Ensuring Quality in the Oversight Control and Management of an Effective FOD Program

Sofema Aviation Services (SAS) www.sassofia.com considers the best practices consistent with a Foreign Object Debris Program suitable for an Aircraft Engine Overhaul or Component Workshop.

Introduction

When we use the term Quality Control we are considering amongst other elements:

- System Reliability,
- Integrity,
- Safety and
- Customer Satisfaction.

Without an effective FOD Control Program in the production area, the product will typically fail to meet expected quality standards. (this can potentially lead to significant outcomes.

Achieving quality is not an easy task, it requires a significant effort from all stakeholders. Here we look into the necessary steps to build quality thinking into a foreign object debris FOD program.

Building the Initial FOD Program

Building a FOD program involves a range of steps from planning and policy development to staff training and continuous improvement.

- The first step is to establish clear policies and procedures for FOD prevention and control.
    - These should set out what FOD is, why it's important to prevent it, and what the roles and responsibilities of different staff members are in relation to FOD.
- All staff members should be trained in the policies and procedures, with specific training for those whose roles involve direct handling of equipment.
    - This should include both initial training and regular refresher courses.
- Procedures for regular inspection, maintenance, and cleaning of facilities and equipment should be established.
    - These should also include the secure storage and disposal of equipment and materials to prevent them becoming FOD.

FOD Detection and Removal:

You should have procedures in place for detecting and removing FOD, including regular checks of facilities and equipment.

- This may involve both manual checks and the use of technology, such as FOD detection systems.

Incident Reporting and Investigation:

- There should be a clear system for reporting and investigating FOD incidents.

- This should include the collection of data on the type, source, and effects of FOD, as well as the actions taken to prevent recurrence.

Continuous Improvement:

- The FOD program should include a process for regularly reviewing and improvement of the FOD policies and procedures.
- Such Improvement should be based on the data and experiences gathered through the incident reporting and investigation process.

FOD Audit Program Typical Elements

- Define Scope:
    o Determine what areas of the organization will be audited and the depth of the audit.
- Develop Audit Criteria:
    o Define what standards or requirements the organization will be compared against.
    o This could include internal policies and procedures, as well as external standards.
- Conduct the Audit:
    o Perform the audit according to the defined scope and criteria.
        § This will usually involve reviewing documentation, observing processes, and interviewing staff.
        § During the actual FOD (Foreign Object Debris) audit, the focus should be on assessing the effectiveness and compliance of the FOD program within the organization.
        § The goal is to ensure that the FOD prevention and control measures are well-established, consistently followed, and continuously improved.
- Report Findings:
    o Prepare a report detailing the findings of the audit, including any non-conformities or areas for improvement.
- Follow-up:
    o Review and verify any corrective actions taken in response to the audit findings.

Challenges to Deliver an Effective FOD Program

There are several challenges often encountered when implementing a FOD program.

Note - The commitment of leadership is crucial to drive the change and allocate the necessary resources.

- It can be difficult to get everyone on board with a FOD prevention program, especially if it involves significant changes to existing routines and practices.
- FOD prevention programs can require significant resources, including staff time, training, equipment, and potentially new technology.
- There can be a lack of awareness or understanding about the seriousness of FOD, and why it's so important to prevent it.

Best Practices for an Effective FOD Program

- Regular communication and training can help to raise awareness, reinforce the importance of FOD prevention, and ensure everyone understands their role and responsibilities.
- Technology such as FOD detection systems can significantly enhance your ability to detect and remove FOD and make your program more efficient and effective.
- Regularly reviewing your program and seeking feedback from staff can help you identify areas for improvement, and make sure your program continues to meet its objectives.

Quality Audit Checklist - Audit Checklist for Quality Control in an Effective FOD Program - The aim of this audit checklist is to ensure that the FOD prevention and control measures are well-established, consistently followed, and continuously improved wherever possible.

Policies and Procedures

- Are clear policies and procedures for FOD prevention and control established?
- Are these policies effectively communicated to all staff?
- Are these policies documented and easily accessible?

Training

- Are all staff members trained in the FOD policies and procedures?
- Is there specific training for staff whose roles involve direct handling of equipment?
- Is there a schedule for regular refresher training?
- Are records of all training sessions properly maintained?

Regular Inspection, Maintenance, and Cleaning

- Are there procedures in place for regular inspection, maintenance, and cleaning of facilities and equipment?
- Is there evidence that these procedures are being followed consistently?
- Are records of inspections, maintenance, and cleaning activities kept?

Secure Storage and Disposal

- Are there secure storage and disposal methods in place to prevent equipment and materials from becoming FOD?
- Is the secure storage and disposal procedure followed consistently?

FOD Detection and Removal

- Are there procedures in place for detecting and removing FOD?
- Are these procedures followed consistently and are they effective?
- Are both manual checks and technological means, such as FOD detection systems, used?

Incident Reporting and Investigation

- Is there a clear system for reporting and investigating FOD incidents?
- Are incidents reported promptly and investigated thoroughly?

- Are data on the type, source, and effects of FOD, as well as actions taken to prevent recurrence, accurately recorded?

Continuous Improvement

- Is there a process for regularly reviewing and improving the FOD policies and procedures?
- Is this process based on data and experiences gathered through the incident reporting and investigation process?

FOD Audit Program

- Is the scope of the FOD audit program well-defined?
- Are the audit criteria clearly defined and consistent with both internal and external standards?
- Is the conduct of the audit consistent with the defined scope and criteria?
- Are audit findings reported accurately and promptly?
- Is there a process to follow-up on corrective actions taken in response to audit findings?

Resource Allocation

- Are sufficient resources allocated for the FOD program, including staff time, training, equipment, and potentially new technology?

Leadership Commitment

- Is there evident commitment from leadership to drive the FOD program?
- Is the leadership involved in regular review and improvement of the FOD program?

Staff Awareness and Involvement

- Is there regular communication with staff about the FOD program?
- Are staff aware of their roles and responsibilities in relation to the FOD program?
- Are staff encouraged to provide feedback on the FOD program?

Use of Technology

- Are FOD detection systems and other relevant technologies utilized to detect and remove FOD effectively?
- Is there a procedure to regularly check and maintain these systems?

Program Review

- Is the FOD program regularly reviewed for improvements?
- Are staff feedback and suggestions considered during these reviews?

Next Steps

Please see www.sassofia.com or www.sofemaonline.com training in FOD related to Engine Workshops and Component Overhaul is available please see the following Aviation Production & Overhaul – Foreign Object Damage Awareness Training (FOD) Initial – 1 Day

For comments or questions please email team@sassofia.com