



# AEROSPACE STANDARD

AS9146™

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Foreign Object Damage (FOD) Prevention Program -  
Requirements for Aviation, Space, and Defense Organizations

## RATIONALE

Foreign Object Damage (FOD) is a major concern in the aviation, space, and defense industry. While there is a large amount of information and guidance available about the prevention of FOD, no requirements standard exists. This standard identifies FOD Prevention Program requirements that can be flowed down in contractual agreements.

AS9146 has been reaffirmed to comply with the SAE Five-Year Review policy.

## FOREWORD

To assure customer satisfaction, the aviation, space, and defense industry organizations must produce and continually improve safe, reliable products that meet or exceed customer and regulatory authority requirements. The globalization of the industry and the complexity of resulting organizations' supply chains have complicated this objective. End-product organizations face the challenge of assuring the quality of, and integrating, product purchased from suppliers throughout the world and at all levels within the supply chain. Furthermore, suppliers and processors, within the industry, face the challenge of delivering product to multiple customers having varying quality expectations and requirements.

The aviation, space, and defense industry established the International Aerospace Quality Group (IAQG) for the purpose of achieving significant improvements in quality and safety, and reductions in cost, throughout the value stream. This organization includes representation from aviation, space, and defense companies in the Americas, Asia/Pacific, and Europe.

The IAQG benchmarked industry best practices and guidance to develop the requirements of this FOD Prevention Program standard. This document standardizes FOD Prevention Program requirements to the greatest extent possible and can be used at all levels of the supply chain by organizations around the world to mitigate FOD risk to aviation, space, and defense products and services.

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## 1. SCOPE

This standard defines FOD Prevention Program requirements for organizations that design, develop, and provide aviation, space, and defense products and services; and by organizations providing post-delivery support, including the provision of maintenance, spare parts, or materials for their own products and services.

It is emphasized that the requirements specified in this standard are complementary (not alternative) to customer, and applicable statutory and regulatory requirements. Should there be a conflict between the requirements of this standard and applicable statutory or regulatory requirements, the latter shall take precedence.

## 2. APPLICABLE DOCUMENTS

The following documents should be considered for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document, including any amendments applies.

9100            Quality Management Systems – Requirements for Aviation, Space, and Defense Organizations

9110            Quality Management Systems – Requirements for Aviation Maintenance Organizations

9120            Quality Management Systems – Requirements for Aviation, Space, and Defense Distributors

NOTE: Equivalent versions (e.g., AS, EN, JISQ, SJAC, NBR) of the IAQG standards listed above are published internationally in each sector.

IAQG Supply Chain Management Handbook (SCMH) – Foreign Object Prevention Program Guidance Material (<http://www.sae.org/iaqg/>)

ISO 9000:2015 Quality management systems – Fundamentals and vocabulary

## 3. TERMS AND DEFINITIONS

### 3.1 Clean-As-You-Go

Practice of cleaning the immediate work area of the product at appropriate intervals to eliminate the accumulation or migration of Foreign Objects (FOs) that may potentially become entrapped within the product [i.e., Foreign Object Debris (FOD)] or cause damage (i.e., FOD).

### 3.2 Consumables

Supplies, materials, and miscellaneous items required for product and operations processes that are expected to be consumed during work performed or discarded after useful function.

### 3.3 Foreign Object (FO)

An alien substance or article (e.g., tools, consumables, hardware, product protective devices, personal items, product process debris, operations debris, environmental debris) that could potentially enter and/or migrate into/on the product or system becoming FOD and potentially cause FOD, if not removed and controlled.

### 3.4 Foreign Object Damage (FOD)

Any damage attributed to FOD that can be expressed in physical or economic terms, which could potentially degrade the product or system's required safety and/or performance characteristics.

### 3.5 Foreign Object Debris (FOD)

Any FO that has entered and/or migrated into/on the product or system, and could potentially cause FOD, if not removed and controlled.