

# ATA11 - Markings & placards consideration in MSG-3 methodology

Presented by :

*Bertrand BOURGUEIL*

EASA Aircraft Maintenance Expert



# ATA11 - Markings & placards consideration in MSG-3 methodology

## → Introduction/ Problem statement

*During 2022 EASA Aircraft Maintenance Workshop held in Dec-2022, the “condition and presence of required markings & placards” was selected as item for discussion by Industry. The following discussion was minuted:*

“  
...  
EASA: ATA11 is NOT considered per MSI selection (typically TCH/ DAH start MSI selection from ATA21).  
EU NAA: some missing/ deteriorated placards & markings may have an impact on safety as well as on operation (AOG). It seems placards and markings should be considered in the MSI selection, potentially not a dedicated MSI but analyzed in the concerned MSI.

Industry: from our point of view existing Zonal programme should cover the condition of all installed placards and markings in each zone.  
EASA: As some placards and markings are safety related, Zonal per definition cannot cover them. Per MSG-3 it should be addressed by a standalone GVI within the MSI from which “the safety function” was identified.  
”  
... ”

# ATA11 - Markings & placards consideration in MSG-3 methodology

1. Requirements for markings & placards
  - Certification Specification (e.g. EASA CS-25/ CS-29)
  - Recent example - EASA AD related to placards
2. Considerations for markings & placards at MRB/MTB process
  - MSI selection
  - Zonal programme (scope and limit)
3. Feedback from IMRBPB
  - Items for consideration

# ATA11 - Markings & placards consideration in MSG-3 methodology

## 1. Requirements for markings & placards

- Certification Specification (e.g. EASA CS-25/ CS-29)
- Recent example - EASA AD related to placards

## 2. Considerations for markings & placards at MRB/MTB process

- MSI selection
- Zonal programme (scope and limit)

## 3. Feedback from IMRBPB

- Items for consideration

# 1. Requirements for markings & placards

- Certification Specification (e.g. EASA CS-25/ CS-29)

## CS-25 Amendment 27

### ^ SUBPART G – OPERATING LIMITATIONS AND INFORMATION

✓ CS 25.1501 General

✓ OPERATING LIMITATIONS

✓ MARKINGS AND PLACARDS

✓ AEROPLANE FLIGHT MANUAL

✓ SUPPLEMENTARY INFORMATION

### ^ EMERGENCY PROVISIONS

✓ CS 25.811 Emergency exit marking

#### ^ MARKINGS AND PLACARDS

✓ CS 25.1541 General

✓ CS 25.1543 Instrument markings;  
general

✓ CS 25.1545 Airspeed limitation  
information

CS 25.1547 Magnetic direction indicator

✓ CS 25.1549 Powerplant  
instruments

CS 25.1551 Oil quantity indicator

CS 25.1553 Fuel quantity indicator

CS 25.1555 Control markings

✓ CS 25.1557 Miscellaneous markings  
and placards

CS 25.1561 Safety equipment

CS 25.1563 Airspeed placard

# ATA11 - Markings & placards consideration in MSG-3 methodology

## 1. Requirements for markings & placards

- Certification Specification (e.g. EASA CS-25/ CS-29)
- Recent example - EASA AD related to placards

## 2. Considerations for markings & placards at MRB/MTB process

- MSI selection
- Zonal programme (scope and limit)

## 3. Feedback from IMRBPB

- Items for consideration

# 1. Requirements for markings & placards

- Recent example - EASA AD related to placards

EASA AD No.: 2023-0012

 **Airworthiness Directive**

**AD No.:** 2023-0012  
**Issued:** 17 January 2023

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.38. In accordance with Regulation (EU) 1321/2014 Annex I Part M.A.301, or Annex Vb Part M.LA.301, as applicable, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I Part M.A.303, or Annex Vb Part M.LA.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

**Design Approval Holder's Name:** AIRBUS S.A.S.  
**Type/Model designation(s):** A330-202 and A330-243 aeroplanes

**Effective Date:** 31 January 2023  
**TCDS Number(s):** EASA.A.004  
**Foreign AD:** Not applicable  
**Supersedure:** None

**ATA 11 – Placards and Markings – Warning Labels – Inspection**

---

**Manufacturer(s):**  
Airbus, formerly Airbus Industrie

- EASA has recently issued an Airworthiness Directive (AD) to address a potential unsafe condition, related to missing warning labels.
- The condition has been assessed to result, if not detected and corrected, in a hazard.

# ATA11 - Markings & placards consideration in MSG-3 methodology

1. Requirements for markings & placards
  - Certification Specification (e.g. EASA CS-25/ CS-29)
  - Recent example - EASA AD related to placards
2. Considerations for markings & placards at MRB/MTB process
  - MSI selection
  - Zonal programme (scope and limit)
3. Feedback from IMRBPB
  - Items for consideration



## 2. Considerations for markings & placards at MRB/MTB process

- MRBR/ MTBR (as part of ICA) does not include any particular task to address condition and presence of placards and markings.
- Why?

## 2. Considerations for markings & placards at MRB/MTB process

- MSI selection

Per MSG-3, for MSI selection, Step 1. requires the manufacturer to partition the aircraft into ATA Systems and Subsystems.

*Operator/Manufacturer  
Scheduled Maintenance  
Volume 1 – Fixed Wing Aircraft*

Revision 2018.1

# MSG-3

---

**2-3-1. MSI Selection**

Before the actual MSG-3 logic can be applied to an item, the aircraft's significant systems and components must be identified. The identification process shall not be influenced by National Requirements.

Maintenance Significant Items (MSIs) are items fulfilling defined selection criteria (see Step 3 below) for which MSI analyses are established at the highest manageable level.

This process of identifying Maintenance Significant Items is a conservative process (using engineering judgment) based on the anticipated consequences of failure. The top-down approach is a process of identifying the significant items on the aircraft at the highest manageable level.

The MSI selection process is outlined below:

**1. Step 1.**

The manufacturer partitions the aircraft into major functional areas: ATA Systems and Subsystems. This process continues until all on-aircraft replaceable components have been identified.

“... manufacturers partitions the aircraft into ... ATA Systems and Subsystems...”

## 2. Considerations for markings & placards at MRB/MTB process

- MSI selection

Per ATA Spec 2200, placards & markings are covered under ATA11

ATA Spec 2200 Information Standards for Aviation Maintenance			
Table 3-1-3.5 Definitions of Aircraft Groups, Systems, and Subsystems			
SYS/ CHAP	SUB-SYS/ SECTION	TITLE	DEFINITION
11		PLACARDS AND MARKINGS	All procurable placards, labels, etc., shall be included in the illustrated Parts Catalog. They shall be illustrated, showing the part number, Legend and Location.
	-20	Exterior Placards and Markings	Those placards and markings required for ground servicing instructions, inspections, cautions, warnings, etc.
	-30	Interior Placards	Those placards, markings, self-illuminating signs, etc. required for interior general and emergency information, instructions, cautions, warnings, etc.

ATA SYS/ CHAP 11 “Placards and Markings”

## 2. Considerations for markings & placards at MRB/MTB process

- MSI selection

MSI selection produced by Manufacturers generally starts at ATA 21-00-00 (Environment Control System)

ATA 11 covering Placards and Markings is not part of the MSI selection

ATA reference	Description	Maintenance program – MSI selection				MSI table at highest manageable level		
		Selection criteria				MSI	Highest manageable level	Applicability / remarks
		Could failure affect safety (on ground or in flight)?	Could failure be undetectable or likely to be undetected during operation?	Could failure have significant operational impact?	Could failure have significant economic impact?			
<b>21-00-00</b>	<b>ENVIRONMENT CONTROL SYSTEM</b>							
<b>21-10-00</b>	<b>COMPRESSION</b>							Included in 21-50-00 cooling system
<b>21-20-00</b>	<b>AIR DISTRIBUTION</b>							
21-20-M01	Cockpit/Cabin air distribution fan	No	No	Yes	Yes	Yes	21-20-00	
21-20-M02	3 positions actuator	No	Yes	Yes	Yes	Yes	21-20-00	
21-20-M03	Air filter	No	Yes	Yes	Yes	Yes	21-20-00	
<b>21-40-00</b>	<b>HEATING SYSTEM</b>							
21-40-M01	Cockpit/Cabin heat modulation valve	No	No	Yes	Yes	Yes	21-40-00	
21-40-M02	TH90	No	Yes	No	No	Yes	21-40-00	
21-40-M03	OverHeat Detection System local sensor	No	No	Yes	Yes	Yes	21-40-00	
<b>21-50-00</b>	<b>COOLING SYSTEM</b>							
21-50-M01	Cockpit / Cabin compressor	No	Yes	No	No	Yes	21-50-00	
21-50-M03	Cockpit / Cabin belt	No	Yes	No	No	Yes	21-50-00	
21-50-M02	Cockpit / Cabin equipped condenser	No	Yes	No	No	Yes	21-50-00	
21-50-M04	Cockpit / Cabin evaporator assembly (evaporator / expansion valve)	No	Yes	No	No	Yes	21-50-00	
21-50-M05	Cockpit / Cabin pressure and temperature sensor	No	Yes	No	No	Yes	21-50-00	
<b>21-60-00</b>	<b>ECS-ACS Temperature Control</b>							
21-60-M01	Environment and Air Controlling Unit	No	Yes	No	No	Yes	21-60-00	
21-60-M02	Air mixed temperature sensor	No	Yes	No	No	Yes	21-60-00	
21-60-M03	Evaporators air outlet temperature sensor	No	Yes	No	No	Yes	21-60-00	
21-60-M04	Internal air temperature sensor	No	Yes	No	No	Yes	21-60-00	
<b>22-00-00</b>	<b>AUTOMATIC PILOT</b>							
<b>22-30-00</b>	<b>Automatic Flight Control System</b>							
22-30-M01	APCP	No	Yes	Yes	Yes	Yes	22-30-00	
22-30-M02	TRIM Pitch	No	No	Yes	Yes	Yes	22-30-00	
22-30-M03	TRIM Roll	No	No	Yes	Yes	Yes	22-30-00	
22-30-M04	TRIM Yaw	No	No	Yes	Yes	Yes	22-30-00	
22-30-M05	TRIM Coll	No	No	Yes	Yes	Yes	22-30-00	

Almost all manufacturers starts the MSI candidate/ MSI selection list from ATA21

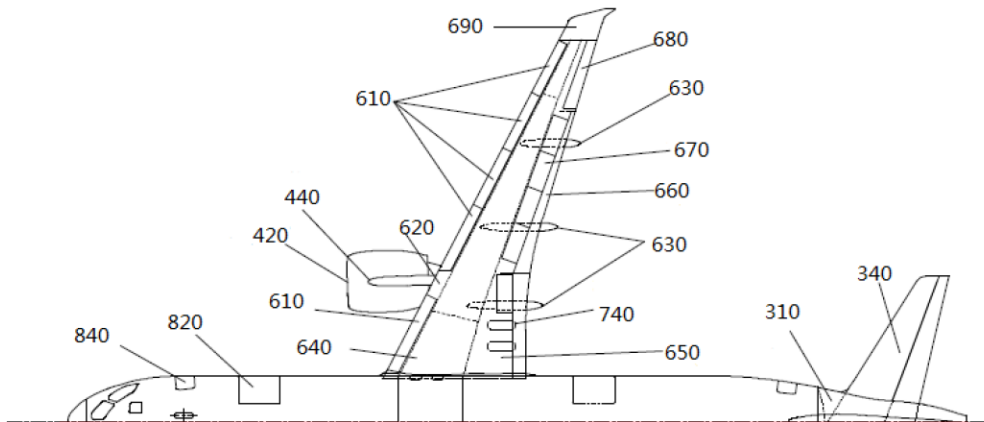
It is therefore not considered at MSG-3 Systems/ Powerplant analysis level

# ATA11 - Markings & placards consideration in MSG-3 methodology

1. Requirements for markings & placards
  - Certification Specification (e.g. EASA CS-25/ CS-29)
  - Recent example - EASA AD related to placards
2. Considerations for markings & placards at MRB/MTB process
  - MSI selection
  - Zonal programme (scope and limit)
3. Feedback from IMRBPB
  - Items for consideration

## 2. Considerations for markings & placards at MRB/MTB process

- Zonal programme (scope and limit)

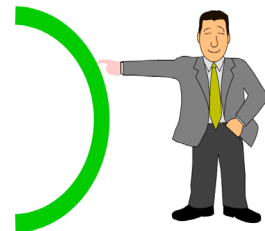


The zonal inspection will detect **obvious unsatisfactory conditions/discrepancies** (due to accidental damage, environmental deterioration, ageing, ...) in **"all visible system components"** (wiring, tubing, actuators, computers, sensors, ...) including proper attachment and security of system installations (e.g. components, wiring, ducting, tubing, pulleys, ...)

The Zonal Inspection Requirements have a single level of inspection :

General Visual Inspection  
(GVI)

Inspection to be carried out from within **touching distance**, unless otherwise stated.



The Zonal Programme:

- may detect obvious unsatisfactory conditions regarding Placards & markings installed in a zone,
- Will NOT detect missing/ lack of presence of Placards and Markings.

## 2. Considerations for markings & placards at MRB/MTB process

- Zonal programme (scope and limit)

*ATA MSG-3 Volume 1*

---

**2-3-7. Task Development (Second Level)**

Task development is handled in a similar manner for each of the five Effect categories. For task determination, it is necessary to apply the failure causes for the functional failure to the second level of the logic diagram. There are seven possible task resultant questions in the Effect categories as follows

**4. Inspection/Functional Check (All Categories)**

QUESTION 5B, 6B, 7B, 8C & 9C.	IS AN INSPECTION OR FUNCTIONAL CHECK TO DETECT DEGRADATION OF FUNCTION APPLICABLE AND EFFECTIVE?
-------------------------------	--

A. GENERAL VISUAL INSPECTION (GVI)

A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance, unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or drop-light and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked. Basic cleaning may be required to ensure appropriate visibility.

**NOTE 1:** A GVI identified through application of Systems/Powerplant logic may not subsequently be considered as covered by a zonal inspection as described in paragraph 2-5-1(h) if it is derived from either a Category 5 or 8 analysis. At the level of the originating document, such a task must be retained as a standalone GVI task within the MSI from which it was identified.

For Systems Analysis procedure, GVI derived from FEC 5/ 8 analysis:

- Cannot be considered as a candidate for zonal;
- Must be retained as a standalone GVI task at the level of concerned MSI.

# ATA11 - Markings & placards consideration in MSG-3 methodology

1. Requirements for markings & placards
  - Certification Specification (e.g. EASA CS-25/ CS-29)
  - Recent example - EASA AD related to placards
2. Considerations for markings & placards at MRB/MTB process
  - MSI selection
  - Zonal programme (scope and limit)
3. Feedback from IMRBPB
  - Items for consideration



# ATA11 - Markings & placards consideration in MSG-3 methodology

- Items for consideration
  - Do you share this view?
  - Possible solution envisaged or already in place?
  - Why placards and Markings have not been considered as part of MSI selection?
  - Any other suggestions?

# Thank you for your attention!



[easa.europa.eu/connect](https://easa.europa.eu/connect)



## Your safety is our mission.

An Agency of the European Union 