



Supplier Quality Manual and Zero Defect Program

Table of Contents

	Page
Patterson Mold and Tool Business Philosophy	2
Section 1 – Patterson Tool and Mold Quality Objectives	3
Section 2 – Scope	4
Section 3 - Supplier Code of Conduct	6
Section 4 - Supplier Access / Responsibilities	8
Section 5 - Commercial Expectations	9
Section 6 - Tooling and Gauging Policy	11
Section 7 - Supplier Quality Requirements	13
Section 8 - Change Management	22
Section 9 - Materials / Delivery Expectations	23
Section 10 - Supplier Performance	25
Section 11 - Record Retention	28

Patterson Mold and Tool Business Philosophy

Mission Statement

At Patterson Mold and Tool, LLC, our mission is to partner with our customers to achieve their goals efficiently and effectively by being a trusted and innovative provider of high-quality die cast tooling, precision machined components, and engineering solutions.

Vision Statement

Patterson Tool and Mold, LLC, will strive to provide superior Customer Satisfaction with integrity and by exceeding their expectations through our commitment to Quality and Continuous Improvement and the growth of our organization and employees. Also, to be environmentally responsible and safe.

Values

1. **Integrity** – Doing the right thing. Living by a high moral and ethical code.
2. **Accountability** – Acknowledging and accepting responsibility for actions, products, and decisions.
3. **Excellence** – Strive for excellence in everything we do, constantly seeking to improve.
4. **Respect** – Treating all employees, customers, and all Interested Parties well.
5. **Safety** - Ensuring the health and safety of employees and providing an accident-free environment.
6. **Sustainability** – Strive to reduce our environmental impact and give back to the communities where we work and live.

Section 1 - Patterson Mold and Tool Quality Objectives

QUALITY POLICY		
Commit to continuous improvement of management and manufacturing processes, to increase customer satisfaction, sales, and profit growth.		
Patterson Quality System Improvement Objective, Continuously review and improve business processes resulting in:		
<ul style="list-style-type: none"> • Increased customer satisfaction, • Increased product and process quality, • A safer workplace, • Lower costs 		
		

In addition, Patterson Mold and Tool has adopted Phillip Crosby's Four Absolutes of Quality as the philosophy required to achieve our goal for quality as expressed in our Quality Policy.

Patterson Mold and Tool Quality Philosophy

*The 4 Absolutes of Quality**

Absolute 1: Quality is defined as conformance to requirements, *not* “goodness”

Absolute 2: The system for causing quality is prevention, *not* appraisal

Absolute 3: The performance standard must be zero defects, *not* “that’s close enough”

Absolute 4: The measurement of quality is the Cost of Quality, *not* indexes

* Quality Improvement through Defect Prevention, The Individual's Role. Phillip Crosby Associates. Pub 1985.

Suppliers are encouraged to read and adopt the principles presented by Phillip Crosby in his book *Quality Improvement through Defect Prevention*.

Patterson Mold and Tool seeks to partner with suppliers who are aligned with the principles stated in our Business Philosophy, who have similar Quality Objectives and who can provide best-in-class quality for both products and services.

Section 2 - Scope

The purpose of this Supplier Quality Manual is to detail Patterson Mold and Tool's Commercial, Quality, Delivery, Technology and Business expectations of suppliers.

The requirements stated in this Supplier Quality Manual apply to all purchased products and services that directly impact our customer's products. These requirements may be applied to other products, materials, and services (such as consumable tools and supplies, capital equipment, and non-production services). If so, the applicability to consumable tools and supplies will be indicated on related purchase orders.

The goal of this Supplier Quality Manual is to:

- Communicate to suppliers Patterson Mold and Tool's (PMT) expectations, goals and minimum requirements to assure quality products and services are supplied.
- Encourage open communication of ideas, information and notification of problems between suppliers, PMT, and PMT's customers, in a spirit of teamwork and cooperation.
- Define the quality assurance procedures and documents which suppliers must follow to assure application of an effective quality system based on ISO 9001-2015 standard.

Patterson Mold and Tool's Expectations of Suppliers

Patterson Mold and Tool operates in an environment focused on continuous improvement and a zero-defect philosophy. Suppliers are expected to:

- Have a documented Quality system that conforms to PMT and PMT's customer requirements.
- Be compliant with ISO 9001-2015.*
- Protect the environment.
- Have operating philosophies compatible with PMT's business philosophy.
- Champion a continuous improvement program that actively engages their company and associates to improve processes, quality, cost, delivery, working environment and safety.
- Ensure safe and environmentally sound working conditions in their facilities.
- React to PMT's changing needs with the highest level of professionalism, support, and commitment.
- Provide defect-free components eliminating the need for receiving inspection by PMT.
- Provide 100% conforming products and services.
- Meet 100% on time delivery goal.

Responsibilities

All production material suppliers and service part suppliers must maintain a comprehensive quality system to ensure compliance with this Supplier Quality Manual, and with the requirements of any purchase order, supply agreement and associated documents. This Supplier Quality Manual provides Patterson Mold and Tool's minimum expectations as well as the process which Patterson follows to assess the capability and performance of each supplier.

***ISO 9001-2015 certification is required of suppliers providing material and components incorporated into finished product by Patterson Mold and Tool, unless waived by the applicable Patterson Mold and Tool customer.**

Section 3 - Supplier Code of Conduct

The following Supplier Code of Conduct summarizes the standards of business conduct which Patterson Mold and Tool expects from its suppliers in a business relationship. Compliance with these standards is mandatory.

Respect for Each Other

Patterson operates in a climate of respect, courtesy and impartiality. PMT expects open, honest and timely communication. PMT's suppliers should encourage a positive and diverse workplace by not tolerating harassment or discrimination based on race, religion, gender, age, or disability.

Power of Collaboration

Successful business relationships are the result of collaboration for mutual benefit. PMT views every supplier relationship as a shared opportunity to extend the enterprise and grow the businesses of both the supplier and PMT.

Passion for Excellence

PMT expects its suppliers to relentlessly improve their own performance and to bring urgency to every business challenge and opportunity.

Personal Integrity

PMT demands uncompromising ethical standards in all we do and say and expects its suppliers to demand the same. PMT prohibits the acceptance of gifts, to include products, services, or anything of such value, with the intent to influence, or that the good judgment of the recipient might be influenced, or that a third party might reasonably perceive as influencing that judgment. Payments of money, property, or services for obtaining business or special consideration is prohibited. If a PMT associate solicits a gift or entertainment opportunity from a supplier for their personal use, such a request is to be declined.

Responsibility to Our Communities

PMT is committed to good corporate citizenship and expects its suppliers to abide by all applicable employment, environmental, health and safety laws and regulations.

Sustainability

PMT is committed to environmental responsibility that leads to sustainability – a practice or process that meets today's needs without compromising the ability of future generations to meet their own needs. PMT believes that this focus will benefit society, future generations, and each of its associates, as well as contribute to a competitive advantage in the global marketplace. PMT expects its suppliers to share these beliefs.

Working Environment

PMT expects all suppliers to comply with applicable laws associated with working conditions, child labor, forced labor, association, compensation, working hours, and equal employment.

Health and Safety

Suppliers are expected to promote safe and healthy work environments for their associates.

Improper Payments

Suppliers must comply with all anti-bribery and anti-corruption laws and regulations applicable to their business, at all governmental levels worldwide.

Adherence

PMT expects cooperation in ensuring adherence to this Supplier Code of Conduct. **If anyone in your company believes that a Patterson Mold and Tool Associate or an associate of a Patterson Mold and Tool supplier has violated the Supplier Code of Conduct, please contact Patterson Mold and Tool Purchasing Department – (636) 940-9988.**

No listing of ethical guidelines can be considered complete. It is incumbent upon those affected by this policy to avoid the misconception that if it is legal, it must be ethical. Appropriate conduct must reflect good judgment, fairness, and high standards.

Section 4 – Supplier Access / Responsibilities

Patterson Mold and Tool Responsibility

- Provide suppliers access to the latest released version of the Patterson Mold and Tool Supplier Quality Manual
- Update the Supplier Quality Manual as required.
- Provide feedback to suppliers in the form of a scorecard, at least annually.

Supplier Responsibility

Ensure adherence to the current released version of the Patterson Mold and Tool Supplier Quality Manual. The most current version of the Patterson Mold and Tool Supplier Quality Manual can be found on the Patterson Mold and Tool website: <https://www.pattersonmold.com/>.

Ensure that Patterson Mold and Tool has the correct supplier contact information, providing immediate notification of any changes.

Revisions

Suppliers will be notified of updates to the Supplier Quality Manual.

Section 5 - Commercial Expectations

Supplier Agreement

Unless otherwise directed, suppliers who perform under a purchase order from Patterson Mold and Tool for products and services, agree to abide by the requirements set forth in this Supplier Quality Manual.

Supplier Selection Criteria

The following criteria guides the award of new business:

- Supplier's demonstrated performance, if a current supplier.
- Supplier Risk Assessment which includes:
 - Supplier's total cost competitiveness and commitment to continuous improvement.
 - Supplier's technical capabilities, ability to provide engineering support for PMT programs, and defined program management of new product launches.
 - Supplier's acknowledgment and acceptance of Patterson Mold and Tool's purchase order ("PO") terms and conditions.
 - Other –PMT customer-directed requirements, regional availability, etc.

Purchase Orders

Refer to the specific Patterson Mold and Tool PO terms and conditions, available on the Patterson Mold and Tool website: <https://www.pattersonmold.com/>

Purchasing Authorizations

Only the Patterson Mold and Tool Purchasing Department is authorized to initiate a purchasing commitment with a supplier. This commitment must be in the form of an authorized PO. This applies to all direct, indirect, service and prototype purchases as well as tooling, equipment, design development, etc.

Continuous Improvement

Continuous Improvement to achieve cost reduction is an essential element of long-term business success for Patterson Mold and Tool and its suppliers. To remain competitive, PMT and its suppliers must recognize the requirement to find effective ways to eliminate waste and reduce the cost of their products and services.

Suppliers are expected to constantly examine and optimize the entire cost structure of their business and the products and services supplied to PMT. This includes process improvements, cycle-time reduction, scrap reduction, die/tooling set-up reduction, design improvements, and reductions in sales, general and administration (“SG&A”) expenses, fixed and variable overhead expenses reduction, transportation expenses, etc. To ensure proper review and validation of suppliers’ design and process improvement ideas, suppliers must strictly comply with Patterson Mold and Tool’s change management requirements for all design and process change proposals by submitting an Engineering Change Request (ECR) to the responsible Patterson Salesperson. The Patterson Salesperson will forward the ECR to the appropriate Patterson associate(s) for approval. Suppliers must request ECR forms from the Patterson Salesperson.

Contingency Plans

Suppliers shall prepare contingency plans to satisfy Paterson Mold and Tool’s requirements in the event of an emergency such as utility interruptions, labor shortages, key equipment failure and field returns. Supplier Contingency Plans must be made available upon request.

Section 6 - Tooling and Gauging Policy

Patterson-Owned Tooling

Patterson-Owned Tooling means:

- Tooling specifically fabricated for a Patterson product with little or no other application.
- Tooling transferred to supplier by Patterson.
- Tooling fabricated by supplier and paid for by Patterson.
- Tooling whose life and value is limited to the commercial production and service life production of the products which it produces or measures.
- Tooling which directly affects the part it measures or produces including part specific gauges, dies, fixtures, gear cutters, broaches, molds, jigs, etc.
- Tooling which can readily be relocated.
- Those items which may be found between “bolster plates” of a machine or pieces of equipment (including dies, welding fixtures, sub plates, or automation handling devices) and are not part of the general equipment.
- Unique computer software required to operate the tooling.

Supplier's Responsibilities – Patterson-Owned Tooling

If Patterson supplies tooling, the supplier is responsible for the cost of routine maintenance, repair, refurbishment, and keeping Patterson-owned Tooling in production condition in accordance with industry standards. Patterson shall be responsible for the cost of major refurbishments. Quotations must be submitted in advance for Patterson review and approval.

Supplier is responsible for disposing of Patterson-owned Tooling when directed in writing by Patterson Mold and Tool.

Supplier will keep detailed maintenance records for Patterson-owned Tooling. Supplier will make these records available to Patterson on request.

Supplier will monitor tooling performance to ensure that repair, replacement, and maintenance are identified and addressed prior to the time that product quality or production capacity are affected. This will include regular dimensional reviews on specific part characteristics. Supplier agrees to make this data available to Patterson on request.

Supplier will monitor tool life and provide the Patterson's Purchasing Department a notice of the need for replacement.

Supplier will ensure that sufficient quantities of components will be in supplier's inventory and available to support Patterson's production prior to, and during, the period that Patterson-owned Tooling is being refurbished or replaced.

Suppliers must receive written authorization from Patterson before:

- Moving or destroying Patterson-owned Tooling.
- Altering tooling capacity.
- Disposing of dedicated gauges.

Measurement Systems Devices/Gauges

Patterson Mold and Tool expectations:

- All measurement devices must be Traceable back to the current edition of the ISO/IEC/ EN 17025 guidelines.
- All gauging systems must provide readings in the same unit of measure as the blueprint unless otherwise designated by Patterson Mold and Tool.
- Gauge tolerances must be defined by SAE/DIN/ISO standards.
 - SAE – Society of Automotive Engineers
 - DIN – Deutsches Institut für Normung – German Institute for Standardization
 - ISO – International Standards Organization

Section 7 - Supplier Quality Requirements

All suppliers must comply with the Paterson Mold and Tool quality expectations as defined in this Supplier Quality Manual unless otherwise stated in writing by the Quality Manager of Patterson Mold and Tool.

7.1 General

Quality Management System

Suppliers are fully responsible for the quality of their products and services. To ensure zero defects, an effective Quality Management System must be in place at supplier. Suppliers shall perform inspections compatible with their system and compliant with appropriate measurement methodologies. Non-conforming material shall be isolated from the production stream, identified as to process and status, and shall be reviewed for correction or rejection in a timely manner per the supplier's documented quality management system.

Unless waived by the Patterson customer, suppliers must be registered to ISO 9001-2015. Reference Section 2 – Responsibilities.

Copies of valid certification certificates must be on file with Patterson. These requirements are mandatory unless otherwise agreed to in writing by Patterson or its customer. Suppliers are also responsible for assuring that their subcontractor's PPAPs are approved and are under a controlled system of evaluation and review. These records must be made available for Patterson examination upon request.

Approved Supplier Status

All suppliers currently supplying direct or indirect material to Patterson are approved suppliers. Approved supplier lists are maintained by the Patterson Mold and Tool Purchasing Department.

7.2 Supplier Assessments

New Suppliers

A Patterson representative will provide each potential new supplier access to the Patterson Supplier Quality Manual and require that the supplier self-assess their quality system through completion of the Patterson Mold and Tool Supplier Assessment audit worksheet. Once completed and submitted, Patterson Mold and Tool will determine whether the supplier candidate has the required quality systems and technical core competencies, to be awarded new business. Regional or customer specific requirements may apply. Patterson may also complete an on-site supplier quality systems assessment if needed.

Existing Suppliers

All existing suppliers are required to complete the Patterson Mold and Tool Supplier Self-Assessment every three years. Depending on the complexity of the product and/or service being purchased, or other potential risks, Patterson may conduct an on-site assessment. The Supplier Assessment will confirm that the existing supplier has the required quality systems, technical core competencies and financial stability to be awarded additional business.

7.3 Production Part Approval Process (“PPAP”)

PPAP Submission Requirements

Unless specifically waived in writing by Patterson, all supplier PPAP submissions must include a completed PPAP Check Sheet, which validates that all PPAP documents are complete.

Prior to a supplier submitting a PPAP to Patterson, all sub-Supplier PPAP’s must have been approved by supplier.

The number of pieces required for PPAP approval will be agreed upon between Patterson and supplier.

Submission Disposition and Notification

There are three possible outcomes of supplier PPAP Submission:

- **Full Approval**—Product is fully approved for series production. Patterson will specify proper delivery and release requirements.
- **Interim Approval**— Product is conditionally approved for a limited time or limited quantity. Patterson will specify proper delivery and release requirements.
- **Rejected**— Product is not approved for series production and tooling purchase orders cannot be paid.

Re-Qualification

On an annual basis, unless otherwise specified by Patterson, supplier must submit an updated PPAP for each active part confirming that all approved PPAP conditions and dimensions have not deteriorated.

PPAP Sample Shipping and Labeling Instructions

Unless otherwise directed by the appropriate Patterson representative, supplier must affix a label stating “PPAP SAMPLE PARTS” below the shipping label.

Supplier Charge Back

Supplier accepts financial responsibility for the consequences of rejected PPAP submissions including, but not limited to, costs associated with premium freight, associate time and travel expenses incurred by Patterson, or its customer. Supplier will be responsible for a \$95 per hour per associate charge for any hour, or portion of an hour of a Patterson associate’s time. The method of charge back will be by debit memo.

7.4 Early Production Containment (“EPC”)/Safe Launch

Definition and Purpose

The purpose of EPC/Safe Launch is:

- To reduce the risk of non-conforming product reaching Patterson and Patterson’s customer, by employing increased detection.
- To document supplier efforts to gain control of its processes during start-up and launch so that any quality issues that arise are quickly identified and corrected at the supplier location.

Procedure

To manage the risk of non-conforming products being shipped by the supplier to Patterson, unless otherwise directed, this EPC/Safe Launch procedure is to be applied when:

- A PPAP is submitted for product supplied to Patterson,
- A significant risk to Patterson exists: e.g., shutdown, escape of non-conforming product, etc.

Supplier Responsibility EPC/Safe Launch

Supplier shall establish a containment process that has the following elements:

- A person responsible for the containment process.
- An EPC/Safe Launch Control Plan, consisting of additional controls, inspection audits and factors in the production process (set-up, machinery, fixture, tooling, operator, material/components, preventive maintenance, climate). Additional controls could include:
 - Off-line validation that the product or service meets all critical quality criteria. This validation must be separated from the normal production process. Auditors must be properly trained, with GR&R performed to validate competency.
 - Increased frequency/sample size of receiving, process audits, and/or inspections.
 - Defined/coordinated sub-supplier containment and/or sub-supplier support/audits as required.
 - Increased verification of label accuracy.
 - Increased error proofing validation.
 - Increased involvement and visibility by top management, including increased Management Internal Audits “(MIA)”.
 - Other items as specified by Patterson or its customer.

The above items should be outlined in the EPC/Safe Launch Control Plan.

EPC / SAFE LAUNCH Exit Criteria:

Unless otherwise specified, EPC/Safe Launch activities shall be enforced until supplier provides defect free product for a period of thirty (30) consecutive calendar days or three (3) production lots (whichever is greater in quantity). If a non-conforming product is found in the EPC/Safe Launch inspection process, the time-period / production lot requirements will restart.

7.5 Process Control and Monitoring

Control of the Manufacturing Process

Supplier shall establish and maintain control plans, as part of the PPAP process, which specify controls for critical part and process parameters.

Defined Part/Process Characteristics

In addition to customer specific requirements, certain characteristics can be deemed as important or critical, and will require increased monitoring to ensure the quality of the products produced. Those characteristics may be designated as special, significant, high impact, major, critical, or other, based on specific Patterson Mold and Tool requirements.

The appropriate Patterson representative will identify these specific requirements, and/or characteristics either by direct communication, specification, or product drawing.

First/Last Piece Verification

First Piece – At the initiation of a production run, a special inspection (“First Piece” or FAI) and/or test shall be performed by the supplier to verify that the product meets all specifications and requirements. The first piece must be retained until the end of the production run.

Last Piece – When a production run is completed, or an interruption of the production run for an extended period occurs, the last piece produced will be checked by gauge or other inspection method to verify that the part meets all requirements. The last piece must be retained until start of the next production run for use as an inspection sample. If the last piece fails the inspection, immediate containment of the product produced must be implemented.

Continuous Quality Improvement (CQI) and Customer Specific Requirements

Patterson may require compliance to specific standards and/or customer specific requirements that are applicable to the products and services purchased from supplier.

Patterson may complete an on-site assessment at supplier to confirm compliance.

7.6 Non-Conforming Purchased Material

General

It is the responsibility of supplier to ensure the continuous supply of conforming product. Supplier shall not be absolved, or otherwise released, from fulfilling established delivery schedules due to identification of non-conforming product. In the event circumstances arise that may result in an inability to fulfill established delivery schedules, supplier must immediately contact the Patterson Purchasing Department and submit a written recovery plan signed by a supplier representative, or authorized manager, for approval by the Patterson Purchasing Department.

Patterson will immediately notify supplier if non-conforming material is found at Patterson Mold and Tool. Evidence of the non-conformance, such as digital photos, will be provided when possible. A sample of the non-conformance may be sent to supplier upon request.

Containment Actions

Upon receiving notification from Patterson, supplier is required to immediately contain all defective product as follows:

- At Patterson Mold and Tool
- In transit
- In warehouses
- At supplier's production facility, etc.
- At the Patterson customer – The appropriate Patterson quality representative will assist the supplier with containment actions.

Production Disruptions

Supplier must ensure that Patterson is supplied with enough certified stock to assure **no** disruptions to production.

Disposition of Non-Conforming Product

Supplier has the following options for disposition of non-conforming product shipped to Patterson Mold and Tool:

- **Return of defective product** – Supplier must arrange return of product for sorting at supplier's facility. Patterson will contact supplier for authorization to return the material at supplier's expense.
- **Sorting at a Patterson Mold and Tool** - If approved by a Patterson quality representative, sort on site at Patterson Mold and Tool, of the affected product. Supplier can use its own people or contract with a third party. Patterson will not manage supplier sorting using a third party. If the sort will be completed at a location other than at Patterson Mold and Tool, supplier must make arrangements to move parts between Patterson Mold and Tool and the outside sorting location. Supplier will also be responsible for inspecting and monitoring the quality of sorted products. Supplier's personnel must wear appropriate personal protective equipment ("PPE"). Supplier must verify PPE requirements with the Patterson contact if sorting is to occur at Patterson Mold and Tool. Supplier is responsible for reporting accurate sorting results. If Patterson must sort defective material to support production requirements, the supplier will be responsible for all associated costs.

- **Sorting at a Patterson customer location** - When non-conforming product is identified at a Patterson customer facility, and sorting is required to avoid production stoppage at the customer, the supplier shall provide all assistance requested. Supplier will be responsible for all related costs.

Identification of Conforming Sorted Material

A witness mark must be applied to each part that passes inspection to indicate that material was inspected. Each container must be labeled as certified for the specific non-conformance for the next three shipments, unless otherwise directed by Patterson. The witness mark and shipping label must be approved by a Patterson quality representative.

7.7 Root Cause Analysis

General

Supplier will respond to corrective action requests by using a Root Cause Analysis tool. (5-Why, 8-D, Cause and Effect Diagram, etc.) The root cause analysis will be submitted in response to each request for corrective action, unless otherwise agreed to by the appropriate Patterson quality representative. E-mail is the preferred method of response.

Initial Submission

Patterson must receive the initial containment response within 24 hours of notification.

A report of the containment action taken, and initial sort results found, must be submitted within 48 hours.

A report describing the definition, planning and implementation of the long-term corrective action items must be completed within 14 days.

Final Submission

Supplier must submit the final Root Cause Analysis Form for approval and closure as soon as practical, but no later than 45 days from issuance date. Supplier may request approval for an extension of the 45 day deadline but must do so prior to the original deadline. Requests should be made to the appropriate Patterson quality representative.

Approval and Closure

When the corrective action is completed and verified to be effective, the Patterson quality representative is responsible for approving the 8-D closure and notifying the Patterson Purchasing Department, who will communicate the results to the supplier.

Supplier Charge Back

Supplier accepts financial responsibility for the consequences of non-conforming product including, but not limited to, costs incurred associated with containment, sorting, premium freight, rework, replacement of non-conforming product, overtime, travel, associate time, line downtime/productivity loss, etc. incurred by Patterson or its customer. Supplier will be responsible for a \$95 per hour per associate charge for any hour, or portion of an hour of a Patterson associate's time.

The method of charge back will be by debit memo.

Section 8 - Change Management

General

Recognizing that managing change is of critical importance, Patterson requires that suppliers have a Change Management System, designed to ensure that changes to product and process are properly reviewed and approved both internally, and by Patterson and Patterson's customer, before implementation. Suppliers are expected to take a proactive approach when proposing deviations or changes affecting product design, performance, materials, or processes. Suppliers should never ship product before obtaining written Patterson approval through one of the methods outlined below. In cases where supplier has implemented an unauthorized change, and Patterson, or its customer, has been negatively impacted, supplier will be responsible for compensating Patterson, or its customer, for all associated costs.

Design Process Change Control

During the manufacturing process, **FOR ANY CHANGE**, whether because of a design change, material, component, equipment, die, tool, mold, jig, etc., supplier must submit a new PPAP prior to shipment.

Engineering Change

Supplier shall use an Engineering Change Request ("ECR") form to propose an engineering change and shall have written approval from the appropriate Patterson quality representative prior to shipment.

Temporary Changes - *Deviations*

When seeking permission to temporarily ship product that is out of specification, or product that is produced with a temporary process change not reflected in supplier's current process control plan, supplier is responsible for obtaining approval prior to shipping. Such situations might include minor dimensional errors or a change in a processing operation caused due to equipment downtime. Any changes to supplier-specified product characteristics also fall under this requirement, even if they are not shown on the specifications, drawings or instructions provided by Patterson. Supplier must complete and submit a deviation request to the appropriate Patterson Salesperson for review and approval.

Supplier must obtain written permission prior to shipping product that is out of specification. All deviations shall be effective for no more than 30 days, unless otherwise specified and approved by the appropriate Patterson representative.

Section 9 – Materials / Delivery Expectations

Requirements

All goods, or their containers, must be marked with the appropriate country of origin. Supplier is also responsible for supplying Patterson with a certification of origin for each product. Prompt notification to Patterson is required if there will be a change in origin.

Program-Specific Requirements

Patterson will specify requirements for products or services associated with a unique program on purchase orders, part drawings and other forms of communication. These requirements will include at least:

- Labeling
- Delivery terms
- Product identification
- Hazardous material restrictions (including but not limited to International Material Data System (“IMDS”), Material Safety Data Sheets (“MSDS”), European Union (“EU”) Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals (“REACH”), EU Restriction of Hazardous Substances Directive (“ROHS”), Global Automotive Declarable Substance List (“GADSL”), Dodd-Frank Wall Street Reform and Consumer Protection Act (“Conflict Minerals” requirements)
- Preservation of product

On Time Shipments - Supplier is expected to ship 100% on time to Patterson per the terms and conditions in the Patterson Mold and Tool PO. Any costs associated with delays in shipment will be at supplier’s expense.

Overseas Suppliers/Shipments

All suppliers whose products require ocean transportation are encouraged to maintain appropriate inventory buffers near Patterson Mold and Tool to ensure that extended transportation lead-time will not affect on time delivery of their products. It is the supplier's responsibility to monitor and maintain this buffer. Any expenses incurred by Patterson Mold and Tool due to failure to deliver the product on time will become the responsibility of supplier.

Packaging/Containerization

Supplier will plan for the timely provision of containers and/or packaging media to support Patterson's requirements. Packaging is to be part of supplier's quotation and is the responsibility of supplier. Patterson must approve all packaging design during APQP, prior to PPAP. Packaging must meet all government and environmental regulations.

Labeling & Identification

Supplier must conform to the labeling and identification requirements as specified by Patterson Mold and Tool.

Transportation Routing Per Purchase Order

Supplier is required to ship product to Patterson Mold and Tool per instructions on the Patterson Mold and Tool PO.

Prevention of Quality Deterioration During Storage

Supplier shall prevent deterioration of product during any period of storage prior to delivery.

Section 10 - Supplier Performance

Metrics / Requirements

General

This Supplier Performance Rating System presents the general criteria that will be used by Patterson to rate suppliers of product and services. Patterson Tool and Mold may impose other metrics based on the type of product and/or service supplied.

Supplier Performance Reporting

On Time Delivery: Goal 100% on time.

Patterson's Purchasing Department will generate purchase orders based on its customer's specific demands. The required delivery dates on these purchase orders are critical. Suppliers who fail to deliver on time, will place Patterson at risk in meeting its customer's demand for 100% on time delivery, risking production delays and shutdowns at the customer.

Expedited Delivery: Goal - Zero Expedited Deliveries.

Suppliers should always be 100% on time therefore there should be no need for expedited delivery. If expedited delivery is required, supplier must provide the Patterson Purchasing Department with an explanation. Supplier will be responsible for the transportation cost of expedited shipments to Patterson Tool and Mold.

Corrective Actions: Goal – Zero Corrective Actions

Supplier will be graded based on the number of corrective actions requests received from the Patterson Quality Department. Depending on the circumstances, supplier may receive a corrective action request for a quality or delivery issue. Corrective action requests must be addressed as stated in [Section 7](#) of this Supplier Quality Manual.

PPM Defect Rate: Goal – Zero PPM

PPM is calculated by dividing the number of parts rejected, by the total parts received, multiplied by 1,000,000.

Responsiveness: Goal 100%

The Patterson Purchasing Department will determine each supplier's score for this metric based on how the supplier:

- Supports Patterson goals and objectives in servicing Patterson's customers.
- Responds to corrective actions requests.
- Addresses shipping errors, paperwork issues and invoicing concerns.
- Responds to requests for quality system self-assessments.

The overall score:

90 or above - Exceptional Supplier Status

80-89 - Supplier is in cautionary status and may not be considered for new work. Supplier needs to start internal corrective action process, to identify and fix the issues.

Below 80 - Supplier is in unacceptable status, and corrective action is required by Patterson. Supplier must submit a performance improvement plan. Supplier termination is possible.

SAMPLE REPORT CARD

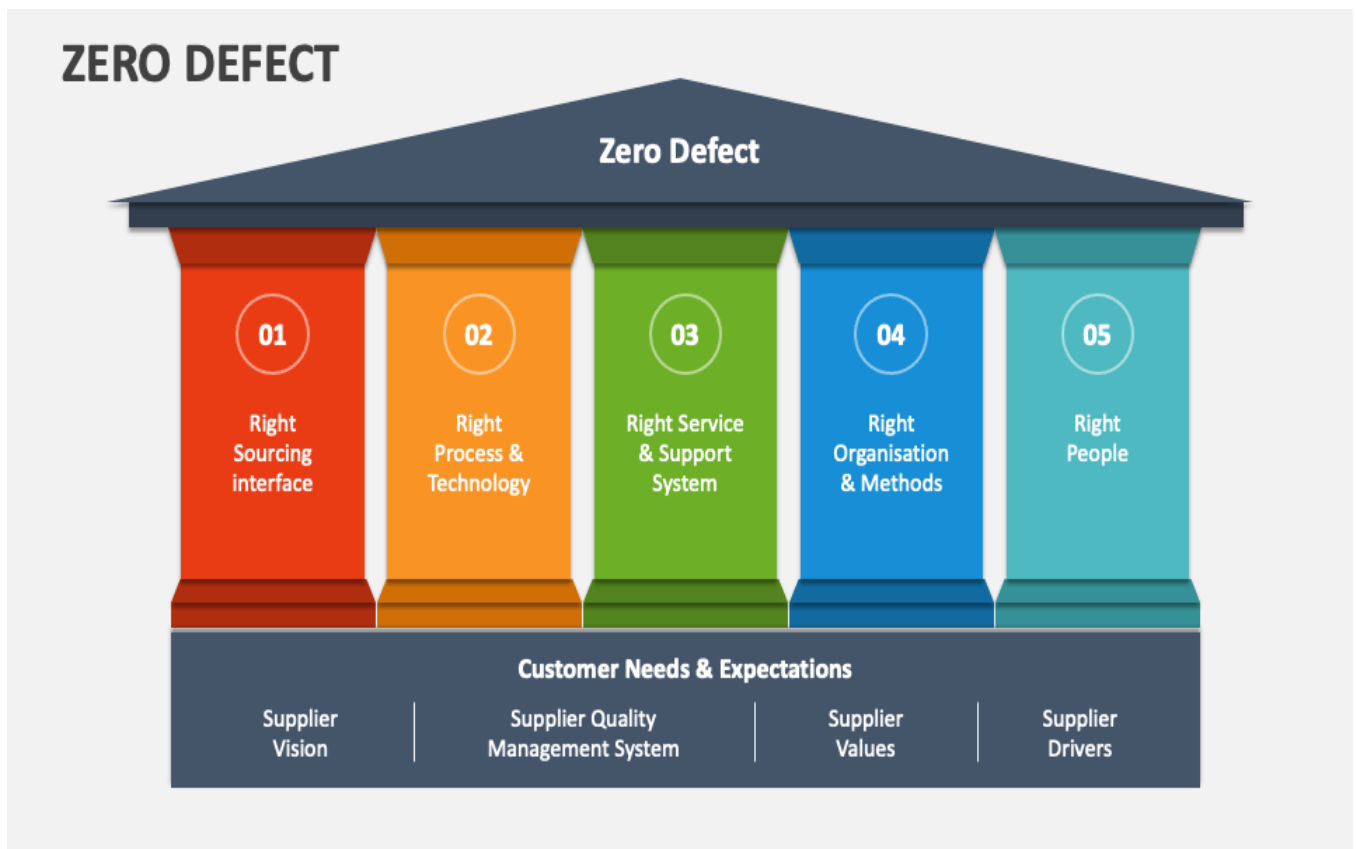
Patterson Mold and Tool - Evaluation of Critical Suppliers					Score:	0%-84%	85%-94%	95%-100%
		Discrepancy - Specification			Discrepancy - Delivery			
Supplier (Vendor ID #)	Orders Issued	Major	Minor	Score	Major	Minor	Score	Ave Score
Alro (43892)	2	0	0	100%	0	0	100%	100%
AMI Metals (P00023)	1	0	0	100%	0	0	100%	100%
ANC Polishing (P5518)	17	0	0	100%	0	0	100%	100%
Balzars (28782)	3	0	0	100%	0	0	100%	100%
Belmont (P5531)	1	0	0	100%	0	0	100%	100%
Bohler/Uddeholm (Q0254)	10	0	0	100%	0	0	100%	100%
Difruscia (DIFRUS001)	14	0	1	93%	0	0	100%	93%
Dynamo (MS0005)	1	0	0	100%	0	0	100%	100%
Ellwood Specialty Steel (P5586)	2	0	0	100%	0	0	100%	100%
Exco Engineer (F7579)	2	0	0	100%	0	0	100%	100%
Fraisa (74052)	37	0	0	100%	0	0	100%	100%
Gateway Metals (76349)	1	0	0	100%	0	0	100%	100%
GSI Flo (46983)	0	0	0	100%	0	0	100%	100%
Hyspeco (P3358)	13	0	0	100%	0	0	100%	100%
Magnetic Inspection Laboratory (MIL001)	40	0	0	100%	0	0	100%	100%
Midland Technologies (45378)	1	0	0	100%	0	0	100%	100%
Mid-Western (F2209)	0	0	0	100%	0	0	100%	100%
M-K Distributing (P9797)	15	0	0	100%	0	0	100%	100%
Modern Metal Finishing (13833)	0	0	0	100%	0	0	100%	100%
Paulo (14131)	14	0	0	100%	0	0	100%	100%
PCS (MS0010)	2	0	0	100%	0	0	100%	100%
Pederson Tool & Design (P3759)	1	0	0	100%	0	0	100%	100%
Swiss Steel USA-Heat Treat & Steel (P5720)	8	0	0	100%	0	0	100%	100%
Ultra Polishing (70680)	0	0	0	100%	0	0	100%	100%
Vallen (80460)	14	0	0	100%	0	0	100%	100%

Section 11 - Record Retention

The control of records must satisfy all regulatory requirements, as well as those of Patterson Mold and Tool, and its customer. These records must be made available for review by Patterson upon request and retained for periods of time specified by Patterson. Customer criteria, will take precedence for length of record retention. It is the supplier's responsibility to confirm the record retention period with the Patterson Purchasing Department on, or before, acceptance of the initial PO for a product.

Section 12 – Zero Defect Overview

The Five Pillars of Zero Defect



There are five requirements for Zero Defect Manufacturing:

1. The right sourcing interface: shall ensure the quality of purchased components, products, or materials are in line with the ZD approach at the interface between manufacturing and external or internal suppliers. You must understand your supplier's processes and quality procedures so that you are able to support them with appropriate methods like Launch Meetings (Pre-Production Meetings) and PPAP/FAI/ISIR and help them to both understand and meet your requirements.
2. The right process and technology: emphasizes the requirements and methods for accomplishing key activities such as process improvements, mistake/error proofing, preventive maintenance, tooling management, and problem-solving processes.
3. The right service and support systems: focuses us on all support functions in our manufacturing channels and cells, such as supply chain, the channel organization, quality service involvement, necessary tools and approaches that are defined to run the channel in a proper ZD way. This means clear work instructions and understanding from the channel operators what these mean and how to respect them.
4. The right organization and methods: focuses on the organization, structure, and management that drive the manufacturing process. You must ensure that management is seen to be setting the requirements and ensuring they are clearly understood by the channel team, before reinforcing the ZD concept and consistently applying it.
5. The right people: reinforce your commitment to retraining and developing personnel. It is essential that you have well-trained people that can help prevent defects rather than install new devices or processes.

Supplier Quality Manual Revision History

Issue	Description of Change	Date
First Release – Rev 1		8/10/17
Rev - 2	Supplier self-audit link revised	8/25/17
Rev - 3	Updated web links	8/29/17
Rev – 4	Removed waive of ISO req.	9/6/17
Rev - 5	Revised hyper links to Pace website	1/11/18
Rev - 6	Removed Pace Industries, Included Zero Defects	1/15/24