



Usui International Corporation

Supplier Quality Manual

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Preface

UIC's Supplier Quality Manual is based upon recognized automotive standards and the requirements defined in manuals published on behalf of the automotive industry by the Automotive Industry Action Group (AIAG). It also recognizes all additional customer-specific OEM requirements. UIC performs Supplier Quality Management System development in conformance with ISO 9001:2015, IATF16949 and Customer Specific Requirements.

This manual is intended to assist suppliers in their understanding of UIC's requirements regarding specific management, communication and reporting processes.

This manual clarifies and supplements AIAG requirements. This manual does not change or eliminate any requirements contained in the AIAG manuals, other automotive industry requirements or UIC Purchase Orders. Purchased product/materials and services are defined as all product and services that affect customer requirements such as sub-assembly, sequencing, sorting, rework and services.

UIC adheres to a Zero Tolerance policy. The expectation is that all suppliers provide materials/parts, services, and processes that are 100% within specifications and delivered 100% within the prescribed delivery schedule. Suppliers are monitored in accordance with ISO 9001:2015, IATF16949 and Customer Specific Requirements.

Refer to UIC's Web Site, www.usuiusa.com for latest edition of this Supplier Quality Manual.

Dennis Chiu
UIC- VP

CONTENTS

1. Message to Suppliers	6
2. Introduction	7
2.1 Purpose	7
3. Qualification for UIC Approved Supplier List	8
3.1 New and/or Current Supplier	8
3.2 Quality system assessment	8
4. Supplier Quality Requirements	9
4.1 Certified Products	9
4.2 SPC/Capability	9
4.2.1 Control Characteristics	10
4.3 Process Controls	10
4.3.1 Inspection Standards	10
4.3.2 First-Piece Approval	11
4.3.3 Final Audit of Process/Engineering Changes	11
4.3.4 Early Production Control- (Pre-launch Control Plan / Safe Launch)	11
4.3.5 Parts/Material Recertification	11
4.4 Process Certification	11
4.5 Zero Defect acceptance	12
4.6 Product Sorting	12
4.7 Restricted Material ISO14001	12
4.8 On Time Delivery	12
4.8.1 Excess Freight Cost	12
4.9 Lot Traceability	12
4.10 Domestic and Foreign Content	13
4.11 UIC Supplied Product	13
4.12 Design change and certified Product	13
4.13 Initial Production Parts Procedure (I.P.P.)	13
4.14 Sub-Supplier Control	13
4.14.1 Requirements for the quality system	13
4.14.2 Scope	13
4.14.3 Criteria to use a sub supplier	14
4.15.3.1 Important Safety Parts	14
a. Quality Assurance Department for purchased products	
b. Responsible Production department for OEM	
4.15.3.2 Checking items to use a sub supplier	14
4.14.4 Continuous Evaluation	14
4.14.5 Sub Supplier Evaluation performed by UIC	14

5. New Model	14
5.1 UIC Project Engineer	14
5.2 Critical or Non-Critical Parts Supplier.....	14
5.3 Design Review Meeting.....	14
5.4 Trial Products requirement	14
5.5 Process Review Meeting.....	15
5.6 Trail Time Line.....	15
5.7 Mass Production Trial.....	15
5.8 PSW approval	15
6. Production Part Approval Process(PPAP)	15
6.1 Advanced Product Quality Planning (APQP)	15
6.1.1 APQP Status Reports	16
6.1.2 Production Trials.....	17
6.2 Submission Requirements.....	17
6.2.1 Prototype or Off-Tool Samples.....	17
6.2.2 Off-Process Samples.....	18
6.2.3 PPAP Samples.....	18
7. Control, Monitor & Verification of Measurement/Test/Tool/Equipment	20
8. Non-Conforming Product- (SDR-Supplier Material Defect Report)	21
8.1 Immediate Notification.....	21
8.2 Supplier Defect (Non-Conformance) Report (SDR).....	21
8.3 Temporary and Permanent Corrective Actions from Supplier-8D Report.....	23
8.4 Return Material Authorization	23
8.5 Goal-Setting and Problem Resolution	23
8.5.1 Poka Yoke (Mistake – Proofing)	24
9. Charge-Backs	24
10. Sorting Requirements	25
11. Controlled Shipment.....	26
11.1 Controlled Shipping-Level 1 (CS1).....	26
11.2 Controlled Shipping -Leve 2 (CS2).....	26
11.3 Key steps of the process.....	26
11.4 CS1 Process	26
11.5 CS 2 Process	27
11.5.1 Kick off Meeting’	28
11.5.2 Exit Criteria.....	29
12. Engineering and Process Changes.....	29
12.1 UIC Initiated Changes.....	29
12.2 Supplier Initiated Changes	30

12.3	Deviations	30
13.	Supplier Assessment	31
13.1	Second Party Audit	
14.	Supplier Development.....	31
15.	Associated Business Conditions	33
16.	Supplier Performance Rating	34
17.	Packaging and Labeling	34
18.	Additional Requirements.....	35
18.1	Sub-Supplier Use	35
18.2	Required Quality Records and Retention Time	35
18.3	Definition of Special Processes	36
18.4	Special Processes Assessment requirements.....	36
18.5	Organizational Changes	36
18.6	Release of Drawings, Technical Regulations, and Specifications to Third Parties.....	37
18.7	Environmental Concerns Health and Safety	37
18.8	Hazardous Materials - Material Safety Data Sheet (MSDS)	38
18.9	Supplier Escalation Process	39
18.10	Supplier Escalation Process	38
19.	General Information	39
20.	Appendix	40
21.	Revision history	41

1. Message to Suppliers

Quality materials, parts, exacting standards excellent workmanship and a commitment to Continuous Improvement are elements that distinguish UIC. The requirements we have set for ourselves and our suppliers to achieve these elements are:

- **100% Quality Product**
- **100% On Time Delivery**
- **Competitive Cost**
- **Continuous Improvement**

Suppliers are considered as an integral part of the business. The capabilities of our suppliers support the fulfillment of the UIC mission and the achievement of company objectives. Relationships with our suppliers are built on total quality principles and practices to achieve the best performance, delivery, service and total cost. We cannot achieve these elements and goals without the support and expertise of our suppliers. Our suppliers are vital to our success.

The purpose in presenting this manual is to assist suppliers in promoting Continuous Improvements in quality, productivity and to set forth the requirements of ISO 9001 or ISO/TS/IATF 16949, which is the foundation of our Supplier Quality Program.

UIC's Quality Policy is:

“UIC will achieve worldwide customer satisfaction through continuous improvement of our quality management system and by meeting all requirements for quality, cost, delivery and services.”

Our quality policies extend to our suppliers. We are committed to build and maintain a profitable partnership with our suppliers that result in a timely and cost-effective launch of products and materials that meet the defined performance standards, plant assembly needs, overall customer satisfaction, governmental and regulatory requirements

2. Introduction

This manual is provided to both UIC plants (Ohio and Virginia). The requirements of this manual will be applied to all new models and mass production components, materials and services that are supplied to both UIC plants. It is the supplier's responsibility to notify the UIC Purchasing Department of any questions or concerns in meeting the requirements of this manual.

"UIC" used in this manual applies to both Ohio and Virginia plants.

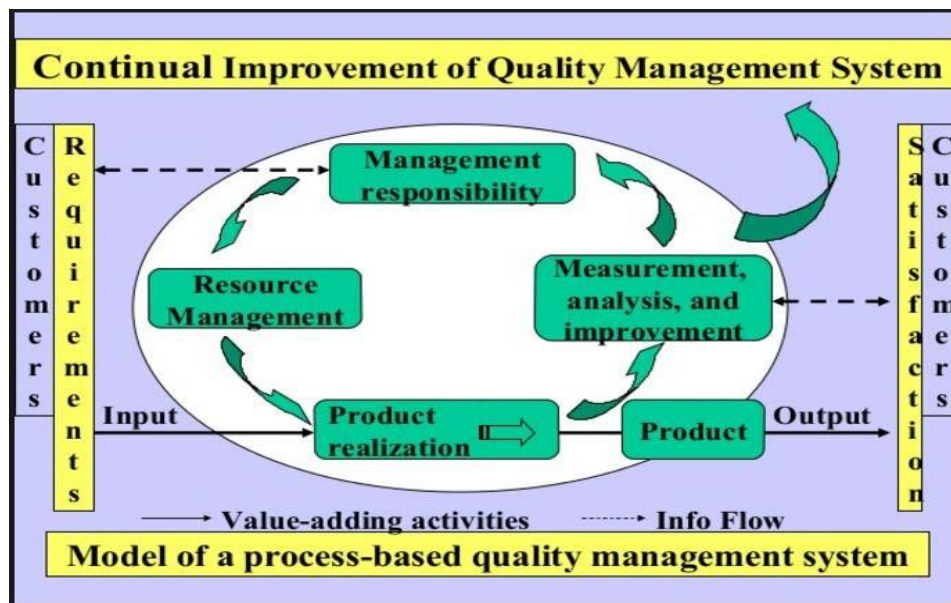
2.1 Purpose

The Supplier Quality Manual provides detailed information pertaining to the required quality assurance activities in all processes of ordering, receiving, manufacture, shipment, delivery, and disposition of defects, etc. that must be executed by suppliers to assure product quality of parts, materials and services being supplied to UIC to satisfy set requirements. In particular, for the purpose of preventing defects, it is most important so that systems enable continuous improvement in daily activities be established such as the company-wide quality management system as exemplified below.

NOTE: UIC requests those suppliers who deliver parts, materials and service under the scope of ISO 9001:2015 or IATF16949 to comply with the requirements set forth in the current ISO 9001:2015 or IATF 16949: standard and this document. Our goal is to develop a supply base of zero defects.

UIC is a TS16949 registered facility and it is UIC's belief that the underlying structure given by adherence to the basic principles of TS16949 makes a company stronger and more competitive while improving the satisfaction of customers, preventing defects, and accelerating continuous improvement. UIC understands the supplier's quality and performance has a direct impact to UIC's quality and performance; therefore, the supplier and UIC must continuously improve to stay competitive in the automotive market. Details are provided of required quality assurance activities in all processes of receiving, manufacturing, packaging, engineering changes, disposition of nonconforming material, etc. These quality requirements should be the basis for continuous improvements by the supplier. The supplier should monitor UIC's satisfaction and evaluate all feedback to continuously improve on quality and performance.

Model of Process-Based Quality Management System, below illustrates the processes of an effective quality management system.



Our Management Team has formally reviewed the systems, procedures and requirements contained within this manual. Suppliers are encouraged to forward comments and suggestions to UIC for inclusion in the review process.

3. Qualification for our Approved Supplier List

3.1 New and/or Current Supplier

New supplier selection and approval process begin by being identified by UIC Purchasing as a resource for a specific part, material or service. New supplier will be provided a Non-Disclosure Agreement (NDA) to be signed and returned to UIC Purchasing. UIC Purchasing, at its discretion, may send a formal Request for Quotation (RFQ) to the supplier, which in turn shall provide a timely response to the quotation request.

If it is determined that potential business relationship exists for further exploration, at any time, UIC Purchasing may perform a Corporate Ability Check and Technical Evaluation to have a preliminary assessment of the basic conditions about supplier's management, financial, technical, manufacturing and quality systems.

Once the new supplier meets the basic conditions and presents a competitive bidding, a Quality System Assessment will be performed (details described in item 3.2). A quality audit is carried out to confirm suppliers' quality systems and to verify the performance of those systems.

There shall be no special exemptions for these qualifications. All requirements must be met.

Current suppliers shall be evaluated in a regular basis and may remain as approved UIC supplier by meeting and/or exceeding UIC and its customer requirements. Acceptable score card evaluation and acceptable performance on periodic QAV assessments are the basic requirements. Eligibility may also be determined by means such as:

- Participation and compliance with all UIC systems, procedures and requirements contained within this manual;
- Full compliance with laws and regulations of each country and region where the supplier is established, and with the corporate ethics;
- Confirmation of performance in all required areas;
- Timely reply to RFQs and competitive bidding.

Remark: QAV audits are implemented according to an annual plan using a globally common set of viewpoints.

An Approved Supplier list will be maintained by UIC. The listing will be updated on a continuous basis by the UIC Purchasing.

When a new supplier or a current supplier is awarded a business by UIC, it is the supplier's responsibility to review all Purchase Orders received from UIC and verify that all terms can be met, including the UIC Terms and Conditions of Purchase (document available with the RFQ package and at www.usuiusa.com). UIC Terms and Conditions of Purchase applies to all purchase orders. The supplier must notify UIC in writing within 10 days of receipt of any item that they do not agree or take exception.

3.2 Quality System Assessment

Supplier Quality System Assessment is performed based on the mandates established on UIC Quality Audit Validation (QAV) form (SQ-0033)

Current, new or potential suppliers will undergo a QAV audit. ISO/TS/IATF16949 certifications do not exempt any supplier from being audited by UIC. However, in some cases, registration may preclude a supplier from being surveyed.

Audits will be conducted on a frequency determined by the UIC SQE or any other Usui Quality team member. UIC's customers may occasionally participate with UIC team members on the quality audit.

The supplier shall, with sufficient notice, allow UIC and its accompanying customer(s) to assess and/or audit their manufacturing processes and/or quality systems. These audits will determine the supplier's ability to meet the requirements of UIC.

On-site supplier assessments performed by UIC Quality members will be used by UIC as one method of ensuring that requirements are met. UIC may determine, based on supplier performance rating system results, which of the sections are to be assessed or if a full assessment is required

The QAV form, a Self-Assessment Questionnaire, may be forwarded to a supplier for completion when UIC is considering awarding new, additional business and/or prior to an on-site assessment being performed.

The self-assessment questionnaire shall be completed as requested and returned to the originator by the requested date. It is expected that suppliers will utilize a multi-discipline approach in order to complete the survey document. If questions are considered to be not applicable, indicate N/A.

In addition to the QAV form, manufacturing process audits are conducted using the supplier's process flow diagram and control plan as a guide.

The QAV survey is rated according to the form guidelines, which is also based on ISO 9001:2015 or IATF 16949 QSA checklist. A copy of the completed assessment or section(s) shall be forwarded by a UIC SQE to the supplier; who must initiate any follow up actions required.

Any non-conformances, as a result of the QAV audit, shall be corrected in a timely manner and evidence of the corrective action shall be made available to UIC.

4. Supplier Quality Requirements

4.1 Certified Products

All mass production parts and materials suppliers shall certify their products to meet or exceed acceptance established at Production Part Approval Process (PPAP) by the supplier. This shall include all parts and materials supplied to UIC or supplied as pass through to UIC's customer. If the quality level falls below the established quality standard parts and materials shall be considered non-conforming. The supplier shall take immediate containment action and re-establish certification.

4.2 SPC/Capability

Suppliers shall monitor process performance using the appropriate statistical techniques in accordance with AIAG Statistical Process Control manual.

Suppliers are required to use statistical methods for the control and continuous improvement of control characteristics and/or process parameters. Suppliers shall illustrate that new products and engineering changes to products conform to all specifications, including process capability. The supplier shall demonstrate process capability according to AIAG PPAP manual using Ppk process

capability index acceptable level is $Ppk \geq 1.67$ unless otherwise agreed with UIC.

The Inspection Standard (SQ-004) will specify all characteristics in addition to the control characteristics illustrated on the product drawing. Process Capability Index (Cpk) on a stable process shall be ≥ 1.33 at least 125 parts with appropriate random sample shall be taken.

Process Performance Capability Index (Ppk) shall be ≥ 1.67 . Ppk acceptance criteria shall be used to evaluate any data from a period less than one month. The supplier may be requested to provide a summary of Cpk results over a certain period of time along with the X-bar and R charts. Should characteristics be identified during launch, production, and/or customer end use that were not originally deemed as a control characteristic but have later been proven to be significant, the supplier may be requested to provide statistical evidence of control and capability, if supplier cannot meet Cpk or Ppk specifications, corrective actions shall be taken such as:

- Investigate and determine root cause and perform corrective actions
- Execute 100% inspection and improve capability by continuous improvement

When used in the monitoring and measurement of specified requirements, the ability of computer software to satisfy the intended application shall be confirmed. This shall be undertaken prior to initial use and reconfirmed as necessary.

Confirmation of the ability of computer software to satisfy the intended application would typically include its verification and configuration management to maintain its suitability for use.

4.2.1 Control Characteristics

When a UIC customer's special characteristic is shown on the part drawing or referenced in the specification, the supplier is required to comply with UIC customer requirement.

Control characteristics identifying	Gauging	UIC Requirements (unless otherwise agreed with UIC)
Significant or Key Characteristic	Variable	Ppk ≥ 1.67 Cpk ≥ 1.33 Gage R&R $\leq 10\%$
Critical Characteristic	Variable	Ppk ≥ 1.67 Cpk ≥ 1.33 Gage R&R $\leq 10\%$

4.3 Process Control

A control plan (SQ-010) shall exist for UIC's production processes. All control characteristics shall be identified on the control plan, PFMEA, work standards, inspection instructions, and inspection standards. A machine checklist should exist for all process or equipment parameters that affect the quality of UIC's part. This machine checklist should be utilized a minimum of once per shift for all processes unless otherwise agreed to by UIC's Supplier Quality Engineer (SQE). The frequency and quantity of process and product checks should be approved by UIC's representative, in most situations, the SQE.

4.3.1 Inspection Standards

Inspection standards define the dimensional features, performance tests, and other drawing requirements to be checked, test equipment (gages and fixtures) to be used, inspection methods, acceptance criteria, and sampling plan for mass production inspection activities. The Inspection standards may be amended based upon the continuing results of process qualification and production

capability results. It is the responsibility of the supplier to prepare inspection standards for review and obtain approval from UIC prior to PPAP submittal, see Inspection Standard form. Once approved, SQE will keep a copy of the inspection standard and forward the original to the supplier.

4.3.2 First-Piece Approval

The supplier should have a written procedure that describes the method and responsibilities for approving a new or revised setup prior to running a production lot. Setup parts and material must be identified and segregated from production material. Setup parts or material can be tagged, labelled, color coded, or destroyed, but must be moved out of the process flow to prevent mixing with acceptable products or material. First-piece inspections are required prior to production runs and after each machine setup, die change, or process change to enhance compliance to specification during a run. This inspection shall be consistent with the acceptable judgment criteria as specified by UIC. First-piece parts or material should be identified and retained, on the particular equipment until the job is complete. These parts shall be used as proof of conformity and for comparison in the event of any detected non-conforming conditions.

4.3.3 Final Audit of Process/Engineering Changes

Check all impacted product characteristics, (dimensions and materials). The supplier is responsible for performing an audit of all the changed dimensions or requirements on the first six shipments (release orders) of an engineering change which includes design and/or process changes. The audit will, at a minimum, include the dimension(s) affected by the change and feasible control characteristics. The supplier should submit to the SQE all changes to the Inspection Standard for approval and revise all applicable documentation.

4.3.4 Early Production Control- (Pre-launch Control Plan / Safe Launch)

Early production control is required for products or processes that are being developed by UIC, new part releases, and/or significant changes to the supplier's product or processes. This process is the supplier's effort to gain control of its processes and provide ZERO quality issues during ramp-up of mass production. The supplier shall develop a pre-launch control plan which shall include significant enhancements to the supplier's production control plan. The supplier shall perform 100% visual inspection and the criteria approved by the SQE. The early production control should be performed on all parts until three months after the supplier's start of mass production excluding minimal builds for samples. The supplier can stop early production control after the completion of the required duration if all quality issues have been resolved or corrected. The supplier should maintain all records; i.e., inspection checklists, pre-launch control plan, etc. during early production control.

4.3.5 Parts/Material Recertification

The supplier has the responsibility to ensure that purchased production parts/material supplied to UIC shall be in compliance with all material specifications shown on the drawing and /or purchase order. Parts I material certification containing actual per request measured results may be required at designated intervals. UIC shall determine the need for part and material certification. The requirement for certification will be shown on the purchase order.

4.4 Process Certification

The supplier has the responsibility to ensure that production processes are in compliance with all material specifications shown on the drawing and/or purchase order. Process certification containing actual measured results with a minimum 1.33 Cpk index is recommended. UIC shall determine the need for process certification verification.

4.5 Zero Defects Acceptance

The supplier shall adopt acceptance criteria of zero defects on parts, materials, products and services supplied to UIC.

4.6 Product Sorting

In the event that defective supplied product or material is discovered at UIC and/or at the UIC customer location, it is the supplier's responsibility to replace or sort the defective material in accordance to the direction given by UIC. UIC holds the right to sort/rework supplied product or material at any time, to ensure the customer's requirements are not compromised. The supplier shall be responsible for all expenses including, but not limited to, UIC administration fee, hourly rate charges, travel expenses and containment company charges.

4.7 Restricted Material IS014001

The supplier shall comply with all current governmental and safety restraints on restricted, toxic and hazardous materials; as well as environmental, electrical and electromagnetic considerations applicable to the country of manufacture and sale.

4.8 On Time Delivery

100% on time delivery is required of all suppliers. Appropriate planning information and purchase commitments to enable suppliers to meet this expectation are provided by UIC and contained in UIC's Purchase Order.

Supplier delivery performance is monitored and is an element of the supplier performance rating system. Appropriate corrective actions shall be taken in the event of failure to meet these delivery requirements.

4.8.1 Excess Freight Cost

The supplier shall be held responsible for excess freight cost incurred because of lack of supplier performance. This includes premium freight charges from the supplier facility to the UIC facility as well as any premium freight charges passed on by our customer.

4.9 Lot Traceability

The Supplier is responsible for maintaining lot traceability while product is at UIC. Each product shall be identified in accordance with UIC's drawing. The supplier should be able to use UIC's release number to identify raw material, lot number, manufacturer's date, shift, and where possible, the operator or other means to identify the date, shift and cavity from which the product was produced. UIC must approve the supplier's alternative traceability method.

Traceability of the raw material, work in process, and finished products must be established and maintained from the receipt at the supplier's facility through delivery to UIC. Raw material includes all material used in component parts that produce the final product. Lot control must provide traceability of material from the point of usage back to the point of manufacture, where parts are put into assemblies at the supplier's locations, to the assembled product. Records indicating inspection, test results, and final inspections must reference principle or subordinate lot codes.

Heat separation is needed unless otherwise specified/agreed in written by UIC.

The supplier traceability internal controlled document records include but are not limited

to: lot numbers, raw materials and sub-components receive dates / consumption dates, production dates / range, process and machine parameters history, maintenance-repair history, manpower changes, inspection dates and evaluation test results, finished goods ship dates, process changes etc.

The supplier must have FIFO at their plants and shall confirm their lower tier's FIFO to support and sustain traceability. FIFO must be followed for all materials and sub-components through all production stages and parts completion, until finished goods delivery.

4.10 Domestic and Foreign Content

Seller shall provide, upon request, the domestic and foreign content of any materials purchased by UIC, as required by U.S. laws and regulations (i.e. NAFTA, etc.)

4.11 UIC Supplied Product

The supplier must notify UIC immediately of suspect product. UIC will follow all ISO 9001 - 7.5.4 (Customer Property) guidelines for Customer Supplied Product. UIC shall maintain records of certification.

4.12 Design Change and Certified Product

Design changes and certified product shall be identified as determined by UIC. This identification should be attached in a clearly visible location to the exterior of the package/container. The identification should be enclosed so it cannot be damaged. Each skid and/or Skid Label must be identified.

4.13 Initial Production Parts Procedure (I.P.P.)

Supplier shall implement the following items in order to facilitate the smooth control of initial parts deliveries during the design and prototype timing and mass production. The following procedure shall be used when sending in prototype event delivery parts, design change parts, non-conformance countermeasure parts and process change parts i.e. tool changes, jig changes, production location change. Supplier shall submit the Initial Parts Notification to the QC or SQE of the appropriate facility (UIC /OH, VA) label to each container during the initial delivery of parts that fall within the scope indicated above. Indication shall be yellow paper per the attached format (See appendix) Please confirm with the appropriate facility (UIC /OH, VA) on what indication should be used and what initial parts notification method is required for finished and pass through.

In the event a supplier fails to provide proper material identification or labeling as stated within this document product cannot go directly to the warehouse. A dock charge may be assessed to the supplier. Product will be considered nonconforming and corrective action may be required.

4.14 Sub Supplier Control

4.14.1 Requirements for the quality system

The Tier 1 supplier shall require its sub supplier to obtain ISO 9001:2015 and IATF 16949 Certification as the requirement for the quality system.

4.14.2 Scope

Sub supplier processing following parts incorporated into finished products of UIC:

- Materials (Main basic material for products)
- Accessories

4.14.3 Criteria to use a sub supplier

The Tier 1 supplier shall use a sub supplier in accordance with the criteria below. The tier 1 supplier shall submit the "Request for Approval of Using Sub supplier" (0244X) to the Quality Assurance Department prior to using the sub supplier.

4.14.3.1 Important safety parts

Important safety parts shall not be outsourced for processing. However, this rule shall not always apply when approval from the following department managers is obtained:

- a. Quality Assurance Department for purchased products
- b. Responsible production departments for OEM products

4.14.3.2 Checking items to use a sub supplier

A supplier shall evaluate the following items in accordance with its criteria regarding its sub supplier end items of "Request for Approval of Using Sub supplier" (0244X):

- a. Whether the sub supplier provides sufficient management resources, and whether its production process is under control.
- b. Whether the sub supplier possesses production and quality control capacities to satisfy the required QCD.

4.14.4 Continuous evaluation

The Tier 1 supplier shall evaluate and monitor the implementation of its sub supplier's quality system on a periodic basis or on an as-needed basis.

4.14.5 Sub supplier evaluation performed by UIC

UIC shall perform audits on the sub supplier, which a supplier is using, as necessary.

5. New Model

5.1 UIC Project Engineer

The New Model Process at UIC includes several trial events leading up to mass production. Suppliers will be assigned a Project Engineer, who will work with them from the time business is awarded.

5.2 Critical or Non-Critical Parts Supplier

UIC will determine whether a supplier will be considered a "Critical" or "Non-Critical" parts supplier. Once this has been determined a Kick-off meeting will be schedule between the supplier and UIC. At this time, schedules, quality requirements, required documentation, mass production requirements, packaging requirements, and contact information will be discussed at this meeting. A kick-off, Trial, and PPAP checklist will be used to ensure all issues have been captured as UIC starts into the process development phase of new model.

5.3 Design Review Meeting

UIC will schedule a design review meeting with the supplier. At this meeting critical characteristics, past problem history, control datums, drawing reviews, design for manufacturing, any testing requirements and schedule will be discussed and reviewed. The supplier should bring up any concerns of the design, what type of assembly equipment will need to be used to control the part, and any other concerns that they may during this meeting. The Design Review Checklist will be used to ensure all issues have been captured.

5.4 Trial Products requirement

Trial requirements will be negotiated between the Project Engineer, SQE and the Supplier. Suppliers are required to submit data and sample parts as requested throughout the trial event process. Suppliers are responsible to guarantee that all parts submitted as trial parts, meet the requirements that have been established between the UIC Project Engineer, SQE and the Supplier, and ensure that each part number and container is identified with an Initial Production Parts label. (Appendix 16.9 Initial Production Parts label.) If trial parts do not meet established requirements, arrangements must be made prior to shipment of the parts.

5.5 Process Review Meeting

UIC will schedule a process review meeting with the supplier. At this meeting inspection gages and standards, MSA plan, process capability, quality documentation, trial event schedules and requirements, P.V. testing requirements and Run@rates will be discussed and reviewed. The supplier should review process flow and over manufacturability of the part during the meeting. The quality review, supplier mass production readiness process check sheet, and the Run@rate worksheet will be used to ensure all issues have been captured.

5.6 Trial Time line

The Supplier should notify the Project Engineer of all scheduled trials to allow sufficient time for the Project Engineer to make plans to attend with SQE. If the Project Engineer is not notified of the trial, the supplier may be required to run the trial again at an agreed upon time.

5.7 Mass Production Trial

UIC will schedule a Run@rate to performed on the actual mass production process. The trial parameters will be established between the supplier and UIC. The supplier shall demonstrate process capability, meeting capability targets, quality documentation, and all open issues have been closed.

5.8 PSW approval

UIC will approve the supplier for mass production after:

a.) Supplier has closed out all open items for new model. b.) Passed the Run@rate with no pending open issues. c.) All QAV action items list closed. d.) Approved PSW.

6. Production Part Approval Process (PPAP)

The supplier shall have a system established that will provide adequate planning to support obtaining PPAP approval in accordance with the due date provided by UIC's purchase order.

All PPAP requirements shall be issued to the supplier using the Supplier Submission Requirements check sheet. UIC-SQE will provide and approve the requirements contained within the submitted PPAP. All PPAP documents shall be submitted to the UIC-SQE.

6.1 Advanced Product Quality Planning (APQP)

The supplier shall investigate, confirm and document the manufacturing feasibility of the proposed products and submit it with the quote response, (SFC).

The supplier shall have an established project management system to develop and track all new and modified products (Figure: Product Quality Planning Timing Chart). The supplier shall submit, at a minimum a monthly Production Preparation Plan or as required by UIC (refer to attachments PPP). The supplier shall identify all milestones that are significant to the successful launch of the product.

Status of the design of the processes and gauges, manufacturing of tooling and gauges, completion of runoffs, completion of inspections and testing, submission of PPAP package, receipt of a signed Part Submission Warrant (PSW), and start of production shall be tracked by the supplier. The product development process must identify all phases and milestones significant to the project (Figure 2.0, Product Quality Planning Timing Chart). The process is used to develop a product plan to ensure that specific inputs, outputs, and/ or deliverables are sequenced at the proper time. The supplier shall have routine cross-functional assessments and feasibility commitments of the project to assure that the project meets UIC's submission date of the PPAP package as well as submission of samples to the correct level on time. All UIC suppliers are required to submit the proper documents in all phases of pre-production, production, and continuous improvement. In addition, UIC and UIC customers are afforded the right to verify conformance of product at the supplier premises upon 24-hour notification to the supplier.

The supplier shall support and participate, when requested or required, in UIC's product development process. This shall include, but not limited to, an onsite audit using the Supplier Readiness Check sheet (). The supplier may be required to perform periodic reviews using the Supplier Readiness Check sheet, Machine Capability Analysis, PPAP runoff, high volume production trials, and a production readiness review prior to start of production with UIC. These activities will ensure production readiness and production part approval on time.

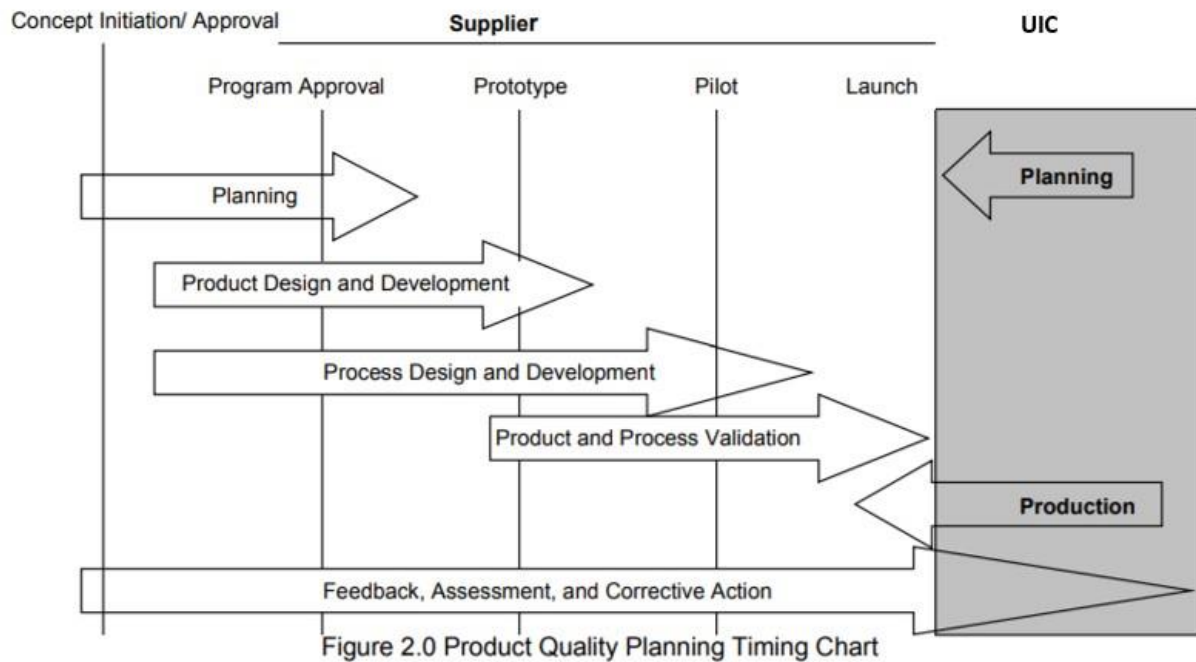


Figure 2.0 Product Quality Planning Timing Chart

6.1.1 APQP Status Reports

The supplier may be required to report their APQP status on the Supplier Readiness Check sheet (refer to attachments). These reports will include a detailed review of the following:

- Production Preparation Plan; a timeline including status of all tooling, equipment, facilities, and gauging for both suppliers and sub-suppliers
- Organizational chart of the entire team, including sub-suppliers (tooling, gauging, raw materials, etc.) with contact information
- Facilities, tools, and gauges
 - Capacity studies

- Upgrades to any facilities
- Design of tools and gauges
- Poka -Yokes (error proofing corresponding with PFMEA)
- Tooling, equipment, and gauge specifications and acceptance criterion
- PFMEA
- DFMEA (if applicable)
- Process flow diagram
- Part Flow Diagram – illustrating all sub-suppliers with the name of the company and their location (refer to attachments)
- Control plan with critical sub-supplier control plans
- Measuring systems evaluation
- Preliminary process capability studies (identification of UIC requirements)
- Design validation plan and report
- Packaging plan
- Sub-supplier/sub-contractor management
- PPAP submission
- Early Production Control (Pre-launch control plan, inspection check sheet, etc.)

6.1.2 Production Trials

The supplier should perform production readiness reviews and trials internally (i.e., Mass Production trials, what-If trials, etc.) prior to the start of production for a minimum of two hours for all purchased parts or as required by UIC. The supplier should use UIC’s Supplier Readiness Check sheet for reviews and the accompanying worksheet “Production Trial Runoff Results” for recording the data from the mass production trials. The mass production trials (MPT); i.e., run-at-rate, must meet overall efficiency, scrap, and downtime targets. Please refer to the Supplier Readiness Check sheet for typical targets. These audits will ensure that process controls, machine checklists, cycle times, work standards, inspection standards, capacity, downtime, consumable tooling, spare parts, SPC capabilities, changeover procedures and instructions, subcomponent PPAP approvals and inspections, gauging, corrective actions for downtime, scrap & efficiency, and packaging requirements are in place. The supplier must resolve all non-conformances found during the audits prior to start of production. The supplier will coordinate with UIC Project Engineer to allow UIC team to witness the subject trials if requested by UIC.

6.2 Submission Requirements

The supplier shall fully comply with the requirements of the Production Part Approval Process Manual published by AIAG. The following requirements are in addition to and/or for further clarification of the other requirements of the PPAP manual. If there are discrepancies between this Supplier Quality Assurance Manual and the purchase order, the specified requirements of the purchase order will supersede. UIC will inspect several pieces of the submitted samples for approval. If non-conformances are found, it is the responsibility of the supplier to determine the root cause and implement corrective actions. Once the corrective action has been effectively implemented, the supplier shall resubmit PPAP to UIC-SQE.

6.2.1 Prototype or Off-Tool Samples

When UIC purchase orders or agreements require prototype samples, it is acceptable to make this product from prototype tooling and/or processes. When UIC’s purchase order or agreements require “off tool” samples, a minimum of one cavity of a multiple cavity mass production tool and non- mass production processes will be acceptable to produce these parts. The product, if possible, should be made from mass production tooling and processes. These processes do not have to be located at the mass production manufacturing location. Due to continued decreases of program lead time, however at times, UIC will be required to order prototype or off-tool samples.

The supplier should provide three pieces, at a minimum, from every multiple mold or cavity of each die and/ or process unless otherwise specified by the Supplier Advancement Engineer or SQE for each purchase order. The raw materials used should be the same as mass production.

The pieces shall be identified with the Delivery Label of Samples Form (refer to attachments). All SC and CC requirements shall be dimensionally inspected on three pieces from each mold or cavity used to produce the parts. Acceptance Criteria for UIC will be the compliance of all parts to be found in specification for all SC and CC requirements.

The supplier should 100% inspect a minimum of five pieces of these parts. If some dimensions are out of specification, however, this will not affect acceptance by UIC unless they are one of the control characteristics specified above. All of the above-mentioned data shall be packaged in one container with the **three** pieces and material certifications for all raw materials used on UIC's product.

A Delivery Label of Samples (refer to attachments) shall be used on the outside of the package containing the parts and attached to each of the three pieces for identification of the parts. The sample submission package with parts shall be sent to each SQE of the applicable UIC location(s), as indicated on the purchase order(s).

6.2.2 Off-Process Samples

When UIC's purchase orders or agreements require off-process samples, this product shall be produced from mass production tooling and processes and located at the mass production manufacturing location. The equipment and processes may still be in development, but the hard tooling and equipment must be that which will be used in mass production. The raw material must be the material to be used in mass production, and the processes should be run by mass production operators. The supplier should provide three pieces, at a minimum, from every multiple mold or cavity of each die and/or process unless otherwise specified by the SQE. The pieces shall be identified with a Delivery Label of Samples (16.18). All control characteristics shall be dimensionally inspected on three pieces. All control characteristics defined as testing shall be tested on a minimum of three pieces, unless the SQE has agreed to, in writing, either a sample size of less parts or waived testing. The supplier should 100% inspect a minimum of three pieces of these parts. All above-mentioned data will be reviewed and if UIC finds all is in compliance, acceptance will be provided. All of the aforementioned data shall be packaged in one container with the three pieces and material certifications for all raw materials used on UIC's product. A Delivery Label of Samples shall be used on the outside of the package containing the parts and on each part for identification of the parts. The sample submission package containing the five parts should be sent to the SQE at the UIC location(s) as indicated on the purchase order(s).

Any exceptions to the above requirements must be approved by the SQE in writing.

6.2.3 PPAP Samples

PPAP samples and packages shall be required in accordance with the latest edition of AIAG's PPAP. UIC will issue a purchase order for PPAP samples for each UIC location that will be using the mass production parts. The supplier shall provide PPAP samples from a runoff of the processes, equipment, tooling, and gauges that will be used in mass production at the mass production location using the operators to be used in mass production. A minimum of 300 pieces, or eight hours of production, based upon declared equipment cycle time to meet required capacity, shall be produced for the PPAP runoff. Results from all testing requirements shall be provided on a minimum of five pieces. Five pieces from the runoff shall be 100% dimensionally inspected and submitted with the "balloon" print to UIC. Capability (Ppk) results from all SCs and CCs, requirements shall be submitted and meet the minimum of 1.67. Ppk results shall be taken from a minimum of 30 pieces

(or 125 pieces in some specific cases – supplier shall confirm with Usui Purchasing or SQE representatives) of data from each cavity of a multiple die or mold, each process, and possible tooling unless the SQE has agreed, in writing, to decrease the sample size. For Ppk, the 30 pieces (or 125 pieces) are to be taken from the total population of the entire runoff. Any exceptions to the above requirements must be approved by the SQE in writing. A PPAP checklist (SQ-080) is available to guide the supplier to a successful PPAP submission.

The PPAP submission should be submitted electronically (confirm with the SQE for preference):

1. **Internal Approval:** (UIC use only) This section is left blank for UIC use.
2. **PSWs/Certificates /Drawings:** This section should contain the Part Submission Warrant from the supplier to UIC and all approved sub-supplier's PSW's and the applicable drawing(s) with any applicable UIC specifications.
3. **PFD/Control Plan/Inspection Std.:** Should include the Process Flow Diagram, Part Flow Diagram, Control Plan, and Inspection Standard. Please refer to attachments for each document.
4. **PFMEA:** Process Failure Mode Effects Analysis. The supplier should show actions and investigations on the top 3 RPN numbers or as designated by Plant on the PFMEA. This should be a baseline to be used to continuously improve the process along with improvements of the controls and Poka Yokes to achieve acceptable ratings.
5. **Capability Studies:** Should include raw data, histogram, and Pp & Ppk results for all control characteristics.
6. **Insp. /Test Data:** Should include the results from the 100%-dimensional inspection of three pieces along with the balloon print corresponding with the data and Performance data from all tests on a minimum of 5 pieces. All Testing must be performed by a facility registered to ISO/TS 16949 or an ISO/IEC Guide 17025 conforming lab.
7. **Gage R&R/ Material Certificates/ IMDS:** Should include all Gage R&Rs for all production gauges, micrometers, calipers, etc. and certification/calibration of equipment to be used to measure any of the components or final assembly of the supplier's product in accordance with TS 16949. All Material Certifications for each component used on the supplier's product should be included.

The Supplier should be registered to the International Material Data System. There is no cost for this registration process. There is a nominal fee for training on how to use this system. www.mdssystem.com. The supplier should perform the following actions to complete the submission;

1. Complete the material data sheet in the IMDS for all materials used on the supplier's product, following the most recent IMDS Recommendations.
2. Include the UIC part number exactly as specified on the Purchase Order.
3. Release the material data sheet, using the "Send" function in IMDS, to the IMDS Company ID for the specific UIC Commodity/Location.
4. Must have IMDS ID# included on the AIAG Part Submission Warrant form

IMDS Company ID for the specific UIC Commodity/Location can be found on UIC Supplier

Network or supplier must contact directly related UIC plan personnel.

The supplier should submit in the PPAP package an approved MDS ID number and a copy of the approval.

8. **Tooling:** For UIC-owned tooling, the supplier should submit the Tooling Record (refer to attachments FSQM-005) for each item or assembly classified as tooling; Progressive Die, Aluminum Casting Die, Injection Mold, gauge, fixture, etc. If requested the supplier will submit a CD with all assembly drawings with a bill of materials, and detail drawings (i.e. core pins, punches, die sections, stripper plates, electrodes, etc.) of each tool, gauge, fixture, etc. If the supplier believes a piece of tooling is proprietary information, the supplier must request in writing prior to PPAP Submission that UIC agrees that drawings/specifications of the subject item will not be submitted to UIC.

9. **Annual layout inspection and functional testing:** The supplier shall, at a minimum, perform one annual 100% dimensional inspection and complete all testing requirements to illustrate compliance to all UIC requirements in accordance with the drawing unless otherwise approved by SQE. The primary focus is to illustrate compliance to all dimensional and material requirements. The dimensional inspections must be performed on each cavity or die, if multiple dies or cavities are used for production. Records of the re-verification results may be submitted to UIC one year from the original approval date. Annual validation documentation shall accompany the AIAG Part Submission Warrant, control plan and design record of each part number. Up to date Material certification that includes chemical analysis data, material grade, and clearly states compliance to all required specifications (if applicable) shall be submitted with the annual layout unless otherwise agreed with UIC. UIC may perform 100% dimensional inspections and applicable testing on an annual basis to verify drawing requirements are being satisfied. These inspections apply to all multiple dies or molds with multiple cavities. The supplier shall correct and notify UIC Supplier Quality Engineer of any nonconformance discovered from these inspections immediately.

7. Control, Monitoring & Verification of Measurement/test/ Tooling Equipment

All equipment provided by UIC or its customer to suppliers for measurement, test and tooling activities shall be monitored by the supplier with respect to the latest product engineering change level for which each piece of equipment is used.

UIC Tooling Location Record must be submitted and remain on all tools, gages, assembly equipment owned by UIC or UIC's customer.

The recall, modification, update, verification, return and/or replacement of all such equipment shall be monitored by UIC.

All suppliers shall have a documented system in place for monitoring all changes to UIC supplied measurement and test equipment. The system shall include an annual verification procedure which shall include confirmation of current revision levels of all equipment supplied by UIC.

All UIC supplied measurement; test and tooling equipment shall be used for UIC applications only. Records shall be kept and available for review by UIC upon request.

The supplier is responsible and financially accountable to maintain, at UIC's acceptable level to ensure that these items can verify and/or produce product quality in the production levels

required, (annually calibrate, if appropriate) all UIC supplied measurement test, and tooling equipment. Design intent shall be maintained.

Routine maintenance includes, but not limited to, regular cleaning and upkeep, replacement or worn parts (i.e. springs, ejector components, switches etc.) and parting line and locking surface maintenance.

The supplier must notify UIC Supplier Quality Engineering Department immediately of tooling that is not capable of product quality or capacity.

8. Non-Conforming Product- (SDR-Supplier Material Defect Report)

Non-conforming or discrepant product is defined as: deviation from drawing specifications, purchase order requirements, UIC product and process specifications or standards and industry product and process specifications and standards, including but not limited to the areas of quantity, appearance, material, metallurgy, packaging, handling, shipping, delivery, cleanliness and dimensions.

When non-conforming product is detected by the supplier after product has shipped, is in transit or delivered to UIC, supplier shall take appropriate action to mitigate the effect including formal, detailed notification to UIC. Contact shall be made by a telephone call to the UIC SQE.

Notification shall include a clear description of the non-conformity, which includes as required: parts affected, part numbers, quantities and dates delivered or in-transit. As appropriate and required the supplier shall provide traceability information for lots or batches of material or product.

8.1 Immediate Notification

Immediate action shall be taken in the event that a supplier or UIC has reason to believe that nonconforming product condition exist. Contact shall be made by a telephone call to or from the UIC Quality Engineer, or the Quality Control Manager.

Notification to the supplier shall be followed by:

Immediate containment, until disposition is completed, of all suspect material at:

1. Supplier
2. UIC
3. In-Transit
4. UIC's Customer facilities

Disposition can include, but is not limited to, replacement with new material, sorting, priority delivery as agreed.

8.2 Supplier Defect (Non-Conformance) Report (SDR)

Supplier Defect (Non-Conformance) Report (SDR) is used to notify the supplier of non-conformances, discrepancies and/or rejections. The SDR is sent via e-mail directly to the Supplier contact and copy to UIC SQE from any UIC facility receiving Direct material. A SDR may be initiated upon detection of non-conforming product. Requests for corrective action may be required from the supplier.

The supplier must respond via e-mail/phone call directly to the SDR issuer and CC to UIC SQE within the requested timeframe.

Supplier Responsiveness – UIC will monitor speed, timeliness and effectiveness of corrective or preventive actions using the 8D responses, and may use it as input for awarding future business and monitoring performance.

If a supplier's product is determined to be defective in material and/or workmanship, as defined by the design requirements, product(s) will be immediately contained.

UIC and the supplier shall determine if the product can be inspected to remove defects from the "lot" that has been contained.

If time does not allow the supplier's personnel to arrive, the supplier shall provide detailed inspection instructions to UIC.

UIC reserves the right to approve all inspection methods.

If it is determined that inspection alone cannot detect the defect, the product(s) will be returned to the supplier or scrapped as per written agreement by the supplier and UIC.

UIC will identify any costs incurred from these defective parts and will initiate a Supplier Cost Recovery Chargeback (SCRC) with the supplier.

If the purchased product is needed for urgent production at a UIC facility, the supplier shall provide a rapid inspection team to UIC's production facility for inspection, or to the use of a third-party inspection service with the cost of service being assumed by the supplier.

In most cases, as appropriate, the supplier shall be given the option regarding sorting method by the affected UIC facility.

The use of a third party to sort defective product does not relieve the supplier of their responsibility for the quality or delivery of product. If the supplier elects to certify or rework material, it is the supplier's responsibility to perform all activities and incur all costs associated with certifying or reworking the defective parts.

UIC may have to perform sorting to eliminate production downtime prior to the supplier's visit, the supplier will be responsible for all cost.

The supplier is responsible for the timely authorization to return suspect product. The supplier shall provide immediate and long-term containment to protect UIC from the receipt of future suspected defects. The supplier shall investigate and determine the root cause(s) of the quality issue by using the 5 Why Process.

UIC shall have the right to perform any, and all, necessary safe, destructive and non-destructive tests to evaluate fully the performance of the supplier's product or services.

UIC shall have the right to utilize the service of an independent ISO 17025 accredited testing laboratory.

The supplier shall reimburse UIC for the expense of said tests only if testing confirms the product or service is defective.

UIC must provide proper accounting of hours for inspection to the supplier.

If the purchased product is determined to be defective or non-conforming for reasons other than those defined on the design prints, the two parties will discuss and determine if containment action is required.

If containment action is required, inspection criteria will be established. If containment action is not required, the supplier's product will be approved for use in production with a proper record of using the deviation process.

8.3 Temporary and Permanent Corrective Actions from Supplier-8D Report

Temporary corrective actions must be documented and forwarded to the UIC Quality Control Manager and SQE within 24 hours of receipt of the SDR via e-mail showing as a minimum: containment activities and/or interim corrective actions, material disposition, sort results, and investigating team with primary contact information. (D1, D2 and D3)

A comprehensive corrective action report is required within 5 days. As a minimum, the report shall have identified: root cause (both system failure & non-detection), permanent and irreversible corrective actions to be taken indicated with commitment date(s) and the associate(s) responsible for the activity/action. (D4, D5, and D6)

A complete 8D and 5-Why report must be submitted to UIC within 14 calendar days.

Response timing and effectiveness will be monitored and reviewed by UIC management. Updated corrective action reports are required when all permanent corrective actions are in place. Validation of permanent corrective action taken will be documented and submitted before SDR is closed.

A UIC SQE or designee may require on-site verification of permanent corrective actions. Supplier may be required to present corrective actions and evidence of effectiveness to UIC's SQE or other management.

8.4 Return Material (product) Authorization

The supplier has to submit a Return Material Authorization (RMA) for the non-conforming material/pats within 24 hours with their initial response to a SDR. If a RMA is not received within this allotted time the material will be returned to the supplier without approval and billed back accordingly.

Non-Conforming material/parts shall always be returned at supplier's expense. The Supplier Performance Rating will be affected for the full quantity returned.

8.5 Goal-Setting and Problem Resolution

UIC and its suppliers strive to achieve excellence in manufacturing, and may review certain UIC units and other companies for examples of best practices.

Best practices are business principles, often identified through benchmarking, that produce better results.

Suppliers are strongly encouraged to become familiar with these concepts and become effective practitioners of continual improvement.

Suppliers shall be able to determine areas that need correction and improvement:

- Quality results
- Supplier quality performance indicators - e.g. PPM, number of Discrepant Material Reports,

- etc.
- Delivery
- On time delivery, deviations in deliveries, etc.
- Cost
- Price reduction cost of quality, etc.
- Service and innovation
- Continual improvement initiative, capacity planning, invoicing problems, responsiveness to change notices, etc.

The supplier should be able to relate all goals to UIC requirements and priorities.

It is very important to determine the scope of the issues or processes to be studied. The supplier should identify any gaps between current processes and the requirements, determine severity of the gaps, and prioritize its efforts to minimize and eliminate gaps, using a structured, and improvement methodology.

The UIC recognizes the 8D PROCESS for problem solving or 5Why (SQ-026).

8.5.1 Poka-Yoke (Mistake – Proofing)

When potential causes of non-conformance are determined, the supplier shall employ solutions in the process to prevent or detect these non-conformances. These solutions shall be independent of operator’s actions.

9. Charge-Backs

All costs associated with the shipment of non-conforming product are the responsibility of the supplier. Costs shall include, but are not limited to, direct and indirect labor, downtime of UIC or UIC’s customer, expedited freight to UIC or UIC’s customer, any gauges, materials, fixtures, and labor associated with sorting or reworking at UIC or UIC’s customer.

All costs associated with actions related to processing of justified SDR are the responsibility of the supplier and due to that UIC will charge these costs to the supplier. Actions associated with processing of SDR shall include, but are not limited to, issuing of internal report, issuing of complaint, organizing of containment actions, monitoring and review of 8D process etc.

The supplier will be responsible for all cost associated with shipping suspect material and replacement material. If UIC’s production lines incur downtime or overtime, the supplier shall be charged a justifiable amount for each hour of accumulated time, per line. A line will include but not limited to all processes that manufacture a component or assemble a product; i.e.

Rail/Joint ASSY line, end forming line, Fan Drive ASSY line, etc. In most cases, charges will be debited to the supplier for each occurrence of a quality issue at the time the charges occur – there may be more than one debit per SDR.

Following cost table will be used for supplier charge back:

1	Administrative Charges	\$ 250 per Non-Conforming Notification (SDR)
2	Sorting Charges	\$ 40/hr. sorting by UIC Personnel
3	Material Charges	Supplier’s material/parts are already processed further utilizing UIC labor and process
4	Shipping Charges	In-coming replacement material/parts and return material/parts Freight

5	Customer Expedite Charge	Supplier's non-conforming material/parts or short-shipped causes delays in UIC production lead to expedite shipment to customer
6	UIC Down time	\$40/hr. per Person – Supplier's non-conforming material or short shipment causes UIC's production line down time
7	UIC Customer Down time	Supplier non-conforming material/parts causes UIC's customer (Honda, GM etc.) production line down time
8	Others	

10.Sorting Requirements

If sorting is required at UIC facilities, the supplier shall be contacted by a UIC SQE or designee.

The supplier must provide trained associates. All Suppliers' must contact the Quality Control Manager or designee prior to entering UIC manufacturing facilities.

Safety equipment such as steel toes and glasses must be worn at all times in the manufacturing areas. Associates shall be required to review and sign UIC's Contractor Safety Policy.

The supplier shall have full responsibility of training either their associates or hired sorting companies to ensure UIC's quality requirements are being met. UIC expects the supplier to supervise the sorting and inspection activities during a sort. However, if the supplier fails to respond or in their absence UIC representation is required for sorting and inspection the following charges will apply.

- A material non-conformance administration fee per occurrence, per issue, of \$250.00 will be charged.
- After 5 days for the same issues an additional \$250.00 will be charged. This charge will repeat every fifth day until the problem is resolved.

UIC appointed associates will only perform sorting activities at UIC or a customer's facility to maintain immediate production requirements at a charge to the supplier of \$40.00 per hour, per person. If the customer requires UIC representation throughout the sort they will be billed at the established rate.

Travel time will be charged to the supplier at a rate of \$30.00 per hour per person. All other travel expenses will be billed at cost.

UIC reserves the right to determine the support required for the containment activities.

The supplier must ensure workers representing their company have the necessary skills, training and tools to perform their job / task in a safe and timely manner.

It is the supplier's responsibility to provide evidence of Bureau of Workers Compensation coverage for the workers representing their company while at UIC in the event of an accident / injury.

The supplier's associate shall complete all the required sort sheet documentation as directed by UIC Supplier Quality accurately and completely.

Note: UIC will not permit a supplier to perform rework on-site unless approved by the Quality Control Manager.

11. Controlled Shipping

If the supplier is unsuccessful in eliminating or containing nonconforming material at the suppliers' location then it will be up to the UIC Supplier Quality Engineer to determine if Controlled shipping is required to control the shipment of nonconforming material.

11.1 Controlled Shipping- Level 1 (CS1)

Includes a problem-solving process, an on-line inspection process, as well as an offline inspection process that would check for the non-conformance.

11.2 Controlled Shipping - Level 2 (CS2)

Includes the same process as Controlled Shipping - Level 1, with an added inspection process that is completed by an impartial third party. The third party is paid by the supplier. In most cases, the Level 2 inspection will be completed outside of the supplier's facility deemed appropriate by UIC.

11.3 The key steps of this process

UIC makes the determination whether the supplier can effectively correct the nonconforming material situation through the corrective action process and isolate the customer from the problem. One or several of the following issues may be considered for implementation of Controlled Shipping:

- Repeat concerns
- Duration and severity of the problem
- Incapable processes
- Quality problem at UIC customer location
- Inadequate containment and/or resolution of non-conformances via the corrective action process
- Major disruptions

Based on considerations above, UIC chooses whether Level 1 or Level 2 would be appropriate. Input for this decision may be provided by the Quality Manager and other appropriate engineering resources.

Note: It is the discretion of UIC, depending on severity of non-conformance, to go directly to Controlled Shipping - Level 2.

Communication to the supplier of action (Level 1 or Level 2) to be taken including exit criteria shall be provided (see form in appendix).

A meeting with the supplier to provide a full explanation of the containment area, deliverable, and the roles and responsibilities of the involved parties shall be initiated by UIC.

11.4 Controlled Shipping (CS1) Level 1 Process

A UIC SQE or designee notifies the supplier by calling the appropriate staff level member at the suppliers' location. This is the official notification of controlled shipping status. This notification cannot be given by voice mail or other forms of communication. Written communication confirms the conversation.

A UIC SQE or designee also communicates to the supplier in writing defining the problem, the need for additional inspection, irreversible corrective action, containment efforts, and the exit criteria.

The intent of the controlled shipping containment guidelines is to outline and describe a rigorous process that insulates UIC from the receipt of nonconforming parts and materials.

11.4.1 Controlled Shipping Containment Guidelines

The containment area must be highly visible and properly lighted, equipped, well defined and efficient material flow including clearly identified areas for incoming and outgoing parts/material.

Repairs will not be done in the containment area. The containment area must be independent of the supplier production process. Information boards must prominently display non-conformances, measures, action plan status, and results of the containment activity.

Charts must be updated daily and reviewed by management. Problem solving must be formal, data driven and documented.

Containment associates must have available to them the proper job instructions, quality standards, boundary samples, tools, and equipment, etc. Associates must be properly trained.

Preventive maintenance must be utilized, if required.

The Supplier Shall:

- Immediately establish a separate containment activity area at their location that is acceptable to UIC.
- Initiate the sort activities. Identify each component/part with a unique witness mark as agreed upon by UIC as proof of being certified by CS1.
- Apply "CS1" identification on or near each shipping label on every container being shipped to UIC. This identification information must be provided in advance of the first shipment.
- Establish and track breakpoints of nonconforming material.
- Review the results and ensure that corrective actions taken are effective, or plan required changes.
- Communicate results of sort activities to the UIC SQE in an agreed upon format and frequency.
- Meet the defined exit criteria. Exit criteria shall be established by incorporating the agreed measurements that verify that the root cause is identified and that appropriate irreversible corrective actions were implemented and effective.
- Request exit from controlled shipping and provide supporting documentation on performance to the UIC SQE or designee.
- UIC SQE evaluates if exit criteria have been met, and communicates in writing, that the supplier is no longer considered in Controlled Shipping.

11.5 Controlled Shipping (CS2) - Level 2 Process

UIC notifies the supplier of Controlled Shipping-level 2 by calling the appropriate Quality Manager at the suppliers' location. This is the official notification of controlled shipping status. This notification is given by voice mail or other forms of communication. Written communication confirms this conversation (See Appendix 16.3)

UIC Supplier Quality Manager or designee will determine distribution of Controlled Shipping notifications based on Group communication needs.

If requested, the Supplier will complete the Controlled Shipping Confirmation Reply form and return it to UIC (See Appendix)

Written communication is sent from the UIC Supplier Quality Manager, and/or other appropriate associate(s), to the supplier's Quality manager describing:

- The action being undertaken
- The non-conformance(s)
- The inspection checks required
- Exit criteria required to be achieved

The scheduling/execution of a Level 2 kick-off meeting with the supplier's management to provide a full explanation of the containment process and containment area, deliverables, and the roles and responsibilities of the involved parties will be initiated by a UIC SQE or designee. A UIC SQE shall facilitate the Kick-off meeting.

11.5.1 The Kick-off Meeting

Describe the purpose of the meeting:

UIC has determined that Controlled Shipping- Level 2 is being implemented. The production source is out of control and the nonconforming part/material must be isolated. Irreversible corrective action must be identified (documented), approved, implemented, and verified for effectiveness.

- Establish the controlled shipping plan details
- Define the exit criteria

Define the communication plan:

Name the UIC associate who will receive the information and return any feedback. Name the supplier associate who will send the information. Define the information that will be sent and the format (Corrective action and containment status, at a minimum) Frequency with which the information will be sent and method for information transmission and feedback

Attendees for the Kick-off Meeting to include the minimum:

UIC SQE and/or Quality Designee Third Party representative UIC Buyer (if requested), Supplier's Quality Manager Supplier's Quality, Operation and/or Manufacturing Manager

Describe the roles and responsibilities of the mentioned parties:

UIC must approve which third party will conduct the Level 2 containment activities. This decision will include input from appropriate UIC management. Reviews, verifies, and approves the containment and corrective action plan. Defines the exit criteria and drives resolution of all issues.

Third Party:

Provide facility, associates, and tools to perform the re-inspection activity and records results. They will identify each component/part with a unique witness mark as agreed upon by UIC, to identify as certified product. Apply CS 2 identification on or near each shipping label on every container being shipped to UIC.

Provide an appropriate space and instruction documents to perform re-inspection activity. Provide this documentation to the supplier and the UIC SQE on the progress of the re-inspection activity.

Supplier:

Contacting and issuing a purchase order to the third party for Controlled Shipping - Level 2 activities. The supplier is responsible for all costs of the CS third party activity.

Provide people to continue performing the inspection activity and recording results for Controlled Shipping - Level 1 activities and the Level 1 inspection, which takes place during Controlled Shipping - Level 2. Provide proper layout and instruction documents to perform controlled shipping - Level 1 activities and the Level 1 inspection.

Provide proper space and tooling to perform inspection activities, drive permanent corrective actions, and communicate the results of sort activities to UIC in a format and with a frequency agreed upon by UIC. Communicate the action plan, inspection status, and results of problem resolution activities to UIC in a format and with a frequency agreed upon by the UIC SQE.

11.5.2 Exit Criteria

Exit criteria must include clear and measurable results, be specific and relevant to the non-conformance issues being addressed, required documentation to demonstrate corrective actions taken are permanent and remain constant for each nonconformance.

The default exit criteria will be used when other exit criteria are not defined. The default criteria are listed below and must be provided to the UIC SQE when requesting removal from controlled shipping.

Ninety (90) days of data from the containment activity, and a summary, which verifies that the normal production controls are effective for controlling the discrepancy(ies) identified in the controlled shipping activity. The time begins accumulating at the date the containment plan was implemented and submitted for approval.

Documentation showing the root cause was identified and verified, documentation indicating that corrective action was implemented and validated. Copies of all documentation revised as required (control plan, FMEA's, flow diagram, operator's instructions, etc.)

UIC evaluates if the exit criteria have been met. If appropriate, UIC communicates in writing that the supplier is no longer considered to be in controlled shipping and controlled shipping activities can cease.

Suppliers cannot be removed from controlled shipping status or cease the controlled shipping activities without documentation from UIC that authorizes the removal.

12. Engineering and Process Changes

All process or tooling changes, as defined by AIAG's PPAP latest edition manual, must be authorized and approved by UIC. The following examples illustrate situations that substantiate engineering/process changes and the submission of PPAP:

- A new part/supplier
- New supplier for an existing part
- A design change or process change
- New tooling for an existing part
- Change in location of the supplier or sub-supplier facilities, processes, equipment, or tooling.

12.1 UIC Initiated Changes

If UIC initiates a design or process change, the supplier will be provided a Request for Quotation (RFQ). If the supplier quote is acceptable to UIC, a purchase order for PPAP and tooling will be issued. Once the PPAP submission is approved by UIC, by signing the PSW, the supplier can start shipping the newly revised, processed parts to UIC, in accordance with the blanket purchase order issued by UIC Production Control and per Quality Control instruction. The SQE determines the level of PPAP submission required, and upon the approval of the submission from the supplier and the receipt of a blanket purchase order, the supplier can start shipping the new product. All initial shipments must be in accordance with section 2.3.2 of this manual.

12.2 Supplier Initiated Changes

Written authorization must be obtained from UIC prior to implementing any product or processing changes. All engineering and process changes shall be requested through UIC's buyer using the applicable form (refer to each attachment SQ-003 or SQ-009). The supplier shall establish a system, where all departments are responsible to track all initiated change requests. If UIC's Supplier Quality Engineer, (SQE) approve the form, the approved request and purchase order for PPAP will be issued. All initial shipments must be in accordance with section 2.3.2 of this manual. Any requests that are denied will be forwarded to the supplier indicating the reason for rejection. After product approval, suppliers shall not make any type of change without PRIOR written notification and approval from UIC. Suppliers must also make this a condition of their own entire supply chain.

A Process Change Request form (refer to attachments) to UIC at a minimum of three months prior to implementation of the intended change for approval. All changes incurred by the supplier may also require the re-submission of a Level III PPAP.

12.3 Deviations

When suppliers cannot conform to drawing or specification requirements, the supplier shall submit a Request for Deviation form (refer to attachments SQ-014) to the UIC SQE for approval. The deviation shall be only for a short time period and must not affect fit, form, or function of UIC's product. UIC will evaluate all requests in detail and may require additional testing. Any additional testing and processing costs will be charged back to the supplier. All supporting data and reason of the non-conforming parts should be provided with the request. If UIC approves the request, the form will be signed and returned to the supplier. The supplier shall establish a system, if one is not present; to track all deviated parts. The supplier shall use the Delivery Label of Samples form for all shipments of deviated parts. Non-conforming material received prior to obtaining UIC's approval will be rejected.

Process deviations are requests to use a different or modified manufacturing method; example, changing a double disc grinding process, fine blanking, or adding a plating process.

Material deviations are requests to use material that does not meet a specification or requirement. A common example is use of parts that have not been PPAP approved.

Any Supplier can request a deviation. Supplier requests for deviations must be initiated through the UIC SQE.

Generally, a sample must be provided by the supplier to perform a trial to assure fit and function and other requirements as determined by UIC.

It is the responsibility of the supplier to ensure that the deviation request is properly completed and outlines exactly all specifics related to the deviated part number, process, material, number of parts, specification etc.

The supplier should submit a deviation request for material/process deviation.

Deviations shall be for a specified length of time, a specified quantity of material or until a specified date.

UIC approval must be obtained for any deviation that affects the final product fit, finish, function or reliability. The approval must be documented on the deviation.

Note: Blanket, undated or open-ended deviations will not be permitted.

13. Supplier Assessment

The supplier shall, with sufficient notice, allow UIC and its customer(s) to assess and/or audit their manufacturing processes and/or quality systems. These audits will determine the supplier's ability to meet the requirements of UIC. Manufacturing process audits are conducted using the supplier's process flow diagram and control plan as a guide. Audit frequency may vary from year to year or with the supplier's performance. Quality System audits are conducted on suppliers who have not yet certified to ISO/TS 16949. In addition, new or potential suppliers will undergo a full quality system audit. Audits will be conducted on a frequency determined by the applicable UIC facility. The supplier may be requested to perform a self-audit using UIC's Quality Audit Evaluation & Technical Capability Audit. Any non-conformances, as a result of this audit, shall be corrected in a timely manner and evidence of the corrective action shall be made available to UIC. ISO/TS16949 registration does not exempt any supplier from being audited or requested to perform self-audits, however, in some cases registration may preclude a supplier from being surveyed.

13.1 Second Party Audit

In order to conform IATF 8.4.2.4.1, UIC include a second-audit process in its supplier management approach. Second-party audits may be used for the following:

- a) supplier risk assessment;
- b) supplier monitoring;
- c) supplier OMS development;
- d) product audits;
- e) process audits.

Based on a risk analysis, including product safety/regulatory requirements, performance of the supplier, and OMS certification level, at a minimum, the organization shall document the criteria for determining the need, type, frequency, and scope of second-party audits.

The organization shall retain records of the second-party audit reports.

If the scope of the second-party audit is to assess the supplier's quality management system, then the approach shall be consistent with the automotive process approach.

NOTE: Guidance may be found in the IATF Auditor Guide and ISO 19011.

14. Supplier Development

In conformance to IATF 8.4.2.5, UIC determine the priority, type, extent and timing of required supplier development actions of its direct material suppliers. UIC has selection criteria for existing suppliers to include in their yearly plan and consider;

1. Supplier performance Rating (Score Cards Quarterly basis)
2. Second-Party audit findings (QAV check sheet for audit) (Corrective Action items check sheet used for unsatisfactory performance issue)
3. Third party qualification management system certificate status
4. Risk Analysis (Score Card, QAV Score, complexity of the part, Complexity of process)

Supplier development is an evolving process through which potential direct material suppliers are surveyed, evaluated and managed. Development is necessary to ensure that supplier requirements are clearly defined and understood, supplier quality systems meet UIC

requirements, supplier processes are capable of yielding defect-free products, and on time delivery. UIC may request that the supplier works with UIC to enhance or improve process design, equipment and tooling selection, manufacturing productivity and cost/waste containment. UIC believes that direct material supplier development is necessary for new complex components and some new suppliers who do not have a working history with UIC; this also is referred to as “Supplier Development Tracking (Team Activity)” (SDT).

Therefore, supplier development/SDT is an ongoing process, which begins prior to the issuance of a purchase order and primarily focuses on all activities to start of production, but it can continue throughout the life cycle of mass production. UIC will evaluate each supplier on the following items prior to deciding if supplier development is necessary.

- A. Quotation
- B. Complexity of Part to be purchased
- C. Design Review
- D. Quality Audit Evaluation Sheet
- E. Cost Improvements
- F. Financial Stability
- G. Supplier Performance

The supplier development process for a new product or supplier is outlined in the Generic Development Timeline. The primary objectives of new supplier development are the following:

- Evaluate the existing quality systems to ensure UIC is supplied with quality parts on a continuous basis. Where non-conformances exist in the quality system, the supplier shall implement corrective action in accordance with ISO9001, and TS16949.
- Assure the supplier has the technical capability to meet UIC’s requirements.
- Assure that design for manufacturability has been included by UIC.
- Define and clarify all UIC’s requirements for design verification testing, process capability, tooling, gauging, and adequate controls of processes for both suppliers and sub-suppliers.
- Perform APQP status reviews in accordance with Section 2.1.1. UIC will ensure that the overall program schedule and requirements are being met and thus allow the supplier to obtain PPAP approval on time. These reviews will be crucial to the development of the tooling, gauging, and process controls. UIC will provide support to help suppliers meet requirements.
- UIC will support the PPAP runoff to ensure the proper controls, tooling, gauging, and process capability requirements are met.
- The supplier will perform a Mass Production Trial (MPT) Runoff after PPAP approval is achieved but prior to Start of Production (SOP).
- The supplier shall perform Early Production Control in accordance with Section 1.7.4 therefore eliminating start-up related quality issues.
- UIC will encourage the supplier to develop a system for continuous improvement of quality systems and the production process leading to less variation in product, lower quality costs, and enhanced delivery

UIC will encourage the supplier to develop a system for continuous improvement of quality systems and production processes which will lead to less variation in product, lower quality costs, and delivery enhancement.

UIC will provide performance data for delivery and quality. The quality data will be derived from the number of rejected parts found at UIC’s receiving inspection, internal process and/or during sorting by UIC. The supplier shall resolve all non-conformances when delivery and quality targets are not

met. If problems continue affecting quality or performance, UIC may require development activities with the supplier, which will usually require further examinations into the root cause(s) and corrective actions pertaining to the problem(s).

Development activities may include the following:

- A. Quality Systems Audit with corrective actions for non-conformances
- B. Process Audit
- C. Corrective actions to improve process control and reduce variability
- D. Corrective actions on work-in-process (WIP) for processes and/or finished goods
- E. Implement systems to track efficiency, internal scrap and downtime
- F. Implement or improve systems to correct scrap and downtime issues
- G. Develop continuous improvement program
- H. Implement corrective actions for issues regarding repetitive quality or delivery issues

Successful suppliers with UIC must be committed to work with UIC to achieve:

- A. Zero Defects
- B. On-Time Delivery
- C. Annual Price Reductions
- D. Continuous Improvements
- E. Cost Reductions due to VA/VE ideas, improvement of efficiency, reduction of scrap, etc.
- F. Zero quality issues at start of production

15. Associated Business Conditions

UIC expects that its employees and our customer's representatives will have access to supplier's facilities and records at reasonable times for the purpose of surveys, assessments, inspection of goods and associated control systems.

Suppliers shall work with UIC detailing cost data as it relates to products for UIC and its customers.

Processes shall be aimed at nominal values unless otherwise directed in writing by UIC Supplier Quality Engineer or designee. It is expected that all goods and services be certified zero defects.

Suppliers shall maintain accurate records, which show UIC and its customer's conformance requirements are being met. Documented procedures shall be in place defining responsibilities for records control as outlined within the requirements of ISO 9001/TS 16949. Legal or government requirements prevail.

Suppliers shall maintain a documented, comprehensive business plan. Development and establishment of goals and objectives, monitoring performance, and adjustments to the plan shall include input from all departments.

Suppliers are expected to develop and implement a companywide training plan with input from all departments, with appropriate review and approval mechanisms.

Team building and organized employee involvement groups, working towards customer satisfaction, shall be developed.

Suppliers shall have documented procedures for assessing, selecting, monitoring and developing their own suppliers, with built-in continuous improvement philosophy geared to customer satisfaction and potential cost reductions.

Suppliers shall have documented procedures to effectively track and meet all key event dates, e.g. tooling build, prototypes; sample submissions; control plans, etc.

16. Supplier Performance Rating

This supplier performance rating system(Q0-0026) presents the criteria that will be used by UIC to

rate production material suppliers. Suppliers shipping to more than one UIC plant will receive individual ratings from each plant. Ratings will be published on a monthly basis using the following categories and notify supplier via balanced score card (QA-152-00).

- **Quality** - 45 %
- **Delivery** - 35%
- **Cost Management** - 20 %

UIC supplier’s Ranks based on score:

A - (Score of 70-100) This is the highest rating level. All suppliers start out in this category and remain in this category as long as their performance continues to be maintained at a high level.

B - (Score of 60-69) A supplier can be placed in this category based on the evaluation of performance concerns by the supplier performance review team. Supplier is required to formulate, implement and sustain corrective action to be considered for upgrade.

C - (Score of <60) A supplier can be placed in this category based on the evaluation of performance concerns by the supplier performance review team. When a supplier is rated as C, that supplier is at risk of not being eligible to bid on any new business from UIC. Supplier is required to formulate, implement and sustain corrective action to be considered for upgrade.

D - (NEW BUSINESS HOLD) A supplier can be placed on new business hold based on chronic performance concerns or by having a major issue. When a supplier is put on new business hold that supplier may not be eligible to bid on any new business from UIC. (Reference the new business hold letter). UIC may decrease the supplier rating by one full grade based on the additional ratings referenced above.

17.PACKAGING/LABELING

Packaging Requirements identified in the section are for the following materials:

- a) Processed/semi-processed product shipped to UIC in either returnable or non-returnable containers, for consumption on site at UIC.
- b) Processed product shipped to UIC for repack to UIC customers
- c) Processed product shipped directly from suppliers to UIC customers (Pass-through)
- d) Raw material shipped directly to UIC
- e) Raw material shipped to a designated UIC sub-contractor

Production shipment and packaging requirements discussions should begin during APQP activities, Design or Feasibility review. All requirements shall be finalized prior to first shipment and PPAP submission.

A packaging form, which must be submitted by the supplier to the buyer. The applicable UIC Packaging Engineer, Buyer, SQE and Warehouse Supervisor must sign, approving it and an approved copy shall be sent to the supplier.

Notification to UIC or the supplier shall be forwarded by:

A copy of the approved packaging form shall be included with all level 3 PPAP submissions with Bar Code Label example.

All suppliers shall have a documented system in place for receipt, control and acknowledgement of all packaging instruction issues and revisions. The system shall include annual verification to ensure current processes meet requirements.

All suppliers supplying goods to UIC which are considered to be "controlled" under D.O.T. (Department of Transportation) shall be familiar with and conform to all such regulations, for packaging and shipping. M.S.D.S. (Material Safety Data Sheets) shall accompany all shipments from all suppliers. "Controlled" substances shall be maintained in accordance with federal, provincial/state and local laws and regulations.

All suppliers shall have a documented system in place the verification of packaging integrity before approval and release for shipment to UIC. Material/Parts stored for extended intervals will be inspected or monitored on regular intervals as required by QS-9000.

Package units must be constructed to ensure the satisfactory condition of both container and contents upon arrival at UIC. All suppliers of production parts to UIC must complete a UIC Packaging Data Sheet (See Appendix 16.18) for submission to the applicable buyer.

Corrugated material used in shipping containers MUST as a minimum, adequately withstand usage from the point of manufacturing to the point of receipt at UIC without failure. Corrugated material must be whatever strength necessary, to ensure no damage or breakage, e.g. single, double or triple wall, as a minimum corrugated material must withstand forces of 275 pounds.

All containers must be adequately sealed to prevent loss and/or damage.

Only one-part number is to be packaged per container or shipped per pallet. (unless approved by UIC)

Air shipments are frequently subjected to rough handling and should be packaged in reinforced containers to prevent loss or damage.

Packing slips shall accompany each shipment and must be affixed to the container in a clearly marked envelope in a conspicuous location. (Unless approved by UIC)

Manually handled containers must not exceed 50 pounds maximum weight, whether palletized or not.

Any exception to the General or Specific Packaging Requirements will not be allowed without Procurements approval with the updated approved packaging form.

18. Additional Requirement

Following additional requirement are provided by UIC and Suppliers shall conform to all.

18.1 Sub-Supplier Use

Use of sub suppliers is principally prohibited on special processes. However, when it is absolutely necessary to use sub-suppliers, prior requests should be sent to UIC and written approval must be obtained. Any suppliers approved to use sub-suppliers for parts involving critical characteristics, special processes, or the like shall submit the following documents to UIC for review and approval:

- Notification of suppliers to be used
- Notification of QA responsible person of second and subsequent suppliers
- Process flow with process controls for each operation of the process or system

18.2 Required Quality Records and Retention Time

The supplier may be requested to provide quality documentation for each received lot. If the required documentation is incomplete, the incoming material will be held pending receipt. Quality records are material certifications, test reports, statistical data, and process capability data.

Suppliers shall keep records for at least 15 years for inspection and testing, process control, actions taken against defects, corrective action records, and lot control. Records for parts manufactured in accordance with ISO/TS16949 are required to be kept for 15 years. In addition, any special requirements determined by UIC shall be followed. The supplier is required to maintain a quality manual containing information related to the complete quality system and provide a copy to UIC upon request.

Documentation, Certification, and Data Requirements for Proprietary Information, UIC and its customers may review, in the presence of the supplier and on the supplier premises, documentation that contains confidential and proprietary supplier information pertaining to the product manufactured for UIC.

18.3 Definition of Special Processes

Special processes shall be defined as any process that builds characteristics in which defect appearance is only in the actual use of the part and requires a non-destructive inspection process. Examples of special processes are:

- Heat-treating, welding
- Hot forging, casting
- Surface treatment (plating)
- Non-destructive testing
- Soldering
- Fastening
- Resin molding
- Coatings

These processes shall conform to the critical part and characteristic control requirement as decided by UIC. Process parameters are to be checked routinely prior to production and documented. All processes and key process parameters shall be captured on the Control Plan and the Process Flow Diagram.

Outsourced Heat Treatment Providers: the following data is required with each shipment of parts.

- a. A copy of all the metallurgical inspection data information.
- b. A copy of the supplier router/operation sheet with operator signatures.
- c. A copy of the furnace temperature and quench data information.

18.4 Special Processes Assessment requirements

Supplier providing products or services with below listed special processes shall demonstrate compliance to relevant AIAG CQI.

- Heat treatment: AIAG CQI-9 "Special Process: Heat Treat System Assessment" latest revision
- Plating: AIAG CQI-11 "Special Process: Plating System Assessment" latest revision
- Coating: AIAG CQI-12 "Special Process: Coating System Assessment" latest revision
- Molding: AIAG CQI-23 "Special Process: Molding System Assessment" latest revision

The supplier shall maintain relevant annual CQI assessment reports and related information at the organization's site and provide copy to UIC upon request.

18.5 Organizational Changes

When changes occur within the suppliers' organization, Designated Quality Assurance Representative Form (QM-002) must be submitted to the UIC Purchasing Department.

18.6 Release of Drawings, Technical Regulations, and Specifications to Third Parties

It is strictly prohibited to release originals, or copies of, drawings, technical regulations, and specifications to third parties. When it is necessary to disclose information to a third party, written authorization must be obtained from UIC.

Suppliers shall control/handle all confidential documents and information provided by UIC at the same level of confidential control as UIC (e.g. password protected and communicated via encrypted means with any 3rd. parties).

This is valid for supplier's tier supply chain support for UIC awarded or study business. This is valid for confidential information such as;

- Data related to quality problem or claim;
- Specific customer or supplier information received under a non-disclosure agreement (NDA) or marked as confidential;
- Customer or supplier drawings or development plans;
- UIC/ approved drawings;
- Marked UIC/ approved drawings.

18.7 Environmental Concerns Health and Safety

Suppliers are expected to adhere fully to all applicable governmental laws and regulations to protect the environment and ensure the health, safety and quality of life within their communities.

In particular, Suppliers must adhere to laws and regulations that apply to the health and safety of their workers.

No abnormal or harmful radioactivity levels shall be permitted in any material. Nor harmful elements or additives shall be permitted that are listed in any EU, ISO or local standards banning such materials at the time of shipment to UIC.

All materials used in product manufacture shall satisfy current government and safety constraints on restricted, toxic and hazardous materials.

Suppliers are required to comply with appropriate restricted or reportable substance notification on PPAP submissions.

Suppliers are encouraged to define, implement and maintain environmental management systems such as ISO 14001.

UIC's Global Environmental Health and Safety Policy should be reviewed and can be accessed by the link 'Global EHS Policy' on the JSN supplier portal on the same page as the SQAM.

Goals of the Supplier environmental management program should be:

- Commitment to compliance with all applicable laws, regulations and company policies relating to environmental protection, to prevent pollution at its source by minimizing emissions, effluents, and waste in the design, operation and maintenance of their facilities.
- Commitment to prevention including source reduction, recovery, reusing and recycling. Where feasible, eliminating negative environmental impacts associated with Suppliers operations and products.

- Commitment to continual improvement to increase the general awareness of environmental requirements among associates, facilitating an understanding of the environmental implications of their day-to-day responsibilities. Developing the capabilities and support mechanism necessary to achieve the Suppliers environmental policy, objectives and targets.

18.8 Hazardous Materials - Material Safety Data Sheet (MSDS)

All materials used in or incorporated into UIC products shall satisfy current governmental and safety constraints on restricted, toxic, and hazardous materials; as well as environmental, electrical, and electromagnetic considerations applicable to the country of manufacture and sale.

A Material Safety Data Sheet (MSDS) must be submitted for all items that fall under the requirements and criteria of the applicable regulations.

The Material Safety Data Sheet(s), with full disclosure, must be submitted to the receiving location for approval as soon as possible following the feasibility meeting and/or receipt of a Purchase Order. At the latest, applicable MSDS sheets must be provided to the using UIC plant prior to first shipment / PPAP submission of any component, raw materials, or product.

18.9 Conflict Minerals

According to the mandates from Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, it is mandatory to comply with the "DRC conflict free" policy and thoroughly cooperate in providing due diligence information to confirm that the 3TG materials in our supply-chain are "conflict free".

Therefore, every calendar year, Suppliers must submit to UIC Purchasing representative the Conflict Minerals Reporting survey (CMRT). When completing the CMRT requirements, note the following requirements:

- Only use the latest version of the template (available at <http://www.conflictreesourcing.org/conflict-minerals-reporting-template/>);
- Complete mine and smelter location address must be submitted for any smelter that is not included in the dropdown menus in the Template
- Zip files and PDF files will not be accepted;
- Submission should be done no later than the last business day of the month of July.

Training materials including video and links to other support information are available at <http://www.conflictreesourcing.org/conflict-minerals-reporting-template/training/>. Additional information regarding conflict minerals can be found on AIAG's website at <http://aiag.org> under Corporate Responsibility/Conflict Minerals.

In the event conflict minerals are identified, Supplier must work with UIC and take reasonable steps to remove conflict mineral content. This may also require coordination with UIC's immediate customer(s), who are also subject to the regulation in question.

18.10 Supplier Escalation Process

The supplier escalation process is an increased level of activity with a supplier resulting from the supplier's continuing failure to perform in the areas of quality, delivery or cost.

Supplier Quality Escalation is the methodology used by UIC personnel to define actions, resolve and improve overall supplier performance.

Escalation stages vary up to and include notification to the supplier's registrar of ongoing systemic

quality issues or recognition that it may be in the best interests of UIC and supplier to discontinue doing business.

Level A escalation is the result of a supplier failing to meet expectations at the plant level for quality or delivery issues.

Level B escalation is the result of continuing product, process, or system failures with a supplier. Escalation notification letter should be sent to supplier.

Level C escalation is the result of continuing process or system failures with a supplier. Escalation notification letter should be sent to supplier.

Costs associated with this status may be billed back to the supplier or waived at the discretion of the appropriate purchasing representative. Suppliers with formal quality management registration (ISO/QS/TS) may have their registrar notified of escalation status.

Suppliers may be required to conduct monthly meetings at their site or at the appropriate UIC facility in order to review and present progress towards defined goals.

Level D escalation is the recognition that it is in the best interests of UIC and the supplier to discontinue doing business entirely or for a particular commodity. Escalation notification letter should be sent to supplier.

Regardless of the escalation status, suppliers completing corrective or preventive actions and indicating successful implementation of permanent solutions monitoring and measurement will have their status returned to full approval by the appropriate UIC representative.

19. General Information

UIC reserves the rights to alter or change any portion of this document at any time. Any desire for deviation from this document shall be communicated to the supplier(s) being affected in a timely manner. This document is NOT to be provided to any other company without UIC's written consent. UIC must approve any deviation from this document in writing.

20. Appendix (List of Procedures/forms)

1. SQ-001 PPAP Checklist
2. SQ-002 Development Timeline-Generic
3. SQ-003 ECR Change Request
4. SQ-004 Inspection Standard
5. SQ-005 Tool Record
6. SQ-006 Packaging Approval Request
7. SQ-007 Part Flow Diagram
8. SQ-008 Control Plan
9. SQ-009 PFMEA
10. SQ-010 Supplier Readiness Check-sheet & Production Trial Run-off Results
11. SQ-012 Delivery Label of Sample
12. SQ-013 SPCR Change Request
13. SQ-014 Supplier Deviation Request
14. SQ-015 Quality Audit Evaluation Sheet
15. SQ-016 Technical Capability Audit
16. SQ-017 Supplier Feasibility Commitment
17. SQ-018 Designated Supplier Quality Assurance Representative

21.Revision history

Revision #	Revised Date	Reason for Revision	Submitted by	Approved by
01	11/10/2017	Updated Supplier Quality Manual submission	Arshad Muhammad	Dennis Chui
02	02/12/2018	Updated with IATF requirements for Supplier Assessment and Supplier Development	Arshad Muhammad	Luis Gomes

Please visit our Web site <https://usuiusa.com/> for the Procedures and forms.