

 <b>Perfection Components, LLC</b> COMPANY OPERATING PROCEDURES	SUBJECT:	DOC. NUMBER	PAGE
	<b>SUPPLIER QUALITY MANUAL</b>	OP-0810	1 OF 12
ISSUED BY: Tom Barber		APPROVED BY: Ed Gerardo	APPROVED BY: Adrian Gerardo
		EFFECTIVE 5/15/07	REVISION E

  
**Perfection Components, LLC**  
 INJECTION MOLDING - FINISHING - ASSEMBLY  
 209 CORPORATE DRIVE  
 DANVILLE, KY 40422  
 PHONE: (859) 236-1166  
 FAX: (859) 236-1162

## SUPPLIER QUALITY MANUAL

### TABLE OF CONTENTS:

SECTION	DESCRIPTION	PAGE
1.0	PURPOSE	2
2.0	SCOPE	2
3.0	GENERAL	2
4.0	SUPPLIER QUALITY SYSTEM REQUIREMENTS	2
5.0	PPAP REQUIREMENTS	3
6.0	SUPPLIER REPORTING REQUIREMENTS <b>REVISED</b>	4
7.0	SUPPLIER PERFORMANCE REPORT	5
7.1	QUALITY PERFORMANCE REQUIREMENTS	5
7.1.A	QUALITY SERVICE	6
7.1.B	PPAP SUBMISSION	6
7.1.C	DEFECTIVE PPM	6
7.2	DELIVERY PERFORMANCE REQUIREMENTS	7
7.2.A	DELIVERY	7
7.2.B	SERVICE	8
7.3	PPAP PERFORMANCE REQUIREMENTS	8
8.0	SUPPLIER SELF-CERTIFICATION REQUIREMENTS	9
9.0	RESPONSIVENESS AND SUPPORT	9
10.0	PACKAGING	9
11.0	LABELING	10
12.0	CONTINUAL IMPROVEMENT	10
13.0	CONTROL OF CUSTOMER-OWNED TOOLING AND EQUIP.	11
14.0	RECORDS	11
15.0	REFERENCES	11

<b>DOC. NUMBER:</b>	<b>REVISION:</b>	<b>DATE:</b>	<b>PAGE:</b>
OP-0810	E	5/15/07	2 OF 12

**1.0 PURPOSE:**

This Supplier Quality Manual (SQM) has been created to serve as a resource for Perfection Components and all of its suppliers to give each supplier the necessary tools to enable it to provide product and services that meet the requirements of Perfection Components and its customers.

**2.0 SCOPE:**

This procedure will include all suppliers who provide materials, components or services used in the manufacture of products at Perfection Components.

**3.0 GENERAL:**

This document is provided to all applicable suppliers for review prior to acceptance of any quotations or release of any purchase orders. The attached SQM Acknowledgment of Receipt (F810-1) must be signed by the Supplier Quality Manager and either mailed or faxed to the Perfection Components Materials Manager in order to be considered as a supplier. The signed copy of F810-1 serves as acknowledgement of receipt of this Supplier Quality Manual and familiarity with all of its requirements.

**4.0 SUPPLIER QUALITY SYSTEM REQUIREMENTS:**

Perfection Components requires that applicable suppliers be third party registered to either ISO/TS 16949:2002 or ISO 9001:2000.

Suppliers are provided initially with copies of a Supplier Quality System Survey (F810-4) and a Supplier Survey (F810-5), which must be completed and returned to the Materials Manager via fax or mail. The forms are included in the initial SQM packet as an attachment to the SQM.

If a supplier is not currently registered, but can present a plan by which it is working to achieve third party registration to either ISO/TS 16949:2002 or ISO 9001:2000, PC may, with the approval of its customer, elect to evaluate the supplier through an on-site Supplier Audit conducted by PC personnel on a date that is mutually convenient. The supplier is provided with a copy of the Supplier Quality Audit (F810-6) in advance to assist with preparations and expedite the audit process. The intention of the audit is to determine whether the supplier has systems in place which would meet the requirements of the ISO/TS 16949:2002 or ISO 9001:2000 standard. If the supplier passes the audit, then it is eligible to be placed on PC's approved supplier list.

The audit is made up of a series of questions that are meant to confirm individual requirements of the ISO/TS 16949:2002 standard. Each answer is rated on a scale of 1 to 4 where 1 = "No System in Place" and 4 = "Requirement Completely Satisfied". In order to pass the audit, the average rating must be 3 or higher. If the audit results in a rating between 2 and 3, the supplier may address the non-

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	3 OF 12

conformities and provide evidence of corrective action to achieve a passing rating.

Perfection Components, at its discretion, may choose to conduct follow-up audits of its suppliers. Typically, follow-up audits are a result of one or more of the following reasons:

- Poor performance ratings as documented on the quarterly Supplier Performance Report
- Significant changes in supplier ownership and/or management
- Failure to achieve 3<sup>rd</sup> party registration to ISO/TS 16949:2002 or ISO 9001:2000 within the timeline proposed by the supplier

Occasionally, special circumstances, not listed here, may arise which would necessitate a follow-up audit. In any case, the supplier is given advance notice of the audit to facilitate preparations. Whenever possible, PC works with the supplier to select a mutually convenient audit date.

## **5.0 PRODUCTION PART APPROVAL PROCESS (PPAP) REQUIREMENTS:**

Perfection Components requires its suppliers to utilize the process and forms referenced in the AIAG (Automotive Industry Action Group) manuals to demonstrate product and process conformance to PC requirements. This includes using the AIAG formats for the following forms (electronic copies are available upon request):

- Control plans (AIAG APQP/CP Manual)
- FMEAs (AIAG FMEA Manual)
- Process Flow Charts (AIAG APQP/CP Manual)
- PSW (AIAG PPAP Manual)
- Appearance Approval Report (AIAG PPAP Manual)
- Material Testing Report (AIAG PPAP Manual)

Capability studies, as defined in the AIAG SPC Manual, must be conducted on applicable processes affecting special characteristics and demonstrate a PpK of 1.67 or higher for PPAP approval. If applicable, the supplier will conduct full dimensional layouts to be submitted as part of the PPAP package.

All measuring equipment must be controlled and calibrated to NIST traceable standards. Gage R&Rs, as defined in the AIAG MSA Manual, must be conducted on all applicable measuring equipment.

The supplier must provide evidence that its process and materials meet all testing and material requirements as specified on the customer print.

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	4 OF 12

Suppliers are required to meet all requirements of the customer print, unless PC's Quality Manager provides a written waiver that specifies all exclusions. This includes all dimensional, material, and functional requirements. Review of the standards and specifications is the supplier's responsibility. If information or clarification is needed, the supplier is responsible for requesting assistance from Perfection Components. Perfection Components will assist the supplier in any way it can.

Suppliers must have a process to ensure compliance with the following:

- All governmental, regulatory, statutory, and safety requirements for all products and services supplied to Perfection Components.
- All regulatory and statutory requirements for handling, processing, identifying, and transporting hazardous or toxic substances.
- All environmental, electrical, and electromagnetic requirements applicable to the country of manufacture and sale.
- MSDS sheet requirements for applicable products.

If a system other than the AIAG PPAP system is required, the supplier will be notified prior to business being awarded.

If it is necessary for a supplier to make significant process changes (i.e. changes affecting materials, components, suppliers, tooling, equipment, location of manufacture, and/or production process), the supplier must submit a PPAP package for approval demonstrating conformance of the new process to all requirements. The supplier may not ship product from the revised process without PPAP approval, unless interim approval is obtained from the PC Quality Manager.

## **6.0 SUPPLIER REPORTING REQUIREMENTS:**

If requested, the supplier will supply data with each shipment (or at an agreed upon frequency) demonstrating ongoing conformance to product requirements. This data may include, but is not limited to, the following:

- Data demonstrating conformance to engineering and test standards.
- SPC data demonstrating a controlled process with a CpK of 1.33 or higher for special characteristics.
- Dimensional data demonstrating conformance to requirements.
- Material certifications showing conformance to material requirements (i.e., melt flow, color, hardness, specific gravity, etc.)

Every PC supplier which processes product supplied by PC (e.g. painting, chrome plating, assembly, etc...) must supply its monthly internal scrap for each related part on or before the 1<sup>st</sup> business day of the following month. For example, Supplier "X" must notify PC's Materials Dept. of its April scrap on part # XXXXX by the 1<sup>st</sup> business day of May of the same year. This information is

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	5 OF 12

necessary for PC to be able to reconcile its monthly inventory numbers and ensure that the inventories are kept at the correct levels.

Also, if requested, the supplier will periodically provide information showing process performance with regard to yields and productivity. The supplier will not be asked to provide any proprietary information such as process settings, chemical compositions, etc.

## **7.0 SUPPLIER PERFORMANCE REPORTS:**

PC provides Supplier Performance Reports to each applicable supplier on a quarterly basis. The reports provide performance feedback pertaining to Delivery (F810-7) and Quality (F810-3). Each report is broken down by sections addressing various performance measurables with an individual point rating assigned to each. An overall score out of a possible 100 is calculated, but each category is evaluated independently and suppliers will be expected to improve those categories in which they are deficient. The overall score is rated as follows: 100-90 – Excellent, 89-75 – Satisfactory, 74-50 – Corrective Action Needed, 49 & under – Unacceptable. The following is an explanation of each category along with scoring methodology.

### **7.1 QUALITY PERFORMANCE REQUIREMENTS:**

Perfection Components expects its suppliers to provide 100% defect free product.

If a quality problem is found with the products or services provided by a supplier, then the PC Quality Department will issue a DMR (Defective Material Report, F810-2) to the supplier. A supplier typically has 1 business day to send an initial reply with a containment plan and effective short-term corrective actions. The supplier then has 10 business days to reply with a root cause and effective long-term corrective actions. The supplier is encouraged to use the Problem Solving Worksheet (F1410-1) to document these activities, but the supplier has the option to use its own internal form. If 10 days to complete the corrective action are insufficient, the supplier should contact the Quality Manager at Perfection Components as soon as possible to request an extension. Otherwise, the DMR reply will be considered late after 10 business days.

PC reserves the right to debit suppliers for sorting, scrap, and rework costs associated with quality issues for which the supplier is responsible. Sorting costs are detailed within the Defective Material Report (DMR), F810-2. The supplier will be notified of any debits prior to the debit(s) being issued. Suppliers have 5 working days to reply with disposition of rejected material.

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	6 OF 12

In order to provide feedback to suppliers on their quality performance, PC has established a point system as outlined in the Quality section of the Supplier Quality Performance Report, form F810-3. An overall score out of a possible 100 is calculated, but each category is evaluated independently and suppliers will be expected to improve those categories in which they are deficient.

The 100-point rating is split between three measurables: Quality Service (40 pts.), PPAP Submission (20 pts.), and Defective PPM (Parts per Million) (40 pts.) Each of these is calculated as follows:

**A. Quality Service:** Quality Service is defined as supplier quality system effectiveness and responsiveness. The supplier is expected to respond to customer requests and DMRs in a timely fashion. The quality service score is calculated from a maximum score of 40 and deductions are taken as follows:

- DMR Issued to Supplier = 1-point deduction
- Late DMR Response = 5-point deduction
- Repeat Issue for DMR Issued in Past 12 Months = 5-point deduction

For example, if a supplier has been issued three DMRs so far during the present calendar year, one of those has been returned late, and one was a repeat issue, the supplier's DMR score is 27 pts.  $(40 - (3 \times 1) - 5 - 5 = 27)$

**B. PPAP Submission:** PC's suppliers are rated based on their performance according to PPAP (Production Part Approval Process, see the AIAG PPAP Manual) performance. Suppliers are evaluated for their ability to provide acceptable PPAP packages according to an agreed upon schedule. (If a supplier is late on a PPAP due to problems at PC, this is taken into account.) Each supplier is rated using the following formula: ***[(# of PPAPs Approved On-Time) / (# of PPAPs Requested)] x 20 Points***

For example, if a supplier has had 4 PPAPs requested during the calendar year and 1 was late, then the supplier's score would be 15.  $((3 / 4) \times 20)$

**C. Defective PPM:** Defective PPM is defined as the number of defects per million parts shipped. Each supplier starts with a maximum of 40 points and deductions are taken based on the annual PPM rating for each calendar year. The deductions are as follows:

- 0-25 PPM = 0-point deduction
- 25-100 PPM = 6-point deduction
- 101-200 PPM = 12-point deduction

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	7 OF 12

- 201-350 PPM = 18-point deduction
- 351-500 PPM = 24-point deduction
- 501-2000 PPM = 30-point deduction
- >2000 PPM = 40-point deduction

For example, if a supplier has a PPM of 79 on the Supplier Performance Report, its PPM score is a 25 because it qualifies for a 5-point deduction for being within the 25-100 PPM range. If the supplier's PPM drops in future months, its score may go up, provided that it falls into a lower range.

The Supplier Overall Quality Score is calculated by adding the three scores together for a maximum score of 100 pts. The overall score is rated as follows: 100-90 – Excellent, 89-75 – Satisfactory, 74-50 – Corrective Action Needed, <50 – Unacceptable. The scores are cumulative over the calendar year and are reset Jan. 1 of each year.

## **7.2 DELIVERY PERFORMANCE REQUIREMENTS:**

PC expects its suppliers to deliver product and services as scheduled with PC 100% of the time. PC will provide a Supplier Delivery Performance Report, F810-7, monthly to each applicable supplier. The supplier will be rated based on two categories, "Delivery" and "Service".

**A. Delivery:** A supplier's delivery rating will take into account the following criteria and deductions are taken as shown:

- Timeliness of shipments (missed or late shipments) – **3 point deduction** for each supplier-related missed or late shipment.
- Accuracy of shipments (correct part quantities and accuracy vs. orders). – **3 point deduction** for each short or incorrect shipment related to a supplier issue
- Impact of timeliness and accuracy issues on PC production and shipments. – **5 point deduction** for supplier responsible delivery issues which impact PC's ability to meet scheduled production and orders
- Impact of timeliness and accuracy issues on the production and shipments of PC's customer. – **7 point deduction** for supplier responsible delivery issues which impact the ability of PC's customer to meet scheduled production and orders

Suppliers will be rated on a percentage scale where 100% is the maximum score. Deductions are cumulative, meaning that, depending on the impact, a problem can cause deductions of 3, 8, or even 15 points.

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	8 OF 12

*For example, supplier "X" misses a shipment due to an internal issue. This missed shipment causes PC to be unable to meet a customer order and miss its shipment. The missed shipment from PC causes PC's customer to shutdown production or miss a shipment to its customer. This results in a deduction of 3 + 5 + 7 points = 15 points and a score of 85% for delivery.*

**B. Service:** A supplier's service rating will take into account the following criteria and deductions are taken as shown:

- Failure to send an ASN or Kanban, as required – **1 point deduction.** (Suppliers are not obligated to send both ASN and Kanban notification but must use one of these methods.)
- Failure to report inventory or scrap as requested by PC – **1 point deduction.** (The inventory numbers must be sent the first day of the month, no later than 2:00 pm EST. The inventory must also include your production scrap numbers for the month.)
- Poor communication – failure to notify PC in a timely manner of issues or concerns which impact a supplier's ability to meet PC orders and delivery requirements – **3 point deduction**
- Failure to respond to a delivery related DMR in a timely manner with effective countermeasures – **3 point deduction**

The overall service rating is 100% less any deductions for issues related to the aforementioned criteria.

The supplier's overall Delivery Score is the average of the delivery and service ratings. The Delivery Score is evaluated vs. the following scale:

- 95% - 100% - Standard Performance
- 85% - 95% - Needs Improvement
- 0% - 85% - Substandard Performance

Any supplier that achieves a score of less than 80% or causes a customer shutdown must attend a review meeting with PC management personnel to discuss countermeasures and their improvement plan. Attendees from the supplier must be management level.

PC reserves the right to debit the supplier for costs associated with premium freight resulting from missed, late, or short shipments for which the supplier is responsible. The supplier will be notified of any debits prior to the debit(s) being issued.

DOC. NUMBER:	REVISION:	DATE:	PAGE:
OP-0810	E	5/15/07	9 OF 12

## 8.0 SUPPLIER SELF-CERTIFICATION REQUIREMENTS:

PC encourages its entire supplier base to achieve and maintain self-certification status. Self-certified suppliers receive preferential treatment during sourcing decisions and are subject to a reduction in supplier audit frequency. The requirements for achieving and maintaining self-certified status are as follows:

- Supplier must maintain a minimum Quality Performance Rating of 75 and PPM less than 201. (See section 7.1 of this manual.)
- Supplier must maintain a minimum Delivery Performance Rating of 85. (See section 7.2 of this manual.)

If a self-certified supplier's quarterly Supplier Performance Report shows a drop in any area below the minimum rating, then the supplier has 1 quarter (3 months) to raise its rating above the minimum or it will lose self-certified status. During the review quarter, PC will conduct more intensive receiving inspection of the supplier's product and services to ensure that issues are contained and verify improvement.

If a supplier appears to be "roller-coasting" (repeatedly dropping below minimum ratings and recovering in the next quarter), self-certified status may be revoked until the supplier can demonstrate stability. The decision to act on this provision is at the discretion of PC's Quality Manager and is made on a case-by-case basis.

## 9.0 RESPONSIVENESS AND SUPPORT:

Perfection Components expects its suppliers to respond to requests for support in a timely manner. PC recognizes that some requests may be of a complex nature and the supplier may need an extended period of time for completion. It is still an expectation that the supplier can, at the very least, provide a prompt acknowledgement via phone call, email, or fax to the requester with a commitment to begin reviewing the request. Timing and/or logistics to enable the support can be discussed at that point or at a prearranged follow-up time.

If an individual is out of the office at the time of the request, it is expected that the person reply as soon as possible. In the event of a prolonged absence, it is the supplier's responsibility to ensure that communication to the absent employee is reviewed and responded to in a prompt manner. It is recommended that primary contacts at the supplier notify their respective contacts at PC prior to a prolonged absence, if possible, along with alternative contact information.

## 10.0 PACKAGING:

Perfection Components expects its suppliers to use packaging that effectively protects products during shipment to Perfection.

<b>DOC. NUMBER:</b>	<b>REVISION:</b>	<b>DATE:</b>	<b>PAGE:</b>
OP-0810	E	5/15/07	10 OF 12

If a supplier is providing its own packaging, then the supplier must request packaging approval from PC's Quality Manager prior to start of production. This is typically documented with the Quality Manager's signature and comments on a concept drawing or an email/fax from the Quality Manager stating that the packaging is approved.

If the supplier is utilizing packaging provided by PC, then the supplier is responsible for use of the appropriate packaging in the proper manner. In the case of suppliers that perform secondary operations on raw products manufactured by PC (i.e. plating, paint, assembly, etc.), the supplier is required to preserve all packaging and dunnage used to ship the raw parts. The supplier must then pack the finished parts in the same manner, when feasible, for return to PC. If damage results from the incorrect use of packaging for the return shipment to PC, the supplier is responsible and the damaged parts are considered defects.

If the supplier does not have sufficient quantities of approved packaging for shipment of ordered product quantities to PC, then the supplier must notify PC immediately to propose an alternative packaging method. PC must approve this alternative pack before the supplier can use it. The approval should be documented via either fax or email.

#### **11.0 LABELING:**

Perfection Components requires its suppliers to utilize labels which clearly identify the product and include, at a minimum, the following information in a legible condition:

- Part Number
- Part Name or Description
- Supplier Name
- Manufacturing Date or Lot #
- Quantity

Additional information may be requested on a case-by-case basis. The text size on the label must be large enough to be easily read from a distance of 10 feet.

#### **12.0 CONTINUAL IMPROVEMENT:**

Each supplier is expected to continually improve its processes and systems to achieve the following benefits:

- Elimination or reduction of supplier-related quality issues at PC
- Elimination or reduction of supplier-related delivery issues at PC
- Problem-free product launch through effective PPAPs

<b>DOC. NUMBER:</b>	<b>REVISION:</b>	<b>DATE:</b>	<b>PAGE:</b>
OP-0810	E	5/15/07	11 OF 12

- Elimination or reduction of scrap
- Reduction of labor
- Reduction of cost
- Improved profitability for the supplier and PC

Suppliers are expected to carry on these activities to support any cost reduction schedules mandated by PC within its supplier contracts. These activities are critical to the support of PC's objectives and goals as well as any cost reductions that PC must provide to its customers.

### **13.0 CONTROL OF CUSTOMER-OWNED TOOLING AND EQUIPMENT:**

Suppliers that use tooling or equipment owned by PC, or its customers, must have systems or controls in place for the following activities pertaining to customer-owned tooling and equipment:

- Maintenance and repair
- Storage and recovery
- Setup
- Tool change programs for perishable tooling (if applicable)
- Documentation of tooling or equipment modifications
- Tooling and/or equipment identification

### **14.0 RECORDS:**

Each supplier is expected to maintain records of all SPC charts, testing, measurement and inspection required to demonstrate conformance to the requirements of Perfection Components and its customers. The records must be legible, stored in a manner to prevent deterioration, and readily available. If requested by PC, the supplier must provide a copy of the record or a summary of the information requested. These records must be retained for a minimum of one calendar year from the date that the record was generated.

Suppliers must also retain all PPAP information for the life of the program (including production and service) plus one year. This information must be stored where it is safe from deterioration and readily retrievable.

### **15.0 REFERENCES:**

**DOCUMENTS:** Section 7.4 – Purchasing – PC Business Manual

**PROCEDURES:** None

**FORMS:** F810-1 – SQM Acknowledgement of Receipt  
F810-2 – Defective Material Report  
F810-3 – Supplier Quality Performance Report

<b>DOC. NUMBER:</b>	<b>REVISION:</b>	<b>DATE:</b>	<b>PAGE:</b>
OP-0810	E	5/15/07	12 OF 12

- F810-4 – Supplier Quality System Survey
- F810-5 – Supplier Survey
- F810-6 – Supplier Quality Audit
- F810-7 – Supplier Delivery Performance Report
- F1410-1 – 5-Principles of Problem Solving Worksheet

(All listed forms are part of the initial SQM packet provided to each supplier. The Quality Manager can provide electronic copies, if requested.)