

STAR 018
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**Health & Safety guidance for the
removal of bird strike remains**

Introduction

Bird strikes are becoming an increasingly common problem in aviation due to stricter wildlife conservation rules that are boosting bird populations. Bird strike damage costs the aviation industry millions of Euros each year, with aircraft engines having to undergo costly repairs or even replacement, and there are examples of airframes being written off due to the effects of a bird strike on final approach. However, it is not just the financial cost that needs to be considered when an aircraft has suffered a bird strike. As birds can carry any number of potentially fatal diseases it is important to be familiar with the health risks and observe certain guidelines when removing the remains following a strike.

Discussion

Birds are known to carry over sixty transmissible diseases in their blood, faeces, feathers etc. In extreme cases some of these diseases have the potential to be fatal. A selection of the more serious diseases associated with birds include:

- **Avian Influenza A (H5N1)** – infection which replicates in the lower respiratory tract, and consequently will cause viral pneumonia, and is often fatal.
- **Histoplasmosis** – a potentially fatal respiratory disease.
- **Salmonellosis** – a bacteria that often occurs as food poisoning; can be traced to pigeons, starlings and sparrows.
- **Candidiasis** – a yeast or fungal infection that affects the skin, mouth, and respiratory system; spread by pigeons.
- **Cryptococcosis** – an illness that begins as a pulmonary disease and can later affect the central nervous system; caused by yeast found in the intestinal tract of pigeons and starlings.

Following a bird strike, apart from the potential damage to the aircraft, there is usually a visible residue which is left behind on the exterior of the fuselage and/or in the aircraft engine(s). The risk of human exposure and contamination is greatly increased when an airline or airport employee is required to clean off this residue.

The issue of a potential health risk to personnel involved in not only cleaning the residue, but also carrying out any maintenance work following a bird strike, has been discussed with various bio-safety specialists around the world. Although it was agreed that the risk of human contamination is remote, there is still a risk.





Above: Photo of an ATR-42 clearly showing bird strike residue

Recommendations

Guidelines for the removal of bird residue do exist, although it has been observed that Regulators have been slow to publish such information in an official capacity. It is worth noting that the World Health Organisation, AIRSAN Project and CAPSCA are individually researching and coordinating the response to health risks in aviation.

With this mind, the following general recommendations for the removal of bird strike residue which have been based on the professional judgement of infectious disease experts:

- Wear disposable gloves.
- Do not touch face, eyes, nose etc. with the gloves.
- If body contact is unavoidable, wear a disposable overall, face mask and eye protection.
- Refrain from using air or water under pressure as this can create breathable aerosols.
- All remains that are removed are to be placed in a sealable plastic bag. In certain EU States legislation dictates that the remains should be forwarded to an infectious disease centre for further examination (a single feather in a sterile bag or container is sometimes acceptable).
- Place gloves, overall and mask (if used) into a separate, sealable bag and dispose as per normal rubbish.
- Wash hands thoroughly with soap and warm water.

Although the removal of bird strike remains is primarily a role for maintenance personnel, some operators permit flight crew to carry out an initial post bird strike inspection at remote locations. In addition operators should consider carrying a kit containing gloves, liquid soap, evidence bags etc., which could be utilised if the bird remains have to be removed by the crew due to the absence of engineering support. However, in this event it is important that the crew have undergone the required training, or at least an awareness briefing, on how to not only correctly remove the debris but also what the potential health hazards are that may be present when coming into contact with bird remains.

References and Further Information

- **AIRSAN Project** – Coordinating action to control public health threats in the aviation sector.



To see all updates and latest news visit: www.airsan.eu

- **CAPSCA Cooperation** – Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation. To see latest news view: www.capsca.org
- **Centre for Disease Control & Prevention (CDC)** – For interim guidance with cleaning aircraft exteriors visit: wwwnc.cdc.gov/travel/page/avian-flu-bird-collisions
- **IATA** – For information on Communicable Diseases in Air Transport visit: www.iata.org/whatwedo/safety/health/Pages/diseases.aspx

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