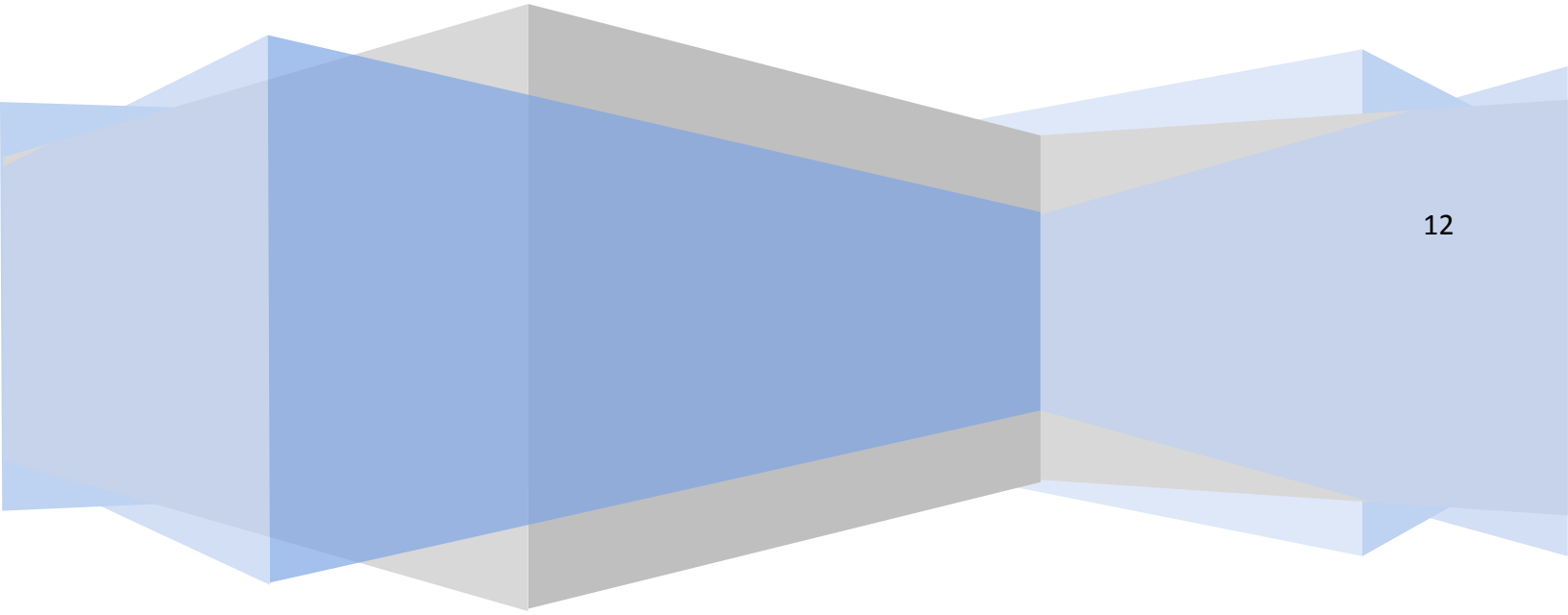
GMJ MACHINE COMPANY

GMJ QUALITY MANUAL

Based on AS9100 Revision C.

Jan. 15, 2016



GMJ Machine Company

The company was incorporated under the laws of the state of Alabama in 1981. GMJ machine Company manufactures products for global customers in diverse markets, largely supporting the aviation, aerospace, and defense markets. GMJ's capabilities include CNC machining, component manufacturing, mechanical assemblies and various contracted vendor services. GMJ employs a capable team with the infrastructure that provides our customers a one stop shop that meets all their needs.

Introduction

GMJ machine Company has developed a quality management system to improve the operations and management of the company and satisfy the needs of its customers. The quality system is designed to operate within the requirements of AS9100 and ISO 9001.

This manual is divided into eight sections that correlate to the Quality Management System sections of the AS 9100 format. Each section begins with a policy statement expressing GMJ's obligation to implement the basic requirements of the referenced Quality Management System section. Each policy statement is followed by specific information pertaining to the procedures and methods used to implement the necessary requirements.

This manual describes the Quality Management System, delineates authorities, inter-relationships and responsibilities of the personnel responsible for performing within the system. The manual also provides procedures or references for all activities comprising the Quality Management System to ensure compliance to the necessary requirements of the standard.

This manual is used internally to guide the company's employees through the various requirements of the 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.

This manual is used externally to introduce our Quality Management System 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 Quality Management System is maintained and focused on customer satisfaction and continuous improvement.

President: *Joel K Parden*

Quality Manual Distribution

This Quality Manual is made available to all GMJ employees via the GMJ computer network. All hard copies of this manual shall be considered UNCONTROLLED unless stamped CONTROLLED in green and signed and dated by the Quality Manager. All CONTROLLED manuals expire 24 hours after issue.

A copy of the Quality Control Manual will be made available to Customers, Vendors, and applicable Regulatory Agencies upon request.

QUALITY POLICY

GMJ is committed to providing high quality products that meet or exceed our customers' needs and expectations. We believe that total quality and customer satisfaction result in long-term relationships that enable mutual growth and opportunity. Our goal is to be the best in what we do by focusing on measured continuous improvement.

1.0 Scope of the Quality Management System and Exclusions

1.1 General

The purpose of this manual is to document the company's quality system, to instruct and guide employees whose actions affect product quality, and to inform the company's customers of controls that are implemented to assure product quality, and fulfillment of the Quality Policy.

The quality manual is structured to address each element of the AS9100 quality system requirements. The activities undertaken to manufacture products are described in general detail within each paragraph of section 7 AS9100 Quality System clauses, of this manual. The specific requirements associated with GMJ processes and procedures are described in level II Operating Procedures. This manual provides appropriate reference to these documents.

1.2 Application and Exclusions

GMJ Machine Company Inc. has determined that the following requirements are not applicable to the operations at GMJ and documented as exclusions.

Design and Development (Section 7.3) - GMJ Machine Company currently does not design product. Customer drawings, contracts, and referenced specifications are used for filling contractual requirements and are relied on solely as the determining factor for making product for the customer.

Service Provision and Requirement (Section 7.5.1.5) - GMJ Machine Company does not perform service for the product. GMJ Machine Company reserves the right to challenge prints provided by the customer that are ambiguous or questionable.

2.0 Quality Management System References (Normative Reference)

- American National Standard ANSI / AS 9001 / ASQ Q9000-2000, Quality Management Systems - Vocabulary.
- American National Standard ANSI / AS 9001 / ASQ Q9001-2000, Quality Management Systems – Requirements
- American National Standard ANSI / AS 9001 / ASQ Q9004-2000, Quality Management Systems – Guidelines for performance Improvement.
- Society of Automotive Engineers SAE AS 9100C - Quality Management Systems – Requirements
- AS9003 – Inspection and Test Quality Systems Requirements for Aviation, Space, and Defense Organizations

3.0 Terms and Definitions

Definition of terms frequently used in GMJ's quality system:

- QMS: Quality Management System
- SOP: Standard Operating Procedure
- WI: Work Instructions
- Traveler: Detailed job router which contains work instructions
- F/A: (First Article). A sample part or assembly manufactured prior to the start of production for the purpose of ensuring that the manufacturer is capable of producing a product that will meet specified requirements.
- Key Characteristics: The features of a material, process, or part whose variation has a significant influence on product fit, performance, service life, or manufacturability.

4.0 Quality management System

4.1 General Requirements

GMJ Machine Company has established, documented, implemented, and maintains a quality management system (QMS) as a means of ensuring that its products and services conform to specific requirements of the AS9100 Standard and to foster an environment of continual improvement.

The system is maintained and continually improved through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive action and management review.

To design and implement the QMS, GMJ has:

a) identified the processes needed for the quality management system and their application throughout the organization.
b) determined the sequence and interaction of these processes, and illustrated them on the process flow diagram.
c) determined criteria and methods needed to ensure that the operation and control of these processes are effective,
d) Ensured the continuing availability of resources and information necessary to achieve planned results and continual improvement of these processes,
e) Established systems to monitor, measure, and analyze these processes, and
f) Established processes to identify and implement actions necessary to

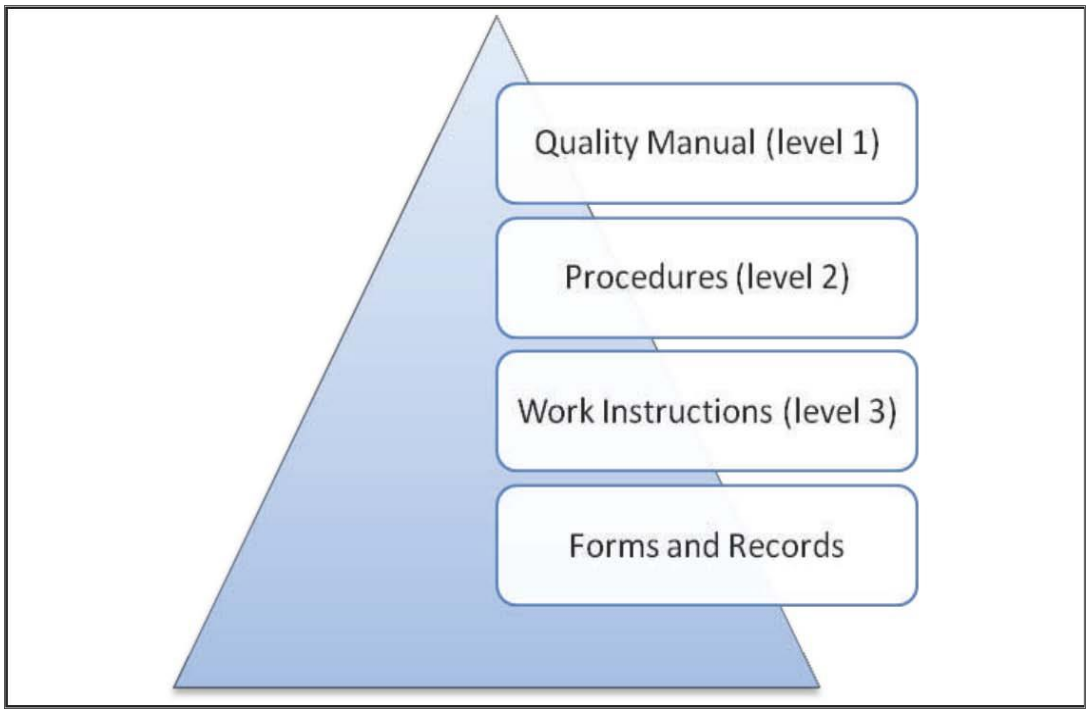
achieve planned results and continual improvement of these processes.

4.2 Documentation Requirements

4.2.1 General

GMJ Quality System documentation includes:

a) documented quality policy and objectives
b) this Quality Manual (Level I)
c) documented procedures required by AS9100
d) documents required by GMJ to ensure the effective planning, operation, and control of the processes (Level II)
e) records required by AS9100 and
f) quality system requirements imposed by the applicable regulatory authorities
g) work Instructions (Level III)
h) forms and records (Level IV)



All GMJ personnel have access to required documentation to perform their required duties. These documents are accessible to customer and regulatory

authorities as needed.

NOTE: GMJ may decide to maintain documentation outside of AS9100 requirements, based on company's business needs.

4.2.2 Quality Manual

The Quality Manual is established and maintained by GMJ management.

- The scope and exclusions are described in Section 1 of this manual
- Each section of the manual references documented procedures relating to the requirements outlined in that section.
- When documented procedures are referenced, the relationship between the AS9100 standard and the documented procedure is indicated by the use of a numbering system which corresponds to the numbering in the AS9100 standard.
- The Process Flow Diagram at the end of Section 4 provides a description of the interaction between the processes of the QMS

4.2.3 Control of Documents

GMJ Machine Company ensures that documents and data related to the requirements of the Quality System and the AS9100 standard are controlled.

Document Control Procedure (AP-423), is established to define the processes necessary

a) to approve documents for adequacy prior to issue,
b) to review and update as necessary and re-approve documents,
c) to ensure that changes and the current revision status of documents are identified,
d) to ensure that relevant versions of applicable documents are available at points of use,
e) to ensure that documents remain legible and readily identifiable,
f) to ensure that documents of external origin are identified and their distribution controlled, and
g) to prevent the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

GMJ recognizes that records are a special type of document and controls them as provided in section 4.2.4.

Document changes are coordinated with customers and/or regulatory authorities in accordance with contract and regulatory requirements.

Related Procedure
Document Control Procedure AP-423

Document and Data Approval and Issue
All documents and data related to the requirements of the Quality System and the standard are reviewed and approved for suitability prior to release or use. Where computer based documents and files are used, special attention is paid to appropriate approval, access, distribution and archiving procedures.

GMJ Machine Company has a mixed media documentation system:

a) Level I and II documents are computer based, and are available as read-only documents.
b) Level III documents (such as work instructions, departmental operating procedure, etc) are also in electronic format whenever possible.
c) Level IV documents are to the extent possible computer based; otherwise they are hard copy.

All electronically stored Quality Management System documents are stored in protective folders. Update access privileges to these folders are limited. Printed copies of procedures are to be considered uncontrolled unless stamped CONTROLLED in green.

The user is responsible to verify the correct revision prior to use. Any printed documents are controlled directly by the department that issued them.

4.2.4 Control of Records

GMJ Machine Company maintains quality records to demonstrate conformance to specific requirements and the effective operation of the quality system.

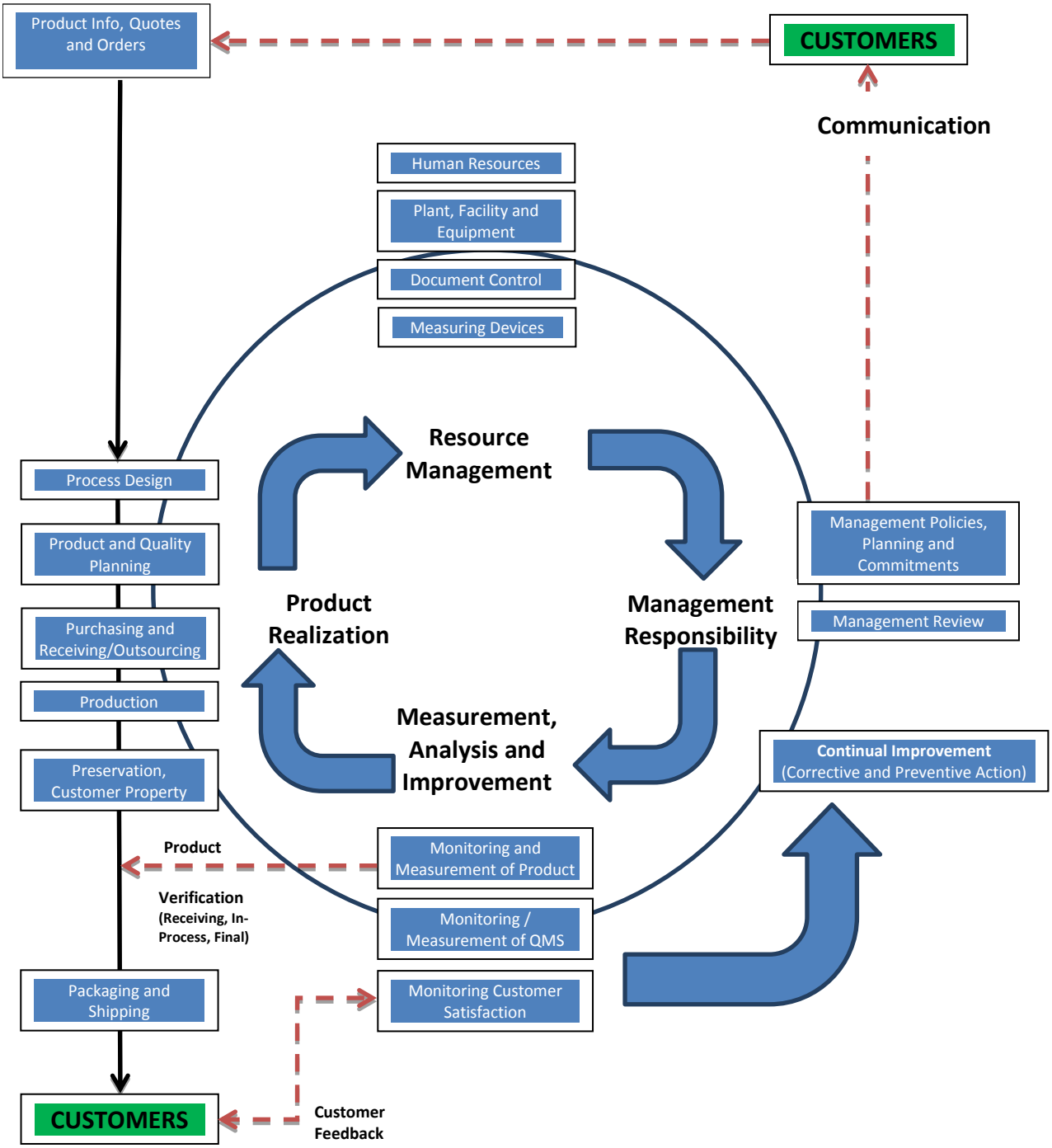
All quality records are legible, readily identifiable and are stored and retained in such manner that they are readily retrievable.

Control of Records Procedure (AP-424), defines the process necessary to control quality records.

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

Related Procedures
Document Control AP-423
Control of Quality Records AP-424

Quality Process Interface Map



5.0 Management Responsibility

5.1 Management Commitment

GMJ Machine Company is committed to the development and improvement of a Quality Management System. This commitment is demonstrated by:

a) Communicating to the organization the importance of meeting all customer and statuary/ regulatory requirements. This activity is further described in the Section 5.2 of this manual.
b) Establishing the GMJ Machine Company Quality Policy for total commitment to excellent service and the associated quality objectives.
c) Ensuring that quality objectives are established.
d) Conducting Management Reviews and
e) Ensuring the availability of resources to perform the activities described by the Quality Management System. This is accomplished through annual planning, objective setting and the budgetary process.

5.2 Customer focus

GMJ Machine Company management ensures that customer requirements are determined and fulfilled with the aim of enhancing customer satisfaction. GMJ Machine Company measures product conformity and on-time delivery performance, and takes appropriate action if planned results are not or will not be achieved.

5.3 Quality Policy

Top management of GMJ Machine Company has defined and documented its Quality Policy and includes the organization's commitment for meeting customer requirements and to continual improvement of the quality management system.

The Quality Policy is documented and:

a) is appropriate to GMJ's Purposes
b) includes a commitment to comply with requirements and continually improve the effectiveness of the quality management system,
c) provides a framework for establishing and reviewing quality objectives,
d) is communicated to all employees within the scope of the quality system.
e) Is reviewed for continuing suitability.

5.4 Planning

5.4.1 Quality Objectives

Quality objectives are established to support GMJ's efforts in achieving our quality

policy. Quality objectives are measurable, and reviewed against performance goals and continued suitability at each management review meeting.

5.4.2 Quality Management System Planning

GMJ Machine Company has identified and planned the resources needed to achieve its quality objectives. The results are documented in a format to suit the GMJ Machine Company method of operation. Quality planning addresses continual improvement of the Quality Management System and assures that when changes to the quality management system are necessary, the changes are implemented in a controlled manner to maintain the integrity of the quality management system and GMJ Machine Company service environment.

The GMJ Machine Company quality plan is established through the Quality Manual, which identifies the business processes of the quality management system and includes references to associated Quality procedures. The core business processes represent how market opportunities are turned into profitable outcomes.

Each process has an owner who has the prime responsibility for ensuring that the process achieves its objectives and is under continual review for improvement.

The GMJ Machine Company Quality Procedures and associated documents identify the series of controls and quality assurance measures that meet the requirements of Section 4.1.

5.5 Responsibility, Authority, and Communication

5.5.1 Responsibility and Authority

An organizational chart has been established to show the interrelation of personnel in the organization.

Job descriptions define the responsibilities and authorities of each of the positions on the organizational chart. Job descriptions and the organizational chart are reviewed and approved by top management for adequacy. These documents are available throughout the organization to help employees understand responsibilities and authorities.

5.5.2 Management Representative

Top management of GMJ Machine Company has appointed the Vice President of Quality as its Management Representative. This individual, irrespective of other responsibilities, has the defined authority to:

a) Ensure that the business processes of the Quality Management System are defined.
b) Ensure that the quality system requirements are established, implemented, and maintained in accordance with the Standard.
c) Report to top management on the performance of the quality management system, including needs for improvement.
d) Promote awareness of customer requirements throughout the organization.

The Management Representative also may act as the liaison between GMJ Machine Company and other third parties on matters concerning the GMJ Machine Company quality system.

5.5.3 Internal Communications

GMJ Machine Company ensures that appropriate communication processes are established within the organization and communication takes place between its various levels and functions regarding the process of the quality management system and their effectiveness. This is accomplished by quality awareness training, various quality meetings, internal publications, and notice boards.

5.6 Management Review

5.6.1 General

Top management of GMJ Machine Company reviews the quality management system at least annually to ensure its continuing suitability, adequacy and effectiveness, identifying opportunities for improvement and needed changes. Records are maintained for each management review meeting.

5.6.2 Review Input

Inputs to management review include current performance and improvement opportunities related to the following:

a) Results of audits
b) Customer feedback
c) Process performance and product conformity
d) Status of preventive and corrective actions
e) Follow-up actions from earlier management reviews
f) Planned changes that could affect the quality management system
g) Recommendations for improvement

5.6.3 Review Output

The outputs from the management review include decisions and actions related to:

a) improvement of the effectiveness of the quality management system and its processes

b) improvement of products elated to customer requirements
c) resource needs.
d) quality objectives

Responsibility for required actions is assigned to members of the management review team. Any decisions made during the meeting, assigned actions, and their due dates are recorded in the minutes of the meeting.

6.0 Resource Management

6.1 Provision of Resources

GMJ Machine Company management determines and provides the resources needed:

a) To implement and improve the processes of the quality management system, and
b) To enhance customer satisfaction by meeting customer requirements.

These resources are assessed and reviewed on a periodic basis consistent with business planning activities.

6.2 Human Resources

6.2.1 General

Personnel who are assigned responsibilities defined in the quality management system are competent on the basis of applicable education, training, skills, and experience. Specific activities are addressed in the Training Matrix.

6.2.2 Competency, Awareness, and Training

GMJ Machine Company:

a) determines the necessary competence for personnel performing work affecting product quality
b) provides training and/or takes other actions to satisfy these needs,
c) evaluates the effectiveness of the actions taken,
d) ensures that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality objectives, and
e) maintain appropriate records of education, training, skills, and experiences.

Qualifications are reviewed upon hire, when an employee changes positions, or the requirements for a position change. Training and evaluation are conducted according to the Training Matrix.

6.3 Infrastructure

GMJ Machine Company management identifies, provides, and maintains the facilities it needs to achieve the conformity of product requirements, including:

a) Workspace and associated facilities
b) Equipment, hardware, and software
c) Supporting services, such as physical security, transportation, and communications
d) Environmental issues such as conservation, pollution, waste, and recycling that may impact infrastructure.

6.4 Work Environment

GMJ Machine Company management identifies and manages the human and physical factors of the work environment needed to achieve conformity of product requirements.

7.0 Product Realization

7.1 Planning of Realization Process

Upon receipt of new product requirements, GMJ Machine Company management plans the sequence of processes and sub-processes required to realize the specified product objectives. In planning the processes for realization of product, GMJ Machine Company:

a) Prepares documentation and data that describe how the processes of the quality management system are applied to a specific product. These are referred to as product specific quality plans. These documents describe the sequence of processes and sub-processes required to achieve the planned operation including specified performance objectives. These quality plans are consistent with the other requirements of the organization's quality management system and are documented in a form suitable for GMJ Machine Company method of operation.
b) Identifies necessary controls, processes, equipment, fixtures, total production resources, including outside services and skills that are needed to achieve the required quality.
c) Addresses delivery, production process, packaging, shipment, measurement, and monitoring activities and the applicable documentation for compatibility.
d) Develops and implements verification, validation, and inspection and test activities, and the criteria for acceptability.
e) Ensures configuration management appropriate to the product.
f) Provides resources to support the use and maintenance of the product

7.1.1 Project Management

GMJ Machine Company plans and manages product realization in a structured and controlled manner to meet requirements at acceptable risk, within resource and schedule constraints, as appropriate to GMJ Machine Company and the product.

7.1.2 Risk Management

GMJ Machine Company has established, implemented and maintains a process for managing risk to the achievement of applicable requirements, that includes as appropriate to GMJ Machine Company and the product

a) assignment of responsibilities for risk management,
b) definition of risk criteria (e.g., likelihood, consequences, risk acceptance),
c) identification, assessment and communication of risks throughout product realization,
d) identification, implementation and management of actions to mitigate risks that exceed the defined risk
e) acceptance criteria, and
f) acceptance of risks remaining after implementation of mitigating actions.

7.1.3 Configuration Management

GMJ Machine Company has established, implemented and maintains a configuration management process that includes, as appropriate to the product

a) configuration management planning,
b) configuration identification,
c) change control,
d) configuration status accounting, and
e) configuration audit.

7.1.4 Control of Work Transfers

GMJ Machine Company has established, implemented and maintains a process to plan and control the temporary or permanent transfer of work (e.g., from one organization facility to another, from the organization to a supplier, from one supplier to another supplier) and to verify the conformity of the work to requirements.

7.2 Customer Related Process

7.2.1 Identification of Customer requirements

GMJ Machine Company determines customer requirements before acceptance of an order. Customer requirements include:

a) Requirements specified by the customer, including requirements for availability, delivery, and support.
b) Requirements not specified by the customer but necessary for specified or known intended use.
c) Obligations related to the contract, including regulatory and legal requirements.
d) Any additional requirements determined by GMJ Machine Company.

7.2.2 Review of Requirements Related to the product

GMJ has a process in place for the review of requirements related to the product. Vice President of Sales, and relevant planning personnel are responsible for the review of requirements. Before submission of a quote or acceptance of a customer requirement, the contract or order is reviewed by GMJ to ensure that:

a) Requirements are adequately defined and documented
b) Differences between the contract requirements and those in the quote are resolved.
c) GMJ Machine Company has the capability and capacity to meet contract or order requirements.
d) special requirements of the product are determined, and
e) risks (e.g., new technology, short delivery time frame) have been identified.

7.2.3 Customer Communications

GMJ Machine Company has implemented an effective procedure for communicating with customers relating to:

a) Product information
b) Enquiries, contracts, and order handling, including amendments
c) Customer feedback including customer complaints.

7.3 Design

Design is excluded.

7.4 Purchasing

7.4.1 Purchasing Process

Purchasing ensures that purchased product conform to the specified purchase requirements. The purchasing document outlines the extent of control required for suppliers. Suppliers are evaluated and selected based on their ability to supply product in accordance with requirements. Records for the evaluation and any necessary actions are maintained as quality records. GMJ Machine Company is responsible for the quality of all products purchased from suppliers, including customer-designated sources.

GMJ Machine Company shall

a) maintain a register of its suppliers that includes approval status (e.g., approved, conditional, disapproved) and the scope of the approval (e.g., product type, process family),
b) periodically review supplier performance; the results of these reviews shall be used as a basis for
c) establishing the level of controls to be implemented,
d) define the necessary actions to take when dealing with suppliers that do not meet requirements,
e) ensure where required that both the organization and all suppliers use customer-approved special process sources,
f) define the process, responsibilities and authority for the approval status decision, changes of the approval status and conditions for a controlled use of suppliers depending on the supplier's approval status, and
g) determine and manage the risk when selecting and using suppliers

7.4.2 Purchasing information

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

a) requirements for approval of product, procedures, processes and equipment,
b) requirements for qualification of personnel,
c) quality management system requirements,
d) the name or other positive identification, and applicable issues of specifications, drawings, process requirements, inspection instructions and other relevant technical data.
e) requirements for test, examination, inspection and related instructions for acceptance by GMJ.
f) requirements for test specimens (e.g., production method, number, storage conditions) for inspection, investigation or auditing.
g) requirements related to supplier notification of non-conforming material, and arrangements for GMJ approval of supplier nonconforming material,
h) requirements for the supplier to notify GMJ of changes in product and/or process definition and, where required, get GMJ approval.
i) right of access by GMJ, our customer, and regulatory authorities to all facilities involved in the order and to all applicable records, and.
j) requirements for the supplier to flow down to sub-tier suppliers the applicable
k) requirements in the purchasing documents, including key characteristics

where required. The purchasing documents are reviewed to ensure the adequacy of requirements before orders are placed with the supplier.

7.4.3 Verification of Purchased Product

Purchased product is verified to ensure that it meets specified purchase requirements. Verification activities may include, as applicable,

a) obtaining objective evidence of the quality of the product from suppliers, such as certificate of conformance, test reports, statistical records, process control and/or other accompanying documentation,
b) inspection and audit at supplier's premises,
c) review of the required documentation,
d) Inspection of products upon receipt, and
e) delegation of verification to the supplier, or supplier certification.

Purchased product is not used or processed until it has been verified as conforming to specific requirements unless it is released under positive recall procedure.

Where test reports are used to verify purchased product, the data in those reports shall be acceptable per applicable specifications. GMJ shall periodically verify test reports for raw material.

Where GMJ delegates the verification activities to the supplier, the requirements for delegation shall be defined and a register of delegations maintained.

Where GMJ or GMJ's customer intends to perform verification at the supplier's premises (source inspection), the verification requirements and method of acceptance shall be stated on the purchase order.

Where specified in the contract, the customer shall have the right to verify at the supplier's premises and GMJ's premises, that subcontracted product conforms to the specified requirements.

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

7.5 Production Provision

7.5.1 Control of Production Provision:

GMJ Machine Company plans and carries out production provision under controlled conditions. Planning considers as applicable,

a) the establishment of process controls and development of control plans where key characteristics i.e.; Critical Items and Processes have been identified,
b) the identification of in-process verification points when adequate verification of conformance cannot be performed at a later stage of realization,
c) the design, manufacture, and use of tooling so that variable measurements can be taken, particularly for key characteristics, and
d) special processes (see 7.5.2)

Controlled conditions include, as applicable

a) The availability of information that describes the characteristics of the product,
b) The availability of work instructions,
c) The use of suitable equipment,
d) The availability and use of monitoring and measurement,
e) The implementation of release, delivery and post-delivery activities,
f) Accountability for all product during manufacture (e.g., parts quantities, split orders, non-conforming product), part accountability to ensure bad parts have been destroyed,
g) Evidence that all manufacturing and inspection operations have been completed as planned, or as otherwise documented and authorized,
h) Provision for the prevention, detection, and removal of foreign objects,
i) Monitoring and control of utilities such as water, compressed air, electricity and chemical products to the extent they affect product quality, and
j) criteria for workmanship, which shall be stipulated in the clearest practical manner (e.g., written standards, representative samples or illustrations).

7.5.1.1 Production Documentation

Production operations are carried out in accordance with approved data. This data contains as necessary:

a) Drawings, parts lists, process flow charts including inspection operations, production documents (e.g., manufacturing plans, traveler, and inspection documents),
b) A list of specific or non-specific tools and CNC machine programs required and any specific instructions associated with their use.

7.5.1.2 Control of Production Process Changes:

Authorized persons for approving changes to production processes are the President and Quality Manager. GMJ identifies and obtains acceptance of changes that require customer or regulatory authority approval in accordance with contract or regulatory requirements. Changes affecting processes, production equipment, tools and

programs are documented and procedures are available to control the implementation of changes. The results of changes to production processes are assessed to confirm that the desired effect has been achieved without adverse effects to product quality.

7.5.1.3 Control of Production Equipment, Tools and CNC Machine programs

Production equipment, tools and programs are validated prior to use and maintained and inspected periodically. Validation prior to production use includes verification of the first article produced to the design data / specification. Storage requirements, including periodic preservation / condition checks, have been established for production equipment of tooling on storage.

7.5.1.4 Control of Work Transferred, on a Temporary Basis, Outside GMJ's Facilities

When planning to temporarily transfer work to a location outside of GMJ's facilities, GMJ defines the process to control and validate the quality of the work

7.5.1.5 Control of Service Operations

GMJ Machine Company does not perform service operations. Therefore the QMS requirements defined within this paragraph do not apply to our organization and have been excluded from our quality management system.

7.5.2 Validation of Processes for production and Service Provision

GMJ validates any special processes for production and service provision where the resulting output cannot be verified by subsequent monitoring or measurement. This includes processes where deficiencies become apparent only after the product is in use. Validation demonstrates the ability of these processes to achieve planned results.

GMJ has documented the process for validation including:

a) Defined criteria for review and approval of the processes, qualification and approval of special processes prior to use.
b) Approval of equipment and qualification of personnel
c) Use of specific methods and procedures
d) Control of the significant operations and parameters of special processes in accordance with documented process specifications and changes thereto
e) Requirements for records
f) Revalidation

7.5.3 Identification and Traceability

GMJ Machine Company identifies where appropriate, the product throughout product realization.

GMJ maintains the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed upon configuration.

Product is identified with respect to monitoring and measuring requirements.

When acceptance authority media are used (e.g., stamps, electronic signatures, passwords), GMJ establishes and documents controls for the media.

Where traceability is a requirement, GMJ controls and records the unique identification of the product.

According to the level of traceability required by contract, regulatory, or other established requirement, GMJ provides for:

a) Identification to be maintained throughout the product realization process;
b) All the products manufactured from the same batch of raw material or from the same manufacturing batch to be traced, as well as the destination (delivery, scrap) of all products of the same batch;
c) For an assembly, the identification of its components and those of the next higher assembly to be traced;
d) For a given product, a sequential record of its production (manufacture, assembly, inspection) to be retrieved.

7.5.4 Customer Property

GMJ exercises care with customer property while it is under the organization's control or being used. If any customer property is lost damaged or otherwise found to be unsuitable for use, this is reported to the customer and records maintained.

7.5.5 Preservation of Product

GMJ preserves the conformity of product during internal processing and delivery to the intended destination.

Preservation of product also includes where applicable in accordance with product specifications and/or applicable regulations, provisions for:

a) Cleaning;
b) Prevention, detection, and removal of foreign objects;
c) Special handling for sensitive products;
d) Marking and labeling including safety warnings;
e) Shelf life control and stock rotation;
f) Special handling for hazardous materials.
g) Packaging.
h) Protection and Storage.

GMJ ensures that documents required by the contract or order to accompany the product are present at delivery and are protected against loss and deterioration.

7.6 Control of Monitoring and Measuring Devices

GMJ determines the monitoring and measurement to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of the product to determined requirements.

Where necessary to ensure valid results, measuring equipment is:

a) calibrated or verified at specific intervals, or prior to use, against measurement standards traceable to international of national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded;
b) adjusted or re-adjusted as necessary
c) safeguarded from adjustments that would invalidate the measurement result
d) protected from damage and deterioration during handling, maintenance, and storage e) recalled according to a defined method when requiring calibration.

In addition, GMJ assesses and records the validity of the previous measuring results when the equipment is found not to conform to requirements. GMJ takes appropriate action on the equipment and any product affected. Records of the results of calibration and verification are maintained.

GMJ maintains a register of these monitoring and measuring devices. The process used for their calibration is defined in procedures, work instructions and equipment manuals and includes details of equipment type, unique identification, location, frequency of checks, check method and acceptance criteria.

When used in the monitoring and measuring of specified requirements, the ability of computer software to satisfy the intended application is confirmed. This is undertaken prior to initial use and reconfirmed as necessary. The software used for the Coordinate Measuring Machine (CMM) will be verified weekly to ensure its accuracy.

GMJ ensures that environmental conditions are suitable for the calibrations, inspections, measurements and tests being carried out.

8.0 Measurement, Analysis and Improvement

8.1 General

GMJ plans and implements the monitoring, measurement, analysis and

improvement processes needed:

a) to demonstrate conformity of the product,
b) to ensure conformity of the quality management system, and
c) to continually improve the effectiveness of the quality management system.

This includes determination of applicable methods, including statistical techniques, and the extent of their use.

8.2 MONITORING AND MEASUREMENT

8.2.1 Customer Satisfaction

As one of the measurements of the performance of the quality management system, GMJ monitors information relating to customer perception as to whether the organization has met customer requirements. The method for obtaining and using this information is documented.

8.2.2 Internal Audit

GMJ conducts internal audits at planned intervals to determine whether the quality management system:

a) conforms to the planned arrangements, to the requirements of AS9100 and to the quality management system requirements established by GMJ and
b) is effectively implemented and maintained.

Internal audits are performed in accordance with Internal Audit Procedure QP-822.

8.2.3 Monitoring and Measurement of Processes

GMJ shall apply suitable methods for monitoring and, where applicable, measurement of the quality management system processes.

These methods demonstrate the ability of the processes to achieve planned results. When planned results are not achieved, correction and corrective action is taken, as appropriate, to ensure conformity of the product.

In the event of process nonconformity, GMJ

a) a. takes appropriate action to correct the nonconforming process,
b) b. evaluates whether the process nonconformity has resulted in product nonconformity, and
c) c. identifies and controls the nonconforming product.

8.2.4 Monitoring and Measurement of Product

GMJ monitors and measures the characteristics of the product to verify that product requirements are met. This is carried out at appropriate stages of the product realization process.

When key characteristics have been identified, they are monitored and controlled.

When GMJ uses sampling inspection as a means of product acceptance, the plan is statistically valid and appropriate for use. The plan will prevent the acceptance of lots whose samples have known non-conformities. When required, the plan will be submitted for customer approval.

Product is not be used until it has been inspected or otherwise verified as conforming to specified requirements.

Evidence of conformity with the acceptance criteria is maintained. Records indicate the person authorizing release of product.

Product release and delivery will not proceed until all the planned arrangements have been satisfactorily completed, unless otherwise approved by a relevant authority, and where applicable by the customer.

8.2.4.1 Inspection documentation

Measurement requirements for product or service acceptance will be documented. This documentation may be part of the production documentation, but will include

a) criteria for acceptance and/or rejection,
b) where in the sequence measurement and testing operation are performed,
c) a record of the measurement results, and
d) type of measurement instruments required and any specific instructions associated with their use.

Test records will show actual test results data when required by specification or acceptance test plan.

Where required to demonstrate product qualification GMJ ensures that records provide evidence that the product meets the defined requirements.

8.2.4.2 First Article Inspection

GMJ provides a process for the inspection, verification and documentation of representative item from the first production run of a new part, or following any subsequent change that invalidates the previous first article inspection result.

8.3 Control of Nonconforming Product

GMJ ensures that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The responsibilities and authorities for controlling nonconforming product, and

responsibility for review and authority for the disposition of nonconforming product, as well as the process for approving personnel making these decisions, are defined in Nonconforming Product procedure (QP-830) Note: The term "nonconforming product" includes nonconforming product returned from a customer

Related Documents

Nonconforming Product procedure QP-830

8.4 ANALYSIS OF DATA

GMJ determines, collects and analyzes appropriate data to demonstrate the suitability and effectiveness of the quality management system and to evaluate where continual improvement of the effectiveness of quality management system can be made. This includes data generated as a result of monitoring and measurement and from other relevant sources.

The analysis of data provides information relating to:

a) customer satisfaction,
b) conformance to product requirements,
c) characteristics and trends of processes and products including opportunities for preventive action, and
d) suppliers.

8.5 IMPROVEMENT

8.5.1 Continual Improvement

GMJ continually improves the effectiveness of the quality management system through the use of the quality policy, quality objectives, audit results, analysis of data, corrective and preventive actions and management review.

8.5.2 Corrective Action

GMJ takes action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the nonconformities encountered.

A documented procedure (***QP-852***) defines requirements for:

a) Reviewing nonconformities (including customer complaints)
b) determining the causes of nonconformities
c) evaluating the need for action to ensure that nonconformities do not recur
d) determining and implementing action needed
e) records of the results of action taken (see 4.2.4), and
f) reviewing corrective action taken
g) flow down of the corrective action requirement to a supplier, when it is

determined that the supplier is responsible for the root cause, and specific actions where timely and/or effective actions are not achieved.

8.5.3 Preventive Action

GMJ determines action to eliminate the causes of potential nonconformities in order to prevent their occurrence in accordance. Preventive actions are appropriate to the effects of the potential problems.

A documented procedure (***QP-853***) defines requirements for:

a) determining potential nonconformities and their causes
b) evaluating the need for action to prevent occurrence of nonconformities
c) determining and implementing action needed d) records of results of action taken e) reviewing preventive action taken.

Related Documents

Internal Audits QP-822
Control of Nonconforming Product QP-830
Corrective Action QP-852
Preventive Action QP-853

Revision History

Revision Level	Date	Description of Change
A	6-7-2012	Revised to requirements of AS9100 Rev. C
B	12-9-2012	Changed wording in 5.1 to include measuring product conformity and delivery performance and actions taken when results are not achieved
C	1-14-2016	Added AS9003 to page 4
D	1/14/2016	No Change
E	1-15-2016	Change wording on 7.5.1 to add critical items and processes