



Issue Paper (IP)

IP Number: CIP EASA 2023-07

Initial Date (DD/MMM/YYYY):

Revision - Date (DD/MMM/YYYY):

Effective Date (DD/MMM/YYYY):

Retroactivity (Y/N): N

Title:	SSI definition update in MSG-3
Submitter:	EASA

Applies To:	
MSG-3 Vol 1	X
MSG-3 Vol 2	X
IMPS	

Issue:

The IP 147 [Clarification of “human occupant” in Volume 2] recommended the following changes for MSG-3 Vol 2:

Recommendation for implementation: Next revision of MSG-3.

Adverse Effect on Safety: Safety shall be considered as adversely affected if the consequences of the failure condition would prevent the continued safe flight and landing of the aircraft and/or might cause serious or fatal injury to human occupants, including those directly supported by external load carrying systems (i.e. hoist/cargo hook etc)

Structural Significant Item (SSI) is any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads or external load, and whose failure could affect the structural integrity necessary for the safety of the aircraft and/or might cause serious or fatal injury to human occupants.

NOTE: the term “human occupants” includes people supported by external load carrying systems (i.e. hoist/cargo hook etc).

However the recommendations of IP 147 are partially applicable also to fixed wing aircraft for which “serious or fatal injury to human occupants” should have also been considered in the SSI definition.

Problem:

Since MSG-3 2015.1, the recommendations of the IP 147 [Clarification of “human occupant” in Volume 2] have been endorsed in Volume 2 with an update of the SSI definition highlighted in yellow (in the Structures section and in the Appendix 4) as follows:

MSG-3 2018.1 Vol 2

2-4-1. Aircraft Structure Defined

[...]

1. Significant and Other Structure

Structure can be subdivided into items according to the consequences of their failure to aircraft safety as follows



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a. A **Structural Significant Item (SSI)** is any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads **or external load**, and whose failure could affect the structural integrity necessary for the safety of the aircraft **and/or might cause serious or fatal injury to human occupants**.

Appendix A Glossary

Structural Significant Item - (SSI)

Any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads **or external load**, and whose failure could affect the structural integrity necessary for the safety of the aircraft **and/or might cause serious or fatal injury to human occupants**.

NOTE: the term “human occupants” includes people supported by external load carrying systems (i.e. hoist/cargo hook etc).

Following the above update, the SSI definition is currently different between the MSG-3 2018.1 Vol 1 and Vol 2. In fact:

MSG-3 2018.1 Vol 1

2-4-1. Aircraft Structure Defined

[...]

1. Significant and Other Structure

Structure can be subdivided into items according to the consequences of their failure to aircraft safety as follows

a. A **Structural Significant Item (SSI)** is any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads and whose failure could affect the structural integrity necessary for the safety of the aircraft.

Appendix A Glossary

Structural Significant Item - (SSI)

Any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads and whose failure could affect the structural integrity necessary for the safety of the aircraft.

The recommendations of the IP 147 [Clarification of “human occupant” in Volume 2] should have been evaluated for applicability to both MSG-3 volumes.

In fact “serious or fatal injury to human occupants” should have been also considered in the SSI definition for fixed wing aircraft although consideration of “external load” and the SSI definition NOTE [the term “human occupants” includes people supported by external load carrying systems (i.e. hoist/cargo hook etc)] are only valid for MSG-3 Vol 2.



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To enforce the above consideration, we also identified that the MSG-3 2018.1 Vol 1 & 2 in the System Section says the following:

MSG-3 2018.1 Vol 1 (Par. 2-3-5.2):

Adverse Effect on Safety: Safety shall be considered as adversely affected if the consequences of the failure condition would prevent the continued safe flight and landing of the aircraft **and/or might cause serious or fatal injury to human occupants.**

MSG-3 2018.1 Vol 2 (Par. 2-3-5.2):

Adverse Effect on Safety: Safety shall be considered as adversely affected if the consequences of the failure condition would prevent the continued safe flight and landing of the aircraft **and/or might cause serious or fatal injury to human occupants, including those directly supported by external load carrying systems (i.e. hoist/cargo hook etc.)**

Recommendation (including Implementation):

- A. To update the definition of SSI for the MSG-3 2018.1 Vol 1 taking partially into account the recommendation of the IP 147 that is also valid for fixed wing aircraft as follows:

MSG-3 2018.1 Vol 1

2-4-1. Aircraft Structure Defined

[...]

1. Significant and Other Structure

Structure can be subdivided into items according to the consequences of their failure to aircraft safety as follows

- a. A **Structural Significant Item (SSI)** is any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads, and whose failure could affect the structural integrity necessary for the safety of the aircraft **and/or might cause serious or fatal injury to human occupants.**

Appendix A Glossary

Structural Significant Item - (SSI)

Any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads and whose failure could affect the structural integrity necessary for the safety of the aircraft **and/or might cause serious or fatal injury to human occupants.**



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- B. To update the definition of SSI for the MSG-3 2018.1 Vol 2 to better clarify that the term “human occupants” is not limited to people supported by external load carrying systems (i.e. hoist/cargo hook etc) as follows:

MSG-3 2018.1 Vol 2

2-4-1. Aircraft Structure Defined

[...]

1. Significant and Other Structure

Structure can be subdivided into items according to the consequences of their failure to aircraft safety as follows

- a. A **Structural Significant Item (SSI)** is any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads or external load, and whose failure could affect the structural integrity necessary for the safety of the aircraft and/or might cause serious or fatal injury to human occupants.

Appendix A Glossary

Structural Significant Item - (SSI)

Any detail, element or assembly, which contributes significantly to carrying flight, ground, pressure or control loads or external load, and whose failure could affect the structural integrity necessary for the safety of the aircraft and/or might cause serious or fatal injury to human occupants.

NOTE: the term “human occupants” **also** includes people **directly** supported by external load carrying systems (i.e. hoist/cargo hook etc).



International MRB Policy Board

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IMRBPB Position:	
Date:	
Position:	
Recommendation for Implementation:	

Status of the Issue Paper:	<input type="checkbox"/>	Active
	<input type="checkbox"/>	Incorporated in MSG-3 / IMPS (with details)
	<input type="checkbox"/>	Archived