



## **Boeing Distribution, Inc**

3350 Davie Road, Suite 206  
Davie, FL 33314

# **BOEING DISTRIBUTION, INC QUALITY PROGRAM MANUAL**

October 20, 2020, Rev 1  
For Reference Only



# INTRODUCTION

These Procedures are designed to ensure Customer satisfaction through Quality Management of new parts and hose assemblies sold by Boeing Distribution, Inc.

This manual describes the overall Quality Control Program and is not intended to include every detail requirement or standard used to ensure conformance. Reference is made throughout the manual to other documents, specifications and procedures, which become an appropriate supplement to the total Quality Control Program. This manual is intended only to briefly explain the systems used for assuring the full conformance of the EATON AEROQUIP products distributed and/or fabricated by Boeing Distribution, Inc. to meet specific customer or FAA requirements.

To facilitate a solid reputation for producing quality parts, achieving timely delivery, and providing competitive pricing, our organization has developed a Quality Management System to better satisfy the needs of its customers and to continually improve the overall management and success of the company. In doing so, this Quality Policy has been formulated, implemented, and is committed to:

- Consistently meeting customer requirements
- Always providing our customers with the best products available
- Continually improving the Quality Management System and the service we provide to our customers
- Adhering to all customer requirements, as well as those defined in the international standard AS9100

In an effort to make our policy memorable to all employees and customers, we have decided to adopt a Quality Slogan that we feel incorporates all the statements listed above. Our Quality Slogan is:

**Your Planes Veins – Quality before Quantity!**

**APPROVED BY: Michael Dalton**

A handwritten signature in black ink, appearing to read 'Michael Dalton', written over a horizontal line.

**Boeing Distribution, Inc.**

Adam Robb

A handwritten signature in black ink, appearing to read 'Adam Robb', written over a horizontal line.

**EATON AEROQUIP**



# SCOPE AND APPROVAL

This manual describes, the Quality Control program, for our Employees and Customers. It is intended to define the requirements for extension of FAA Production Approvals, ie: PMA or TSOA to delegated Eaton Aeroquip facilities and distributor hose assembly shops. The quality program is intended to insure conformance of all hose assemblies fabricated, tested and inspected by Boeing Distribution, Inc to AS9100, EATON AEROQUIP (QAP-7.2J21) and FAA-TSO (14 CFR Part 21) airworthiness requirements and is suitable for an FAA CM audit per Order 8120.23. Unless expressly stated otherwise, the standards outlined in FAA order 8120.23 shall be considered the requirements for a quality system compliant to the requirements of 14 CFR Part 21.

Eaton Aeroquip LLC – Jackson Michigan remains the Production Approval Holder (PAH) and is ultimately responsible for the quality and conformance of all parts marked under the FAA approvals.

The quality system shall include a description of assigned responsibilities and authority by the Quality organization, with a chart indicating functional relationship of personnel with the Quality responsibilities to management and other functional activities and / or personnel.

All facilities shall be approved and maintain a quality system meeting the requirements 14 CFR Part 21 and AS9100 standard and be registered by a third party.

Any changes to the Quality manual must be approved in writing by Eaton Aeroquip Quality prior to implementation.

Boeing Distribution, Inc. will provide an English copy of the current revision of the Quality Manual to Eaton upon request.

The delegation of FAA-PMA and TSOA marking by Eaton Aeroquip does not include the authority to issue EASA Form 1 or FAA Form 8130-3, or to repair for return to service Eaton Aeroquip products. Contact Eaton Aeroquip or the local civil air authority for further information on Designated Manufacturing Inspection Representatives (DMIR).



# MANAGEMENT RESPONSIBILITY

Boeing Distribution, Inc. **Quality Policy** is to facilitate a solid reputation for producing quality parts, achieving timely delivery, and providing competitive pricing. Our organization has developed a Quality Management System to better satisfy the needs of its customers and to continually improve the overall management and success of the company. In doing so, this Quality Policy has been formulated, implemented, and is committed to:

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Boeing Distribution, Inc. shall assume and fulfill its responsibility for ensuring each product or part, Conforms to FAA approved design and is in condition for safe operation

Boeing Distribution, Inc. management will review the quality system yearly to ensure to continue effectiveness in satisfying the stated quality policy. Records of such review shall be maintained by the Manager of the Hose Shop.

For Reference Only

Review\_\_\_\_\_

Review\_\_\_\_\_



# Hose Shop Organization

The Operations Manager or Designee is responsible for the shop performance and the Chief Inspector will be responsible for ensuring commitment to quality. This includes performing preventive and/or corrective actions (Ref Form QF-05-01) to prevent non-conforming product from being processed.

All employees in the shop are authorized and required to document and implement the corrective actions as needed to ensure compliance to the quality goals.

The Boeing Distribution, Inc. hose shop organization chart defines the roles & responsibilities of each person / title at the hose shop. (Ref: Appendix D)

## **OPS MANAGER**

Oversee Production Schedule

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## **ASSEMBLER D**

Build Hoses  
Order Input  
Contract Review  
Final Inspection  
Receiving/Receiving Inspection  
Shelf life Product Control  
Tool and Equipment Calibration

## **ASSEMBLER C**

Build Hoses  
Order Input  
Contract Review  
Final Inspection  
Receiving/Receiving Inspection  
Shelf life Product Control  
Tool and Equipment Calibration  
Scrap Inventory

## **Assembler B & A**

Build Hoses  
In-Process Inspection  
Clean Hose Assemblies  
Test Hose Assemblies

## **PRS Coordinator**

Oversee Production Schedule  
Build Hoses  
Order Input  
Contract Review  
Drawing/Process Spec. revision review  
Assist with PRS Manager Task with QMS Management  
Purchasing Coordination  
Inventory Management  
Internal Audit Management

Eaton Aeroquip will be notified in writing of any organization changes within 24 hours.



## **Fabrication**

All assemblies shall be fabricated, tested and inspected to the latest engineering drawings and ACES. Any deviation shall be approved by Eaton Aeroquip Engineering and Quality.

Boeing Distribution, Inc. facilities shall verify the latest revision of all drawings, ACES and associated documents by the use of the ENOVIA system prior to beginning any process.

The use of the ENOVIA system shall be the only approved method of verifying the latest revisions of all documents. Eaton Aeroquip will not guarantee the accuracy of any other method (i.e. email notifications, subscription services, etc)

# For Reference Only



## Product Stocking & Receiving

Components received from Eaton Aeroquip shall be verified and inspected for shipping damage. All damage or otherwise unusable material shall be returned to Eaton Aeroquip.

Accepted materials shall be stocked in a manner that will protect against mechanical damage and corrosion.

As practical, components shall be issued from stock on a "first in, first out" basis.

Age sensitive items shall be protected from adverse environmental conditions that could result in premature aging.

Shipments coming into the hose shop are counted and visually inspected to verify the correct count and part number and the packing list is stamped "REC BY \_\_\_\_\_" signed or stamped with the issued quality control stamp, when it is determined the parts and quantity are correct. The fittings are stocked on the fitting shelf and hose is stocked on hose shelf, rotating the oldest hose to the front. Any discrepancies are marked on the packing slip.

Receiving inspection- All components received are subjected to inspection to assure for correctness, damage free and properly identified. No dimensional inspections or testing is required for items purchased from Eaton Aeroquip.

All nonconforming parts found during processing are to be isolated, logged on QF-04-01 NON-Conforming Product log and moved to the reject/scrap area. These items will be reported to Eaton Aeroquip and a copy of QF-04-01 NON-Conforming Product log provided during the periodic audits.

Out of date items are processed as nonconforming material

All special packing, packaging and marking processes are on the packing list or posted in the shipping area to ensure conformance to customer's requirements.



# Hose Qualification and Testing

Pre-production evaluation samples shall be submitted to the Eaton Aeroquip- Jackson, MI for each hose and size combination.

A Distributor Hose Sample Test Request/Report form (FORM-JXN-QA-F-0047) shall be initiated and submitted with each evaluation sample.

For hose styles that have multiple fitting designs, one sample may be submitted with one fitting design on one end and a second fitting design on the opposite end. The test request shall list the applicable part numbers for both.

Completed reports shall be retained on file for a minimum of four years by Eaton Aeroquip and the Boeing Distribution, Inc. facility.

Boeing Distribution, Inc. facilities are not authorized to assemble any Eaton Aeroquip branded hose assemblies without a certificate of approval, regardless of PMA or TSO status.

Once Eaton Aeroquip production approval status has been granted, periodic control samples shall be evaluated.

Samples shall consist of one hose of one size per hose family which will be reviewed during the periodic audits.

- 1) At least one silicone hose and one fire-sleeved hose shall be reviewed during the audit, where applicable.
- 2) Periodic evaluation samples are not required for sleeved hoses.

Boeing Distribution, Inc. agrees to allow Eaton Aeroquip and the civil air authorities to enter and audit facilities to ensure compliance with these requirements.

A copy of all unsatisfactory audit findings are emailed to Eaton Aeroquip within 24 hours.





## Purchasing

Boeing Distribution, Inc. shall ensure that only original Eaton Aeroquip material, purchased from Eaton Aeroquip or a company with Eaton Aeroquip production approval extension as listed in QAP-7.2J23 are used for the manufacture of Eaton Aeroquip assemblies.

Any deviation to this requirement must be authorized in writing by Eaton Aeroquip.

Purchase orders specifying items ordered are replacement parts for use on type certificate products may be accepted if:

- 1) The item is covered by an Eaton Aeroquip FAA TSO approval
- 2) The item is covered by an Eaton Aeroquip FAA-PMA
- 3) The part falls under the "Standard Parts" category per 14 CFR Part 21.9
  - A) Facilities must be certified and listed on the governing QPL to sell standard part numbers.

When none of the above apply, the customer shall be advised, and the specific application information requested.

# For Reference Only



# Calibration

Calibration of gages shall be in accordance with SAE AS9100 and 14 CFR Part 21.137(f)

Boeing Distribution, Inc. provides suitable measuring and testing devices used to assure product conformance to technical requirements, accuracy and condition. Re-inspection is in accordance with section 6-5 as a minimum.

Each piece of test and measuring equipment will be marked or tagged with the manufactures serial number or assigned number for traceability to the calibration records showing status and history (QF-12-01).

All gage items will be marked with:

- Date of inspection,
- Due date of next inspection
- Person and/or company performing the inspection.

Calibration will meet MIL-STD-120 or equivalent.

Standards used for calibration are certified traceable to the National Institute of Standards Technology (NIST). Commercial sources providing calibration services are maybe audited for verification of their capability.

Inspection Interval:

1	PROTRACTOR	1 YEAR
2	DIGITAL CALIPERS	6 MONTHS
3	MICROMETER	6 MONTHS
4	PRESSURE GAUGE	6 MONTHS
5	LENGTH MEASURING SCALE	1 YEAR
6	BALL GAUGES	1 YEAR
7	GAP GAUGE	1 YEAR
8	3* CHECK FIXTURE	2 YEARS

A calibration Inspection Interval board will be used showing measuring equipment and due date.

All personnel using measuring equipment will be trained and have the experience to demonstrate accuracy capability within the product dimensional limits. Such training will be recorded on the Boeing Distribution, Inc. training log. (Ref: QF-08-01)

Boeing Distribution, Inc. will make available the necessary tools and measuring equipment when required by Customer's or the FAA for audit evaluation purposes within the facility.

Boeing Distribution, Inc. shall evaluate, document and notify Eaton Aeroquip when inspection, measuring and test equipment is found to be out of calibration by a significant amount exceeding the required accuracy by more than 25%.

Boeing Distribution, Inc. will ensure environmental conditions are suitable for calibration, inspection, measuring, handling, storage and preservation of equipment and inventory.



# Nonconforming Product

Delegated facilities may disposition discrepant assemblies for scrap, rework according to the applicable ACES and/or drawings or return to Eaton Aeroquip for further disposition.

- 1) Material Review Board (MRB) authority for any disposition other than scrap or allowable rework shall lie with Eaton Aeroquip
- 2) Discrepant material to be reworked, returned, or scrapped must be tagged with the discrepancy noted.
- 3) The discrepancy tag including the disposition and any subsequent Eaton Aeroquip approvals, shall be maintained on file with the related inspection report on which the condition was reported.
- 4) All nonconforming parts are recorded on QF-04-01 NON-Conforming Product log if the parts are to be scrapped. All parts to be scrapped are mutilated (fittings; crushed in a vice and/or cut and hose cut into small pieces) to prevent unintended use or installation. A copy of QF-04-01 NON-Conforming Product log will be provided to Eaton Aeroquip during the periodic audits. All nonconforming parts from Eaton Aeroquip are to be identified, segregated and documented on QF-04-01 NON-Conforming Product log and returned for evaluation by Eaton Aeroquip. A copy of QF-04-01 NON-Conforming Product log will be provided to Eaton Aeroquip during the periodic audits
- 5) Nonconforming material resulting from the shop production will be dispositioned for immediate disposal after it is assigned a numbered red tag and recoded on QF-04-01.
- 6) Corrective action form QF-05-01 may be completed for repeated nonconforming parts resulting from the production process.



## Failures in Service

Delegated facilities shall immediately notify Eaton Aeroquip of all user or FAA reported product failures related to materials fabricated by them. Eaton Aeroquip is required to notify the local FAA Aircraft Certification Office (Chicago, IL) of all reported failures within 24 hours. The delegated facility, in conjunction with Eaton Aeroquip, shall investigate non- airworthy conditions or unsafe features and develop corrective actions. Field failures shall be returned to Eaton Aeroquip for analysis and report in accordance with ACES-0008 and QAP-8.4J5.

The Manager or designee will notify Boeing Distribution, Inc. management of any notices received from Eaton Aeroquip concerning nonconforming components or services, which may affect performance or safety. Any necessary action on Boeing Distribution, Inc.'s part will be coordinated with Eaton Aeroquip.

# For Reference Only



## Product Identification

Product requiring TSO or PMA marking shall be marked per ACES-0068 unless the product is being produced for an OEM (TC holder or PAH).

- 1) Product being produced for an OEM or not requiring TSO or PMA marking (Nat'l Government orders, non-airborne product) shall be marked per customer instructions or per ACES-0068 and the applicable Eaton Aeroquip drawings and specifications.
- 2) Product marking shall include the name or Eaton Aeroquip assigned code to identify the assembly facility.
- 3) For TSO products, verify TSO approval and correct "AR" or "AT" numbers in ACES-1300 Mark per ACES-0068M5.
- 4) For PMA products, verify PMA approval in ACES-7028 Mark per ACES-0068M33.

Identification of the components or product will be maintained by stocking in the appropriate boxes on the shelves and any overflow that will not fit on the shelf will be stocked in the packaging supplied by Boeing Distribution, Inc. / Eaton Aeroquip to maintain traceability.

Lot traceability will be maintained by recording the lot number / job number, cure date and/or the original purchase order number on the work order for the purpose of identifying the part number, lot or batch number, serial number and nondestructive test numbers.

All hose assemblies are traceable back to the work orders by putting the work order number on the identification band. As a minimum all bands will contain Eaton Aeroquip name or distributor assigned number and the Eaton Aeroquip part number and or customer part number when applicable, the date of fabrication-month/day/year, maximum operating pressure for TSO-C75, size of hose and the appropriate TSO or PMA designation. A true copy of the complete identification data is filed with the work orders.

Each hose assembly is traceable from the day of fabrication listed on the ID band back to records of test, inspection, fabrication and hose origin on the work order.



# Inspection

Fabricated assemblies shall be verified using work-order form 1000A and procedures approved by Eaton Aeroquip.

- 1) The inspection report shall be completed indicating the results of the above verification.
- 2) Inspection and test records shall be retained on file for a minimum of ten years.
- 3) Sampling plans shall be "accept on zero" with an AQL no greater than 1% for major characteristics, and no greater than 2.5% for minor characteristics.
  - A) Critical or Key Characteristics shall be 100% inspected.
  - B) Reference QAP-8.2J89 for more information on sample planning.

Inspections of assemblies occur during the process at each machine. Final assembly inspections are done at the Final inspection table and consist of:

- 1) ID band information
- 2) Correct hose and fittings
- 3) Twist angle if required
- 4) Crimp OD
- 5) Gap and swivel
- 6) Cleanliness inside and out
- 7) Length
- 8) Fire-Sleeve if required
- 9) Chafe guard if required
- 10) Caps
- 11) Ball gage size used
- 12) Inspected by
- 13) Quantity rejected
- 14) Quantity accepted

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## Shipment of Product

Shipment of assemblies, fabricated and identified per Eaton Aeroquip delegated FAA marking authority, shall be accompanied by the following declarations:

- 1) "This material was produced and is direct shipped under delegated terms of Eaton Aeroquip's FAA production approval number \_\_\_\_\_. (PQ 2084 CE for PMA parts, PT2084CE for TSO parts).
- 2) "Note: Satisfactory compliance with the conditions and test required for TSO approval indicate the part has met the minimum performance standards specified in the TSO. It is the responsibility of those desiring to install this part on an aircraft to determine that the installation of the hose assembly will not cause the part to be subjected to conditions in excess of those for which it has been approved. The part may only be installed in a manner acceptable to, or approved by the FAA administration.

# For Reference Only



## Customer Supplied Property

All customer hoses received by the shop will be received, counted, identified and maybe recorded on AHSQCF017. The hoses will be stored separately and packaged for return with the new hoses. Any discrepancies or damage will be promptly reported to the customer. No surplus or reworked hose fittings are to be used.

The BDI Hose Shop is not authorized under TSO or PMA approvals to repair hose assemblies.

# For Reference Only





## Customer Rejections or Complaints

Customer rejection or complaints are recorded on (AS9100 Appendix B) Management review and investigated to determine the validity and /or cause of the nonconformance. The customer is asked to send the hose assembly, bulk hose or fittings back to the shop for inspection and if the reason for the nonconformance can't be determined the part in question is sent to Eaton Aeroquip for evaluation. An acknowledgement response is made back to the customer and be coordinated with Eaton Aeroquip within 24 hours. Any nonconforming parts are replaced after the remaining stock has been inspected and verified to meet Eaton Aeroquip specifications. All rejected or nonconforming parts are logged on AHSQCF016 and returned to Eaton Aeroquip for credit or replacement. The customer will receive an acknowledgement response after the completion of the investigation.

All hose assembly failures of a flight safety critical nature will be reported to Eaton Aeroquip within 24 hours.

The investigation of each valid rejection or complaint shall result in appropriate corrective action per QF-05-01.

# For Reference Only



## Quality Audits

Boeing Distribution, Inc. Hose Shops will permit the right of entry and access to all shops for periodic audits to be conducted annually (plus or minus 1 quarter) by Eaton Aeroquip (PAH).

Failure to accommodate these audits or to respond to audit findings in a timely manner shall result in loss of extension approval and marking privileges.

Results of all audits are reviewed by all personnel in the area audited. Corrective actions of all deficiencies are responded to in a timely manner. Copies of all audit results are provided to Eaton Aeroquip and are available to the FAA as requested. Audit records are maintained by the manager of each shop.

Boeing Distribution, Inc. agrees to allow Eaton Aeroquip and the civil air authorities to enter and audit the facility to ensure compliance.

# For Reference Only



# Revision

Initial Release

# For Reference Only