BIRD STRIKE COMMITTEE EUROPE

BERNE, May 29-June 2, 1978

Ref: BSCE/13 - WP 6

THE BIRD STRIKE REPORTING SYSTEM IN SWISSAIR

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SUMMARY

The bird strike reporting system in Swissair is described, emphasizing the storage of all bird strike information under a separate code in the computerized maintenance control system (MCS).
Comments are made on the efficiency of the reporting and on the priorities of future activities.

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1. History In the early Sixties, when Swissair's fleet became an all-jet-fleet, the damage to engines and aircraft through foreign objects was increasing considerably. The analysis showed clearly - amongst others - an increasing number of bird strikes being the cause of the damage.

So, the damage to aircraft initiated the recording of bird strike occurrencies within the airline.

Evidently other airlines had the same problem and - as you all know - national committees and international contacts were established to tackle the problem of bird strike in its entire complexity.

In May 1970 the "Swiss Bird Strike Committee" was founded. A Bird Strike Report Form was created by the Federal Air Office and was distributed to the Flight Information Offices of airports. As little use was made of this form, it was assumed that a better response could be expected if the airlines themselves were approaching their pilots and if the form was available in the cockpit of every aircraft. Swissair made then its own draft for a reporting form, which was completed by the Ornithological Station at Sempach for ornithological information and - since 1972 - the form is being stored in the ships library of every Swissair aircraft. In the meantime this form has once been revised to add the switching-on of landing lights.

2. Reporting System

For convenience I shall call this form the "Pilot's Report" to distinguish it from a second form to be called "Maintenance Report". A third source of information on bird strikes is the Aircraft Technical Log.

2.1 The Pilot's Report has to be filled in by the pilot whenever a bird strike had occurred or was suspected. Near-misses are also to be reported by this form.

The form is delivered to the Chiefpilot's Office, where 5 copies are made; the original is filed in a special bird strike file; 1 copy is sent via our IATA/ICAO - coordinator to the IATA - Office.

The remaining 4 copies go first through the office of the Flight Operations Assistant, primarely for information, and if necessary for publishing of procedures in the Flight Operations Manual or of informative articles in the Chief Pilots Bulletins.

All four copies go then to the Manager of Maintenance Engineering who is Swissair's coordinator for bird strike matters. Here come all the information on bird strikes together. Pilot's reports, Maintenance Reports, bird remains, repair cost information, etc. One copy of the Pilot's Report is filed and the remaining 3 are stored until the end of the year and then sent all together to the Ornithological Station at Sempach for scientifique and statistical evaluation.

Sempach keeps 1 copy of each report on the files and sends the remaining 2 copies to the Federal Air Office for distribution to the airport management concerned and to the Aviation Administration of the state concerned.

So far the way that the Pilot's Form take! This seems

all rather complicated if put into words, but is in fact very simple in its application. How effective it is, we shall discuss later on.

2.2 The second source of information on bird strikes is the Maintenance Report, as I call it here for convenience. This form is filled in by the maintenance people whenever a damage to the aircraft through bird strike is located and no entry in the Aircraft Technical Log was made by the flight crew. The Maintenance Report is also filled in whenever bird remains are found on the aircraft or in the engines intake. Bird remains and the Maintenance Report are also forwarded to the Maintenance Engineering Manager's Office. Here, the lower part of the form - which is a detachable tag - is sent immediately, together with the bird remains and the corresponding Pilot's Report (if filed), to the Ornithological Station at Sempach for identification. The Maintenance Report states - among other information - the estimated cost of repair.

2.3 The third source of information is the Aircraft Technical Log. All entries in the Aircraft Log (for all aircraft types except the DC-9) are being stored in our computerized Maintenance Control System (MCS).

Bird strike items are especially codified, which makes it possible to get separate coputer print-outs of bird strike information whenever needed.

Thatmuch to the reporting system in Swissair.

3. Comment Finally I would like to make a few remarks on the evaluation and some comment on the system in general.

3.1 The evaluation within Swissair is ending up in a statistical report - once per year - giving the total of strikes for each aircraft type as taken out of the computer and compared with the number of Pilot's Reports. This shows that as an average 25 + 35% of all bird strikes are not reported by pilots.

3.2 Furthermore the direct costs for repair are determined. Related costs as for crew- and aircraft changes, passenger accommodation or revenue losses, etc. are not recorded.

3.3 The complete evaluation of all data as collected by means of Pilot's- and Maintenance Reports is done at the Ornithological Station at Sempach. The result is presented in the yearly "Civil Aircraft Bird Strike Analysis for Switzerland" and is forwarded to the BSCE.

3.4 Only for approximately 1/3 of the registered bird strikes the bird has been identified - either by bird remains or by visual identification through the pilot in the moment of impact.

This is one of the discourageing facts we have to face. Though it is possible to stimulate the pilot's effort towards filing of bird strike reports, e.g. through informative publications and a monthly review of reportable incidents - including bird strike accidents - it seems unrealistic to expect far better results.

The main reason for this could be the following: the only situation where the pilot can eventually see what kind of bird might become a hazard to his aircraft, is on the ground, i.e. before take-off and during the take-off roll.

Once in the air and close to the ground, in other words, in the height bracket where bird strikes are likely to occur, the identification of birds beomes difficult unless they are real big ones or a whole flock. Furthermore this is the time when the crew is most busy with instrument reading and cockpit procedures - after take-off and before landing. Therefore a great number of bird

strikes are just heard but not seen or even noticed. This could not only explain the small number of identified birds, but also the difference of about 30% between actual and reported strikes.

3.5 One remark on the use of landing- and taxi lights for all take-offs and landings: With the revision of our Pilot's Report form at the end of 1976, the switching on of landing- and taxi lights for take-off and landing - even in daylight conditions - was introduced as a standing procedure. There is no statistical evidence as yet, that the number of bird strikes can be reduced by this means.

3.6 And this brings me to the last and concluding remark: The r e d u c t i o n of bird strikes is the objective of this honourable assembly; it has always been and it must always be. The accumulation of evidence and data through whatever system is certainly valuable and necessary to cover the grounds for a scientifique and successful approach to the problem. Pilots and airlines however, would highly appreciate - for safety and economical reasons - if the BSCE could set a high priority on scaring and expelling methods and devices, even if this seems fighting the symptoms rather than the cause. But as it is, this looks like being the only way that could lead to results in the foreseeable future.

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Discussion on WP 6

Pierre: How do you identify "near misses"?

Schwarzenbach: If you can see birds near the aircraft.

Bruderer: Near misses are reported but they are not included into the statistics.

After this there was a question from the delegation of the Netherlands about the type of form for birdstrike reports used by Swissair.

Schwarzenbach: Swissair has in co-operation with the ornithological station of Sempach prepared its own birdstrike report form. We prefer in Swissair to have our own form.

Ferry: We are very grateful for the first paper presented at a BSCE-conference by a respresentative for an airline who is also a pilot. I have the opinion that Swissair has one of the best systems for reporting of bird strikes. -I wonder a little about the number of 30 % for the discrepancy between the reported and the real number of birdstrikes. This will, however, be highlighted by working paper No 31.