

EQRS

EMBRAER Quality Requirements for Suppliers

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CHANGES IN THIS REVISION

- Removed from table 1 the product type references from previous EQRS revisions.
- Removed from table 1 the type 5 - Tooling, its reference on table 2 and from each requirement on the applicability to the type of product.
- Removed from the mandatory and operational requirements the references from previous EQRS revisions.
- Added COTS and Standard Parts on table 2 and as a project type on each requirement.
- Added a new guideline (RFA Submission) and included it into the requirement M.008.2018.
- Added a new requirement M.024.2023.
- Added a new requirement OPR.022.2023.
- Wording improvement on requirements M.004.2018, M.010.2018, M.012.2018, M.016.2018, OPR.001.2018, OPR.004.2018 and OPR.009.2018.
- Requirements M.005.2018, M.006.2018, M.017.2018 and OPR.021.2018 were revoked.
- Added a new guideline supporting how to fill a Compliance Matrix and included it in section C.
- Added new definitions into section E.
- Changes are indicated with a sidebar on the left side of the text.

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A. INTRODUCTION

EMBRAER expects from Suppliers a supportive commitment to quality through the maintenance of an effective Quality Management System (QMS), the strong foundation where improvement of products, services, and processes are accomplished.

EMBRAER Quality Requirements for Suppliers (EQRS) is the set of requirements - the QMS as basic requirement, mandatory requirements (based on Airworthiness' Authorities requirements) and Operational Requirements (OPR) as complement - expected to be accomplished by Suppliers.

The requirements herein expressed shall be fulfilled. Any exception shall be submitted to EMBRAER for proper evaluation (see section C - Compliance Matrix Fulfilment).

EMBRAER may revise EQRS and will post any revised version of the document at <https://www.embraersuppliers.com/esuppliers/#!/en-US/supplier-requirements>. It is supplier's responsibility to access EQRS at the URL address to verify its revision status and implement it.

EMBRAER reserves the right to perform audits at Suppliers' and their subtiers using the latest revision of the EQRS even if suppliers' contract indicates requirements in other revisions.

B. SUPPLIER QUALITY REQUIREMENTS

EMBRAER has separated the Supplier quality requirements as:

- i) Quality Management System requirements;
- ii) Mandatory requirements;
- iii) Operational requirements.

Supplier is expected to comply with all requirements applicable to its type of products to be supplied as defined and also according to the project responsibility.

Table 1 shows a reference of types of product to be supplied.

Supplier shall comply with the requirements applied to the type of product to be delivered to EMBRAER. If Supplier delivers more than one type of product, it is the Supplier's responsibility to comply with the specified requirements for each part.

Exception to a requirement applicability can be granted in defense programs where there is no civil or military type certification, or EMBRAER does not hold a production certification. In this case the requirements to be complied shall be defined according to programs definitions and contract.

TABLE 1 - TYPE OF PRODUCT TO BE SUPPLIED

(In case of questions, please contact EMBRAER Supplier Quality Department)

	Supplier of:	Examples:
TYPE 1	Assemblies, sub-assemblies, end items and primary parts.	Wings, fuselages, flaps, slats, winglets, ailerons, stabilizers, skins, spares (spars), ribs, special pins, radomes, machining, heat treatments, surface treatments, forming, pressing, painting, doors, composite parts, small assemblies. Machining, forming parts, composite parts, special processes (heat treatment, surface treatment, painting, etc.)
TYPE 2	Equipment and systems with or without technical standard order (TSO).	Avionics, engines, flight controls, landing gear, air management systems, propulsion systems, fuel systems, hydraulic systems, hydro-mechanical equipment, electrical-electronics equipment, entertainment systems, windshields, tires quick access recorders, water and waste systems, smoke detection systems, exterior lighting, equipment with embedded or loadable airborne, space borne, ground support software components, software, end-item with specific part number, oxygen system, fire extinguish system, emergency equipment, interior system.
TYPE 3	Raw material and hardware.	Transparencies, lenses, wires, cables, connectors, switches, relays, circuit breakers, fuses, terminals, contactors, sensors, rivets, screws, bolts, bearings, ball bearings, rod assemblies tubes, fittings, hoses, links, pulley, metallic sheets, plates, forgings, extruded shapes, castings, tubes, composite materials, sealants, adhesives, seals, harnesses.
TYPE 4	Distributors.	-
TYPE 5	(REVOKED IN REVISION M)	
TYPE 6	Parts of interiors.	Linings, sidewalls, overhead bins, ceiling panels, floors, monuments, bulkheads, doors, pilot seats, pax seats, window shades, insulation.
TYPE 7	Interior trim and finish.	Leather, carpet, fabric, ultra-leather, veneer, plating, coating.
TYPE 8	Non-aircraft products.	Products, systems or services <u>not for aircraft use</u> as flight simulators, ground stations, etc.
TYPE 9	Ground support equipment (GSE).	Machined parts, assemblies, boiler, safety covers and caps, and electric parts.
TYPE 10	Repair stations.	Maintenance services provided by an organization or any Original Equipment Manufacturer (OEM) that is currently part of EMBRAER's supply chain.

i. QUALITY MANAGEMENT SYSTEM REQUIREMENTS

Table 2 shows the applicable QMS requirements for each Supplier. The certifications described in this table shall be accredited by a certification body listed in the International Aerospace Quality Group (IAQG) OASIS database (for AS series). The scope of the certification shall include the manufactured product for EMBRAER, as well.

TABLE 2 - QUALITY SYSTEM REQUIREMENTS

QUALITY SYSTEM REQUIREMENTS	SAE AS 9100 ⁽¹⁾	SAE AS 9110 ⁽²⁾	SAE AS 9120 ⁽³⁾	ISO 9001 ⁽⁴⁾
Distributors	Accredited (for VAD - Value Added Distributors)		Accredited	
Ground support equipment Suppliers (GSE)				Accredited
Suppliers designing, developing or producing aviation and defense products (build to print or design and build) and special processes.	Accredited			
Suppliers for non-aircraft products				Accredited
Third party repair stations		Compliant		
Suppliers for COTS & Standard Parts				Accredited

(1) 9100 series includes all IAQG sanctioned standards, including but not limited to AS9100, EN 9100 and JISQ 9100.

(2) 9110 includes all IAQG sanctioned standards including but not limited to AS9110 and EN 9110.

(3) 9120 includes all IAQG sanctioned standards including but not limited to AS9120 and EN 9120.

(4) 9001 series includes all sanctioned standards.

ii. MANDATORY REQUIREMENTS

Since these requirements are deployed from the Airworthiness Authorities, waiver requests will only be taken into consideration in cases where the requirement is Not Applicable (shall be justified) or the supplier presents an Alternative Means of Compliance that meets or exceeds the requirement.

The mandatory requirements are identified as **M.XXX.YYYY**, where:

- M - Identifies a mandatory requirement;
- XXX - Identifies the number of the requirement;
- YYYY - Year that the requirement has been incorporated to the document.

	MANDATORY									
M.001.2018	Supplier shall flow down applicable EQRS requirements to its supply chain.									
	APPLICABILITY TO THE TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO THE TYPE OF PROJECT:									
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS					
M.002.2018	EMBRAER, its customers, or Airworthiness Authority's representatives shall have the right to conduct audits, inspections or evaluations at Supplier's facilities at any time, which may include visits to subtiers or vendors' facilities. Note: In cases of proprietary information and ITAR requirements, EMBRAER and Supplier shall negotiate the access to the facilities.									
	APPLICABILITY TO THE TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO THE TYPE OF PROJECT:									
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS					X
M.003.2018	EMBRAER shall have the right to access internal and 3 rd party certification audit reports and data. Note: In cases of proprietary information and ITAR requirements, EMBRAER and Supplier shall negotiate the access to data.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS					X

	MANDATORY									
M.004.2018	When required by EMBRAER, Supplier shall fill out the Supplier Data Record (SDR) form and send it to Supplier Quality Department. The information shall comprise the site that supplies products to EMBRAER. The Supplier data record is available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
M.005.2018	(REVOKED IN REVISION M)									
M.006.2018	(REVOKED IN REVISION M)									
M.007.2018	Supplier shall notify EMBRAER Supplier Quality Department in written form upon any relocation or transfer of Supplier’s or its supply chain manufacturing operations.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS			

	MANDATORY									
M.008.2018	Supplier shall submit a Request For Alternative (RFA) for technical standards or exception letter (for product standards - MEP, MP) in case of any Supplier's restrictions or deviations from EMBRAER standards.									
	EMBRAER reserves the right to approve or reject this request.									
	See the document Guidelines for RFA Submission available at https://www.embraersuppliers.com/esuppliers/#!/en-US/supplier-requirements									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10		
APPLICABILITY TO TYPE OF PROJECT:										
BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS			X	
M.009.2018	Supplier shall keep retained documented information on file and available to EMBRAER's representatives according to the following criteria:									
	a) For critical components (limited lifecycle, fixed inspection intervals, or other specific similar procedure defined in the manufacturer maintenance manual or in the instructions of continued airworthiness), retained documented information shall be kept for at least 20 years;									
	b) Records for parts not described in item a) shall be kept for at least 10 years.									
	Note: In case of different periods of retention defined in Technical Standards, Supplier shall comply with the most restricted period.									
	APPLICABILITY TO TYPE OF PRODUCT:									
TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X			
TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X	
APPLICABILITY TO TYPE OF PROJECT:										
BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS				
M.010.2018	Supplier shall comply with EMBRAER Production Part Approval Process (EPPAP) requirements established in EPPAP Manual available at https://www.embraersuppliers.com/esuppliers/#!/en-US/supplier-requirements									
	The scope of application will be registered in the negotiated EPPAP scope matrix.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9		TYPE 10	
APPLICABILITY TO TYPE OF PROJECT:										
BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS				

MANDATORY									
M.011.2018	Supplier shall apply First Article Inspection (FAI) when changes occur in production and quality processes, in a modification or evolution of parts, in a new production, assembly line or Subtier. Note: SAE AS 9102 - Aerospace First Article Inspection Requirement may be used as a guide.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X	
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				
M.012.2018	Supplier shall control in house and outsourced special processes, including at least: qualification, revalidation criteria, control of nonconforming product and corrective action.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X	
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
M.013.2018	Any suspected or confirmed non-conformance, detected by the Supplier after delivery of the parts and that were not previously detected or reported by EMBRAER, shall be notified through the email quality.escape@embraer.com.br and the Supplier Quality Engineer's email. Supplier shall complete a Notification of Escape (NoE) form available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements or an equivalent Supplier document, including at least the following information: a) Part number and part description; b) Quantity of parts; c) Units affected (serial number, batch number, PO number and line); d) Problem description; e) Containment action. Supplier shall respond to any other EMBRAER requests during investigation and problem solution.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X	
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X

	MANDATORY									
M.014.2018	Supplier's disagreements to an EMBRAER's non-conformity report issuance shall be sent to EMBRAER Supplier Quality Department with the technical evidence that the products are according to the specifications. Otherwise, Supplier is considered responsible for the product non-conformance.									
	Note: When necessary, part may be returned to supplier for further investigation. The date to have the investigation concluded shall be agreed between Supplier and EMBRAER technical teams.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
M.015.2018	For rework, repair, retrofit, troubleshooting or stock screening performed at EMBRAER's facilities, Supplier shall comply with the document Guidelines for Suppliers Working at EMBRAER's Facilities available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4			
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
M.016.2018	The responsibilities of disposition authority shall be documented by a Material Review Board (MRB) delegation and approved by EMBRAER.									
	For Suppliers without an MRB delegation by EMBRAER, non-conformities shall be submitted to EMBRAER for disposition, review, and approval.									
	For details on the process, access the Guidelines for Material Review Board Plan available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements									
	Note: Not applicable for FAR33 Parts and TSO Parts.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4			
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9	X	TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS			
M.017.2018	(REVOKED IN REVISION M)									

MANDATORY									
M.018.2018	<p>The reference number of the documents issued for non-conformities by Supplier at EMBRAER web system or by concession report form shall be informed in the certificate of conformance or when applicable, in the Assembly Inspection Summary (AIS) (see the document Guidelines for Assembly Inspection Summary) available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements</p>								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9	X	TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
M.019.2018	<p>Supplier shall have EMBRAER Quality Department authorization for shipping a non-conforming part. Supplier shall issue a non-conformity document through EMBRAER web system.</p> <p>If Supplier does not have access to the system, a concession report document shall be submitted and sent to Supplier Quality Department according to concession report form, available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements</p>								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X	
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
M.020.2018	<p>All non-conformities in test articles and setups during the inspection for issuance of statement of conformity shall be submitted for EMBRAER review and approval.</p> <p>Supplier shall use form pendency analysis report available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements</p>								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X

	MANDATORY									
M.021.2018	(REVOKED IN REVISION L)									
M.022.2018	When required by EMBRAER, Supplier shall submit the corrective action plan within the agreed due date.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS	X				
M.023.2018	Supplier shall maintain a Part 145 approval based on RBAC 145 or equivalent requirements (e.g. FAA Part 145, EASA Part-145, etc.).									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1		TYPE 2		TYPE 3		TYPE 4			
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS					
M.024.2023	Supplier shall submit, prior to implementation, all changes to the product that affect aircraft approved type design data, for EMBRAER evaluation and approval.									
	Must be submitted to Embraer:									
	• Changes related to the Configuration which affects Form, Function, Dimensions, Materials and Production Process, associated with compliance with the certification basis.									
	• Changes related to Dimension, Material, Production Process which impact Structural Strength.									
	NOTE: If the supplier does not have all the information to conclude the analysis, Embraer must be consulted.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4			
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		DESIGN AND BUILD	X	COTS AND STANDARD PARTS					

iii. OPERATIONAL REQUIREMENTS

EMBRAER has defined specific requirements to be complied by Suppliers, the operational requirements (OPR), considering the type of the product to be supplied.

The operational requirements are identified as **OPR.XXX.YYYY**, where:

- OPR - Identifies an operational requirement;
- XXX - Identifies the number of the requirement;
- YYYY - Year that the requirement has been incorporated to the document.

	OPERATIONAL									
OPR.001.2018	Supplier shall assist any audit, product inspection or product failure investigation. Embraer will communicate Supplier with a written notice at least 10 working days prior to an audit.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
OPR.002.2018	For defense programs, Supplier shall comply with NATO AQAP 2110 - Quality Assurance Requirements for Design, Development and Production.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
OPR.003.2018	Quality documentation exchanged with EMBRAER shall be written in English.									
	Note: Supplier may also provide quality documents written in Portuguese.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	

OPERATIONAL									
OPR.004.2018	When required by Embraer, for test articles and setups conformity, Supplier shall propose candidates from its quality organization, to issue the statement of conformity (FAA 8130- 9 form or equivalent). Supplier shall comply with the document “ <i>Guidelines for Delegation of Suppliers for Issuance of Statement of Conformity on Behalf of EMBRAER</i> ” available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
OPR.005.2018	When the local Airworthiness Authority is delegated by ANAC to perform conformity inspection, Supplier shall be responsible to provide Airworthiness Authority representatives (Designated Manufacturing Inspection Representative - DMIR, Designated Airworthiness Representative - DAR, etc.) to issue the appropriate release certificate.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
OPR.006.2018	When required by EMBRAER, for Suppliers that are under EASA Production Organization Approval (POA) regulation, a Design Organization (DO) or Product Organization (PO) agreement shall be signed with EMBRAER, in order to provide support for parts and test setup conformity inspection. This DO/PO agreement will be valid only for non-approved design data during the certification.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
OPR.007.2018	When required by EMBRAER, Supplier shall fill out the Supplier self-assessment checklist to assess the circuit card assembly process, even if this process is performed by a Subtier. The updated electronic manufacturing process checklist is available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1		TYPE 2	X	TYPE 3		TYPE 4		
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				

OPERATIONAL									
OPR.008.2018	During product development, Supplier shall submit to EMBRAER a risk analysis of past issues of the same type of product. These issues shall be proposed by Supplier, by EMBRAER and shall be regularly updated.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				
OPR.009.2018	When required by EMBRAER, Supplier shall provide the Subtier quality performance metrics and corrective actions. This information shall be submitted or presented to Supplier Quality Department.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X	
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
OPR.010.2018	Supplier shall have its special processes accredited by Nadcap, including outsourced special processes as follows:								
	<ul style="list-style-type: none"> Aerospace Structural Assembly; Chemical Processing; Coating; Electronics; Heat Treating; Non-Destructive Testing; Composites; Materials Testing Laboratories; Surface Enhancement; Welding. 								
	Note: Information concerning Nadcap accreditations can be consulted at www.pri-network.org and www.eauditnet.com .								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				

OPERATIONAL									
OPR.011.2018	Supplier shall have special processes (in house and outsourced) complying with Guidelines for Special Process Appraisal available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4		
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10 X
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				X
OPR.012.2018	Supplier shall prepare, implement, and maintain a control plan applicable to Electrostatic Discharge (ESD) susceptible items that are handled, stored, transported, and delivered to EMBRAER. Note: See ANSI/ESD S 20.20 - Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices) as reference.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1		TYPE 2	X	TYPE 3		TYPE 4	X	
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10 X
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				
OPR.013.2018	Supplier shall have documented criteria to perform manufacturing, handling and rework of electronic boards. Also, Supplier shall comply with: a) IPC/JEDEC J-STD-033 - Standard for Handling, Packing, Shipping and Use of Moisture Sensitive Surface Mount Devices; b) IPC J-STD-001 Requirements for Soldered Electrical and Electronic Assemblies; c) IPC-A-610 Acceptability of Electronic Assemblies; d) IPC-7711/7721 Rework, Modification and Repair of Electronic.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1		TYPE 2	X	TYPE 3		TYPE 4		
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10 X
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD	X	COTS AND STANDARD PARTS				
OPR.014.2018	EMBRAER will not accept the return to EMBRAER's assembly line or aftermarket stock, of a specific unit with a second occurrence of no fault found disposition, due to same non-conformity.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1		TYPE 2	X	TYPE 3		TYPE 4		
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT		DESIGN AND BUILD	X	COTS AND STANDARD PARTS				

	OPERATIONAL									
OPR.015.2018	When receiving a non-conformity disposition request, Supplier shall give the disposition within the required time frame, in order to not have interruption at EMBRAER production line.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4			
	TYPE 6	X	TYPE 7	X	TYPE 8		TYPE 9		TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT			DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
OPR.016.2018	EMBRAER will not accept the return to EMBRAER’s assembly line or aftermarket stock, of a specific unit with three removals of confirmed failure, due to the Supplier’s responsibility.									
	Note: In case of a signed agreement to support field removals, such agreement supersedes this clause. However, the above mentioned clause is kept valid for units shipped to EMBRAER’s assembly line.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1		TYPE 2	X	TYPE 3		TYPE 4			
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10	
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT			DESIGN AND BUILD		X	COTS AND STANDARD PARTS			
OPR.017.2018	When required by EMBRAER, Supplier shall provide appropriate quality data (charts, indicators, acceptance rate, first pass yield, shop findings, etc.), which demonstrates Supplier’s internal quality performance.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	
OPR.018.2018	When Supplier’s quality performance is out of the required target or agreed limits, EMBRAER reserves the right to request an action plan or take other actions such as: EMBRAER’s or third party source inspection, process audit, etc., to be performed at Supplier’s or Subtiers’ facilities in order to support the action plan accomplishment.									
	APPLICABILITY TO TYPE OF PRODUCT:									
	TYPE 1	X	TYPE 2	X	TYPE 3	X	TYPE 4	X		
	TYPE 6	X	TYPE 7	X	TYPE 8	X	TYPE 9	X	TYPE 10	X
	APPLICABILITY TO TYPE OF PROJECT:									
	BUILD TO PRINT		X	DESIGN AND BUILD		X	COTS AND STANDARD PARTS		X	

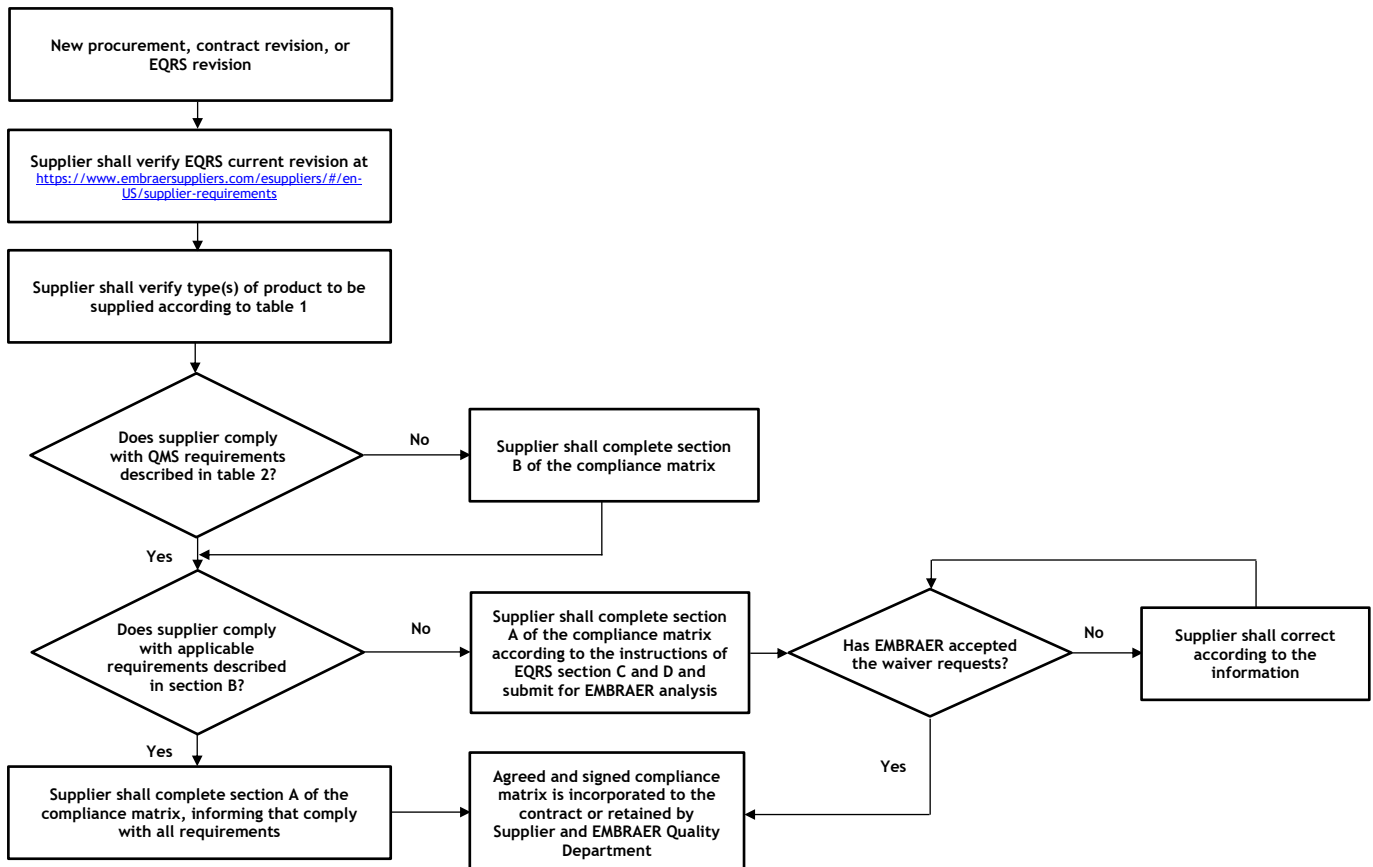
OPERATIONAL									
OPR.019.2018	When required by EMBRAER, Supplier shall fill out the Repair Station self-assessment checklist to assess the maintenance process, even if it is partially or fully performed by a Subtier. The updated Repair Station self-assessment checklist is available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1		TYPE 2		TYPE 3		TYPE 4		
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10 X
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD		X		COTS AND STANDARD PARTS		
OPR.020.2018	When required by EMBRAER, Repair Station shall provide the Acceptance Test Procedure (ATP) and Component Maintenance Manual (CMM) for approval. In this context, ATP and CMM comprise the set of verifications performed: a) At incoming inspection to confirm customer complaint; b) Prior to the product return to service.								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1		TYPE 2		TYPE 3		TYPE 4		
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10 X
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD		X		COTS AND STANDARD PARTS		
OPR.021.2018	(REVOKED IN REVISION M)								
OPR.022.2023	Subcontractors shall comply with the “Manual de Fornecedores - Subcontrato Nacional” available at https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements								
	APPLICABILITY TO TYPE OF PRODUCT:								
	TYPE 1	X	TYPE 2		TYPE 3		TYPE 4		
	TYPE 6		TYPE 7		TYPE 8		TYPE 9		TYPE 10
	APPLICABILITY TO TYPE OF PROJECT:								
	BUILD TO PRINT	X	DESIGN AND BUILD				COTS AND STANDARD PARTS		

C. COMPLIANCE MATRIX FULFILMENT

The compliance matrix is composed of two sections: section A related to mandatory and operational requirements and section B related to applicable QMS according to table 2.

The Figure 1 summarizes the process to fill in a compliance matrix. Details on how to fill in a compliance matrix may be seen at “Compliance Matrix Guideline” available at <https://www.embraersuppliers.com/esuppliers/#/en-US/supplier-requirements>.

FIGURE 1 - PROCESS TO COMPLETE A COMPLIANCE MATRIX



i. INSTRUCTIONS TO COMPLETE SECTION A

Supplier shall complete the compliance matrix section A with the number of the requirement and the reasons for waiving the requirement shall be described. See waiver conditions in section D.

ii. INSTRUCTIONS TO COMPLETE SECTION B

When Supplier’s quality management system is certified by an accredited registration body, Supplier is exempted from completing compliance matrix section B.

If Supplier is not certified, it is necessary to report all clauses of the applicable Quality Management System (QMS) requirements, describing Supplier’s procedures and instructions to comply with each requirement.

D. WAIVER CONDITIONS

- a) Supplier shall negotiate a waiver when:
- Complying with the requirement differently from established (alternative means of compliance);
 - The requirement is not applicable to the type of product to be supplied. In this case, a justification shall be informed.

When the requirement is met or exceeded, even with an alternative means of compliance, or the requirement is not applicable, a due date is not necessary.

- Not complying with the requirement. In this case, a justification shall be informed with a due date for the waiver, which will be analysed by EMBRAER.

- b) The waiver may be:
- Extended if the waiver has been contributing to improve quality, productivity, performance or another established requirement;
 - Terminated if quality, productivity, performance or other established requirement has been inadequate to justify extension or if it is no longer necessary.

In both cases, a new compliance matrix shall be submitted.

- c) A new waiver request shall be negotiated if in an EQRS revision:
- A waiver that has been already negotiated is transferred to another one;
 - Supplier does not comply with a revised or a new requirement.
- d) Every new compliance matrix shall replace the existing one and shall be incorporated to the contract.
- e) Every new compliance matrix shall incorporate:
- The waivers agreed by EMBRAER, which text has not changed;
 - New waiver requests.
- f) In case of changing contract scope, the compliance matrix shall be revised.
EMBRAER signature in the compliance matrix confirms that EMBRAER is in agreement with the requested deviations. EMBRAER reserves the right to request a plan if Supplier does not comply with an established requirement.

E. TERMS, DEFINITIONS AND ACRONYMS

For the purposes of this document, the terms and definitions given in ISO 9000 apply.

ANAC (Agência Nacional de Aviação Civil): Brazilian Airworthiness Authority;

AIS (Assembly Inspection Summary): AIS is a set of data associated with each end assy serial number that shall be available at the time of end assy delivery from supplier to EMBRAER. It shall be the way used to record and evidence that end assy as build configuration reflects the end assy as designed configuration. The exception occurred during the process shall be previously approved;

ATP (Acceptance Test Procedure): is a test conducted to determine if the requirements of a specification or contract are met;

Build to print - When the part is manufactured under EMBRAER's drawing;

CMM: Component Maintenance Manual;

Concession report: Written authorization to use or release a product, which does not conform to the specified requirements;

COTS (Commercial Off-The-Shelf): A commercial item available and sold in substantial quantities intended by design to be procured and utilized without modification as it is sold in the marketplace.

DAR: Designated Airworthiness Representative;

Design and build - When the part is manufactured under supplier's drawing;

Disposition: Immediate action to be taken in order to solve any non-conformity;

DMIR: Designated Manufacturing Inspection Representative;

DO: Design Organization;

Electrostatic discharge (ESD): A transfer of electrostatic charge between objects at different potentials caused by direct contact or induced by an electrostatic field;

End Item: Material, part, facilities, or service (or their combination) that is deliverable or supplied under a contract;

EPPAP: EMBRAER Production Part Approval Process;

FAA: Federal Aviation Administration;

FAI (First Article Inspection): The purpose of the First Article Inspection is to provide objective evidence that all engineering design and specification requirements are properly understood, accounted for, verified, and documented;

GSE: Ground Support Equipment;

ITAR (International Traffic in Arms Regulations): is a United States regulatory regime to restrict and control the export of defense and military related technologies to safeguard U.S. national security and further U.S. foreign policy objectives;

Material Review Board (MRB): A group of specialists from the Quality and Engineering Departments formally constituted, under the coordination of the Quality, whose function is to review, evaluate, determine the disposition of nonconforming material, and request corrective actions;

MEP: "Material EMBRAER Padronizado" (EMBRAER Standard material);

MP: "Material Padronizado" (Standard Material);

Nadcap: International program for special processes accreditation;

NE: EMBRAER Engineering Standard;

NoE: Notification of Escape;

PO: Product Organization;

POA: Product Organization Approval;

Product: General term used to designate raw materials, assemblies, parts, components, hardware, embedded and/ or loadable software, equipment, services, etc.;

QMS: Quality Management System;

Repair: the nonconforming article, material or service can be corrected to a usable condition, although its condition will not be identical with drawing/specification requirements. [9009];

Request For Alternative (RFA): Document which shall be used to request and justify deviation from a requirement of an applicable EMBRAER specification;

Rework: Processing of a nonconforming article using an approved and documented instruction or process applied to a nonconformance that will completely eliminate the nonconformance which results in the article completely conforming to the original contract, specifications, drawing or other applicable design data. [SCMH 3.3]

SDR (Supplier Data Record): A form to be completed with Supplier information;

Source Inspection: Examination of customer purchased product performed at the supplier's facility to verify product integrity and conformity to specified requirements prior to delivery. Source inspection may be performed on a finished product immediately before shipment; it may also be carried out in process, to ensure the conformity of sub-assemblies that may be obscured – and thus impossible to inspect subsequently – as the assembly is built up;

Special Process: A process which the result cannot be fully verified by subsequent inspection or testing of the product and disabilities in processing, for example, may become apparent only after using the product. In a special process, the product quality is ensured by controlling process key parameters;

Specimen: a component, sub-assembly or assembly used to demonstrate compliance with airworthiness requirements. In this context, ground tests as fatigue test, static, blowout, hydraulic system integration, etc. are considered specimen;

Standard Parts: A part manufactured in complete compliance with an established industry specification that contains design, manufacturing, and uniform identification requirements. The specification must include all information necessary to produce and conform the part and must be published so any person/organization may manufacture the part. Examples include, but are not limited to, National Aerospace Standard (NAS), Aerospace Standard (AS), Military Standard (MS).

Statement of conformity: Statement issued by EMBRAER's Quality Organization or by supplier's Quality Organization, when delegated for this, with the purpose to attest the test specimen is in conformity with project data before the execution of the Authority conformity inspection and/ or conduction of certification tests;

Subtier: supplier not working under a direct purchase order from the prime contractor but performing work on related products at a lower level in the supply chain (via purchase order cascade). [IAQG-history]

Supplier: Supplier is any company that sells products or services to EMBRAER and accounts for the quality of these products or services;

- **Distributor:** A supplier that procures new products and / or assembles higher level components/ assemblies from new surplus materials/parts/kits and resells them to EMBRAER;
- **Manufacturer:** A supplier who sells to EMBRAER products which it designs and/ or manufactures and whose configuration it manages;

- MRO: Maintenance, Repair and Organizations.
- Repair Station: Aviation Maintenance Organizations.
- Subcontractor: A Brazilian supplier which has a contract with EMBRAER to provide some portion of the work or services using raw material provided by EMBRAER and under EMBRAER design authority. (BTP)

Test article: A component, sub-assembly, or assembly that has the primary function of demonstrating conformity to Airworthiness requirements. In this context, the Ground Test such as static/fatigue test, bird impact, tire burst, hydraulic system integration rig, etc. is considered Test Article;

VAD (Value Added Distributors): a company that adds features or services to an existing product, then resells it (usually to end-users) as an integrated product or complete "turn-key" solution.

F. NORMATIVE REFERENCE

- **AS9100** - Quality Management Systems - Aerospace - Requirements and Quality Systems - Model for quality assurance in design, development, production, installation and servicing;
- **AS9102** - Aerospace First Article Inspection Requirement;
- **ANSI/ ESD S 20.20** - ESD Association Standard for the Development of an Electrostatic Discharge Control;
- **EN 9100 series** - Aerospace series - Quality management systems - Requirements and Quality systems - Model for quality assurance in design, development, production, installation and servicing;
- **JIS Q 9100 series** - Quality Management Systems - Aerospace - Requirements - SJAC;
- **IPC-7711/7721-** Rework, Modification and Repair of Electronic.
- **IPC-A-610** - Acceptability of Electronic Assemblies;
- **IPC/JEDEC J-STD-033** - Standard for Handling, Packing, Shipping and Use of Moisture Sensitive Surface Mount Devices;
- **IPC J-STD-001 - Requirements for Soldered Electrical and Electronic Assemblies;**
- **ISO 9001** - Quality management systems – Requirements;
- **NATO AQAP 2110 (North Atlantic Treaty Organization Allied Quality Assurance Publications)** - NATO quality assurance requirements for design, development and production;
- **RBAC 21** - *Certificação de produto aeronáutico* (equivalent to FAR 21);
- **RBAC 145** - *Organização de Manutenção de Produto Aeronáutico;*
- **SAE AS9110** - Quality Management System - Aerospace - Requirements for Maintenance Organizations
- **SAE AS9120** - Quality Management Systems - Aerospace Requirements for Stockist Distributors;

Note: Any subsequent amendment or revision of the above-mentioned normative references shall prevail. Under these circumstances, a mutual agreement between EMBRAER and supplier(s) should be made regarding the transition period.

G. COMPLEMENTARY DOCUMENTS, FORMS AND TRAINING

Available at:

<https://www.embraersuppliers.com/esuppliers/#!/en-US/supplier-requirements>.

i) DOCUMENTS AND GUIDELINES

- c. EPPAP Manual;
- d. Guidelines for Assembly Inspection Summary;
- e. Guidelines for Delegation of Suppliers for Issuance of Statement of Conformity on Behalf of EMBRAER;
- f. Guidelines for Material Review Board (MRB) Plan;
- g. Guidelines for Special Process Appraisal;
- h. Guidelines for Suppliers working at EMBRAER's Facilities;
- i. *Manual de fornecedores - Subcontrato nacional* (Available only in Portuguese);
- j. Compliance Matrix Guideline;
- k. Guidelines for RFA Submission.

ii) FORMS

- a. EQRS Compliance matrix - Section A and Section B;
- b. Concession report;
- c. Electronic manufacturing process checklist;
- d. Notification of Escape;
- e. Pendency analysis report;
- f. Repair Station assessment checklist;
- g. Supplier data record.

iii) TRAINING

- a. TRAINING - Delegation of Supplier for Issuance of Statement of Conformity on behalf of EMBRAER.