

**Flight Training Supplement**  
**U15 Phoenix S-LSA Glider**

# Flight Training Supplement



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## **Flight Training Supplement**

# **U15 Phoenix S-LSA Glider**

### **Read this before your first flight!**

This document is provided to supplement the information provided in the Aircraft Operating Information Handbook (AOI) but does not replace it. Specific information on the operation of the engine and systems are provided in the AOI.

Specific information about maintenance is contained in Maintenance Manual provided with each aircraft.

Every pilot has to understand the limitations and specifications of this light sport glider. The AOI must be read thoroughly. Please pay attention to the pre-flight and daily checks. Maintenance instructions for the aircraft are given in a separate Maintenance Manual. For maintenance of the Rotax® engine, emergency parachute system and other installed equipment refer to the original manufacturer's manuals.

Flying the Phoenix must be always done with the possibility of a safe landing due to loss of the engine power.

The Phoenix is a VFR aircraft only. Because of cruising speed and range of the Phoenix, flight into vastly different weather patterns and meteo conditions can occur. The entry into bad weather with IFR conditions with VFR aircraft is extremely dangerous. As the owner or operator of an aircraft you are responsible for the safety of your passenger and yourself. Do not attempt to operate the Phoenix in any manner that would endanger the aircraft, the occupants or persons on the ground.

### **Manufacturer**

**Phoenix Air s.r.o.**

Lochmanova 64

Usti nad Orlici

562 01

Czech Republic

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### **Flying the U15 Phoenix**

The Phoenix is an aerodynamically clean aircraft and a pilot being transitioned to the Phoenix needs to be trained to manage his airspeed carefully. The rapid acceleration to takeoff and angle of climb is different from conventional aircraft.

Landing the Phoenix requires controlling and reducing airspeed in the pattern and final approach to landing. After practice the Phoenix can be landed in very short airfields safely.

### **Normal procedures**

#### **Daily flight check:**

At the start of every new flying day the Phoenix should be checked thoroughly.

An accidental engine start is very dangerous, that is why you must always ensure that the ignition and main switch are turned off!!!

Make sure that throttle and choke controls are free from friction and binding

Check the coolant level

Check oil level

Carefully examine the oil, cooling and fuel system for leaks

In case of any inoperative equipment, the engine should not be started before proper maintenance is performed

Check that all visible bolts are fastened and secured

In case of cracks or scratches on the paint finish, their cause must be determined and repaired (if necessary)

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**Pre-flight checklist:**

Check the fuel in both fuel tanks with drain valve

Is there any contamination in the fuel? Drain until fuel is clear.

Are the air-vents of tanks clear?

Make sure the both tank caps are closed tightly.

Move fuel valve to **open left** or **open right** fuel tank position.

Remove possible water from fuel system by draining the gascolator.

Make certain the control stick and rudder pedals are free

Check that main spar pins are secured

Check that trim is functioning

Check all hinges points are free

Check all the wing surfaces are secured and free

Check the stabilizer bolt is tight and secured

Check that static ports are clear

Check that wingtip pins are secure and door is closed

Is the Pitot tube cover removed?

Check pressure in tires

Check that wheel covers are secured

Check that intakes for coolers are clear

Check that propeller is OK (no defects)

Check the spinner attachment.

In case luggage is carried.... It is properly fastened? Follow the balance loading plan!

Solo flight.... Are co-pilot seatbelts fastened?

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**Checklist before engine start:**

Complete pre-flight checklist  
Remove emergency parachute system lock  
Elevator trim in middle position  
Flaps set to 0°  
Altimeter set  
Check the wind direction.  
Canopy lock secured  
Radio and all electric equipment switched off before engine start  
Clear the area around the airplane of persons and obstacles –  
**especially around the propeller!**

**Engine start:**

Fuel valve open  
Choke (if engine is cold) on  
Throttle control position idle  
All electric equipment off  
Parking brake on  
Ignition on both circuits  
Verify prop unfeathered  
Ignition key turn to start position  
Crank the engine for maximum 10 seconds. Allow the starter to cool for two minutes if the engine does not start. As soon as the engine starts, set the throttle level in such a way that the engine runs smoothly at minimum RPM  
Check the oil pressure immediately  
Close the choke  
Run the engine until warm at a middle RPM  
Switch on all additional instruments  
If the airplane rolls and cannot be stopped with the brakes, stop the engine immediately!  
The tail wheel is directly linked to the rudder pedals for taxiing, takeoff and all maneuvers on the ground.

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**Before take-off (CCCCIGAAR – Lights, Camera, Action)**

- |                |                            |
|----------------|----------------------------|
| 1. Controls    | - check of free movement   |
| 2. Canopy      | -closed and locked         |
| 3. Choke       | - off                      |
| 4. Cowl flap   | -open                      |
| 5. Instruments | - set and in the green     |
| 6. Gas         | - fuel valve on left tank  |
| 7. Attitude    | - trim set for take-off    |
| 8. Airbrakes   | - closed and locked        |
| 9. Run-up      | - 3000rpm – check magnetos |
| 10. Lights     | - strobe/nav lights on     |
| 11. Camera     | - transponder on alt       |
| 12. Action     | - fuel pump on             |

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### **Takeoff:**

If the RWY and approach to the RWY are clear, roll out to the takeoff position

Confirm plane is centered on runway

Controls are in proper position for takeoff

Smoothly apply throttle to fully open (forward)

If it is possible takeoff directly into the wind (wind limitations - see AOI)

Keep the stick position 2 inches forward of full aft

After takeoff lower the nose slowly and as airspeed reaches 60 kts climb to a minimum height of 300 ft. Do not start turn until minimum altitude 300 ft!

Slightly reduce the throttle to 5000 rpm.

Turn electric fuel pump off when return to runway is possible

### **Climb:**

Keep the climb speed at 60 kts.

### **Basic limitations:**

Phoenix is not certified for aerobatics

Fights are only to be made under VFR conditions

No night flights permitted without navigation and strobe lights

Steep turns beyond 60° should not be performed

### **Cruising flight:**

During cruising flight RPM of 4000 - 5000 rpm should be used.

The maximum permissible speed of 119 kts should not be exceeded.

For normal cruising flight bring the airplane to the desired cruising speed in level flight by observing VSI and altimeter. Adjust throttle and trim to hold altitude.

During flight monitor fuel indicators.

### **Banked turn:**

Each of turn should be made with the coordinated use of the ailerons and rudder

Steep turns exceeding 60° are not recommended. Banked turns with more than 30° should not be carried out less than 50 kts.

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**In-flight engine off:**

Speed 60kts

Avionics off

Ignition key to off position – prop feathers

Master switch off, or avionics on as desired

Run engine every hour for battery charging or monitor battery voltage

**In-flight engine start:**

Altitude above 1500'agl if away from an airport

Speed 60kts

Avionics off

Choke off

Throttle at idle

Master switch on

Fuel pump on

Ignition key on both circuits, verify prop unfeathered

Ignition key to start

If engine does not start within 4 seconds, use ½ choke to start

Check oil pressure

Choke off

Fuel pump off

RPM below 2500rpm until oil temp is 122°F (50 °C) but use full power if necessary

**Stalls:**

Phoenix is very resistant to stalling. If you feel the tendency to roll, you can easily react with rudder.

If you are close to the ground keep the speed at least 60 kts.

If you enter a spin use opposite rudder input, keep the ailerons centered and gently level the plane with the elevator.

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### **Landing:**

Land always into the wind, or the runway with least crosswind if possible. The final approach to landing is to be carried out in level altitude.

Engine power: about idle – 20% (slightly above idle)

Approach speed: about 55 kts

Flaps at 0° or +10°

At the distance of 3 ft above the ground use elevator and land airplane gently. It is recommended to touch the ground with full airbrakes.

Flights over obstacles during approach to landing should be avoided

### **Engine stop:**

Under normal conditions, the engine is cooled during approach and rollout, therefore it can be stopped by turning the ignition switch off (both magnetos)

The radio, transponder and all optional electric equipment should be switched off **BEFORE** engine is stopped.

### **Engine failure:**

Below an altitude 150 ft, try to don't make any turns because of loss of altitude.

At an altitude of less than 300 ft, no attempt to re-start the engine should be made.

Below an altitude of 300 ft, no attempt to return to RWY should be made.

Choose a landing spot without trees or obstacles and with sufficient length.

Keep minimum speed of 50 kts until final approach.

In case of landing on a field with crops or in a forest:

- Look for a flat spot in the plants, treetops or bushes
- For final approach, the air brakes position should be as needed, and air-speed should be 45 kts on short final
- The final flair for landing should be carried out at a height of about 1.5 ft. over the chosen spot
- Ignition should be turned off
- The elevator control should be fully pulled back

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**Optional parachute ballistic rescue system:**

The rescue system has shown an ability to be used at low altitudes as well. In an emergency the parachute system should be activated even when at a very low altitude.

Before activating, if it is possible, stop the engine and tighten pilot and co-pilot seatbelts.

To activate the rescue system, handle must be pulled to the stop.

**Overturn on land:**

Carefully unfasten the seat belts and lower yourself first, then your co-pilot

Be careful of any fuel leakage – there may be a fire hazard!

Leave the plane immediately.

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Notes

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