

Supplier Request for Change Process

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1. Introduction

1.1 Purpose

This document defines the Crane Supplier Request for Change SRC process for the identification, evaluation, and submission of proposed changes for products that have previously been approved (qualified) as compliant with Crane Source Control Drawing requirements. The design baseline (i.e., qualification, post-qualification/pre-certification, or post certification) affected by these provisions will be established by the terms and conditions of the associated Purchase Order or statement of work (SOW) if applicable.

1.2 Applicability

All Aerospace Group Sites:

This instruction applies to all Solutions at Aerospace Group sites: Lynnwood, Burbank, Elyria, and Lyon. This includes Sensing/Utility Systems, Power (Lynnwood only), Landing Systems, Cabin Systems, and Fluid Management.

Suppliers:

This instruction applies to all suppliers and their sub-tier suppliers of major sub-assemblies or highly engineered components that have been previously granted production status. The specific application of this instruction is subject to the terms and conditions of the supplier purchase order and/or the SOW, if applicable. This process does not apply to commercial off-the-shelf parts/materials controlled by Crane’s industry-certified ECMP or similar parts control processes.

1.3 Policy

All supplier changes shall be managed through the processes described herein. Suppliers shall not make revisions to the internal design or process documentation without evidence of compliance to this process. Failure of the supplier to comply with this process, may result in cost recovery for supplier nonconformities as described in document AGIS 40-002.

1.4 Related Documents

- AGIS 40-002 - Supplier Quality Assurance Requirements
- AGIS 30-030 - Notification and Approval Process for Type Design Changes

1.5 Definitions

Data Item – A design, drawing, BOM or document that results from a change.

Item – A single hardware article, unit, or document.

End-Item – A qualified configuration of subassemblies, components, materials, software and manufacturing processes; also referred to as a product.

Non-End-Item – Subassemblies, components, materials, software and manufacturing processes of an End-Item part.

Supplier Engineering Change Order (SECO) – A change order that is initiated in response to a Crane Supplier Request for Change to an item controlled by a Crane SOCD or other engineering documents.

The SECO is created by the Cognizant Engineer from the information supplied in the supplier's request for change and is submitted for approval on the behalf of the Supplier.

Source Control Drawing (SOCD) – A Source Control Drawing is typically used for custom engineered parts. It provides an engineering description and acceptance criteria for purchased items that require design activity imposed qualification testing and exclusively provide performance and interchangeability characteristics specifically required for one or more critical applications. It includes a listing of approved suppliers and the supplier's item identification. It establishes item identification for the controlled items. The drawing includes qualification requirements for the part.

1.6 Acronyms/Abbreviations

AGIS – Aerospace Group Instruction System

BOM – Bill Of Materials

CA&E – Crane Aerospace & Electronics

CCB – Change Control Board

CEC - Custom Engineered Component

CM – Configuration Management

DOC - Documentation of Change

ECMP – Electronic Component Management Plan

ECO – Engineering Change Order

Focal – Supplier Change Control Focal

PDM – Product Data Management

RAC - Request for Authorization of Change

SCM – Supply Chain Management

SRC – Supplier Request for Change

SECO – Supplier Engineering Change Order

SN – Serial Number

SOCD – Source Control Drawing

SOW – Statement of Work

NOC - Notification of Change

WIP – Work In Progress

2. Process Overview

All changes to operating characteristics, design, process, or material will be assessed by Crane Engineering for impact to the Certification, Qualification and or Performance of the design. All changes will be routed within Crane as appropriate to obtain the necessary approvals.

2.1 Potential Affected Changes

Product modified by an engineering change to design records, specifications, or materials; or any planned changes by the Supplier to the design, process, or manufacturing location, such as those listed in AGIS 40-002 shall require submittal to Crane Aerospace & Electronics for approval.

2.2 Change Request Process

When the supplier identifies a need for a change, in addition to their internal processing requirements, the supplier is required to compile a "supplier data package" which shall be submitted directly to the Crane Supplier Liaison using the Crane SRC Form referenced in Appendix A. The change request data package shall include the Crane Supplier Request for Change Form and also any/all data required to accurately describe, justify and assess the full scope of the change.

To support the evaluation of the change, the Supplier shall complete the change impact matrix referenced in Appendix B.

The Supplier shall designate a change control focal, upon acceptance of a CA&E purchase order for a Source Control Drawing defined part, assembly, or sub-assembly. The change control focal shall be the point of contact between CA&E and the supplier for coordination of the Supplier requested change. All submittals to or from the supplier will be through this focal. The supplier shall also define an alternate in the event the defined focal is unavailable. If a defined focal is no longer available the supplier shall define a replacement within 20 business days.

2.3 Customer Notification and Approval Process Definitions

The notification and approval process terms utilized by Crane to communicate Type Design Changes to its customers are modeled after industry standards and best practices to meet the needs of compliance to regulatory and customer requirements. Crane will provide a completed Customer-approved change notification form and any required related data and or documents as part of the SECO package. These definitions are:

Request for Authorization of Change (RAC) – Changes are internally approved by the Authorizer and Approver roles. Subsequent to internal approval, Customer Approval is required prior to release of the SECO Package to the supplier.

Notification of Change (NOC) – Changes are internally approved by the Authorizer and Approver roles. Customer approval is not required prior to release of the SECO Package to Production. However, it is required that the customer be notified of the change and acknowledgement of the change obtained prior to the shipment of the Changed Product to the Customer.

Documentation of Change (DOC) – Changes are internally approved by the Authorizer and Approver roles. Customer acknowledgement is not required but the customer change form is submitted to the customer for information.

None – No requirement to submit any change notification to customer.

3. Instructions

The change request process is shown graphically in Figure 3-1 and described in the following paragraphs.

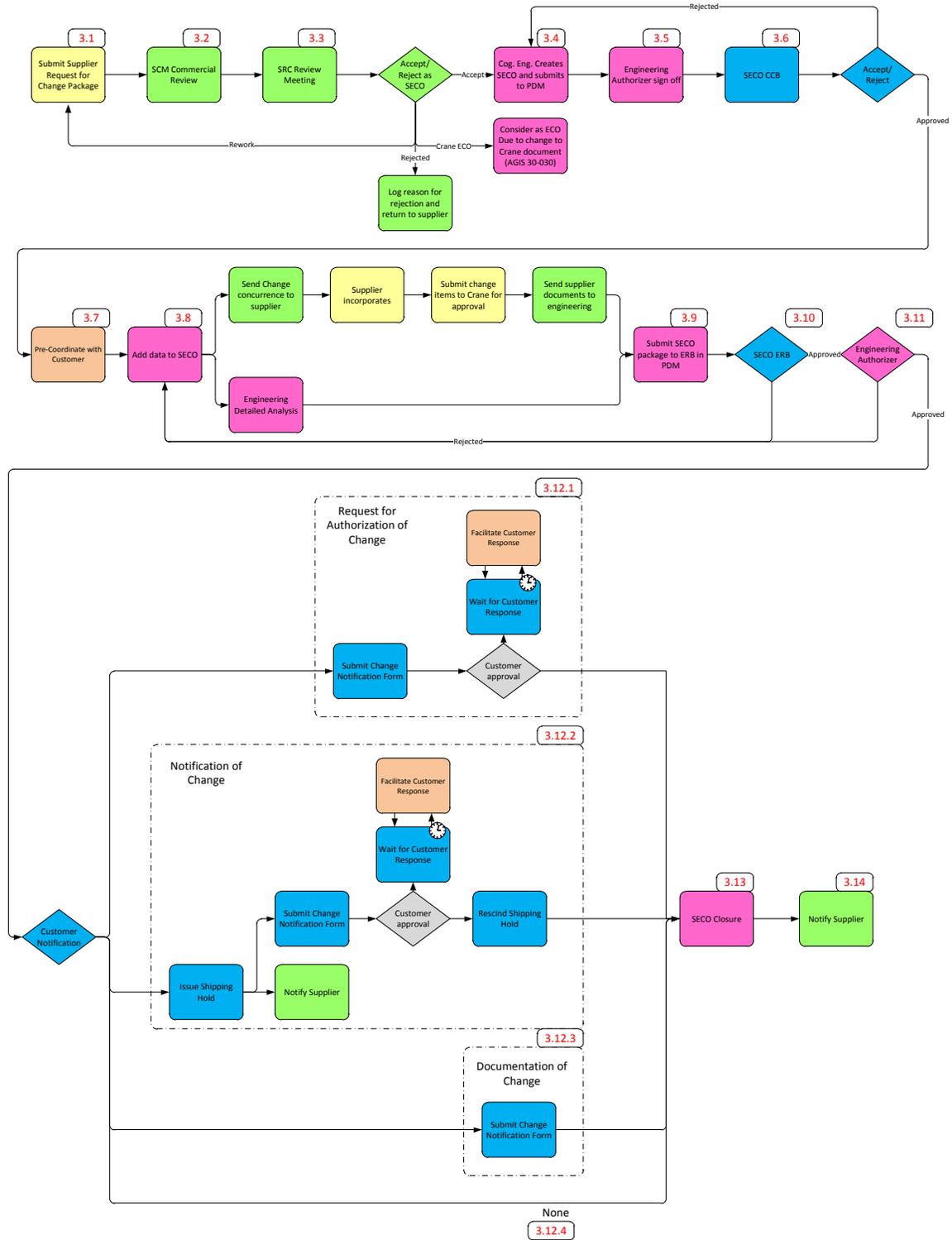


Figure 3-1 Change Request Process

3.1 Submit Supplier Request for Change

When a need for a change has been identified, a preliminary impact assessment will be performed by the supplier to determine the appropriate corrective action. In addition to evaluating design issues, the assessment will also consider any potential impact on product qualification.

Once a need for change has been identified and defined the supplier shall perform their normal change evaluation process to determine this is a change that does indeed need to occur (or is highly desirable since it results in a positive impact to product cost, quality, or reliability). During this process the supplier shall also determine if it is required, or desirable, to revise the top assembly of the product. A target top assembly SN or cut-in Date Code for changed implementation (if applicable) should be defined.

After the supplier has determined that a change is indeed needed, the supplier shall fill in the Supplier Request for Change Form 104-209 (appendix A) and the Change Impact Matrix Form 104-210 (appendix B). All fields in the SRC Form must be filled in prior to submittal to Crane. The supplier should attach copies of the proposed data item changes which have the change detail defined and highlighted. These can take the form of redlined drawings and documents or drafts of them with the changed sections highlighted. When new drafts are involved a clear documentation of the "Was" and "Is" condition of the changes is required. Also the planned disposition of the change addressing parts in WIP, Stores, Finished Goods, and Fielded units shall be attached. It shall include top assembly SN effectivity when applicable.

Packages not containing all of these elements will not be accepted for review and will be returned to the supplier for correction and resubmittal.

Upon completion of the change request package it will be submitted to the Crane Supplier Liaison.

3.2 SCM Commercial Evaluation

The Crane Supplier Liaison shall:

- a. Review the change request package to insure it is complete verifying that it contains:
 - 1) The Supplier Request for Change Form 104-209 completely filled in.
 - 2) The Change Impact Matrix completely filled in.
 - 3) Copies of the data item changes, which have the change detail defined and highlighted, are attached to the package.
 - 4) Recommended disposition of product in WIP, Stores, Finished Goods, and Fielded units.

If any of the required elements are missing from the package it will be returned to the supplier for rework and resubmittal.

- b. Complete the additional required documents for the SRC review meeting
 - 1) Order Summary Worksheet or PPI Calculator
 - 2) Productivity Planning Worksheet with Engineering input, Crane Co Action Plan Template (Recommended)
- c. Upon completion of the SCM Commercial Evaluation, the supplier liaison should distribute the package to the Cognizant Engineer, Customer Account Manager and Supplier Quality Engineer. The Supplier Liaison shall store the change request package and all supporting documents on the Supply Chain Management SharePoint site.

3.3 SRC Review Meeting

The participants at the SRC review are Supplier Liaison, Cognizant Engineer, Customer Account Manager, and Supplier Quality Engineer. The SRC review meeting will use the SRC review meeting

checklist, stored on the Supply Chain Management SharePoint site; there are four potential outcomes from the meeting:

- Return to supplier for rework – The change request package shall be returned to the supplier through the Crane Supplier Liaison for rework.
- Reject - If Crane has rejected the requested change, the change request package shall be returned to the supplier through the Crane Supplier Liaison for cancellation. The Crane Supplier Liaison shall verify the REJECTED box has been marked in the Crane only portion of the Supplier Request for Change form, and that comments defining the reason for rejection have been added to this section as well, prior to returning the change package to the supplier.
- Change requires changes to Crane documentation
- If the SRC results in change to Crane documentation an ECO is required and will be processed as defined in AGIS30-030
- Request for change can proceed to SECO process

3.4 Cognizant Engineer Creates SECO and submits to PDM

The Author creates a new SECO record in the Crane PDM system; this information will include the generic Crane Customer Change Notification Form found in AGIS30-030 or, if required, a Customer specific Change Notification Form. Included in the SECO record are the following:

- Synopsis or brief description of the change
- Urgency
- Reason (e.g., drawing error, product improvement, process change, etc.)
- Detailed description of the change including redlines if required
- Project Name
- Supplier Name
- Customer Name
- Change type (Mechanical, Electrical, etc.)
- Proposed Customer Notification

3.5 Engineering Authorizer Sign Off

The SECO is routed to the appropriate Authorizer who performs the impact analysis. The analysis should consider the impact on engineering development, production, customers and aircraft. If the Authorizer determines that the change did not sufficiently consider the impact, then the change will be returned to the author for rework.

The Authorizer shall sign off the SECO package indicating accountability for the following:

- Validate the Customer Notification / Approval as RAC/NOC/DOC/None assigned to the SECO.
- Identify if the Change affects data items that contain Special Trade Secrets. Such data items will be made available for review, but not submitted to customers through the normal customer portal.

3.6 SECO Change Control Board

The CCB reviews the SECO to ensure that the detailed change description is technically correct. The CCB also considers if the business impact of the change is acceptable.

The CCB is a cross functional team composed of representatives from each of the major functional organizations including:

- Design engineering, including the relevant approvers for the content of the change
- Manufacturing Engineering
- Supply Chain
- Quality Assurance
- Customer Account Manager should be added as required

The CCB shall provide one of the following dispositions:

- Approve – continue on with the change process
- Rework Needed – rework SECO package as required based on input from the CCB
- Rejected - If Crane has rejected the requested change, the change request package shall be returned to the supplier through the Crane Supplier Liaison for cancellation. The Crane Supplier Liaison shall verify the REJECTED box has been marked in the Crane only portion of the Supplier Request for Change form, and that comments defining the reason for rejection have been added to this section as well, prior to returning the change package to the supplier.

3.7 Pre-Coordinate with Customer

The objective of customer pre-coordination is to communicate and obtain concurrence with the identified change and proposed solution, as well as the validation of the classification of the change. The Customer Account Manager or their designee should carry out the Customer Pre-Coordination, depending on the customer and phase of the program.

If needed the SECO Package should be routed to the customer. The customer should disposition the Change Notification form along with any findings or recommended alterations. The customer may provide an indication of preliminary concurrence (with findings) via alternate methods such as an engineering memo, email, or other form of written record.

Possible Pre-Coordination dispositions are as follows:

- Preliminary Concurrence – continue on with the change process
- Rework Needed – rework Customer package as required based on input

The record of concurrence will be retained and, in the case of a RAC/NOC, it will be made a part of the formal change notification package submitted to the customer.

3.8 Add relevant data to SECO

If required, detailed engineering analysis required to support the change should be added to the SECO. If supplier documentation is impacted the Supplier Liaison should send change feedback to the supplier and request the supplier update their documentation.

3.8.1 Send change feedback to supplier

If Crane has concurred with the requested change and all of the pre-coordination processing is completed, the completed package shall be returned to the supplier through the Crane Supplier Liaison for final processing of the change. The Crane Supplier Liaison shall verify the Crane-only portion of the Supplier Request for Change form has been completed prior to returning the change package to the supplier.

3.8.2 Supplier incorporates change and submits to Crane for approval

Upon return of the completed and concurred change package to the supplier they shall process the change as follows:

- a. The supplier shall incorporate the changes to the data item.
- b. The supplier shall internally approve the data item change and place it in a customer hold file.
- c. The supplier shall send the changed data item, along with the finalized Supplier Request for Change Form 104-209, to the Crane Supplier Liaison for final approvals.

3.8.3 Engineering detailed analysis

If required the Cognizant Engineer will coordinate any engineering analysis or testing required to support change. The engineering analysis or testing results may be documented as white papers or engineering technical reports as required.

3.9 Submit SECO package to ERB in PDM

When the Cognizant Engineer determines that the SECO is complete and contains sufficient detail of the supplier change and supporting engineering analysis, the SECO shall be submitted to ERB.

3.10 SECO ERB

The Engineering Review Board (ERB) shall perform a technical peer review of the SECO. The ERB shall include the Approver. The Approver shall perform a technical approval of the SECO; this includes checking for correctness and completeness of the SECO, and verifying that the proper processes have been used.

3.11 Engineering Authorizer

The Authorizer shall perform the final authorization for release of the SECO, accepting the content considering the impact on engineering development, production, customers and aircraft.

3.12 Customer Notification / Approval

The SECO Package is routed through RAC, NOC or DOC if required according to the validated Customer Notification / Approval process.

3.12.1 Request for Authorization of Change (RAC)

Subsequent to internal approval, Customer Approval is required prior to release of the SECO Package to Production.

3.12.1.1 Submit Change Notification Form and ECO Package

The Data Manager will submit the Change Notification Form and approved SECO Package, along with a Letter Of Transmittal. The submittal and its receipt acknowledgement are recorded in the PDM system along with any disposition returned by the Customer.

3.12.1.2 Customer Approval

The disposition of the RAC shall be returned to the Data Manager via an agreed upon method and recorded in PDM.

- Approve - Authority for Crane to release the SECO and its approved items in preparation for change implementation.
- Reject – Return to the Author for rework

If no disposition is received within agreed upon times, the Customer Account Manager facilitates resolution.

3.12.2 Notification of Change (NOC)

Subsequent to internal approval, Customer Approval is not required prior to release of the SECO Package to Production. However, it is required that the customer be notified of the change and acknowledgement of the change obtained prior to product shipment.

3.12.2.1 Submit Change Notification Form and SECO Package

The Data Manager will submit the Change Notification Form and released SECO Package, along with a Letter Of Transmittal. The submittal is recorded in the PDM system.

3.12.2.2 Customer Acknowledge

The receipt acknowledgement shall be recorded in the PDM system. If no acknowledgement is received within agreed upon times, the Customer Account Manager facilitates resolution.

3.12.3 Documentation of Change (DOC)

Subsequent to internal approval, Customer Approval is not required prior to release of the SECO Package, the customer change form is submitted to the customer for information only.

3.12.4 None

Configuration Management performs its release processes.

3.13 SECO Closure

The Cognizant Engineer shall add the SECO Number and check the approved box in the Final Approval block of the Supplier Request for Change Form. Also add any references to the end user approval documents (ECM, STD, etc.) and provide copies of all approvals to the Crane Supplier Liaison.

3.14 Notify Supplier

The Crane Supplier Liaison will then forward the results to the supplier for release of the data item changes from their customer hold file.

4. Roles and Responsibilities

Supplier Liaison (Crane): Supplier Liaison is the Crane employee whose name and signature appears on the Crane purchase order agreement provided to the supplier. . His/her role in this process is receiving change request packages from suppliers, vetting these packages for completeness, and submitting these complete packages to the Cognizant Engineer as described in this document. This role also serves as single point of contact for the SECO disposition to Supplier.

Supplier Change Control Focal: The Supplier Change control focal (focal) shall be the supplier's point of contact with CA&E for coordination of the Supplier requested change process defined herein. All submittals to or from the supplier will be to this focal. The focal is responsible to collect and/or distribute all submitted or received information to or from the appropriate resources within the supplier's - organization to support the process defined herein.

Custom Engineered Component (CEC) sub tier supplier – A CEC supplier is a Crane sub-tier supplier contracted to deliver parts manufactured uniquely for Crane. The CEC supplier utilizes a drawing package developed and maintained on site by the supplier where changes within the documents, data, and resources are owned by the supplier and approved by Crane.

Configuration Management (CM) – CM plans for the product data configuration activities and identifies the required resources to carry out these activities. Configuration Management activities include but are not limited to practices applied to Change Management and Data release.

Cognizant Engineer - The appropriate engineering personnel will be determined based on the demands of the specific requested change and may involve any combination of engineering disciplines as needed. The Cognizant Engineer is responsible for, technical evaluation, assessing the supplier-requested change, creating a Supplier ECO in Team One and processing it for review and approval according to AGIS 30-030.

Approver – The role of the Approver is to check for correctness and completeness of the data item, and to verify that the proper processes have been used.

The competence, experience and qualifications for the Approver are:

The Approver must have a high level of expertise in his functional domain (mechanical, electrical, systems, software or test) to evaluate the technical merit of new data item or changes to data items. The Approver must have at least 10 years of applicable experience; know relevant customer specifications and requirements, and regulatory processes to guarantee the new data items will easily integrate without problem or violation. When necessary, the Approver must be capable of performing or evaluating accuracy calculations. The Approver must also be able to verify the acceptance of the design content, conclusions and recommendations.

The personnel who may fill the role of Approver should be defined in site level documentation

Authorizer – The role of the Authorizer is to be accountable for the change classification of Major, Minor Type A, Minor Type B or Non-Type Design. In addition the role of the Authorizer is to be the final release point of the new data items, accepting their content considering the impact on engineering development, production, customers and aircraft.

The competence, experience and qualifications of the Authorizer are:

The Authorizer must have 10 years of applicable experience, must have well-rounded technical expertise to evaluate the relevance and impacts to the engineering development, production, customer and aircraft as a result of new data item release. This includes both short and long term effects. The Authorizer must be able to bridge across the enterprise, work with customers if necessary, to make sure the effects of the new document are easily and well received by affected parties.

The personnel who may fill the role of Authorizer should be defined in site level documentation

Data Manager - The Data Manager Role provides administration and execution of delivery, tracking, and controls of customer submittals as per customer contractual requirements and Crane process. They are also responsible for populating the appropriate customer portals for change and data item notification and approvals from customers.

The Data Manager's electronic assignment for delivery of changed data items is triggered by the notification and approval requirements. The Data Manager will create the ECO package in PDM, deliver it as per customer requirements, and log the customer receipt in PDM and track / follow-up for customer response.

5. RACI

Responsibilities, **A**ccountabilities, **C**onsult or **I**nform Chart

Accountable: Delegates and Assigns Work Responsible: Those Who Do the Work
Consult: Subject Matter Experts Inform: Kept Up-to-date on Progress

Tasks	Supplier Liaison	Supplier Change Control Focal	Supplier QA	CAM	Cognizant Engineer	Authorizer	Data Manager
1. Submit Supplier Request for Change	I	R	-	-	-	-	-
2. SCM Commercial Evaluation	R, A	-	I	I	I	-	-
3. SRC Review Meeting	R, A	-	C	C	C	-	-
4. Create SECO and submits to PDM	I	-	-	-	R,A	I	-
5. Engineering Authorizer Sign Off	-	-	-	-	-	R,A	-
6. SECO Change Control Board	I	-	R,A	-	R,A	-	-
7. Pre-Coordinate with Customer	I	-	-	R,A	-	-	-
8. Add relevant data to SECO	-	-	-	-	R,A	-	-
9. Submit SECO package to ERB in PDM	I	-	-	-	R,A	-	-
10. SECO ERB	-	-	-	-	R,A	-	-
11. Engineering Authorizer	-	-	-	-	-	R,A	-
12. Customer Notification / Approval	I	-	-	I	-	-	R,A
13. SECO Closure	I	-	-	-	R, A	-	-
14. Notify Supplier	R, A	I	-	-	-	-	-

**APPENDIX A
CHANGE REQUEST FORM**

SUPPLIER REQUEST FOR CHANGE FORM



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IDENTIFICATION OF PRODUCT						
Supplier Name: <input type="text"/>			Supplier Code: <input type="text"/>			
Supplier focal point (name, email, phone): <input type="text"/>						
1. Crane Part Number <input type="text"/>		2. Crane Control Dwg & Revision <input type="text"/>		3. Crane Program (if known) <input type="text"/>		
4. Supplier Part Number & Revision <input type="text"/>		5. Crane Part Description <input type="text"/>		6. Supplier Part Description (if different from 5.) <input type="text"/>		
SUBMITTAL						
7. Submission details:						
<input type="checkbox"/> Initial Submittal		Submission Date: <input type="text"/>				
<input type="checkbox"/> Re-Submittal						
<input type="checkbox"/> Final Approval Submittal		Crane-assigned number: <input type="text"/>				
DETAILS OF CHANGE						
8. Description of Requested Change: <input type="text"/>				9. Reason of Requested Change: <input type="text"/>		
TYPE OF CHANGE						
10. Priority				11. Part Status		
<input type="checkbox"/> Emergency – line stopper now				<input type="checkbox"/> Development phase		
<input type="checkbox"/> Urgent – potential line stoppage within 30 days				<input type="checkbox"/> Production		
<input type="checkbox"/> Routine						
EXISTING MATERIAL						
12. Recommended Disposition by Supplier:						
Disposition Codes:						
Use as is		Use item or assy until current inventory is depleted				
Mandatory		Install change to product in stores, WIP, finished goods, in field, or on order				
Rework/Retest		Rework or retest designated inventory				
Scrap		Scrap designated material				
Part Number	In Stores	WIP	Finished Goods	In Field	On Order	Remarks
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
COST AND TIMING OF REQUESTED CHANGE						
13. Please check the boxes as applicable:						
<input type="checkbox"/> This requested change will not have any cost implications to Crane						
<input type="checkbox"/> This requested change will impact product cost (if checked, please arrange meeting with Crane's Supplier Liaison)						
Estimated Cost impact <input type="text"/> (will require firm quote, before/after breakdown and approval from Crane Supplier Liaison)						
14. Estimated timing of the change (by supplier): <input type="text"/> weeks						

SUPPLIER REQUEST FOR CHANGE FORM



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FOR CRANE'S USE ONLY:	
Initial Concurrent Submittal	
<input type="checkbox"/> Crane concurs (OK for Supplier to BEGIN WORK for requested change. Result must be submitted to Crane for final change approval)	
Eng. _____ Date: _____ SCM: _____ Date: _____	
<input type="checkbox"/> Crane Rejects (Supplier to Cancel Change activity or rework and resubmit based on Crane Comments provided below)	
Eng. _____ Date: _____ SCM: _____ Date: _____	
Comments by Crane: _____	

Final Approval Submittal	
Crane Supplier Liaison Approval of Cost:	
Crane Supplier Liaison (Name, Signature, Date) _____	
Crane SECO Results:	
SECO Number: <input style="width: 80px;" type="text"/>	
<input type="checkbox"/> Crane approves change (OK for supplier to process FINAL RELEASE)	
End User Approval Document(s): _____	
<input type="checkbox"/> Change REJECTED by Crane (supplier shall NOT proceed with requested change)	
End User Rejection Document(s): _____	
Comments by Crane: _____	

Guidelines for completion of Supplier Request for Change form:

Enter Supplier name, Supplier Code, and Supplier's focal point-of-contact information. Enter additional information into the numbered boxes as described below:

1. Crane's Part number purchased from the supplier and on Crane's purchase order
2. Crane's Drawing number; please include Revision Level from drawing
3. Crane Program can be obtained through Crane's Supplier Liaison or Cognizant Engineer, if unavailable, leave blank
4. Supplier's part number as list in Crane's drawing
5. Crane part description as listed on the drawing
6. Optional - Supplier part description (if different from 5)
7. Check the applicable box for the type of submittal and the date. Obtain Crane-assigned submittal number from Crane's Supplier Liaison
8. Describe the nature of the change; what does it consist of; components, materials or subassemblies impacted, and include components, suppliers or part numbers if available; use additional space in a new page if needed and attach relevant technical information (redline drawings, illustrations, 3D models, etc.)
9. Describe why the change is needed and explain potential consequences if the change is not approved
10. Check the appropriate box determining the level of priority recommended by the supplier
11. Check the appropriate box if the part going through this requested change is either in the development phase or is currently supplied to Crane as a production part; check with your Crane Supplier Liaison if needed
12. The supplier must provide recommendations for disposition of existing material using the table listed on the form. Select the disposition code most appropriate for every cell on the blank table for every part number impacted on this requested change.
13. At least 1 box in this section shall be checked. If the second box is checked "Cost Impact" the supplier is expected to estimate, in the next box, this impact and arrange meeting with Crane's Supplier Liaison at the time of submitting the form. A firm quote showing cost breakdown before and after implementing the change is required for such meeting. The change request will be on hold until this meeting has been arranged
14. Supplier populates the estimated lead time to implement this change at its end
15. "For Crane's use only" – Supplier shall leave this section blank, as it is strictly for Crane to indicate whether the supplier is authorized to begin work on the change and submit for final approval, or the change is finally approved or rejected. Authorized Crane signatures are also submitted here.
 - a. In the Initial Concurrence Submittal phase, both the Cognizant Engineer and the Supplier Liaison shall check the appropriate Concur or Reject Box as applicable. They both must sign in the space provided under the check box they have selected (it does not have to be the same check box, i.e. one can concur and the other can reject). If a rejection is selected, the rejecting party should fill in the "Comments by Crane" defining the reason(s) for the rejection.
 - b. In the Final Approval phase, the Supplier Liaison shall sign in the "Crane Supplier Liaison Approval of Cost" provided, if commercial issues are acceptable.

16. "Crane SECO Approval Results"
 - a. Cognizant Engineer adds the Supplier Engineering Change Order (SECO) number used to process the requested change in the box provided.
 - b. If SECO approval is received for the change then Cognizant Engineer checks the "Crane approves change..." box. Cognizant Engineer enters the document information of any End User Approval documents received.
 - c. If SECO approval is not received for the change (change rejected) then Cognizant Engineer checks the "Change REJECTED by Crane ..." box. Cognizant Engineer enters the document information of any End User rejection documents received.
17. If the Change is rejected with recommended changes for resubmittal the "Comments by Crane" sections should be filled in by the Supplier Liaison, in coordination with the Cognizant Engineer, prior to returning the rejected change package back to the supplier.

**APPENDIX B
REQUESTED CHANGE IMPACT ANALYSIS MATRIX**

Guidelines for completion of Requested Change Impact Analysis Matrix

Please check all boxes that apply and include an explanation on how the change impacts such category. Use additional space on a separate page if needed. Submit this matrix along with the form to your Crane Supplier Liaison

REQUESTED CHANGE IMPACT ANALYSIS MATRIX



Change Notification Examples	Impacts Supplier Design Documentation	Impacts Crane Design Documentation	Other Changes	Describe Impact of Change
Dimensional and Other Parametric Changes				
<input type="checkbox"/> Changes to part Envelope/Outline dimensions controlled by SCD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to internal dimensions not controlled by SCD (Must not affect Form, Fit, or Function)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Correction of fastener interference or fastener installation issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to electrical parameters or properties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to other specified parameters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
Material or Process Changes				
<input type="checkbox"/> Changes to basic materials of housings, castings, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to encapsulants, adhesives, sealants, paints, or coatings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to heat treatments, annealing, surfacing, or finishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to plating materials or processes (i.e. electroplating vs. Electrolysis)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changes to supplier of key components potentially affecting form, fit, or function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█
<input type="checkbox"/> Changing the supplier of key processes potentially affecting form, fit, or function	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	█

REQUESTED CHANGE IMPACT ANALYSIS MATRIX



Change Notification Examples	Impacts Supplier Design Documentation	Impacts Crane Design Documentation	Other Changes	Describe Impact of Change
Manufacturing Changes				
<input type="checkbox"/> Changes that employ manufacturing or fabrication techniques that are new or different from what was used for the baseline product design (whether or not controlled by the drawing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Use of new or modified tooling, molds, patterns, etc. (includes replacement or reworked tooling)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Production following upgrade or rearrangement of existing tooling or equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Use of tooling that has been inactive for production for 12 months or more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Use of tooling transferred to a different plant site or from another plant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Change of sub-tier supplier for key processes or services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Relocation or change of manufacturing facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
Other Changes				
<input type="checkbox"/> Changes to test or inspection equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Replacement or Reprogramming of Automated Test Equipment (ATE) for electronic parts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Use of component parts other than as defined in the SCD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■
<input type="checkbox"/> Changes to supplier's ATP or FTP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	■