Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
Functional Group:	**Engineering**

1. **PURPOSE/SCOPE**

1.1. Purpose

1.1.1   This work instruction defines the process for managing the administration of Engineering Coordination Memos (ECM).

1.1.2   Send/export technology/technical data in compliance with Global Trade procedures.

1.2. Scope

1.2.1   The ECM is to be used for coordinating technical data with Collins Aerospace Landing Systems (Landing Gear) and suppliers.

1.2.2   This work instruction covers the activity for preparing, creating PLM object and distributing the ECM.

1.3. Applicability

This document is applicable to all Engineering Associates at Landing Gear (LG) sites and Proprietary Design Suppliers.

Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
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2. DEFINITIONS/ACRONYMS/ABBREVIATION

2.1. Engineering Coordination Memo (ECM)

Documents specific understanding between engineering and the supplier for engineering data. The ECM is an official record. **An ECM is not a contractual document and should not be construed as such**. The ECM is a transfer of engineering data between Collins Aerospace (Landing Gear) and suppliers.

2.2. Product Lifecycle Management (PLM)

Information management system that can integrate data, processes, and business systems. PLM software facilitates management of information throughout the entire lifecycle of a product from ideation, design, and manufacture, through service and disposal.

2.3. File Transfer System (FTS)

Secure system allowing employees to manage, view and control file transfer activity. It is used by Collins to transfer data internally and externally

2.4. Technical Data

Information in any form necessary for the design, development, production, operation, installation, modification or maintenance of Hardware, Materials, Software, or processes related to those necessary actions. Technical Data does not include financial, management, and specific publicly available data.

Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
Functional Group:	**Engineering**

3. <u>RESPONSIBILITIES</u>

3.1. Supply Chain Representatives

Supply Chain Representatives (Buyer, Commodity Manager, NPI Manager) are responsible for ensuring communications between LG Engineering and Suppliers are formalized and documented.

3.1.1 Flowing down requirements to suppliers to utilize ECM to formally document communications and transmit data to and from LG Engineering.

3.1.2 Request new supplier template and log from LG Engineering.

3.1.3 Request new supplier data sharing folder and providing usernames.

3.1.4 Provide template EF 300-081 and log to supplier.

3.2. Suppliers

3.2.1 Suppliers are responsible to use the proper ECM form to transmit engineering data to LG Engineering.

3.2.2 Suppliers are responsible to use the ECM folders (LG_ECM) in their file transfer system.

3.2.3 Suppliers are responsible to coordinate ECM activity with Supply Chain Representative.

3.2.4 Suppliers to <u>follow the numbering system provided by Collins.</u>

Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
Functional Group:	**Engineering**

4. <u>REQUIREMENTS</u>

4.1. Logging the ECM

4.1.1 Each program has a series of electronic logbook. Logbooks have been created for each supplier per program.

4.1.2 The main purpose of this logbook is to provide a listing and naming convention for ECM numbers.

4.1.3 The use of the logbook in *not mandatory*; however, it is recommended.

4.1.4 The logbooks contain the following information:

- <u>ECM Number-Rev</u> – Numbers assigned by Collins

- <u>Date Logged</u> – Date when the ECM number was taken (may not be ECM created date)

- <u>Requested by</u> – ECM Originator

- <u>Request Type</u> – Hard coded – no change

- <u>ECM XXXX</u> – Naming convention

- <u>Who needs the data</u> – Individual(s) who need to receive the data

- <u>Program</u> – Hard coded – no change

- <u>Classification</u> – The ECCN number or classification information (if required)

- <u>TEXTPORT</u> – Export approval number (if required)

- <u>ECM Subject</u> – A brief explanation of the ECM matter (must match what is on the ECM)

IMPORTANT: **If supplier has their own numbering / revision system, the supplier must also include the Landing Gear ECM number and naming convention provided on the template in addition to their own on the ECM.**

Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
Functional Group:	**Engineering**

4.2.   Creating the ECM

4.2.1   The ECM is created using template **EF 300-081** in electronic format. Because of the numerous programs, customers and suppliers that engineering interfaces with, there is no one template that is used for the ECM process. Landing Gear is typically obligated to follow the format set out by the customer for the ECM form, so the template itself is different for each customer. The format that is adopted for each program's customer is also the format that Landing Gear develops for the template to be used with suppliers on that same program.

4.2.2   The ECM template is obtained from the authorized procurement representative

4.2.3   The ECM template, at a minimum will contain the following information (see Figure 1 for more details):

- SUBJECT - A brief explanation of the ECM matter. For example: "Drawing XYZ submitted for SDIR".

    IMPORTANT: Subject change requires new ECM number not a revision

- ECM NUMBER - as defined by ECM Log provided by GLG

- ISSUE - Must be alpha and start at A

- SUPP ECM No - Used if supplier has their own numbering system

- DATE - ECM created date

- FROM - Supplier name and Cage Code.

- TO - Select one of the Goodrich legal entity (US or Canada).

- AUTHOR - Name of the individual authoring the ECM (Originator)

- ATTN – Name of the individual(s) this ECM is addressed to.

- REQUEST – Check box if the ECM will require a reply or additional information or an approval.

- RESPONSE REQUIRED BY - If Request is checked, then use this field to identify date by which a response is required.

- REPLY – Check box to indicate if ECM in in reply to

- IN RESPONSE TO - If Reply is checked, then use this field to identify what is this ECM in reply of.

- INFORMATION – Indicates if the ECM is for information only

- APPROVED / AUTHORIZED – per supplier's own procedure

Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
Functional Group:	**Engineering**

- <u>REFERENCE</u> – Any reference document that relates to the subject of the ECM
- <u>KEYWORDS</u> – Any word that may be useful in database searches
- <u>DISCUSSION/REPLY</u> – What is the purpose of this ECM; what information is being related. For example: "Drawing XYZ submitted for SDIR"
- <u>ACTIONS</u> – What is expected from this ECM (response, approval, no action). For example: "Collins to review drawing XYZ and return approval via SDIR"
- <u>ATTACHMENTS</u> – Title or number of documents being attached/submitted

IMPORTANT: Supplier may customize the footer of the form to include their proprietary and/or export statement.

Landing Systems

Title:	Engineering Coordination Memo (ECM)
Functional Group:	Engineering

Header and body of ECM

SUBJECT:	A brief explanation of the ECM matter	ECM NUMBER:	As defined by ECM Log provided by GLG
		ISSUE:	Must be alpha and start at A
DATE:	Date Picker – ECM create date	SUPP ECM No.:	Supplier's own ECM Number if applicable
FROM:	Supplier name and Cage Code	TO:	Choose a legal entity Collins Aerospace Company
AUTHOR:	Originator's name	ATTN:	Individual(s) receiving this ECM

REQUEST:	☐	RESPONSE REQUIRED BY:	If Request is checked, then use this field to identify date by which a response is required or delete the date picker
REPLY:	☐	IN RESPONSE TO:	If Reply is checked, then use this field to identify what this ECM in response to
INFORMATION:	☐	Indicates if the ECM is for information only	

APPROVED: Per supplier's own procedure	AUTHORIZED: Per supplier's own procedure
_____ Print Name	_____ Print Name

1.0 **REFERENCES**

1.1 Any reference document(s) that relates to the subject of the ECM

2.0 **KEY WORDS**

2.1 Any word that may be useful in database searches

3.0 **DISCUSSIONS/REPLY**

3.1 What is the purpose of this ECM; what information is being related

4.0 **ACTIONS**

4.1 What is expected from this ECM (response, approval, no action)

5.0 **ATTACHMENTS**

5.1 Title or number of documents being attached/submitted

Footer of the ECM P. 1

Supplier's own proprietary and/or export statement

EF 300-081 [00]   Page 1 of 2

Footer of the ECM P. 2

Supplier's own proprietary and/or export statement
SUBJECT TO THE RESTRICTION ON THE TITLE OR COVER PAGE

Page 2 of 2

Figure 1: Template Instructions

Landing Systems

Title:	**Engineering Coordination Memo (ECM)**
Functional Group:	**Engineering**

5.   ECM FLOW CHART

Complete ECM per template	→	Upload ECM to File Transfer System (LG_ECM)	→	System notifies Landing Gear	→	ECM is downloaded and entered in Landing Gear PLM system	→	PLM notifies Landing Gear recipients