

Choosing A Better FOD Sweeping Technology Reduces Foreign Object Damage Significantly

Choosing the best technology for FOD Sweeping significantly reduces associated FOD mishap costs while increasing airside safety.

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

THE CHALLENGE

Reducing the costs associated with FOD damage using a sweeper with intelligently designed technology focused on effectiveness and speed.

IMPACT

A ninety-nine-point nine percent (99.9%) reduction in the total cost of FOD damage over a thirty-nine (39) month period.

THE OUTCOME

*An outstanding and highly significant reduction in the Eglin AFB's foreign object damage related expenses. The expenses reduction was achieved in association with the adoption of the MIL-Spec and MEEP tested **FOD*BOSS Ultimate** Air Force Sweeper.*

Eglin AFB is a United States Air Force base located in western Florida Panhandle and is home to the 33rd Fighter Wing, a graduate flying wing and maintenance training wing for the F-35 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

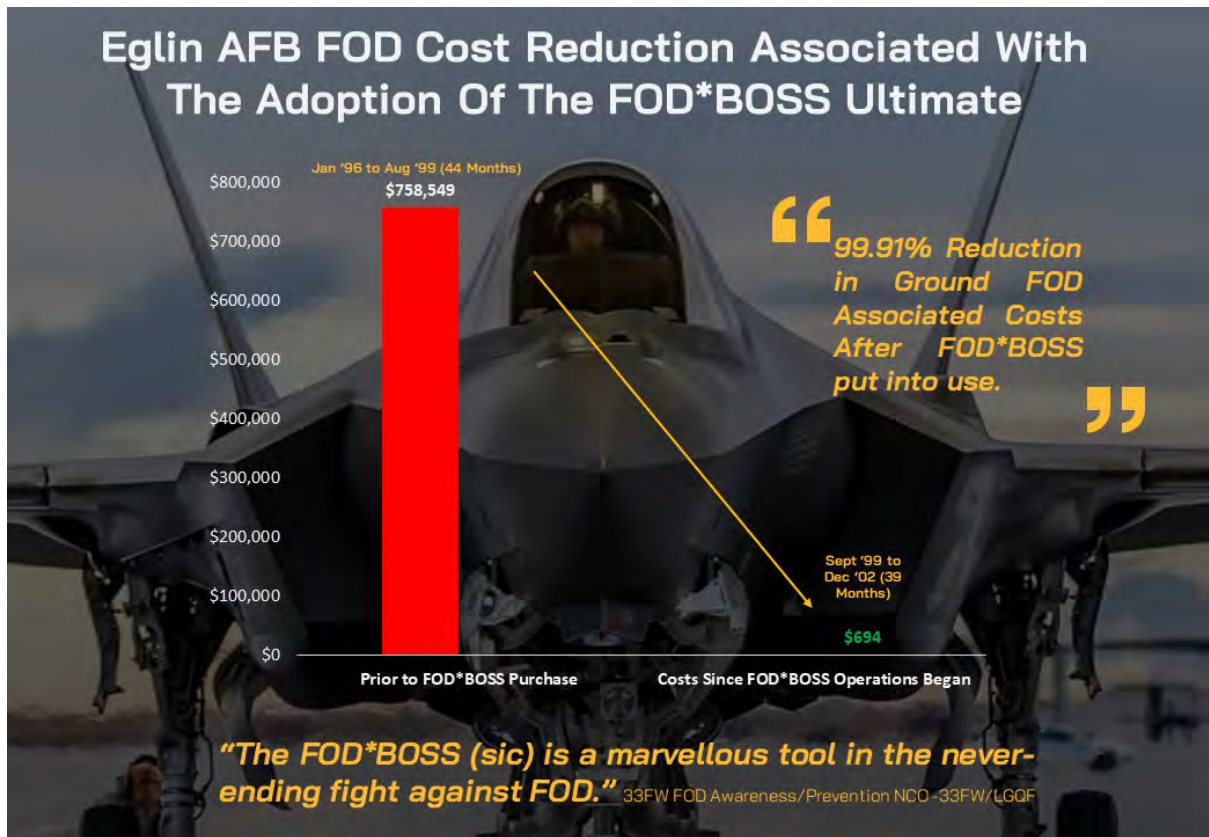
the commercial aviation industry would have reached US\$7 billion in direct costs, US\$28 billion for indirect costs, and the military estimate will have reached US\$3.5 billion. This last figure will not have considered the cost escalations commonly attributed to improvements in military technology.



Ensuring all AOAs are as FOD-free as possible requires excellent FOD management plans and ensuring the best-available FOD sweeping tools are available. Additionally, ensuring the best sweeping tools are chosen requires looking for better technology focused on maximising FOD pick-up rates and ensuring aircraft movements and “mission-readiness” are not compromised.

The Eglin AFB endured significant foreign object damage associated with ground-FOD over four years and incurred costs over three-quarters of a million dollars. It was clearly understood that something needed to be done about this, as these costs were considered entirely avoidable.

Over the period Jan 1996 to Aug 1999, a total of US\$758,549 in foreign object damage costs were incurred, an average of US\$17,740 per month. Therefore, a decision was made to choose a better FOD sweeping technology (**FOD*BOSS Ultimate**) and assess the impact of adopting the **FOD*BOSS** Ultimate Air Force Sweeper on FOD-related costs.



After adopting the **FOD*BOSS** in September 1999, Eglin AFB reported that foreign object damage related costs dropped by 99.9% over the following 39 months to December 2002. This outstanding achievement resulted from using the **FOD*BOSS** as the underpinning factor in an unrelenting approach to eliminating FOD from all AOA's.

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 AOA's similar to Eglin 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 Eglin AFB selected the **FOD*BOSS** to protect their sensitive jets.

The **FOD*BOSS** was chosen for several reasons, which included an unrivalled FOD pick-up and retention rate over 99.9%, a high-speed capability and low operating cost, but importantly because the **FOD*BOSS** 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, or visit our website (www.aerosweep.com) to read more.