



# Supplier Quality Manual

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## 1. Quality Expectations

Suppliers to Industrial Fastener shall establish and maintain a documented quality system at a minimum 3<sup>rd</sup> party certified to ISO 9001:2008 unless specified otherwise by customer requirements. Vendors not third party certified to either ISO 9001 or TS 16949 will require approval from Industrial Fastener's customer, which may include on-site visits and customer audits.

Industrial Fastener requires that all components conform to the print for dimensional and material specifications, and that all inspections be available upon request. Suppliers are not to rely on Industrial Fastener's receiving inspection function to determine acceptability of the supplied product.

### 1.1 Special Designations

Suppliers to Industrial Fastener will be familiar with special characteristic designations as outlined by AIAG or any of Industrial Fastener's customer base. Any print or drawings with special characteristics will require customer specific data and part retention and will be highlighted to the supplier by Industrial Fastener. All special characteristics will require consistent designations throughout all key documentation such as PFMEA, Control Plans and Work Instructions.

### 1.2. High Impact Suppliers

High impact suppliers are companies supplying products to Industrial Fastener that affect safety, fit or functional aspects of Industrial Fastener's customer's final product. Any supplier with a Customer designated Critical Characteristic listed on their print is automatically deemed a high impact supplier

The Supplier Development team will create a high impact supplier listing for all new and current products. A supplier may also be deemed high impact due to quality, delivery issues or complexity of the product. These suppliers will be audited to ensure that the tooling, equipment and procedures being used are adequate to provide the part required to the drawing quoted. Special emphasis will be placed on defect prevention as part of this audit.

### 1.3. Advance Product Quality Planning (APQP)

Advance Product Quality Planning (APQP) will be the tool used to monitor launch activities for all suppliers. The expectations for APQP for all production suppliers (components, materials tooling, etc.) are summarized in the current edition of the Automotive Industry Action Group ([www.aiag.org](http://www.aiag.org)) methods manual. Industrial Fastener reserves the right to require customer specific methods for APQP outside of the AIAG standard.

## 1.4. Production Part Approval Process (PPAP) Sample Submission

### PPAP Expectations:

- Submitted using the current AIAG requirements, including; Production Part Approval Process (PPAP), APQP and Control Plan, PFMEA as well as any additional Customer Requirements
- All Initial and ECR PPAP submissions to Industrial Fastener are a minimum Level 3 PPAP
- All Annual Validation PPAP submissions to Industrial Fastener are a Level 3 PPAP as is required by customers of Industrial Fastener.

#### NOTE:

It is the responsibility of the suppliers and their sub-suppliers who ship plated, coated, heat-treated, welded or soldered product into Industrial Fastener to ensure that their processes are assessed and certified to the appropriate CQI standard. It is also the responsibility of the supplier and sub-suppliers to submit their assessments and lab accreditations annually. When supplying heat treated parts, supplier must ensure that heat treat lots are not mixed and heat treat certificates accompany each shipment.

- All sub-suppliers submissions to the supplier shall be a minimum Level 3 PPAP
- Samples shall be provided using production tooling
- Where multiple tools, mold cavities or patterns are used, samples from each shall be clearly identified and submitted with the PPAP package
- As per the AIAG manual (Part submission Warrant) which states if production parts will be produced from more than one cavity, mold, tool, die, pattern or production process, e.g., line or cell, the organization shall complete a dimensional evaluation on one part from each.
- For single cavity, mold, tool, die, pattern or production process, e.g., line or cell, the organization shall complete a dimensional evaluation on six parts.
- A ballooned print shall be submitted identifying the areas of each measurement and notes corresponding to the dimensional report
- For all Special Characteristics, including but not limited to Significant Characteristics (SC), and Critical Characteristics (CC), process capability shall be submitted. This capability shall be accomplished using no fewer than 125 parts. Acceptable process capability will be a Ppk value greater than or equal to 1.67, at the time of PPAP
- Gauge R&Rs shall be completed for every gauge on the control plan using the gauge / fixture identified on the control plan.
- Gauge R&Rs are to be done annually for all variable gauging systems, and be performed on a dimension on an Industrial Fastener part number. GR&R's do not have to be Part number specific and can be applied to all PPAP's submitted.
- Part numbers with Customer Critical Characteristics or Industrial Fastener CC's must have a GR&R for the specific dimension called out on the print.

- Gauge R&Rs shall be completed using the ANOVA method as described in the current AIAG Measurement Systems Analysis (MSA) manual
- Variable Gauge R&Rs shall use 10 parts, 3 operators and 3 trials. The 10 parts selected for the study must represent the normal variation in the process
- Attribute Gauge R&Rs shall use 50 parts, 3 operators, 3 trials.
- Process capability data, gauge R&R and dimensional data is to be supplied electronically along with the hard copy package.
- IMDS submissions must be supplied with each PPAP package to Industrial Fastener.

Regular production is not to be shipped to Industrial Fastener until the supplier has received written approval from Industrial Fastener, via approved PSW.

It is the supplier's responsibility to ensure that parts meet all drawing and material requirements prior to submission. Samples found to be dimensionally incorrect or submissions with improper or incomplete documentation shall be rejected unless a supplier change request has been submitted and approved.

Laboratory certificates must be submitted with PPAP documentation and be accredited to a National body having *Signatories to the ILAC Mutual Recognition Arrangement* designation. If the supplier lacks the facilities and certification required to perform dimensional inspection, laboratory analysis, testing or heat-treating the supplier assumes the responsibility to subcontract to a certified 3<sup>rd</sup> party. Laboratory subcontractors shall be ISO 17025 registered. Production subcontractors shall be a minimum of ISO 9001 registered. Subcontractors of heat treating, plating, coatings, soldering and welding shall also have a valid CQI self-assessment.

**NOTE:** Late PPAP submissions will result in a NON CONFORMANCE REPORT being issued to the supplier with an associated \$500 administration fee.

## 1.5. Supplier Change Requests

Suppliers shall obtain written approval from Industrial Fastener for any changes in process, design or facilities (including rework not identified in the PPAP package, and equipment move within the facility) prior to implementation of such change. All Change requests are to be submitted via e-mail to the appropriate project manager.

Any implementation of new processes, transfers of production to a different location or changes to the manufacturing process require a new PPAP submission.

## 1.6. International Material Data System (IMDS)

All subcontractors supplying parts to Industrial Fastener will be required to submit IMDS documentation 30 days before the contracted PPAP due date. Suppliers must be registered in IMDS and all documentation will be submitted to Industrial Fastener through the IMDS web-based system. Suppliers shall submit IMDS to the appropriate INDUSTRIAL FASTENER ID number obtained from the appropriate purchasing personnel.

To register in IMDS go to [www.mdsystem.com](http://www.mdsystem.com) and follow the instructions for online registration.

## 1.7. Supplier Sourcing Audit

Prior to the approval of a potential supplier, a sourcing audit (F C3-1) may be required. Industrial Fastener reserves the right to require the supplier to complete a customer specific Supplier Self-Assessment form or any Technical Assessments that are applicable.

## 1.8. On Site Audits

### 1.8.1. Process Sign off (PSO)

Process Sign off (PSO) is an in depth audit and review of all processing facets associated with the manufacturing of products purchased by Industrial Fastener. The PSO process is a cross-functional evaluation of a supplier's readiness to produce product at a specified volume prior to the launch of a program. If a PSO is required to be conducted, the Supplier Development Representative will contact the supplier and set up a date and time.

The PSO review covers both the process documentation and the actual process for both new product and engineering changes. By establishing the documentation as evidence of the intended process and then reviewing the actual process running at production rate, Industrial Fastener will have a firsthand understanding of the supplier's production readiness.

A run at rate may also be required for completion of the PSO. The number of components to be produced during a Run at Rate (R@R) should be sufficient to demonstrate manufacturing process capability and should be predetermined by the Supplier Development representative. Factors such as product complexity, shelf life, storage cost and single shift vs. multiple shift operations are taken into consideration when determining the length of the R@R. The default length of the R@R will be a minimum of 300 pieces or 2 hours of production. The production run must be on the production line of record, using production tools, processes and trained operators. The format of the R@R will be dependent on Industrial Fastener's customer requirements, and will be made available upon request at the time of launch.

A PSO will be scheduled for (but not limited to) the following reasons:

- All suppliers that are designated as high impact suppliers (refer to Section 1.2)
- For corrective actions that have caused decreased customer satisfaction for Industrial Fastener and or Industrial Fastener's customers.
- If the supplier is new to Industrial Fastener you may be contacted for an audit prior to sign off (Ref Section 1.7)

## 1.9. Supplier Non-Conformance Material Report and Delivery Performance

Suppliers are notified of non-conforming material and delivery performance through an e-mail from Industrial Fastener.

A NON CONFORMANCE REPORT is issued whenever purchased material which does not conform to Industrial Fastener requirements has been identified. This is inclusive of, but not limited to: quality, delivery, logistics, labeling, design, customs compliance, paperwork, etc.

Non-conforming material may be identified during incoming inspection, audit, OEM notification, or reliability testing. An authorization number will be requested from the supplier for debit authorization of on-site scrap, rework, sort, material to be returned or any associated cost due to the nonconformance.

The supplier non-conformance material report (NON CONFORMANCE REPORT) serves the following functions:

- Accounting debit memo
- Packing slip for returned material
- Quality record for generating PPM
- Supplier response request. (8D)
- Communication of issues and concerns to the supplier
- Record to support adjustments of suppliers cumulative shipment history

All suppliers Non-conformances will be formally documented using 8D Problem Solving Methodology.

### 1.9.1. Supplier NON CONFORMANCE REPORT Requirements

Within **one (1)** working day of the NON CONFORMANCE REPORT being issued, the supplier will submit a detailed containment action plan to include the following at a minimum.

- Written containment actions (At supplier's facility and at Industrial Fastener)
- Suspect inventory, lot numbers, etc.
- Sort Criteria approved by Industrial Fastener.
- Number of parts sorted and number of defects found
- Date and time of first clean shipment and how certified parts will be identified

Within **five (5)** days of a NON CONFORMANCE REPORT or Defective Material Report (DMR) being issued, the supplier shall submit an updated corrective action plan along with updated PFMEA and Control Plan and other required documents (work instructions, alert notices, etc) as required.

### **1.9.2. Closing a NON CONFORMANCE REPORT.**

The Industrial Fastener initiator shall review and approve closure of the NON CONFORMANCE REPORT. Industrial Fastener reserves the right to require that additional controls be implemented and/or additional documentation be provided to resolve supplier issues.

### **1.9.3. NON CONFORMANCE REPORT and DPR Dispute**

In the event of a disputed NON CONFORMANCE REPORT, the supplier shall document the dispute (with reasons) in writing via e-mail to Industrial Fastener. Should an escalation be required for disputes with no response, the supplier shall contact their buyer.

## **1.10. Supplier Non-Conformance Material Report Charge Backs**

Industrial Fastener will debit the supplier for all internal and external costs associated with the supplier's NON CONFORMANCE REPORT. In addition, the supplier will be charged a \$200 administration fee for each NON CONFORMANCE REPORT issued. This fee covers Industrial Fastener's administration costs associated with documenting the non-conformance.

**NOTE:** If Industrial Fastener, under emergency circumstances, is required to sort, rework or inspect supplier's non-conforming product, a fee of \$60.00 per hour – per employee utilized will be charged back to the Supplier along with any cost associated with any shutdown of an Industrial Fastener Customer.

## **1.11. Controlled Shipping Containment**

For suppliers with chronic or repetitive quality and delivery issues, Industrial Fastener reserves the right to impose additional containment measures at the supplier's expense to ensure the product received conforms to the requirements.

These additional controlled containment measures are intended to be interim steps to ensure conforming product is shipped to Industrial Fastener. Permanent actions to prevent recurrence must be implemented in conjunction with these containment programs. Once permanent actions are implemented and verified to be effective, a 30-day clean point must be established from the date the corrective action was implemented with zero (0) non-conformances reported before the supplier is allowed to exit controlled containment. Weekly updates are required throughout the entire containment period detailing the quantity of parts inspected and the percentage of failures detected.



### 1.11.1. Early Containment

Early or Pre-Production Containment activities are required of the supplier and must be documented on a prototype or pre-launch control plan.

Typically, the specified production quantity or duration is intended to match the OEM's acceleration / ramp up plan to full production volumes. If not specified, the duration for containment is 5% of the annual volume of pieces defect free after the Start of Production (SOP).

The supplier must attach a green dot (1.25 – 2 inch diameter) signed and dated by the designated senior management representative to each bar code label verifying that Early Production containment requirements have been met.

The supplier must establish a containment process that includes the following elements:

- Identifies the person responsible for the containment process
- Pre-launch control plan
- Must include additional controls, inspection audits, and testing to identify non-conformance during the production process (See the AIAG advanced product quality planning and control plan reference manual)
- The supplier is responsible to document the containment activities, as proof of adherence to the established pre-launch containment plan. This data shall be used to verify the effectiveness of the containment activities

Additionally if Industrial Fastener receives non-conforming product from their suppliers during the pre-production phase, the supplier will be placed on Level 2 controlled shipping containment and will be required to institute third party inspection to protect Industrial Fastener from further non-conformances.

The exit criteria for Early Production containment is as follows:

- Self-Exit Criteria – The supplier ships the required quantities for the duration specified with no non-conformances or Defective Material Notices for the affected product
- If the supplier does not meet the self-exit criteria, all Supplier Non-conformance reports must be closed before the supplier can exit early Production containment.

The early production containment plan is required until the self-exit criteria has been met and the process controls and capabilities have proven effective and valid.

## 1.12. Statistical Methods

Industrial Fastener suppliers are required to use statistical methods to understand product and process variation to proactively prevent non-conformance. Automobile Industry Action Group (AIAG) Measurement System Analysis – MSA manual describes the methodology for ascertaining if the measurement techniques and equipment used are capable of collecting accurate data to drive improvements.

Industrial Fastener suppliers are expected to establish the appropriate Statistical Process Controls (SPC) for special characteristic(s) selected during the Advanced Product Quality Planning (APQP) process (refer to AIAG Statistical Process Control Manual).

Special characteristics will be clearly identified on drawings and require the completion of short-term capability studies:

- Before a part goes into production a process study as a part of the PPAP and PSO
- When an engineering change is made that affects a special characteristic
- When major tool maintenance or repair occurs that affects the characteristic

The supplier control plan will be used to define the method and means of control of special characteristics during production. A special characteristic does not necessarily require the use of ongoing SPC, so long as 100% inline detection is being used with calibrated reject masters to verify detection in functioning properly. Unless otherwise specified by the customer, short-term capability must exceed a Ppk of 1.67. Long-term process capability must exceed a Ppk of 1.33.

## 1.13. CQI - Requirements

The Standards CQI-9, 11, 12, 15 and 17 have been published through the AIAG.

All suppliers providing heat treated, plated, coated, welded or soldered components to Industrial Fastener regardless of tier must submit annual self-assessments consistent to those described in the applicable and current CQI guidelines as published through AIAG. Submissions of the annual validations are to be submitted to the Quality Facilitator.

If a supplier to Industrial Fastener is having heat treat, plated, coated, welded or soldered services contracted out, it is the responsibility of the Industrial Fastener supplier to obtain and submit the self-assessment (s) accordingly. Failure to provide these surveys will result in NON CONFORMANCE REPORT to be issued, negatively affecting your supplier quality rating.

The following processes require CQI Assessments:

- CQI-9            Heat Treat
- CQI-11        Plating
- CQI-12        Coatings
- CQI-15        Welding
- CQI-17        Soldering

Additional information on these standards can be obtained through the AIAG at [www.aiag.org](http://www.aiag.org).

## 2. Labeling and Shipping Requirements

### 2.1. Tool Labeling and Identification

All tools for which Industrial Fastener issues a purchase order must be tagged with a tag identifying the appropriate customer as the owner of the tool where required or directed by a customer of Industrial Fastener. For each tool purchased Industrial Fastener will provide the vendor with the tag to be permanently attached to the tool, this tag will be stamped by Industrial Fastener with the appropriate tool identification number. Tags are used unless otherwise specified by customer requirements.

A notice will be sent to the supplier cross referencing the part to be made to the tool tag ID.

It is the responsibility of the Vendor to permanently affix the tag to the tool in a predominant place on the tool that is easily visible, but will not be damaged by the use of the tool.

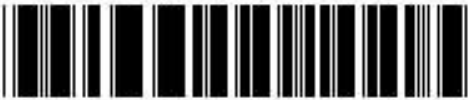



Pictures of the tool are to be submitted to Industrial Fastener in order to complete the payment of the tooling purchase order. These pictures must show the tool with the tag predominantly shown in this picture. A second picture may be required to show the information that is stamped on the tool tag.

**NOTE:** Tool include, but are not limited to: dies, moulds, holding fixtures, checking fixtures, equipment.

## 2.2. Production Labeling

All products must be labeled in accordance with the latest AIAG labeling requirements. The following label format is expected on all packaging shipped to Industrial Fastener. An example of the label and format is shown below. The supplier will contact Industrial Fastener’s shipping/receiving department to determine exact format and field configuration before the first shipment is made to industrial fastener.

**Format:**

PART NO. (P) <b>11588685</b> 	MANUFACTURE DRIP DATE <b>06/18/14</b>
QUANTITY (Q) <b>1000</b> 	PID # (K) <b>2596</b> 
SUPPLIER NO. (V) <b>INDU6</b> 	
PART DESCRIPTION (S) <b>M6-1.0 X 20 M-POINT STUD</b>  <b>MADE IN TAIWAN</b>	INDUSTRIAL FASTENER, WINDSOR, ONTARIO LOT NO. <b>P1310031</b>

- Label is 4” High x 6” Wide
- Labels are to be printed with black characters on a white background
- The vendor is to ensure that labels will be readable upon receipt at Industrial Fastener’s receiving dock.
- Barcodes are to be of the 3 of 9 format (also known as Code 39)
- The Lot Number is to be used for material traceability from Industrial Fastener to the supplier. The supplier shall be able to trace all raw materials back to the raw state from

this lot number. The format of the lot number is up to the discretion of the supplier, however, the format cannot be longer than ten (10) characters in length.

Any deviations requested from the standard AIAG bar code labels specified above must be approved by Industrial Fastener Purchasing department prior to shipment.

**NOTE:** Suppliers will ensure all old labels are removed from the containers prior to shipping to Industrial Fastener.

**NOTE:** The supplier shall be able to show traceability through the lot number on each container.

**NOTE:** Any shipments missing the above information may affect the receiving process which could result in delayed payment to the vendor and the creation of a NON CONFORMANCE REPORT.

### **2.3. EDI Capability**

Suppliers shall have EDI capability as an option for receiving releases and submitting ASN with shipments.

### **2.4. Lot Traceability**

For lot traceability, Industrial Fastener requires the supplier to establish and maintain procedures for identifying the production lots from receipt of raw material through to shipment of final product.

The supplier's lot traceability system shall permit isolation of suspect product and report production and quality data based upon the lot number on each container.

Industrial Fastener expects the supplier to provide lot traceability data within 24 hours based on the label lot number. The supplier shall be able to identify other lot numbers that may be affected (i.e. Subcomponents used from one lot number used across several different finished good lot numbers).

### **2.5. Packaging**

Packaging is to be sufficient to ensure that delivered product is free of any defects including handling and transportation damage. This shall also be carried across to any work in process packaging throughout the entire manufacturing process.



### 3. Supplier Rating

Industrial Fastener utilizes a rating system to monitor and assess supplier performance. The Industrial Fastener supplier rating system uses quality and delivery to calculate an overall performance rating. The rating is then factored into future sourcing decisions.

#### 3.1. Supplier Rating Criteria

Suppliers will be rated on a 100 point scale, quarterly with the following criteria:

##### **Schedule Adherence by Quantity: (Max score 25 points)**

Acceptable: 0-10% deviation per part higher or lower than released quantities.

**Each occurrence will result in a 5 point deduction.**

##### **Schedule Adherence by Date: (Max score 25 points)**

Delivery tolerance is +/- 7 days from delivery date/ sail date requested and confirmed.

**PPAP Submission Timing: Late PPAP and sample submissions**

**Each occurrence will result in a 5 point deduction.**

##### **Defective Material Notice: (Max Score 25 points)**

Minor Non-conformance issued (non-conformance within agreed PPM level)

**5 point deduction for each occurrence.**

Major Non-conformance issued (non-conformance above agreed PPM level or repeat occurrence).

**10 point deduction for each occurrence.**

##### **Shipping/Receiving Accuracy: (Max Score 25 Points)**

Paperwork accuracy: Lot numbers, quantities of parts and box count is accurate.

Paperwork is with each shipment and shipment is in good condition.

Sea shipments and air shipment paperwork is forwarded in a timely manner.

If shipment is rejected due to poor conditions 10 points will be deducted.

**5 points will be deducted for each occurrence or any shipment rejections will be a 10 point deduction.**

**Rating Score Breakdown: 100-90 Acceptable**

**89-70 At Risk**

**69-0 Unacceptable**

A supplier will be notified if their supplier rating has fallen below the acceptable Industrial Fastener standards.

If a supplier achieves an **AT Risk** rating for 2 consecutive rating periods, the supplier shall initiate internal corrective actions to improve the supplier rating. SMQR process may be initiated for suppliers rated “At Risk”. A supplier whose rating falls below 70 points for 2 consecutive rating periods will enter the **SMQR** process as noted below, and may be placed on the “**No New Business**” list which will be dependent on the results of the SMQR process.

### 3.2. Supplier Management Quality Review (SMQR)

Suppliers exhibiting poor performance in delivery, quality, or who have repeat issues will be required to attend a Supplier Management Quality Review meeting (SMQR). It is the supplier's management team that must attend. The goal of the SMQR is to review the supplier's corrective actions for the effectiveness towards performance improvements. This is an extension of the supplier rating system. The supplier is required to present an action plan to address the poor performance. The action plan shall, at a minimum, address the cause of the SMQR being issued.

Meetings will be managed by Industrial Fastener Quality and a Buyer.

### Revisions History

Rev.	Date	Revisions
A	September 1, 2015	Initial Release