



FOD Program Assessment Tool

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Overview

FOD Assessment Tool

- National Aerospace Standard 412 and NAFPI
- FOD prevention and types of work
- Boeing's need for a single assessment tool
- Thirteen Assessment Areas
- How it works
- What the Tool Can Do
- Summary
- Questions

National Aerospace Standard 412

- NAS 412 was created and is maintained by NAFPI so that there is an industry standard for FOD prevention.
- NAS 412 is used in new military contracts
- NAS 412 can be ordered on line through the Aerospace Industries Association website for \$34
 - www.techstreet.com/info/aia.tmpl
- NAS 412 lays the foundation for FOD programs across our industry

FOD Prevention and Types of Work

- There are many types of work done in our industry
 - Manufacturing Facilities
 - Building widgets
 - Manufacturing sub-assemblies
 - Final product assembly
 - Functional testing
 - Painting and finishing
 - Commercial, military and space products
 - Flight Line Operations
 - Airports, field operations, carriers,
 - Space Launch Facilities

Boeing's Need For a Single Assessment Tool

- Boeing performs many different types of work
- When a company-wide FOD team was formed, there was a desire to assess all of our facilities with a common tool
- What would we use as a standard?
- How would this tool be used?
- How could we rate different facilities that performed different work?

The Creation of a Single FOD Assessment Tool

- NAS 412 was recognized as the standard
- The standard was first divided by Assessment Areas
- Each Assessment Area would be scored on a scale of 1 to 5
- The scores are based on levels of maturity
- Objective evidence is recorded for each level of maturity scored

The Thirteen Assessment Areas

- Measuring Performance
- Training – FOD Awareness and Prevention
- Reporting and Investigation
- FOD Focal Point
- Material Handling Parts and Protection
- Housekeeping
- Tool Accountability
- Employee Actions in or Around Production Areas
- Design Considerations
- Production and Modification Operations
- Test Area
- Field and Facilities Operations
- Hardware Accountability

How It Works

- A work area is selected for assessment
- The facility FOD focal or independent assessor reviews the assessment tool and excludes any Assessment Areas that do not apply
- Next, the work area is examined and scored for each Assessment Area on the tool
- Notes are made about the objective evidence reviewed during the assessment with every score.
 - This step is very important so that processes and practices are noted as solid evidence that there are prevention activities
- All criteria for an Assessment Area maturity level score must be met to achieve a specific level.
- The assessment scores are totaled and divided by the number of assessment areas used for an average maturity level.

Scoring Assessment Area Examples

7) Tool Accountability

Primary objective of a tool accountability program is to eliminate accidents and incidents and loss of life or equipment due to tool FOD.

Does not apply.

Scoring Assessment Area Examples

Maturity Level 1

7) Tool Accountability

Primary objective of a tool accountability program is to eliminate accidents and incidents and loss of life or equipment due to tool FOD.

No evidence of tool accountability or tool containment.

Scoring Assessment Area Examples

Example – Maturity Level 2

7) Tool Accountability

Primary objective of a tool accountability program is to eliminate accidents and incidents and loss of life or equipment due to tool FOD.

Tool accountability procedures exist in appropriate areas of the facility;
No evidence of tool containment compliance.

Scoring Assessment Area Examples

Maturity Level 3

7) Tool Accountability

Primary objective of a tool accountability program is to eliminate accidents and incidents and loss of life or equipment due to tool FOD.

☐ Tool accountability and tool control exist in appropriate areas of the facility; **Tool containment includes some methods such as use of containment trays, shadow boards/ shadowboxing, bar coding, chit systems or consolidated tool kits**

Scoring Assessment Area Examples

Maturity Level 4

7) Tool Accountability

Primary objective of a tool accountability program is to eliminate accidents and incidents and loss of life or equipment due to tool FOD.

- Tool accountability and tool control exist in appropriate areas of the facility; Tool containment includes some methods such as containment trays, shadow boards/shadowboxing, bar coding, chit systems or consolidated tool kits. **Tools and equipment are usually tethered or suitably restrained to prevent dropping where appropriate. A system of accountability is in place for consumable tools**

Scoring Assessment Area Examples

Maturity Level 5

7) Tool Accountability

Primary objective of a tool accountability program is to eliminate accidents and incidents and loss of life or equipment due to tool FOD.

☐ Tool accountability and tool control exist in appropriate areas of the facility; Tool containment includes some methods such as containment trays, shadow boards/ shadowboxing, bar coding, chit systems or consolidated tool kits. **Tools have been marked with an identification number.** Tools & equipment are **always tethered** or suitably restrained to prevent dropping where appropriate. **Loose tools are carried and stored in a tray or other container, both on the floor and in the assembly.** A system of accountability is in place for consumable tools.

What the Tool Can Do

- Assess your FOD prevention *procedure* for program maturity against a national standard
- Assess the maturity of your FOD *practices* against a national standard
- Understand how mature your program should be
 - It's not always a good thing to have a perfect score!
 - You may aspire to have practices in place that are expensive to integrate and do not affect the desired result
 - Assess what your area needs and decide on the level of maturity desired
- Work areas that are struggling can be helped by a “Tiger Team” of subject matter experts using this tool to make recommendations.

Summary

- There is an industry standard for FOD prevention practices.
- There are many kinds of work done within the industry.
- Boeing needed to create a tool that could be used across the company
- The Boeing FOD Assessment Tool has proven to be an effective method for rating the maturity of FOD prevention practices and procedures with varied products and types of work.
- Selecting the level of maturity for your program is part of the process.
- This tool is available for you to use and is provided on the CD/DVD package given away at the Boeing display.

Questions?

