

# A Better FOD Sweeping Experience Reduces Foreign Object Damage Related Expenses and Improves Airside Safety

*Adopting an outcomes approach to FOD Sweeping helps improve airside safety and reduces associated FOD mishap costs.*

Client: **Eielson Air Force Base, USA**

---

## **THE CHALLENGE**

*Reduce the expenses associated with FOD damage by taking another look at the type of FOD sweeper in use.*

## **IMPACT**

*A ninety-eight percent (98%) reduction in the total cost of FOD damage over a nineteen (19) month period.*

## **THE OUTCOME**

*Eielson benefitted from a significant reduction in expenses related to foreign object damage. The expense reduction was underpinned by the adoption of the MIL-Spec and MEEP tested **FOD\*BOSS Ultimate** Air Force Sweeper.*

---

Eielson AFB is a United States Air Force base located in Fairbanks, Alaska and is the home of F-16 aircraft and the F-35A Lighting II.

The impact of FOD on the aviation industry is well documented, with 1996 estimates of the financial burden on the commercial aviation sector reaching up to US\$4 billion per year in direct costs. Indirect costs have this reaching as high as US\$16 billion per year when factoring in the expense of rescheduling flights and organising replacement aircraft. Estimates (1996) for the military sector identify similar levels of costs with US\$2 billion,

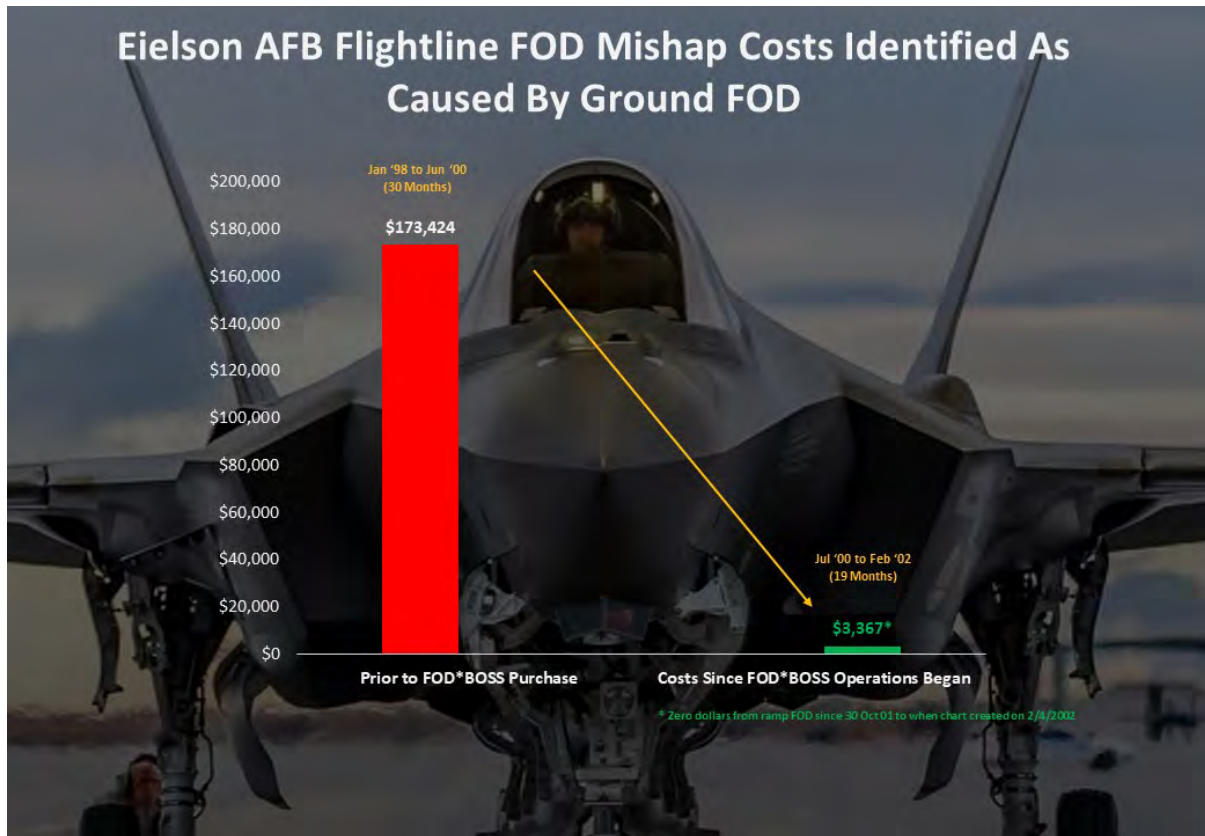
although this may be a conservative estimate. Unfortunately, this author is unable to find estimates for 2021. However, if these were calculated in 2021 dollars, the cost of FOD on the commercial aviation industry would have reached US\$7 billion in direct costs, US\$28 billion for indirect costs, and the military estimate will have reached US\$3.5 billion. This last figure will not have considered the cost escalations commonly attributed to improvements in military technology.

In this specific example, Eielson AFB identified their foreign object damage expenses over 30 months and realised this should be dealt with.



Over the period Jan 1998 to June 2000, a total of US\$173,424 in foreign object damage costs were incurred, an average of US\$5,780 per month. These costs were considered to be unacceptable and avoidable. Therefore, a decision was made to take a deeper look at the FOD sweeping tools currently in use and assess the likely impact of adopting the **FOD\*BOSS Ultimate** Air Force Sweeper and the benefits of using a sweeper with unique critical safety design features.

The **FOD\*BOSS** was formally adopted in July 2000, with FOD related costs continuing to be measured to understand any related reductions in foreign object damage costs. After nineteen months of continued usage, it was reported that foreign object damage related



expenses dropped by at least 98% between July 2000 to February 2002, to a total of US\$3,367. This outstanding achievement was underpinned by the use of the **FOD\*BOSS** and an unrelenting approach to eliminating FOD from all AOAs.

## Summary

The financial burden that FOD imposes on the aviation and aeronautical sector is estimated to be a combined US\$38.5 billion in 2021 dollars. However, these costs are all considered to be largely avoidable. On a positive note, if every airfield and airline implemented a **FOD\*BOSS Ultimate** to clean and protect their AOAs similar to Eielson AFB, then this figure could be reduced by at least 98%, saving an incredible US\$37.7 billion for the entire aviation and aeronautical industry in 2021's value. That is an astounding

outcome. So let's look at why Eielson AFB selected the **FOD\*BOSS** to protect their sensitive jets.

The **FOD\*BOSS** was chosen for several reasons, including an unrivalled FOD pick-up and retention rate over 99.9%, a high-speed capability and low operating cost. The **FOD\*BOSS** was also selected because it contains unique critical safety design features that ensure FOD is "activated", captured, and retained throughout the entire sweeping process. Further, all FOD captured within the **FOD\*BOSS** is available for investigation and analysis on an AOA-by AOA basis, ensuring education and FOD mitigation programs are entirely supported.

To learn more about the **FOD\*BOSS** and how your FOD Management plan can be enhanced using technology and intelligent design principles in FOD sweeping, contact Aerosweep today at [info@aerosweep.com](mailto:info@aerosweep.com), or visit our website ([www.aerosweep.com](http://www.aerosweep.com)) to read more.