

**TEXTRON** Systems

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▶ **PUSHING PAST POSSIBLE**

# CRITICAL SAFETY ITEM (CSI) PROCESS

## Supplier Guide

# DEFINITIONS

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- **Critical Safety Item (CSI)**

- A part, an assembly, installation equipment, launch equipment, recovery equipment, or support equipment for an aircraft system that contains a characteristic which failure, malfunction, or absence of could cause a catastrophic or critical failure resulting in the loss of or serious damage to the aircraft, an unacceptable risk of personal injury or loss of life, or an un-commanded engine shutdown that jeopardizes safety.

- **Critical Characteristic (CC)**

- Any feature throughout the life cycle of a CSI (e.g., dimension, finish, material or assembly, manufacturing or inspection process, installation, operation, field maintenance, or depot overhaul requirement) which if nonconforming, missing, or degraded could cause failure or malfunction of the CSI. Critical characteristics may be identified on drawings, in technical data packages, in contract quality assurance provisions, or through other contract requirements/clauses.



# IDENTIFICATION OF CSI ITEMS

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- Textron Systems maintains a Critical Safety Item (CSI) program designed to mitigate the risk of failure of specified parts.
- Part description includes “(CSI x)”
  - e.g., 12345-67890 Widget 1 (CSI 4)
- Drawing indicates **CRITICAL SAFETY ITEM** on first page
- Text within drawing identifies item as **CSI**
- Critical characteristics are identified with the symbol **\*CSI\***



# GENERAL DESCRIPTION OF LEVELS

**Most Critical and/or  
currently least  
controlled**



**Least Critical and/or  
currently well controlled**

<p><b>LEVEL 4</b></p> <ul style="list-style-type: none"><li>• Level 1, 2 and 3 Requirements plus:<ul style="list-style-type: none"><li>• Implement control plan to monitor critical characteristics</li><li>• Perform and maintain detailed inspection records</li><li>• Maintain serialization information</li><li>• Complete initial Physical Configuration Audit (PCA)</li><li>• Develop control plan (purchased items)</li></ul></li></ul>
<p><b>LEVEL 3</b></p> <ul style="list-style-type: none"><li>• Level 1 and 2 Requirements plus:<ul style="list-style-type: none"><li>• Identify critical characteristics and revise or create source/spec control/mfg drawings to include critical characteristics</li><li>• Define inspection/test plan that monitors critical characteristics</li><li>• Complete supplier surveys/audits</li><li>• Conduct first article inspections</li><li>• Develop control plan (Textron Systems-manufactured items)</li><li>• Supplier meetings to communicate program requirements</li></ul></li></ul>
<p><b>LEVEL 2</b></p> <p>Level 1 Requirements plus:</p> <ul style="list-style-type: none"><li>• Identify Critical Failure Modes and collect data</li><li>• Compare Critical Failure Modes with current acceptance criteria</li></ul>
<p><b>LEVEL 1</b></p> <ul style="list-style-type: none"><li>• Review data: Part usage, failure history and FMECA data<ul style="list-style-type: none"><li>- Identify and review: Drawings/processes/controls</li></ul></li><li>• Procurement method</li></ul>

# CSI PROGRAM ACTIVITIES

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- The requirements for the CSI Program Activities are listed below and documented in QA-SP65, which can be found on the Textron System's [Supplier Information Site](#).
  - Data gathering and Control Plan Creation (Levels 3 & 4)
  - Configuration Management (CM)
  - Configuration Control
  - Physical Configuration Audit (PCA) (Levels 3 & 4)
  - First Article Inspection (FAI) (Levels 3 & 4 )



# EXAMPLE CONTROL PLAN

## CRITICAL SAFETY ITEM CONTROL PLAN

Part Number:	Control Plan Approved:
Part Description:	Engineering Approval:
Supplier:	QA Approval:
Control Plan Rev:	Customer Approval:

Characteristics		Mfg Tools/Machines	Characteristic Classification	Methods				Reaction Plan
Product	Process			Product/Process Specification/Tolerance	Evaluation/Measurement Technique/Accuracy	Sample		
						Size	Frequency	

# CHANGES TO CSI ITEMS

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Start

- Supplier Actions
  - Changes formally requested using form [QAPG-QE63-FM1](#) Item Change Request.  
QAPG-QE63-FM1 can also be found on Textron System's [Supplier Information Site](#).
  - Suppliers submit to buyer
- Textron Systems Actions
  - All requests forwarded from buyer to Engineering MRB Representative or Alternate, and Quality Representative
  - Program team assesses impact of request
  - Class I Engineering Change Notice (ECN)/Engineering Change Process (ECP) required to implement drawing or control plan changes
  - Buyer communicates revisions to supplier through PO changes

Finish