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'A small accident but a very complex Investigation'

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The Author has 17 years operational experience with a number of European airlines including Aer Lingus, joining that airline in 1990. Promoted to Command in 2000 on Fokker 50 and subsequently on the Boeing 737. Following a 6-week short course in Air Accident Investigation at Cranfield University, appointed as Air Safety Officer and Line Training Captain with SkyNet Airlines, Shannon serving from 2002 to 2004. Joined Channel Express (Air Services) in 2004 and served as Line Captain and Base Flight Safety Officer. Appointed as an Inspector of Air Accidents (Operations) in March 2007 with the Air Accident Investigation Unit (Ireland).

1. Introduction

On 10 February 2011, a Fairchild SA 227-BC with 10 passengers and 2 flight crew on board crashed in dense fog while making a third attempt to land at Cork Airport. Four passengers and both flight crew lost their lives and four of the surviving passengers suffered serious injuries. The accident occurred on an intra-Community scheduled passenger service operated by a licenced Community Air Carrier.

The AAIU is an operationally independent unit within the Department of Transport, Tourism and Sport and is the Safety Investigation Authority in Ireland which undertakes to investigate Accidents, Serious Incidents and Incidents into air accidents in the State. This particular Investigation was the most challenging of the more than 500 Investigations that had been completed at that time by the Unit since its formation in 1994. The complexity of the accident sequence, examination of components at overseas locations, the international dimension of the Operation including the intricate relationship between the various agencies and associated undertakings, translation of technical documents and natural justice obligations determined the time taken to finalise its Report following a 3-year Investigation. Follow-up of the Safety recommendations took another year. The Final Report, totalling 238 pages, made a total of 54 findings, concluded the probable cause, nine contributory causes and made 11 Safety Recommendations. These notes provide a summary of the AAIU Final Report made into this Investigation which was published on 28 January 2014 (AAIU Formal Report No. 2014-001).

2. Background to the Operation

The aircraft was engaged on a scheduled passenger flight from Belfast City (in the UK) to Cork Airport (Ireland). The flight was operated by a Spanish Air Carrier, based in Barcelona which was the holder of an Air Operator Certificate (AOC) and an Operating Licence. The aircraft was owned by a separate Spanish company based in Seville; the Flight Crew were employees of this company. Tickets for the scheduled service were sold by another company based in Isle of Man.

3. Aircraft Description

The aircraft involved was a Fairchild SA 227-BC Metro III built in 1992 and was first registered in Spain as EC-ITP in 2004. At the time of the accident the aircraft was configured with 18 passenger seats and a crew of 2 pilots. No cabin crew were required to be carried and safety briefings were demonstrated by the Co-pilot prior to departure. The aircraft can be flown by either pilot, however it was not equipped with an autopilot nor a flight director. The aircraft and flight crew were capable of making ILS approaches to CAT I standard only.

The Metro III is powered by 2 TPE 331 turbo-propeller engines. The engines are controlled by sets of levers positioned between the pilots to control the Power and the RPM on each engine. In addition, a set of latches adjacent to the main power levers allow the main power levers to be brought into 'Beta range' to provide reverse thrust on the ground after landing.

4. Events Prior to the Accident Flight

Prior to the accident flight, the aircraft operated a series of night cargo charters from Belfast Aldergrove to Edinburgh, to Inverness and back to Belfast Aldergrove. These flights were operated by a different flight crew to the accident flight crew and required the removal of all passenger seats in the aircraft. On arrival at Belfast Aldergrove at 05.10 hrs on 10 February 2011, the passenger seats were re-installed by the flight crew that operated the night cargo charter.

The Flight Crew involved in the accident, the Commander and the Co-pilot, commenced duty at Belfast Aldergrove at 06.15 hrs. Their planned duty that day was to position the aircraft empty to Belfast City and operate two return flights to Cork, finishing at Belfast City. Flight documentation required for the flight sectors was downloaded in a handling agent's briefing office at 06.25 hrs including flight logs for each sector, meteorological information and NOTAM information. The weather documentation did not have any current weather for Waterford Airport, the only alternate aerodrome declared on the flight plan.

The aircraft departed Belfast Aldergrove at 06.40 hrs and arrived at Belfast City at 07.15 hrs. On arrival, a fuel uplift of 800 litres of Jet A1 fuel was made with a total fuel quantity of 3,000 lbs recorded in the Technical Log. Boarding was delayed; the handling agent witnessed the flight crew working towards the rear of the aircraft with torches on the floor. The flight crew did not obtain or request a weather update during the turnaround. A total of 10 Passengers boarded the aircraft and took their seats at random. Two pieces of baggage were loaded into the aft hold.

5. The Accident Flight

The aircraft was airborne en-route to Cork at 08.10 hrs and climbed to a cruising level of Flight Level 120. The flight contacted Shannon Control at 08.34 hrs and, following release for descent, the flight was handed over to Cork Approach at 08.48 hrs. Following initial contact the flight was given the latest weather conditions including the IRVRs. The Flight crew were advised that a CAT II approach was available for runway 17 and given their choice of runway.

The aircraft carried out two ILS approaches, both of which were conducted with conditions below the required minima. The flight crew required a visibility of at least 550 metres when they passed the Outer Marker equivalent point (3.5 NM on the approach). On both of these approaches, descent was continued below the decision height, which was followed by a missed approach.

The aircraft then entered a holding pattern for approximately 25 minutes. While in the holding pattern, Cork ATC obtained up to date weather reports for the flight crew for Waterford, Shannon, Dublin and Kerry Airports. Waterford and Shannon were similar to Cork with fog and Dublin had fog patches but was operational. Kerry Airport however had good weather with visibility in excess of 10 km.

Although a diversion to Kerry Airport was considered briefly, as evidenced by the CVR, the Commander decided to make a third ILS approach as the visibility was reported to be improving slightly. While the touchdown RVR improved briefly to 550 m, the final approach was made with conditions below the required minima. This approach was continued below the decision height and a missed approach was again initiated. Approaching the runway threshold, the aircraft rolled to the left, followed by a rapid roll to the right during which the right wingtip contacted the runway surface. The aircraft continued to roll and impacted the runway in an inverted position. The aircraft departed the runway surface to the right and came to rest in soft ground. Post-impact fires occurred in both engine nacelles.

The Investigation notes from ATC and CVR recordings that ATC personnel at EICK actively assisted the Flight Crew following requests for weather information and were pro-active in identifying an operational alternate for the Flight Crew. Following the accident and loss of communications with the aircraft, ATC immediately activated the crash alarm.

6. Accident Site

Inspection of the runway surface and FDR data showed that the aircraft initially struck the runway with its right wingtip at a roll angle of 97 degrees (past the vertical), where it continued to roll impacting the runway surface inverted. Three of the right and one of the left propeller blades detached as contact was made with the runway surface and were found at various distances from the main wreckage. The aircraft left the paved area and decelerated rapidly in soft ground. During the deceleration the fuselage fractured allowing a large amount of soil to enter the forward cabin.

7. Principal Questions for the Investigation

Evidence showed that a catastrophic loss of control had occurred within the 10 seconds prior to impact. The AAIU Investigation then had two principal questions to answer: Firstly, what caused the loss of control in the final moments of the third approach, and secondly, why did the Flight Crew not divert to Kerry Airport following two abortive attempts to land.

To help answer the first question, the Investigation examined the following scenarios that may have contributed to the loss of control:

- a flight control problem
- a primary instrument failure on the aircraft
- unreliable signals from the ILS ground based equipment
- incorrect display of ILS signals
- incapacitation of one or both of the Flight Crew
- powerplant anomaly (the engines, propellers or the engine control components).

The flight controls were examined at the accident site and the Investigation was satisfied that the aircraft's flight control system was not a factor in the accident. Likewise the Investigation was also satisfied that the ground-based ILS signals were radiating correctly at the time of the accident and that the Horizontal Situation Indicator (the primary reference instrument that would have been used by the Co-pilot) did not contribute to the loss of control. The Investigation also discounted the possibility of subtle or sudden incapacitation of the flight crew.

The final factor that may have contributed to a loss of control was the powerplant. Examination of the propellers showed that, at the moment of impact, the blades of both propellers were at pitch angles of approximately 40 degrees, which was appropriate for a power setting commensurate with a go-around. No pre-accident defects were found with any of the propeller blades and all evidence indicates that the propellers were functioning correctly at the moment of impact.

Data and evidence relating to the operation of the engines was contained in the flight recorders. Both the Flight Data Recorder (FDR) and the Cockpit Voice Recorder (CVR) were recovered from the wreckage and downloaded. The FDR contained data in digital format for the previous 106 hours of aircraft operation until the unit ceased recording in the impact. The CVR contained recording for 29 minutes until the unit ceased recording at impact.

The FDR contained a total of 11 parameters. Examination of the FDR data showed that up to approximately 9 seconds prior to impact all recorded parameters were normal except for a slight difference between the recorded engine Torque values.

Evidence shows that the final approach was flown at approximately 140 kts, an indicated airspeed consistent with engine power settings, expected aircraft performance and proper control of the aircraft. According to the Airplane Flight Manual (AFM) the zero bank stall speed calculated for the aircraft in the approach configuration was 88 kts. Although the stall warning horn activated during the final seconds of the flight, various combinations of airspeed decay and load factors, coupled with the aerodynamic disturbance associated with the loss of control were the likely causes of its activation.

The first significant event was a reduction of delivered engine torque from both engines, commencing approximately 9 seconds before impact, accompanied by a decrease in airspeed. Coincident with the reducing torque values, the aircraft began a roll to 40 degrees to the left. As both engine torques increased (approximately 5 seconds before impact), the pitch attitude increased and the airspeed continued to decay. Concurrently, the aircraft commenced a roll to the right past the vertical as torque values increased towards 100%. Following impact the data values become unreliable.

Examination of the FDR showed Analysis of FDR data showed that, from the earliest available data (106 hours prior to the accident) there was a mismatch between the recorded torques being delivered by the two engines. In general, the data showed that the torque being delivered by No. 2 engine exceeded that being delivered by No. 1 engine by up to 5%.

It was also noted that, as the power levers for both engines were being advanced prior to take-offs, the torque response for No. 2 engine was faster than that for No. 1 engine. FDR data also showed that prior to and on the day of the accident, the power levers were manually adjusted in normal flight to compensate for the engine torque differential.

During laboratory examination of the engine control components under the oversight of the Investigation, an anomaly was found on the PT2/TT2 (Pressure/Temperature) sensor associated with the No. 2 engine. This sensor, which is located in the inlet to the first stage compressor, provides total pressure and total temperature information for the scheduling of the associated fuel control unit (FCU). The bellows of the sensor when examined was found to be considerably shorter than required by the manufacturer's specification. Subsequently, a leak within the system was identified, due to a crack identified in the coil of the sensor bulb. The exact cause of the crack initiation could not be determined and may have been related to several contributors, such as interface corrosion and in-service stresses. The crack appeared to have been present for some time as evidenced by corrosion found on the fracture surface. Laboratory testing demonstrated that, as a consequence of this defect, the Pressure/temperature sensor in the No. 2 engine was outputting a temperature value up to 135°F below the actual total temperature to the No. 2 Fuel Control Unit.

This cold temperature signal resulted in incorrect scheduling of fuel flow to the No. 2 engine. This in turn had three effects on engine performance, all of which were in evidence throughout the FDR data. These were:

1. Slower engine speed response when the speed lever was advanced.
2. Faster engine torque response when the power lever was advanced.
3. Higher torque for a given power lever angle.

The respective fuel flow rates were then used to calculate the power lever angles during this phase of flight. The data indicates that during the final approach up to a time approximately 9 seconds before impact, both power levers were at angles in the range 50° to 52°. The power levers were then simultaneously moved below the Flight Idle position of 40° in the period from approximately 8 seconds to 6 seconds before impact. Calculations indicate that the power lever angles at this time were in the range 31° to 33°, i.e. below the Flight Idle position and in the Beta range of operation.

8. Loss of Control

The evidence from the CVR, Beta mode latch and FDR engine parameters is consistent with a simultaneous retardation of both power levers below the Flight Idle stops. Operating one or more power levers below Flight Idle in-flight, an action prohibited in the Airplane Flight Manual (AFM), produces high drag conditions which may result in excessive airspeed deceleration and may induce an uncontrollable roll rate due to asymmetric thrust and drag. These rapid and asymmetric torque and drag variations coincided with the initial stages of loss of control i.e. a rapid roll to the left to an angle of 40 degrees. Upon application of go-around power, the aircraft commenced a rapid roll to the right during which the right wingtip came in contact with the runway.

At the time the power levers were operated below Flight Idle, the FDR shows a decrease in airspeed and rapid rolling, probably as a result of asymmetric thrust which may have been exacerbated by the latent fault identified with the Pressure/Temperature sensor of the No. 2 engine.

The anomaly identified with the Pressure/Temperature sensor on the No. 2 engine, existed for more than 106 hours of aircraft operation including the two go-arounds that had been conducted prior to the final approach. It is the opinion of the Investigation that this anomaly did not materially affect the normal operation of the aircraft; however when the aircraft entered a regime prohibited by the AFM, this anomaly became significant.

The CVR indicates that the Commander took control of the power levers during the final approach, this action being acknowledged by the Co-Pilot (Pilot Flying). This was significant, as both power levers were subsequently retarded below Flight Idle – an action which would have been unexpected by the PF. It is possible that the PF may have made a control wheel input to the right in response to the unanticipated left roll. However, without the FDR parameters of control wheel or control surface position the Investigation cannot determine if such input was made.

The subsequent application of power to commence the go-around, at approximately 100 feet, coincided with the commencement of a rapid roll to the right and loss of control. This roll continued through the vertical, the right wingtip struck the runway and the aircraft inverted.

The Investigation identified three principal factors contributed to the loss of control:

- Uncoordinated operation of the power levers and the flight controls, which were being operated by different Flight Crew members.
- The retardation of the power levers below Flight Idle, an action prohibited in flight, and the subsequent application of power are likely to have induced an uncontrollable roll rate due to asymmetric thrust and drag.
- A torque split between the powerplants, caused by a defective Pressure/Temperature sensor, became significant when the power levers were retarded below Flight Idle and the No. 1 powerplant entered a negative torque regime. Subsequently, when the power levers were rapidly advanced during the attempted go-around, this probably further contributed to the roll behaviour as recorded on the FDR.

The probable cause of the accident was determined to be a loss of control of the aircraft at a low height, from which recovery was not possible. The approach was continued despite not having the required minima and the aircraft descended below the decision height without adequate visual reference. Loss of control was initiated by the retardation of the power levers below Flight Idle, a manoeuvre prohibited in flight as such a manoeuvre may result in excessive airspeed deceleration and may induce an uncontrollable roll rate due to asymmetric thrust and drag.

9. Option to Divert

The second question the Investigation needed to address was why the Flight Crew did not divert to Kerry Airport following two abortive attempts to land. While the aircraft was holding at point ROVAL, Cork ATC obtained the weather conditions at Kerry Airport which were good and passed them to the Flight Crew. In addition, Cork ATC also made the Flight Crew aware of the proximity of Kerry. The fact that the opportunity to divert was not taken prompted the Investigation to examine the training and experience of the Flight Crew and how that may have affected the decisions taken.

The Commander held a JAA Commercial Pilot Licence (CPL, Aeroplanes) issued in Spain. His SA 227 type rating was valid to 30 June 2011 and his Class I medical certificate was valid to 7 May 2011. Records show that he had a total flying time of 1,801 hours with 1,600 hours on type.

The Commander began flying in 2007 and completed his basic training on single and multi-engine piston types; his total general aviation flight time was 201 hours.

He then completed an SA 227 type rating with a Type Rating Training Organisation (TRTO) in Barcelona and commenced employment as a co-pilot on the type. Between 7 December 2009 and 16 December 2009, his personal logbook showed that he completed nine sectors totalling 15 hours 10 minutes as P1/S (Pilot-in-Command under Supervision). This command training was discontinued and he returned to flying as a co-pilot.

He flew as a co-pilot for the Operator until 2 February 2011 when he completed an Operator Proficiency Check (OPC), during which he occupied the left hand seat. This OPC took place at Reus (LERS), Spain and was recorded as lasting 40 minutes, during which two landings were completed. The Operators procedures require a flight of 2 hours duration and at least 4 landings/touchdowns. Following seven sectors under supervision, he completed two Line Check (LC) sectors; one sector on 4 February 2011 and a second the following day and he was promoted to the rank of commander. Following this he travelled from Spain to Belfast to commence duty as Commander. His first flight in command was on 6 February 2011, four days prior to the accident. His total experience in Command on the SA 227 was 25 hours.

Records show that the Commander operated as a co-pilot into EICK on 61 occasions between 8 September 2010 and 30 January 2011. Between the 6 February 2011 and 9 February 2011, he operated into EICK on 7 occasions as Commander. The Investigation found no records of a diversion for operational or weather reasons on any of these flights into EICK. In addition, his logbook showed that he had never operated into either EIWF or EIKY.

The Co-pilot had completed an SA 227 type rating in Spain and had accumulated a total of 270 hours experience on the type. Following an initial Operator Proficiency Check on 8 January 2011, he flew as Co-pilot with commanders who were not instructors. At the time of the accident, he had flown a total of 19 hours with the Operator but had not completed an initial line check.

In summary, the Investigation found that the aircraft commander was inadequately trained in the command role and thus was ill prepared for the situation in which he found himself on the day of the accident.

10. Operational Issues

It is recognised that tiredness and fatigue can adversely affect the performance of an individual to such an extent that the decision making and evaluation of a situation is compromised. Both Flight Crew commenced duty without the prescribed rest and it is likely that the Commander and Co-pilot were suffering from tiredness and fatigue at the time of the accident.

The Investigation determined that the aircraft Commander was inadequately trained in the command role. Poor evaluation of the weather conditions, lack of CRM and inappropriate decision making are largely attributable to the inadequate command training given to the Commander. In addition, the Co-pilot who had only recently joined the Operation, had not been line checked, yet was paired with the newly appointed Commander. This inappropriate pairing resulted in a flat cockpit authority gradient with little formal command in evidence.

The Co-pilot's duty change was made without the knowledge of the Operator although preparation and oversight of flight duty times was solely its responsibility. While the Operator stated it did not pair the Flight Crew together, there was no procedure in its Operations Manual to prevent this occurring, contrary to the provisions of EU-OPS. Such a crew pairing is not conducive to flight safety and came about due to the Operator not exercising appropriate control over its crew rosters and its lack of operational control and effective oversight.

Flight Time Limitations transgressions and the inadequate training provided to both Flight Crew members illustrate that this lack of oversight was not confined to the remote Operation.

11. Organizational Issues

The granting of an Air Operator Certificate requires that an operator satisfies the Competent Authority that it is able to conduct safe operations; that its organisation and management are matched to the scale and scope of the operation; and that procedures for the supervision of operations are defined.

The introduction of the intra-Community scheduled passenger air service was a significant departure from the Operator's core activity of cargo flights. Sufficient scrutiny of this proposed remote operation by the Operator should have identified and managed the additional resources and challenges while mitigating any risks identified. The lack of a contract or contact between the Operator and the Ticket Seller illustrates that this did not take place.

The Ticket Seller, which was not based within the European Union, accrued revenue from scheduled intra-Community air services. The Investigation found no evidence of a direct link between it and the Operator, the holder of the Operating Licence providing the air services. The UK Civil Aviation Authority (CAA) stated that there were concerns that the Ticket Seller was allowing the impression to be created that it was a licensed airline in its own right. The CAA addressed these concerns by requesting the Ticket Seller to amend its website. The Investigation notes that the term 'airline' was not defined or addressed in EU regulations.

The Investigation formed the opinion that the Ticket Seller, an 'air carriage contractor' as defined in Regulation (EC) No 2111/2005, Article 2 (c), was portraying itself as an airline. The Investigation further considered that in the eyes of the travelling public, an 'airline' is synonymous with an 'air carrier', an entity which is required to hold a valid operating licence. Such an operating licence can only be held by the holder of a valid AOC.

The de-facto operation of the aircraft by the Owner (the Seville-based Company which not an air carrier) and the Isle of Man based Ticket Seller) appearing to be an airline, was facilitated by the Operator in providing an air service through the use of its AOC. Furthermore, as there was no contract between the Operator and the Ticket Seller (the unsigned agreement being between the Owner and the Ticket Seller), the Operator was isolated from the activities associated with the Operation and became just a service provider. The operational oversight of this arrangement would be difficult to administer, with each undertaking carrying out various tasks, but with no overall effective oversight of the Operation being carried out by the AOC holder.

12. Regulatory Oversight

In its oversight responsibility the Competent Authority conducted operational and engineering audits on a regular basis. The Investigation considers that the findings of these audits were superficial. Specifically, they did not identify the remote Operation nor its inadequate resources.

Furthermore, the State audit carried out by ICAO and the Standardisation Audit by EASA also found weaknesses in the ability of the Competent Authority to conduct effective oversight.

13. Intra-Community Air Services

This accident flight was an intra-Community air service as defined in Regulation (EC) No 1008/2008, and under the requirement for 'a high and uniform level of protection of the European citizen through the adoption of common safety rules', as detailed in Regulation (EC) No 216/2008. Neither the Ticket Seller nor the Owner had any accountability under these Regulations, as neither held either an Operating Licence or an Air Operator Certificate.

Whereas Regulation (EC) No 1008/2008 provides for the operation of an intra-Community air service by a Community air carrier, the oversight role of Member States except the State which has issued the Air Operator Certificate and Operating Licence, appears to be limited:

'Member States shall not subject the operation of intra-Community air services by a Community air carrier to any permit or authorisation. Member States shall not require Community air carriers to provide any documents or information which they have already supplied to the competent licencing authority, provide that the relevant information may be obtained from the competent licencing authority in due time.'

The Investigation was concerned that the commercial model of an intra-Community air service provided by a ticket seller was not in the best interests of passenger safety as it could facilitate utilisation of resource-constrained undertakings to provide air services, thus allowing a ticket seller to exercise an inappropriate and disproportionate role with no accountability regarding air safety. The responsibilities of an air carrier are set out in Regulation (EC) No 1008/2008, but the role of a ticket seller, the Investigation found, is not clear nor are its activities defined.

14. Summary

The Investigation determined that the probable cause was 'Loss of control during an attempted go-around initiated below Decision Height in Instrument Meteorological Conditions'.

The Investigation identified the following factors as being significant:

- The approach was continued in conditions of poor visibility below those required.
- The descent was continued below the Decision Height without adequate visual reference being acquired.
- Uncoordinated operation of the flight and engine controls when go-around was attempted.
- The engine power-levers were retarded below the normal in-flight operational range, an action prohibited in flight.

- A power difference between the engines became significant when the engine power levers were retarded below the normal in-flight range.
- Tiredness and fatigue on the part of the Flight Crew members. Inadequate command training and checking.
- Inappropriate pairing of Flight Crew members, and inadequate oversight of the remote Operation by the Operator and the State of the Operator.
- Systemic deficiencies at the operational, organizational and regulatory levels were also identified by the Investigation. Such deficiencies included pilot training, scheduling of flight crews, maintenance and inadequate oversight of the operation by the Operator and the State of Registration.

In accordance with the Investigation's objective of preventing future accidents and incidents, a total of 11 Safety Recommendations have been made to various entities as follows:

- Three were made to the European Aviation Safety Agency (EASA) regarding the number of successive instrument approaches that can be conducted to an aerodrome in certain meteorological conditions, the syllabus for appointment to Commander and the process by which Air Operator Certificate variations are granted (all but one SR was accepted, however a Safety Information Bulletin was issued by EASA in respect of IRLD2014-002 regarding successive instrument approaches).
- Two were made to the Operator, Flightline S.L., regarding its operational policy and training (both SR's were accepted).
- One was made to *Agencia Estatal de Seguridad Aérea* (AESA), the Spanish Civil Aviation Regulatory Authority, regarding oversight of air carriers (SR was accepted).
- One was made to the International Civil Aviation Organization (ICAO), regarding the inclusion of the approach capability of aircraft/flight crew on flight plans (SR was accepted).
- Four are made to the European Commission Directorate responsible for Commercial Air Transport regarding Flight Time Limitations, the role of the ticket seller, the improvement of safety oversight and the oversight of Operating Licences.

All but one Safety Recommendation to the European Commission was accepted. However, regarding the Safety Recommendation made related to the role of the ticket seller, the European Commission kindly remarked the following in communications to the AAIU during 2014:

'This safety recommendation also underlines the importance of sharing safety related information between authorities. Further improvement of risk-based oversight and the lessons learned from this situation will be taken into account in the Commission's policy initiative on aviation safety that is highlighted at the end of this letter.'

From a general perspective, the lessons learned from this valuable report will be used in future legislative activities. More specifically, the Safety Recommendations will also be exploited during the process with regard to the Commission's policy initiative on aviation safety and a possible revision of Regulation (EC) No 216/2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency. Under this initiative, the roadmap includes considering a possible strengthening of the oversight system to better respond to today's needs, such as the growing share of remote operations. Among the options to be examined will be the expansion of mechanisms for cooperative oversight, including the possibility to delegate oversight duties to other National Aviation Authorities or to EASA, where appropriate.'

'...I would like to confirm that the issues that you raised in your final report have been discussed on a regular basis within my services in the context of future legislative activities. The lessons learned from this tragic accident will not be forgotten''.

The AAIU welcomes and appreciates the closing remarks made by the Commission regarding its policy on aviation safety and future legislative activities and that a high and uniform level of safety is achieved and maintained for the travelling public.

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Investigator-in-Charge

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