PROPOSALS REGARDING DIRECTIONS OF CHANGES IN THE CONTENT OF NORMATIVE DOCUMENTS REGULATING THE TRANSPORT OF THE MOST IMPORTANT PEOPLE IN THE STATE BY MILITARY AIRCRAFT

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Abstract

Ensuring the security of people who hold the most important state positions is one of the most significant tasks for all institutions and people involved in securing the official activities of such people, including their mobility and movement by air. This requires undertaking actions aimed at eliminating security threats and thus minimising risk. Proposals regarding directions of changes in the content of normative documents concerning the transport of the most important people in the state by military aircraft concern: flight experience of crews; selection and assembly of the crew; planning the flight and preparing the crew for the flight; preparation, equipment and technical condition of the aircraft and atmospheric conditions and analysis of them.

Key words: the most important people in the state, transport by military aircraft, normative documents, security.

Introduction

The results of research presented in the article Changes in the content of normative documents after aviation incidents during transport of the most important people in the state by military aircraft concerning the impact of irregularities in the content of normative documents on the security of transport of the most important people in
the state by military aircraft constituted a substantive basis for conducting further research regarding the directions of changes that should be implemented in the content of normative documents regulating such transports in order to ensure their security in the perspective approach. Perspective considerations regarding directions of changes in the normative documents were not limited to the assumed time horizon.

The aim of the research, the results of which are presented in this article, was focused on proposing directions of changes in the content of normative documents regulating the transport of the most important people in the state by military aircraft. While the research problem: which directions of changes in the content of normative documents regulating the transport of the most important people in the state by military aircraft are desirable in order to ensure the safety of such transports? And the hypothesis verifying the indicated problem on the assumption that in order to ensure the security of such transport, it is necessary to introduce regulations in the normative documents developed and implemented by the Ministry of National Defence concerning the increased air experience of crews assigned to such tasks, changes in requirements for aircraft equipment and checking its technical condition, increased time for ordering such transports and minimum weather conditions for take-off and landing of an aircraft.

In order to verify the conclusions that were drawn thanks to theoretical research, empirical studies involving the examination of judgments and opinions\footnote{D. Tatarowski, Safety of transport of the most important people in the state with military aircraft, Doctoral dissertation, War Studies Academy, Warsaw 2019, p. 267–335.} were carried out. 74 people involved in planning and implementation of transports of the most important people in the state by military aircraft took part in the studies, as well as being at the stage of obtaining entitlements to carry out such transports, as other selected officers who in the past, while performing the service in the 36th special regiment of transport aviation and the General Command of the Polish Armed Forces, participated in the planning and implementation of such transports. Expert examinations were carried out on six former and current commanders of military units transporting the most important people in the state by military aircraft that have knowledge and experience regarding both normative documents regulating such transport and practical aspects of ensuring safety during planning and transport of the most important people in the state.

On the basis of conducted research, it was found that desirable directions of changes in the content of indicated normative documents regulating the transport of the most important people in the state by military aircraft should concern: flight experience of crew members performing such transports; proper selection and assembly of the crew; planning flights and preparing the crew for the flight; preparation, equipment and technical condition of the aircraft, as well as atmospheric conditions and analysis of them.

It should be noted that all presented factors regulated in normative documents concerning such transport have a similar impact on the safety of such transport and it
is difficult to indicate any grading in this respect. Any irregularities in the regulation of normative documents regarding one of the factors cannot be compensated by more restrictive regulations regarding another. Only normative documents that comprehensively regulate all factors affecting the security of such transport and strict compliance with obligations arising therefrom by all persons involved in the planning and implementation of it can contribute to ensuring the safety of the transport of the most important people in the state by military aircraft.

Flight experience of the crew

The minimum live flight hours of the commander of the crew performing the transport of the most important people in the state by military aircraft specified in the normative documents should not be less than 1500 hours. It should also be pointed out that according to the regulations in force in civil aviation\(^2\), a flight time of 1500 hours is also the minimum required for pilot operations of an aircraft (plane or helicopter) in commercial air transport, on aircraft of over 5700 kg or carriage of more than 9 people. The commander of the crew performing such transport should also have a minimum of 500 hours flying time on the type of aircraft on which the transport is performed and be fully trained to perform flights on such in all weather conditions day and night.

The minimum amount of hours flown by the second pilot performing such transport, specified in normative documents, should amount to 1000 hours, of which a minimum of 500 hours have been carried out on the type of aircraft on which the most important people in the country are transported. While there is no need to formulate the requirements in normative documents concerning the acquisition of appropriate experience by the second pilot in the implementation of such transport before the potential training for the performance of obligations of the crew commander during such transports. Decisions in this respect should be made by the commander of the aircraft unit performing the transport depending on the predisposition to perform such duties, after meeting other criteria related to the required aviation experience indicated in the normative documents.

The regulation of normative documents regarding the transport of the most important people in the state by military aircraft should also specify that the minimum amount of hours flown by the members of the crews performing such transport should be obtained on such a type of aircraft (plane or helicopter) on which they will carry out the transports.

\(^2\) Regulation of the Commission (EU) no. 1178/2011 of 03.11.2011 laying down technical requirements and administrative procedures for civil aviation crews in accordance with the regulation of the European Parliament and the Council (EC) no. 216/2008 (Journal of Laws EU L311/1).
The normative documents should also include regulations regarding the minimum aviation practice for the last 12 months, entitling the crew commanders and second pilots performing these transports to maintain their entitlement for their implementation in the next calendar year. As a minimum requirement in this respect, it is necessary to obtain 120 hours of flight and to perform 60 landings as a flying pilot (physically piloting the aircraft).

The training programmes for a given type of aircraft should include the scope of training for the commander of the crew and the second pilot to obtain the entitlement to perform transports of the most important people in the state by military aircraft. Depending on the type and kind of such aircraft, the scope of training included in the training programmes should include flights of a type as close as possible to the most complex tasks that can be performed during the transport of the most important people in the state, such as, e.g., flights to airports located in the United States and Asia (in the case of training programmes for Boeing 737 or Gulfstream G-550), flights to other places of take-offs and landings (in the case of helicopter training programmes), or flights with mock anti-missile and anti-artillery manoeuvres (in the case of training programmes on aircraft that can be used to carry out such transports in dangerous regions).

The normative documents should include the regulations to enable the pilots of military aircraft (planes) to acquire professional skills and exchange experience with civil pilots by executing commercial flights in civil aviation by the pilots implementing the said transports in the composition of national carrier crews (Polish Airlines LOT) on types of aircraft used to transport the most important people in the state. The Ministers of National Defence and Infrastructure should be designated as competent to sign the applied agreements in this respect.

**Selection and compatibility of the crew**

The regulation of normative documents concerning the transport of the most important people in the state by military aircraft should specify the procedures for the selection of candidates for members of flight crews carrying out such transports, who would have to be selected by superiors from among the best pilots in military aviation. The following formal requirements should be determined in relation to candidates for crew members performing such transports: age over 35, possession of a valid civil licence (a professional or line pilot3), knowledge of English at the operational

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3 In accordance with the *Concept of training the flying personnel of the Polish Armed Forces*, prepared based on the decision no. 262/MON of the Minister of National Defence of 05.06.2007, every officer in the direction of pilot of transport aircraft of the Military Aviation Academy (formerly the Higher School of Air Force Officers) from 2011 has obtained, as part of the training (and after passing the relevant examinations), a civilian professional pilot licence.
PROPOSALS REGARDING DIRECTIONS OF CHANGES IN THE CONTENT... level according to ICAO (ICAO level 4⁴), knowledge of another foreign language at the 2,2,2,2 level according to STANAG 6001⁵, very good or good physical fitness confirmed by a grade from an annual exam, a very good grade from the last two service opinions, a positive assessment of psychophysical predispositions to perform the transports of the most important people in the state issued by the Military Institute of Aviation Medicine and a positive pinion on the candidate by the Military Counterintelligence Service.

The normative documents should also include regulations concerning the motivational system for crew members participating in the execution of the transport of the most important people in the state by military aircraft, which should guarantee such personnel a non-permanent allowance. The amount of the allowance should be set at such a level that together with the basic salary, the members of these crews receive a remuneration comparable to the level of wages of the national air carrier.

In order to keep such crews in active service for as long as possible, part of the indicated non-permanent allowance (not more than 20%) should be included in the base from which future retirement benefits are calculated after 15 years of its collection, systematically increasing by 3% for each year of service for positions related to the implementation of transport of the most important people in the state by military aircraft (up to a maximum of 50% after 25 years of service in such positions).

The normative documents regulating such transport should also determine the requirement for the performance of such transports by crews (crew commander and the second pilot) completed “permanently”. Despite some restrictions for the operational capabilities of the aircraft unit performing such operations (e.g. if one of the pilots falls ill, the second crew member will also be excluded from the possibility of carrying out such transports); however, this principle would allow a better mutual understanding among crew members and to achieve the synergy effect.

The normative documents should also include the regulations specifying the requirement of more frequent pilot training than in the case of other crews who perform such transports. Such training devoted to the practical exercise of activities after the occurrence of emergency situations during the flight, should be systematically carried out every 6 months (twice a year). The negative evaluation from the simulator session should also be the reason for the temporary removal of a given pilot from carrying out said transports (until its successful completion). A negative result of two consecutive simulator sessions should, on the other hand, result in the permanent removal of a given pilot from performing such transports.

⁴ In accordance with the requirements specified in Doc 9835 Manual on the Implementation of ICAO Language Proficiency Requirements, ICAO Publisher, Quebec 2010.

⁵ The language proficiency requirements set out by ICAO in the 9835 document apply only to English. In order to determine the level of knowledge of other foreign languages, the requirements specified in the standardisation document NATO STANAG 6001 (edition 3) Language Proficiency Levels, NATO Standardisation Agency, Brussels 2009, are applied commonly.
There should also be restrictions on the number of aircraft on which crews carry out flights of the most important people in the state by military aircraft, stating that such pilots can only fly one type of aircraft. If it is necessary to train a given pilot on another aircraft (e.g. after obtaining a new type of aircraft or helicopter for transporting the most important people in the state), he should be removed from carrying out the transports on the type of aircraft on which he has performed such transports so far.

Planning a flight and preparing the crew for the flight

Normative documents regulating the transport of the most important people in the state by military aircraft should include regulations determining: the minimum time to place an order for such transports to domestic airports and airstrips of 24 hours, the minimum time of placing an order for such transports to other take-off and landing places within the country of 72 hours and the minimum time for placing an order for such transports to foreign airports, which should be determined individually for each airport. In the case of transport to other take-off and landing sites, each time before its use, the reconnaissance of such a place must be performed (with forces of the aviation unit performing such transport or another military unit indicated in a given case by the General Commander of the Armed Forces) and the full-time air coordinator directed to it (from the composition of the aircraft performing the transport) along with the appropriate equipment to secure the landing and take-off from that place.

Normative documents regulating such transport should include a list of foreign airports to which such transports may be carried out, with an indication of the take-off and landing procedures that can be used during such operations, determining the minimum weather conditions, necessary actions in order to minimise the risk of transport to a given airport and dates of placing a demand for the transport to each such airport. Transport to a foreign airport other than the one indicated in normative documents should be preceded each time by reconnaissance of such a place, determination of transport risks and the possibility of minimising them, while the order of such a transport should take place no later than 4 weeks before its implementation.

The normative documents should contain provisions that also stipulate that the demand for transport of the most important people in the state by military aircraft placed without compliance of the indicated deadlines of their placement will not be performed. In the event of the need to carry out such transport in the “urgent” mode, related to the occurrence of situations, the closed list of which should be specified in normative documents, the minimum time to place an order for such transport, carried out only to national airports and indicated airports of the European Union (e.g. the Brussels Zaventem airport in Belgium) should be set for 6 hours. The commander of the aircraft designated to perform the transport should keep the flying and technical
personnel ready (at the place of residence, with a 2-hour deadline for arrival at the unit after a telephone call) for the preparation and performance of such transports.

The regulations of normative documents should also make it possible to carry out such transport in the “urgent mode” to other take-off and landing sites, on the condition of using one of the designated places used in the country for landing and take-off, used by the crews of rescue helicopters (so-called municipality areas). The implementation of such a transport must be conditioned by an agreement with the Operating Centre of the Air Rescue Service (OC ARS) on the possibilities of using a given community place (which must be associated with temporary suspension of its use by ARS crews), obtaining current data from OC ARS (geographic location, designated directions of take-off and landing, description of obstacles occurring in its vicinity) and referring to them before using another helicopter for securing the transport of the most important people in the state, the crew of which will perform a reconnaissance of the given community place, and will transport an aviation coordinator and a meteorological observer there together with the necessary equipment for securing the landing and take-off.

The normative documents should stipulate the threshold of requirements to designate the performance of such transports to a specialist aviation unit (or two units, of which one will only perform the transport of the most important people in the state in dangerous areas, such as the areas of Polish Military Contingencies or areas affected by armed conflicts), with adequate equipment and staffing. The structure of such a unit must function in a continuous operating system (24 hours a day, 7 days a week) of an operational centre responsible for accepting demands for the performance of such transports and their detailed planning.

For each military aircraft used to carry out the transport of the most important people in the state there a full-time staff of 3 crews must be provided. The Commander-in-Chief of Types of Armed Forces should be responsible for maintaining such a full-fledged personnel, who in the case of its reduction (e.g. due to the termination of military service by certain members of the flying personnel) should inform the most important persons in the state about temporarily limiting their transport by military aircraft.

Normative documents should also contain provisions regarding the creation at the level of the Ministry of National Defence (e.g. in the Operational Centre of the Ministry of National Defense) of an appropriate unit coordinating the use of military aircraft designated for such transport and not allowing the placement of orders for said transport of with the failure to observe the time advance.

Due to the lack of professional subordination to the person approving and introducing normative documents regulating the transport of the most important people in the state by military aircraft, the Minister of National Defence, the indicated normative documents should not include the scope of duties of personnel responsible for the transport needs of the most important people in the state employed in the offices of the president, prime minister, marshals of the Sejm and the Senate, but only indicate the necessary deadlines for their submission for such transport. The scope of responsibilities of such personnel regarding the demand for such transport
should be specified in separate normative documents and agreements concluded by their superiors.

The content of normative documents regulating the transport of the most important people in the state by military aircraft should include points specifying that the starting time of crews performing such transport should be determined in accordance with the rules applicable in civil aviation\(^6\) regarding the time of flight operations depending on the time of their commencement, the number of completed sections, the number of changed time zones, as well as include a requirement that for each section of the planned route of such a transport, there is one spare airport which can be reached within 30 minutes of flight, and a requirement that during such transport, the planning should take into account an additional fuel residue sufficient for 30 minutes of flight.

### Preparation, equipment and technical condition of the aircraft

Normative documents regulating transport of the most important people in the state by military aircraft should contain regulations specifying the absolute requirement to use such aircraft equipped with at least two propulsion units on which the following systems and devices should be located: a self-defence warning about radiation by anti-aircraft systems and flare and dipole disruptors interfering with anti-aircraft missiles, preventing collisions in the air (TCAS) and approaching the ground (TAWS), monitoring the technical condition and aircraft wear (HUMS), real-time data transmission from the aircraft to the ground station, monitoring the position of the aircraft in the airspace, and a four-channel autopilot controlling the inclination, tilting, flight direction and engine thrust/power.

The content of normative documents regulating such transport should include regulations prohibiting the use of new aircraft for the performance of these transports in the first year of their use or for a given aircraft to achieve 500 hours, as well as aircraft that are 30 years old or achieved flying hours of more than 75% of the flying limit or the number of landings specified by the manufacturer. It should also be forbidden to use aircraft after repairs that interfere with their supporting structures for such transports (e.g. after a “hard landing”), and those which, as part of the necessary replacement of drive units, have been equipped with refurbished, not brand new engines and which were allowed to perform flights with any defective element of the on-board equipment (based on the so-called list of minimum equipment).

Regulations of normative documents should specify that the aircraft planned for the performance of transport of the most important people in the state are

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subject once a year to technical verification by a commission appointed at the level of the General Commander of the Armed Forces, determining, on the basis of their technical documentation, whether they have the necessary resources of all aggregates and on-board systems. Their technical condition should be constantly monitored by the technical personnel of the aviation unit carrying out the transport. The technical personnel must be required to decide to move the given aircraft away from the performance of such transports if data detected in the records of the on-board recorders shows the failure or operation of any aircraft systems outside the regimes specified by the manufacturer. Checking the technical performance of the aircraft before carrying out a given transport should be performed by a crew 2 hours before the planned take-off, according to the instructions for using this type of aircraft (according to the check card for the daily pre-flight inspection) including engine start and engine tests on the ground.

The normative documents concerning transports of the most important people in the state by military aircraft should also include regulations requiring comprehensive checking of such an aircraft (both in terms of pyrotechnic and counterintelligence) and whether the aircraft was used for the performance of other transports before.

It is also necessary for the normative documents to specify that one aircraft (the main one) is prepared for the performance of such transports. The designation of a spare aircraft for such a transport should take place at the request of the law office submitting the demand for a given transport, if due to the distance of the transport or time constraints, it is not possible to plan a spare variant for transporting the most important person in the state (with another means of transport).

**Atmospheric conditions and analysis of them**

Normative documents regulating the transport of the most important people in the state by military aircraft should include regulations determining the absolute requirement to direct a full-time meteorological observer (from an aviation unit designated in normative documents as carrying out said transport) together with appropriate equipment into places used for landing and take-off of an aircraft (both an airport, landing areas and other take-off and landing sites) carrying the most important people in the state, where there is no fixed point providing information about the prevailing meteorological conditions.

The content of normative documents regulating such transport should include regulations stipulating that such transports are performed according to the flight procedures with visibility (VFR) to landing sites, other take-off and landing sites and airports deprived of instrument landing systems, they can be performed with minimum atmospheric conditions of: in the case of helicopters – visibility of 2000
m, a cloud base of 1000 feet; in the case of planes – visibility of 5000 m, cloud base of 1500 feet.

Normative documents should contain regulations specifying that weather forecasts necessary to make a decision on the implementation of a given transport of the most important people in the state and for such a transport are prepared by the meteorological service units with the greatest knowledge and experience in preparing weather forecasts for a given area. In the case of international transport, such forecasts should be prepared by the Chiefs of the Hydrometeorological Service of the Polish Armed Forces, and in the case of national flights, by the personnel of the take-off and landing airport meteorological offices that know the local atmospheric conditions, and then verified by the personnel of the Hydrometeorological Service of the Polish Armed Forces.

Taking into account technological and IT progress, normative documents regulating such transport must include regulations concerning the necessity to ensure “online” access to meteorological data (such as TAF and METAR messages, radar maps of intensity of precipitation, icing intensity maps) on board an aircraft performing such transports.

**Conclusions**

The conducted research made it possible to indicate the directions of changes in the content of normative documents regulating the transport of the most important people in the state by military aircraft desirable for ensuring the safety of such transport, and to positively verify the working hypothesis, and thus solving the research problem and achieving the research goal.

The suggested directions for changes in the content of normative documents regulating such transport that concern the necessary flight experience of crew members performing such transports, proper selection and compatibility of the crew, planning the flight, preparing the crew for the flight, preparation, equipment and technical condition of the aircraft, as well as atmospheric conditions and analysis of them could contribute to ensuring the safety of such transport.

Due to the inability to independently develop, and above all to implement a new normative document, the intention of the authors of this article and the previous was to signal irregularities in their content and display the desired directions of change, the introduction of which may contribute to ensuring the safety of the transport of the most important people in the state by military aircraft. The proposed directions of changes in the content of normative documents regarding the security of such transport could be taken into account in the process of their development and implementation.

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transport are not final. They may be outdated because of technical progress forcing changes in the equipment of aircraft used for such transports, or the introduction of legal regulations changing the rules of air traffic, among other things.

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