

Planet Tool Quality Manual



***AS9100:2000 Rev B
Quality Manual***

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***315 S. Cool Springs Road
O'Fallon, MO 63366***

Vice President _____ Date _____

General Manager _____ Date _____

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I Scope

Planet Tool has developed and implemented a quality management system (QMS) that complies with AS9100 Rev B. The scope of this QMS includes the precision machining and design and building of custom production equipment.

The QMS also conveys our ability to provide consistent products that meets customer and applicable regulatory requirements. It addresses customer satisfaction through the effective application of the system, including continual improvement and the prevention of nonconformities.

This manual defines and describes the quality system, authority and responsibility of personnel, and presents our quality system to our customers so they can be informed of our quality activities to assure consistent product quality and customer satisfaction.

This manual is divided into sections corresponding with the AS9100 Standard. In addition, more specific and detailed procedural methods and responsibilities are referenced.

The General Manager is responsible for maintaining this manual and assuring it complies with the AS9100 Standard. The General Manager maintains the master signed copy.

The Quality Manual is available on our web site and hard copies will not be provided to off site parties.

The General Manager and Vice President approve the quality manual and any revisions with concurrence of the Management Representative.

Exclusions

The Management Representative is responsible for identifying those requirements of AS9100 that do not apply to our organization or products, and to exclude such requirements from the scope of the quality system.

Exclusion: AS9100 Section 7.5.1.5 a and d Control of Service Operations

Justification: 7.5.1.5 a Planet Tool does not collect and analyze in-service data as customer owns and controls product once it is accepted. 7.5.1.5 d Planet Tool does not perform repairs at the customer.

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II Introduction

Since 1965 Planet Tool & Engineering has provided Precision Machining and the Design and Manufacturer of Custom Tooling, Gages and Associated Machinery for the Aerospace, Automotive and Refrigeration Industries.

Since conception the company has seen a continued and steady growth and operates from a specifically constructed manufacturing facility located just west of St. Louis Missouri.

Planet Tool is managed by a General Manager who is assisted by a team of experienced managers, administrators, foreman, supervisors and production personnel. With such an extensive array of experience and competence within the company and having some of the most up-to-date and technically advanced technical equipment available we are able to cope with diverse requirements from their clients.

Planet Tool is proud of its record of providing and maintaining high Quality and Excellence to our customers. Our manufacturing specialists are committed to meeting customers most complex and demanding production needs.

We are extremely competitive and able to offer superior value and reduced turn around times by the use of progressive technologies in conjunction with refined manufacturing efficiencies.

Our commitment to Quality extends beyond the AS9100 requirements; it expands to the areas of Safety and the Environment as well.

Through constant review of all processes and policies we aim to guarantee that our "Customer Comes First" policy remains at the forefront of our beliefs.

Planet Tool is geared up for success on a global scale, buying and selling to both domestic and international markets.

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III Quality Policy

Planet Tool & Engineering is dedicated to fulfilling customer requirements and satisfaction. Our Company achieves this by providing quality products, on-time delivery and service as required.

We will meet the goals of this policy through:

- Continual Improvement
 - Striving to Meet Our Quality Objectives
- Maintaining a Management System That Meets the Current AS 9001 Standard
 - Meeting Our Customer Requirements
- Communication of This Policy to All Planet Tool & Engineering Employees

IV Sections

4.0 Quality Management System

General requirements (4.1)

Planet Tool has established, documented, implemented, and maintains a quality management system, and continually improves its effectiveness, in conformance with requirements of AS9100 International Standard.

Quality system processes (4.1.a, 4.1.b, 4.1.c)

Quality Management System processes are identified in Figure 1 section 4.2 in this manual, and in associated operational procedures and work instructions. The documentation defines the quality system processes, their sequence and interaction, and provides information on how to implement and apply them throughout the organization.

Quality system documentation also defines criteria and methods needed to ensure that the operation and control of quality system processes are effective. This includes assignment of responsibilities and allocation of resources for the process, instructions on how to carry out (or operate) the process, and definition of methods for monitoring and/or measuring the effectiveness of the process.

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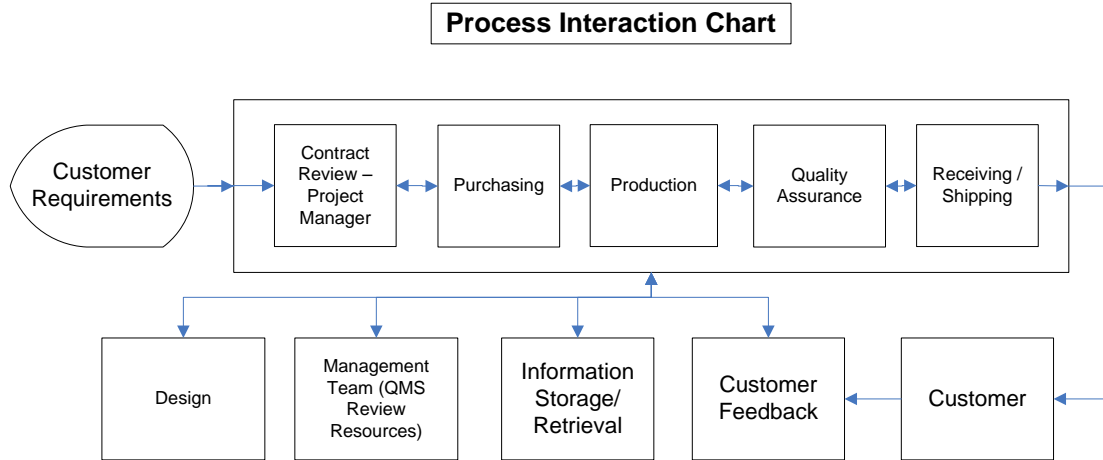


Figure 1

Resources and information (4.1.d)

The Management Staff is responsible for ensuring the availability of necessary resources and information. Section 6.1 of this manual, Provision of Resources, explains how resource requirements are identified and satisfied.

Monitoring and measurement (4.1.e)

The performance of quality system processes is systematically monitored and/or measured. This is to ensure its effectiveness and to identify opportunities for improvement.

The performance of product realization processes is monitored by measuring process parameters and/or product characteristics resulting from the process; and through the program of inspections and tests applied to the product. The performance of processes required for the quality management system is monitored through internal quality audits. Measuring customer satisfaction monitors the overall performance of the quality system. Monitoring and measuring activities are defined in corresponding procedures ref Sections 8.1 and 8.2 of this manual.

Conformance and continual improvement (4.1.f)

The QMS is regularly reviewed by the Management Staff to identify opportunities for improvement. Sections 5.6 and 8.5 of this manual and the corresponding procedures define how management reviews and corrective/preventive actions are used to ensure conformance and improvement.

Outsourced processes (4.1)

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When processes that affect product conformity are outsourced, controls are implemented to ensure that these processes meet specified requirements. Such controls may include assessment of supplier realization processes, quality system, requirements for inspection, testing or other records demonstrating product conformity, or containment and verification of the supplied product/services. Section 7.4 of this manual and the corresponding procedures define the purchasing control system.

4.2 Documentation requirements

The scope of the quality system documentation is defined. The establishment and revision of documents, and their distribution, are controlled. New documents and revisions are reviewed and approved prior to issue; and are identified with respect to their revision level. Appropriate documents are available at locations where they are used. Obsolete documents are removed from points of use. Documents of external origin are identified and their distribution is controlled. Planet Tool personnel have access to the quality management system documentation and are aware of relevant procedures. Customer and regulatory authorities have access to the quality management system documentation as applicable.

Quality records are identified and indexed to facilitate their retrieval, and are stored in a suitable environment to minimize deterioration. Quality records are retained for a specified period of time.

General (4.2.1)

Quality system documentation comprises the following types of documents:

- Quality Manual (including a quality policy)
- Operational procedures
- Work instructions, process and inspection/test procedures, internal standards
- Applicable industry standards and other technical reference materials
- Customer documents, including drawings, specifications, procedures, and other documents defining products
- Product realization and control plans
- Forms and records
- Quality system requirements imposed by applicable regulatory authorities

The purpose, scope, and responsibility for controlling various types of documents are defined in procedure PTP-4.2.3-01 Document Control.

Quality Manual (4.2.2)

The top-level document defining the overall quality management system is the

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Quality Manual. It includes:

- The scope of the quality system, including details of and justification for any exclusions (refer to Section I)
- Description of quality system processes, their sequence, and interrelation
- References to documented procedures and relationship to the AS9100 Standard

Control of documents (4.2.3)

New documents and document changes may be initiated by anyone in the organization, but are issued by authorized personnel. The issuing of documents is defined in procedure PTP-4.2.3-01 Document Control. All documents are reviewed and approved prior to issue.

An electronic document is issued by being placed in a read only public directory accessible from the network. A paper document is officially issued for use when approved by an authorized person.

Documents are made available to personnel and locations where they are used. Every effort is taken to assure documents remain legible.

Document changes are coordinated with customer and/or regulatory authorities per contract or regulatory requirements.

Control of records (4.2.4)

Quality records are established and maintained to provide evidence that:

- Materials, components, and production processes meet specified requirements
- Finished products conform to specifications
- The QMS is operated in accordance with documented procedures and that it is effective.

Records are established by personnel performing the task or activity utilizing that record. Records are dated and identify the product, person, and/or activity to which they pertain.

Records are indexed and grouped to facilitate their retrieval. Cabinets, binders, computer server, disks, and other storage media containing records are clearly labeled with identification of their content.

Records are stored to prevent deterioration and electronic records are regularly backed up. Quality records are controlled per PTP-4.2.4-01 Control of Records.

Records are available for review by customers and regulatory authorities in accordance with customer contract or regulatory requirements.

4.3 Configuration management

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The Configuration Management process is controlled per procedure PTP-4.3.0-01 Configuration Management.

5.0 Management responsibility

Management commitment (5.1)

The Management Staff is responsible for establishing, implementing, maintaining, and improving the QMS. Management commitment is demonstrated by communicating to the organization the importance of meeting requirements, establishing the quality policy and quality objectives, conducting management reviews of the quality system, and ensuring the availability of necessary resources.

Top management (5.1)

The Management Staff consists of the General Manager, Vice President and personnel directly reporting to the General Manger.

Customer requirements (5.1.a)

The Management Staff communicates the importance of meeting customer, regulatory, and legal requirements throughout the organization.

Quality policy and quality objectives (5.1.b, 5.1.c)

The Management Staff defines the purpose and objectives for the quality management system. They are documented and communicated in the form of a quality policy (PTP-5.3.0-01) and quality objectives (PTP-5.4.1-01). Processes for establishing the quality policy and quality objectives are defined in Section 5.3, Quality Policy, and Section 5.4 Planning.

Management reviews (5.1.d)

Management Staff reviews the quality management system at a minimum of once a year to ensure its continuing suitability, adequacy, and effectiveness. The review evaluates the current status and performance of the quality system and initiates actions for further improvement of the system. The process for conducting management reviews is defined in Section 5.6 of this manual and in procedure PTP-5.6.0-01 Management Review.

Resources (5.1.e)

The Management Staff provides resources necessary for establishing, implementing, and improving the quality management system. Section 6.1 of this manual defines processes for identifying resource requirements and the allocation of resources for specific activities and projects.

5.2 Customer Focus

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The prime objective of the quality management system is to focus our organization on customer satisfaction. Achieving customer satisfaction requires an understanding of customer requirements and the ability to consistently fulfill these requirements.

Customer requirements include all aspects of products that can influence customer satisfaction. Management Staff is responsible for collecting and analyzing information on customer needs and expectations.

Customer requirements are determined and verified through the Management Staff. This process is defined in procedure PTP-7.2.1-01 Contract Review.

5.3 Quality Policy

The Planet Tool quality policy is provided in Section III. The quality policy is established and approved by the General Manager with input from the Management Staff. The General Manager also approves any changes to the quality policy.

Quality Policy (5.3.a/b/c)

The purpose of the quality policy is to communicate the company's commitments with regard to quality, and to establish principal objectives for the QMS.

The quality policy provides a framework for establishing specific quality objectives, and provides direction for the continual improvement effort. The use of the quality policy in setting quality objectives is addressed in Section 5.4 Planning. The use of the policy to facilitate continual improvement is explained in Section 8.5.1.

Communication (5.3.d)

A copy of the quality policy is made available to Planet Tool employees and its role is explained and discussed at orientation training provided to new employees.

Review (5.3.e)

The Management Staff reviews the quality policy during management reviews of the quality system. This is to ensure its continual relevance and suitability. The process for reviewing the quality policy is defined in procedure PTP-5.6.0-01 Management Review.

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5.4 Planning

Quality objectives are established to support the quality policy and continual improvement. Quality planning includes: 1) identification and determination of priorities for continual improvement of quality system processes, and 2) resources needed to achieve quality objectives and to maintain and improve the quality system.

Quality objectives (5.4.1)

Quality objectives are established by the General Manager with input from the Management Staff to support the quality policy, to meet requirements for products and processes, and to improve the quality system.

Quality system objectives are established, documented, and monitored within the framework of management reviews of the quality system in accordance with procedure PTP-5.6.0-01 Management Review. Quality objectives are stated in PTP-5.4.1-01 Quality Objectives and are communicated to employees.

Quality management system planning (5.4.2.a/.b)

The Management Staff ensures that the quality system processes are planned and that the system is appropriate for its intended purpose, and that it is effective and efficient. Changes to the quality system are planned within the framework of management reviews.

5.5 Responsibilities, authority and communication

The General Manager is also the Management Representative with responsibility for establishment and maintenance of the QMS, and for reporting on the performance of the system to the organization.

Issues regarding the QMS are communicated internally through distribution of pertinent documents, meetings, training and awareness programs, and management reviews.

Responsibility and authority (5.5.1)

The General Manager with input from the Management Staff ensures responsibility and authority are defined and communicated. Departments, groups and functions within the company, and their interrelations, are defined in various operational procedures.

All departments and functions affected by the QMS are responsible for implementing, maintaining, and improving the QMS.

Specific responsibilities and authorities are as follows:

General Manager

- Formulates the quality policy

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- Assigns responsibilities and authorities
- Provides resources necessary to maintain and improve the quality system
- General Manager chairs management review meetings

Management Representative

- Maintains quality management system
- Administers corrective and preventive actions
- Monitors non conformances
- Leads internal audit activities
- Administers document control activities
- Issues approved documents
- Maintains document levels

Shop Foreman

- Plans Production personnel, facilities, equipment, and processes
- Controls and monitors processes
- Monitors product identification
- Monitors production equipment
- Provides training for personnel
- Defines personnel qualification requirements

- Maintains training records
- Conducts company-wide training

Shipping Coordinator

- Receives purchased products
- Performs receiving inspection
- Applies or verifies product identification
- Packages products
- Ships products to customers

Purchasing Coordinator

- Selects qualified suppliers

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- Prepares and approves purchasing documents
- Monitors and evaluates supplier performance
- Obtains quality products on-time to support schedules
- Carries out subcontractor quality surveys and audits

Project Manager (Sales)

- Determines customer requirements
- Communicates customer requirements
- Reviews customer orders
- Handles customer feedback and complaints
- Provides product information

Supervisors

- Schedules Production
- Develops production processes
- Develops set-up instructions

Quality Assurance

- Develops quality plans and control plans
- Maintains and calibrates measuring and test equipment
- Performs inspections and testing
- Handles nonconforming products

Management Representative (5.5.2)

The Management Representative has the authority and responsibility to:

- Ensure that the quality management system is implemented, maintained and continually improved
- Promote awareness of customer requirements throughout the organization
- Lead the internal quality audit program
- Report to the Management Staff on the performance of the quality system, including needs for improvement
- Coordinate communication with external parties on matters relating to the quality system and AS9100 registration when appropriate
- Resolve matters pertaining to quality

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Internal communication (5.5.3)

Internal communication regarding the quality system flows two ways:

- The Management Staff communicates to the organization by memos, meetings, and verbally the quality policy and objectives, customer and regulatory requirements, product and process specifications, verification and validation requirements; and instructions on how to implement and use the quality system.
- The organization communicates to the Management Staff information and data regarding quality performance, the effectiveness of the quality system, and opportunities for improvement.

5.6 Management review

The Management Staff conducts reviews of the quality system. The review evaluates the suitability and effectiveness of the system, identifies opportunities for improvement, and considers the need for changes to the quality policy and quality objectives. The results of the review are documented.

General (5.6.1)

The purpose of management reviews is to:

- Evaluate the suitability, adequacy and effectiveness of the quality system
- Consider changes to the QMS, quality policy, and quality objectives
- Identify opportunities for improvement of the quality system, processes, and products

Management reviews are chaired by the General Manager and attended by Management Staff. These management reviews are conducted at least once a year. Additional reviews are scheduled when there are circumstances that require increased attention, or due to input from a member of the Management Staff.

Section 8.4 of this manual, Analysis of Data, and procedure PTP-5.6.0-01 Management Review define the scope and presentation of the information and data.

The results of management reviews are documented in the minutes of the meeting. The minutes include improvement actions, assigned responsibilities, and allocated resources for implementation of these actions. The minutes of the review meetings are shown on PTF-5.6.0-01 Management Review and are maintained per PTP-4.2.4-01 Control of Records.

6.0 Resource management

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The Management Staff provides adequate resources for the implementation and improvement of the quality system, and addresses customer satisfaction.

The resources required may include people, suppliers, information, infrastructure, work environment, and financial resources.

Provisions of resources (6.1)

The Management Staff determines resource requirements for addressing customer satisfaction to meet customer requirements. Resources needed are based on input from various management personnel responsible for activities relevant to particular aspects of customer satisfaction.

Management reviews of the quality system are a means for determining allocation of resources for the operation and continual improvement of the quality system and product. Actions initiated by the review are supported by allocation of specific resources necessary for their implementation; reference PTP-5.6.0-01 Management Review.

Human Resources (6.2)

Management Staff identifies personnel training needs, provides required training, and evaluates the effectiveness of the training provided. Personnel assigned to perform specific tasks, operations, and processes are qualified on the basis of appropriate education, experience, or training. Employees are made aware of the relevance and importance of their activities and how they contribute to the achievement of quality objectives. In addition, training needs are often identified in response to corrective or preventive action requests.

Reference procedure PTP-6.2.2-01 Training and PTF-6.2.2-01 Training records for personnel qualifications.

Effectiveness of training (6.2.2)

Effectiveness of training is evaluated using the following approaches:

- General Manager and Management Staff follow-up training with performance evaluations of employees
- Review of the overall performance in areas relevant to particular training programs
- Consideration of competency and training effectiveness when investigating causes of quality system issues and product or process nonconformities
- A review of training and awareness programs conducted within management

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reviews of the quality system

6.3 Infrastructure

Suitable infrastructure, facilities and work environment are provided as required to achieve product conformity. This includes planning, provision and maintenance of workspaces, equipment, software, and associated services.

The planning of new, and/or modification of existing infrastructure and facilities are conducted in conjunction with product needs or process changes; capacity and/or work force expansions; and other such events. Facilities may also be expanded or modified to improve productivity and/or quality, or to improve the work environment.

Management Staff is responsible for identifying the need and requirements for new and/or modification of existing infrastructure and facilities in their departments.

Supporting services and maintenance of facilities (6.3)

Internal personnel or external contractors may perform building and facility maintenance. The Shop Foreman is responsible for coordinating and managing maintenance activities.

Production equipment maintenance is addressed in Section 7.5 of this manual and Procedure PTP-7.5.1-01 Production and Service

6.4 Work environment

Management Staff is responsible for ensuring a suitable working environment for personnel. This includes both human and physical factors.

Management Staff is responsible for identifying those operations where environmental conditions may impact product quality or performance of personnel that could result in product nonconformities.

7.0 Product realization

The planning of product realization processes includes the determination of quality objectives for products, development of required processes and process documentation, and the establishment of product verification and validation programs. The plan also defines requirements for records necessary to demonstrate process and product conformity.

Product quality objectives (7.1.a)

Quality requirements for products are defined in work orders, specifications, contract documents, internal and external standards, and applicable legal and regulatory requirements.

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Project Managers and Management Staff are responsible for identifying product quality requirements.

Planning of Product Realization (7.1.b, 7.1.d, 7.1.e)

Product realization planning includes, as applicable:

- Definition and evaluation of production operations and processes
- Development of adequate and capable processes
- Identification of special processes
- Establishment and implementation of appropriate process control measures
- Development of instructions and/or training for process operators
- Requirements for records necessary to demonstrate process conformity
- The identification of resources to support operation and maintenance of the product.

Product realization plans are established in collaboration between Project Manager (Sales), Production, and Quality Assurance. The plans are defined in various types of production documents, including work orders, drawings, specifications, and work instructions. These plans are consistent with requirements of other processes in the quality management system.

Product verification and validation planning (7.1.c)

The product verification and validation plans determine the inspection and testing program for a product, and for materials and components incorporated into the product. This includes:

- Identification of inspection and testing points
- Inspection and testing scope, frequency, and method
- Acceptance criteria

Project Managers are responsible for the development of product verification plans. The plans are defined in various types of documents, such as specifications, production Work Order, purchasing documents, inspection and testing procedures. Documents defining the inspection and testing requirements are provided in the Job Packet reference PTP-7.5.1-01 Production and Service.

Records (7.1.d)

Initialed or stamped Work Order indicates production/inspection requirements have been met and the Work Order becomes a record per PTP-4.2.4-01 Control of Records.

7.2 Customer related processes

Product requirements include customer requirements, legal, regulatory, and other necessary requirements that may not be specified by customers. Customer orders are reviewed to ensure that requirements are defined and can be met,

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and to resolve any incomplete or conflicting requirements. Amendments or changes to orders are reviewed and communicated to relevant functions. These reviews are conducted prior to Planet Tool committing to supply the product.

Arrangements for communication with customers relating to product information and order handling is defined and implemented; reference PTP-7.2.1-01 Contract Review.

Review of requirements related to the product (7.2.1, 7.2.2)

Requirements for product characteristics, packaging, and support are determined and reviewed in the process of determining production activities.

Customer specific requirements for packaging are reviewed in conjunction with Contract Review.

Incomplete or conflicting requirements (7.2.2 .b)

Any incomplete or conflicting requirements are resolved with the customer by the Project Manager before acceptance of the order.

Amendments (7.2.2)

Changes to customer orders are received and reviewed by Project Manager. Changes to orders are communicated to those functions within the organization that are affected by the change.

Record (7.2.2)

The establishment and maintenance of contract review records are per procedure PTP-4.2.4-01 Control of Records.

Customer communication (7.2.3.a)

Project Managers or designee may communicate with customers regarding product information.

Inquiries and order handling (7.2.3.b)

Project Manager is responsible for receiving customer inquiries and orders. Quality Assurance and Production may be asked to assist as appropriate.

The handling of order amendments is controlled to the same extent as the initial order. Amendments are reviewed to verify that the new or modified requirements can be met, and is confirmed with the customer.

PTP-7.2.1-01 Contract Review defines how to handle customer inquiries, orders, and amendments.

Customer feedback and complaints (7.2.3.c)

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Management Staff is responsible for receiving and processing customer compliments and complaints. PTP-7.2.3-01 Customer Feedback provides information on how to receive, process, and respond to customer compliments and complaints.

Customer compliments and complaints allow for tracking of trends and evaluating improvement activities. Customer complaints are communicated to relevant functions within the organization. The Management Staff, as necessary, determines the response to the customer and identifies corrective or preventive actions to be implemented when appropriate.

7.3 Design and Development

Planet Tool has the capability and resources to conduct product design and development. Revisions to existing product in support of customer requirements for product development. This includes interface activities between Project Managers, Management Staff, and customers as needed to create or update products. Design activities are defined in PTF-7.3.0-01 Design Project Plan.

Design and Development Planning (7.3.1)

Project Manager determines design stages, verification and validation activities, and determines responsibilities and authorities.

Design and Development – Inputs (7.3.2)

Project Manager determines inputs relating to product requirements and records are maintained for the following:

- Information from previous similar designs
- Functional and performance requirements (both customer and Planet Tool)
- Applicable statutory and regulatory requirements
- Inputs are reviewed to ensure adequacy and relevance.

Design and Development – Outputs (7.3.3)

Primary design output consists of documents that define the product how to manufacture the product. These documents include the work Order, drawings, specifications, procedures, workmanship standards, inspection procedures, and release criteria as needed. These documents are provided by the Project Designer or designee.

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Design and Development Review (7.3.4)

Planet Tool conducts reviews of as scheduled in the Design Project Plan to assure requirements are met. Special focus is directed toward identifying problems and proposed necessary actions. Copies of reviews are distributed to participants in the review sessions and are placed in the job packet. A design review can occur at the request of any Management Staff personnel.

Design and Development Verification (7.3.5)

Verification activities are performed in accordance with the Design Project Plan to ensure that the design and development outputs have met the design and development input requirements. Verification documentation is maintained in the respective job packet.

Design and Development Validation (7.3.6)

Validation is performed in accordance with the Design Project Plan to ensure the product(s) are capable of meeting the requirements for application and intended use. Results of validation tests performed internally or by the customer are maintained along with any necessary action in the job packet.

Control of Design and Development Changes (7.3.7)

The Project Manager reviews and approves any design changes and obtains customer approval when required by contract. The design and development change records are maintained for review and application. Changes are reviewed, verified and validated as necessary, and approved before incorporation. Design and development changes include consideration of impact to other constituent parts, systems, and existing products.

7.4 Purchasing

Suppliers are evaluated and purchase orders are placed with those that satisfy the requirements. Supplier quality performance is monitored and evaluated. Purchasing documents clearly and completely describe ordered products including any quality requirements. Purchasing documents are reviewed and approved prior to release. Purchased products are verified before they are used or shipped. Planet Tool is responsible for the quality of purchased products including product from suppliers designated by customers. When required by contract, suppliers are required to use customer approved special process

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sources.

Supplier evaluation (7.4.1)

New suppliers are evaluated with regard to their quality and process capability by Purchasing Coordinator and appropriate Management Staff. They establish the criteria for the selection of suppliers and conduct supplier evaluations. Records of supplier evaluations are maintained. Supplier selection and evaluation process is per PTP-7.4.1-01 Supplier Assessment and records are maintained per PTP-424-01 Control of Records.

Supplier quality performance monitoring (7.4.1)

The quality performance of suppliers is monitored periodically. Suppliers showing inadequate performance may be asked to implement corrective actions and if the requested corrective actions are not implemented or there is no improvement the supplier may be removed from the approve supplier database by Purchasing Coordinator.

Purchasing information (7.4.2)

The purchase order clearly and completely describes ordered products, including precise product identification and any quality requirements.

The preparation, review, and approval of purchasing documents are explained in PTP-7.4.2-01 Purchasing.

Verification of purchased product (7.4.3)

Receiving personnel verify purchased products for correct identity, quantity, damage and verification that all requested certificates and quality records are available. Designated products are further inspected or tested by Production or Quality Assurance personnel as applicable.

Project Manager or Quality Assurance is responsible for selecting appropriate methods for purchased product verification and acceptance; reference PTP-7.4.3-01 Verification of Purchased Product

When verification of the purchased product is to be performed at a supplier's premises, purchasing documents specify the intended verification arrangements and method of product release.

Customers will be provided the right to verify product at Planet Tool or a supplier when specified in the contract.

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Planet Tool periodically validates test reports for raw material randomly once year.

When Planet Tool delegates verification activities to a supplier they are defined on the PO and Planet Tool maintains a record of delegated verification requirements.

Verification by the customer shall not be used by Planet Tool as evidence of effective control of quality by the supplier and shall not absolve the organization of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by the customer.

7.5 Production and service provisions

Product and process information and appropriate work instructions are established and are communicated to relevant personnel. Operations and production processes are monitored and controlled, and are validated where appropriate. Machines and equipment used in production or for monitoring and measurement activities are maintained. Methods for product release and delivery are defined.

Production planning includes consideration for the following as applicable:

- The establishment of process controls and control plans when key characteristics have been identified
- Identification of in-process verification points when adequate verification of conformance can't be performed at a later stage of realization
- The design, manufacture, and use of tooling so that variable measurements can be taken, especially for key characteristics

Control of production and service provisions (7.5.1.a)

Information specifying product characteristics is communicated to production in the Work Order or Job Packet. Project Manager, Production, and/or Quality Assurance determine the scope, form, and distribution of product specifications, work instructions or provided verbally by supervisors.

Product release and delivery (7.5.1.f)

Product is released for delivery only after all specified activities have been satisfactorily completed and conformity of the product has been verified and signed off by authorized personnel on the Work Order.

Product accountability (7.5.1 g)

Information in the Job Packet provides accountability for all products during production e.g. part quantities and split orders.

Monitoring and control of utilities (7.5.1.j)

General Manager or designee monitors and controls utilities to the extent that

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they could affect product quality.

Criteria for workmanship (7.5.1.k)

Workmanship standards are provided when acceptability of the process output can only be determined by comparison with a standard sample.

Project Manager or Quality Assurance determines workmanship criteria and the method for communicating the criteria.

Production documentation (7.5.1.1), (7.5.1.2)

Production documentation is contained in the Job Packet and per PTP-7.5.1-01 Production and Service. Control of production process changes are also per PTP-7.5.1-01 and PTF-7.5.1-06 Authorized Personnel.

Production equipment (7.5.1.3)

The Shop Foreman or designee controls production equipment and performs periodic preservation or condition checks to assure production equipment or tooling is properly maintained. First Article inspection is utilized to validate production equipment, Ref. procedure PTW- 7.5.1-01 Equipment Maintenance.

Control of work transferred (7.5.1.4)

When work is temporarily transferred to an outside source Planet Tool defines the controls and validation requirements on the purchase order to define the quality of work required.

Control of service operations (7.5.1.5)

Section 7.5.1.5 a and d Control of Service Operations has been excluded per section I Scope. 7.5.1.5 b. Planet Tool does provide warranty activities at customer location when required. 7.5.1.5 c. Provides updated technical information when required by customer. 7.5.1.5 e. Warranty work done at the customer location is done by qualified personnel using applicable repair methods.

7.5.2 Validation of processes for production and service provisions

Section 7.5.2 has been excluded per section I Scope. At this time Planet Tool does not have any special processes.

7.5.3 Identification and Traceability

The production Work Order or other documents identify products during all stages of production. Parts and components may also be identified by labels or tags, or the containers in which they are held. Identification of the configuration of the product is maintained in order to identify any differences between actual and agreed to configuration: reference PTP-7.5.3-01 Identification & Traceability.

Completed product is identified by a part number or job number, which is labeled or marked on the product and/or is printed on the product container.

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A signature or initials on the print / inspection sheet identifies the in-process inspection status. Tagging, labeling, or holding products in designated containers may also identify the status.

Finished products are released after the Work Order is signed or initialed by authorized personnel at final inspection.

Products that fail any inspections or tests are identified with a red tag and are segregated and/or quarantined when practical. Whenever a nonconforming product is identified it is controlled per PTP-8.3.0-01 Control of Nonconforming Product.

When required by contract, traceability is implemented to the extent specified and necessary records will be per PTP-7.5.3-01 Identification & Traceability. Traceability may apply to materials, parts/components, equipment, inspection and testing, or personnel responsible for processing and verifying of products.

7.5.4 Customer property

When customer supplied product is received PTP-7.4.3-01 Verification of Purchased Product is used. In the event the customer supplied product fails receiving inspection, or is not suitable for any other reason the Project Manager or designee contacts the customer.

When specified by contract, special handling instructions from customers will take precedent over the company's standard packaging procedures.

In the event of loss, damage, or deterioration while at Planet Tool the Project Manager or designee contacts the customer. Records are maintained per PTP-4.2.4-01 Control of Records.

7.5.5 Preservation of product

Production personnel are responsible for product handling and preservation. Including ensuring that containers holding products are suitable and in good condition, equipment used for transportation of products is maintained and operated properly, and products are adequately protected during production and storage. For product provided to the aerospace industry special attention is placed on assuring the prevention, detection, and removal of foreign objects (FOD). Ref-Procedure PTP-7.5.5-01 Preservation of Product.

Storage (7.5.5)

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Control of storage, staging, and holding areas is the responsibility of the department in which the area is located. Only products that are properly identified and that have passed required inspections are authorized to enter and leave the storage areas.

Products with limited shelf life are identified with expiration dates. These products are also rotated in the storage areas to ensure that the oldest product is used first.

Packaging and labeling (7.5.5)

Product packaging and labeling are defined in the Work Order or by training.

Shipping and delivery (7.5.5)

The signed off Work Order initiates shipping of finished products. Before products are shipped, shipping personnel verifies that the shipment contains correct product, quantities as specified, packaging and labeling conform to customer and/or carrier requirements and documents required by the customer. Only orders that have been verified and signed off can be shipped.

7.6 Control of monitoring and measuring devices

Appropriate measuring and monitoring equipment is maintained and selected to ensure that measurement capability is consistent with the measurement requirements. Equipment used for assuring product conformity is calibrated using calibration standards traceable to a national standard. Measuring equipment is properly maintained and its placement and use are controlled. Reference PTP-7.6.0-01 Control of Monitoring and Measuring Devices.

Measurement identification and selection of equipment (7.6)

Gauges, instruments, and other measuring and monitoring equipment are selected on the basis of their capability to provide the necessary accuracy of the measurement. Quality Assurance is responsible for selecting appropriate measuring and monitoring equipment.

Equipment calibration and maintenance (7.6)

Quality Assurance is responsible for calibrating and maintaining measuring and monitoring equipment. Active equipment is inventoried on a controlled data base that indicates calibration status, frequency, and location. When applicable, measuring equipment is calibrated by a qualified supplier.

Only calibration instruments and standards having known relationship to nationally recognized standards are used for calibrating measuring and test equipment.

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Calibration data is recorded and the calibrated equipment is labeled with a calibration sticker. Calibration records are per PTP-4.2.4-01 Control of Records.

Validation of software (7.6)

In-house developed inspection, test, and monitoring software are validated before it is used for product assurance or verification. Commercial software is purchased with validation certificates where available. Software is revalidated or recertified when conditions for which it was initially validated are materially changed.

8.0 Measurement, analysis and improvement

Measurement and monitoring activities required to assure product conformity, and to achieve improvement, are planned and defined. When applicable, statistical techniques are used for analyzing measurement data.

General (8.1)

Measurement and monitoring activities to assure and verify product conformity are defined in specifications, drawings, production Work Order, inspection and testing procedures, and process control documents. These activities are further defined in Section 8.2, Monitoring and Measurement, and in various operational procedures referenced in other sections.

The conformity effectiveness of the quality system is monitored by internal audits. Effectiveness and continual improvement is measuring by quality performance, and customer satisfaction. Results of these activities are reported to the Management Staff and are used to identify opportunities for improvement.

Quality Assurance is responsible for identifying the applied measurement method including statistical techniques when applicable.

Monitoring and measurement (8.2)

Customer satisfaction is a prime objective of the quality system, and the level of customer satisfaction is an indicator of effectiveness of the system. Customer satisfaction is measured by collecting and analyzing direct customer feedback. Customer satisfaction data is used by the Management Staff to identify opportunities and set priorities for improvement.

Customer satisfaction (8.2.1)

Procedure PTP-7.2.3-01 Customer Feedback defines the methods for collecting and analyzing customer satisfaction and perception. Customer recognitions and ratings are considered an important input into determining customer satisfaction. The resulting information and data is provided at management review meetings.

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Project Managers or Management Staff receives information about product returns. The results and trends are reported and analyzed at management review meetings.

Internal audit (8.2.2)

The Management Representative establishes an internal audit schedule in accordance with procedure PTP-8.2.2-01 Internal Audits. Every activity and area of the QMS is audited at least once a year. Selected activities are audited more frequently depending on their importance and quality performance history. Internal Audits also meet contract and regulatory requirements.

Audit team and preparation for audit (8.2.2)

Auditors prepare for audits by reviewing applicable standards, internal procedures, quality records, and establishing questionnaires and checklists.

Conducting the audit (8.2.2)

Audit findings are documented and recorded using PTF-8.2.2-01 Internal Audit Report form. These audit reports provide evidence of the effectiveness of the internal audit process and the tools used are appropriate.

Areas of the QMS that are acceptable are also indicated to provide evidence the system is implemented and is effective.

Corrective action and follow up (8.2.2)

When nonconforming quality systems conditions are identified a member of the Management Staff is assigned responsible for implementing corrective action. The implementation and the effectiveness of the corrective actions are verified by a follow-up audit utilizing PTP-8.5.2-01 Corrective Action procedure.

Reporting (8.2.2)

Audit report results are presented at management review meeting ref PTP-5.6.0-01 Management Review. These audit reports are maintained as records per PTP-4.2.4-01 Control of Records.

Monitoring and measurement of processes (8.2.3)

The quality system processes are monitored by methods appropriate for a particular process and its relative importance. These methods demonstrate the ability of the processes to achieve planned results. Should a process have a nonconformity the following are evaluated:

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- Taking appropriate action to correct the nonconforming process per PTP-8.5.2.01 Corrective Action.
- Evaluate whether the process nonconformity has resulted in a product nonconformity.
- Identifying and controlling nonconforming product per PTP-8.3.0-01 Control of Nonconforming Product.

Monitoring and measurement of product (8.2.4)

Planet Tool monitors and measures product characteristics to verify product requirements have been met during appropriate stages of production. When Key Characteristics are identified they are monitored and controlled as defined in the Work Order, Inspection Sheet, Drawing or Specification.

When Planet Tool utilizes sampling inspection for product acceptance the sampling plan shall be statistically valid and appropriate. The plan will preclude the acceptance of lots whose samples have shown nonconformities. When required, the sampling plan shall be submitted for customer approval.

Product will not be used until it has been verified as conforming to requirements unless it is released under positive-recall pending completion of all required measurements and monitoring activities.

The results of inspections and tests are recorded in the Work Order, Inspection Sheet or test records. The filing and maintenance of these documents are per PTP-4.2.4-01 Control of Records.

When a demonstration of product qualification is required by the customer records will be provided as evidence that product meets defined requirements.

Reference procedure PTP-8.2.4-01 Monitor-Measure Product

Product release (8.2.4)

Products are released for delivery only after all specified inspection activities have been satisfactorily completed and conformity of the product has been verified. Only personnel performing final product inspections and tests have the authority to release products by their signature or initials in the Work Order, which becomes a record of release authorization. When applicable, the customer can also authorize release of product and a record of their authorization is maintained.

Inspection documentation (8.2.4.1)

The Work Order identifies criteria for acceptance, where the measurement/test is performed in the production sequence, results, and type of measurement

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instrument is noted and any specific instructions for its use.

First Article Inspection (8.2.4.2)

The first run of a new part or following any subsequent change is verified by a First Article Inspection as defined in PTP-7.5.1-01 Control of Production.

8.3 Control of nonconforming product

Nonconforming product is identified, documented, evaluated, and prevented from being used or shipped. Repaired or reworked products are reinspected to verify conformance to requirements. Appropriate actions are taken when product nonconformity is identified after delivery. When appropriate, corrective and preventive actions are implemented to prevent recurrence and occurrence of nonconformities. Reference procedure PTP-8.3.0-01 Control of Non Conforming Product

Project Manager shall provide timely reporting of delivered nonconforming product to customers or regulatory authorities that may affect reliability or safety. Notification shall include a clear description of the nonconformity, parts affected, customer or organization part numbers, quantity, and date(s) delivered.

Identification and documentation (8.3)

Nonconforming products are documented per PTP-8.5.2-01 Corrective Action. It describes the nonconformity, documents the disposition decision, and records closeout of follow-up activities (re-inspection, concessions, corrective actions, etc.).

To prevent nonconforming products from being used or shipped, the nonconforming product is marked with a red tag and is segregated when practical; reference PTP-8.3.0-01 Control of Nonconforming Product.

Re-verification of repaired or reworked product (8.3)

Repaired or reworked products are re-inspected in accordance with customer requirements.

Records (8.3)

Information concerning the nonconformity and subsequent actions taken are per procedure PTP-8.3.0-01 Control of Nonconforming Product and PTP-4.2.4-01 Control of Records.

Product returns and recalls (8.3)

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When the customer detects product nonconformity after delivery the customer is provided disposition of the product by a Project Manager or designee.

When product nonconformity is detected by Planet Tool after delivery has been made customer is informed by a Project Manager and instructed on what actions to take. Notification includes description of nonconformity, parts affected, quantity and dates delivered. In situations when the nonconformity may create a safety or other serious hazard, the product may be recalled.

8.4 Analysis of data

Information and data is collected, compiled and analyzed as required to evaluate the suitability and effectiveness of the QMS and for identifying opportunities for continual improvement and preventative action.

The Management Representative is responsible for coordinating these activities, and Management Staff is responsible for reporting any conclusions and trends at management review meeting, reference PTP-5.6.0-01 Management Review.

8.5 Improvement

Improvement opportunities are identified by analyzing quality performance data and information. Improvement projects are defined and implemented through the system of corrective and preventive actions and management review actions.

Continual improvement (8.5.1)

The QMS effectiveness is evaluated during management reviews. This includes reviewing the quality policy, quality objectives, audit results, analysis of data, corrective and preventative actions. Based on this review the Management Staff identifies specific improvement actions to continually improve the QMS ref PTP-8.5.1-01 Continual Improvement.

Corrective action (8.5.2)

The need for corrective action is based on an identified nonconformity and evaluating the effect of the nonconformity and need for corrective action to ensure that nonconformity does not recur. Corrective action requests are typically triggered by such events as a failed inspection, customer complaint, product return, supplier nonconformity, or a quality system audit finding; reference PTP-8.5.2-01 Corrective Action and PTP-8.2.2-01 Internal Audit.

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Preventive actions (8.5.3)

The need for preventive action is based on information and data regarding capability and performance of processes, product nonconformity rates, post-production experience feedback, customer complaints, and quality system audit findings. Such information and data are collected and analyzed to detect unfavorable trends that, if not checked, will increase the risk of nonconformities. The system for collecting and analyzing quality performance information and data is defined in PTP-8.5.3-01 Preventive Actions.

V Revisions

- Rev A. 01/10/2009 Original release
- Rev B 01/19/2009 Revised Section I Scope and Exclusions, 4.1 flow chart, 7.5.1.1, 7.5.1.5, 7.5.3
- Rev C 1/21/2009 Revised 7.5.1.3