch the electric fuel pump on. After turning reduce the power to **1300 RPM** and maintain level flight until **65 KIAS** is reached then lower the nose for the descent attitude, extend the flaps to 15° and maintain **60 KIAS**.

#### 4.14. Final turn

The place for the final turn is when the landing threshold is **10° in front of the lateral axis**. The speed for this turn shall be **65 KIAS** so before the turn lower the nose for the **65 KIAS** attitude and turn into the runway centerline. Arrange the turn to roll out **by 500 ft AAL latest**. Increase the power slightly if necessary in order to reduce the descent rate. Raise the nose to reach and maintain **60 KIAS** attitude on the final.

#### 4.15. Positioning the A/C for landing

The landing flap shall be extended to FULL **earlier or later as the wind strength** requires it. Check speed in the white arc (below 67 KIAS) before extending flaps to FULL. As the flap extended to FULL lower the nose to **maintain 60 KIAS**, trim the plane as necessary.

Normally the right hand shall be handling the control stick and the left hand controls the power! Adjust the power in order to point the nose to the aiming point approximately 30 m in front of the threshold mark that is appr. 50 m in front of the touch down zone. With increasing power raise the nose and when reducing the power lower the nose so that the speed remains **60 KIAS**.

Reaching 3-5 m height reduce the power to idle and break the angle of the approach. Start the flare with the main gear wheels 30-50 cm from the ground. In case of crosswind align the A/C axis with the rudder to fly parallel with the RWY and bank into the wind so that the plane will not move sideways from the landing axis. Land on the lower wheel in crosswind then let the other wheel



down. Control the roll out with rudder and neutral the aileron as the speed drops.

#### 4.16. Go around

In case the **landing can't be completed safely** (due to other traffic, car or personnel on the RWY, the A/C is too high or low for the safe landing, the weather is not suitable for the landing, RWY is not visible or the instructor/controller advises so etc...) **go around must be flown**. Apply **full power** and maintain RWY track, turn off the carburetor heating. At the same time stop the descent, check speed increasing and **pitch up for climb attitude** (appr. 8° up). When the A/C starts to climb (**confirm** positive rate on VSI) retract the **flap slowly to 15° (T/O)** maintain **60 KIAS** then proceed to fly a normal traffic circuit.

#### 4.17. Touch and go

After touch down **maintain the RWY direction** with the rudder and let the nose gear down gently. Then change the hand to keep the stick in the left hand and retract the **flap to 15° (T/O) position**. Change the control handling back to the right hand then apply **full power smoothly** and continue the take off.

#### 4.18. Full stop landing

In case of full stop landing let the A/C decelerate. On grass RWYs keep the nose gear eased up in the air (stick pulled), on concrete RWY let the nose gear down gently and control the RWY direction with the rudder. When the speed is under control and the speed is low apply pedal braking. Then vacate the RWY to the appropriate direction and report it.

*RT: Gödöllő Info, HA-VOE RWY 13; 31 is vacated to the left; right. Taxiing to the CAVOK hangar; to the refueling place.*





#### **4.19. Taxi in**

If the RWY is vacated (mind the minimum RWY occupancy) during taxi retract the landing flap, turn fuel pump and the landing light off, set transponder to STBY and preset 7000.

#### **4.20. Before engine shut down**

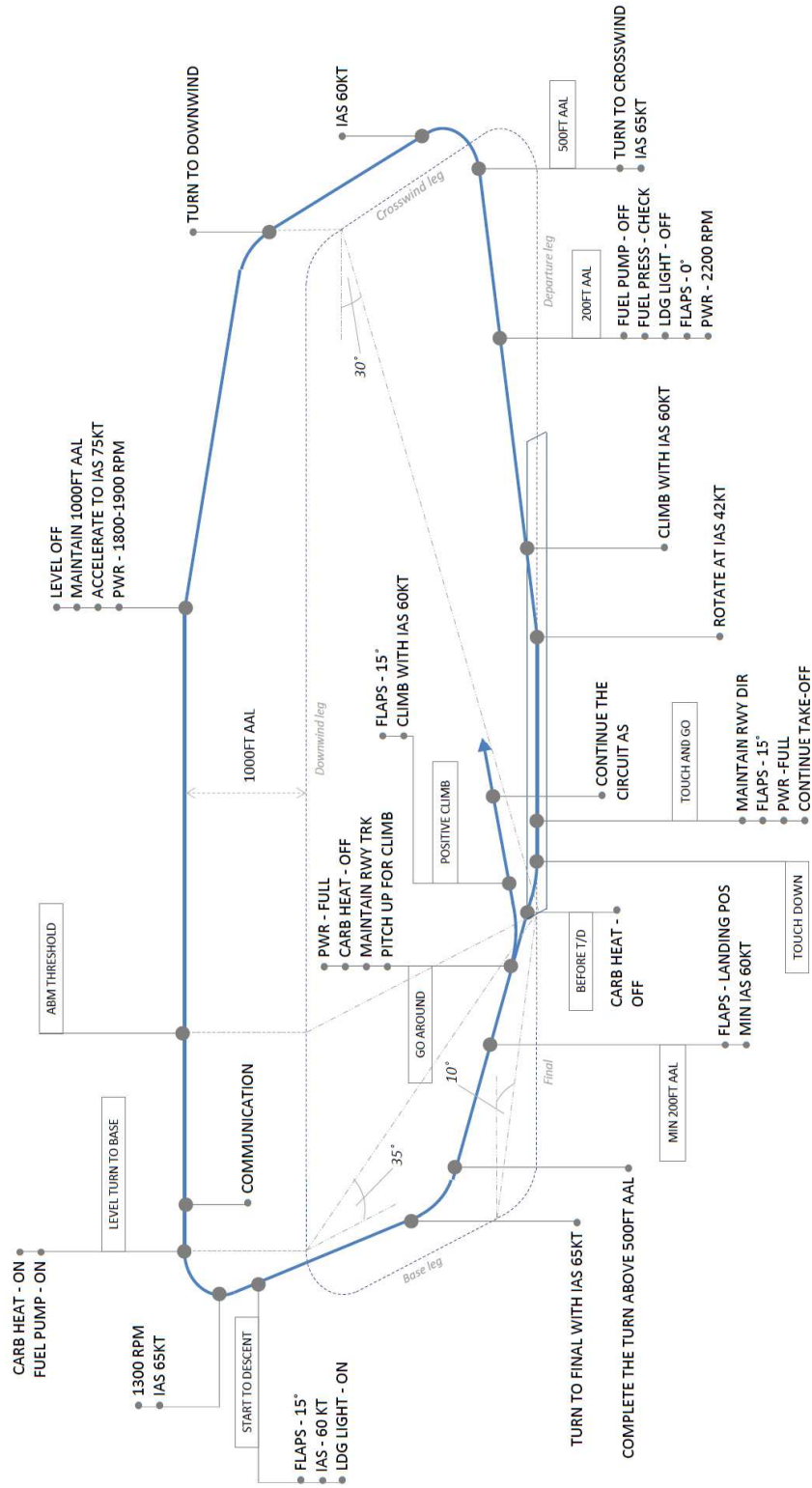
On hot days run the engine for 1-2 min at idle to cool it down. Turn off the radio, artificial attitude, gyro instruments and equipment.

#### **4.21. Shut down**

Turn the ignition key to OFF then turn OFF the generator and master switch. Pull the key out from the ignition slot. Record the shut down time. In case the A/C does not continue the flight shortly install the pitot cover and insert the control lock and put chocks to block the wheels. The parking brake may also be used.



4.22. Tecnam P2002-JF traffic circuit illustration (not to scale)





## 5. Flight phase transition procedures

### 5.1. Transition from climb to level flight:

Climb:

- Speed: **60 KIAS**
- Power: **2200 RPM**

Lower the **nose to level** attitude position, let the plane to **accelerate to 75 KIAS and than set the power to 2000 RPM**. Reduce the right rudder input during this maneuver to keep the ball centered.

### 5.2. Transition from level flight to climb

Level flight:

- V/S: 0
- Power **2000 RPM**

Raise the nose to the climb attitude, simultaneously **increase the power to 2200 RPM and adjust the speed to 60 KIAS**. Apply right rudder input when giving power to maintain the ball centered.

### 5.3. Transition from level flight to descent

Level flight:

- V/S: 0
- Power **2000 RPM**

Pull the carburetor heating. Reduce the power to **1300 RPM**. Maintain level flight until the speed reduce to **60 KIAS**, then lower the nose to descend attitude while maintain **60 KIAS**. Some left rudder may be required to center the ball.



#### 5.4. Transition from descent to level flight

Descent:

- Speed: **60** KIAS
- power: **1300** RPM
- Carburetor heating: ON

Push the carburetor heating in. Apply power to **2000** RPM and simultaneously raise the nose to the level flight attitude and maintain 0 vertical speed. Trim the elevator as necessary.

#### 6. Remarks

##### 6.1. Fuel selector valve operation in-flight

During cross country flight monitor and manually compensate asymmetrical fuel consumption by switching fuel selector valve. The maximum allowed difference of fuel amount between the tanks is 12 litres (1/4 marking). Switch ON the electric fuel pump prior to swap the fuel feeding from one tank to another. Monitor the fuel pressure after switching fuel supply and turn the electric fuel pump off if the fuel pressure does not change.

Approaching Gödöllő from airspace work or cross country flight, check fuel 1 minute prior joining traffic pattern and change fuel tank if necessary.



## 7. Normal checklist

### BEFORE START

MASTER ..... ON  
BEACON ..... ON  
FUEL PUMP ..... ON  
FUEL SEL VALVE ..... LESS FUEL TANK  
BRAKE LEVER ..... PULL  
THROTTLE (COLD ENGINE: IDLE) ..... 15%  
CHOKE (COLD ENGINE) ..... PULL  
PROPELLER AREA ..... FREE  
IGNITION KEY ..... START

### AFTER ENGINE START

OIL PRESSURE ..... CHECK  
RPM ..... 1000-1200  
CHOKE ..... PUSH  
GENERATOR ..... ON  
FUEL PUMP ..... OFF  
ELECTRICAL EQUIPMENTS ..... ON

### ENGINE TEST RUN

ENGINE PARAMETERS ..... IN GREEN  
BRAKE LEVER ..... PULL  
CONTROL STICK ..... PULL  
RPM ..... 1700  
IGNITERS ..... 1, 2, ON 1700 RPM CHECK  
RPM MAX ..... 2100  
CARB HEAT ..... CHECK  
ENGINE IDLE ..... 570 – 660 RPM

### BEFORE TAKE OFF

FUEL PUMP ..... ON  
FUEL SEL VALVE ..... FULLEST TANK  
FLAPS ..... 15°  
CONTROLS ..... FREE

### AFTER TAKE OFF (200' AAL)

FUEL PUMP ..... OFF  
FLAPS ..... 0°

### BEFORE LANDING

FUEL PUMP ..... ON  
FUEL SEL VALVE ..... FULLEST TANK  
FLAPS ..... 15° OR FULL  
CARB HEAT ..... AS REQUIRED



### 8. Tecnam P2002-JF aircraft data, limitations

Description	Values
Maximum Take-off / Landing Weight	<i>580 kgs</i>
Standard empty weight	<i>337 kgs</i>
Max Useful Load	<i>243 kgs</i>
Maximum baggage compartment load	<i>20 kgs</i>
Center of Gravity limit (Datum: from the propeller support flange without spacer) Forward limit (aft of datum for all weights) Aft limit (aft of datum for all weights)	<i>1,693 m (26,0% MAC)</i> <i>1,782 m (32,5% MAC)</i>
Load limits in flight  Flaps - CLOSED Flaps - EXTENDED	<i>+3,8 g – -1,9 g</i> <i>+ 1,9 g – 0 g</i>
Oil capacity Min load Full load Oil temperature Min temperature Normal range Max temperature Oil pressure Min pressure Normal range Max pressure CHT Max CHT	<i>2,0 l</i> <i>3,0 l</i> <i>50 °C</i> <i>90 - 110 °C</i> <i>130 °C</i> <i>0,8 bar</i> <i>2 - 5 bar</i> <i>7 bar</i> <i>135 °C</i>
Fuel Total load (Two tanks) Usable (Two tanks)	<i>RON 95</i> <i>100,0 l</i> <i>99,0 l</i>
Maximum engine power (HP)	<i>98,5 HP</i>
Propeller RPM Max RPM Take-off Max Continuous Idle	<i>2350-2450 RPM</i> <i>2200 RPM</i> <i>570-660 RPM</i>



Description	KIAS - Indicated Air Speed
Roration Speed (in take-off, $V_R$ ) (580 kg)	<i>42 kts</i>
Take-off speed Normal climb, flaps 15° Short field T.O, flaps 15°, speed until 50 ft AGL	<i>60 kts</i> <i>56 kts</i>
Normal climb speed flaps 0°	<i>60 kts</i>
Best Angle of Climb Speed - $V_X$ flaps 0°	<i>56 kts</i>
Best Rate of Climb Speed - $V_Y$ flaps 0°	<i>66 kts</i>
Best Glide Speed	<i>69 kts</i>
Stalling Speed (Bank angle 0) Most forward center of gravity (26% MAC) Idle power - flaps 0 ( $V_{S1}$ ) Idle power - flaps T.O. - ( $V_{S1}$ ) Idle power - flaps FULL - ( $V_{S0}$ )	<i>40 kts</i> <i>35 kts</i> <i>30 kts</i>
Approach Speed Normal approach - flaps T.O Final approach - flaps FULL	<i>66 kts</i> <i>51 kts</i>
Maximum Flaps Extended Speed - $V_{FE}$ Flaps - FULL Flaps - T.O.	<i>67 kts</i> <i>97 kts</i>
Design Maneuvering Speed - $V_A$	<i>96 kts</i>
Maximum Structural Cruising Speed - $V_{NO}$	<i>110 kts</i>
Never Exceed Speed - $V_{NE}$	<i>138 kts</i>
Maximum cross-wind	<i>22 kts</i>



## 9. Tecnam P2002-JF emergency procedures

This chapter contains a brief list only about the airplane emergency procedures. It is mandatory to become thoroughly familiar with the emergency procedures before operating this aircraft. For complete information refer **AFM Section 3 EMERGENCY PROCEDURES**.

### 9.1. Malfunctions

#### 9.1.1. Electric power system malfunction

- Generator switch – OFF
- Master switch – OFF
- Generator switch – ON
- Master switch – ON

If the problem persists:

- Generator switch – OFF
- Non-vital electric equipment – OFF

#### 9.1.2. Electrical fuel pump failure

- Fuel pump – OFF
- Fuel pump – ON
- Fuel pressure – CHECK raise

If fuel pressure doesn't build up:

- Land ASAP monitoring fuel pressure





### **9.1.3. Trim system failure**

#### **9.1.3.1. Locked control**

- Circuit breakers – CHECK
- Trim switch LH/RH – CHECK for correct position
- Airspeed – Adjust to control A/C without excessive stick force
- Land ASAP

#### **9.1.3.2. Trim runaway**

- Trim disconnect switch – OFF
- Airspeed – Adjust to control A/C without excessive stick force
- Land ASAP

### **9.2. Airplane evacuation**

- Fuel selector valve – OFF
- Throttle – IDLE
- Ignition – OFF
- Electric fuel pump – OFF
- Master switch – OFF
- Seat belts – Unstrap completely
- Headphones – Remove
- Cabin canopy – OPEN

If the canopy doesn't slide break it using the hammer, escape away from flames / hot engine compartment / spilling fuel tank.



### 9.3. Engine failure

#### 9.3.1. Engine failure before take-off

- Throttle – IDLE
- Rudder – Keep heading control
- Brakes – Apply as needed

When safely stopped:

- Ignition key – OFF
- Fuel selector valve – OFF
- Fuel pump – OFF
- Generator – OFF
- Master switch – OFF

#### 9.3.2. Engine failure after take-off

Immediate landing should be planned straight ahead with only small changes in directions not exceeding 45° to the left and 45° to the right.

- Maintain airspeed – 51 KIAS
- Flaps – As needed

Before touch-down:

- Throttle – IDLE
- Ignition key – OFF
- Fuel selector valve – OFF
- Fuel pump – OFF
- Generator – OFF
- Master switch – OFF
- Landing – Ahead avoiding obstacles, if any



### 9.3.3. Engine failures in-flight

#### 9.3.3.1. Low fuel pressure

If the fuel pressure indicator falls below 2.2 psi (0.15 bar):

- Electric fuel pump – ON
- Fuel selector valve – Change the fuel feeding tank
- Fuel quantity - Verify

If fuel pressure doesn't build up:

- Land ASAP monitoring fuel pressure

If engine stops:

- Land ASAP applying forced landing procedure

#### 9.3.3.2. Oil pressure limits exceedance

If oil pressure exceeds upper limit (7 bar):

- Throttle – REDUCE as practical
- Oil pressure & temp – CHECK within limits
- Land as soon as practical

If oil pressure is under the lower limit (0,8 bar):

- Throttle - REDUCE minimum practical
- Land as soon as practical

If oil pressure continues to decrease:

- Land ASAP applying forced landing procedure



### 9.3.3.3. High oil temperature

If oil pressure is within limits:

- Throttle – REDUCE minimum practical

If oil temperature does not decrease:

- Airspeed – INCREASE
- Land as soon as practical

If engine roughness, vibrations, erratic behaviour, or high CHT is detected:

- Land ASAP applying forced landing procedure

### 9.3.3.4. CHT limit exceedance

If CHT is above 135°C:

- Throttle – REDUCE Minimum practical
- Land as soon as practical

If CHT continues to rise and engine shows roughness or power loss:

- Land ASAP applying forced landing procedure

### 9.3.4. In-flight engine restart

After a mechanical engine seizure, fire or a major propeller damage engine restart is not recommended. It is preferred to restart the engine at an altitude below 4000ft and at the suggested speed of 69 KIAS or more.

- Carb heat – ON if required
- Fuel pump – ON
- Fuel quantity indicator – CHECK
- Fuel Selector – Change the fuel feeding tank



- Ignition key – BOTH
- Ignition key – START
- Throttle – SET as required

In case of unsuccessful engine restart:

- Engine – SECURE
- Land ASAP

### **9.3.5. Engine securing**

Following procedure is applicable to shut-down the engine in flight:

- Throttle – IDLE
- Ignition key – OFF
- Fuel selector – OFF
- Fuel pump – OFF
- Generator – OFF

## **9.4. Engine fire / Electrical smoke**

### **9.4.1. Engine fire on ground**

- Fuel Selector – OFF
- Fuel pump – OFF
- Ignition key – OFF
- Throttle - FULL power
- Cabin Heat – OFF
- Generator – OFF
- Master Switch – OFF
- Aircraft Evacuation – Carry out immediately



### 9.4.2. Engine fire during take-off

Before rotation, abort take-off:

- Throttle – IDLE
- Rudder – Keep heading control
- Brakes – Apply as needed

With A/C under control:

- Fuel selector valve – OFF
- Fuel pump – OFF
- Ignition key – OFF
- Cabin heat – OFF
- Generator – OFF
- Master switch – OFF
- Aircraft Evacuation – Carry out immediately

### 9.4.3. Engine fire in-flight

- Cabin heating – OFF
- Fuel selector valve – OFF
- Fuel pump – OFF
- Throttle – FULL power
- Ignition key – OFF
- Cabin vents – OPEN
- Land ASAP applying forced landing procedure

**CAUTION!**

**AFTER AN ENGINE FIRE DO NOT TRY TO RE-START THE ENGINE**



#### **9.4.4. Cabin fire / electrical smoke in-flight**

- Cabin heating – OFF
- Cabin vents – OPEN
- Canopy – OPEN, if necessary
- Fire extinguisher (if fire is in the cabin) – TO BE USED

If smoke persists:

- Generator – OFF
- Master switch – OFF
- Land ASAP

#### **9.4.5. Cabin fire / electrical smoke on ground**

- Generator – OFF
- Throttle – IDLE
- Ignition key – OFF
- Fuel selector valve - OFF
- Master switch – OFF
- Fire extinguisher – TO BE USED
- Aircraft Evacuation – Carry out immediately

### **9.5. Emergency landing**

#### **9.5.1. Forced landing without engine power**

- Flaps – Closed
- Airspeed – 69 KIAS
- Throttle – IDLE
- Safety belts – Tighten
- Canopy locks – CHECK LOCKED
- Gliding ratio (no power) – 12,8



- Landing place – IDENTIFY
- Fuel selector valve – OFF
- Fuel pump – OFF
- Ignition key – OFF

When certain to land:

- Flaps – As necessary
- Generator – OFF
- Master switch – OFF
- The flare shall be done on top of the vegetation and pull the stick at touch down

#### **9.5.2. Power-on forced landing**

- Airspeed – 69 KIAS
- Flaps – CLOSED
- Safety belts – Tighten
- Canopy locks – CHECK LOCKED

When certain to land, right before touch down:

- Flaps – As necessary
- Fuel selector valve – OFF
- Fuel pump – OFF
- Ignition key – OFF
- Generator – OFF
- Master switch – OFF
- The flare shall be done on top of the vegetation and pull the stick at touch down





## 9.6. Other emergencies

### 9.6.1. Recovery from unintentional spin

- Throttle – IDLE
- Rudder – Opposite to the spin rotation – APPLY FULL
- Control stick – NEUTRAL

As the spin stops:

- Rudder – NEUTRAL
- Control stick – Gentle proceed to level flight
- Throttle – Set for level flight

**WARNING!**  
**INTENTIONAL SPINNING IS PROHIBITED**

### 9.6.2. Unintentional flight into icing conditions

- Carburetor heating – ON

Immediately fly away from icing conditions (changing altitude and direction of flight, out of clouds, visible moisture, precipitations).

- Controls surfaces - Continue to move to maintain their movability
- Propeller speed – Increase RPM
- Cabin heat – ON

**WARNING!**  
**FLYING INTO KNOWN ICING CONDITIONS IS PROHIBITED**



## 10. Unit conversation table

1 knots = 1 NM/h = 1,853 km/h

1 lbs (librae = pounds) = 0,4536 kg

1 qts (US quart) = 0,946 l

1 gal (US gallon) = 3,78 l

1 in (inch) = 2,54 cm

1 psi (pounds per square inch) = 6894,76 Pa = 6,89476 kPa = 0,0689476 bar

1 inHg (Hg inch) = 25,4 mmHg = 3386,39 Pa

$n F^{\circ} = ((n-32)*5) / 9C^{\circ}$

## 11. The traffic circuit particularities at LHGD (Gödöllő) A/P

The flap retraction and fuel pump switch off shall be done at altitude 300 ft AAL (1000 ft QNH)

Turn to crosswind leg

- RWY 31 LH circuit: overhead the highway crossing
- RWY 13 RH circuit: overhead the high tension cable at altitude 500 ft AAL (1200 ft QNH)

Turn to downwind leg

- RWY 31 LH circuit: at the antenna tower
- RWY 13 RH circuit: at the valley line

The circuit altitude is 1700 ft QNH.

Turn to base leg

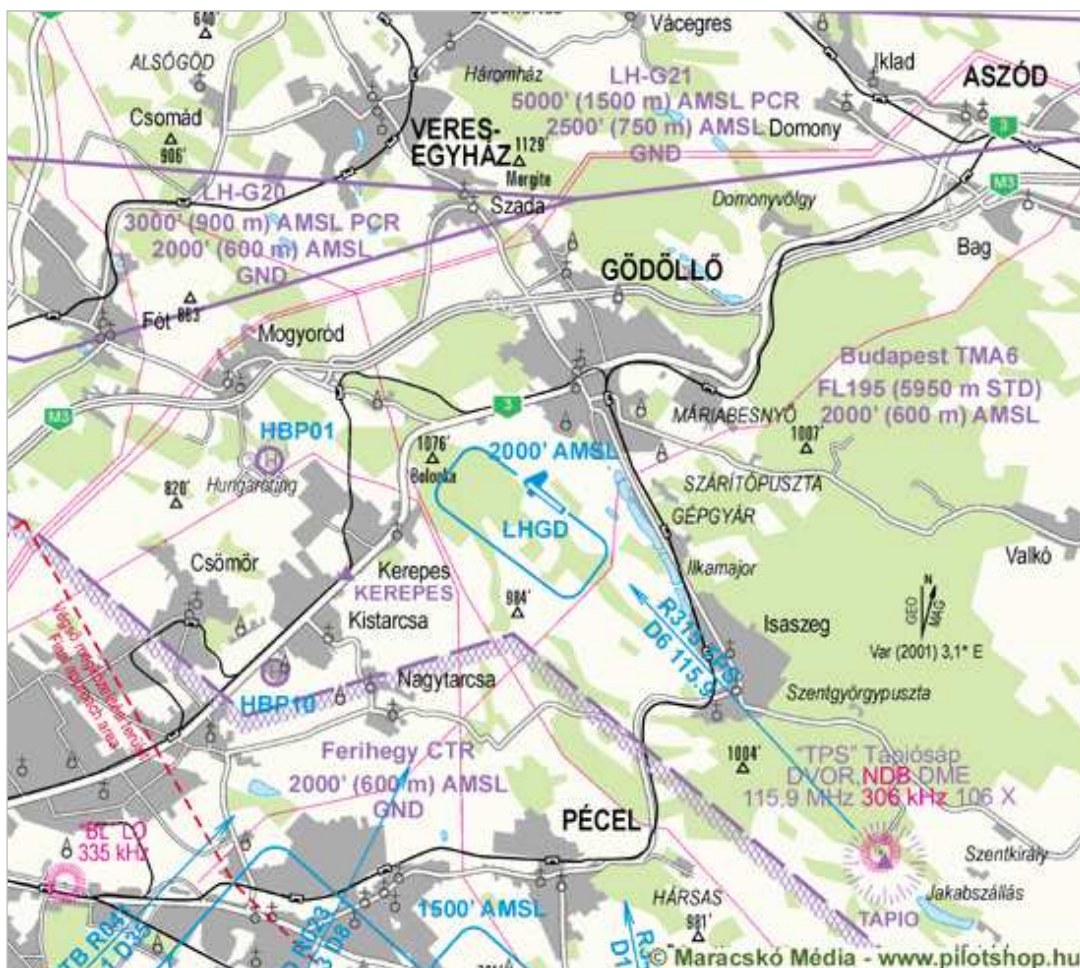
- RWY 31 LH circuit: overhead the high tension cable
- RWY 13 RH circuit: at the antenna tower

Turn to final shall be completed by 1200 ft QNH latest. **Always check preceding traffic before initiating a turn!**

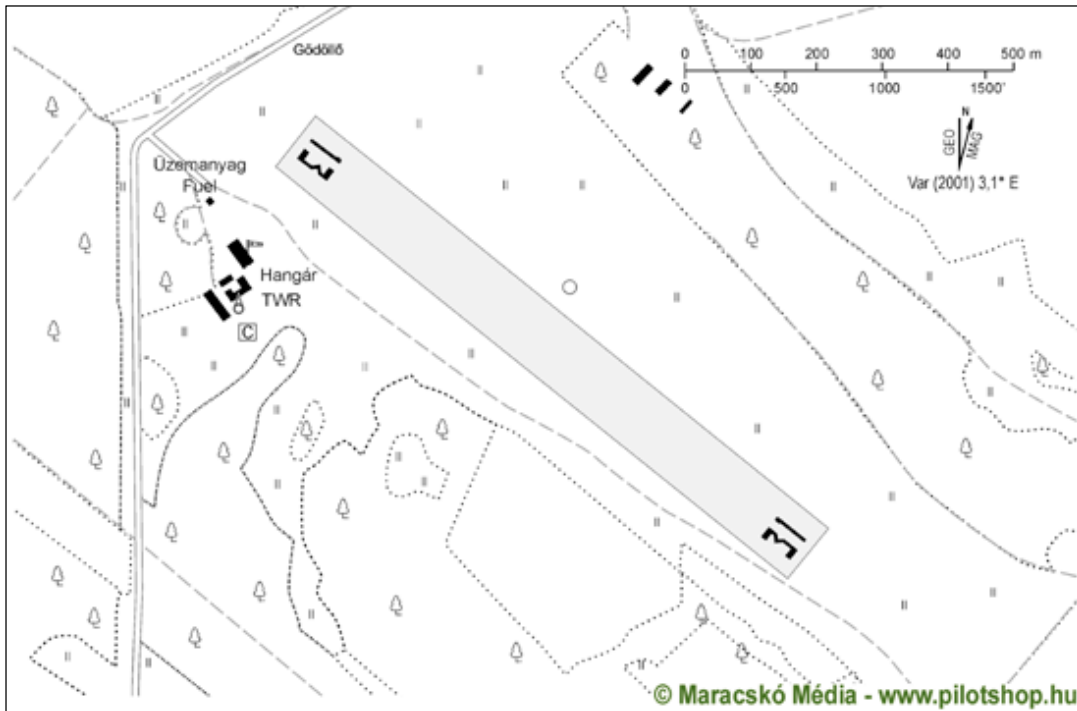
### 11.1. LHGD (Gödöllő) A/P data

ICAO code:	LHGD
Name:	Gödöllő
Location:	2 km / 1NM SSW Gödöllő
Position:	N473425 E0191957
Elevation:	218 m / 715 ft
Callsign:	Gödöllő INFO
Frequency:	119,05 MHz
Traffic circuit:	31LH; 13RH; 1000 ft AAL
Airfield category:	Non public aerodrome
Operation:	SR-SS
NVFR:	N/A
IFR:	N/A

### 11.2. VFR map



### 11.3. A/P map



### 11.4. Aerial photo





### 11.5. A/P limitations

RWY	Size (m)	Surface	TORA (m)	LDA (m)	Load	Lighting
13 / 31	1300 x 60	grass	1300 x 60	950 x 60	15 / 5	N / A

#### Remarks:

- Only day VFR
- The A/P can be used after permitted by the operator except for urgency or emergency
- Establish contact 2-4 minutes flight time prior reaching the field at Gödöllő INFO (119,05 MHz)
- The A/P directory can be checked at: [www.lhgd.hu](http://www.lhgd.hu) site

#### Warnings:

- Displaced threshold
- Sheeps on the RWY
- Budapest TMA over the field: max permitted altitude 2000 ft AMSL
- Possible activities: parachuting; winch started paragliding; remote controlled model flying

**OPS:** +36-20-410-6517