

EMERGENCY TRAFFIC AND AIR TRAFFIC CONTROLLER

Matej Antoško – Juraj Vagner – Jozef Sabo

The article discusses the role and about divisions of ATS. The text is devoted to the period of uncertainty, period of emergency, period of distress. A substantial part of the article consists of duties of the flight crew and ATC during period of emergency.

K e y w o r d s: air traffic controller, air traffic, emergency traffic, safety

1 INTRODUCTION

Along with the development of air transport has also developed a system of air traffic control. Using elements of technological development and knowledge from multiple disciplines that form the basis of ATS. "The mission of the air traffic services business is the provision of air navigation services in the airspace and at designated airports." Air traffic services must be provided by habitat called Flight Information Centres (FIC), which are established to provide flight information service and alerting services and habitat management for providing air traffic control services.

2 ROLES AND DIVISION OF ATS

To enable air traffic control to provide air traffic control service, must have information about the intended movements of all aircraft, or their changes and updates during the actual flight of all aircraft, which is intended to provide air traffic control service, the information received to determine the relative position known aircraft, issue permits to fly and information to prevent aircraft collisions, which are in the range of responsibilities and maintain a rapid and orderly flow of air traffic and, where appropriate, coordinate with other permits to fly to air traffic whenever the aircraft is to be managed, it can get into conflict situation with the operation controlled by another station and also well before handing over control of the aircraft to another unit.

Information on aircraft movements together with a record of issuing a permit to aircraft must be displayed in a way that enables quick evaluation and decision so as to maintain efficient traffic flow and spacing between aircraft.

Habitat must be provided with a recording device and communications background sound environment for jobs, air traffic controllers, which are able to keep the information recorded during at least the last 24 hours of operation.

The main tasks of air traffic services are:

- Preventing Collisions aircraft
- Preventing Collisions aircraft on the manoeuvring area and obstructions on the manoeuvring area
- Maintaining a fast and orderly flow of air traffic
- Providing advice and information useful for the safe conduct of the flight

- Information relevant organizations and bodies of the aircraft to be granted emergency services and cooperation with these bodies to the respective requirements.

Air Traffic Services includes three services:

- Service air traffic control (ATC), which further comprises:

Area control service

Approach control service

Aerodrome control service

- Flight Information Service (FIS)
- Emergency Services (ALR)

3 INFORMATION FOR RESCUE COORDINATION CENTERS

No matter what other factors indicate that such notification is appropriate air traffic services must immediately recognize the rescue coordination centre, where an aircraft is considered to be an aircraft in distress, according to the following:

The period of uncertainty (INCERFA) when:

- No report has not been received from the aircraft during the thirty minutes after the time to be accepted or from the time when it was first made an unsuccessful attempt to establish a connection with such aircraft, whichever occurs first.
- When the aircraft has not arrived within thirty minutes from the calculated time of arrival last notified or calculated air traffic service, whichever is later.

The period of emergency (ALERFA) when:

- If ten minutes of the announcement period of uncertainty have been other attempts to establish a connection with the aircraft or inquiries to other authorities in order to obtain information about the aircraft failed, or
- If the plane received permission to land and not landed within five minutes of the calculated landing time, or not renewed connection with him, or
- If the received information which indicates that operating the aircraft has deteriorated, but not to the extent that it is necessary to make emergency landing

- If it is known or suspected that the aircraft is subjected to unlawful interference

The period of distress (DETRESFA) when:

- If the declaration of emergency period and after further attempts to establish a connection and after extensive queries over the next thirty minutes are not any news about the aircraft, or
- If it is assumed that the supply of fuel on board is exhausted or insufficient to complete the flight safely, or
- If the received information which indicates that operating the aircraft has deteriorated to such an extent that you may need to make an emergency landing, or
- If the information was or is a reasonable certainty that an aircraft is likely to be carried out, or made an emergency landing.

The notification must contain such of the following information that is available in the following order:

- INCERFA, ALERFA or DETRESFA under emergency
- The person who is calling
- Nature of the emergency
- Important information from the flight plan
- A unit that has last link with the aircraft, the time and the means
- Last plane location and the method of determining
- Colour and significant features to detect aircraft
- Dangerous goods transported as cargo
- Measures taken the delivering authority
- Other appropriate information

Air traffic services as appropriate, must use all available coupling devices, in order to bind and retain a connection with the aircraft, which is in a state of emergency and request further reports on aircraft.

When it is considered that there was an emergency must be plotted on the map of the flight of the aircraft to determine the likely future position of the aircraft and a maximum working radius of last known location. Flights from other aircraft in the vicinity of the aircraft also must be drawn to determine their probable next location and range.

When control centre or flight information centre determines that the aircraft is in a period of uncertainty, or emergency shall, if possible, inform the aircraft operator first, then rescue coordination centre.

All information that area control centre or flight information centre transmits rescue coordination centres, must without delay give the aircraft operator. [1]

4 DUTIES OF FLIGHT CREW IN EMERGENCY TRAFFIC

Pilots are governed, whether in normal or abnormal situations, by the information practices of the central electronic display (ECAM), or practices of the Quick Reference Handbook. QRH is used when no procedure is not available from a central electronic display, or if the QRH procedures are called directly from the central site warning electronic monitor or before completion of the Single Status page to monitor the initial assessment process for possible additional information or procedure.

Starting unusual / emergency procedures

They can not be taken as any procedures:

- Flight path is stable and
- Are normal procedures applied
- The aircraft is less than 400 ft above the runway when the error occurred during take-off, approach and go around
- There was an order issued by a competent skipper (PF - Pilot Flying)

Division of responsibilities at the unusual / emergency procedures

PF is responsible for:

- Operation of the levers of gas
- Flight path and control air speed
- The configuration of the aircraft (PF commands performed PNF)
- Navigate
- Communication

PNF (pilot non flying) is responsible for:

- Oversee and reading aloud ECAM and checklists
- The implementation of required actions or actions required by PF
- Using fuel lever handle runoff, inertial reference systems and safety switches with the approval of PF

5 DUTIES OF ATC DURING UNLAWFUL INTERFERENCE

Unlawful interference on board an aircraft is considered to be the period of availability (ALERFA), air traffic controllers can expect in this situation:

- Set the transponder to Code 7500 - or deviation from the course and level
- Problems in communications with manned aircraft
- Failure to comply with instructions issued by aircraft

- It is necessary to inform the pilot's request to verify the settings of the transponder code to 7500 and the phrase "to confirm the setting assigned code" to confirm the setting to Code 7500 must not consider this setting for crew error.

ATC should not forget:

- ASSIST (Ack, separated, not interrupt, inform, help, time for pilot)
- Inform the head of change / habitat and adjacent sector / unit
- Declare the emergency period (ALERFA)
- The papers do not talk about kidnapping, long before the pilot of the first changes
- Complete, if possible, all the pilot's demands
- Broadcast important information without expectation of acknowledgment
- Keep track of all the manoeuvres of the aircraft - to create a safe space in the vicinity of the aircraft
- Allow for a possible change in route or airport landing
- Get all the necessary information such as, destination aerodrome, the weather at the airport of destination, routing, etc. ...
- Find additional information on the aircraft (the Company) or other (dangerous cargo on board)
- If you change the destination airport or track, change Coordinate with neighbouring habitats
- Ensure full documentation and submit report and completion report emergencies
- If you need to stop or limit the operation of the CTR / TMA [2]

6 DUTIES OF ATC DURING FIRE ON BOARD

Fire engine or auxiliary power unit fire is considered to be the period of availability (ALERFA). Possible consequences:

- Rejected take-off
- Stopping the engine
- High workload on the crew
- Effective engine shutdown and fire fighting
- Fire and smoke in cabin
- Emergency landing

Considering an aircraft in flight so we can expect:

- Problems with pressure
- Inability to maintain cruising level
- Land at the nearest suitable airport
- Optional emergency landing

ATC should not forget:

- ASSIST (Ack, separated, not interrupt, inform, help, time for pilot)
- Do not bother the crew of an extensive correspondence
- Inform the head of change / habitat
- Notify adjacent sector / unit
- Get additional information (number of persons on board, dangerous goods, etc.)
- Inform airport landing
- Ensure full documentation and submit a report message and end the state of emergency

During a fire engine on final approach below 1000 feet pilot does not interfere with engine performance and actions needed to extinguish a shutdown is performed after complete cessation of the aircraft on the runway. If unsuccessful extinguished subsequent evacuation and blocked the runway.

During a fire engine after take-off and subsequent return to AD after an unsuccessful attempt to extinguish during flight, landing with a mass greater than the maximum allowed, is associated with it can overheat the brakes, fire and / or running out of runway. [2]

7 DUTIES OF ATC DURING LOST CONNECTIONS

ATC can expect:

- Setting the SSR transponder code to 7600
- Set SSR code 7600 after ten minutes of the first unsuccessful attempt to establish a connection should be regarded as a loss of connection and assume that if it is a:

Controlled flight in VMC, the crew may choose to land at the nearest suitable airport and landing announce as soon as possible the relevant ATS unit

- Notify airports after its planned route and close to the possibility of unexpected approach and landing aircraft with a loss of connection
- Flight on the track:
- Pilot will maintain during the last seven minutes set the speed and level, or minimum flight altitude (if higher);

The 7 minutes begin:

- From the time the crew reached the last assigned level;
- From the time when the crew set up the transponder to Code 7600;
- From earlier estimate for the compulsory reporting point, crew reports;
- 4th From time failed report of position over a compulsory reporting point.
- Pilot then adjust level and speed according to filed flight plan.

If being radar vectored or proceeding offset according to RNAV without a specified limit permits, in the most direct way possible to return to the track under the current flight plan before than the next significant point, taking into consideration the applicable minimum flight altitude

ATC should not forget:

- Messages sent by blindly repeat twice, speak slowly and clearly;
- ASSIST (Ack, separated, not interrupt, inform, help, time for the pilot);
- Inform the head changes / position;
- It is able to receive messages sent by us? If so validating information and instructions can be done by changing the code SSR. For this purpose, use only the code
- Note whether the plane began to fall it received an order;
- Inform the subsequent by ATS that it is a one-sided loss of connection;
- Ask for instructions on approach, hand over their aircraft to change their code is confirmed;
- In the area of secure two-RVSM vertical spacing, and even if one-sided loss of connection
- Check how long is a connection with the aircraft and accordingly consider initial INCERFA, ALERFA, DETRESFA;
- information on the occurrence of storm activity and other known hazardous weather conditions in the area of responsibility of position;
- Inform other plants in the vicinity of the aircraft with the loss of connection;
- Consult the other plants
- Try to establish a connection to other frequencies, including 121.5 MHz;
- Hand over information on the aircraft with the loss of connection to the following unit. [2]

5 CONCLUSION

The article describes substance and importance of air traffic services, their classification and role, the main emphasis was placed on emergency services. One part includes a description of the functions of an air traffic controller's job. Another section is devoted to the duties of flight crew in non-standard situations, distribution of jurisdiction.

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AUTHORS' ADDRESSES

Antoško Matej, Ing.
Technical university of Kosice
Faculty of aeronautics, Flight preparation department
Rampová 7, 041 21 Košice
e-mail: matej.antosko@tuke.sk

Vagner Juraj, Ing.
Technical university of Kosice
Faculty of aeronautics, Flight preparation department
Rampová 7, 041 21 Košice
e-mail: juraj.vagner@tuke.sk

Sabo Jozef, Ing.
Technical university of Kosice
Faculty of aeronautics, Flight preparation department
Rampová 7, 041 21 Košice
e-mail: jozef.sabo@tuke.sk