CODE RC-92
CHARACTERISTICS ACCOUNTABILITY WORKSHEET
CONTROL PLAN FOR CRITICAL/PRIMARY/MAJOR FEATURES

For hardware features deemed "Critical", "Primary", or "Major" by the Buyer, the Seller shall provide information pertaining to the controls in place to assure those features are maintained. This information shall include the following:

1) Key process characteristics, which result in the noted Critical, Primary, and Major product features.

2) Control methods, procedures, inspection that verify that key process characteristics are maintained.

3) First article inspections/tests (if applicable).

4) Acceptance plans/inspection methods used to verify the noted Critical, Primary, and Major product features.

The Seller shall place this information on the Characteristics Accountability Worksheet (CAW) provided by the Buyer per the example and instructions attached to this purchase contract code. Prior to hardware production/processing, the Seller shall coordinate with the Buyer to establish a submittal date for the CAW. Once approved, the CAW shall be considered the Seller's Control Plan for Critical, Primary, and Major product features and shall not be revised by the Seller without Buyer's approval.

Seller shall assure that key processes performed by sub-tier suppliers are baselined and controlled and that information pertaining to these processes is noted on the CAW. Seller is responsible for managing sub-tier suppliers to assure that any changes to be made by those suppliers to key processes are communicated to the Buyer for approval.

Concurrent with the submittal of hardware to the Buyer, the Seller shall provide:

A. The approved CAW document assigned to their purchase contract and item B below.

B. Certificate of Conformance stating that items 1 through 4 listed above were completed as stated on the approved CAW.

CODE RC-92 (ATTACHMENT)
CHARACTERISTICS ACCOUNTABILITY WORKSHEET INSTRUCTIONS

Definitions for Characteristic Accountability for Process-Product Validation

The following definitions and descriptions should be used to assist in completing a Characteristics Accountability form for each component. The Boeing Company teams should define the product characteristics and requirements (columns 1 through 5), and the supplier should define the key process characteristics and controls and planned hardware verifications (columns 6 through 9) used to manufacture the hardware. Jointly the supplier and Buyer should reach consensus on the accountability of each characteristic and establish a means to assure conformance and concurrence of changes to key process characteristics and validation methods.

1. Item Number - (Buyer completes)

Utilized to provide identification and sequence of drawing features.

2. C of C (Classification of Characteristics) - (Buyer completes)

Classification of Characteristics is a means of identifying and communicating design information considered essential to product performance. Product performance characteristics are classified by The Boeing Company utilizing analysis which considers the functional, performance, environmental, interchangeability, and service life requirements of a given component. The analysis typically encompasses material properties, fracture mechanics, tolerance studies, failure modes and effects of failures on performance and safety. Product characteristics are provided by Buyer and are classified as follows:

Critical - Critical characteristics are those features that, if outside prescribed limits, are likely to cause hazardous or unsafe conditions which could result in loss of life, vehicle, or mission. Critical characteristics require 100% verification and recording of variable data.

Primary - Primary characteristics are those features that, if outside prescribed limits, are likely to result in loss of engine or component performance, resulting in hazardous or unsafe conditions. Primary characteristics require 100% verification except when statistical sampling or process control has been approved by Buyer. Recording of variables data is recommended for performance measurement and statistical process control.

Major - Design and producibility features that, if nonconforming, are likely to impair the performance of the engine. These features require component or detail level verification(s) necessary to minimize the probability of occurrence and/or failure. Major Characteristics may be sample inspected in accordance with MIL-STD-414 or MIL-STD-105 per AQL 2.5 and shall identify all proposed characteristics to be sampled. The statistical sampling plan must be approved by Buyer. If no sampling plan is available, 100 percent inspection is required. Recording of variables data is recommended for performance measurement and statistical process control.

3. Note # or Dwg. Sh. Zone - (Buyer completes)

This column is used to indicate where the requirement or characteristic can be found on the engineering drawing - either by note number or drawing sheet and zone number.

4. Requirement/Characteristic - (Buyer completes)

Characteristic - A characteristic is typically a drawing feature such as a dimension or a geometrical relationship such as parallelism.
Requirement - A requirement in this context can be any drawing feature, drawing note, or specification requirement.

This column only lists individual characteristics that have been classified as critical or primary. Because an inspection process has the same classification as its characteristic or requirement, it is also listed here for validation.

5. Spec No. (Specification Number) - (Seller Completes)

This column lists the applicable specification for the requirements listed in column 4. These may be the specifications listed in the referenced drawing note, or they may be sub-tier specifications.

6. Key Process Characteristic - (Buyer Completes)

Key process characteristics are the various manufacturing process and product elements that exert significant influence upon the product performance characteristics and requirements. Not all process steps have an equal impact upon the quality of the process or product. Isolation and control of the key process steps and related variables are necessary to establish manufacturing processes, which consistently produce high quality end items. Key process characteristics are determined by the supplier in conjunction with Buyer.

7. Control Method, Procedure, or Inspection - (Seller completes)

Control Method - A control method is the means by which control is imposed. It may be by training and qualification testing or an operator or by automation of the operation.

Control Procedure - A control procedure is a written description of how an operation is to be accomplished. It can be a separate document referenced in the manufacturing planning, or it can be a step by step instruction listed in the planning itself.

Control Inspection - Control inspection is a verification of a continuous process element such as temperature, or it can be a test of a sample that was processed with a production lot of parts.

8. First Article (if applicable) - (Seller completes)

First Article verifications are required tests and inspections performed on a part or parts (as opposed to the process) before initial production and before resumed production after significant process or design changes have occurred. Sometimes first article verifications result in destruction of a part to perform all testing.

9. Acceptance Plan/Inspection Method - (Seller completes)

Acceptance Plan - The acceptance plan describes the extent of inspection or testing performed on the part or parts (i.e., 100% or lot inspection/testing per The Boeing Company approved sampling plan).
Inspection Method - The inspection method is the inspection process used on the part or parts and includes such methods as gauging, X-ray, penetrant, ultrasonic, hardness testing, leak testing, etc.

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Characteristics Accountability **Process/Product Validation**	Last Change: Last Copied Worksheet:
Work ID: Program:	Drawing No.: Part Name: CIL Item No.
Supplier: Procurement Code: Supplier Code:	Approval (R/D): Date: Supplier Approval: Date:

REQUIREMENTS					**PROCESS CONTROL**		**VERIFICATION**	
(1) Item No.	(2) Class. of Char.	(3) Note No. Dwg. Sh. Zone	(4) Requirements/Characteristics	(5) Spec. No.	(6) Key Processes Characteristic	(7) Control Method, Procedure of Verification	(8) FA Or LA	(9) Acceptance Plan or Insp. Method