Schwartz Precision Manufacturing (SPM) was launched in 1994, producing precision fabricated parts and assemblies for the commercial, industrial, transportation, and aerospace markets. The company's success results from adopting innovative technology, anticipating market trends, and maintaining a reputation for excellence.

Schwartz Precision Manufacturing has established that quality is the most important element in the production of precision parts and assemblies. Each employee is responsible for delivering quality products that meet or exceed the requirements of our customers in a reliable, consistent and cost-effective manner. Our Company will provide the means to achieve our goals through teamwork, communication, training, and continual improvement.

We believe that a relationship with our suppliers is a vital function to the success in the world market place. This relationship to success is dependent upon the following:

- Partnering with suppliers where it makes senses for both partners. The partnership can be in the form strategic alliances or other forms of business partnering. This allows for shared knowledge, training and resources,
- Continuous improvement of product, processes, services and customer satisfaction,
- Quality excellence, and
- Communication.

This manual represents SPM's efforts to improve its relationship and communication with its suppliers in order to ultimately meet the needs of our customers.

LEVEL	DESCRIPTION	DATE	APPROVED
1	New document See CR 04-061	2/25/04	S. Altman
2	See CR 04-093	3/23/04	S. Altman
3	See CR 08-151	6/11/2008	T. Brewer & L. Brown
4	See CR 08-183	8/29/2008	T. Brewer & L. Brown
5	See CR 09-202	10/5/2009	T. Brewer & L. Brown
6	See CR 11- 274	10/31/2011	T. Brewer & L. Brown
7	See CR 13-321	9/23/2013	T. Brewer & L. Brown
8	See CR 17-376 and change bar |	10/16/2017	Signatures on file

1.0 SCOPE

Schwartz Precision Manufacturing (SPM) specifies the scope of this Supplier Quality Assurance Manual to be as follows:

Suppliers Providing

- Raw Materials,
- Hardware,
- Outside Processing,
- Services, and
- Finished Product.

Note: Office and Business suppliers are not included.
Note: Where ever the term Product is used it can also mean Service
Note: ***Bold Italic text is used to identify additional requirements for all Aerospace related products.***

2.0 PURPOSE

The purpose of this manual is to provide methods of control over suppliers and outsourced processes. Such controls are defined in but not limited to the following:

- Criteria of Supplier selection and approval criteria, reference section 3.0
- Supplier responsibilities and requirements, reference section 4.0
- Supplier Evaluations, reference section 5.0
- Management of Suppliers, section 6.0
- Verification of purchased product, section 6.1
- Control of Nonconforming Product 6.2
- SPM's Responsibilities, section 7.0
- Work Transfers, section 8.0

3.0 SUPPLIER SELECTION AND APPROVAL

Suppliers New or ASL approved are selected based on the following:

- Customer requirements,
- Locale,
- Price,
- Lead Time,
- Capabilities,
- Capacity, and
- Past Experience / performance, with input from all departments.

***** An Approved Supplier List is found on the G-Drive/Quality/Supplier Quality Assurance/Supplier Lists (Excel)

3.1 ASL Suppliers

Account Management and/or Purchasing select suppliers from the Approved Supplier List when the supplier affects the quality of the product or process.

3.2 New Suppliers

Purchasing and/or Account Management will notify the Quality Manager with the intent to add a supplier to the ASL.

3.2.1 Process for Approval

Suppliers are requested to provide one or more of the following:

- Certificate of Quality System Registration,
- Copy of Quality Manual or company quality related material (if system is not registered),
- Product Samples and/or specifications,
- Description of processes,
- Industry references, and
- Published experiences of other users (If applicable).

Note: If the supplier is intended to be used for a NADCAP approved process a copy of their Certificate and Scope of Accreditation is required.

The Quality Manager initiates a Supplier Information Kit consisting of a Supplier Information Request (form SQAM 8.3) and Supplier Self Assessment Evaluation (form SQAM 8.1). This evaluation is performed by the supplier and submitted to SPM. The evaluation is reviewed by the Quality Manager and Purchasing. An on-site evaluation may be necessary before final determination is made for approval. The Quality Manager has final authority to approve or disapprove a supplier. Quality forms SQAM 8.1 and SQAM 8.3 are found in the G-drive/Quality/Quality Blank Forms.

Note these forms are not required for MRO suppliers, suppliers with 3rd party registrations to ISO and/or AS verified through Oasis database, or NADCAP registrations verified through eAuditNet database.

4.0 SUPPLIER REQUIREMENTS

SPM shall be responsible for the Quality of all products purchased from suppliers, including our customer-approved suppliers and customer approved process list. The scope of these products and/or services may include but are not limited to the following:

- Inorganic coatings (chemical),
- Organic coatings (prime/topcoat),
- Non-destructive testing,
- Heat treat,
- Special testing/inspection requirements and
- Specialty Machined Parts.

SPM requires its suppliers to meet all design specifications including special Purchase Order requirements such as customer requirements, statutory and regulatory requirements that will include as applicable:

- Requirements for qualification of personnel,
- Quality Management System Requirements,
- Requirements of approval of product, procedures, processes and equipment,
- ***notifying SPM of non-conforming product and obtain SPM's approval for nonconforming product disposition,***
- ***notifying SPM of changes in product and or process, changes of suppliers, changes of manufacturing facility location and where required, obtain SPM's approval,***
- ***right of access by SPM, our customers, and regulatory authorities to the applicable areas of all facilities at any level of the supply chain involved in the order and to all applicable records,***
- ***flow down to the supply chain the applicable requirements including customer requirements,***
- ***use of SPM's customer approved special process sources when required,***
- ***requirements for test specimens (e.g., production method, number, storage conditions) for design approval, inspection/verification, investigation or auditing,***
- ***records retention requirements,***
- ***SPM's requirements for design, test, inspection, verification, (including production process verification), use of statistical techniques for product acceptance, and related instructions for acceptance by SPM and as applicable critical items including key characteristics and***
- ***identification and revision status of specifications, drawings, process requirements, inspection/verification instructions and other relevant technical data.***

Aerospace suppliers are required by SPM to maintain their records for ten years. The 10 year retention time was chosen because some Aerospace suppliers require 10 year and other's a 7 year retention time. If a supplier will not retain records for 10 years but will for 7 years they can still be on the Approved Supplier List but they cannot be used for Customers requiring a 10 years retention time. If the supplier does not retain records for 10 years, the Supplier List in the G-Drive/Quality/Supplier Quality Assurance must identify their retention time in red font next to the supplier's name. A note not to use a supplier for a specific customer due to inadequate retention times is also recorded in MIETrak in the comment section next to the supplier's name on the Vendor list. If no retention time is listed by the suppliers name on the Aerospace Approved Suppliers List they retain their records for 10 years. Examples of retained records are COC's, work orders, purchase orders and any other records created by the supplier. All drawings furnished by SPM are to be shredded at the completion of each Commercial or Aerospace purchase

order agreement. This requirement was updated on Appendix 8.1 Supplier Self-Assessment Questionnaire 5/20/2011 which is sent to all suppliers that are being considered for the approved supplier list.

All purchase orders whether Commercial or Aerospace have the following statement:
"All vendors are required to destroy furnished drawings upon completion of purchase order."

5.0 SUPPLIER EVALUATIONS

New Suppliers status is "Assessment" for six months from the date of the first purchase. During that time, all approval criteria is evaluated. SPM will monitor supplier performance using both quantitative and subjective measuring tools in a Supplier Performance Evaluation/Verification Record. If the new supplier has had no Notification of Rejections, Supplier Corrective Actions or Supplier charge backs the supplier will be placed in the "Approved" status and evaluated annually.

The Supplier's overall Annual Quality Rating is formulated using 70% Quality Rating and 30% delivery rating.

Supplier evaluations are located electronically in the G-Drive/Quality/Supplier Quality Assurance/Yearly Supplier Evaluation Reports and a Master List of Suppliers (Access database) is located in same location.

Any Supplier who does not achieve an Annual Approved rating of 90 or higher will be notified of their performance level. A supplier that does not receive an Annual Approval rating of 80 or above will be asked to submit Supplier Corrective Action for Improvement within 30 days and will be on probation until there is an acceptable rating level. A supplier can be removed from the ASL for not returning the completed Supplier Corrective Action upon request. A Supplier Corrective Action Request or Notification will only be issued to Suppliers with at least six orders to calculate a fair average. A supplier scoring an Annual Approved rating less than 70 will be removed from the ASL.

SPM will review supplier quality throughout the year. Supplier Corrective Action trends can also result in removal of a supplier from the ASL. Any removal is documented and retained for a period of 2 years.

6.0 MANAGEMENT OF SUPPLIERS

The Quality Manager is responsible for maintaining and updating the Supplier's third party Quality registrations and any NADCAP approved process certifications along with their Scope of Accreditations but may acquire assistance from Quality support personnel.

These records are located electronically in the G-Drive/Quality/Supplier Quality Assurance/ Supplier Registration and Scope of Accreditations and a hard copy is kept on file in the Quality Manager's office. This is SPM's control of verifying the supplier's registrations and accreditations are current not expired.

6.1 Control of Out-Sourced Processes/Product

Processes/Product such as:

- Inorganic coatings (chemical),
- Organic coatings (prime/topcoat),
- Non-destructive testing,
- Heat treat,
- and special testing/inspection requirements,
- specialty machined parts

SPM verifies the purchased product.
Verification activities can include the following:

- ***Accompanying documentation such as***
  -certificate of conformity of the product from the supplier,
  Data results from outside processing test reports/COC's are verified by Quality. The Quality Technician will place a check mark next to the test result and stamp his/her stamp number on the last page of the COC.
  -statistical records,
  -process control records and test records

- ***inspection and audit at the supplier's premises,***
- ***review of required documentation,***
- ***inspection of product upon receipt and***
- ***delegation of verification to the supplier or supplier certification.***

Paint processors will provide Salt spray test performed by a third party when specified by the Customer. Records of salt spray test are found in the Quality Managers files.

Parts returning from an outside processor/suppliers are inspected for conformity to customer purchase order requirements. Controls are as applicable:

- COC's are checked for:
  - Correct process specifications performed by Supplier
  - Correct revision levels for process specifications performed by supplier
  - Authorized Signature and Date
  - Data results from outside processing test reports/COC's are verified by Quality. The Quality Technician will place a check mark next to the test result and stamp his/her Quality stamp number on the last page of the COC.

Note: Check to see if the parts returning from outside processing do have the COC's with them when a COC is required. Purchasing, the Account Manager or the Quality Manager can notify the Supplier to obtain missing COC's.

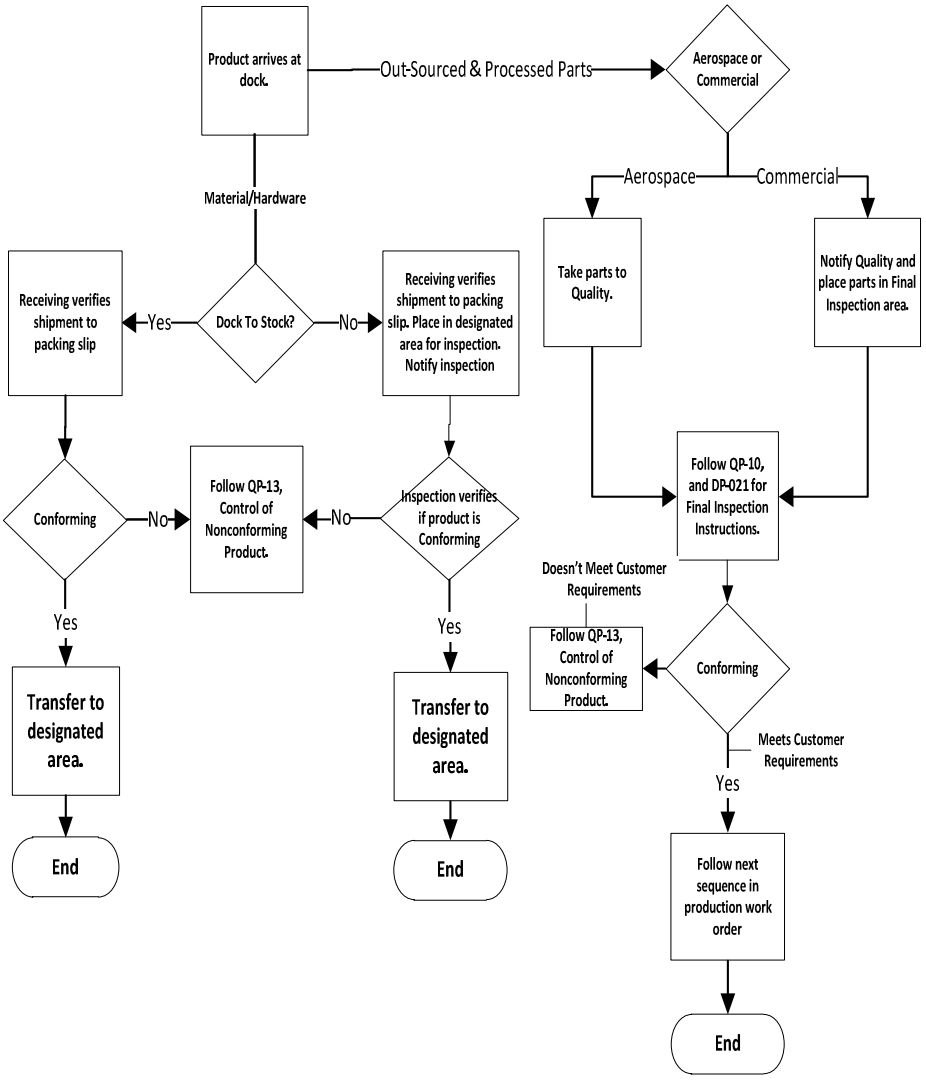
- Visual and Physical Inspection as applicable:

- Parts are free of damage,
- Parts are processed with the correct color/ paint mil thickness / process,
- Part numbers listed on the Suppliers packaging are verified by dimensionally checking the parts to the drawing, MLO or Mylar. This will eliminate the chance of misidentified or nonconforming parts being delivered to the Customer due to a supplier identification error.
- Dimensionally checking the parts after heat treating will also verify straightening process conforms to the correct dimensions.
- Masking dimensions are per Customer requirements. (Masking templates are returned.)
- Threaded parts are verified with thread gauges when required by the customer.
- Correct quantity is returned.

Suppliers with nonconforming trends may require an audit by the Quality Manager as well as other members of the SPM‘s Management Team. The Quality Manager will notify Upper Management and determine when this is necessary.

Dock to Stock:
Material and hardware suppliers with an annual quality rating of 90 or above may have receiving inspection by-passed and product will go from “dock to stock”; DP-010 Receiving and QP-10 Inspection and Testing for clarification.

Receiving Process Flow Chart



6.2 Control of Non-Conforming Product Process

Product disposition:

- Return to Customer - This disposition only applies to customer furnished material,
- Scrap - This disposition applies to all nonconforming product. It requires that the product clearly identified as nonconforming until it can be rendered physically unusable,
- Use-As-Is - This disposition applies to all nonconforming product, however, it requires customer approval prior to acceptance of the disposition regardless of the origin of the material,
- Return to Supplier - This disposition applies to SPM furnished product.
- Rework - This disposition applies to all nonconforming product that can be rework without deviating from customer requirements and
- Repair - This disposition applies to all nonconforming product that deviates from customer requirements, however, it requires customer approval prior to acceptance of the disposition regardless of the origin of the material.

If a nonconforming part is found during receiving inspection it is written up on a Disposition Request by Quality. If it is determined that the supplier is responsible for the nonconformity the Quality Manager is responsible for sending the Supplier a Notice of Rejection; the Quality Manager may appoint a member of Quality to assist. Nonconforming parts are dispositioned by MRB, (some may require prior customer approval) per QP-13 Control of Nonconforming Product.

Suppliers with nonconforming trends may require an audit by the Quality Manager as well as other members of the SPM‘s Management Team. The Quality Manager will notify Upper Management and determine when this is necessary.

If disposition is scrap or rework by SPM, all additional costs to SPM will initiate a Supplier Charge Back Information Form (SCIF). See section Supplier Charge Back in this manual for details.

6.2.1 NORS

Notice of Rejection form includes:

- NOR Number
- Date
- Supplier Information
- Product Identification
- Purchase Order Number
- Disposition
- Problem Description

The Quality Manager or a member of Quality designated by the Quality Manager will fill out and issue the NOR(s) to the supplier’s Quality Manager.

6.2.2 Supplier Corrective Action Request / Escalation Clause

The Quality Manager will issue a SCAR due to one or more of the following:

- Supplier Evaluation Approval Rating < 80
- When the total number of rejected parts for like occurrences exceeds .5% of total parts processed/received from the supplier year to date
- The Quality Manager reserves the right to issue a supplier corrective action for a general trend of poor Quality or severity of the nonconformance.

This form Includes:

- SCAR Number
- Date
- Supplier Information
- Product Identification
- Number of NOR's Issued
- Problem Description
- Root Cause
- Immediate Action
- Long Term Action
- Effective Date

6.2.3 Completion of the SCAR

The following are directions for completing the Supplier Corrective Action Request. All sections, except for 'Description of Problem' must be filled out and returned to the Quality Manager at SPM.

Root Cause

- Determine the true root cause: that is, elimination or control of this cause will solve the issue by using a problem solving approach and tools.
- State the root cause.

Immediate Action

- This action must address the short-term resolution and effective dates to ensure that new or similar product will not be affected.

Long Term Action

- This action specifically addresses the root cause defined above. The permanent action plan must outline what was done, by whom and when.

Effective Date

• Date that the action is implemented and controlled.

6.3 Supplier Charge Back Information

Suppliers shall be responsible for full compliance to order requirements including:

- Delivery Schedules
- Correctness of Quantities
- Material Specifications and Revisions
- Fitness for use
- Correct Documentation
- Invoicing
- Contractual Agreements
- Regulatory and Statutory Requirements

Materials Review Board (MRB) determines whether a non-conformance is the supplier's responsibility and if it will result in additional cost to SPM. The Quality Manager will initiate SCIF. Any decision to repair, rework or scrap at the expense of the supplier shall require prior notification and approval. Based on the severity of the nonconformance appropriate charge backs in the form of a debit to the supplier may occur for the following cost:

6.4.1 Charges

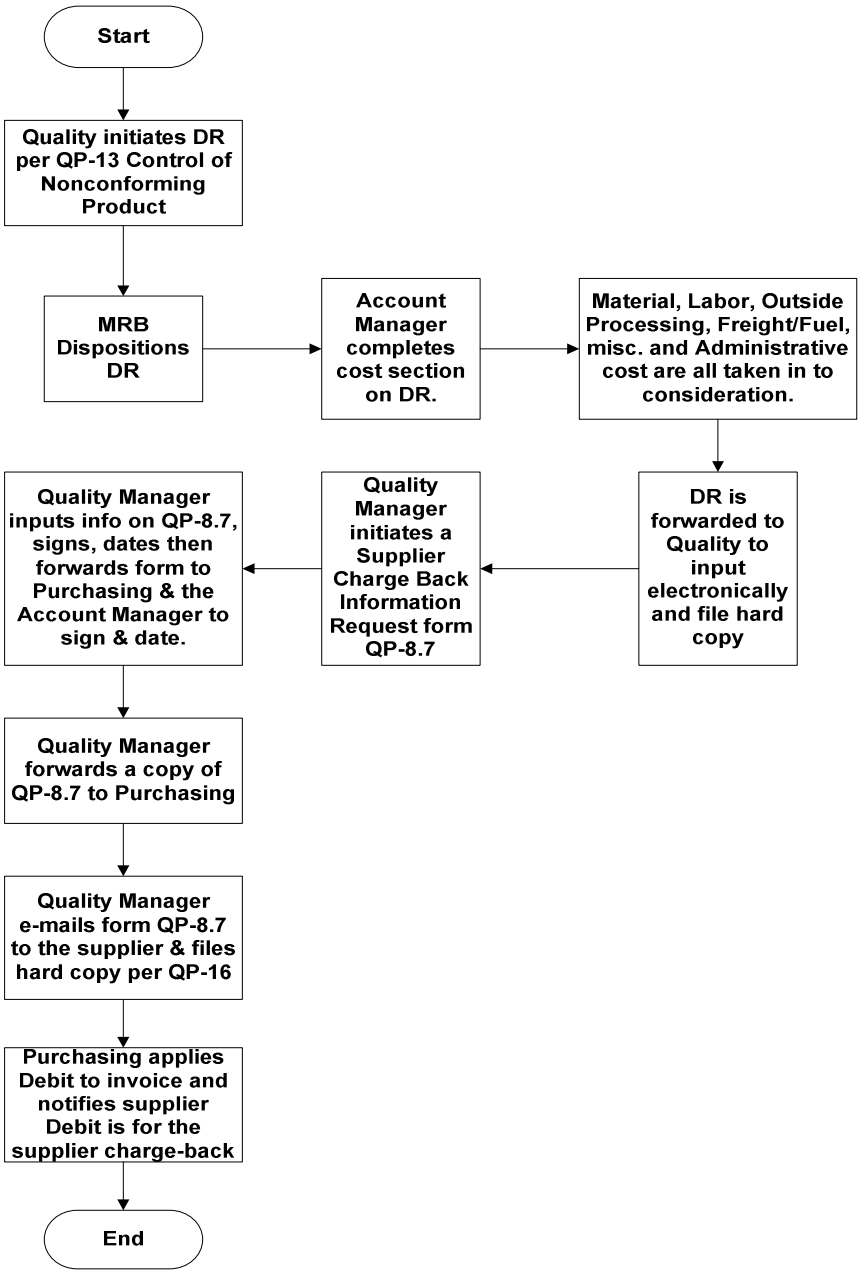
Rework includes:

- Manufacturing Time
- Inspection
- Repackaging
- Additional outside processing costs
- Freight
- Administrative Services
- NCM charges/fines to Schwartz Precision by our customer for supplier caused defects

Scrap includes:

- Material Cost
- Manufacturing Time
- Inspection
- Repackaging
- Additional outside processing cost
- Freight
- Administrative Services
- NCM charges/fines to Schwartz Precision by our customer for supplier caused defects

Supplier Charge-Back Process Flow Chart



7.0 SPM's RESPONSIBILITIES TO SUPPLIERS

Provide accurate and complete purchasing information and instructions.
Examples, as applicable:

- Part Number
- Purchase Order Number
- Process Specification and Revision level
- COC Required if Applicable
- Date Required
- Drawings and Revision Level
- Quantity
- Masking Template or Drawing
- Price
- Acknowledgement of PO Terms & Condition Clause (Includes vendor is responsible for notifying SPM of any changes or inability to meet SPM Terms and Conditions.)
- SPM Contact Information
- Special Shipping/Packaging Requirement
- Special Requirements, Critical Items and Key Characteristics when required

Pay accounts on time
Response in a timely fashion
Communicate changes (Requirement Change Notice RCN)
Provide contact information
Perform periodic evaluations, notify and review with suppliers that have a rating less than 90 or show a trend of poor quality
Work closely with the supplier to resolve any issues

8.0 Work Transfers

SPM shall establish, implement, and maintain a process plan and control temporary or permanent work transfers. Work transfers can be between SPM & Logistics or transferring work from our facilities to an outside supplier.

Additional steps taken when work is temporary or permanently transferred outside of SPM will include the following as applicable:

- The Account Managers will initiate the temporary or permanent work transfers.
- The Vice President authorizes temporary and permanent work transfers.
- The Account Manager hand writes and initials the temporary change in the production work order or prints out a new work order with the corrected information. Permanent changes require the router to be update for future work orders.
- The Account Manager chooses a supplier from the Approved Supplier List.

- The Account Manager creates a Purchase Order listing part number, revision number, work performed, drawings & specifications with revision levels and/or tools required, special requirements, any statutory or regulatory requirements, quantity needed and date required as applicable.
- All products received in from Outside Processors/Suppliers are inspected to ensure conformity to customer purchase order requirements per DP-10 Receiving, QP-21 Final Inspection Instructions and QP-10 Inspection and Testing.

  Note: If the Supplier purchases material or hardware a COC must be presented with the completed product.
  If required by the Customer or SPM, the Supplier must use approved supplier sources.