
Plasan Carbon Composites Supplier Quality Manual

Table of Contents

Preface:	Introduction Plasan Carbon Composites “Forever Requirements” Supplier Acknowledgement Sheet Supplier Documentation Checklist Plasan Carbon Composites General Information
1.0	Communication
1.1	General Communication
1.2	Revisions to the Supplier Quality Manual
2.0	Selection and Assessment of Suppliers and Subcontractors
2.1	IATF 16949, ISO140001, and ISO9001 Certifications
2.2	Potential New Suppliers/Competitive Bidding
2.2a	Supplier Selection
2.3	Customer Directed Suppliers
2.4	Supplier Profile
2.5	Approved Supplier List
2.6	Current Suppliers
3.0	Supplier Performance Monitoring, Evaluation and Development
3.1	Monitoring Methods
3.2	Supplier Ratings
3.3	New Business Hold
4.0	Document Control and Record Retention
4.1	Control of Design Records
4.2	Control of Specifications
4.3	Control of Procedures
4.4	Record Retention
5.0	Control of Inspection Gages, Fixtures and Measuring/Testing Instruments and Equipment
5.1	General Requirements
5.2	Control of Plasan Carbon Composites Supplied/Owned Equipment
5.3	Calibration and Validation
5.4	Gage Instructions
5.5	Equipment Identification
5.6	Measurement System Analysis
5.7	Inspection, Measuring and Test Equipment Records
6.0	Packaging
6.1	Packaging Suitability
6.2	Initial Packaging Approval/Change Requests
6.3	Returnable Containers
6.4	Pallets
7.0	Labeling
7.1	Container Label Requirements
7.2	Part Barcode Labels
7.3	Label Approval

8.0 Transportation

- 8.1 Schedules, Routing and Carriers
- 8.2 Transportation Routing Information
- 8.3 Packing Slip and Bill of Lading
- 8.4 Advanced Shipping Notice (ASN)
- 8.5 Hazard / Non-Hazard Chemical Requirements and Material Certifications

9.0 Purchasing

- 9.1 Conditions of Business Placement and Purchase Orders
- 9.2 Compliance of Business and Purchase Orders
- 9.3 Manufacturing Process
- 9.4 Process Sign-Off (PSO)
- 9.5 APQP Kick-Off
- 9.6 Duration of Supply

10.0 Scheduling of Requirements

- 10.1 Communication/EDI
- 10.2 Forecasting
- 10.3 Scheduling/Releases
- 10.4 Cums and Material Authorizes

11.0 Incidents of Quality and Delivery Nonconformances

- 11.1 Quality Nonconformances
- 11.2 Controlled Shipping
- 11.3 Excess Transportation Charges
- 11.4 Downtime Charges

12.0 Engineering Changes

- 12.1 Plasan Carbon Composites and Customer Initiated Engineering Changes
- 12.2 Supplier Proposed Engineering Changes
- 12.3 Engineering Change Notification and Control
- 12.4 Engineering Change Product Identification
- 12.5 Product Obsolescence

13.0 Sample Submission Requirements

- 13.1 Advanced Product Quality Planning (APQP)
- 13.2 General Sample submission Requirements
- 13.3 Specific Sample Submission Requirements
- 13.4 Reporting Material Composition (IMDS)
- 13.5 Supplier Prototype Product Requirements
- 13.6 Product Submission Disposition Status

14.0 Lot Traceability

15.0 Associated Business Conditions

16.0 Warranty

- Forms and Attachments
- Revision History

Introduction

Plasan Carbon Composites (PCC) is committed to maintaining its position as a Global Leader within the automotive sector. We will continue to be the supplier of choice to our Customers, through continued leadership and excellence in Innovation, Technology, Cost, Quality and Delivery. Recognizing the integral role that each supplier has in this value chain, it is our intent to establish strategic, long-term relationships to bring lasting value and benefit. Those suppliers demonstrating the desire and ability to support us through value engineering, exceptional quality and world-class manufacturing disciplines will be our partners. Suppliers focused on effective design validation, mistake proofing, process controls, delivery, service and continuous improvement towards reducing waste will continue to share in this partnership.

The relationship between PCC and its suppliers shall be managed to the highest degree of honesty, integrity and professionalism. Our standard of conduct will ensure that we consistently make our decisions based upon optimization of value and sound business principles. We will not allow any undue influence or inappropriate activity to compromise those decisions. We are committed to managing our Supply Base in a manner that continues to bring shared value, growth and reward. In support of maintaining a professional business relationship with our suppliers, our senior management encourages an open door policy to facilitate discussion and resolution of issues through escalation, as appropriate.

Plasan Carbon Composites “Forever Requirements”

The foundation of a good relationship with our supply base is based on open, effective and proactive communication. The occurrence of non-conforming product, unauthorized changes and related supply or capability issues present risk to both PCC and to our customer when communications are not effectively managed. This risk is compounded when these occurrences happen at the Tier 2, 3 or 4 suppliers or sub-contractors facilities.

Our “Forever Requirements” are as follows:

- Proactively communicate with your Customer (**PCC**). Know when to raise the “red flag”.
- Notify the Customer (**PCC**) of proposed material or process changes.
- Notify the Customer (**PCC**) of proposed manufacturing location changes.
- Watch for Divisional issues and tell your Customer (**PCC**) about them.
- Notify the Customer (**PCC**) of potential supply and/or capability issues.
- PCC will flow down all of our customer’s statutory and regulatory requirements to our suppliers and out-sourced processes. It will be the suppliers’ responsibility to follow these accordingly.

The intent of these requirements is to eliminate surprises and special cause events that can impact upon Plasan’s customer(s). The requirements apply to ALL suppliers and sub-contractors who support our manufacturing process. PCC expects that you will manage your entire supply base with these same principles.

We consider these requirements paramount in establishing a relationship of trust with our suppliers, and violation of any requirement will result in escalation to Quality and Purchasing Organizations within PCC. If deemed necessary, a Supplier’s IATF/ISO Registrar will be contacted and asked to conduct the appropriate investigations and assessments, at the Supplier’s expense. Continued non-compliance could lead to loss of business. If you are uncertain when or for what reason(s) PCC should be notified, you are asked to contact your PCC Representative for guidance.

ACKNOWLEDGMENT SHEET

Please retain this sheet and return a signed copy to the appropriate Buyer, indicating that you have received, reviewed and accepted in principle the contents of this guideline. All communications with respect to the contents of this guideline are to be addressed initially in writing to your designated Plasan Carbon Composites Buyer. Comments or concerns should be noted below prior to returning your acknowledgment sheet copy. Updates to this guideline document will be sent when updates are available.

Comments (Please Type):

Supplier Name, Address, Telephone Number, E-Mail Address (Please Type):

Authorized Signature	
Name and Title (Please Type)	
Date Signed (Please Type)	

SUPPLIER CHECKLIST

Supplier Name:		Date Submitted:	
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Along with the signed acknowledgment page, the following documents have been attached for inclusion in the Plasan Carbon Composites master supplier file:

- Non-disclosure Agreement (NDA)
- Supplier Assessment Survey (SAS)
- ISO 9001 Certificate *
- IATF 16949 Certificate *
- Certificate of Liability Insurance
- Minority Status Certificate (if applicable)*
- Woman owned enterprise (if applicable)*
- Supplier Performance Summary Rating (SPSR)
- Confirmation for receipt of PCC Supplier Quality Manual (SQM)
- Confirmation for adherence to local statutory, governmental, regulatory, and environmental requirements
- Country of Origin Certification / NAFTA
- Duns # _____

Please enclose this checklist with the required information and note below reason(s) for any omission(s).

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* Note: It is the supplier's responsibility to provide updated copies of the certificates of registration and Supplier profile whenever there is a change in the reported information

GENERAL INFORMATION

Plasan Carbon Composites Operating Divisions	
<ul style="list-style-type: none"> Plasan Carbon Composites Corporate Office 	46908 Liberty Drive Wixom, Michigan 48393 Phone: 248-924-3801 Fax: 248-773-7164
<ul style="list-style-type: none"> Plasan Carbon Composites Walker 	3195 Wilson Drive NW Walker, MI 49534 Phone: 616-965-9450 Fax: 616-965-3424
E-Mail Addresses are formatted:	first name.last name@plasancarbon.com
Internet Address:	www.Plasancarbon.com

Any questions or concerns with information that has been supplied by Plasan Carbon Composites (PCC) should be immediately addressed with the appropriate the PCC personnel.

1.0 Communication

Standard Abbreviations used in this manual

PCC	Plasan Carbon Composites
AAR	Appearance Approval Report
AIAG	Automotive Information Action Group
APQP	Advanced Product Quality Planning
ASN	Advanced Shipping Notification
ASTM	American Society for Testing and Materials
CRR	Change Request Review
CS1	Controlled Shipping 1 requires 100% sort before ship
CS2	Controlled Shipping 2 requires 100% sort by 3 rd party
CUMS	Accumulations of a number used in MRS
EDI	Electronic Data Interchange
EPS	Expanded Polystyrenes
FAB	Build authority allowance on MRS
FIFO	First In – First Out – an inventory control method
FMEA	Failure Modes & Effects Analysis
FOB	Free On Board – ship term location where title passes
GD&T	Geometric Dimension & Tolerances for specifications
IATF	International Automotive Task Force
IGES	Initial Graphics Exchange Specifications
IMDS	International Material Data System
ISO	International Organization of Standardization
LOI	Letter of Intent
LTA	Long Term Agreement
MAQMSR	Minimum Automotive Quality System Requirements
MOU	Memorandum of Understanding

MDS	Material Data System
MRS	Material Release Schedule
MSA	AIAG Measurement System Analysis Guidelines
NAFTA	North American Free Trade Agreement
NBH	New Business Hold
NDA	Non-Disclosure Agreement
NMFC	National Motor Freight Classification
OEM	Original Equipment Manufacturer
PO	Purchase Order
PPAP	Purchase Parts Approval Process
PPSR	Practical Problem Solving Report
PSO	Process Sign Off
R&R	Repeatability & Reproducibility
RFQ	Request for Quotation
SAE	Society of American Engineers
SDS	Safety Data Sheet
SPC	Statistical Process Control
SOW	Statement of Work
SPSR	Supplier Performance Summary Rating
SSA	Supplier Survey Assessment
UOM	Unit of Measure
WHMIS	Workplace Hazardous Materials Information Systems
8d	Eight Discipline Problem Solving Method (Ford)

1.1 General Communication

An essential ingredient to a successful partnership is clear and concise communication. At PCC, our means of communicating direction, expectations, guidelines and systems include:

- Purchase Orders (P.O.)
- Supplier Performance Data (SPSR)
- Letter of Intent (LOI)
- Sourcing Commitment Documents
- Statements of Work (SOW) or Memorandum of Understanding (MOU)
- Regular scheduled meetings
 - Cross Functional Launch Team meetings
 - Performance Review meetings
 - Escalation of Problem Issues
- The Supplier Quality Manual

Details are noted in the appropriate sections of this manual. Refer to the Table of Contents.

Although we communicate in numerous ways, SPSR's are indicative of a suppliers overall performance and is the main input of new business sourcing.

1.2 Revisions to the Supplier Quality Manual

This manual will occasionally require revision as requirements, expectations and systems change. It is the suppliers' responsibility to ensure they have the latest released edition. It is the suppliers' responsibility to contact the appropriate PCC personnel with any questions regarding the requirements contained within the SQM.

The initial manual will be mailed to each new supplier.

Subsequent revisions will be posted on the PCC website. www.plasancarbon.com

It is the suppliers' responsibility to confirm that they have, use and understand the most updated version as indicated on the website.

2.0 Selection and Assessment of Suppliers and Subcontractors

2.1 IATF 16949, ISO14001, ISO9001 Certification

PCC has a high regard for those suppliers who have earned certification status such as IATF & ISO. Suppliers who have achieved this status will generally be given preferential treatment in the selection process for source supply.

As specified by IATF 16949, PCC will perform supplier quality management system development with the goal of supplier conformity to IATF 16949. At a minimum, suppliers must be registered to ISO9001, unless otherwise authorized by PCC. The supplier is to provide PCC with current copies of their registration certificates. Additionally, the supplier is to notify PCC of any change in registration status.

PCC specific requirements will supersede the OEM requirements, if and only if the PCC requirements are more stringent or are in addition to the OEM requirements.

Any supplier who has not earned certification is subject to an audit performed by a PCC representative or an accredited 3rd party source.

2.2 Potential New Suppliers/Competitive Bidding

Potential New Suppliers follow the competitive bidding process as the method for receiving business awards from PCC. The method used for this effort is through an initial submission of a Request for Quotation (RFQ) for goods or services not previously supplied to Plasan.

PCC uses a variety of methods for requesting a quotation:

- 1) PCC RFQ format
- 2) PCC email with supporting documentation
- 3) PCC verbal request
- 4) In some cases specific examples are provided to the supplier

In some cases, bids may be initiated through a Manufacturing or Product Engineer.

RFQ's are reviewed for merit and a determination of direction is reviewed internally at PCC. In some cases bids will be discussed with the quoting supplier. In some cases written responses are returned to the supplier citing PCC acceptance or rejection of a bid.

In all cases, further negotiations are required.

2.2a Supplier Selection

Based on the SAS criteria along with the results of the RFQ and sampling of material, PCC makes selections based on the best overall candidate that will provide the best overall value to PCC.

Other specific considerations for selection are (but not limited to):

- a. Quality
- b. Cost
- c. Delivery
- d. Capability
- e. Capacity
- f. Attitude
- g. Financial strength
- h. Risk Considerations
- i. Directed by the Customer

2.3 Customer Directed Suppliers

In those instances where sources are directed by PCC's customer for a specific part or commodity, the directed sources shall meet all requirements as specified in the SQM and may also undergo an assessment review.

2.4 Supplier Profile

All suppliers are required to complete an SAS that consists of general information, company contacts, etc. Other data may also be required, such as financial and technical information and union contract status as a means for supplier consideration and monitoring. It is the supplier's responsibility to provide an updated SAS whenever there is a change in the reported information.

If the supplier has ISO or IATF certifications, completion of pages 4-9 are not required.

2.5 Approved Supplier List

An Approved Supplier List (ASL) exists for production suppliers and is utilized by PCC for strategic sourcing decision-making by commodity or service performed. The listing is updated on a continuous basis in order to reflect input from the assessment, development and performance monitoring systems maintained by PCC.

Should it become probable that business will be awarded to a potential supplier; an assessment of that supplier's quality system will be required to ensure that their minimum standards are acceptable to the PCC Quality Engineers. Following a satisfactory assessment, the potential new supplier(s) will be added to the Approved Supplier List (ASL) for consideration of future business awards

2.6 Current Suppliers

Current suppliers on the ASL must continue to meet performance objectives of PCC. Supplier performance will be monitored as specified in the "*Supplier Performance Monitoring, Evaluation and Development*" section whereby these performance measures will serve as the basis for future sourcing decisions.

3.0 Supplier Performance Monitoring, Evaluation and Development

3.1 Monitoring Methods

PCC has established a system to monitor measure and report supplier performance in the areas of **quality, delivery** and **commercial activity**. In support of Continuous Improvement, each PCC department among QA, Materials and Purchasing will provide rating information for each supplier

PCC also defines supplier performance requirements that are tracked and measured; including, but not limited to indicators such as:

- Quality Performance & timely problem resolution
- Delivery and schedule attainment
- Responsiveness

PCC requires specific actions be taken by the supplier when performance levels are not met. Typical actions may include, but are not limited to, documented corrective actions, cost recovery, on-site management reviews at the suppliers or the PCC facilities, probationary status precluding new business awards or NBH, and in extreme circumstances, de-sourcing.

3.2 Supplier Ratings

PCC will provide the supplier with rating information on the SPSR. Future sourcing decisions will be based on a supplier's performance record. All suppliers should be aware of their standing and to resolve performance issues expeditiously.

3.2.1 **Quality performance** will be monitored by tracking quality issues & past due actions. Quality related ratings will make up 50% of a suppliers overall performance rating.

3.2.2 **Delivery performance** will be monitored by tracking compliance to shipment due date(s) and quantity accuracy. Any deviations from timeliness and quantity accuracy requirements must be approved by the appropriate PCC Materials Representative. Written authorization for acceptance will be in the form of a modified supplier release. Delivery performance will make up 40% of the supplier's overall performance rating. Suppliers are expected to implement a process to meet 100% on time shipping requirements.

3.2.3 **Supplier Responsiveness** will be measured by tracking documentation submission. Examples of timely submission are: SAS, W9, Certificates of insurance, certification, etc. Supplier responsiveness will account for 10% overall performance rating.

3.2.3 **The Supplier Performance Summary (SPSR) Rating** will be issued each quarter to production component suppliers and sub-contractors. Other forms of communication (letters, phone calls, etc.) regarding the supplier's performance rating is optional and provided only as a courtesy. It is the supplier's responsibility to review the monthly performance rating report and respond to unsatisfactory ratings with a written corrective action plan. Should the supplier disagree with their monthly performance rating, they may request that the rating be reviewed. The request and supporting details must be submitted in writing to the appropriate PCC Representative within five business days of receipt; otherwise the rating will stand without review.

3.2.4 The SPSR is based on a 100 point system. The maximum allowance of points is based on the following criteria:

Quality 50 points

- o 35 points for quality cases
- o 15 points for timely documentation submission (8d)

Delivery 40 points

- o 15 points for on time delivery
- o 10 points for no customer shutdowns for material outages
- o 5 points for no over or early shipments
- o 5 points for no mistakes in transportation methods
- o 5 points for no mistakes or missed ASN's

Responsiveness 10 points

- o 10 points for no delays in required documentation

A score of 85+ = Supplier acceptable for future use with alerts to improve

A score of 70 to 84 = Supplier may be required to complete an 8d

A score of <50 = Supplier may be required to complete an 8d with an improvement plan to be submitted

A score of <50 for 2 consecutive quarters = Supplier may be subjected to NBH and faces the possibility for resourcing of material.

3.2.4 Unsatisfactory supplier performance will be determined by the following:

- Less than 100% on-time delivery performance, unless otherwise agreed upon by PCC.
- Noncompliance to any requirements as outlined in the SQM.
- Non-responsiveness to customer service request(s).

3.2.5 Unsatisfactory supplier performance will be monitored by the designated Buyer, Materials and/or Quality Representative with any of the following steps being taken as steps to improve or develop the supplier's performance:

- Corrective actions (action plan, 8D, PPSR) requested and monitored for compliance.
- Meeting between the supplier representative(s) and the designated Buyer, Materials Representative, Supply Chain Manager, Program Manager, and/or Quality Representative(s) to develop a time-line for completion of required corrective action(s).
- On-site supplier audit may be required.
- Notice of placement on Controlled Shipping 1 (CS1), which requires 100% inspection of all parts prior to shipment. (refer to section 11.2 Controlled Shipping Levels)
- Notice of placement on Controlled Shipping 2 (CS2), which requires 100% inspection by a PCC, approved 3rd party prior to shipment. This expense will be borne by the supplier. (Refer to Section 11.2 Controlled Shipping Levels).
- On-site evaluation of the supplier's manufacturing, quality and/or containment activities.
- Notification to the supplier of New Business Hold (NBH) status.
- Notification to the supplier of product de-sourcing due to continued noncompliance.

3.2.6 Plasan Carbon Composites will also compile an overall list of the quarterly and yearly performance of the supply base. Continued high performance levels will be strongly considered when awarding new business.

3.3 New Business Hold

3.3.1 Suppliers may be placed on NBH for any one, or combination of, the following criteria:

- Suspension of the supplier's Quality and/or Environmental System Registration Certificate
- Performance issues resulting in multiple instances of Controlled Shipping
- Financial risk or instability.
- Contractual issues, (at Purchasing discretion)

3.3.1 The New Business Hold (NBH) process is as follows:

- PCC Purchasing and/or Quality will review the supplier's performance and initiate the NBH process.
- PCC Purchasing representative will notify the supplier in writing of their NBH status via the NBH letter. The supplier's quality system registrar may also be contacted regarding Controlled Shipping or NBH status.

- Purchasing and/or Quality will develop and review the improvement expectations and exit criteria with the supplier.
- Purchasing and/or Quality will monitor the supplier's progress to plan.
- Once the supplier has met the exit criteria, an NBH Removal Letter will be issued to the supplier and the supplier's quality registrar (as applicable) and removed the NBH status (for the affected supplier Duns location) from the SPSR.

4.0 Document Control and Record Retention

4.1 Control of Design Records

All suppliers/subcontractors must have a documented system in place for monitoring receipt, control, and obsolescence of all PCC supplied design records. Suppliers will be responsible for being able to read math data files in the appropriate language (NO Translations, i.e. IGES), and have the ability to print files which include wire frame, GD&T, and notes (i.e. performance and material requirements).

Note: Confidentiality applies to all customer supplied drawings, math data media and specifications.

4.2 Control of Specifications

Specifications noted on drawings and/or sketches supplied by PCC, and subsequent specifications referred to within the body of those specifications shall be obtained by the supplier/sub-contractor directly from the controlling authorities (i.e. ASTM, SAE, etc.)

All suppliers/sub-contractors must have a documented system in place for obtaining the latest released editions of required specifications. The system shall address annual verifications by suppliers/sub-contractors to the controlling authorities.

4.3 Control of Procedures

- 4.3.1 Suppliers/sub-contractors shall establish documented quality practices for all areas of the quality function based on AIAG Advanced Quality Planning (APQP) Guidelines.
- 4.3.2 A multi-disciplined approach shall be utilized for approval of quality documentation.
- 4.3.3 A documented method shall exist for revising, approving, re-issuing and implementing policies, procedures and work instructions.
- 4.3.4 All procedures and supporting documentation shall be controlled, maintained and available on site for review, upon request by Plasan Carbon Composites personnel.

4.4 Record Retention

Suppliers are expected to maintain applicable retention periods as specified in the latest released edition of the IATF 16949 standard and OEM Specific Requirements when applicable, unless otherwise specified by Plasan Carbon Composites. Legal or government requirements prevail.

5.0 Control of Inspection Gages, Fixtures, Measuring/Testing Instruments and Equipment (Metrology)

5.1 General Requirements

- 5.1.1 The supplier must have a documented system for the control, calibration, analysis, use and maintenance of all gages, fixtures, measuring/testing instruments and equipment.
- 5.1.2 Gages, fixtures, and measuring/testing instruments/equipment are to be calibrated and adjusted at prescribed documented intervals or prior to each use, against certified equipment having a known valid relationship to nationally recognized standards.

- 5.1.3 Gages, fixtures, and measuring/testing instruments/equipment are to be assessed for accuracy and repeatability /reproducibility (R&R) at prescribed documented intervals.
- 5.1.4 The environmental conditions must be suitable for use of the equipment.
- 5.1.5 Handling, preservation and storage is to be such that accuracy and fitness for use is maintained.
- 5.1.6 Documented procedures and instructions for the control, calibration, analysis, use and maintenance of all gages, fixtures and measuring/testing instruments and equipment are to be available at the point(s) of use.
- 5.1.7 Records associated with the control of inspection gages, fixtures and measuring/testing instruments and equipment are to be properly maintained and available for review upon request.
- 5.1.8 Control, acceptance criteria and procedural requirements are to be in accordance with the latest released edition of the AIAG Measurement System Analysis Guideline (MSA).

5.2 Control of Plasan Carbon Composites Supplied/Owned Equipment

- 5.2.1 All equipment provided by, and/or property of, PCC for measuring and test activities at the suppliers/sub-contractors facility shall be monitored with respect to the latest product engineering change level for which each piece of equipment is used.
- 5.2.2 PCC shall monitor the recall, modification, update, verification, return and/or replacement of all such equipment.
- 5.2.3 All suppliers/sub-contractors shall have a documented system in place for monitoring all changes to the PCC supplied/owned measuring and test equipment. The system shall address an annual verification procedure.
- 5.2.4 All tooling, inspection and test fixtures supplied by and/or property of PCC are to be permanently marked with clear identification indicating ownership.
- 5.2.5 PCC may periodically perform audits to confirm the location and condition of assets used or stored at a subcontractor's location.

5.3 Calibration and Validation

- 5.3.1 Calibration is to be performed at prescribed intervals against certified equipment having a known, valid relationship to nationally recognized standards.
- 5.3.2 All gages and test equipment must be calibrated in accordance with IATF standards.
- 5.3.3 The calibration certificate must be on file at the supplier's facility, and be traceable to the actual gage identification information. Calibration Services, when used, must meet the requirements of the latest released edition of IATF 16949.

5.4 Gage Instructions

Operating instructions must be displayed at every inspection station requiring the use of a gage or other measuring /testing device. The operating instruction must describe the proper methodology for use in inspection. These instructions must include a reference to the gage identification number, and revision level, and be approved by appropriate management. Whenever there is any change to the inspection procedure that affects the use of the gage, or when any identification information is revised, the operating instructions must be updated to reflect the current status and the records retained accordingly.

5.5 Equipment Identification

All gages, fixtures, measuring devices and test equipment, including employee owned must be identified as follows:

- Unique identifier
- Revision level (when applicable)
- The calibration date and the next calibration due date.
- Name/initials of the person who performed the calibration.

5.6 Measurement System Analysis

5.6.1 Evidence is required that appropriate statistical studies have been conducted to analyze the variation associated with each type of measuring and test equipment system. Analytical methods and acceptance criteria must conform to the latest released edition of the *AIAG Measurement System Analysis (MSA)* manual.

5.6.2 The supplier must have a documented system in place to control, calibrate, and maintain the proper function and accepted level of gage repeatability and reproducibility (R&R) of all inspection fixtures, gages, measuring / testing instruments and equipment.

5.7 Inspection, Measuring and Test Equipment Records

Records of calibration, verification, maintenance and statistical analysis activities must be traceable to the part revision level demonstrating conformance to standards and corrective actions taken where applicable. Records must include:

- Device identification number and change level (when applicable).
- Date of calibration/analysis and identification of the person performing the activity.
- Conditions and readings as received and prior to calibration.
- Calibration results and actions taken (i.e. replace, repair, etc.)
- Gage R%R results.
- Action taken on products measured with out of calibration and/or non-capable equipment.

Note: PCC must be notified if suspect or discrepant product has been shipped as a result of out of calibration gages, fixtures, measuring or test equipment.

6.0 Packaging and Storage

6.1 Packaging Suitability

It is the supplier's responsibility to provide any product sold to PCC in approved packaging as determined by the PCC APQP process. The criteria necessary to determine suitability may include:

- Robustness to ensure integrity of product
- Compliance with health and safety guidelines (especially in the area of ergonomics)
- Compliance to PCC Operations requirements
- Compliance to AIAG standard guidelines
- All expendable packaging should be recyclable.

6.2 Initial Packaging Approval/Change Requests

6.2.1 PCC must approve all packaging prior to the first shipment. Approval is required for packaging type (i.e. returnable, expendable), container size, container quantity and pallet quantity. Any changes or deviations from the approved packaging require written approval.

Note: Packaging is also part of the PPAP submission.

6.2.2 Suppliers are encouraged to confirm with the applicable PCC representative any additional requirements such as:

- Container fill and identification for a “balance out” or “final release” situation
- Foamed plastics or expanded polystyrenes (EPS)
- ISO Modular Packaging Requirements for import/export product
- Maximum weight for manually and mechanically handled goods

6.2.3 All goods sold to PCC that are considered to be “controlled” under *Workplace Hazardous Material Information Systems*, must comply with appropriate legislated regulations for packaging and shipping.

6.3 Returnable Containers

Returnable containers are the primary packaging method considered on new programs. On an individual basis, PCC may assess current production part packaging feasibility using returnable containers. Suppliers are encouraged to consider conversion to reusable containers.

PCC has developed and implemented returnable containers with many suppliers. As a result, specific styles of containers best suited to shipping, storage and manufacturing requirements have been identified. Any inquiries regarding this packaging may be submitted to the PCC Engineer or designated Buyer.

6.3.1 The Supplier shall be responsible to maintain the cleanliness of all returnable containers. This requirement extends to removing all prior container labels.

6.3.2 The supplier shall is responsible for all maintenance and logistical tracking of the returnable. The supplier shall notify PCC when repairs are necessary.

6.3.3 Financing of returnable packaging will comply to mutually agreed upon terms.

6.4 Pallets

Pallets are to meet the following specifications:

- Pallets are to be banded and/or stretch wrapped.
- Boxes must fit on pallet, without any overhang.
- Pallet height limit is 48”, unless otherwise authorized.
- “DO NOT STACK” sticker is to be affixed to 2 adjacent sides (when applicable).
- Pallets must be 4-way entry.
- Like parts may be mixed on a skid only if less than a skid quantity of each part is required. Otherwise, all cartons for the same part number must be on the same skid(s).
- All mixed pallets must be clearly labeled as “MIXED SKID” on 2 adjacent sides.
- Wooden pallets are to be heat treated to ISPM standards.

6.5 Storage

6.5.1 The Supplier will have a segregated storage facility for the preparation of timely shipments to PCC.

6.5.2 All materials shall be stored in a safe, dry location.

6.5.3 All materials shall be safe-guarded and protected from dirt, debris and moisture.

6.5.4 All materials shall be segregated and identified to prevent mixing.

6.5.5 All materials shall be stored and controlled in an environment that maximizes security and minimizes potential damage to products and packaging.

7.0 Labeling

7.1 Container Label Requirements

7.1.1 All materials for prototype or production consumption, shipped to PCC, must be identified with labeling containing human-readable text / graphics, and machine-readable bar coded symbols.

7.1.2 Containers shall be identified with the following, as applicable:

- container labels
- master labels
- mixed load labels
- primary metals labels and
- part labels when specified by design records, specifications, or other written requirements

All labels must be legible and scannable to AIAG Standard and unobstructed from banding and other packaging materials.

7.1.3 Characters and symbols shall comply with the PCC requirements of the AIAG, B-8 standard – Quality Assurance Guide for Shipping Labels and Other Bar Code Applications.

7.1.4 Parts Shipping Labels (container, master, and mixed load), shall comply with the layout formats defined in the AIAG, B-3 standard – Parts Shipping Label. Custom formats may be specified by a PCC via a Customer Compliance Specification Sheet.

7.1.5 Label placement, orientation, quality and quantities shall follow the guidelines contained in the AIAG, B10 standard – Trading Partner Labels Implementation Guide, unless otherwise specified by division specific requirements.

7.1.6 Each container must have two AIAG bar-coded labels (formatted as described above); this also includes any items not in cartons such as rolls, bundles, drums, etc. The labels must be affixed to the upper RH corner of at least two adjacent sides. If the container is returnable, the supplier is to ensure that old labels are removed and replaced.

7.1.7 Labels will include the following information:

- Part Number
- Revision Level
- Description (the description must exactly match the description on the Purchase Order and Releases).
- Quantity (the quantity must be as per the standard Unit of Measure (UOM) as mutually agreed upon).

7.1.9 Pre-production and/or trial material must be clearly identified by Program and Purchase Order Number, as well as any other information defined by PCC.

7.2 Part Barcode Labels

7.2.1 When required that a barcode label be affixed to each part, such labels must be affixed in an area as not to interfere with the part function or appearance. Exceptions to part labeling requirements are made for components that are restricted in size (i.e., fasteners). Contact the appropriate PCC Engineer and/or Buyer for requirements and exception details.

7.2.2 Part labels shall comply with the requirements defined in the AIAG, B-4 standard – Parts Identification and Tracking Application Standard, unless otherwise specified by design records or PCC division specific requirements.

7.2.3 Typical Part Barcode Labels will include, at a minimum the following information:

- Part Number
- Part Revision Level
- Part Description
- Quantity

7.2.4 When requested, the supplier shall submit a sample label for each component that is to be barcode labeled to PCC for approval, prior to shipping. PCC will review the labels for completeness and approve to each supplier accordingly.

7.3 Label Approval

Suppliers must obtain approval of newly introduced label formats from PCC prior to implementation.

8.0 Transportation

It is important that PCC suppliers are aware of transportation and delivery requirements, as it is one of the key performance metrics upon which they will be assessed. PCC supports the industry initiative of inventory reduction, recognizing however the importance this places on accurate and timely delivery of quality product. It is our expectation that suppliers will deliver 100% on time to our location, in compliance to schedules.

In an effort to support JIT delivery, we expect our suppliers to constantly strive to reduce lead times with their suppliers, improve flexibility and minimize changeover times. If necessary to support JIT schedules, the supplier may be asked to support local warehousing.

8.1 Schedules, Routing and Carriers

8.1.1 All appropriate scheduling, routing, FOB points and delivery requirements will be communicated early in program award, typically through the Supplier SOW, MOU, PO, MRS or similar documentation. All transportation arrangements and requirements must be approved by PCC Supply Chain, Materials or Purchasing representatives.

8.1.2 Specified truck lines along with customs and brokerage information, if required, will be detailed on PCC Routing Instructions.

8.1.3 Any changes to carrier or delivery frequency must be approved in writing by the applicable PCC Representative, even it is for an expedited shipment.

8.2 Transportation Routing Information

8.2.1 Suppliers will receive routing information including transportation method, and pick-up and delivery window times. Routing information will be communicated in writing or similar document used by PCC. PCC will make certain that all transportation and routing details are clearly specified. Suppliers shall question any ambiguous instructions. All costs incurred as a result of missed or late shipments that are clearly the responsibility of the supplier, shall be recovered from the supplier.

8.2.2 All material entering from a foreign country must have “Country of Origin” clearly marked on the packaging, Pro forma Invoice, as well as on the original Commercial Invoice.

8.2.3 Failure to comply with PCC directed service providers or process will result in charge backs to the offending supplier

8.3 Packing Slip and Bill of Lading

8.3.1 Packing Slip

It is required that all material shipped be identified on a Packing Slip or Bill of Lading. While requirements may differ by program, the information typically required includes:

- Ship date
- Invoice/Packing Slip number
- Ship to and Sold to Addresses
- Separate line item for each part number shipped
- Part number(s) and descriptions
- Engineering change level of each part number
- PO number for each part
- Quantity ordered and Quantity shipped of each part
- Number of cartons/skids/containers/weight per part

The packing slip is to be attached in a clearly visible location.

8.3.2 Bill of Lading

The Bill of Lading must include the following information:

- Total Number of Containers Shipped.
Examples of Containers Shipped:
 - 20 cartons on 1 skid **-or-** 1 skid @ 20 cartons
 - 50 cartons on 3 skids **-or-** 2 skids @ 20 cartons ea + 1 skid @ 10 cartons
 - 70 cartons on 4 skids + 3 loose cartons **-or-** or 3 skids @ 20 cartons ea + 1 skid @ 10 cartons + 3 loose cartons
- Number of cartons per skid and/or the number of loose cartons
- Total Weight
- Proper NMFC Description, Item Number, and Class
Example:
 - OEM PLASTIC AUTOMOTIVE COMPONENTS, NM18850, CL 85.
- Indicate whether freight is prepaid or collect

Questions regarding the correct NMFC description, item number, or class should be directed to the designated carrier. Because this information affects freight rates, it is critical to ensure its accuracy.

8.3.3 All re-weigh fees listed on the truckers invoice to PCC will be debited back to the supplier.

8.4 Advance Shipping Notice (ASN)

8.4.1 The ASN must be completed and sent to the PCC Materials Planner within 1 hour of the shipment leaving the supplier's facility. ASNs may NOT be sent early.

- See ASN form attached
- E-mails can also be used as a substitution of completing the ASN form at the discretion of the Materials Planner.

8.4.2 In the event of a known shortage or late shipments, the supplier must immediately contact the appropriate PCC Materials Planner and advise them of the shortage or late shipment. The supplier shall also indicate the anticipated time of delivery of the expedited material required to complete the original schedule.

8.4.3 The supplier must maintain a third party contingency to ensure uninterrupted communication of ASNs in the event of a system failure at the supplier's location. The PCC divisional Materials Representative must be in agreement with the third party selection.

8.5 Hazard / Non-Hazard Chemical Requirements and Material Certifications

8.5.1 PCC suppliers/sub-contractors considered to be "controlled" under WHMIS (Workplace Hazardous Material Information Systems) **must** be familiar with and comply with all such regulations, for packaging and shipping.

8.5.2 Prior to shipping **ANY** chemical or related material, the SDS must be submitted through the Buyer or PCC representative for a prior internal authorization by the PCC Environmental Health & Safety Manager to accept or purchase said material.

8.5.2 Safety Data Sheets (S.D.S.) **MUST** accompany all initial shipments from all suppliers/sub-contractors and marked to the attention of the Environmental Health and Safety Manager.

8.5.3 Where required, Material Certifications are to be placed in a separate envelope and addressed to the using division's Materials Department.

8.5.4 All materials certifications received by the Materials group will be forwarded to the appropriate engineering team member.

9.0 Purchasing

9.1 Conditions of Business Placement and Purchase Orders

9.1.1 As a condition of business, all suppliers/sub-contractors must be prepared, on request, to provide information required to substantiate the capacity to provide the necessary products, commodities and services. This shall include, but is not limited to, technical capability systems/procedures to evaluate key product characteristics, price structure, and financial information. In addition, the supplier must be prepared to provide proactive initiatives such as cost reduction proposals and recycling programs to PCC.

PCC's expectation is that all suppliers will pursue certification in ISO or IATF

9.1.2 The extent of the purchase contract and order of precedence shall be:

- 1) Compliance with all relevant local, provincial, state and federal government legislation with special emphasis on hazardous waste and other environmental requirements
- 2) The Purchase Order and the terms and conditions thereof (see appendices and our website)
- 3) Requirements as stated in the Supplier Guidelines
- 4) Letter of Intent
- 5) MOU or SOW Requirements

9.1.3 All suppliers/sub-contractors must provide Country of Origin Certification and other documentation required under the US/Canada Free Trade Agreement and the North American Free Trade Agreement (NAFTA). All customs requirements must be met in a timely manner to ensure efficient transportation of goods.

9.1.4 All suppliers shall have documented procedures for assessing, selecting, monitoring and developing their suppliers/sub-contractors with adherence to a continual improvement philosophy geared to complete customer satisfaction and cost reductions.

- 9.1.5 Suppliers / sub-contractors are expected, where applicable, to sign up to a Long Term Agreement (LTA), Productivity Program or other type of cost savings agreement. This LTA is to provide cost savings through, but not limited to, raw material price decreases, value analysis, or productivity improvements.
- 9.1.6 Suppliers must utilize appropriate APQP techniques as identified in the AIAG APQP reference manual or similar techniques.

9.2 Compliance of Business and Purchase Orders

9.2.1 Purchase Order / Letter of Intent

PCC will issue PO's to suppliers for awarded programs. In advance of receipt of PO's, suppliers to PCC may receive a letter of intent from the Purchasing Department providing the following information pertaining to Supplier conditions, requirements, and responsibilities:

- Design, development, prototype and production source award.
- Pricing
- Packaging (Expendable and Returnable)
- Tooling design and timing
- Freight and Customs
- Pre-Production Activity
- Cost Reduction
- Currency
- SOW or MOU

It is the intent of PCC that the chosen subcontractor be the product supplier for the related program; provided the supplier meets commercial, design, program support, quality, and delivery requirements. Where PCC or OEM dictated program changes necessitate adjustments to the PO or LOI, the supplier will be required to quote and substantiate such adjustments (variance quotation).

The supplier will be required to conform to PCC and/or OEM tooling documentation and audit requirements. PCC reserves the right to audit tool costs incurred by the supplier in support of awarded programs. Such an audit may include, but not be limited to, a review of quotes, purchase orders, invoices, and other documentation.

Business award is conditional upon the supplier's concurrence with the requirements of the PCC Bailee Bond, and the applicable SOW/MOU, if so requested.

9.2.2 Statement of Work / Memorandum of Understanding

The supplier may receive a copy of the applicable program SOW/MOU issued to prospective suppliers for applicable programs. Suppliers will be expected to fulfill all applicable elements of the SOW/MOU. The requirements outlined in the SOW/MOU are consistent with the OEM expectations of PCC and reflect a cascading of these expectations to Tier II suppliers.

9.2.3 Product / Program Changes

PCC will not accept cost increases due to process-oriented developmental changes that are necessary to meet the design requirement. The supplier will be reimbursed only for approved costs associated with product/program changes mandated by PCC or the applicable OEM. If PCC initiates product/program changes that result in reduced production tooling or manufacturing costs, PCC will expect piece price or tooling costs to be reduced to reflect the entire amount of the reduction.

9.2.4 Quotation Response Requirements

When PCC is considering a product or program change, an RFQ (Request for Quote) may be generated and forwarded to the supplier. Suppliers are expected to respond by the due date identified in the RFQ, with documentation as defined by the PCC initiator. RFQ response is a measurable for supplier performance. Failure to meet response expectations may result in NBH or removal from the ASL.

9.3 Manufacturing Process

If the supplier manufacturing process assumptions are based on new technology, or on processes that are new to the supplier, the supplier must document how and when the processes will be proven out in a pilot program prior to production launch. The pilot program must provide for the manufacture of a sufficient quantity of parts so that the program production launch curve is based on the experience of the pilot program rather than unproven assumptions.

If a pilot program cannot be accomplished, the supplier must provide a detailed back-up manufacturing plan based on proven processes; to be implemented in the event problems are encountered during the launch of the new technology or processes that may impact supply to PCC.

Regardless of process assumptions, the supplier must submit periodic launch plans reflecting process assumptions as well as key launch events, associated timing and progress to plan. The due date for the first submission will be discussed at the APQP kick-off.

9.4 Process Sign-Off Requirements

Process Sign-Off (PSO) must be performed on all new or modified parts. Products that have a high or medium initial risk evaluation will require that the PSO be led by PCC personnel. Parts with a low risk evaluation will have a supplier led PSO.

Any product or process change that occurs during the lifecycle of a part or system must be reviewed by the product team to determine whether a new PSO is required. Submission for full PPAP approval will not be accepted unless PSO sign off approval is achieved.

It is the responsibility of the supplier to submit PPAP documentation for review and approval prior to shipping products to PCC.

9.5 APQP Kick-Off

An APQP kick-off meeting will be scheduled upon business award. Personnel representing the supplier's Program Management and Quality Assurance shall participate to establish and outline APQP requirements, timetables, and contacts. All immediate technical concerns will be addressed at this time.

The following documentation is to be provided at the APQP kick-off meeting:

- Manufacturing facility status as Union/Non Union. (identify each union affiliation and the respective contract expiration date(s))
- Documentation certifying the facility as a certified minority location (if applicable)
- Applicable IATF 16949 and ISO14001 facility registrations

The supplier is required to submit periodic launch plans reflecting process assumptions as well as key launch events, associated timing and progress to plan. The due date for the first submission will be discussed at the APQP kick-off.

9.6 Duration of Supply

The supplier must meet program commercial, design, quality, and delivery requirements to be selected as the PCC production source for awarded program materials. The supplier must remain fully cost competitive with qualified alternate suppliers throughout the life of the program.

10.0 Scheduling of Requirements

10.1 Communication/EDI

- 10.1.1 Suppliers should have EDI (Electronic Data Interchange) capability.
- 10.1.2 The chosen supplier will receive confirmed forecasted volumes for the project at the time of the kick-off meeting.
- 10.1.3 All material, purchased components, assemblies and associated services will be ordered by issuance of an individual PO or Blanket PO. The PO will identify forecasted (non-obligated) volumes for the material to be released in a specified time frame.

Suppliers will be issued production material requirements via MRS at weekly intervals, or as need dictates by the Materials Planner. Schedules will be communicated through a variety of options including E-mail or EDI. PCC will dictate the method and frequency of MRS communication.
- 10.1.4 It is the supplier's responsibility to contact the Materials Planner or appropriate contact if a weekly release was not received or if the supplier is unable to meet all requirements for delivery date, time, quantity or quality.

10.2 Forecasting

- 10.2.1 Forecasting information for materials used in production, will be communicated to the supplier initially through the program launch process and "blanket" PO and later confirmed by the weekly scheduled releases from the Materials Planner. While this information is an indication of future material requirements, it is not considered binding on the part of PCC.
- 10.2.2 The supplier must maintain the ability to absorb a 10% volume increase at all times. Additionally, the ability to accommodate a 15% increase within 24 hours notice without expenditure to plant or equipment is also required.
- 10.2.3 Material authorization will typically include three to six weeks (combined finished goods, work in process and raw material) and is determined by PCC. In every case, additional material lead time allowances require specific approval from the Purchasing or Materials Department.
- 10.2.4 The supplier is expected to maintain sufficient safety stock and finished goods inventory to accommodate 100% on-time delivery. Short shipments must be communicated immediately to the Materials Planner, along with a Corrective Action/ Recovery Plan.
- 10.2.5 Suppliers must maintain an effective contingency plan, in order to mitigate undue risk to PCC, in the event of utility disruption, labor disruption and/or equipment failure. The intent of the contingency plan is to reasonably protect PCC from disruption of supply in the event of an emergency.
- 10.2.6 PCC recommends that all suppliers develop a risk assessment and contingency plan based on variables that could create business interruptions.

10.3 Scheduling and Releases

- 10.3.1 Raw material may be ordered by issuance of individual PO's or releases under a "blanket" PO.
- 10.3.2 Suppliers who have been issued a "blanket" PO will typically receive weekly releases; however some suppliers may receive daily releases, depending on the product type and/or volume.

- 10.3.3 The supplier is to ship only those quantities that have been released unless the Materials Planner or Buyer has authorized other arrangements. If deviations are made, a revised release will be issued as documentation of scheduling deviation approval. Over shipments may be subject to refusal on the dock or returned at supplier's expense and without receipt of a return material authorization. Excess transportation charges resulting from unauthorized multiple shipments; past due requirements and/or unauthorized truck lines will be debited in full to the supplier.
- 10.3.4 Suppliers who are unable to meet all delivery requirements including date, time, quantity and quality must notify the Materials Representative or Buyer immediately. Note that this communication does not alleviate the supplier of any of the related costs and penalties associated with being past due or shipping defective material.
- 10.3.5 Telephone calls, emails, or other forms of communication noting schedule deviations, while appreciated for planning purposes, do not result in allowances for deviation of the requirement schedule or leniency on the SPSR. If a shipment is missed or is incomplete, an expedited carrier must be set up at the supplier's expense.

10.4 Accumulations (CUMS) and Material Authorization

- 10.4.1 CUMS that do not match is an indication that an error has been made either in receipt history or ship history. CUMS must match to ensure the correct release of parts. It is recommended that the supplier review CUMS daily. At a minimum, CUMS should be reviewed and confirmed weekly.
- 10.4.2 In the event the received and the shipped cums do not match, the supplier must immediately notify the appropriate Materials Representative. Until the CUMS discrepancy is resolved, the supplier should consider the PCC CUMS to be correct, and ship per the current release. It is the supplier's responsibility to provide proof of delivery when a discrepancy is found.
- 10.4.3 The supplier will have 30 calendar days after product shipment receipt to resolve invoice CUMS discrepancies. Failure to resolve discrepancies may result in non-payment of open invoices items. CUMS discrepancies must be communicated in writing to the Materials Department.
- 10.4.4 Unless otherwise specified, standard FAB authorization is 2 weeks and RAW authorization is 4 weeks. Exceptions to these authorizations require written approval by the appropriate Materials Representative.
- 10.4.5 PCC will not be responsible for material beyond the CUMS as authorized above. Quantities on release beyond the RAW CUMS are for planning purposes only.

PCC's release requirements may change on a daily basis due to fluctuations of customer requirements. PCC is committed to meeting these requirements without exception or assistance from our customer. Excess freight or labor costs incurred by PCC in order to meet delivery requirements are not passed on to our customer, no matter the circumstance. Because of this, we require our supply base to provide the same level of flexibility and support. This is the basis for FAB and RAW authorizations as stated above.

11.0 Incidents of Quality and Delivery Nonconformances

11.1 Quality Nonconformance

- 11.1.1 Purchased components found to be nonconforming through line rejections, testing failures, failed inspection results, customer concerns, warranty, customer returns and/or obsolete material are handled through the following procedure:
 - The supplier will be notified of the concern via telephone and/or electronic means. All relevant containment actions will be established at this time.
 - Incidents of nonconforming product will be reflected in the monthly supplier ratings to be indicated on the SPSR.

11.1.2 A corrective action report addressing the reported concern is to be submitted in the appropriate format (Global 8-D, PCC format, 5 Why? or other pre-approved format) within the following time frames:

- Initial response describing immediate containment activities up to and including sort, rework and shipment of certified material required within 24 hours.
- A completed corrective action report including preventive action is required within 5 business days for standard purchased components (unless otherwise specified).
- For more complex nonconformance issues, a corrective action report citing as a minimum, containment actions, the potential root cause(s) and the planned permanent and preventive actions and timing for such actions is to be submitted within the timeframes noted above.

Note: Should a response not be received from a supplier, any stated charges associated with the notice will be considered accepted by the supplier.

11.1.3 Root cause for escape and occurrence and action addressing both must be included on the corrective action report. Documented corrective actions must address product, process and system causes of the reported nonconformance.

11.1.4 Terms associated with costs charged to the supplier (time duration of applied charges, sort costs, methods of calculation, etc.) as a result of a quality concern are determined by the applicable PCC location. Charges that may be applied as applicable are as follows:

- Sort of supplier product on or off line to support production schedules.
- Production line shutdown.
- Sort and/or scrap of finished product.
- Material transfer of nonconforming supplier product.
- Costs associated with problem investigation.
- Testing costs.
- Costs associated with rework.
- Related transportation expenses.
- Any costs incurred by PCC for customer sort, rework, and/or line disruptions.
- Administrative costs.

11.1.5 All anticipated supplier charges will be discussed and mutually agreed upon by PCC Quality or Operations Representatives and the designated Supplier Representative. If agreement cannot be reached, the issue will be forwarded to the appropriate PCC Purchasing Representative within 30 days of final notice issuance.

11.1.6 It is the responsibility of the supplier to notify the affected PCC in the event that a nonconforming condition of supplier components exists or is suspected. Notification must be followed by documented corrective action as previously described.

11.1.7 PCC reserves the right to send the appropriate Purchasing, Supplier Development, Materials and/or Quality representatives into the supplier/sub-contractor's production facility to establish 100% compliance and ensure that effective containment and corrective action has and is currently taking place. PCC's customer may accompany at said meeting, if so requested.

11.2 Controlled Shipping

11.2.1 When so directed, suppliers will be required to certify product after a lot rejection has occurred. Two types of controlled shipping actions are employed when this situation occurs.

- Supplier conducted sort and certification of subsequent part shipments (CS1).
- Third party sort and certification (CS2).

11.2.2 The level of inspection (CS1 or CS2) will be determined based on one or more of the following reasons:

- Repeat quality issues and/or failure to resolve a quality issue.
- Severity or risk to the organization.
- Incapable supplier process(s).
- Line disruption.
- High PPM level.
- Customer complaints.
- Other factors deemed applicable.

11.2.3 The Controlled Shipping Process will be applied as follows:

- The appropriate PCC's Quality Representative will initiate controlled shipping as deemed necessary based on a review of the quality concern(s).
- The supplier will be notified of their Controlled Shipping status. Additionally, PCC's customer and/or the supplier's quality system registrar may be notified of Controlled Shipping Level 2 as deemed necessary.
- PCC Purchasing, Operations, Supplier Development and/or Quality will develop and review the Controlled Shipping expectations and exit criteria with the supplier.
- PCC Purchasing, Operations, Supplier Development and/or Quality personnel will monitor the supplier's progress to plan.
- When the supplier has met the exit criteria, the Controlled Shipping status will be removed. PCC's customer and the supplier's quality system registrar will be notified of the change in status as applicable.
- Failure to exit from Controlled Shipping status may result in NBH or de-sourcing.

11.2.4 Coordination and follow up of all controlled shipping actions are the sole responsibility of the supplier. Part supply to the using PCC Division must meet released quantities without supply interruption.

11.2.5 The supplier and PCC will mutually define the certified material identification requirements.

11.3 Excess Transportation Charges

If the need to expedite shipments is deemed to be the fault of the supplier, the supplier will bear the costs for expedited freight required to meet delivery requirements. This includes any excess freight charges incurred by PCC to meet the customer's delivery requirements.

Additionally, excess transportation costs may be debited back in full to the supplier for reasons including, but not limited to the following:

- Unauthorized multiple shipments
- Expedited freight as a result of past due requirements
- Expedited freight as a result of defective material
- Using unauthorized truck lines

- Past due parts received on regularly scheduled truck(s)

11.4 Downtime Costs

The supplier is responsible for all costs associated with downtime at PCC and/or downtime costs billed to PCC by their customer when such costs are deemed to be the fault of the supplier due to quality, delivery and/or other incidents of nonconformance.

12.0 Engineering Changes

12.1 PCC and Customer Initiated Changes

All potential, proposed and/or mandated engineering changes ECN affecting purchased product, will be submitted to the supplier for impact and timing. These engineering change/change request documents will be processed via PCC Engineering Change Request Review (CRR) procedures. Documentation for approved engineering changes will be forwarded to the supplier for execution as defined in the PCC CRR procedures. All changes are required to be approved in accordance to the AIAG PPAP requirements before production implementation.

The supplier is required to:

- Respond to CRR/RFQ requests within 5 business days or as otherwise arranged with the designated Buyer.
- Itemize applicable cost and timing in the required format.
- Manage and report all applicable engineering changes of the Tier 3 supply base.
- Submit samples of all executed changes, in accordance with the PPAP manual requirements prior to production implementation. Report Tier 3 changes as part of the PPAP process.

12.2 Supplier Proposed Engineering Changes

Supplier proposed changes must be submitted for approval consideration via the PCC CRR review procedures. All proposed changes, including but not limited to the following are to be communicated as applicable:

- Proposed material changes.
- Proposed process changes.
- Proposed tooling and/or fixture changes.
- Proposed manufacturing location changes.
- Proposed Tier 3 supplier changes.
- Any other changes as defined in the AIAG PPAP manual, including Customer Specifics.
- Cost impact/benefit for each of the change considerations listed above

12.2.1 **Rejected Supplier Change Requests** will be returned to the supplier with an explanation and/or request for additional information.

12.2.2 **Approved Supplier Change Requests** will be communicated to the supplier through CRR process documentation. The appropriate Quality Engineer will communicate sample submission expectations and timing requirements. Other instructions and required documentation, when applicable, will also be communicated at this time.

12.3 Engineering Change Notification and Control

All applicable documents and data to support engineering changes will be forwarded to the affected supplier(s) and controlled as defined in the Document Control Requirements section.

All executed engineering changes are to be submitted and approved in accordance with AIAG PPAP manual requirements prior to production implementation.

12.4 Engineering Change Product Identification

The first shipment of engineering change products is to be identified as directed by the applicable PCC Quality Engineer or other authorized PCC Representative. Subsequent shipments may also require engineering change identification when deemed necessary by PCC. Each container of engineering change product is to include this identification. Failure to properly identify engineering change materials may result in the issuance of a charge back. Any CRR acceptance must have a plan established to minimize obsolescence.

12.5 Product Obsolescence

Suppliers must submit obsolescence claims resulting from engineering changes within 30 days of the change implementation date. Suppliers must use the Obsolescence Claim form posted on Supply Web, and submit via email to the appropriate PCC Material Planner. Claims received outside of the 30 days will not be processed.

13.0 Sample Submission Requirements

13.1 Advance Product Quality Planning (APQP)

All suppliers are required to utilize the methodologies defined in the latest released editions of AIAG Core Tools manuals, including:

- Advanced Product Quality Planning and Control Plan (APQP).
- Failure Modes and Effects Analysis (FMEA)
- Statistical Process Control (SPC)
- Measurement System Analysis (MSA)

These manuals are tools intended to assist the suppliers in meeting the requirements necessary to produce a world-class product.

It is the responsibility of each supplier to ensure that their subcontractors (Tier 3 suppliers to PCC) are meeting similar expectations and requirements.

13.2 General Sample Submission Requirements

13.2.1 Suppliers are to meet all requirements of the latest released edition of the AIAG PPAP manual. This requirement extends to all commodities supplied by the supplier's subcontractors and third tier suppliers.

13.2.2 All submissions for production part approval must include the required information as specified for a Level 3 submission, unless otherwise instructed in writing. All submissions for prototype part approval must include the requirements specified for Level 2 submission unless otherwise instructed in writing.

13.2.4 Regardless of submission level, all documentation defined in the AIAG PPAP manual and PCC specific requirements are to be on file and available for review upon request.

13.2.5 Suppliers are responsible for costs incurred by PCC resulting from late or incomplete submissions.

13.3 Specific Sample Submission Requirements

13.3.1 When requested, PPAP submissions must be made in accordance with OEM specific requirements

- 13.3.2 Part submission warrants must be filled out completely, indicating the finished part number(s) that are being submitted. Only parts within the same product "family" (i.e. multiple colors of the same product) and of the same revision level may be submitted on a single warrant. All part numbers must be listed on the warrant.
- 13.3.3 Unless otherwise instructed, six (6) sample parts per cavity will be required for tools consisting of 1-3 cavities; two (2) sample parts from each cavity is required for tools with four (4) or more cavities.
- 13.3.4 Dimensional layout data must be provided for each drawing dimension and note. A ballooned reference drawing showing the relationship between the layout results and drawing specifications must accompany the layout report. Graphical math data plots are acceptable for profile dimensions. A sufficient number of inspection points to adequately define the surface are required. Prior approval of inspection points is recommended.
- 13.3.5 Only PPAP approved raw material sources may be used. Material certifications must include a copy of the OEM customer color and/or construction approval (e.g. General Motors Material Evaluation Form). Material certifications must indicate lot numbers and dates as certification that these approved materials were used in the manufacture of the submitted samples.
- 13.3.6 Laboratory testing, when applicable, must be conducted by an accredited facility (GP-10 (GM), ISO/IEC 17025, and A2L2). A copy of the accreditation with scope of testing is to be included with the submission.
- 13.3.7 Appearance approval, when required, must be submitted via an Appearance Approval Report (AAR). The AAR is to be completed in its entirety. On occasion, the supplier may be requested to obtain appearance approval directly from the end customer. Suppliers will be notified in writing when this is the case.
- 13.3.8 Significant characteristics must demonstrate preliminary process potential and capability indices of 1.67 or greater. Long-term process potential and capability indices must be 1.33 or greater and must be statistically controlled, per AIAG SPC manual.
- 13.3.9 Restricted and reportable chemicals contained in the raw materials and parts used in the manufacture of supplied components must be reported based on the IMDS (International Material Data System) requirements. This form must be submitted with packages whether reportable chemicals are contained in components or not.

Note: All questions regarding PPAP submission should be directed to the appropriate PCC Quality Engineer.

13.4 Reporting Material Composition (IMDS)

The supplier is required to provide evidence that the Material/substance Composition reporting for each part has been completed and complies with requirements. Material is to be reported in the Materials Data System (MDS) unless another system or method is pre-approved by PCC authorized personnel.

Note: MDS is available through mdsystem.com.

13.5 Supplier Prototype Product Requirements

The requirements noted below pertain to prototype submissions received from suppliers providing component parts during the Design Verification and Prototype builds. If for any reason the Supplier cannot meet these requirements, they are required to notify the PCC Quality Engineer in writing, prior to shipment. The supplier is to use the appropriate program documentation to note discrepancies.

- 13.5.1 **Prototype Submission:** The following documentation must be completed and provided with each shipment supplied for the prototype build. All documentation must reference the product number and the drawing date/level.

- Prototype Control Plan
- Pre-Production Sample Report
- Drawings
- Dimensional Results
- Sample Parts
- Proper Identification

13.6 Product Submission Disposition Status

13.6.1 FULL Approval

Full approval indicates that ALL engineering design record and specification requirements have been satisfactorily met.

13.6.2 CONDITIONAL Approval

Conditional approval MAY be granted under the following conditions:

- Product is from production tooling and meets all Appearance, Dimensional, & Test Specifications.

Exceptions/examples: Document missing/incomplete, Capability 1.0 to < 1.67 - Action Plan Required
- Product is not from production tooling or production tooling is off-site, but product meets all customer requirements.

Exceptions/examples: Production tooling not complete or off-site, low volume tooling used, conveyors not in place, automation not complete – Action Plan Required.

13.6.3 REJECTED

Rejected status indicates that the product does not meet the required customer specifications

14.0 Lot Traceability

All material received by PCC must contain a lot code, or serial number, clearly identified on each label and container, ensuring full traceability of all material. Material must be traceable from receipt of raw material, to each processing stage and through final assembly and shipping to PCC.

The supplier shall communicate, to PCC, the traceability method used (e.g. date and shift of manufacture along with sequential processing number). In some cases the component may be critical enough so as to warrant part identification; these instances will be communicated through the appropriate quality and engineering groups.

A lot recommendation should contain a specific quantity of parts, and should not exceed eight hours or one day of production, at a maximum. In the event of certain commodity-based material, methods such as “Prepreg manufacturing campaigns”, “dye lots” or steel coils will be acceptable.

The supplier shall ensure implementation and management of an effective FIFO method of stock rotation.

Failure to comply with traceability requirements may lead to rejection of material and issuance of non-conforming material reports.

Traceability Records shall be maintained and accessible for the life of the product, including Service, plus one year.

15.0 Associated Business Conditions

Additional situations may arise, from time to time, that are not specifically addressed in other sections of this manual. They will be noted in this section.

- All suppliers are to conform to all Statutory and Regulatory requirements as outlined in IATF 16949; as well as the Minimum Automotive Quality Management System requirements for Sub-Tier Suppliers (MAQMSR).
- PCC and its customers expect to have access to all APL supplier facilities and records at reasonable times for the purposes of audits, assessments, inspection of goods and associated control systems.
- Suppliers are expected to share with PCC detailed cost data. Suppliers are also expected to use a fair and consistent method of applying the profit factor and distribution of overhead expenses in support of PCC requirements, consistent with goals of long-term financial viability.
- Suppliers must be willing to extend the benefits of cost reduction efforts with PCC.
- It is expected that a target for compliance of zero discrepancies be set for all goods and services to be supplied to PCC.
- Warrants and certification requirements will be stated on PCC PO's. Annual validations for raw material are to be carried out by an independent accredited testing when required by PCC.
- Suppliers will be held accountable for warranty costs due to negligence, process and supplier design issues.
- Products/processes that are jointly developed between PCC and its suppliers will be considered to have co-ownership and be royalties free unless otherwise negotiated.
- Suppliers must provide Country of Origin Certification, Certificate of Analysis and other documentation required under the US/Canada Free Trade Agreement and the NAFTA. All customs requirements must be met in a timely manner to ensure efficient transportation of goods.
- As a condition of business, all suppliers must be prepared, on request, to provide any information required by the PCC Purchasing Department to substantiate the ability to provide the necessary products, commodities and services. This shall include, but is not limited to, quotes provided on PCC developed cost model, technical capability and systems/procedures to evaluate key product characteristics and financial information. In addition, the supplier must be prepared to provide proactive initiatives such as cost reduction proposals and recycling programs to PCC.
- Suppliers will be accountable for all costs associated with an interruption in material supply to PCC resulting in a shutdown, due to labor, utility disruptions or equipment failures. All suppliers must have a contingency plan to mitigate risk.

16.0 Warranty

A primary focus of OEM Customers is expenses attributed to product performance after vehicle sale. Financial liability associated with warranty is more significant now due to consumer awareness and extended warranty coverage. Extensions of warranty periods from the traditional 12-months to 36-months and beyond have emphasized the need to deliver reliable and durable product or face warranty costs and owner dissatisfaction.

OEM's have stipulated that warranty costs will be shared with their supply base. As such, with respect to new and carryover programs, suppliers will be required to participate in warranty activities including:

- Warranty return reviews/analysis
- Improvement actions
- Warranty cost responsibility

When a supplier's component is clearly implicated in a warranty issue with financial consequences, the supplier will accept these costs. Currently purchase orders contain terms relative to warranty cost. The SOW/MOU will specifically define details of the supplier participation.

Revisions

Revision Date	Description	Approved By;
20DEC2016	Implemented Supplier Quality Manual for Walker/Wixom Facility	Jack Turner, Director of Quality and Supply Chain
27JUL2017	Updated per IATF Requirements	Jack Turner, Director of Quality and Supply Chain
03OCT2017	Updated the following sections: minor changes Monitoring Methods, Quality Performance, Supplier Performance, Scheduling & Releases	Dan Hartzler, VP Engineering, Supply Chain and Quality
05MAY2018	Updated several features to support IATF certification needed with applicable forms	Willis Conklin, Supply Chain
09JUL2018	Updated forever requirements and storage requirements	Willis Conklin, Supply Chain
30JUL2019	Updated new Wixom address	Willis Conklin, Supply Chain
02JUN2020	Included reference to additional certifications	Dan Hartzler, VP of Operations