

**QUALITY CONTROL MANUAL**

**for**

**J.O. KING INCORPORATED**

**1265 Old Alpharetta Road**

**Alpharetta, Georgia 30005**

***REVISION 15 December 2010***

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## TABLE OF CONTENTS

DESCRIPTION	SECTION
Approval of manual	i
Review sheet	ii
Q.C. Organizational Chart	iii
Revision List	iv
SCOPE	1.0
RESPONSIBILITIES	2.0
CONTROL OF PURCHASES	3.0
PURCHASE ORDER CONTROL	4.0
DRAWING & SPECIFICATION CHANGE CONTROL	5.0
RECEIVING INSPECTION	6.0
STOCK STORAGE AND HANDLING	7.0
FINAL INSPECTION	10.0
DISCREPANT MATERIAL CONTROL	11.0
CORRECTIVE ACTION	12.0
GAGE AND STAMP CONTROL	13.0
PACKING AND SHIPPING	14.0
IDENTIFICATION	15.0
GENERAL CONDITIONS & SPECIFICATIONS	16.0
STAMP CONTROL CHART	17.0
APPROVED VENDORS LIST	18.0
REVISION LIST	19.0
FORM SAMPLES	20.0

This Quality Control Manual has been submitted to and approved by the below listed officials for use by: J.O. King, Incorporated, 1265 Old Alpharetta Road, Alpharetta, Georgia 30005 P.O. Box 1088 Alpharetta, Georgia 30009. This manual will meet the intent of MIL-I-45208A as applicable to a distributor as requested on customer purchase order/contract. This manual will be reviewed annually and revised when applicable.

Tom Morrell  
President

ussell Sheldon  
Quality Control Manager

Rev. 1 August 1990  
Rev. 2 July 1992  
Rev. 3 June 1996  
Rev. 4 April 1998  
Rev. 5 January 1999  
Rev. 6 August 1999  
Rev. 7 September 2001  
Rev. 8 August 2003  
Rev. 9 August 2004  
Rev.10 August 2005  
Rev.11 September 2006  
Rev.12 November 2007  
Rev. 13 December 2008  
Rev. 14 December 2009  
Rev. 15 December 2010

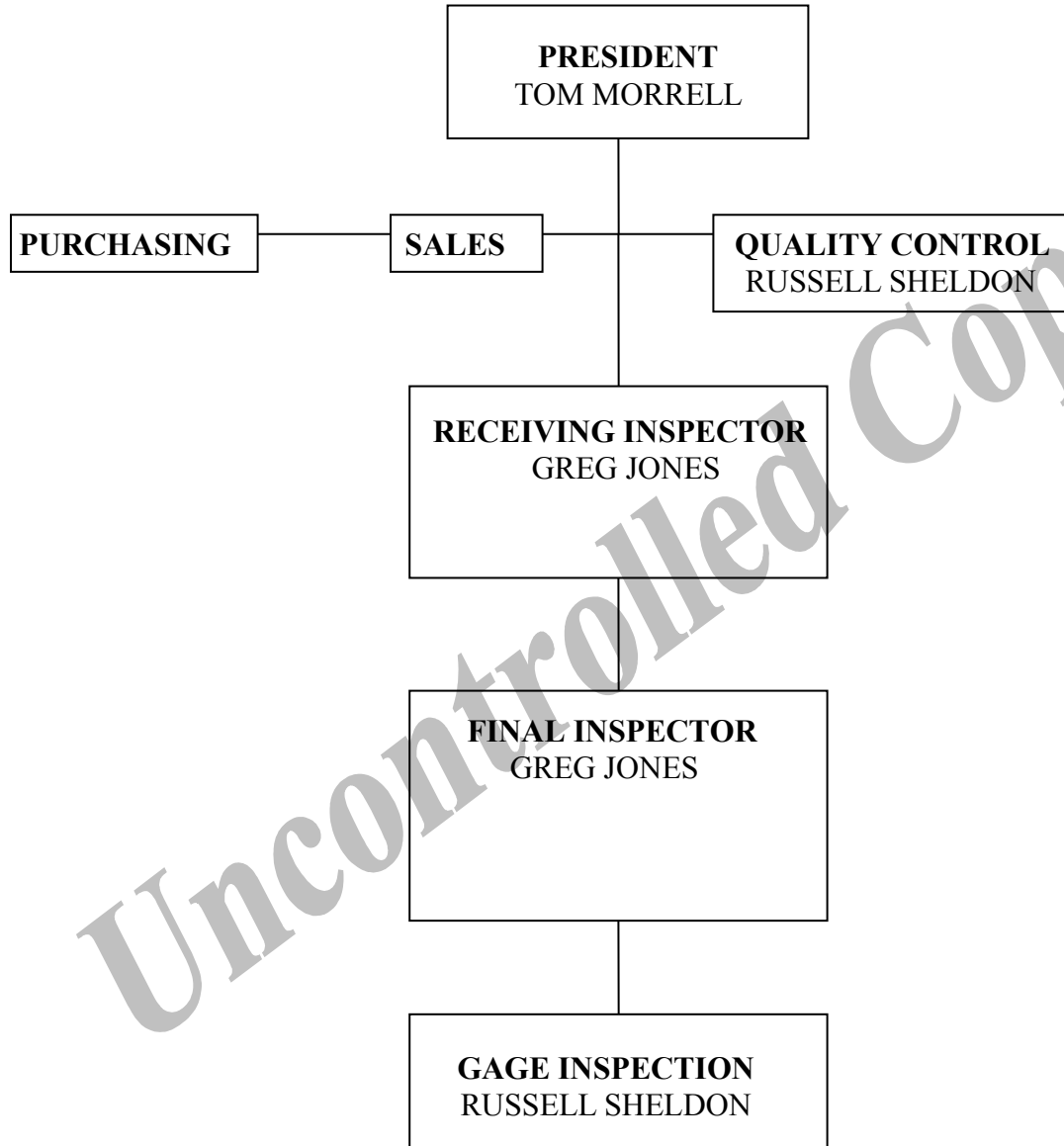
REVIEW SHEET

	REVIEW/REVISION	DATE	INITIAL
1996	_____	_____	_____
1997	_____	_____	_____
1998	_____	_____	_____
1999	_____	_____	_____
2000	_____	_____	_____
2001	_____	_____	_____
2002	_____	_____	_____
2003	_____	_____	_____
2004	_____	_____	_____
2005	_____	_____	_____
2006	_____	_____	_____
2007	_____	_____	_____
2008	_____	_____	_____
2009	_____	_____	_____
2010	_____	_____	_____

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*See Master Copy for revision specific dates.*

**J.O. KING, INCORPORATED**  
**Q.C. ORGANIZATIONAL CHART**



## 1.0 Scope

1.1 The quality control system includes: receiving; identifying; inspections; corrective action; stocking and issuing parts; packing; storing and shipping.

1.2 The system is designed to ensure customer satisfaction through quality control management of services performed at J.O. King Incorporated.

1.3 Written inspection and sampling procedures will be prepared to supplement drawings and other specifications, as deemed necessary.

1.4 **NOTE:** This system will normally be enforced to the level of generally accepted principles of commercial distribution.

## 2.0 Responsibilities

2.1 The manager of quality control reports directly to the President.

2.2 The quality control manager's responsibilities include:

2.2.1 Planning how to meet customers quality requirements.

2.2.2 Review in detail customer purchase orders, requirements, specifications, and all terms and conditions to assure compliance and conformance.

2.2.3 Determining inspection points.

2.2.4 Writing inspection and sampling instructions, when applicable.

2.2.5 Establishing the most effective and efficient quality assurance procedures possible.

2.2.6 Keeping adequate quality assurance records.

2.2.7 Reviewing quality assurance records and overseeing follow-up for corrective action and prevention of defects.

2.2.8 Assuring that vendor's quality control and follow-up are adequate.

2.2.9 Assuring that all gages are inspected and calibrated on a regularly scheduled basis.

2.2.10 Making sure inspectors make unbiased decisions to accept or reject items.

2.2.11 Copies of the quality control manual are issued to shipping, receiving, and purchasing.

### **3.0 Control of Purchases**

#### 3.1 Superseded

3.2 Distributed parts: J.O. King Inc. buys from qualified vendors only. A qualified vendor is defined as one that controls lot numbers and traceability records back to the raw production material and can supply certifications and test reports on any given lot number assigned to their parts.

3.3 A qualified vendor must also be able to show by documents that all measuring and test equipment and gages used to assure that supplies conform to technical requirements are calibrated at established intervals to conform to national standards.

3.4 When a vendor is originally considered for our approved vendors list, a mail-in Vendor Quality Control Questionnaire is issued to that vendor. J.O. King, Inc. shall control and limit the selection of procurement sources to those with proven or demonstrated capability, based upon purchasing history and quality history, to provide materials or services meeting all contractual quality requirements. These sources shall be evaluated by the Q.C. mgr. based upon: adequate delivery time, superior product quality, and the DPF file (see sec. 12). If the Q.C. mgr. ascertains that a specific vendor is not meeting the approved vendor requirements of quality control then the vendor will be notified and be put on a period of probation of not less than six months. Vendor performance during this time will be closely monitored. If continued non-compliance occurs, the vendor will be notified that they are no longer on the J.O. King, Inc. approved vendors list.

### **4.0 Purchase Order Control**

4.1 All of our purchase orders to vendors must be approved by the Q.C. Mgr. or authorized purchasing representative.

4.2 When the purchase order is released, our buyer will send our vendor all new or required drawings, specs, and other customer requirements with the purchase order, when requested by the customer.

4.3 Copies of all purchase orders will be kept on file for our customers to review for a period of at least seven years. Form number: purchase order. This form will be used for quality history.

## **5.0 Drawing and Specification Change Control**

5.1 We distribute parts to vendor specifications and drawings. Sets of these are on file.

5.2 Purchasing is responsible for changing and keeping track of drawings and specifications.

5.3 The sales dept. receives engineering changes from our customers and is responsible for sending these changes to specific vendors immediately.

5.4 Purchasing is responsible for issuing the latest engineering changes, drawings, and specs to departments that need them and for voiding outdated drawings and specs based on effective dates.

## **6.0 Receiving Inspection**

6.1 Received material shall be inspected to the extent necessary to verify conformance to customers purchase orders.

6.2 All documents and certifications will be reviewed for correctness and completeness.

6.3 When certifications are required they will be reviewed and stamped by the inspector if acceptable. If certs are not acceptable, the material will be sent to the hold area until proper certs are received and/or a disposition is made by the Q.C. Mgr.

6.4 Receiving inspection will take random samples from all lots within a single shipment in accordance with ANSI/ASQC Z1.4, normal, level I through special, AQL 2.5-15, depending upon quantity. Tightening of inspection will take place per ANSI/ASQC Z1.4 when necessary. (Charts used are online at [www.sqconline.com/mil-std-105.html](http://www.sqconline.com/mil-std-105.html)) Any change will be authorized by the Q.C. mgr. All receiving paperwork/records will be stamped by inspector and dated.

6.6 Accepted material will be sent to stock or customer as required. Non-conforming material will be segregated, identified and sent to the hold area. The material review board will then decide the disposition of the material as per form # 1001 (see sec. 12). Disposition options are: return to vendor or scrap.

6.7 Distributed items that are already in stock may not have a receiving inspection record because they were ordered for a standard stocking situation. If these items are ordered and the customer p.o. requests a MIL-I-45208A inspection process, then the items will be given a documented final inspection before they are shipped. If the customer requires a receiving inspection record, then parts will be special ordered from the vendor and a receiving inspection will be performed when the parts are received. Receiving records will be retained on file for a minimum of seven years. Form number: receiving record/packing list. This form will be retained for quality history.



## **7.0 Stock Storage and Handling**

7.1 After the receiving inspector has accepted the parts, per specific inspection requirements requested on customer p.o., they will be forwarded to the pre-designated stocking areas by qualified shipping personnel. All parts will be segregated by part numbers. They will be separated by packaging considerations or by physical space. No unlike lot number of any like parts will be allowed to be combined under any circumstances. Any parts purchased from other distributors will be so noted on purchase orders and be kept segregated from, by record, all original manufacturers stock. When shipped, only stock from original manufacturer, when applicable, will be released for shipment. Inspected and accepted stock items that are specifically required by customer p.o. to be such, will be stamped on their respective containers by receiving personnel to notate accepted status of parts.

## **10.0 Final Inspection**

10.1 Final inspection will be performed on a sample of shipped items. The number of items sampled depends on the quantity of the item and customer requirements, if any. Inspection will follow customer supplied procedures if required, or ANSI/ASQC Z1.4. (see sec. 6.4)

10.2 All final inspection records will be notated on picking tickets or accompany picking tickets and will be attached to original orders.

10.3 Inspection records will be filed and will be available for customer review at any reasonable time. Inspection records will be kept on file for a minimum of seven years. Form number/name: Picking ticket/final inspection. This form will be used for quality history.

10.4 All faulty parts will be marked and set apart from the normal flow of correct parts. Material review board will be notified and disposition of parts will conform to specifications of form # 1001 (see sec. 12).

10.5 Rejected material that has been repaired, or sorted, must be re-submitted to final inspection to make sure it meets requirements.

10.6 Final inspection records will list: the number of pieces accepted (quantity shipped), the date of inspection (ship date), the inspector's initials, and final inspectors stamp.

## **11.0 Discrepant Material Control**

11.1 All nonconforming parts will be placed in a segregated area. The items will be marked with part number, lot size, defect, inspector's initials, and other information necessary.

11.2 The specific reason an item has been rejected will be clearly written on a rejection tag attached to each part or container.

11.3 No one may remove the items from the segregated area until disposition is determined by the material review board, made up of the Q.C. Mgr. and Receiving Inspector.

11.4 Disposition of the items will then be documented on form # 1001 (see sec. 12) and corrective action procedures will be implemented. Form #1001 (see sec. 12) will be kept on file for a minimum of seven years. Form number/name: 1001. This form will be used for quality history.

## **12.0 Corrective Action**

12.1 Corrective action will be taken when any part is found to be discrepant.

12.2 A discrepant part form (DPF), form # 1001, will be filled out noting: part number; quantity; p.o.#; date; and discrepancy. Purchasing and sales will be notified about the discrepancy. The discrepant vendor will be notified, by telephone or mail, and sent a "Request for Corrective Action" form and directed to take their own corrective action and return form with complete information. Form numbers: #1001 and Request for Corrective Action form. These forms will be used for quality history.

12.3 A file of DPF and RfQA forms will be kept on record and referred to, from time to time, to monitor the quality assurance performance of said vendor.

12.4 Discrepant parts will be tagged as such and put aside out of the normal flow of stocking and conforming parts. The material review board, consisting of the Q.C. Mgr. and Receiving Inspector, will review the parts and make a decision on their disposition.

12.5 If such a review confirms discrepancy, the vendor will be notified by telephone and part will be returned to vendor for further corrective action (vendor will also be put on a period of probation, see sec. 3.4) Options for corrective action are: (1) rework to customer specifications. This corrective action requires customer approval. (2) Repair to customer specifications/approval. (3) Use as is. This corrective action requires customer approval. (4) Scrap, per DPF form #1001. This corrective action requires material review board approval. All decisions concerning discrepant material disposition will be made exclusively by the material review board in conjunction with customer desires and approvals. (5) Return to vendor.

### 13.0 Inspection Tool and Gage Control

13.1 This procedure has been established to instruct the calibration inspector in the proper methods for verifying the accuracy of all tools and gages used for the acceptance of customer parts.

13.2 This procedure meets the requirements of MIL-STD-45662A.

13.3 Except as noted, all calibration will be done with Master Block Set # JK34A. The Master Block Sets will be calibrated every three years and a certificate of calibration traceable to the National Institute of Standards and Technology will be kept on file.

13.4 The Master Block Set will be used for calibration only and will be securely stored while not in use.

13.5 This procedure may be amended or revised whenever deemed necessary or as new types of gages are added or modified.

13.6 All tools will be identified with a serial number to correspond with history records.

13.7 After calibration is completed, the history records will indicate the following:

- a.) If tool/gage is acceptable to procedure as written.
- b.) Actual findings recorded.
- c.) Out of tolerance action, if applicable.

13.8 Measuring and test equipment shall be handled, stored and transported in a manner, which shall not adversely affect the calibration or condition of the equipment. Measuring and test equipment shall be stored in their respective holding cases and carefully placed in the assigned storage compartments.

13.9 Measuring and test equipment and measuring standards shall be calibrated and recorded at 90-day intervals established on the basis of stability, purpose and degree of usage. Intervals shall be shortened as required to assure continued accuracy as evidenced by the results of preceding calibrations and may be lengthened only when the results of previous calibrations provide definite indications that such action will not be adversely affect the accuracy of the system.

13.10 Measurement and test equipment found to be out-of tolerance during calibration shall be evaluated for its impact on product quality. Any suspect hardware shall be re-tested and documented. If any hardware in user's possession is determined to be suspect after evaluation, the user shall be formally notified. Any tool or gage found to be significantly out-of-tolerance will be reevaluated as to method of calibration, frequency of calibration and possible placement.

13.11 A log indicating due date will be kept by the Q.C. mgr. who will review it each month and recall any gage due for calibration.

13.12 Calibration procedures will be performed in a clean environment at ambient temperatures and humidity.

13.13 All tools and gages must be thoroughly cleaned before calibration. All nicks, burrs, and buildup of foreign matter which will interfere with the proper use of the tool gage must be removed. Check for freedom of movement through entire range when applicable. Do not use solvents, oil or forced air when cleaning dial type gages. Clean all dial caliper rack gears with a clean dry acid brush.

13.14 Calibration procedure - Outside and Inside Micrometers

13.15 Visual Inspection - Examine micrometer for damage, such as: bent spindles; burred anvils; damaged threads; illegible graduations due to wear or damage. Check spindle threads for end play. If end play exists, tighten adjusting nut until end play is removed and micrometer action is free in the full range of travel. The spindle lock nut should effectively lock the spindle without altering the distance between its measuring surfaces more than .0001".

13.16 Mechanical Inspection - Zero the micrometer, using the adjusting wrench if necessary. Record adjustment values. Check micrometer accuracy at 3 random measurements over entire range using master gage blocks. Record actual findings. Adjust if deviation exceeds out of tolerance by .0005 inches. Affix calibration sticker.

13.17 Calibration Procedure - Depth Mics

13.18 Visual Inspection - Examine mics for burrs, rust, freedom of movement and obvious damage and remove as required.

13.19 Mechanical Inspection - Place the base of the mic on the surface plate and zero adjust if required. Place the base of the mic on two equal height gage blocks. Measure down to master gage blocks at three random measurements. Record measurements. Repeat above step for all rods in the set, adding inch blocks as required. Adjust the mic if measurement deviation exceeds .0005. Affix calibration sticker.

13.20 Calibration Procedure - Caliper (Vernier and Dial)

13.21 Visual Inspection - Examine caliper for damage, such as: burred anvil, damaged threads, rust, illegible graduations due to wear or damage.

13.22 Mechanical Inspection - External measuring jaws - Measure master gage blocks at 3 random measurements over the entire range. Internal measuring jaws - Measure with master caliper at 3 random measurements over the entire range using master calipers. Record if OK or specific variances. Adjust calipers if deviation exceeds .001 inch. Affix calibration sticker.

### 13.23 Calibration Procedure - Dial Indicators

13.24 Visual Inspection - Clean indicator thoroughly. Inspect for obvious damage.

13.25 Mechanical Inspection - Mount indicator on a firm, solid, test base. Check indicator for perpendicularity to base with master block. Inspect for repeatability. Zero the indicator to a .100 inch master block. Slide the gage block in and out for the indicator point several times. The indicator should repeat zero within 1/2 of a division.

### 13.26 Inspection Stamps

13.27 Stamp Design and Use - Individually numbered stamps are assigned to each employee who is qualified, authorized, and/or certified to perform the specific functions pertaining to the use of such stamps. Stamp designs used by J.O. King, Inc. are: inspection/receiving paperwork stamps, inspection/shipping paperwork stamps, and numbered inspection stamps.

13.28 Issue, Control, and Use of Stamps - A record is maintained by the Q.C. Mgr. of all stamps issued to employees, indicating date issued, to whom, date returned and signature of employee. Upon an employee's termination, the stamp must be returned and not reissued for a period of 1 month. If a stamp is lost, any remaining stamps of the same number must be returned and a new number issued to the employee. The number of the lost stamp will not be reissued for a period of 1 year. An annual audit will be conducted of all stamps holders of record to verify condition of stamps and the presence of all stamps issued to each employee. When specifically requested on customer p.o., inspector will properly identify, by stamp, all material and parts which have been inspected and accepted. The stamp will be placed on the shipping/receiving documentation, tag, or label as applicable. Shipping/receiving records shall be stamped by inspection to signify acceptance.

## 14.0 Packing and Shipping

14.1 No order will be shipped to a customer until all shipping papers are stamped, initialed and dated by the final inspector as specifically requested on customer p.o.

14.2 No order will be shipped until all required certifications, test reports, special samples, etc., have been packed with the parts in accordance with the customer's p.o., and accepted by the final inspector, if necessary. If Certificate of Conformance is required by customer p.o., copy will be retained and original will be attached to shipping paperwork.

14.3 All parts will be packed to prevent damage, deterioration, and substitution.

14.4 The customer will be identified on the packaging, and as otherwise necessary to prevent lost or misdirected shipments.

14.5 The order will be packed as directed by the customer, if applicable, or will be packed using standard commercial packaging techniques.

### **15.0 Identification**

15.1 All parts will be identified by a basic part number and revision letter, if applicable.

15.2 Critical parts will also carry a lot number that will be so noted on packing lists and final inspection records when specifically requested on customer p.o.

### **16.0 General Conditions & Specifications**

16.1 All related records, i.e. receiving records, final inspections, certificates of conformance, DPF, etc., will be retained for a minimum of seven years when specifically requested on customer p.o. These records will be used for quality history.

16.2 All related records that are retained will form the basis for a quality history.

16.3 When required by p.o., customer shall be notified in writing of any upper level organizational or management changes that may affect quality or the quality system.

## 17.0 STAMP CONTROL CHART

STAMP #

PERSONNEL

INSP. BY #1

GREG JONES  
Date issued: 2/14/02

INSP. BY #5

RUSSELL SHELDON  
Date issued: 6/1/86

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## 18.0 OFFICIAL LIST OF J.O. KING, INC. QUALIFIED VENDORS

### Authorized Distribution:

3M CO.	ST. PAUL, MI
ALLIANCE PLASTICS	LOS ANGELES, CA
AMTACK	PROVIDENCE, RI
ATLAS ENGINEERING	DANBORO, PA
AUTOFAST	OLDSMAR, FL
AVDEL RIVET	PARSIPPANY, NJ
AVDEL USA, LLC	STANFIELD, NC
BENNETT TOOLS	GAINSVILLE, FL
BOLLHOFF RIVNUT INC.	KENDALLVILLE, IN
BOLLHOFF, INC.	PORTSMOUTH, NH
BURGESS MANUFACTURING	SUWANEE, GA
CAMCAR	CHICAGO, IL
CAPLUGS	BUFFALO, NY
CELLUS FASTENERS	PROVIDENCE, RI
COMPONENT INNOVATIONS	HUNTINGTON BEACH, CA
EBBERT ENGINEERING	TROY, MI
ETC	PINELLAS PARK, FL
ETIFLEX – MULTITEC S.A.	ARGENTINA
FABCO BUILDING FASTENERS	STANFIELD, NC
GESIPA	PHILADELPHIA, PA
HARTWELL CORPORATION	PLACENTIA, CA
HELI-COIL PRODUCTS	DANBURY, CT
HENROB CORP.	NOVI, MI
HUCK FASTENERS	WACO, TX & CARSON, CA
ITW NEXUS	WOOD DALE, IL
ITW WATERBURY	WATERBURY, CN
KATO FASTENERS	NEWPORT NEWS, VA
MARSON PRODUCTS	CHICAGO, IL
NUCOR FASTENERS	CHICAGO, IL
POP RIVETS	CHICAGO, IL
PSM INTERNATIONAL	NEWBERRY, SC
RECOIL	CHICAGO, IL
SFS INTEC	PHILADELPHIA, PA
SHEPHERD CASTERS	CHICAGO, IL
SHEREX	TONAWANDA, NY
SUPERIOR WASHER	BUFFALO, NY
TERRY HINGE	LOS ANGELES, CA
VELCRO	BOSTON, MA
VLIER	BRIGHTON, MA
WELLINGTON SYNTHETIC FIBERS	ATLANTA, GA



## 19.0 REVISION LIST

### **Rev. 1**

August 1990

1. General

### **Rev. 2**

July 1992

1. General

### **Rev. 3**

June 1996

1. Revised MIL-STD 105E to ANSI/ASQC Z1.4-1993.

### **Rev. 4**

April 1998

1. Revised numbering scheme of inspection stamps. Collected and scrapped previous version stamps. Issued new version stamps. (13.26 & 17.0)
2. Revised retention of Certificate of Conformance. (10.2)
3. Revised review and acceptance of customer purchase orders. (2.2.2)

### **Rev. 5**

January 1999

1. Revised Q.C. organizational chart.

### **Rev. 6**

August 1999

1. Removal of inactive personnel.
2. Rewrote manual to exclude manufacturing processes.
3. Added vendors

### **Rev. 7**

September 2001

1. Removal of inactive personnel.
2. Revised organizational chart.
3. Added vendors

### **Rev. 8**

August 2003

1. Removal of inactive personnel.
2. Added vendors

### **Rev. 9**

August 2004

1. Added vendors

### **Rev. 10**

August 2005

1. Added vendors

### **Rev. 11**

September 2006

1. Personnel changes

**Rev. 12**

November 2007

1. General review, vendor update

**Rev.13**

December 2008

1. General review, vendor update

**Rev.14**

December 2009

1. General review, vendor update, revised AQL percentage to allow for larger quantities.
2. 6.4 & 16.3 updated.

**Rev. 15**

December 2010

1. General review, vendor update

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20.0 FORM SAMPLES

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