



Quality Manual

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Introduction

This manual has been prepared to express the quality control policies of Bees Manufacturing, LLC (“Bees”), and to describe the systems employed to maintain compliance with certain industry standards.

In addition to the quality control systems employed, this manual also describes the company organization, inspection, and record keeping systems. It is intended to provide customers and employees of Bees with a description of company policy for maintaining effective quality assurance systems.

In keeping with the spirit of constant improvement, this manual shall be reviewed regularly (at least annually) by management. No changes in the manual or any quality assurance procedures are valid until approved by management and ownership.

Primary day to day responsibility for execution of quality procedures are the responsibility of the management and ownership.

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Rev. 5, October, 2010

Replaces Rev. 4 dated January, 2009

1. Control of Procured Supplies (Purchases)

1. Purchases are processed using a *purchase order form* and must include supplier name, quantity, material, part number, per unit cost, due date, and person responsible for order.
2. Purchase orders are identified by a five digit number beginning with the number “4”. All purchase order numbers are generated at the time and order is placed by the office in the *Job Boss* program.
3. Raw materials purchases are made through a bidding process coordinated by the office to a minimum of three sources whenever possible.
4. Office supplies, commercial parts, and plating purchases are made after verification by office of pricing to a minimum of two sources.

2. Evaluation of Suppliers:

1. Suppliers are required to bid per unit pricing, minimum lot pricing and delivery time lines.
2. On-time delivery, pricing, and quality are tracked by the office and a quarterly rating and evaluation is completed by management of major suppliers including raw materials, commercial parts, and sub contractors.

3. Incoming Inspection

A. Raw Materials (Accepted)

1. The office is responsible for providing the receiving dock with a current list of Open Purchase Orders.
2. Receiver is responsible to:

- Match packing slip to Open Purchase Order summary.
- Match and verify item count to packing slip
- Verify material specifications to packing slip
- Verify material size and specifications using appropriate measuring equipment.
- Date and sign packing slip which goes to office in-box.
- Mark material meeting proper specifications with a green sticker. Sticker is to be initialed and dated by receiver which signals that materials are approved for use.

B. Materials not meeting specifications

1. Non Conforming materials are to be noted by the Receiver with a red sticker with material placed in *red pallet area*. Sticker should be initialed and dated by receiver.
 - Receiver is responsible for promptly filling out and providing a *Non-Conforming Materials Report* to the office. Report should be attached to packing slip.
2. The office is responsible to determine action to be taken on all non-conforming raw materials and parts including replacement, scheduling, accounting, etc.
3. All non-conforming materials and parts are held in red pallet area until ready for pick-up or shipment back to supplier.

C. Use-By Dates

1. All shop materials having a use-by date will be verified prior to use in any shop application and will be tracked in the *Use-By Log*.

D. Quality Assurance of Sub-Contractors:

1. Packing slip must be signed and dated by receiver and placed in incoming material box in the office.

2. Sub contracted parts are inspected by assigned machinist to part dimensions using proper print revision and proper inspection equipment and gauges.
3. Random lot sampling of sub-contracted parts, heat treating, and plating is done for all dimensions for 5% of lot, with a three piece minimum (5% for quantities up to 499 pieces, 3% for quantities greater than or equal to 500).
4. Lots passing sampling inspection are received and placed in inventory or shipped to the customer.

E. Rejection of Non-Conforming Sub-Contracted Part:

1. Lots not passing sampling inspection are marked with a red sticker (which is dated and initialed) and placed in the red pallet area to be returned to vendor or reworked in house.
2. Inspecting machinist is responsible to complete a *rejection form* for out-of-tolerance conditions stating print dimension and actual measured dimension.
3. Inspecting machinist is responsible to complete a rejection form for all visible damage to parts i.e., part not properly deburred, dents, scratches, chip marks, or incomplete plating.
4. The office is responsible to notify sub-contractor of rejection.
5. The office is responsible to determine whether non-conforming parts will be returned or reworked or if some are to be accepted.
6. The office is responsible to arrange shipment of rejected parts.

4. In Process Inspection

1. Machinist is responsible to verify raw material size and specifications.

2. Machinist is responsible to check set-up sheet notes, current revision level and critical dimensions from print.
3. Machinist is responsible for 100% inspection of first part.
4. Machinist is responsible for having shift supervisor inspect the first piece from each operation before the remaining pieces are run.
5. Machinist is responsible to inspect 5% of lot size (minimum of 3 pieces) to critical dimensions as specified on print for each operation

5. Final Machining Inspection

1. Conducted by the machinist assigned at completion of all in house machining using calibrated gauges.
2. Sampling to include complete inspection of 5% (minimum of 3 pieces).

6. Shipping Procedures

A. Domestic Shipments by Commercial Carrier (ex: UPS, USPS, etc.)

1. Shipper is responsible to:
 - Review manifest for accuracy and communicate discrepancies to office.
 - Identify and gather parts and proper quantities.
 - Write part number and quantities on outside of each group of bagged parts.
 - Use paper to wrap parts for snug fit in box and to avoid rattling & chafing.
 - Label wrapped parts if more than one part number is being shipped together.

- Label the number of boxes in shipment on the exterior side of each box in shipment (ex: 1 of 3, 2 of 3 etc.).
- Fold packing list and insert it into stick-on window with “Ship To” showing.
- Print labels and apply them to the top of each box.
- Arrange for shipment pick up, provide # of boxes, weight, pick up time, and closing time to shipping vendor.

2. Office is responsible to:

- Complete a packing slip for each part being shipped. Packing slip will indicate part number and quantity of parts.

B. Shipping via Bees Manufacturing

1. Shipper is responsible to complete all items above, except that shipper will label package with Bees Label.
2. Shipper is responsible to write part numbers and quantities on Bees Label or exterior of box.

C. Customer Shipping Instructions

1. Customers may request special packing and shipping instructions be followed by Bees Manufacturing.
2. The office is responsible to give the shipper written instructions to meet a customer’s special shipping request.

D. Overseas Shipping (Customs Requirements)

1. The shipper is responsible for items listed under domestic shipments above. (6A1.)
2. The office is responsible for items listed under domestic shipments above. (6A2.)
3. The office is responsible to complete U. S. customs paperwork and include this paperwork in the boxes for shipment.

7. Non-Conforming Parts

A. Documentation

The office is responsible to:

- Request a written non-conforming material report from the customer.
- Issue an RMA number to the customer. RMA numbers are issued using the date, followed by R__ __ (issuer's initials) – 1, 2, 3, extra.
- Arrange for return of the non-conforming part(s) to Bees Manufacturing by commercial carrier or staff pick-up.

B. Corrective Action:

The VP of Manufacturing is responsible to:

- Assign a machinist to re-inspect part(s) and verify reason for part(s) rejection and determine corrective action.
- Assign and prioritize rework or replacement of non-conforming part(s) will be complete in a timely manner.
- Amend written instructions (job ticket) for machinists, if indicated, to ensure future part(s) fabrication will meet customer specifications.

8. Measuring Devices & Test Equipment

A. Measurement equipment will be certified regularly with measurement standards directly traceable to the National Bureau of Standards. A master log will be maintained and will contain the following information:

- | | |
|--------------------------------|----------------------------|
| (1) Identification number | (5) Tool location |
| (2) Description | (6) Calibration cycle |
| (3) Manufacturer | (7) Active/Inactive Status |
| (4) Model and/or serial number | (8) Calibration History |

Once a piece of equipment has been calibrated and entered into the system, a calibration sticker or other identifier will be placed in an area it will not hinder. This sticker will contain Calibrated Date, Next

Cycle Due Date and by whom calibrated. All tools calibrated will have data recorded and on file.

- B. An Inactive File will be kept for all items in an inactive status. Items which are on Inactive Status by means of damage, or just temporarily out of calibration, will be noted to be used “FOR REFERENCE ONLY”.
- C. Equipment that is due for calibration and cannot be found shall be noted in the calibration record file that the item is missing and the date in which it was discovered missing.

An Out of Tolerance Condition exists only when the equipment is found to exceed manufacturers required tolerance or one resolution/graduation of its unit of measure. When an out of tolerance condition is found, that item shall be immediately taken out of active status. The item shall then be assessed for Repair or Replacement and Calibrated. When said item returns to an active status it shall be monitored as a problem item. The monitoring period shall be the length of one normal calibration cycle. During this time the item will be checked for an Out of Tolerance condition prior to each use with the best available on-site equipment.