

M004

BOEING MISSION ASSURANCE REVIEW (BMAR) COMPLIANCE

(a) Supplier Expectations for BMAR Compliance. Seller will meet the requirements of "Supplier Expectations for Boeing Mission Assurance Review Compliance" provided below. Seller has submitted to Boeing for approval its "Boeing Mission Assurance Review (BMAR) Supplier Evaluation Criteria" document showing Seller's compliance. Seller will comply with the approved document and other evidence of compliance. Any changes to Seller's practices that would materially affect Seller's compliance with the BMAR expectations will be submitted to Boeing for approval.

(b) Preferred Supplier Certification. In addition to BMAR compliance, it is Boeing's expectation that Seller will attain minimum performance standards of 98% quality and 90% delivery performance. If Seller does not meet minimum performance standards, Seller will comply with the corrective action plan submitted with its "Boeing Mission Assurance Review (BMAR) Supplier Evaluation Criteria" document. Seller must achieve and maintain the minimum performance standards for a 12-month period to qualify for a preferred Supplier Certification (PSC) assessment.

When Seller becomes a Boeing Certified Supplier or if Seller is a Boeing Certified Supplier, Seller will maintain or improve the minimum performance standards for its current level of certification. If Seller does not meet minimum performance standards, a corrective action plan must be submitted to Boeing for approval.

Supplier Expectations for Boeing Mission Assurance Review Compliance

	Broad Area	Boeing Expectation of Suppliers	"Build to Spec." Requirements	"Build to Print" Requirements
1	Quality-First Environment	<ul style="list-style-type: none"> • Communicate to all employees the importance of Quality and Reliability. • Meet the explicit intent of existing contract language regarding responsibility, authority and the interrelation of personnel who manage, perform and verify work affecting quality. • Identify and document production, installation and servicing processes that directly affect quality and ensure that these processes are carried out under controlled conditions. • Define and document a process that allows the organizational freedom and authority to initiate action to 	<ul style="list-style-type: none"> • Applies • Applies • Applies • Applies 	<ul style="list-style-type: none"> • Applies • Applies • Applies • Applies

		prevent the occurrence of any nonconformance relating to the product, process and quality system.		
2	Systems Engineering	<ul style="list-style-type: none"> Define and document clear roles, responsibilities, and authority for the design, test and production of products with special emphasis on horizontal process integration, interfaces and hand-offs. 	<ul style="list-style-type: none"> Applies 	<ul style="list-style-type: none"> Applies
3	Responsible Engineer	<ul style="list-style-type: none"> Assigned responsible engineers (RE) shall have overall responsibility for the quality and performance of each critical item or process that is part of their system. Provide documented evidence of completion of quality review by responsible engineer prior to delivery. Conduct a training program for RE's and provide certification of training upon request. Flow down similar RE requirements to critical sub-tier suppliers producing "Build to Specification" products. 	<ul style="list-style-type: none"> Applies Applies Applies Applies 	<ul style="list-style-type: none"> Not Applicable Not Applicable Not Applicable Not Applicable
4	Design Intent	<ul style="list-style-type: none"> Verify design intent is met by reviewing engineering drawings and planning, specifications, conducting physical inspection, or other appropriate demonstrable means. Verify product definition is completely contained in engineering drawings. Validate that design parameters are not defined on planning paper/work instructions. Document initial review of new part manufacture, including all processes used. Document subsequent reviews when product or process changes are made. Shall review critical sub-tier suppliers and flow down comparable requirements to suppliers producing "Build to Specification" products. 	<ul style="list-style-type: none"> Applies Applies Applies Applies 	<ul style="list-style-type: none"> Not Applicable Not Applicable Applies Not Applicable
5	Design, Qualification and Flight Performance	<ul style="list-style-type: none"> Perform post-test data analysis to verify and report nominal and anomalous performance. Perform post-flight data analysis to 	<ul style="list-style-type: none"> Applies Applies to major 	<ul style="list-style-type: none"> Applies Not Applicable

	Baseline	<p>verify and report nominal and anomalous performance. Document and retain post-flight data review records.</p> <ul style="list-style-type: none"> Retain all acceptance test data and plot trend data for verification of variability and process control. 	<p>systems only</p> <ul style="list-style-type: none"> Applies 	<ul style="list-style-type: none"> Applies
6	Change Control	<ul style="list-style-type: none"> Ensure a change review process in place with sufficient technical representation to evaluate for key technical and analytical assumptions, effect on qualification baseline, and technical risk. Ensure the change review process contains a documented risk mitigation process. Retain a qualification baseline record and document all changes to the baseline as they occur. Note revision of all deliveries and any changes that have been made since the previous delivery. Provide objective evidence and analysis that the cumulative effect of changes does not invalidate the qualification baseline. 	<ul style="list-style-type: none"> Applies Applies Applies Applies 	<ul style="list-style-type: none"> Not Applicable Not Applicable Not Applicable Not Applicable
7	Eliminate Non-Conformances	<ul style="list-style-type: none"> Prepare and maintain a documented Variability Reduction (VR) Program. Retaining all acceptance test data and plot trend data for verification of Variability Reduction and Process Control. Review critical sub-tier suppliers and flow down similar requirements. 	<ul style="list-style-type: none"> Applies Applies Applies 	<ul style="list-style-type: none"> Applies Applies Applies
8	Independent Mission Assurance Process	<ul style="list-style-type: none"> Support Boeing's Independent Mission Assurance as required by contract. Document internal "ready to fly" for each launch as required by contract. 	<ul style="list-style-type: none"> Applies Applies to major systems only 	<ul style="list-style-type: none"> Applies Not Applicable
9	Supplier Management	<ul style="list-style-type: none"> Provide objective evidence that applicable sections of this plan are implemented at sub-tier suppliers. 	<ul style="list-style-type: none"> Applies 	<ul style="list-style-type: none"> Applies