

QUALITY ASSURANCE MANUAL

“QAM”

AS9100D

JPM OF MISSISSIPPI, INC.

Hattiesburg, MS

Revision H

Effective Date: 11-13-2017

Rev- E __MRM to a minimum of once per year. (7/9/09)

Rev- F __ Changed Quality Manager Name. (4/18/13)

Rev- G __ Added provisions for AS9100C. (10/12/15)

Rev-H__ Re-constructed for AS9100D std. (7/5/17)

Rev-I__ Updated Clause 8.4.3 and 10.2 (11/13/17)

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0.2 Quality Management Principles

JPM has adopted and realizes the benefits of Quality Management principles into our daily activities. The intent of the Quality Management principles is to provide a foundation to continually improve upon the Company’s performance. Subsequent sections of the QMS Manual will provide our commitments of the following QMP elements:

- Customer focus;
- Leadership;
- Communications and the engagement of our people;
- Process approach;
- Improvement;
- Risk & opportunity as well as evidence-based making;
- Relationship management.

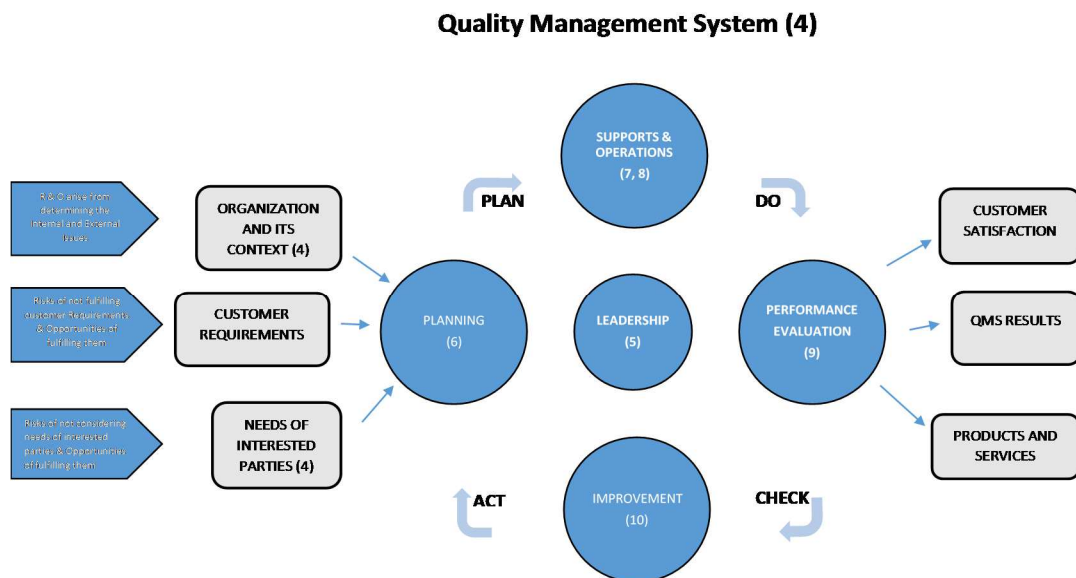
0.3 Process Approach

JPM has adopted the “Process Approach” into our daily operations including the PDCA Cycle. We have considered the utilization of Risk-Based Thinking Philosophy when developing, implementing, and improving the effectiveness of our Quality Management System. This approach will enable JPM to enhance the overall performance of the Company by the effectively controlling the interrelationships and the interdependencies among the QMS processes.

The implementation of the “Process Approach” in our QMS enables:

- The understanding and consistency with achieving customer specific requirements;
- The consideration of our processes in terms of added value;
- The achievement of effective process performance;
- Improvement of our processes based on the evaluation of data and information

0.3.2 Plan-Do-Check-Act-Cycle



0.3.3 Risked-Based Thinking

The implementation of risk-based thinking is an essential tool for achieving and maintaining an effective QMS. JPM plans and implements various actions to address risks and opportunities to maximize the outcomes including, but not limited to achieving improved results and preventing negative effects of our product and QMS.

1.0 Scope

JPM is currently in compliance with ISO 9001:2015, SAE AS9100 Revision “D” (**with exclusion for section 8.3 Design Activity from both standards**), customer, and all applicable statutory and regulatory requirements. The justification for these exclusions are that JPM only manufactures products to customer requirements. It does not market, control, test, or determine effectiveness for the product. Procedures and necessary documentation for implementing the Quality Management System (hereafter referred to as QMS) are established and dictated by the complexity of the process and product design.

The quality system described in this manual has been adopted by JPM to support our ability to consistently provide product that meets customer and applicable statutory and regulatory requirements. This manual is used externally to introduce our QMS to our customers and other external organizations or individuals. The manual is used to familiarize them with the controls that have been implemented and to assure them that the integrity of the QMS is maintained and focused on customer satisfaction and continuous improvement.

This manual is used internally to guide JPM through the various requirements of AS9100 standard that must be met and maintained in order to ensure customer satisfaction, continuous improvement and provide the necessary instructions that create an empowered work force.

2.0 Normative References

- ISO 9000:2015 Quality Management Systems- Fundamentals and Vocabulary
- ISO 9001:2015 Quality Management Systems- Requirements

3.0 Terms and Definitions

Terms and definitions given in the latest ISO 9001 Standard are applied to this manual in addition to the terms and definitions below.

- Top Management – person or group of people who direct and control an organization at the highest level.
- Product – Output of an organization that can be produced without any transaction between the organization and the customer.
- Service – Output of an organization that can be produced with at least one transaction between the organization and the customer.
- Quality Records – Documentation of those activities wherein records of said activities must be maintained will be specified in the procedure or work instruction level documents, as applicable.
- Nonconforming Product – product that fails to meet a requirement. This includes product returned from customers.

3.1 Counterfeit Part

An unauthorized copy, imitation, substitute, or modified part (e.g., material, part, component), which is knowingly misrepresented as a specified genuine part of an original or

authorized manufacturer. Note: Examples of a counterfeit part can include, but are not limited to, the false identification of marking or labeling, grade, serial number, data code, documentation, or performance characteristics.

3.2 Critical Items

Those items (e.g., functions, parts, software, and characteristics, process) having significant effect on the provision and use of the products and services; including safety, performance, form, fit, function, producibility, service life, etc.; that require specific actions to ensure they are adequately managed. Examples of critical items include safety critical items, fracture critical items, mission critical items, key characteristics, etc.

3.3 Key Characteristics

An attribute or feature whose variation has a significant effect on product fit, form, function, performance, service life, or producibility, that requires specific actions for the purpose of controlling variation.

3.4 Product Safety

The state in which a product is able to perform to its designed or intended purpose without causing unacceptable risk of harm to persons or damage to property.

3.5 Special Requirements

Those requirements identified by the customer, or determined by the organization, which have high risks of not being met, thus requiring their inclusion in the operational risk management process. Factors used in the determination of special requirements include product or process complexity, past experience, and product or process maturity. Examples of special requirements include performance requirements imposed by the customer that are at the limit of the industry's capability, or requirements determined by the organization to be at the limit of its technical or process capabilities.

4.0 Context of the Organization

4.1 Understanding the Organization and its Context

To understand the Organization and its Context, JPM has determined relevant external and internal issues and items that may become relevant to the company's purpose and strategic direction, and may affect our ability to achieve the intended results of the QMS. These issues are documented and maintained in QMS-2. These issues are reviewed at each management Review Meeting and actions are taken as needed.

4.2 Understanding the Needs and Expectations of Interested Parties

The effect or potential effect on our organizations ability to consistently provide product and services that meet our customer and applicable statutory and regulatory requirements, JPM has determined the following:

- The interested parties relevant to the QMS;
- The requirements of the identified interested parties relevant to the QMS;

The need and expectations of the these interested parties are documented in QMS-3.

JPM is committed to continually monitoring, reviewing and analyzing information and relevant requirements of the interested parties to assure their requirement are effectively managed in the QMS.

4.3 Determining the Scope of the Quality Management System

JPM has determined the boundaries and the applicability of the QMS and how it relates to our Business Core Competency. JPM is committed to applying all applicable requirements of the International Standard to the intent and Scope of our QMS.
 The scope of our QMS shall always be available to internal and external parties and maintained as documented information.

The QMS was determined, designed and implemented to cover and support the following Scope:

- The Manufacturing of Bearing Separators, Retainers, and Components

Exclusion of the QMS

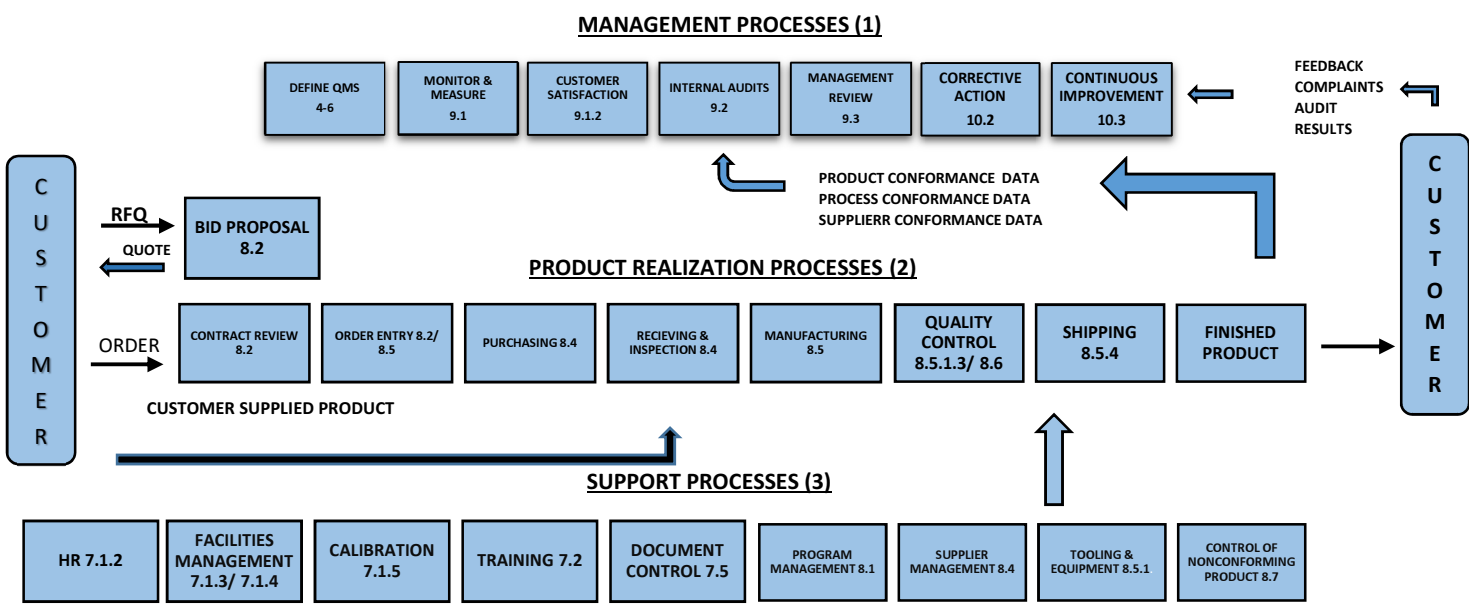
(8.3)- Design and Development of Products and Services.

JPM does not perform design activities therefore; the fulfillment to the requirements of this Clause are not applicable to our QMS.

4.4 Quality Management System and Its Processes

JPM has established, documented and implemented our Quality Management System in accordance with the requirements of ISO 9001:2015 and AS9100 D. The QMS is maintained and continually improved through the use of the Quality Policy, Quality Objectives, audit results, analysis of data, corrective actions and management review. JPM utilizes Quality Procedures (QP) and Work Instructions (WI) to provide our employees and external providers (Suppliers), with detailed “How To” instructions and requirements. The documents support the achievement of quality compliance for each of the process steps. We retain Quality Forms which provide documented information substantiating the process inputs and outputs have been accomplished as planned.

INTERACTION OF QMS



5.0 Leadership

5.1 Leadership and Commitment

5.1.1 General

Top Management is actively involved in implementing the QMS, and is accountable for its overall effectiveness. Management has initiated and fully supports the vision and strategic direction for the continued sustainability and enhancement of the QMS.

To demonstrate their leadership and commitment with respect to the QMS, Top Management:

- Has established the Quality Policy and the Quality Objectives that are compatible with the vision and strategic direction for JPM;
- Supports the continually improvement of the effectiveness of the QMS;
- Ensures that the QMS achieves its intended results;
- Ensures resources are available for the QMS that are needed;
- Provides direction to the integration of the QMS requirements into each business process of the organization;
- Is committed to promoting the use of the Process Approach and Risk-Based Thinking;
- Is committed to the engagement and motivation of our employees throughout our QMS;
- Supports other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility;
- Communicates the importance of effective quality management and of conforming to the quality management system requirements throughout JPM;

5.1.2 Customer Focus

JPM recognizes that customer satisfaction is the key to continued success. The QMS provides for the identification of, and compliance to, customer and applicable statutory and regulatory requirements as well as identifying risks and opportunities that the conformity of the products. Top Management ensures that product conformity and on-time delivery performance are measured and that appropriate action is taken if planned results are, or will not, be achieved. These results are achieved through such activities as contract review, quality planning, and process control and proactive inspection techniques.

JPM will always look to use the latest technologies, materials, and equipment available, with an emphasis placed on value-added processing, maximizing efficiency, and optimized process performance. Commitment of resources for both product realization and capital improvements are made, with a focus on

enhancement of customer satisfaction with superior service and improved quality conformity, with reduced cost and cycle times.

5.2 Policy

5.2.1 Establishing the Quality Policy

The Quality Policy is a commitment by the Top Management of JPM and provides the framework for setting quality objectives, satisfying applicable requirements and supporting the Company's commitment for continual improvement of the QMS. The Quality Policy is appropriate to the purpose and context of the company and supports its strategic direction.

5.2.2 Communicating the Quality Policy

Top Management ensures that the quality policy is communicated to all interested parties. It is included in the new employee training on the QMS to ensure it is understood and applied. The Quality Policy is detailed in QMS-4 and is posted in prominent places throughout the facility to maintain high standards within our organization. Any changes to the quality policy will be communicated to all employees and interested parties.

5.3 Organizational roles, responsibilities and authorities

The Organization Chart detailed in QMS -6 has been established to provide the interrelation and reporting structure of personnel within the organization. JPM's top management has appointed the Quality Assurance Manager as the Management Representative (MR) to oversee and manage the overall effectiveness and compliance of the QMS.

The Management Representative has the following responsibility and authority to:

- Ensure QMS conforms to the requirements of international standard AS9100 Rev. D;
- Ensure interaction of processes and their ability to achieve planned results;
- Report to top management on the results achieved by the QMS, possibilities for improvements and the needs of changes or innovations;
- Maintain QMS integrity when planning and implementing changes;
- Act as a liaison with external parties such as customers or auditors on matters relating to the QMS;
- Resolve all matters pertaining to quality issues.

The Quality Management Representative has the organizational freedom and unrestricted access to resolve matters pertaining to Quality Management System as well as to be the Company liaison with external parties, including our customers and vendors on all matters relating to the QMS.

6.0 Planning

6.1 Actions to Address Risks and Opportunities

When planning our QMS, JPM has taken into consideration potential issues and has determined the risks and opportunities that need to be addressed to:

- Provide assurance that the QMS can achieve its intended result;
- Enhance desirable effects;
- Prevent, or reduce, undesired effects;
- Achieve improvement;

JPM has planned actions to address the above risks and opportunities and has initiated appropriate procedures to integrate and implement appropriate actions into our QMS including the evaluation of the effectiveness our QMS processes.

Any actions taken to address risks and opportunities shall be proportionate to the potential impact on the conformity of products and services.

6.2 Quality Objectives and Planning to Achieve Them

6.2.1 Establishing Quality Objectives

Quality Objectives have been established by JPM to implement the quality policy, meet and exceed requirements for product and processes, and to improve the QMS and its performance. The Quality Objectives are detailed in QMS-5 and are posted in prominent places throughout the facility. JPM retains documented information on the status of our quality objectives. If shortfalls are identified, management may revise objectives, issue corrective action requests, or take other appropriate actions to address the issue.

6.2.2 Quality Objective Planning

Quality Objectives are measurable targets for improving operational performance to ensure process conformity and customer satisfaction. They apply to all departments and functions having direct responsibility for activities that require improvement. Performance objectives and goals are established by management and through employee involvement and monitored within the framework of management reviews.

6.3 Planning of Changes

When changes to the QMS are deemed necessary, JPM shall ensure the change will comply with the requirements of AS9100 Rev. D and shall consider:

- The purpose of the changes and their potential consequences;
- The integrity of QMS;
- The availability of resources;
- The allocation or reallocation of responsibilities and authorities.

7.0 Support

7.1 Resources

7.1.1 General

JPM is fully committed to providing adequate resources required for the establishment, implementation, maintenance and continual improvement of our QMS. Our committed resources include:

- Competent employees;
- State of the industry equipment;
- Well maintained work environment;
- And financial resources.

The process for determining and communicating resource requirements is an integral part of our management review process. Our infrastructure resource considerations include:

- Management review meeting inputs and outputs;
- Capabilities and constraints on existing internal and external resources;
- Requirements and expectations provided by our external providers/
vendors

7.1.2 People

JPM identifies personal 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. Records of personnel qualifications and training are maintained.

7.1.3 Infrastructure

JPM determines, provides, and delegates the maintenance to Maintenance Personnel or outside services to maintain the infrastructure needed to achieve conformity to product requirements as applicable. Our infrastructure resource considerations include:

- Buildings, workspace and associated utilities;
- Equipment including hardware and software;
- Transportation resources;
- Information and communication technology.

As new infrastructure requirements are determined to be necessary, they will be documented in quality plans and other documents as required.

7.1.4 Environment for the Operation of Processes

Management identifies and manages the human and physical factors of the work environment considered to be important to control processes and to achieve conforming of products and services. Evaluations included:

- Assessment of product requirements to identify where human and/ or physical factors will affect product quality this is also conduct during advanced product quality planning;
- Assessment of current working environment conditions to determine if the work environment is suitable to achieve conforming product;
- Implementation of work environment improvements needed to achieve conforming product;
- Continual assessment of work environment to ensure that adequate human and physical factors are maintained.

7.1.5 Monitoring and Measuring Resources

7.1.5.1 General

JPM has determined the necessary monitoring, measurement and resources to be initiated across our QMS. The structure of internal resources includes but is not limited to:

- Monitoring and measuring equipment;

- Routine maintenance and repair of equipment;
- Documented procedures and forms;
- Competent and qualified personnel.

7.1.5.2 Measurement Traceability

JPM's calibration system is designed to ensure that monitoring and measuring equipment requiring calibration or verification is:

- Calibrated or verified, or both, at specified intervals, or prior to use, using standards traceable to international or NIST measurement standards, or other documented standards when no international or NIST standards exist;
- Adjusted or re-adjusted as necessary;
- Have clear identification in order to determine its calibration status and dates for recertification;
- Safeguarded from adjustments that would invalidate measuring results;
- Protected from damage and deterioration during use, maintenance and storage.

JPM maintains records of the results of calibration and verification performed. The calibration procedure provides for the assessment of product validated for acceptance, using measuring equipment found to be out of acceptable calibration range. The review and actions taken on the equipment and any affected product is documented.

7.1.6 Organizational Knowledge

JPM considers the specific knowledge necessary for each operation and considers this as an important resource to ensure our people and processes are consistent and will achieve conformity of the product and services provided by the Company. Specific organizational knowledge is defined, maintained and available to the extent necessary within appropriate procedures.

7.2 Competence

JPM has determined to the extent necessary the below elements of competence for people performing work that may affect the effectiveness of the QMS.

- Ensure employees are competent on the basis of their education, training and experience;
- Initiate job descriptions including specific competency provisions;
- Measure job performance for each employee on an annual basis;
- Provide job and career training programs to the extent necessary;
- Retain appropriate documented information as evidence of competence;
- Take actions when necessary to assist employees that exhibit less than desirable results.

7.3 Awareness

JPM has determined to the extent necessary persons performing work are aware of:

- The Quality Policy;

- The Quality Objectives;
- The QMS and any changes thereto;
- Their contribution to the QMS effectiveness, including improved performance;
- The implications of noncompliance to our QMS requirements;
- Their contribution to product or service conformity;
- Their contribution to product safety;
- The importance of ethical behavior.

7.4 Communication

Communication occurs throughout the company about the importance of fulfilling customer, legal and regulatory requirements. That communication happens through the use of: general and product specific training or retraining when and where shortfalls appear. Displays and postings of customer communications and/ or scored data, JPM meetings, memos and/ or emails, Quality Policy and Quality Objectives, management review records within the company in high traffic areas of the facility. JPM ensures the availability of resource as required by customer requirements (as determined through contract review), company policies, or AS9100 requirements.

The performance of the QMS is shared throughout JPM by meetings, memos or data generated concerning topics of the QMS. These items may include as applicable; Top Management hosted meetings, internal and/ or customer reject reports, customer scorecards, continual improvement plans, preventive actions or any other data relevant to the performance of the QMS.

JPM has determined and implemented effective arrangements for communicating with customers and suppliers in relation to: Product information, enquires, contracts or other handling, including amendments and customer feedback, including customer complaints through the use of corrective and/ or preventive actions when required, or by means of reports, or memos noting the customer concern and the response required.

7.5 Documented Information

While considering the size of our organization, the complexity and interaction of the processes and the competency of our workforce, we chose to include the following documentation in our QMS:

- This Quality System Manual including the statements of our Quality Policy and Quality Objectives;
- Documented procedures and records as required per AS9100.
- Documents and records needed by JPM to ensure the effective planning, operation and control of its processes.

7.5.1 Creating and Updating

When creating and updating documented information JPM ensures the following:

- The identification and description (revision date, approval etc.);
- The format and media (electronic, paper hard copy etc.);
- The review and approval for suitability and adequacy.

-Approval implies authorized persons and approval methods are identified for the relevant types of documented information, as determined by JPM.

7.5.2 Control of Documented Information

Documented information required to support the effectiveness of our QMS is controlled to ensure:

- It is available and suitable for use, where and when it is needed;
- It is adequately protected from loss of confidentiality, improper use, or loss of integrity.
- Distribution, access, retrieval and use;
- Storage and preservation, including preservation of legality;
- Control of changes;
- Retention and disposition;
- Prevention of the unintended use of obsolete documented information by removal or by application of suitable identification or controls if kept for any purpose.

Documented information of external origin determined to be necessary for the planning and implementation of the QMS is identified as appropriate and controlled in accordance with Quality System procedures and Forms. Documented information retained as evidence of conformity shall be protected to prevent unauthorized changes and unintended alteration. Only the Vice President, Quality Manager and Top Management Representatives are to have access to the password with no restrictions. All other personnel can only view the files. All electronic files are backed up on a scheduled basis to a secure off-site location.

8.0 Operation

8.1 Operational Planning and Control

JPM defines the expectation and implements controls for each of our QMS processes. The planning of controls is required to ensure consistent acceptability of products and services. Planning processes include the definition of quality objectives, development for required processes, establishment for appropriate verification programs and the requirement for records necessary to demonstrate the process and products conform to intended requirements. Operational planning and control is required prior to new and/ or revised products or processes being implemented. During the planning phase, management will identify:

- Requirements for the products and services including the consideration of:
 - Personal and product safety;
 - Producibility and inspectability;

- Reliability, availability, and maintainability;
- Suitability of parts and materials used in the product;
- Selection and development of embedded software;
- Product obsolescence;
- Prevention, detection, and removal of foreign objects;
- Handling, packaging, and preservation;
- Recycling or final disposal of the product at the end of its life.
- Criteria for the processes and the acceptance of products and services, including statistical techniques that can be used to support:
 - Design verification (e.g., reliability, maintainability, product safety);
 - Process control;
 - Selection and verification of key characteristics;
 - Process capability measurements;
 - Statistical process control;
 - Design of experiments;
 - Verification;
 - Failure mode, effects, and critically analysis.
- Resources needed to achieve conformity to the product and service requirements and to meet on-time delivery of products and services;
- Control of the processes in accordance with the criteria;
- Documented information to the extent necessary to have confidence that the processes have been carried out as planned and to demonstrate the conformity of products and services to their requirements.
- Determining the processes and controls needed to manage critical items, including production process controls when key characteristics have been identified;
- Engaging representatives of affected organization functions for operational planning and control;
- Determining the process and resources to support the use and maintenance of the products and services;
- Determining the products and services to be obtained from external providers;
- Establishing the controls needed to prevent the delivery of nonconforming products and services to the customer.

As appropriate to the organization, customer requirements, and products and services, JPM plans and manages product and service provision in a structured and controlled manner including scheduled events performed in a planned sequence to meet requirements at acceptable risk, within resource and schedule constraints.

JPM has established, implanted and maintains a process to plan and control the temporary or permanent transfer of work (e.g., from on JPM facility to another, from this organization to a supplier, or from one supplier to another). Definition of work to be performed per the specific work transfer is documented via a JPM purchase order.

Control over work transfers and validation of the conformity of the requested work process by the outside source will be performed in accordance with JPM through receiving inspection work instruction.

8.1.1 Operational Risk Management

JPM conducts a review of requirements related to the product during contract review. Risk is assessed during this review and any task deemed necessary is assigned. Task are inserted into the work order router and responsible personnel identified when remaining risks are accepted; the job is identified for tracking.

8.1.2 Configuration Management

JPM uses an ERP system, GSS software for complete integration of all information required through all phases of operation. The standard process router serves as the documentation vehicle to identify process and product configuration and controls. QP-8

8.1.3 Product Safety

During the planning phase, JPM has defined the criteria required to control the processes needed to assure product safety during the entire product life cycle, as appropriate to the organization and the product. These criteria are implemented through the instructions provided on the work orders generated from our ERP system. Any event which affects the safety of the product or the employee in regards to the product is reviewed by Top Management and new safeguards are determined and implanted, with all documentation updated and training provided to affected personnel to communicate the changes.

8.1.4 Prevention of Counterfeit Parts

JPM has planned and implemented controls in our purchasing process to ensure the prevention of counterfeit parts/materials use and their inclusion in products delivered to the customer. JPM uses only Material and Services from JPM's Approved Vendor list or our Customer's Approved Vendors list.

8.2 Requirements for Products and Services

8.2.1 Customer Communication

JPM has determined and implemented effective arrangements for communicating with customers in relation to: Product information, enquires, contracts or orders, including amendments, customer feedback, including customer complaints, and handling or controlling customer property. The Quality department coordinates any contingency actions that may arise.

8.2.2 Determining the Requirements for Products and Services

During contract review at the Request-for –quote stage potential projects are checked to determine requirements applicable to the product including:

- Requirements specified by the customer, including any special requirements for delivery and post-delivery applications.
- Requirements not stated by the customer but necessary for intended use, where known.
- Any statutory and/ or regulatory requirements applicable to the product.
- Any additional requirements that JPM may consider necessary.

8.2.3 Review of Requirements Related to the Product

JPM ensures we have the ability to meet the requirements for products and services to be offered to customers. Management conducts a contract/ product review prior to committing to supply products and services to a customer. The review process at a minimum includes:

- All product requirements are defined.
- Any requirement on the current contract that differ from those previously expressed to JPM are resolved.
- JPM has the ability to meet the defined requirements.
- Any special requirements have been determined.
- JPM at this time also evaluates any risk associated with the contract in regard to subjects such as delivery schedules, new technologies and manufacturability.

If, upon completion of the review, JPM determines that some customer requirements cannot be met or can only partially be met, JPM shall negotiate a mutually acceptable requirement with the customer. JPM ensures contracts, purchase orders or other requirements differing from those previously defined, are reviewed and approved prior to incorporating into our business systems. We retain applicable documented information of the initial review and on any new/ revised customer or applicable external party requirements for the products and services provided as part of the documentation for the customer in accordance with our documentation retention procedure.

8.2.4 Changes to Requirements for Products and Services

JPM ensures that relevant document information is amended, and that relevant persons are made aware of the changed requirements, when the requirements for products and services are changed.

8.3 Designed and Development of Products and Services

8.4 Control of Externally Provided Processes, Products, and Services

All purchased materials and services for the manufacture of product will require written purchase orders. These will clearly describe quantities, part number and description of the purchased materials and are subject to JPM specification and verified to ensure that it meets purchase requirements.

JPM is responsible for the conformity of all purchased product including products from sources defined by the customer.

Suppliers or Subcontractors shall be selected by JPM on the basis of their ability to meet our needs or from sources defined by the customer.

JPM may choose to conduct an on-site survey of any supplier and reserves the right to audit a qualified supplier at any time.

JPM supplier survey is designed to assess the effectiveness of the supplier's quality system and operations. JPM will also use other methods for determining a supplier's ability to meet our needs, such as tracking of on time delivery performance, and rejection history of nonconforming product. All information provided by suppliers will be reviewed by JPM to identify which improvements need to be made prior to becoming an approved supplier. Supplier surveys and supplier documentation shall be maintained on file and will be updated periodically. The frequency of supplier audits is dependent upon the supplier's ability to meet contractual or purchase order requirements.

When JPM feels that quality or performance level of a customer specified supplier is substandard, we will notify our customer in writing. Where nonconformance continues to be identified with no evidence of corrective action, JPM will recommend disapproving the supplier for future business. JPM purchasing department maintains a register of all suppliers classified as Approved, Conditionally Approved and Disapproved. The Purchasing procedures detail the extent of controls on these suppliers, the purchased product as well as the process, responsibilities and authority of approval status decision, changes of approval status and the controlled use of suppliers based on their approval status.

8.4.2 Type and Extent of Control

The type and extent of control required to be applied on the purchase product would depend on the effect of the purchased product on the subsequent product realization of the end product.

Purchased products are subject to inspection in accordance with Inspection and Testing procedures and Receiving Inspection work instructions to ensure purchase order requirements are met prior to release for use. Activities to verify conformance may include:

- Obtaining objective evidence of quality conformance from the supplier, such as inspection documentation, certificates of conformity, test reports and/ or record of statistical process control.
- Inspection and audit at supplier's facilities.
- Review and acceptance of required documentation.
- Inspection of product upon receipt.
- Certifying supplier as a delegate to determine verification of product or processing conformity. Test report data is verified against applicable specifications when used for applicable acceptance. Periodic third-party testing is performed on raw materials to verify accuracy of supplied test reports in accordance with Receiving Inspection work instructions. JPM will accommodate contract requirements by our customers to access our facility or our supplier's facilities, as needed to verify product conformance.

Unless otherwise authorized by our customers, any acceptance validation by customers is not used by JPM as primary evidence of effective control of quality at this organization or our suppliers, nor considered to negate our responsibility to provide acceptable product or our customer's right to later reject any product found to be nonconforming.

Where purchased product is released for production use pending completion of all required verification activities, it shall be identified and recorded to allow recall and replacement if it is subsequently found that the product does not meet requirements. If JPM elects to delegate acceptance authority to a supplier in the future, the requirements for that delegation shall be defined and a register of delegations shall be maintained.

8.4.3 Information for External Providers

All purchased materials and services for the manufacture of product will require purchase orders which are generated in our ERP system by designated individuals in our company. Purchasing documents are reviewed for adequacy and approved by purchasing personnel prior to release. These will clearly describe quantities, part number and description of the purchased materials and are subject to JPM specification and verified to ensure that it meets purchase requirements.

Purchasing information describes the product to be purchased, including where appropriate:

- Requirements for approval of product, process and equipment;
- Requirements for qualification of personnel;
- Competence, including any required qualification of persons;
- Special requirements, critical items, or key characteristics;
- Test, inspection, and verification (including production process verification);
- The use of statistical techniques for product acceptance and related instructions for acceptance by the organization;
- QMS requirements outlined in the Purchasing procedure.
- Need to implement a QMS;
- Need to use customer-designated or approved external providers;
- Need to notify JPM of non-conforming processes, products, or services and obtain approval for their disposition;
- Need to prevent the use of counterfeit parts;
- Need to notify JPM of changes to processes, products, or services, including changes of their external providers or location of manufacture, and obtains JPM's approval;
- Need to retain documented information, including retention periods and disposition requirements;
- The right of access by JPM, our customers, and regulatory authorities to the applicable areas of facilities and to applicable documented information, at any level of the supply chain;

- Ensuring that their employees are aware of their contribution to product or service conformity, their contribution to product safety, and the importance of ethical behavior.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

JPM plans and carries out production provisions under controlled conditions.

Planning considers, as applicable:

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

Controlled conditions included, as applicable:

- The availability of information that describes the characteristics of product;
- The availability of work instructions. These work instructions can include flow charts, production documents (e.g., manufacturing plans, routers, work orders) and inspection documents;
- The use of suitable equipment;
- The availability and use of monitoring and measuring devices;
- The implementation of monitoring and measurement;
- The implementation of release, delivery and post-delivery activities;
- Accountability for all product during manufacture (e.g., parts, quantities, split orders, nonconforming product), part accountability to ensure nonconforming parts have identified and permanently destroyed;
- The control and monitoring of identified critical items, including key characteristics, in accordance with established processes;
- Evidence that all manufacturing and inspection operations have been completed as planned, or as otherwise documented and authorized;
- The determination of methods to measure variable data (e.g., tooling, on-machine probing, inspection equipment);
- The identification of in-process inspection/ verification points when adequate verification of conformity cannot be performed at later stages;
- Provisions for the prevention, detection and removal of foreign object (FOD);
- Monitoring and control of utilities and supplies such as water, compressed air, electricity and chemical products to the extent the affect product quality and criteria for workmanship, which **shall** be stipulated in the clearest practical manner (e.g., written standards, representative samples or illustrations).

- The identification and recording of products released for subsequent production use pending completion of all required measuring and monitoring activities, to allow recall and replacement if it is later found that the product does not meet requirements

8.5.1.1 Control of Equipment, Tools and Software Programs

Production equipment, tools and software programs used to automate and control/ monitor product realization processes are validated prior to release for production, maintained and inspected periodically.

Production equipment is validated prior to production (e.g. verification of the first article produced to customer specifications). Tools are validated prior to use in production and tooling in storage is checked periodically for preservation and condition.

8.5.1.2 Validation and control of Special Processes

Any process output that cannot be verified by subsequent monitoring or measurement may result in deficiencies becoming known only after the product is in use or the service has been delivered. When required by contract, JPM ensures that special processes utilized in production of product, where resulting output cannot be verified by subsequent monitoring or measurement, are validated via supplier qualification based on statutory and/ or regulatory agency and/ or customer approval. These would typically be suppliers qualified by Nadcap under defined criteria for review and approval, with subsequent statutory and/ or regulatory agency monitoring for periodic revalidation; and when also required, suppliers whose processes have been reviewed and approved by the customer for use on their product. JPM may document processes for validation as follows:

- JPM defines the criteria for review and approval of the processes;
- Approves the equipment and qualification of personnel;
- Utilizes specific methods and procedures;
- Validates the requirements for records;
- Re-validates these processes to achieve the planned results.

8.5.1.3 Production Process Verification

JPM will use a representative item from the first production run of a new part or assembly to verify that the production processes, production documentation and tooling are capable of producing parts and assemblies that meet requirements. This process shall be repeated when changes occur that invalidate the original results (e.g., engineering changes, process changes, tooling/ fixturing changes). This activity is often referred to as First Article Inspection (FAI). All documented information from the verification will be kept on file.

8.5.2 Identification and Traceability

JPM identifies and maintains product traceability requirements that can include:

- Identification of product by suitable means as appropriate, throughout the production process and into inventory to the destination (e.g., delivery, scrap), in accordance with JPM Product Identification and Traceability procedure in order to identify any differences between the actual configuration and the agreed configuration. JPM identifies product status with respect to monitoring and measurement requirements throughout product realization.
- The ability to trace all the products manufactured from the same batch of raw material or from the same manufacturing batch.
- For a product, a sequential record of its production (manufacture, assembly, inspection/ verification) to be retrievable. Identification with respect to inspection status is documented via the process router. Acceptance media used (e.g., stamps, electronic signatures, passwords) are appropriately controlled. Inspection stamp identification is maintained and controlled.

8.5.3 Property Belonging to Customers or External Providers

JPM will exercise control and care of customer property in accordance with the Customer Supplied Material procedure QP 6. JPM will verify the condition of the property upon receipt and maintain its identification as such. Safeguards with respect to handling, storage and preservation will be performed. Any customer property found to be lost, damaged or otherwise unsuitable for use will be documented, reported to the customer, and records maintained in accordance with the Quality Records procedure. Customer product can include intellectual property and personal data.

8.5.4 Preservation

JPM Handling, Storage, Packaging, Preservation and Delivery procedure identifies internal processes to preserve product, including constituent components, during internal processing and final delivery to the intended destination in order to maintain conformity to requirements. Processes include identification, verification, handling, packaging, storage and protection. When special requirements are applicable in accordance with product specifications and statutes or regulations to a given product, the process router will define, as applicable, provisions for:

- Special cleaning requirements.
- Prevention, detection and removal of foreign objects (FOD).
- Special handling for sensitive products.
- Marking and labeling, including safety warnings.
- Shelf life control and stock rotation
- Special Handling for hazardous materials.

8.5.5 Post-Delivery Activities

JPM excludes section requirements related to the installation or service of products at customer's sites. JPM will provide post-delivery support for the following as applicable:

- Collection and analysis of in service data. Actions to be taken after the analysis may include but are not limited to:
 - Investigation and reporting when problems are detected after delivery.
 - Controls required for off-site work (e.g. organizations work undertaken at the customers facilities related to nonconforming product detected after delivery.

8.5.6 Control of Changes

JPM shall review and control changes for production or service operations to the extent necessary to ensure continuing conformity of customer or internal requirements. Changes for production may be initiated as a result of:

- Modernization based on the context of the organization analysis results;
- Needs of interested parties, or customer feedback;
- Manufacturing department when vulnerability is detected and (or) opportunities for improvement are identified.

Management reviews and monitors changes that affect production or outside services and ensures change documentation and information is distributed and controlled. Records of results of the review of changes, the persons authorizing the change, and any necessary actions arising from the review are maintained in accordance with applicable procedures.

8.6 Release of Products and Services

JPM monitors and measures the characteristics of the product in receiving inspection, in-process inspection, and final inspection to verify that requirements have been met. Documented procedures have been established for product inspection. Documented Records and information of inspection include evidence of inspection are maintained.

8.7 Control of Nonconforming Product

JPM ensures that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product are defined in the Control of Nonconforming Product procedure QP 11. Responsibility for review and authority for the disposition of nonconforming product and the process for approving personnel making these decisions is defined in the procedure.

9. PERFORMANCE EVALUATION

9.1 Monitoring, Measurement, Analysis, and Evaluation

JPM plans, implements, and utilizes various systems of monitoring, measurement, analysis to assess and improve the effectiveness of our operations with respect to meeting customer expectations, as well as insuring our own viability. These processes serve to:

- Demonstrate that our products conform to customer requirements.
- Provide evidence that JPM QMS conforms to requirements.
- Provide data to support continual improvement of the effectiveness of the QMS.

Product monitoring and measuring is performed through all phases of the manufacturing process. JPM has made substantial investment in the necessary measuring equipment, to promote adequate and efficient product evaluation, allowing real-time capture of product conformance and quick reaction to process output trends. Statistical sampling is utilized for in-process controls as follow:

- Selection and inspection of key characteristics (as applicable)
- Process capability measurements
- Statistical process control (SPC)
- Inspection
- Failure mode, effect and criticality analysis

9.1.2 Customer Satisfaction

JPM management uses several sources of information to assess customer satisfaction and customer perception as it relates to our performance:

- Customer satisfaction.
- Conformance to product requirements.
- Characteristics and trends of processes and products including opportunities for preventive action.
- Supplier performance so that it does not impact customer satisfaction.

9.2 Internal Audit

The strategic system of planned audits is implemented to verify compliance with all applicable QMS, customer and regulatory requirements, procedures and documentation as determined applicable by JPM management. This process is detailed in procedure QP 15.

9.3 Management Review

9.3.1 General

JPM Top Management reviews the quality system at planned intervals (currently once per calendar year as a minimum), sufficient to ensure its continuing suitability, adequacy and effectiveness in satisfying customer QMS requirements. The Management Review includes accessing its opportunities for improvement, the need for changes to the QMS including the company's Quality Policy and Objectives. Management Review records including any inputs or outputs, are maintained in accordance with QP 1.

9.3.2 Management Review Inputs

The management Review meeting will include the following topics as a minimum: Audit Results (Internal Audits, Process Audits, 3RD Party Audits, Customer Audits, Regulatory Audits, Etc.), Customer Feedback (Surveys, Scorecard Data, Complaints Data, and Nonconforming Product Data), Process Performance and Product Conformance Data (On-Time Delivery performance, Internal Rejection Data, and Monitoring Data), Corrective Action Status (Internal, Customers, Supplier, Follow-up, and Final Sign Off), the effectiveness of actions taken to address risks and

opportunities (see 6.1); Follow-up Action Item from prior Management Reviews, internal and external issues relevant to the QMS, changes that could affect the QMS, any recommendations for improvement, Quality Objective data, and Quality Policy suitability.

9.3.3 Management Review Outputs

Actions and decisions relating to the topics discussed at the Management Review meeting are included in the Management Review report and include as a minimum: Improvement of the effectiveness of the QMS and its processes, Improvement of product related to customer requirements and any resource needs, and identification of risks. Responsibility for required actions is assigned to members of the management review team during the meeting.

10. IMPROVEMENT

JPM determines and selects opportunities for improvement and implements necessary actions to meet customer requirements and enhance customer satisfaction. Examples:

- Improving products and services to meet requirements as well as to address future needs and expectations;
- Correcting, preventing or reducing undesired effects;
- Improving the performance and effectiveness of the QMS.

10.2 Nonconformity and Corrective Action

JPM initiates actions to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the nonconformities encountered. When nonconformity occurs, corrective action procedures are initiated and implemented. Examples of actions taken include:

- Taking action to control and correct it;
- Reviewing and analyzing the nonconformity;
- Deal with the consequences
- Determining the cause of the non-conformity, including, as applicable, those related to human factors;
- Determining if similar nonconformities exist, or could potentially occur;
- Implementation of any action needed;
- Review of the effectiveness of any corrective actions taken;
- Updating risks and opportunities determined during planning, if necessary;
- Making changes to the QMS, if necessary;
- Flow down corrective action requirements to an external provider is responsible for the nonconformity;
- Take specific actions when timely and effective corrective actions are not achieved.

Nonconformity and Corrective Action documented records, which include the nature of the nonconformities and any subsequent actions, and the results of any corrective actions, are maintained in accordance with section 7.5.3.

10.3 Continual Improvement

JPM continually improves the effectiveness of the QMS through the use of the quality policy, quality objectives, and audit results, analysis of data, corrective actions and management review. Additional continuous improvement opportunities can result from lessons learned, problem resolutions and the benchmarking of best practices. All improvement activities are monitored for effectiveness and efficiency.