

Exercise 1: MSI Selection and Analysis Preparation

Objective

Identify Maintenance Significant Items (MSI) and prepare a detailed analysis worksheet.

This exercise focuses on applying MSG-3 methodology to categorize and document significant items that require detailed analysis.

Steps

Aircraft Partitioning

- Choose a Single ATA systems and subsystems.
- This involves categorizing components and systems, ensuring a structured approach to identify all relevant parts of the aircraft.

MSI Identification

- Using the MSG-3 criteria, identify potential Maintenance Significant Items (MSIs).
- The criteria focus on evaluating each item's potential functional failure and its consequences. Specifically, assess the impact on:
 - Safety (on the ground or in-flight)
 - Operational reliability
 - Economic implications (e.g., repair costs versus preventive maintenance costs)

Worksheet Completion

- For each identified MSI, record the following information in the worksheet:
 - MSI Name and Description
 - Primary Function(s)
 - Potential Functional Failure(s)
 - Consequences of Failure (evident or hidden, safety, operational, or economic)
 - Decision on whether the item should proceed to further analysis.

Deliverable

The deliverable for this exercise is a detailed MSI analysis worksheet that documents the above information.

This worksheet serves as a foundation for subsequent MSG-3 analysis processes.

MSI Analysis Worksheet Template

Use this template to record information for each identified MSI. Complete all sections for thorough analysis.

MSI Name	Description	Primary Function(s)	Functional Failure(s)	Failure Consequence(s)	Analysis Required
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Instructions:

1. List the MSI name and provide a brief description.

2. Describe the primary functions of the MSI.
3. Identify potential functional failures.
4. Document the failure consequences, categorizing them as evident or hidden and detailing their impact on safety, operations, or economics.
5. Decide whether the item requires further MSG-3 analysis and note it in the final column.