

OPTIMALIZATION OF PRE-FLIGHT PREPARATION OF PPL PILOTS

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The article contains legislative problematic of pre-flight preparation of private pilots of PPL. The consequence of the research of legislative prescription and technical literature is effectuation of sequences before flight with emphasise on all of its parts. Each chapter focuses on important parts and processes such as navigation, meteorology, flight plan and observation of the plane. The aim of the thesis is creation of control paper of sequences, called checklist. This checklist contains the avoiding of serious mistakes as a result of the absence of the sequence and the omission of important operation.

Keywords: Pilot, Pre-flight preparation, Flight plan, Flight

1 INTRODUCTION

Pre-flight preparation is the base for safe flight. The statistics of accidents show that in many cases is missing satisfactory pre-flight preparation in recent years. The consequence of declining of number of general flight and landing accidents, but rising up of taking off accidents. The statistics show that taking off accidents are appeared because emphasis on pre-flight preparation is not satisfactory. The pre-flight preparation is not embodied into pre-flight routine and the pilots don't suppose potencional taking off accidents.

For rising of safety of flight, recommendation for pilots: to create a good pre-flight plan and to control it before every flight so that they get used to take it as a certainty. They must be properly informed by danger and conditions that can represent some risk, mainly during the flight and to realise equipment and deficits of their aircraft.

2 DEFINITIONS

SIGMET: the warning information published by workplace of meteorological warning service about appearance or presupposed appearance of chosen meteorological phenomena on the railway, which can influence the safety of flight operation.

AIRMET: the information prepared by meteorological warning service which attentioned at chosen observed or forecasting meteorological phenomena on the railway which can influence the safety of flights done in low levels and which weren't contained to the forecast for flights in low levels in particular flight informational area or in its part.

Aeronautical information publication: the handbook published by the state or organization comprised some pieces of flight information of permanent character important for flight operation.

Heding: the way of direct axis of plane expressed in grades from north (geographical, magnetic, compass).

Private pilot: pilot of the aircraft is authorized to make the function of the commander without paying or the second pilot at non-business flights.

Pilot: is efficient airman with particular identity card of capability, who fulfils basic requests needed for direction of aircraft and he graduated particular training.

Aircraft: is motor plane harder than the air with holding area which in that configuration is motionless toward fuselage and during the flight it creates need lift force based on aerodynamic principle.

3 PRE-FLIGHT PREPARATION

One of the most often abandoned acts of a pilot before flight in an aircraft is proper pre-flight preparation. While the reasons are obscure, the facts are supported by statistics of aircraft accidents. In recent years the number of general flight accidents going down, but the accidents and serious injury statistics show an increase in the percentage of accidents during the take-off.

Pilots emphasize the planning of the flyway and phase of landing; e.g., direction of flight and destination weather, the equipment of destination airport, applicable altitudes and fuel requirements. Accident data, however, indicate that too little preparation is made for the pre-flight preparation.

3.1 Key parts of pre-flight preparation

Creation of flyway

A basic element of pre-flight preparation requires the use of current navigational maps in which pilots can review their planned route of flight. They can or cannot to draw a line on the chart representing the true course. They should, however, review the projected path across the face of the chart for the location of good checkpoints, restricted areas, obstructions, other flight hazards, and suitable airports.

Most pilots are reluctant to admit being disoriented or lost. Being lost can be an embarrassing and sometimes frightening experience. Pilots should carry appropriate and current aeronautical charts on all cross-country flights. The use of out-dated charts may result in flights into airport traffic areas, control zones, or other restricted airspace without proper authorization. Having available the information contained in current charts will enhance the pilot's ability to complete the flight with greater confidence, ease, and safety.[1]

Route

Majority of pilots prefer the shortest distance between two points which are displayed by direct line in the map. Restricted and prohibited areas present obstacles to direct flights. In single-engine aircraft, pilots should give consideration to circumnavigating large, desolate areas. Pilots should also consider the single-engine service ceiling of multiengine aircraft when operating over high altitude terrain since the terrain elevation may be higher than the single-engine ceiling of the multiengine aircraft being flown.

Aeronautical information publication (AIP)

The aviation informational handbook
The pilot could be informed with every available pieces of information connected with the flight before the beginning of every flight. The aerobatic informational handbook concludes these pieces of information relative to planning the flight path. The pieces of information paperless in the form of integrated package of flight information, which consists of this parts:

- The aviation informational handbook,
- Change attendance to the aviation informational handbook,
- Complements to the aviation informational handbook,
- News NOTAM and pre-flight informational bulletins,
- Aerial circulars,
- Control records and summary of valid news NOTAM (Checklists, Summaries).

AIS SR extradites also national flight publications (for example: L, SM, VŠ), which are not a part of integrated package of flight information. NOTAM and correspondent monthly control notices are editing through flight compact service.

Airport

The pilot should tackle the pieces of information in detail before every flight concerning with the airport of the taking off, landing and alternate airdrome. Published pieces of information in regard to material supply situated at the airport. The pieces of information concerned with safety of the flight, for example, terminal aerodrome forecast (TAF), communication statements, air-navigation aids, some special announcements (for instance: parachutism), telephone numbers, preferred tracks and map bulletins, as you can see on the picture no.1.

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Figure 1 Airport information

Notices for pilots

Notices for pilots are published biweekly and is divided into two sections. The first section contains those notices which are expected to remain in effect for at least 7 days after the effective date of the publication. Notices for pilots (NOTAMS) primarily reflect changes to standard instrument approach procedures. FDC NOTAMS also establish flight restrictions and correct data in aeronautical maps.

The second section contains special notices that, either because they are too long or because they concern a wide or unspecified geographical area, are not suitable for inclusion in the first section. The content of these notices vary widely and there are no specific criteria for inclusion, other than their enhancement of flight safety.[2]

International information for pilots

It contains essential international information NOTAM and special notices which can influence decisions of pilots about enter or using into foreign or international areas of air space. All corresponding maps and publications comprehensive of AIP and NOTAMS should be useful for pilots.

Weather

A weather briefing is an important part of pre-flight planning. An overview of the synoptic situation and general weather conditions can be obtained from public media (radio, TV, etc.) or by telephone from recorded sources. This will help the pilot to better understand the overall weather picture when obtaining a complete briefing from the SHMU (Slovak Hydrometeorology Institution). Information on public media and recorded weather sources is contained on the website of Slovak Hydrometeorology Institution, which introductory page you can see in the picture 2. This website also provides information on how to obtain a complete weather briefing, what to look for, and what to ask of the briefer to ensure that the pilot has all the weather necessary for the flight. The weather information should be weighed very carefully in considering the go/no-go decision. This decision is the sole responsibility of the pilot and compulsion should never take the place of good judgment.



Figure 2 Weather information from www.shmu.sk

Navigation report

Precise flight plan of pre-computed courses, time and distance, navigational aids, and frequencies to be used will make en route errors in these items less likely. Special attention should be given to fuel requirements, keeping in mind the need for an ample reserve as well as location of refuelling points available as the pre-flight progresses.

Flight plan (VFR)

It is not required, but is dictated by good operating practice. A flight plan not only assures prompt search and rescue in the event the aircraft becomes overdue or missing, but it also permits the destination station to render better service by having prior knowledge of your flight. It costs only a few minutes of time to file a flight plan and may be the best investment the pilot ever makes.

Aircraft manual

Aircraft manuals contain operating limitations, performance, normal and emergency procedures, and a variety of other operational information for the respective aircraft. Traditionally, aircraft manufacturers have done considerable testing to gather and substantiate the information in the aircraft manual. Pilots should become familiar with the manual and be able to refer to it for information relative to a proposed flight.

4 CONCLUSION

The right pre-flight preparation is the most often abandoned act of pilot before the flight and also of the instructor in the aeronautic school. In my opinion the fact is that pilots emphasise planning of the track and landing phase as the most important part of the flight. The aim of this article was to approach particular parts of pre-flight preparation.

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