



Supplier Quality Assurance Manual

**MURSIX Corporation
2401 N. Executive Park Drive
Yorktown, Indiana 47396
USA**

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Suppliers:

MURSIX Corporation is committed to supplying high quality, reliable and cost-effective parts in a timely manner to our customers. Therefore, it is the goal of MURSIX to form a partnership with its suppliers to ensure:

- Quality materials
- On-time delivery, and
- On-going price competitiveness throughout the supply chain.

This Supplier Quality Assurance Manual is intended to ensure that all suppliers adhere to the quality, purchasing and delivery requirements of MURSIX Corporation. It is compliant to the internal operating systems of MURSIX Corporation and the quality system requirements of IATF16949 for automotive components and ISO13485 for medical devices and is intended to serve as a link between MURSIX Corporation and its suppliers, both existing and potential.

Furthermore, the requirements of this manual describe a few of the minimum requirements that are placed on the supplier's quality management system. It is designed to supplement the fundamental technical and organizational conditions that govern all deliveries and services and not replace or amend the terms and conditions specifically noted on purchase orders, engineering drawings, prints and/or specifications, agreements, or contracts.

We appreciate your cooperation, and if you have any questions, they should be directed to your MURSIX Purchasing Representative.

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Quality Systems Requirements

MURSIX Corporation is a manufacturer of precision metal stampings, machined parts, and welded assemblies for general applications, the automotive industry, and the medical device industry. Our aim is to enhance customer satisfaction through effective application of a quality management system with a focus on continual improvement and assuring the conformance of supplied parts to our customer's requirements and/or regulatory requirements.

Suppliers of Automotive Related Products:

Our automotive customers require that our QMS be compliant with and certified to IATF16949, which uses ISO9001 as its base but expanded to encompass the necessities of automotive-related products. As a result, each of our suppliers of any 'direct' automotive related material and of parts subjected to special processing, as defined by the Automotive Industry Action Group (AIAG), **must also comply to the requirements of the current IATF16949 standard either, at a minimum, through registration by an accredited 3rd party certification organization to the current ISO9001 standard, or at least compliance to ISO9001 through second-party audits. The ultimate objective is achieving certification to IATF16949.** (see [Supplier Approval Requirements](#)).

Suppliers of Medical Related Products:

Our medical customers require that our QMS be compliant with and/or certified to ISO13485. As a result, each of our suppliers of any medical related products must complete a supplier assessment to determine the ability to provide products that meet the specified requirements (FM0504).

Suppliers of Non-Automotive and Non-Medical Products:

Our suppliers of non-automotive and non-medical related material should be registered by an accredited 3rd party certification organization to the current ISO9001 standard. Otherwise, a quality system must be fully implemented and verified by a site audit conducted by a MURSIX Corporation representative to assure all requirements are met.

Supplier Approval Requirements

Before becoming an automotive, medical or other supplier of components or material, the forms in the Supplier Approval Process packet must be completed and returned. These forms, which include a Supplier Profile (FM0503) and a Supplier Audit Checklist (FM0504), will be reviewed upon return to Mursix Corporation. Once accepted your company will be added to our Approved Supplier List. **No business can be placed with a new supplier prior to them being placed on our Approved Supplier List following verification of information provided and certification status as described.** The acceptance process involves the determination that your company meets the following criteria:

In addition to the above, suppliers of automotive related products must meet the following:

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1. A Quality Management System is in place. This can be shown by meeting the requirements specified in the current IATF16949 standard.
2. A PPAP can be submitted.
3. An existing AIAG CQI Special Process Assessment current to the present version of the manual can be provided. This applies to all suppliers who perform coating, heat treat (including stress relief), molding, plating (and/or hydrogen embrittlement relief), soldering and welding.
4. Test reports and certifications can be supplied (as required).

Copies of documents required must be supplied upon request.

Approved Supplier

Rapidly changing and increasing customer requirements require our suppliers to be highly flexible and to support processes that are error-proofed and have a fast problem solving mindset. Therefore, the suppliers' deliveries and services have to fully meet all stipulated and legal demands. A strict quality planning and effective production control is indispensable to achieve zero defects. The focus in this has to be on defect avoidance. Our suppliers must commit themselves to deliver our products without failures.

As Mursix is committed to supplying products that conform to the European Union (EU) Directive 2011/65/EU: Restriction of Hazardous Substances (RoHS) and is fully aware of the REACH Regulation that has been adopted throughout the EU to improve the protection of human health and the environment from the risks that can be posed by chemicals; therefore, our suppliers are required to adhere to these restrictions and regulations as well.

In addition, since 2010 when the United States enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act, which includes a section which regulates disclosure of the use of any "Conflict Minerals", Mursix is committed to having a socially responsible supply chain that share our values around human rights, ethics, and environmental responsibility and will not condone any abuse of human rights.

To maintain Approved Supplier status, a supplier is one who has met the requirements criteria and must also:

1. Be fully responsible for all aspects of controlling quality and delivery of product supplied. This includes but is not limited to the product:
 - Meeting the requirements of the purchase order, including the product quality expectations and requirements specified in this manual.

In addition, the supplied product must be:

 - Clearly labeled,
 - Packaged to prevent damage during transit, and
 - Delivered on time

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2. Ensure that all certifications and other required documentation is available,
3. Be responsible for ensuring that any sub-supplier understand and meet MURSIX requirements and expectations.

Escalation Process

Mursix Corporation evaluates supplier performance regularly by means of a rating system. The supplier scorecard details performance ratings in categories such as delivery and quality. In the event of an unsatisfactory rating, the supplier status may be downgraded from “acceptable” to “conditional” or the worst case of “unbiddable”. Once graded “unbiddable” a supplier will be blocked from quoting on new business. Suppliers failing to achieve and maintain the “acceptable” status may be required to develop a plan to correct performance. **Also, Mursix reserves the right to visit our suppliers to perform an audit of their systems. Incentive for this audit can be; to judge the suitability of the QMS; assessed risk based on the ability to comply with changes to customer requirements; process or product audits based on performance related issues; or changes in their supplier status.**

It is the responsibility of the supplier to monitor their rating periodically. If a supplier feels that their performance is not accurately reflected in the reported rating, they should confirm their rating by contacting the Mursix Purchasing Department.

The change of the status of a Supplier and escalation may include:

1. Performance measurements which fail to meet on-time delivery or acceptable quality levels as determined by Mursix Corporation,
2. Failure to submit corrective action reports,
3. Product exhibits a deterioration of product quality through an increase in PPM **or** increase of trouble incidents that results in line downtime, and
4. Failure to submit acceptable PPAPs.

Monthly performance evaluations will be comprised of:

- Delivery (% on-time and incidents of premium freight) - On-time delivery rating is based on the number of shipments received within the specified time-period window. This window is the expected deliver date plus 2 day; Incidents of premium freight is number of occurrences
- Quality (PPM) - PPM is the number of nonconforming units divided by the total number of units shipped (converted to million units), and
- Customer line disruptions, including field returns.

If data is provided by our customers, these categories will also be included in the evaluations:

- Special status customer notifications related to quality or delivery issues.
- Dealer returns, warranty claims, field actions and recalls.

Request for Quote (RFQ)

A request for quote will be solicited by MURSIX Corporation. This will be the only quote that will be considered for acceptance. The quote must:

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- Be returned/delivered within 5 working days, unless an exception is granted,
- Be complete to part print and specification requirements, and
- Offer competitive pricing.

The Supplier is responsible for:

- Understanding all the parameters of producing and supplying the product,
- Providing value added recommendations that affect production or shipping,
- Providing technical support, and
- Warranty costs directly related to the product, through the end-of life of the product.

See Mursix specified requirements for additional requirements.

Purchase Order (PO)

All purchase orders will include:

- P.O. Number,
- Product being purchased (including but not limited to specific part number with revision level, process type and specification, and requirements for testing or approval, et al.),
- Quantity being ordered (or service required if quantity not applicable),
- Price,
- Shipping requirements,
- Freight terms, and
- Other contractual agreements, as required.

The general terms and conditions that comprise the supplier's acceptance of the Purchase order can be found on the Mursix Corporation website (<http://mursix.com>).

Cancellation of a purchase order can be executed based upon the performance of the supplier, pricing issues, change in ownership, or bankruptcy. Should a supplier receive a cancellation notice, they shall have two (2) weeks to notify MURSIX Corporation (through the Purchasing Department) in writing of any inventory for which they feel is the responsibility of MURSIX Corporation. Failure to provide the written response will result in the supplier forfeiting any future claim associated with the PO defined by the cancellation notice.

Production Part Approval Process (PPAP) - for suppliers of automotive related products

MURSIX Corporation requires that all suppliers complete a **PPAP (level 3 unless otherwise instructed) and related IMDS on all new** part submissions using the Production Part Approval Process as described in the AIAG PPAP Manual. The PPAP Manual is used in conjunction with other associated reference manuals. Part approval submission instructions and a guide to completing all the steps required prior to submitting the PPAP are included in the manual.

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A supplier of bulk material will need to comply with the Bulk Material – Specific Requirements, including submission of a design matrix, as outline in the PPAP reference manual. This may include:

- Design record,
- Material certification with test results, and
- Part submission warrant.

A MURSIX Corporation Purchasing Representative will confirm this requirement, when necessary. Associated reference manuals include:

- Advance Product Quality Planning (APQP) and Control Plan
- Potential Failure Mode and Effects Analysis (FMEA)
- Statistical Process Control (SPC)
- Measurement Systems Analysis (MSA)
- CQI-9: Special Process: Heat Treat System Assessment
- CQI-11: Special Process: Plating System Assessment
- CQI-12: Special Process: Coating System Assessment
- CQI-15: Special Process: Welding System Assessment
- CQI-17: Special Process: Soldering System Assessment
- CQI-23: Special Process: Molding System Assessment

See Mursix specific requirements for additional requirements.

It is the responsibility of each supplier to ensure that all “dues dates” (request for quotes, PPAP submissions, corrective action reports, etc.) are met.

Request for Change

Since over the life of a part or product, changes in design, specification or processing may occur, the supplier shall request in writing all proposed changes to currently approved product, processes, materials and/or components in accordance with the purchase order and PPAP requirements as applicable prior to implementation. This includes, but not limited to:

- Design Changes
- New supplier of raw material (including chemicals) or components
- Material or Component change
- Method of control or inspection methods
- Method of manufacturing method or process
- Packaging
- Labeling
- Delivery

(For examples detailing these changes see table below in Change Point Control section)

Suppliers are solely responsible for controlling changes initiated at their location(s). Written authorization from MURSIX Corporation must be obtained prior to incorporating any changes into

production that may affect the fit, form and function of any supplied product or component. A Supplier Process Change Request form (FM0506) must be completed and forwarded to Mursix Purchasing Department at least 30 days prior to introducing a permanent change.

If because of an emergency situation a change is to exist for a limited time, a request should be made using the Temporary Deviation Permit (FM0502). This completed request should be forwarded to Mursix Purchasing Department. Production should not commence before approval is given. This approval can be verbal followed by an e-mail, but ultimately the return of the signed deviation to be kept as the record of the approval.

See Mursix specific requirements for additional requirements.

Change Point Control

The “Change Point Control” (CPC) system is a method to document a change to a part or process and to distinguish parts shipped from previously delivered consignments. The following table outlines change types where CPC may apply:

<u>Type of Change</u>	<u>Explanation/Example</u>
Design change	The part drawing changes, altering the physical structure or number of the part. A design change is done when a new part drawing or a manufacturing instruction has been issued. <ul style="list-style-type: none"> • New part design • Design change that affects the part • Design change that does not affect the part, such as part name or part number.
Material or Component change	The material or component used to manufacture the final part/product. This also includes any material used to manufacture any component used to assemble the final product. <ul style="list-style-type: none"> • Material Composition • Material Type These will include raw material, oil, solder, epoxy, and other material deemed to affect functionality of the product.
New Supplier (of components or processing) change	A new supplier is one who has never produced the supplied material or component or contracted to provide a service, such as heat treat or paint. <ul style="list-style-type: none"> • Addition of a new supplier, • Change of supplier, • Change of facility location, • Change from in-house production to outside supplier (or vice-versa).
Manufacturing Process change	Any change to the processing steps that deviates from the original steps outlined in the approved PPAP, including changing a temporary process to become permanent (or vice-versa). <ul style="list-style-type: none"> • Changing the order of processing steps, • A special processing step. • Parts sorted or inspected/certified and not detailed in the control plan.
Manufacturing Method change	A change to the method, setting, or condition used during the manufacture or assembly of the product that deviates from the original, approved PPAP as applicable.

	<ul style="list-style-type: none"> • Change in machine location or after major repair. • Machine or process setting change, • Plating, welding, soldering or heat treat process changes, • Change in normal control ranges (not routine adjustments), • Operator change on a critical process.
Die or Mold or Jig or Tool change	<p>The design of primary, secondary dies and/or molds including jigs are changed which potentially affects the quality, function, fit, appearance or reliability of the product.</p> <ul style="list-style-type: none"> • New die or mold, • Modification to a die or mold (from original design), • Welding or assembly fixtures, • Cooling fixtures, • Machine master for camshafts, pistons, or other parts, • New or modified jigs or tooling.
Inspection Method change	<p>The inspection method is changed which could affect a change in the quality performance of the product. This may require a PPAP resubmission.</p> <ul style="list-style-type: none"> • New or modified inspection equipment, • Measurement methods or instrument type.
Shipping or Packaging change	<p>The method of shipping/transporting parts or any change in the packaging that could affect the quality of the product.</p>
Trial parts	<p>Changes should require a production trial run for verification of changes (such as changes to part design, manufacturing location, or manufacturing process) to validate the impact of any changes on the manufacturing process.</p>
Countermeasure	<p>After a countermeasure was initiated.</p>
New Production Parts	<p>After any change to a part or process that results in a production of parts that differ from those previously supplied.</p>
Other	<p>As directed by Mursix Quality Department.</p>

When suppliers are required to change the product or service supplied or receive an approved deviation to make any suggested change, they are required to have a Change Point Control (CPC) system in place. This system is a method to document a change to a part or process and to distinguish parts shipped from previously delivered consignments. When used correctly, this CPC system will afford both Mursix and its suppliers with a documented approval record which correspondingly tracks changes and provides an accurate history of any change that has occurred to the parts or process. The supplier will also make information available, whether in the form of a Certification of Conformance, first article test result, or other means, to show Mursix that the change has occurred. This system will help ensure final product quality by providing a way to identify, approve and control change points which is necessary to safeguard the quality of finished products.

Records of the change must be maintained.

Supplier Change Identification

The Supplier will use some means to identify the initial shipment of components or product following the implementation of any one of the previously described change point conditions. Suppliers are requested to utilize the MURSIX standard Initial Production Parts (IPP) tag (FM0411)

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to clearly identify the shipment of components or product. Further, the IPP tag must be securely affixed to the shipment. The reason for the change point needs to be listed on the IPP tag as a point of reference. A copy of the MURSIX IPP tag is available upon request.

Handling Mursix Initiated Changes

When suppliers receive product for processing that has a MURSIX IPP Tag attached it should be understood that this tag will be a multipart document. It is required that the supplier's representative signs and dates the tag in the next available box, saves the top copy for their records and re-attaches the tag to the shipment.

The lot must not be split nor mixed with other lots of the same or similar product. A first in, first out (FIFO) method of processing and shipping must be maintained. If a problem occurs to prevent FIFO, MURSIX must be informed, prior to any further processing.

Commodity Requirements

MURSIX logistics manual (link found on the MURSIX Corporation web page) provides guidelines for the various types of commodities that are supplied. These guidelines include the requirements for identifying the material according to print and/or purchase order and lot traceability using the AIAG labeling guidelines for part shipping labels; document B-10. A copy of the MURSIX Shipping Label Specifications (WI0501) is provided. Any product specific requirements will also be listed.

A supplier is responsible for protecting all products supplied/shipped to Mursix and must provide suitable means for transporting.

Unless otherwise specified, the supplier is responsible for developing packaging and submitting packaging drawings for approval. The supplier is free to use its' own format for package concept submission.

Evidence of Material Properties

As evidence of the consistency of the product supplied, the supplier must prepare certifications of conformance or analysis where applicable. These certifications shall include but not limited to certain characteristics, such as chemical composition, mechanical properties, process conformance and other attributes like appearance specific to the process or material supplied. If these characteristics are limited to a specific range, this range should be noted.

Suppliers of Automotive Related Products:

A new requirement stated in the IATF standard is that purchased products, processes, and services are to conform to the current applicable statutory and regulatory requirements in the country of receipt, the country of shipment, and the customer-identified country of destination, if provided. Mursix requires that our suppliers conform to this requirement and advise if any purchased products, processes, and services do not conform to this requirement. A statement should be added to the certifications of conformance or analysis of this confirmation.

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When a customer defines special controls for certain products with statutory and regulatory requirements, Mursix expects our suppliers to implement and maintain these controls as defined.

Receiving inspection, containment and corrective action requirements

To verify that shipments are defect free, MURSIX may choose a number of methods to verify conformance which include:

- Analysis of the statistical data received,
- Evaluation of Certificates of Analysis (CofA) received,
- Evaluation by an independent laboratory,
- Inspection and/or testing of quality characteristics by random sampling with a c=0 acceptance criteria or 100% inspection, or
- Any other agreed upon method.

In the event that a shipment is rejected, whether at time of receipt or during processing, the shipment will be quarantined, and the supplier will be contacted. At this point:

- a concession (deviation) can be issued for use of the material, with any additional costs associated with the use debited to the supplier, or
- the material or product returned for replacement, or
- the material or parts be sorted with the costs associated with the sort and discarded material/parts debited to the supplier.

Additionally, a supplier corrective action report (SCAR) may be issued which will require a structured investigation of the nonconformity and corresponding documentation reported to MURSIX of the proposed corrective action to prevent recurrence.

An interim response submitted via e-mail is required within two (2) work days and the completed response, which address permanent corrective actions within two (2) weeks (14 calendar days).

MURSIX Provided Parts

Any MURSIX parts that are in a supplier's control are to be reported if lost, damaged or found to be nonconforming to requirements. It is the responsibility of the supplier to maintain records and notify MURSIX Corporation as soon as possible after the event is discovered.

MURSIX Corporation Owned Property

Any MURSIX Corporation property that is in a supplier's control; such as, tooling, containers or intellectual property that is provided shall be identified and protected. If any become lost, damaged or found to have been rendered unusable, it is the responsibility of the supplier to maintain records and notify MURSIX Corporation as soon as possible after the event was discovered.