



## 1.0 Quality Management Overview/Quality Policy/Quality System

### 1.1 Section Overview/Responsibilities

1.1.1 Overview: Section 1.0 is a description of the Lodestone Group Quality System and how company management describes, supports, improves, and monitors the system. All companies in the Lodestone Group use the Quality System described in this manual.

1.1.2 Corporate Quality Structure Exhibit 1.1.2

1.1.3 Responsibilities: The Quality Manager is responsible for maintaining, recording and documenting the overall Quality Control System. The Operations Manager is responsible for product design, well-designed processes, and documented procedures. The President is responsible for the overall Quality System as part of the Groups Objectives, Strategy and Policies, including customer service. These managers meet and review these responsibilities at least twice a month as members of the Material Review Board, (MRB).

1.1.4 Organizational Chart

1.1.4.1 Corporate Organizational Chart Exhibit 1.1.4,

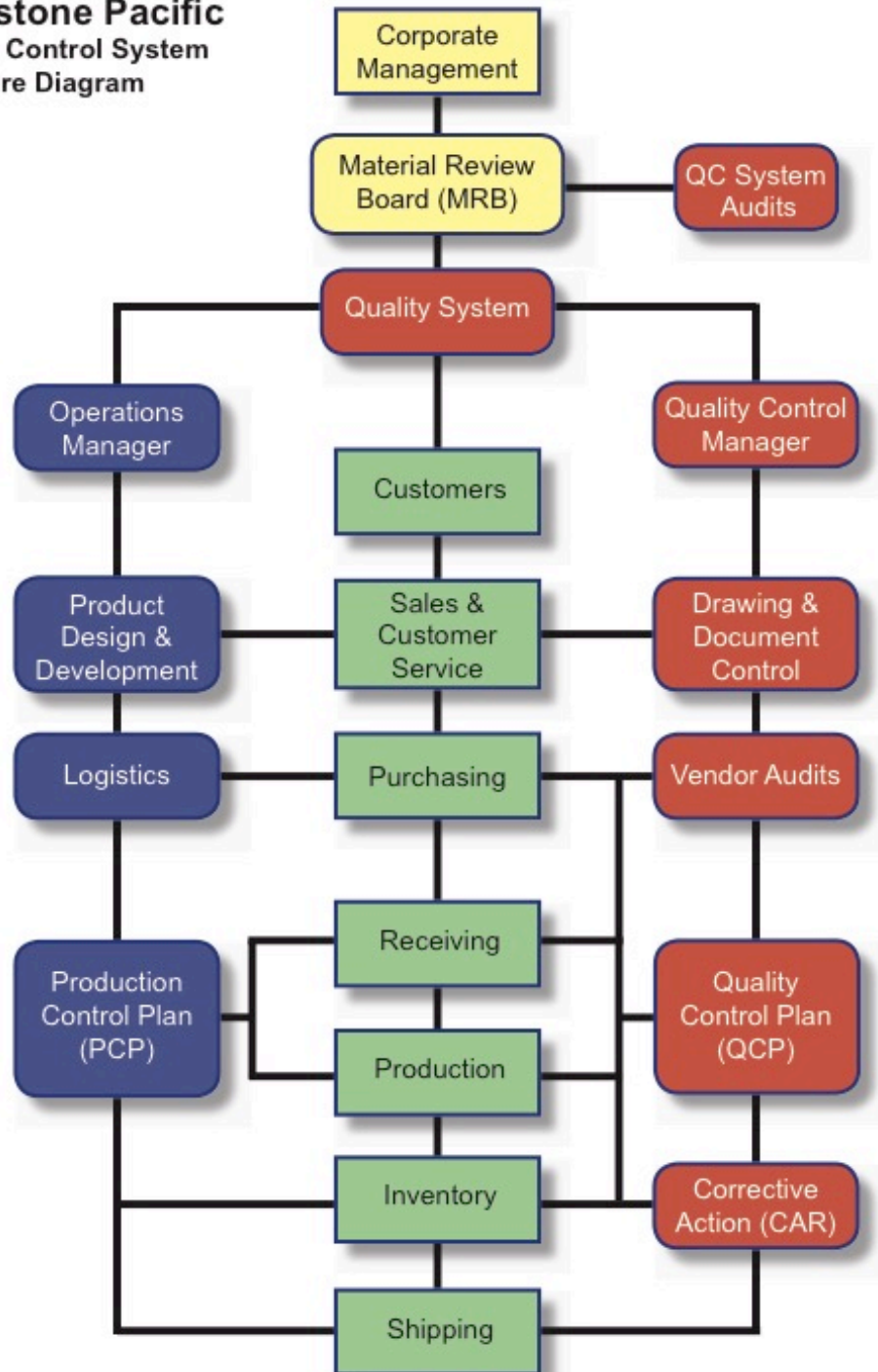
1.1.4.2 Operations Manager Job Description Exhibit 1.1.4.2

### 1.2 Management Objectives

1.2.1 Company Mission: To maximize transactional value to customers, vendors, employees and company owners. In all company interactions, seek to maximize the value to all participants so each party is better off as a result of the interaction.

1.2.2 Quality Objectives: 1) To understand customer quality requirements and expectations and develop products, processes and procedures that will balance that expectation with industry segment competitive cost restraints. 2) Develop an overall Quality System that ensures quality, exceeds customer expectations, or can be modified if customer requirements are unique or outside industry expectations. 3) Create a Quality System that is robust, efficient, agile, and easily monitored to ensure objectives are met.

**Lodestone Pacific  
Quality Control System  
Structure Diagram**





### 1.3 Quality Policy

- 1.3.1 The Quality Policy is to provide a level of quality products and operations that exceed customer and industry expectations. Management is committed to continually monitoring industry trends and constant improvement through improved process, documentation and training.

### 1.4 Quality System

- 1.4.1 Overview: The quality system is designed to ensure a level of quality of products and operations that exceed customer and industry expectations. The Quality System is structured to provide centralized overall Group quality management at our headquarters in the USA and localized quality control management at our manufacturing facilities in China.

Quality System Summary is a brief overview of the Lodestone Group Quality System and can be used to introduce new customers to our Quality System. Exhibit 1.4.1

- 1.4.1.1 The Quality System is designed using the recommendations found in ISO-9001 and enhanced in procedures and documentation specific to customer and industry expectations.
- 1.4.1.2 ISO-9001 Section Cross Reference Exhibit 1.4.1.2
- 1.4.1.3 Vendors and Suppliers will be evaluated to ISO-9001 recommendations and will have ISO certification when the MRB deems it critical to the company's Quality Objectives and Policies.
- 1.4.2 Product Design: The key to the quality system is the design of products that meet customer performance and quality expectations, but are also cost effective to produce.
- 1.4.2.1 Drawing Requirements: Each drawing must display the 1) Product drawing/Part number, 2) Revision Number, 3) Scale, 4) Materials, 5) Approval Initials. Drawing Template example Exhibit 1.4.2.1
- 1.4.3 Production Control: Production Control Plans are specific to each family of part numbers and developed for each process or procedure that is critical to product success and the company's Mission, Quality Policy and Objectives. The Production Control Plan is used to verify and document inspection occurs at critical



points in the Production Process. Example of Production Control Plan Exhibit 1.4.3.1

- 1.4.4 System Documentation: The documentation system is designed to record quality attributes by part number and lot number for comparison to stated quality standards and to facilitate the continual improvement of product and process.
- 1.4.5 System Structure: Is designed to minimize management layers that will insulate senior management from product and process quality. Quality System Structure Diagram Exhibit 1.1.2
  - 1.4.5.1 China Operation System Structure. Our China operations uses this manual as an extension of the Lodestone Group and integrates with the USA operations through numerous structural and procedural systems. Exhibit 1.4.5.1
- 1.4.6 Quality Process Cost: The MRB will review product margins and the cost of quality to determine if; 1) Product require improved designs or raw material sources, 2) Processes require improvement and/or expanded worker training, 3) Expanded inspection, or 4) Product is Dis-continued.
- 1.4.7 Customer Service: Ensure customer service has the training and management tools to exceed customer expectations for price, delivery, quality, product specification, and timely information.

## 1.5 Quality System Review

- 1.5.1 Material Review Board (MRB) The MRB will meet and review elements of the Quality System at lease once a month. The actions of the MRB are recorded in the MRB minutes. Exhibit 1.5.1.
- 1.5.2 The MRB duties include:
  - 1) Review existing product design,
  - 2) Review new product design, or product revisions
  - 3) Manage (Engineering Change Notices, ECN)
  - 4) Ensure Quality System Objectives and Policies are maintained.
  - 5) Modify product process and documentation to meet customer's unique requirements or expectations.
  - 6) Review system audits and implement any improvements or additional training.



- 7) Review procedures and implement any improvements or additional training.
- 8) Review quality results that do not meet expectations and make product, process or training improvement. Implement and monitor the Corrective Action Report (CAR) process as required.
- 9) Review the overall Quality System to determine if it addresses the company Objectives, Strategies and Policies and if revisions are required.
- 10) Review product margins and the cost of quality to determine if;  
1) Products require improved designs or raw material sources,  
2) Processes require improvement and/or expanded worker training,  
3) Expanded inspection, or  
4) Product discontinued.

### 1.5.3 Quality System Audits

A system of Quality System audits are designed to ensure product and process quality meet company Objectives and Policies. Product and Process Audits are performed by the MRB when deemed necessary. The results will be recorded and compared to historical records to ensure processes meet company Quality Objectives and Policies.

1.5.3.1 Overall Quality will be audited at least once a year to determine if the level of quality exceeds the expectations of customers and the industry.

1.5.3.2 Products Out of Specification: Analyze product non-compliant occurrence, CAR's and RMAs, to determine % of quality issues compared to total products shipped. Review historical trends, and compare results to Quality System goals as determined by the MRB.

1.5.3.3 Vendor Performance: Review vendor delivery and quality performance to identify issues that require MRB action.

1.5.3.4 Shipping Errors, Freight Damage: Review RMAs to determine % of shipping related quality issues compared to total products shipped.

1.5.3.5 Customer Service: Audit customer service performance to ensure training and resources are sufficient to meet or exceed customer expectations.

### 1.5.4 Measures of Product Quality

1.5.4.1 Lot Numbers: Well-documented lot numbers for raw material and finished goods will be the basis for



monitoring quality compliance. Lot number tracking will be recorded and maintained throughout the Quality System.

- 1.5.4.2 Quality Compliance to product drawings will be by lot number and based on industry accepted sampling techniques described in MIL-STD 1916. A more rigorous sampling system can be used as determined by the MRB. Digital inspection records will be retained a minimum of 10 years.
- 1.5.4.3 Solderability Acceptance will be based on MIL-STD 202, Method 208. Solderability records and samples will be retained a minimum of 5 years.

## 1.6 File Naming and Storage Convention

- 1.6.1 Objective: To maintain record and document integrity over time and company growth, the following file naming and document storage guidelines will be followed.
- 1.6.2 File and Document Names will follow the guidelines described in “Quality System File Naming and Storage Convention”, (Exhibit 1.6.2) and managed by the Material Control Board.



## 2.0 Customer Service, Product Design and Review

### 2.1 Section Overview

This section of the Lodestone Pacific Quality Control Manual describes procedures and processes designed to ensure the company's customer interface meets the requirements of the Quality System and strategic intent of the Quality Policy.

Customer Service has its own objectives, strategies and goals that extend beyond the scope of the companies Quality Strategy. Sales and customer service strategies are determined by the president.

All three entities included in Lodestone Group share the structure and procedures described in this manual.

### 2.2 Responsibilities:

2.2.1 Customer Service is the responsibility of the Sales and Marketing Manager and the Business Development Manager, together they allocate resources, provides strategic direction, sets priorities and trains the employees in the customer service interface. The Operations Manager is responsible for having product available to meet customer expectations. The Quality Control Manager is responsible for managing the Quality System where is interacts with customer service.

2.2.2 Pricing Product. Pricing is determined by multipliers entered into the integrated P21 computer system. These multipliers use various product cost fields to create product pricing. The multipliers are created by the President and managed by the Operations Manager. Product cost information is managed by the Purchasing Manager. Formal Quotes are sent to the customer and tracked via the Zoho CRM. Exhibit 2.2.2.

### 2.3 Customer Opportunity and Purchase Order Review

2.3.1 Responsibility for opportunity or purchase order review is shared by the Sales Manager and Operations Manager.

Sales Manager is responsible for product viability, pricing, payment terms, delivery methods and delivery timing.



The Operations Manager is responsible for ensuring inventory or production will meet sales expectations, that the quality of the product will meet customer expectations, and that the cost of the product is accurate in the P21 system.

2.4.2 The Opportunity and Customer Purchase Order Review will verify pricing, profit margin, delivery, contact or purchase order duration, and any other conditions meet the strategic, fiscal, and moral requirements of the company. Any concerns regarding a contract or purchase order are shared with the president prior to acceptance.

2.4.3 Non-disclosure agreements to protect intellectual property of the customer and Lodestone Group will be activated as required and is the responsibility of the Business Development Manager and the President, but obligate all employees to the agreement. Exhibit 2.4.3

#### 2.4.4 Custom Tooling Procedure; Exhibit 2.4.4

2.4.4.1 Members of the Material Review Board (MRB) will review the opportunity to verify it is a good part for our capabilities, and can we make it. Suggest changes that will improve the product. Whether it is better to make production tools or prototype tools. Verify the drawing is clear, has a revision number, is complete, and accurate. Any terminals material and plating is clearly defined and the plastic material is clearly defined. The MRB will also suggest vendors to quote.

2.4.4.2 Create Project Number as the primary way to identify and segregate customer projects. The opportunity and project number are entered into the opportunities Customer Relationship Manager program, (CRM).

2.4.4.3 Send a drawing to factory to quote. Ensure the quote defines the materials, coatings, tolerances, and performance specification. Specify the quantity to quote and request a lead-time estimate. Update the Project File in the CRM.

2.4.4.4 As required, create a Design for Manufacturing (DFM) evaluation as a way to suggests improvements in the customers design.

2.4.4.5 Review factory price to ensure all product attributes are addressed by the quote. Use quote guidelines to develop a cost/price spreadsheet for the product that meets

the minimum profit guidelines and is the basis for the quote to be sent to the customer.



2.4.4.6 Prepare and send the quote to the customer.

Ensure the quote includes:

- a) Price brakes by quantity
- b) Tooling price
- c) FOB point, usually Hong Kong
- d) Any additional charges
- e) Special instructions or notes
- f) Payment terms
- g) Shipping methods
- h) Include the drawing with revision number used to make the quote.
- i) Send to customer. Update Project Number CRM.

## 2.5 Design Control

2.5.1 The design of new products, or modification of existing products, will be reviewed by members of the Material Review Board (MRB). This board includes the President, the Operations Manager, the QC Manager. The MRB will verify: 1) The product documentation is complete. 2) The product can be made within the constraints of customer expectations. 3) The production of the product will not adversely affect the financial health or reputation of the company.

In addition, a Design for Manufacturing (DFM) process will be initiated to review the customer's design to ensure production and quality success that meets customer expectations. Exhibit 2.5.1

2.5.1.1 Drawing Change Procedures, Drawing revisions require a record of the change and MRB approval. All customer or Lodestone Group drawings must have a unique drawing number and revision designation. As products are created or modified, all revisions are archived in the CRM and Lodestone Group digital storage. The Engineering Change Notice (ECN) Exhibit 4.4.3.2 will be created and updated to document changes to product drawings and will be based on product drawing numbers and revision numbers.

## 2.6 Customer Returns



2.6.1 Customer returns are managed by customer service using RMA and ARA written procedures.

2.6.1.1 RMA is a Return Material Authorization that is issued to a customer each time product is returned to the company. Each RMA is unique to an issue and has a unique RMA number. The customer includes this RMA number with their return shipment to match product, customer and the return issue. The RMA form is filled out by the Lodestone Pacific customer service representative that in interacting with the customer. This form will provide the information needed to evaluate the returned product and resolve the issue to the customer's satisfaction.

2.6.1.2 ARA is an Accounts Receivable Adjustment and is used by the accounting department to ensure the potential customer Credit and Re-invoice process has the information required to resolve the issue to the customer's satisfaction. The ARA and RMA are actually two parts of the same form and share the same document number.

2.6.1.3 RMA/ARA example Exhibit 2.6.1.3.

2.6.2 Product Return Documentation.

2.6.2.1 Product returned utilizes the RMA/ARA documentation as the primary method for documenting a return event. Depending on the circumstances, the MRB may decide a CAR is merited.

2.6.2.2 Corrective Action Report, if a CAR is merited, the members of the MRB will initiate the process described in Section 4.0 of this manual.

2.6.2.3 Customer Return Audits, periodically, but no less than once a year RMAs will be reviewed by the MRB. The results will be compared by issue type to pass audits and to Sales and Customer Service strategic objectives and goals.



## 3.0 Purchasing Operations

### 3.1 Section Overview/Responsibilities

3.1.1 Overview: The purchasing operation is controlled by the Quality System and follows the company Quality Policy. The purchasing operation includes; 1) the development, approval and qualification of vendors, 2) the purchasing and scheduling of products for production or inventory, 3) Updating the P21 integrated computer system with part numbers, descriptions, costs and delivery information, and 4) determining delivery dates, destinations, delivery methods and inventory levels.

3.1.2 Purchasing Operations Responsibilities: It is the duty of the Purchasing Manager to manage the day-to-day purchasing function. It is the responsibility of the Quality Control Manger to ensure the Purchasing Operation follows the guidelines described in the Quality Control Manual.

#### 3.1.3 Supplier and Vendor Definition:

3.1.3.1 A supplier is a strategic partner that provides products for production or for inventory. A supplier's contribution is controlled by the Quality Control System.

3.1.3.2 A vendor is a company that provides products that support the administrative activities of the company and are not controlled by the Quality Control System.

### 3.2 Supplier Quality and Purchase Control

3.2.1 Qualified Supplier: When the MRB develops a new product, or the need for a new supplier for an existing product, the Purchasing Manager will begin the process of approving the vendor as a contributor of products and services. All suppliers are evaluated prior to addition to the P21 Purchasing System using the Vendor Qualification Form. Exhibit 3.2.1. Supplier Qualification Form,

3.2.2 Supplier Performance Review: All Suppliers are reviewed and audited periodically as requested by the Purchasing Manager or the MRB, but at least one a year. Exhibit 3.2.2 Supplier Audit Form

3.2.3 P21 Approved Suppliers: Only approved suppliers will be added to the P21 Integrated Computer System. All purchase orders for products and services must come from the P21 System. Vendor

and supplier audit information is stored in the CRM and Lodestone Group digital archive.

3.2.4 Supplier ISO Certificate: All suppliers are expected to have a current ISO 9001 certification. The Material Control Board can authorize exceptions to the ISO 9001 requirement.

### 3.3 Receiving Product from Suppliers

3.3.1 Product received must follow the incoming and inspection procedures described in Section 4.5 of this manual. Once the product declared compliant, the purchasing procedures and P21 System requirements add it to inventory, available for production or sale. The product purchase order will be updated and an accounts payable obligation will be created.

The receiving process starts a procedure designed to ensure products and documentation flow efficiently through to the Accounts Payable process. Exhibit 3.3.1

### 3.4 Inventory Control

3.4.1 The Purchasing Manager monitors the inventory based on company inventory turn strategic guidelines and customer demand. A monthly summary of inventory by product group is reviewed by the company president.

3.4.2 FIFO: Inventory is managed on a First-In, First-Out (FIFO) basis based on lot codes.

3.4.2 Cycle Counts are used to verify inventory accuracy.

### 3.5 Transfers

3.5.1 In cooperation with the Operations Manager, the Purchasing Manager can transfer inventory from the USA warehouse to the China warehouse as required. The original lot codes are maintained regardless of the warehouse location.

### 3.6 Handling, Packaging, Storage

3.6.1 Overview: The goal of product handling, packaging and storage is to protect the product from damage, to ensure part number and lot number traceability is maintained, and that the shipment of products is efficient for the customer and company

3.6.2 Packaging and Handling: Each product should be packaged according to packaging guidelines.

3.6.2.1 Packaging is designed to segment the product into useful quantities, and to protect the product from damage and contamination.

3.6.2.1 All packaging must clearly display the Products Part Numbers.

3.6.2.1 All packaging will clearly display the Production Lot Number.

3.6.3 Storage: All product will be rotated from inventory based on First-In, First-Out (FIFO)

### 3.7 Shipping

3.7.1 Shipping Objective: The objective of the shipping operation is to: 1) maximize product protection while minimizing package size and weight, 2) ensure the accuracy of the shipping operation.

3.7.2 Avoid Shipping Errors: Each product package needs to be checked by a “second set of eyes” to ensure the correct product is being prepared for shipment. Products that are similar in appearance or part number structure are stored in inventory in different locations.



## 4.0 Quality System

### 4.1 Section Overview/Responsibilities

This Section describes the Quality System designed to meet Lodestone Pacific's Objectives and Quality Policy.

**Responsibilities:** The Quality Control Manager is responsible for ensuring the Quality System is efficient, accurate and follows the guidelines described in this Quality Control Manual.

**Employees Reporting Directly to the Quality Control Manager:** All Department level Quality Control Supervisors and Quality Engineers report directly to the Quality Control Manger.

All three entities included in Lodestone Group share the structure and procedures described in this manual.

### 4.2 Quality Control System

4.2.1 The Quality Control System Structure is designed so that senior management is not insulated from product and process quality.

4.2.1.1 Section 1.0 Quality Management Overview, sub-section 1.4. provides a full explanation of the Quality System. The Corporate Quality Structure Diagram Exhibit 1.1.2

#### 4.2.2 Quality System Reviews and Audits

Quality System reviews and audits are designed to ensure product and process quality meet company Objectives and Policies.

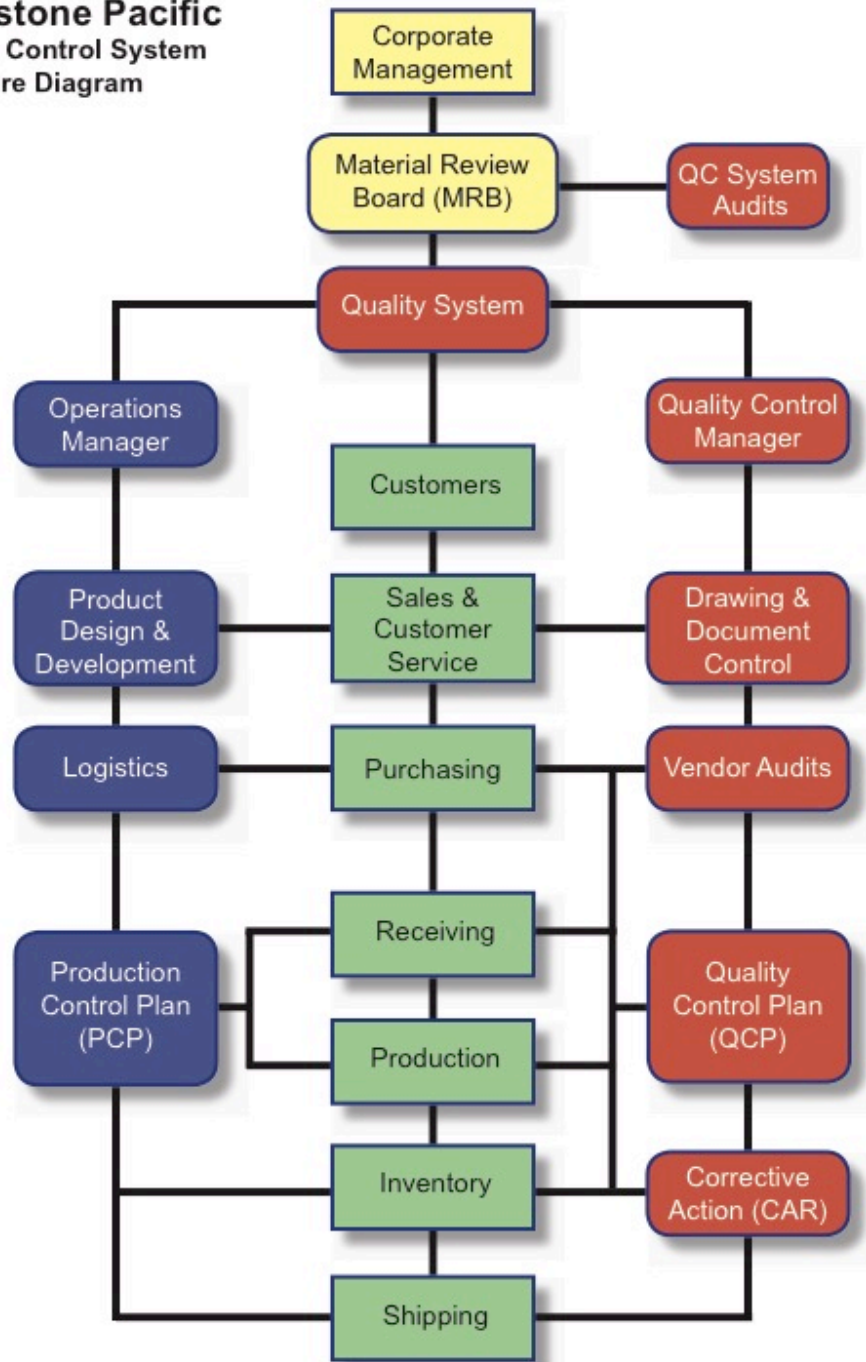
Product Reviews are performed by the Material Review Board (MRB) when deemed necessary.

4.2.2.3 Process Audits are performed quarterly or at the request of the MRB. The results will be recorded and compared to historical records to ensure processes meet company Quality Objectives and Policies.

4.2.2.4 Overall Company Quality will be audited at least once a year to determine if the level of quality exceeds the expectations of customers and the industry.

4.2.2.4.1 Audit Products Non-Compliant History: Analyze product non-compliant occurrence as documented in CAR's and

**Lodestone Pacific  
Quality Control System  
Structure Diagram**





RMA records to determine % of quality issues compared to total products shipped. Review historical trends, and compare results to Quality System goals as determined by the MRB.

Product Non-conformance, Shipping Errors, Freight Damage: Review RMAs Quarterly to determine % of shipping related quality issues compared to total products shipped. Results are reviewed by the Material Review Board (MRB) to determine the need for further action. Example of RMA/ARA Exhibit 4.2.2.4.1.

Customer Service: Quarterly the Sales and Customer Service Manager will audit customer service performance to ensure training and resources are sufficient to meet or exceed customer expectations

4.2.2.4.2 Vendor Performance: Review vendor delivery and quality performance to identify issues that require MRB action. All Vendors are evaluated prior to addition into the P21 Purchasing System using the Vendor Qualification Form. All vendors are reviewed and audited periodically as requested by the Purchasing Manager or the MRB, but at least one a year. Example of Vendor Qualification & Review Form Exhibit 4.2.2.4.2

### 4.3 Product Identification and Traceability

4.3.1 Product Part Numbers: Each product will have a unique part number that is a direct correlation to the product drawing number. Each Product Drawing will include a Revision Number to differentiate current product versions from former versions. All Quality System Inspection documents and records will be based on part number.

4.3.2 Lot Codes: Well-documented lot numbers for raw material and finished goods will be the basis for monitoring quality compliance. Lot code tracking will be recorded and maintained throughout the Quality System so that any finished product can be traced to each raw material input.

4.3.2.1 In-coming Raw Materials will be given a lot code in addition to any manufacturers lot code. This code will be recorded in the Receiving Record and will be included on the production summary when the raw materials are used in production.

4.3.2.2 Production Lot Codes by Product will be established on the Production Summary during the production process. The





production summary will also include all raw material input lot numbers.

4.3.2.3 Final Inspection Lot Codes are the Production Summary Lot Codes. These Lot Codes are part of the permanent inspection records and the basis for investigating product quality issues.

4.3.2.4 Lot Code Integrity: Every container, box, bin or bag, regardless of position in the production process, will include the product part number and lot number.

#### **4.4 Documentation and Data Control**

4.4.1 Summary of Document Control: Records are maintained in both digital and hard copy formats. Digital Quality System documents and records are maintained a minimum of 10 years.

System Documents: This Manual, Procedures, System Event Records, Diagrams, Flow Charts, Operating Procedures, Workman Ship Standards, RMS and CARs are filed by document type.

Inspection Records: All incoming, production and final inspection records are filed by part number.

4.4.2 Document Approval and Revisions: All document, approval, review and revisions are performed by the Material Review Board. Quality System Document modifications require approval by the MRB.

4.4.3 Drawing and Process Change Procedures: Drawing revision or process changes require a record of the change and MRB approval. Engineering Change Notice (ECN) Exhibit 4.4.3.1

4.4.4 External Sourced Drawings and Procedures: Drawings from customers follow the same procedures described in Section 4.4 in cooperation with the customer's representative.

4.4.5 Obsolete Document Control: Obsolete drawings, as determined by the MRB, are clearly marked as OBSOLETE and maintained in the drawing file in the Obsolete Folder by part number.

## 4.5 Receiving Procedures (Flow Chart 4.5)

4.5.1 Receiving: Product received at any Lodestone Group world-wide facilities are entered into the receiving record. The Receiving Record will record: a) Date Received, b) Part Number, c) Vendor Name, d) Quantity Received, e) Lodestone Pacific PO number, f) Lot Code. Example of Receiving Log Exhibit 4.5.1

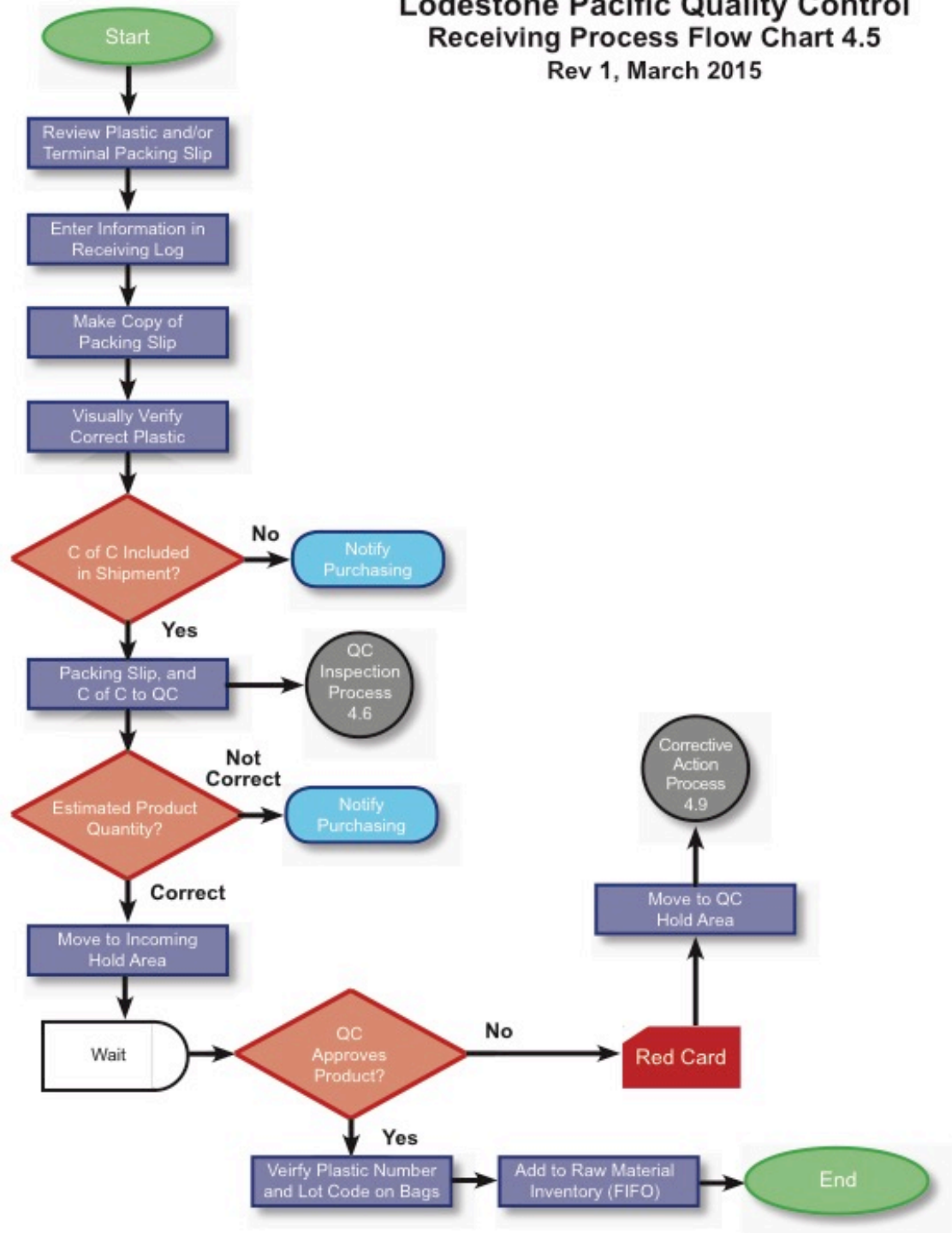
4.5.2 Packing Slips: Packing slips for each product are checked for accuracy to verify part number and quantity match the system purchase order. A visual verification quantity received is done without doing a complete count. (For example, each bag is marked to contain 1000 pieces, verify there are 10 bags, to equal 10,000 total). The packing slip is marked with the lot number and the signature of the person doing the receiving. A photo-copy is made of the packing slip to be included with the QC inspection samples.

4.5.3 Certificates of Compliance: Any C of Cs or other quality documentation included with the shipment are delivered with a copy of the packing slip to the QC Department.

4.5.4 Segregation Prior to Inspection: All product received shall be placed in the QC hold area until they are inspected. Samples of the incoming products are removed from the received product and delivered to the QC Inspection area in sealed bags clearly marked with the part number, PO number, and lot code specific to the receiving location. A copy of the packing slip remains with the product, and a copy of the packing slip goes with the samples to the QC inspection area along with all quality documentation included with the shipment. The product stays in the QC hold area until the packing slip returns from QC inspection with the approval stamp and signature of the QC engineer. Upon QC approval, the product is counted and moved from the QC hold area and added to inventory.

4.5.4.1 Error in Quantity: If verification of the count finds the quantity is in error, the copy of the packing slip showing the ordered quantity, and counted quantity is delivered to the QC department for possible Corrective Action Record creation. The QC department notifies the Purchasing Department to determine what action is required.

**Lodestone Pacific Quality Control  
 Receiving Process Flow Chart 4.5  
 Rev 1, March 2015**





4.5.5 Release of Product from QC Hold: The packing slips with the QC inspection approval stamp and signature, any Certificates of Compliance, and/or vendor supplied inspection documents are scanned and e-mailed to the USA purchasing manger for inclusion in the company's central file system. The hard copies of the packing slip with the QC inspection approval, or other documents, are stored in the QC Department hard file by vendor. All other un-needed packing slip copies are destroyed.

4.5.6 Non-conforming Products: Any product that does not pass QC inspection remains in the QC Hold area and is marked with QC Hold Red Card. Product can't be moved from QC Hold without the approval of the QC Manager. The QC Department Corrective Action Record procedure will be initiated.

4.5.7 Transfer Products to Inventory: Upon Quality Control approval, in-coming products are moved to inventory. Each product container must have a part number and lot number attached. As appropriate, products must be sealed in plastic bags to keep them free of dirt or contamination. Lead frames and terminals must be sealed to protect their surfaces from oxidation or contamination.

## 4.6 Incoming Inspection Procedures

4.6.1 Component Inspection: Once incoming products are included in the receiving log, samples of the in-coming products are removed from the received product and delivered to the QC Inspection area in sealed bags clearly marked with the part number, PO number, and lot code specific to the receiving location. A copy of the packing slip remains with the product, and a copy of the packing slip goes with the samples to the QC inspection area along with all quality documentation included with the shipment. The number of samples needed from each received quantity is determined using MIL-STD-105E or MIL-STD-1916.

4.6.2 Inspection Records: Inspection records for each part number are stored in the companies central file system. Inspection records should be retrieved from the central file location using the digital network. Once the product has been inspected and all required data recorded on the inspection record for that product, the inspection record is returned or saved to the company digital file system.



4.6.3 Inspection Procedure for Plastic Molding: Inspection records are digital, and record the a) Date, b) Lot Number, c) Lot Quantity, d) and Sample Size in addition to the results of physical inspection, Exhibit

4.6.3.1. and Physical inspection will follow Plastic Molder Inspection Workmanship Standard Exhibit 4.6.3.1. and will verify at least the following attributes: Dimensional compliance, material compliance, any cracks or voids, any discoloration, any incorrect terminal quantity, any damaged terminals, that correct markings are present. All results will be included in the Inspection Record.

4.6.4 Solderability: Products with plated terminals must be evaluated according to MIL-STD-202, Method 208 for solderability, following Solderability Testing Workmanship Standard 4.6.4. The results of the solderability evaluation are included on the inspection record. The tested samples are placed in a sealed plastic bag, marked with the product part number, lot number, solderability test level, and test results. These samples are retained in the QC inspection area for possible future review. Example Solderability Test Results, Exhibit 4.6.4

4.6.5 Plastic Material Certificate of Compliance (C of C): Each delivery of plastic molding should include a C of C that certifies the plastic required on the product drawing was used. The inspection process will include a review of this certificate to confirm compliance. The C of C is filed with the incoming packing list in both the digital central file system and the QC Department hard file. Exhibit 4.6.5.

4.6.6 Inspection of Non-plastic products: The inspection process of non-plastic follows the specification included in the drawing or inspection requirements for each individual non-molded product. This may include shield cans, fasteners, PCB assemblies, wound components, metal fabrications, individual components, packaging material and core materials.

4.6.7 Plating Certificates of Compliance: All incoming plating should include a C of C from the platter via the product vendor. The inspection process will include a review of this certificate to confirm compliance. The C of C is filed with the incoming packing list in both the digital central file system and the QC Department hard file.

**4.6.8 First Article Inspection Process:** The first article for a new product follows a specific initial inspection process Example of the First Article Workmanship Standard 4.6.8

**4.6.9 Incoming Inspection Approval:** Once the inspection is completed, the QC inspector verifies the product meets the company specifications (including solderability) for a compliant product by

adding their mark to the inspection record, and to the packing slip that accompanied the samples from Receiving. This mark signifies the product is available for production or can be included in inventory and are available for sale. The packing slip with the QC Manager mark is return to the Receiving area with any samples not retained by the QC Department.

**4.6.10 Non-Conforming Products:** If the QC Inspection Process determines and product is non-compliant, it is recorded in the Inspection Record as a failed lot. The samples from the non-compliant lot are retained in the QC inspection area and marked with a Red QC Problem Card. These samples are retained for further evaluation. The Corrective Action Report (CAR) Non-Conforming Product Review document is initiated.

**4.6.10.1 QC Hold Area:** When the QC Inspection Process determines product is non-conforming, the QC Manger has the in-coming product tagged with a Red QC Problem Card and moved away from received product waiting for Inspection so the product will not be mistaken for conforming products.

**4.6.10.2 Non-Conforming Corrective Action Process:** Once product is marked non-conforming and moved to QC hold, the QC manager will begin the process described in Section 4.9 Non-Compliance, Corrective Action.

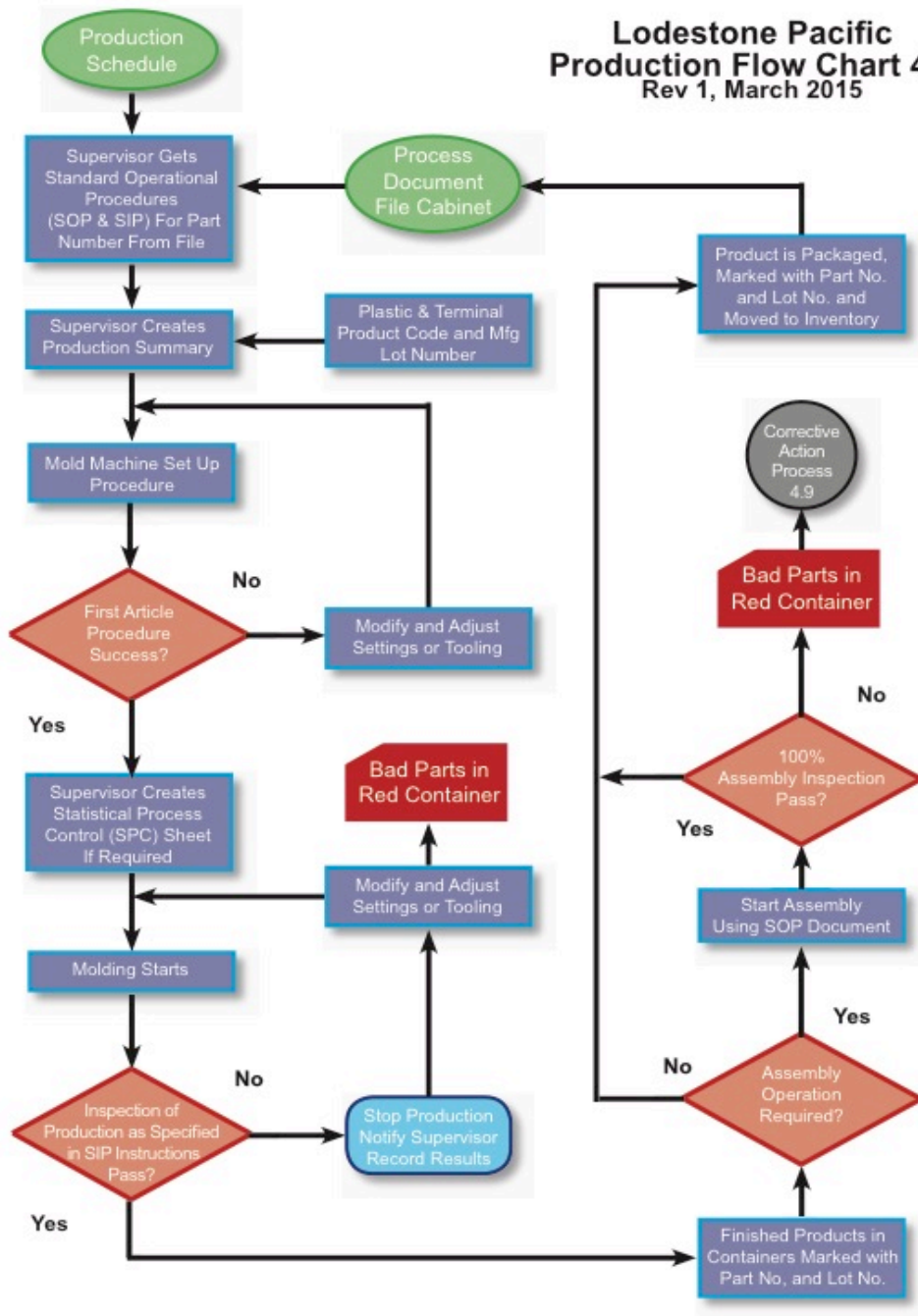
## **4.7 In-Production Inspection Procedures (Flow Chart 4.7)**

**4.7.1 Overview:** Quality Control Inspection will occur during the product set-up and production process. Based on Production Control Plan, the production process will be continually monitored to ensure product meet the published specifications.

4.7.1.1 Production Control Plan, Exhibit 4.7.1.1

**4.7.2 First Article Inspection:** Due to the inherent dimensional stability of plastic molding tooling, the verification of the tooling dimensions to the product drawing during production set-up is critical to production success. Once the molding machine has been stabilized, a

appropriate number of samples are delivered to Quality Control to perform the First Article Inspection Process.





4.7.2.1 First Article Approval: First articles are compared to dimension on the most current revision of the product document. If they meet the specifications of the drawing, the first articles are marked as Passed in the Quality Control records and returned to production. First Article Inspection Record Exhibit 4.7.2.1.

4.7.2.2 First Article Not Approved: If the product does not meet the dimensions and specifications of the product drawing, the product is marked as Failed, and returned to production with an explanation of attributes that do not meet specifications. Production then reviews the tooling and production procedures to determine the modifications needed to provide products that meet specifications. The First Article procedure is repeated until the product meets the specification of the drawing. Formal corrective action procedures is not required for failed product set-ups.

4.7.3 Production Control Plan: The Production Control Plan (Shop Traveler) is created during production set-up and is the primary lot traceability document. The Production Control Plan will include:

- 1) The Production Lot Number
- 2) The raw material manufacturers lot number
- 3) The terminal (if any) manufacturers lot number
- 4) The process description
- 5) A diagram of the production process
- 6) The Production Control Plan Document number.
- 7) QC Inspection Sign-Off at critical production steps.

A copy of the Production Control Plan is included with the finished products as they are taken to final approval. The other copy of the Production Control Plan is stapled with plastic and terminal manufacturer C of Cs to ensure lot traceability and filed in the production records by part number. Example of Production Control Plan, Exhibit 4.7.3.

4.7.4 In-Production Inspection: The various Production Control Plans (PCP) will be created by common product type and will designate 1) inspections required, 2) where in the process inspection is required, 3) the frequency of inspection 4) and the number of samples evaluated.

In addition, the MRB may also require Statistical Process Control (SPC) documents and recordings. The inspections will be recorded and filed in the Quality Control files by part number.



4.7.4 Secondary Operation Inspections: Each secondary operation inspections will follow the Production Control Plan.

## 4.8 Final Inspection of Products

4.8.1 Completion of Production: When the last products of a production lot have finished all secondary operations, they are ready for final inspection. A representative sample of production is delivered to Quality Control for final inspection.

4.8.2 Inspection Procedure for Manufactured Products: Inspection records are digital, and record the a) Date, b) Lot Number, c) Lot Quantity, d) and Sample Size in addition to the results of physical inspection (Exhibit 4.8.2). Physical inspection will follow Inspection Workmanship Standards unique to the each product type and will verify at least the following attributes: Dimensional compliance, material compliance, any cracks or voids, any discoloration, any incorrect terminal quantity, any damaged terminals, that correct markings are present. All results will be included in the Inspection Record.

4.8.3 Solderability: Products with plated terminals must be evaluated according to MIL-STD-202, Method 208 for solderability, following Solderability Testing Workmanship Standard. The results of the solderability evaluation are included on the inspection record. The tested samples are placed in a sealed plastic bag, marked with the product part number, lot number, solderability test level, and test results. These samples are retained in the QC inspection area for possible future review. Example of Solderability Inspection Record Exhibit 4.6.4.

4.8.4 Inspection Records: Inspection records for each part number are stored in the companies central file system. Inspection records should be retrieved from the central file location using the local network, or the VPN if in China. Once the product has been inspected and all required data recorded on the inspection record for that product, the inspection record is returned or saved to the company central file system via the network of VPN. Exhibit 4.8.4 Inspection Record.

4.8.5 Final Inspection Approval: Once the inspection is completed, Quality Control verifies the product meets the company specifications (including solderability) for a compliant product by adding their mark to

the inspection record. This mark signifies the product is available for sale and can be included in inventory.

4.8.7 Non-Conforming Products: If the QC Inspection Process determines and product is non-compliant, it is recorded in the Inspection Record as a failed lot. The samples from the non-compliant lot are retained in the QC inspection area and marked with a Red QC Problem Card. These samples are retained for further evaluation. The Corrective Action Report (CAR) Non-Conforming Product Review document is initiated.

4.8.7.1 QC Hold Area: When the QC Inspection Process determines product is non-conforming, the QC Manager has the product tagged with a Red QC Problem Card and moved to QC Hold area away from product waiting for Inspection so the product will not be mistaken for conforming products.

4.8.7.2 Non-Conforming Corrective Action Process: Once product is marked non-conforming and moved to QC hold, the QC manager will begin the process described in Section 4.9 Non-Compliance, Corrective Action.

#### **4.9 Non-Conforming, Corrective Action (Flow Chart 4.9)**

4.9.1 Segregation: All products and materials suspected to be non-conforming are to be moved to the QC Hold area and marked with a QC Problems Red Card. This product will remain in QC Hold until the review by the Material Review Board has determined the products final status. Exhibit 4.9.1 Red Card.

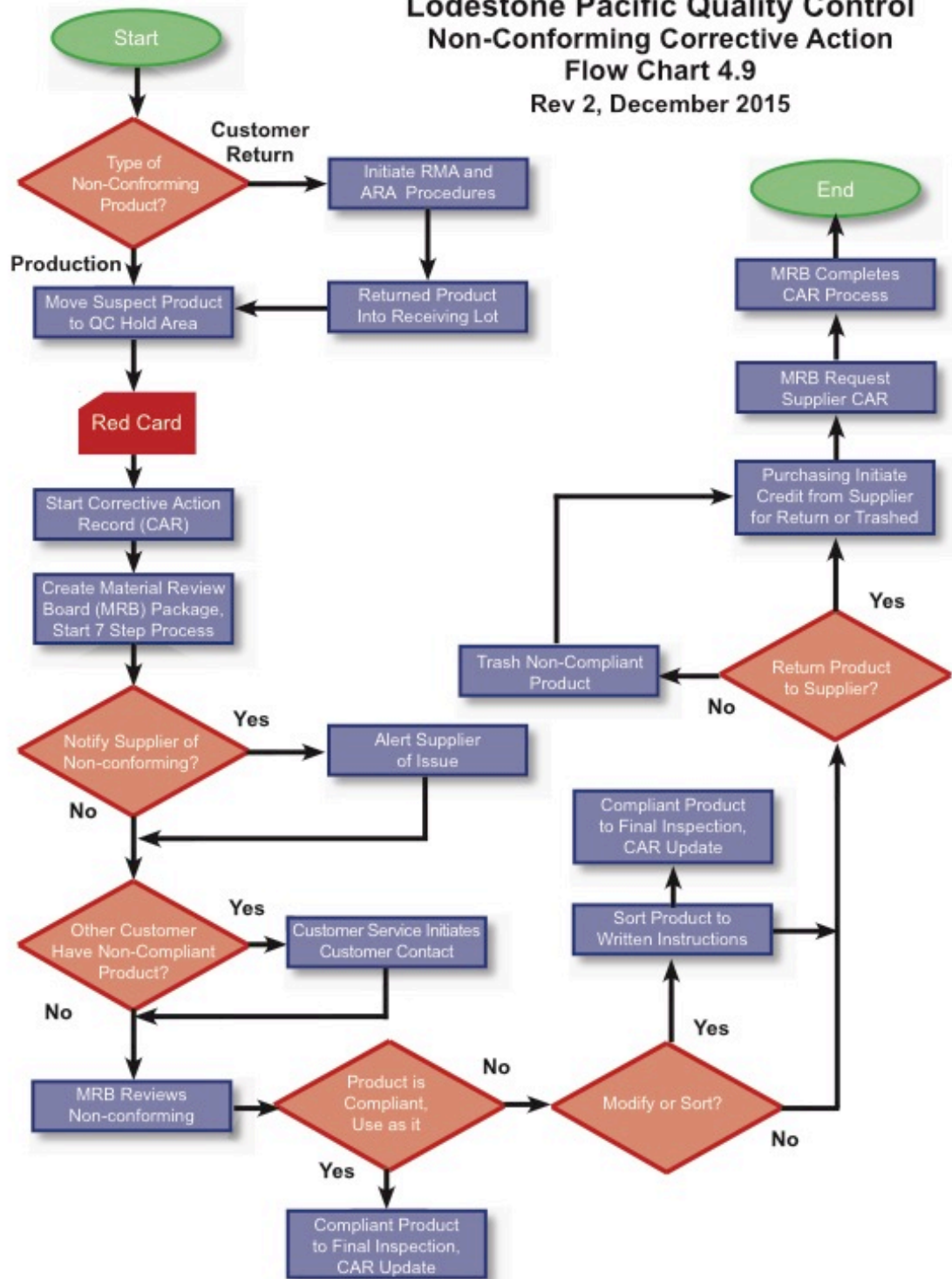
4.9.2 Material Review Board: The MRB will review quality issues that the QC manager determines are either; 1) non-compliant, or 2) products to be improved.

4.9.2.1 MRB Members are, the USA Operations Manager, the USA QC Manager, China Operations Manager and USA General Manager or President.

4.9.2.2 Material Review Board Determinations: Members of the MRB will review the inspection records, evaluate the parts, and determine the status of the products or materials segregated in QC Hold.

**Lodestone Pacific Quality Control**  
**Non-Conforming Corrective Action**  
**Flow Chart 4.9**

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4.9.2.2.1 Use As Is: The MRB can decide the product is conformant, or will not adversely affect the customer's use of the product.

4.9.2.2.2 Modification or Sorting: The MRB can decide the parts or material should be modified, reworked or sorted by quality control employees before being designated compliant, or Use As Is. QC re-inspection may be required after modification or sorting of products.

4.9.2.2.3 Return to Vendor: The MRB can decide to return the product to the vendor for replacement, modification, or sorting.

4.9.2.2.4 Trash: The MRB can decide to trash the product or material.

4.9.2.3 Removal from QC Hold: The QC Manager has the authority to carry out the determination of the MRB and release product or material from QC Hold. The determinations of the MRB are recorded on the Corrective Action Record (CAR)

4.9.3 Corrective Action Record (CAR): This document is the record of MRB investigations and recommendations of product or material determined to be non-compliant or to be improved with a re-design. Each CAR document has a unique CAR Number. Example of CAR Exhibit 4.9.3

4.9.3.1 CAR Product Review: The initial stage of the CAR process gathers information regarding the nature and scope of the non-conformance. If the non-conformance is the result of a customer complaint, feedback from the customer's inspection process and results are recorded.

4.9.3.2 CAR and MRB Results: The next stage of the CAR will follow a 7 step procedure that shows 1) the Members of the MRB who participated in the determination, 2) a Description of the Problem, 3) The Containment Action to segregate the problem from production or inventory, 4) A Root Cause analysis, 5) a description of the Corrective Action, 6) An Implementation Description, 7) and a Plan to Prevent Re-occurrence. The signature of the QC manager is verification that the process has been completed. While active, the CAR will be filed in the CAR active file for review by the MRB. Once completed, the CAR is filed by part number. Example of CAR Exhibit 4.9.3

## **4.10 Customer Complaints/Returns:**

4.10.1 Overview: When a customer contacts customer service with a product complaint, customer service will use the RMA/ARA form to



gather the following information; a) Company Name, b) Customer Contact information, c) Customer PO Number, d) Lodestone Part Number, e) Quantity of product, f) Lodestone Lot Number and information describing the nature and scope of the problem. This information is delivered to the QC Manager who initiates the following procedures;

4.10.2 Gather Information about Customer Product Complaint: The QC Manager will use the Corrective Action Record (CAR) Product Review to gather information needed to resolve the customer complaint in a fast and efficient manner. This will include customer supplied photos, inspection results and/or samples. The QC Manager will create a digital file with both the customer name and part number included in the file title.

4.10.3 Review Inspection Records: The QC Manager will compare Lodestone inspection records by lot number to the customer description of the non-compliant product.

4.10.3 Re-inspection Physical Inventory: If required, the QC Manager will re-inspect the physical inventory to determine if non-compliant product is in inventory.

4.10.4 Other Customers with Non-Compliant Product: Review sales records to see if other customers have received this part number and lot number, include this information for MRB review. MRB will determine if customers need to be notified of non-compliance and if replacements need to be arranged.

4.10.5 CAR and MRB Results: The next stage of the CAR will follow a 7 step procedure that shows 1) the Members of the MRB who participated in the determination, 2) a Description of the Problem, 3) The Containment Action to segregate the problem from production or inventory, including replacement of non-compliant product at other customers, 4) A Root Cause analysis, 5) a description of the Corrective Action, 6) An Implementation Description, 7) and a Plan to Prevent Re-occurrence. The signature of the QC manager is verification that the process has been completed. While active, the CAR will be filed in the CAR active file for review by the MRB. Once completed, the CAR is filed by part number.

4.10.6 Resolution of Complaint: The investigation by the QC Manager could have the following outcomes;

4.10.6.1 Replace Non-Conforming Product: The QC Manager and the MRB determine the product is non-conforming and finalizes a Corrective Action Record. The QC Manager authorizes replacement product is send to the customer using the Credit/Re-Bill procedures as soon as conforming product is available. An Accounts Receivable Adjustment (ARA) is created and a Return Material Authorization (RMA) number is created and sent to the customer with shipping instruction for the returned parts at no expense to the customer. Exhibit 4.10.6.1 RMA/ARA Form.

The Material Review Board may require asking the vendor to initiate their own Corrective Action Procedures to be included in the Lodestone Pacific's CAR.

4.10.6.2 Shipped Wrong Part Number: The QC Manager determines Lodestone shipped the wrong product to the customer. The QC Manager authorizes replacement product is send to the customer using the Credit/Re-Bill procedures as soon as the correct product is available. An Accounts Receivable Adjustment (ARA) is created and a Return Material Authorization (RMA) number is created and sent to the customer with shipping instruction for the returned parts at no expense to the customer. The QC Manager will facilitate and verify the adjustments required to get inventory back into balance. The Material Review Board will determine the cause of the shipping of the wrong product and complete the Corrective Action Report (CAR) procedure.

4.10.6.3 Product Is Compliant: The QC Manager determines the product is compliant. All information regarding the customer complaint is given to the Regional Sales Manager who contacts the customer on the phone in addition to providing the results of the complaint in writing. The Regional Sales Manager can offer alternative products or the return of the compliant products. An Accounts Receivable Adjustment (ARA) is created and a Return Material Authorization (RMA) number is created and sent to the customer with shipping instructions for the returned parts at the customer's expense. The Regional Sales Manager determines if a re-stocking charge is to be applied to the customer's credit.

## **4.11 Test Equipment Calibration and Repair**

4.11.1 Overview: All test equipment and tools used in determining compliance of products or processes to Quality System specifications are to be inspected and calibrated.



**4.11.2 Test Equipment and Tool Inspection and Calibration Process:**

Each item to be tested and calibrated will be identified by an asset number sticker and have a record based on the asset number and show the date of tests and calibrations performed.

4.11.2.1 Each QC Asset to be evaluated will have a stated evaluation interval on its permanent record and asset sticker. The nature of the evaluation, test, calibration, or repair will be recorded on the asset record. The evaluation interval is determined by the MRB. Example of Calibration Record, Exhibit 4.11.2.1

4.11.2.2 Any asset deemed to be out of specification will be tagged and marked as “Out Of Service” and segregated from assets in use. Disposition of Out of Service asset will be determined by the QC Manager.

**4.12 Quality System Records**

4.12.1 Overview: All Quality System records will be maintained in digital form a minimum of 10 years protected by off-site digital back up. Hard copy records and historical physical samples will be maintained a

minimum of 5 years. The archiving of samples from daily inspection is at the discretion of the Quality Control Manager.

4.12.2 File and Document Names will follow the guidelines described in “Quality System File Naming and Storage Convention”, (Exhibit 1.6.2) and managed by the Material Control Board.

**4.13 Quality System Training**

4.13.1 Overview: The Quality System overall training program will be developed and continually updated by the Material Review Board.

4.13.2 Production and Inspection Training: This training will be documented in Standard Operating Procedures, (SOP), Standard Inspection Procedures, (SIP) and Workmanship Standards. Employee training at the production process or inspection level is the responsibility of the immediate Production Manager or Quality Manager. Sections of this manual will provide additional process and



inspection training. Additional specialized training will have separate training documents and instruction.

4.13.3 Customer Service Training: This training is provided by the Sales & Customer Service Manager and will be specific to job function, product focus, and employee skill set. The P21 Integrated Computer System training will be supplemented by the P21 training DVD.





## 5.0 Manufacturing and Assembly

### 5.1 Section Overview/Responsibilities

5.1.1 Overview: This section describes that systems and procedures that plan, control, monitor, measure and record product production. These are the operations the Quality Control System verifies are in compliance with the Company's Objectives and Policy.

5.1.2 Responsibilities: The Operations Manager is responsible for all Manufacturing and Assembly, either within company facilities or out-sourced to a cost effective partner.

### 5.2 Production Process, (Production Flow Chart 4.7)

5.2.1 Production Planning is initiated by the Company's integrated MRP system that identifies products that are needed for inventory or for customer requirement. Purchasing and Operation evaluate this information and determine a production schedule. Based on the production manager schedule, the factory production supervisor will create a production document package for products to be produced. That package should include:

5.2.1.1 Production Control Plan (PCP) for the part number. This document shows the step-by-step production process with dimensioned part drawings, photos, processing instructions, and critical details to watch for. Example of PCP, Exhibit 5.2.1.1

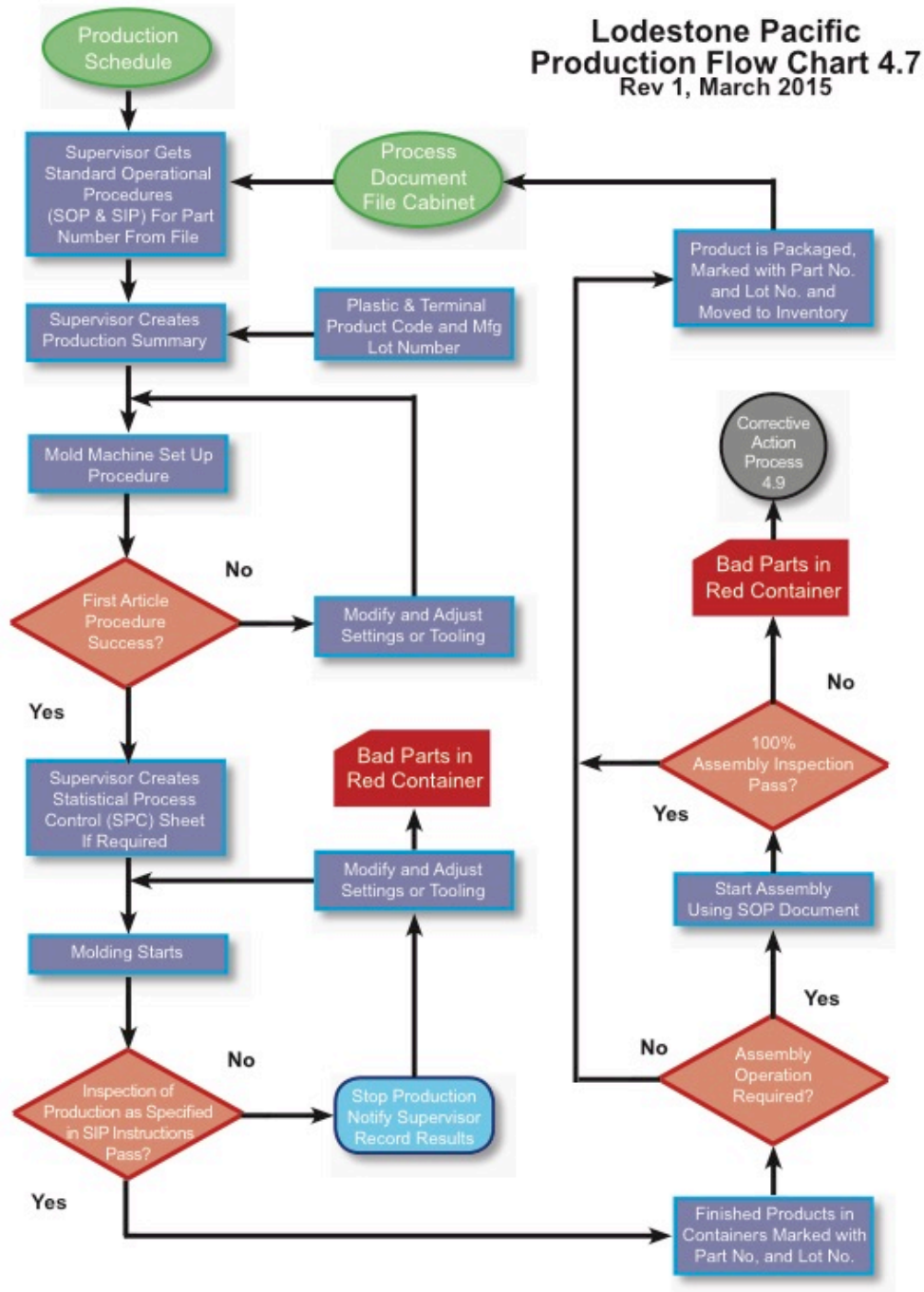
5.2.1.2 Production Summary The Production Control Plan is created during production set-up and is the primary lot traceability document and will include:

- 1) The Production Lot Number
- 2) The plastic material manufacturers lot number
- 3) The terminal (if any) manufacturers lot number
- 4) The Molding Press number
- 5) A diagram of the production process
- 6) QC Inspection Sign-Off at critical production steps.

A copy of the PCP is included with the finished products as they are taken to final approval. The other copy of the PCP is stapled with plastic and terminal manufacturer C of Cs to ensure lot traceability and filed in the production records by part number.

5.2.3 Production Set Up is the initial set up of the production equipment and will follow the instruction found in the production package. The Production Control Plan for the scheduled production is posted in the production area.

are produced during the set up process to ensure the equipment is producing consistent products and to produce enough parts for a valid First Article approval process.



5.2.4 First Article Inspection is designed to verify the product set up will produce products that meet published specifications. A representative quantity of first articles are produced and delivered to Quality Control along with the Production Control Plan where the samples are compared to product drawing and specifications. Results are recorded on the First Article Inspection Record. First Article Inspection Record Exhibit 5.2.4

5.2.4.1 Products that meet specifications are returned to production with the Production Control Plan that is marked with Quality Control approval. Production is approved to begin.

5.2.4.2 If Products do not meet specifications, and an incomplete Production Control Plan, are returned to the production supervisor with a description of what specifications are non-compliant. New first article samples are produced and sent to Quality Control for evaluation.

5.2.5 Production is Started and the Production Control Plan for the product and process is followed by production employees. All containers holding product are marked with the Part Number and Lot Code that appears on the PCP. The Production Control Plan will designate a predetermined percent of the continuous products that will be inspected to verify the process remains within specifications. A Standard Inspection Procedure (SIP) will provide inspection instructions. The Production Control Plan may also instruct the inspectors to create a Statistical Process Control (SPC) sheet. A copy of the PCP will remain with the first container of product that leaves the production area and moves toward secondary operations and final inspection. Another copy stays with the production equipment until finished.

5.2.6 Secondary Operations by production employees follow the instructions on the product Production Control Plan. Quality Control inspectors will follow the instructions on the SIP. It is important that each container of product is marked with the part Number and Lot Code displayed on the PCP.

5.2.7 Production Quality Inspection will occur during the Production and Secondary Operation processes to ensure product remain in specification and have not been damaged by the process. The Production Control Plan will identify where inspection should occur in the process and identify the SIP document number Quality Inspectors will use. Quality Control Inspector have the authority to stop production if product is out of specification. SIP Example Exhibit 5.2.7.



5.2.7.1 If Production Quality is non-Compliant, the inspector will stop production and alert the Production Manager. An investigation of the non-compliance begins. All non-compliant products are marked with Non-Compliant Red Cards and segregated from compliant products. Adjustments or modifications of the process are made to ensure the product production or secondary operation is back in compliance. Production begins again when the process produces compliant product.

5.2.7.1.1 Product marked as Non-Compliant is moved to the Quality Control Hold Area and either destroyed or reworked based on the MRB decision.

5.2.8 Final Inspection occurs when the last of a part number's production lot is produced. The final copy of the Production Summary stays with the last products produced and is re-united with the first copy at final inspection, and then filed by part number. Samples from the lot as described in the Production Control Plan are taken to Quality Control for final inspection and completion of inspection documents. Upon final Quality Control approval, the Production Supervisor is notified that the product can be packaged and moved to inventory. Inspection documents are files in the Quality Control files by part number.

5.2.9 Packaging of finished products follows the instruction on the part number Production Control Plan. Each container and package must have a clearly marked part number and lot number.

5.2.10 Completions of Production: When a production run is finished, both hard copies of the Production Control Plan are re-united and filed by part number. Any production tooling will follow the post-production inspection procedures described in the machine set-up Production Control Plan.

### **5.3 Assembly Operations**

5.3.1 Overview: The assembly of multiple products from potentially different sources will follow specific procedures. To maintain lot code integrity through the assembly process, each assembly will have a unique Kit Number.

5.3.2 Kit Numbers: All components associated with an assembly process will have unique lot numbers traceable to the vendors manufacturing process, and will be organized into Kits. Each Kit will contain the required number and mix of components need to produce a

predetermined number of assemblies as described in the product's Bill of Material (BOM). All vendor product certifications, receiving documents, and test results are verified and filed in the Kit File.

5.3.3 Kit Summary and File: A summary of the components in the Kit will list the required documentation to verify the components meet the requirements of the purchase order. The Kit Summary file can include C of Cs, BOM, inspection records, drawings, assembly procedures, flow charts, workmanship standards, photos, corrective action documents, and final inspection results for the designated Kit. All documents related to the kit will be filed digitally by Kit number. These documents are accessible in either China or the USA for verification.

5.3.4 Assembly Production Control Plans will be a written description and instructions for the process required to use a kit to complete and inspect an assembly.

## **5.4 Customer Supplied Specifications, Testing, and Records**

5.4.1 Overview: The company will accept production and assembly opportunities specified by the customer. Customer will supply drawings, material requirements, procedures, test methods, and inspection documents. Acceptance of these documents must be approved by the Operations Manager.

5.4.2 Customer Document Control: Customer supplied drawings must have a clear file name and a revision number. Hard copies of the customer-supplied drawings are placed in a Project file folder with the customer name and project identification on the folder. If not in use, this hard copy file will be in the Customer Project file cabinet. The customer-supplied documents must be included and described in the customer's written PO. Modifications of customer supplied documents will result in a review and re-approval of those documents, possible re-quote of work to be done, a change in revision number, and a re-issue/modification of the PO showing the new document revision numbers.

5.4.3 File Procedures: Customer supplied drawings will be filed in the virtual file cabinet and CRM with customer name, product number and revision number appearing in the digital file name.



5.4.4 Customer Procedures/Process: When required, the customer's documents will be included, and in addition to, the process control documents described in Sub-section 5.3.

5.4.5 Records: All document changes, production, inspection and test results will be recorded in the company Quality Assurance records and will be fully traceable through the assembly-manufacturing process to the supplier's production lot codes.