



QUALITY MANUAL

Conforming To AS9100D and
ISO9001:2015

Contents

| | | |
|------------|---|-----------|
| 0 | | |
| I. | FOREWORD | 3 |
| II. | INTRODUCTION | 3 |
| 1 | SCOPE..... | 4 |
| 1.1 | SCOPE STATEMENT..... | 4 |
| 1.2 | FACILITIES WITHIN THE SCOPE..... | 4 |
| 1.3 | PERMISSIBLE EXCLUSIONS | 4 |
| 1.4 | SCOPE OF THE QUALITY MANAGEMENT SYSTEM MANUAL | 4 |
| 2 | NORMATIVE REFERENCES..... | 4 |
| 3 | TERMS AND DEFINITIONS..... | 5 |
| 3.1 | COUNTERFEIT PART | 5 |
| 3.2 | CRITICAL ITEM | 5 |
| 3.3 | KEY CHARACTERISTICS | 5 |
| 3.4 | PRODUCT SAFETY | 5 |
| 3.5 | SPECIAL REQUIREMENTS..... | 5 |
| 4 | CONTEXT OF THE ORGANIZATION | 6 |
| 4.1 | UNDERSTANDING THE ORGANIZATION AND ITS CONTEXT | 6 |
| 4.2 | UNDERSTANDING THE NEEDS AND EXPECTATIONS OF INTERESTED PARTIES..... | 6 |
| 4.3 | DETERMINING THE SCOPE OF THE QUALITY MANAGEMENT SYSTEM..... | 7 |
| 4.4 | QUALITY MANAGEMENT SYSTEM AND ITS PROCESSES | 7 |
| 5 | LEADERSHIP..... | 7 |
| 5.1 | LEADERSHIP AND COMMITMENT | 7 |
| 5.2 | POLICY | 8 |
| 5.3 | ORGANIZATIONAL ROLES, RESPONSIBILITIES AND AUTHORITIES | 8 |
| 6 | PLANNING | 9 |
| 6.1 | ACTIONS TO ADDRESS RISKS AND OPPORTUNITIES | 9 |
| 6.2 | QUALITY OBJECTIVES AND PLANNING TO ACHIEVE THEM | 9 |
| 6.3 | PLANNING OF CHANGES | 9 |
| 7 | SUPPORT | 9 |
| 7.1 | RESOURCES..... | 9 |
| 7.2 | COMPETENCE | 10 |
| 7.3 | AWARENESS..... | 10 |
| 7.4 | COMMUNICATION | 10 |
| 7.5 | DOCUMENTED INFORMATION..... | 11 |
| 8 | OPERATION | 12 |
| 8.1 | OPERATIONAL PLANNING AND CONTROL | 12 |
| 8.2 | REQUIREMENTS FOR PRODUCTS AND SERVICES | 14 |

8.3 DESIGN AND DEVELOPMENT OF PRODUCTS AND SERVICES (SEE 1.3 EXCLUSION)15

8.4 CONTROL OF EXTERNALLY PROVIDED PROCESSES, PRODUCTS AND SERVICES.....18

8.5 PRODUCTION AND SERVICE PROVISION.....20

8.6 RELEASE OF PRODUCTS AND SERVICES.....23

8.7 CONTROL OF NONCONFORMING OUTPUTS23

9 PERFORMANCE AND EVALUATION 24

9.1 MONITORING, MEASUREMENT, ANALYSIS AND EVALUATION.....24

9.2 INTERNAL AUDIT25

9.3 MANAGEMENT REVIEW.....26

10 IMPROVEMENT 27

10.1 GENERAL.....27

10.2 NONCONFORMITY AND CORRECTIVE ACTION27

10.3 CONTINUAL IMPROVEMENT27

APPENDIX A. QUALITY MANUAL REVISION HISTORY..... 29

APPENDIX B. ORGANIZATIONAL CHART 32

REVISION HISTORY..... 32

APPENDIX C. ORGANIZATIONAL DESCRIPTORS 34

ORGANIZATIONAL DESCRIPTORS 34

REVISION HISTORY..... 35

APPENDIX D. INCORPORATED DOCUMENTS 36

REQUIRED PROCEDURES..... 36

REVISION HISTORY..... 36

APPENDIX E. QUALITY MANAGEMENT SYSTEM PROCESS FLOW..... 38

APPENDIX F. OUTSOURCED ACTIVITIES 39

OUTSOURCED PROCESSES..... 39

REVISION HISTORY..... 39

APPENDIX G. QUALITY OBJECTIVES 40

QUALITY OBJECTIVES 40

REVISION HISTORY..... 40

i. Foreword

This manual is issued to describe the quality system employed by Sager Electronics (hereafter referenced as Sager). The Quality Manual is issued and controlled by Sager's Director of Quality and Logistics.

The systems and processes described in this manual serve to ensure conformance to customer requirements, implementation of Sager's quality policy, as well as, conformance to the requirements of AS9100 and ISO9001.

It is the responsibility of the Director of Quality and Logistics to ensure that this manual is maintained as a current reflection of the Sager Quality System.

ii. Introduction

Sager Electronics, a wholly owned subsidiary of TTI Inc., a Berkshire Hathaway Inc. company, is a North American distributor of Interconnect, Power and Electromechanical components from leading manufacturers worldwide and a provider of value add solutions. Grounded in 130 years of innovation and service, Sager Electronics provides customers and suppliers a unique combination of operational excellence and innovative business solutions through its Distributing Confidence® business model. Headquartered in Middleborough, MA, Sager Electronics operates a national network of field sales representatives and power systems sales engineers, strategically located service centers across North America, and a value-add Power Solutions Center located in Carrollton, TX.

CUSTOMERS

Original Equipment Manufacturers and Contract Electronic Manufacturers primarily in the industrial, instrumentation, and medical industries as well as the maintenance repair operations and research and development related markets.

VISION STATEMENT

To be recognized as the leading electronic component distributor and provider of value add solutions to our targeted markets through: High Customer Satisfaction, Highly Developed Employees and High Levels of Technology Utilization.

1 Scope

1.1 Scope Statement

Main site scope: Warehousing and distribution of electronic components.

Additional site scope: Warehousing, assembly and distribution of electronic components.

1.2 Facilities within the Scope

The quality system applies to all processes, activities and employees within the company facilities located at Sager Electronics, 19 Leona Drive, Middleborough, MA 02346 & 1432 Wainwright Way, Suite 100, Carrollton, TX 75007.

1.3 Permissible Exclusions

The following clauses of ISO 9001 were determined to be not applicable to the Sager Electronics facility located at 19 Leona Drive in Middleborough, MA (DC001): Design and Development clause 8.3. Sager Electronics DC001 does not design or develop products or services. This exclusion does not affect Sager Electronics ability, or responsibility, to provide product that meets customer and applicable statutory and regulatory requirements.

1.4 Scope of the Quality Management System Manual

This manual is prepared for the purpose of defining the company's interpretations of the ISO 9001 and AS9100 international standards, as well as to demonstrate how the company complies with these standards.

2 Normative References

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the reference document (including any amendments) applies.

[AS9100:2016](#)

Quality Management Systems – Requirements for Aviation, Space, and Defense Distributors

[ISO 9001:2015](#)

Quality Management Systems – Requirements

[AS9496](#)

Counterfeit Mitigation

3 Terms and Definitions

3.1 Counterfeit Part

An unauthorized copy, imitation, substitute, or modified part, 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 or marking or labeling, grade, serial number, date code, documentation, or performance characteristics.

3.2 Critical Item

Those items (e.g., functions, parts, software, characteristics, processes) 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 of 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

Maintaining the state of product so that it is able to perform 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.

Note: Special requirements (3.5) and critical items (3.2) along with key characteristics (3.3) are interrelated. Special requirements are identified when determining and reviewing requirements related to the product (See 8.2.2 and 8.2.3). Special requirements can require the identification of critical items. Some critical items will be further classified as key characteristics because their variation needs to be controlled.

4 Context of the Organization

4.1 Understanding the Organization and Its Context

Sager shall determine external and internal issues that are relevant to its purpose and its strategic direction and that affect its ability to achieve the intended result of its Quality Management System. Sager addresses the customer requirements and applicable statutory and regulatory requirements. Sager shall monitor and review information about these external and internal issues:

- a) Issues with possible positive and negative factors or conditions.
- b) Issues arising from legal, technological, competitive, market, cultural, social, and economic environments, whether international, national, regional, or local.
- c) Issues related to values, culture, knowledge and performance of the organization.

4.2 Understanding the Needs and Expectations of Interested Parties

Due to their effect or potential effect on the organization's ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, the organization shall determine:

- a) The interested parties that are relevant to the quality management system.
- b) The requirements of those interested parties that are relevant to the quality management system.

Interested Parties

Requirements

Customers

Customers expect quality products delivered on time at the lowest possible cost. Sager monitors through on time delivery and internal error percentages.

Employees

Employees expect that they be given all required tools, guidance and training in order to perform their functions in a safe and diligent manner.

Suppliers

Suppliers expect a fair level of business and proper feedback on their performance.

Leadership

Leadership expects all Sager employees perform all their job functions in an ethical manner to create value and to meets its financial objectives.

Regulatory Authorities

Regulatory Authorities expect Sager to comply with Aviation requirements and to maintain all required certifications.

Government Agencies

Government Agencies expect Sager to meet all applicable laws about environment, employment, export compliance, health and safety and fiscal responsibilities.

Sager monitors and reviews information about these parties and their relevant requirements through contract review, supplier meetings, Sager's supplier excellence program, employee interaction and

retention, feedback from the parent company and feedback from auditors, consultants and standards communities.

4.3 Determining the Scope of the Quality Management System

Based on an analysis of the above issues of concern, interests of stakeholders, and in consideration of its products and services, Sager Electronics has determined that the scope of the management system as follows:

Main site scope: Warehousing and distribution of electronic components.

Additional site scope: Warehousing, assembly and distribution of electronic components.

4.4 Quality Management System and Its Processes

Sager shall establish, implement, maintain, and continually improve a quality management system, including the processes needed and their interactions.

The quality management system assigns the responsibilities and authorities for these processes (See Appendix B). These processes are continually reviewed on a regular basis by conducting management reviews, internal audits, risk assessments, and reviewing and monitoring quality objectives.

5 Leadership

5.1 Leadership and Commitment

5.1.1 General

A major part of Sager's business philosophy is to be customer-focused. This can be evidenced throughout Sager's organization. In addition to the biannual Quality Council management review meetings, members of the Executive Council participate in regular meetings and conference calls with departments to identify areas for improvement and reinforce Sager's customer-centric service and sales strategies.

Management's commitment to excellent customer service has been carried through to Sager's vision statement, quality policy, quality objectives, performance metrics, corporate presentations and collateral material, and risk assessments. Quality goals and metrics are posted in both hard and soft copy throughout the organization to further reinforce Sager's tag line "Distributing Confidence".

Sager's management team is responsible for identifying and procuring the resources needed to fulfill the requirements of Sager's Quality System. Managers shall continually validate that their teams are properly staffed with trained personnel who are committed to Sager's customer service and quality objectives.

5.1.2 Customer Focus

The Quality Council employs a number of ways to ensure that customer requirements are identified and properly fulfilled. Methods include, but are not limited to the following:

Customer Satisfaction – Sager evaluates Customer generated report cards, as well as, responses to electronic advanced ship notice surveys to determine how well their needs are being met. This data is compiled and reviewed with the Quality Council. Where appropriate, customers are contacted for more specific feedback. Areas for improvement are identified and addressed.

The Quality Council ensures that product and service conformity and on time delivery performance are measured and appropriate actions are taken if results are not or will not be achieved.

5.2 Policy

5.2.1 Establishing the Quality Policy

Sager's quality policy was developed by the Quality Council to communicate Sager's commitment to quality and the associated requirements of AS9100, ISO9001 and AS6496. The individual components of the quality policy are routinely reviewed and reinforced in both management and department meetings.

SAGER'S QUALITY POLICY

As a distributor of electronic components and provider of value added solutions, our constant goal is to ensure that the services provided meet or exceed our customer's expectations. Through our Quality System, we monitor both our suppliers and our processes, focusing on continual improvement.

5.2.2 Communicating the Quality Policy

The Quality Council meets regularly to review Quality System performance and to discuss current and future Quality initiatives. Performance metrics, meeting notes and action items are posted electronically for the management team according to documented Management Review procedures. Summary metrics are posted, at minimum, on Sager's portal to ensure that all employees have access to Sager's Quality System performance. Weekly and monthly quality metrics are also posted in common areas of the facility for employee review. The quality policy can be found on Sager's website for our interested parties.

5.3 Organizational Roles, Responsibilities and Authorities

Management has defined authority and responsibility for ensuring that the requirements of AS9100 and ISO9001 as well as this manual are implemented, followed, maintained and communicated. Sager has designated the Director of Quality and Logistics as the management representative that has responsibility and authority for the oversight over the QMS with direct access to senior leadership. An organization chart can be found in Appendix B of this manual.

6 Planning

6.1 Actions to Address Risks and Opportunities

Sager considers risks and opportunities when taking actions within the management system, as well as when implementing or improving the management system; likewise, these are considered relative to products and services.

Risks and opportunities are managed in accordance with the document: Risk Management Plan.

6.2 Quality Objectives and Planning to Achieve Them

The goals of Sager's quality management system have been established and are monitored and communicated as part of the Management Review process. These objectives are reviewed at each Management Review meeting for consistency within the quality policy and updated as appropriate. The Quality Council is responsible for insuring that these requirements are identified and met.

These objectives are listed within Appendix G of this manual and are additionally made available to employees via the portal and other collateral materials.

6.3 Planning of Changes

When the Quality Council determines the need for changes to the quality management system, the changes shall be carried out in a planned manner (see section 4.4).

The organization shall consider:

- a) The purpose of the changes and their potential consequences;
- b) The integrity of the quality management system;
- c) The availability of resources;
- d) The allocation or reallocation of responsibilities and authorities.

7 Support

7.1 Resources

7.1.1 General

Sager's management team is responsible for identifying and procuring the resources needed to fulfill the requirements of Sager's Quality System. Managers shall continually validate that their teams are properly staffed with trained personnel who are committed to Sager's customer-service and quality objectives.

Resource allocation is done with consideration of the capability and constraints on existing internal resources, as well as needs related to supplier expectations. Sager's management team is responsible for maintaining a proper work environment to ensure achievement of Quality Management System objectives.

7.1.2 Monitoring and Measuring Resources

Resources and resource allocation are assessed during management reviews.

Sager insures that all measuring tools used to determine product conformance are calibrated per the Calibration Procedure. All measuring tools are identified with labels showing date of calibration. All measuring tools are traceable to the national standards. All calibration or verification is carried out under suitable environmental conditions.

Sager maintains a record of all tools requiring calibration within the facility.

7.1.3 Organizational Knowledge

Sager also determines the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This may include knowledge and information obtained from:

- a) internal sources, such as lessons learned, feedback from subject matter experts, and/or intellectual property;
- b) external sources such as standards, academia, conferences, and/or information gathered from customers or suppliers.

This knowledge shall be maintained, and made available to the extent necessary. When addressing changing needs and trends, Sager shall consider its current knowledge and determine how to acquire or access the necessary additional knowledge.

7.2 Competence

Training requirements are determined by job requirements, inputs obtained from employee performance reviews, audit results, and/or Improvement Initiatives/Corrective Actions generated. Competence is based on education, training, skills, experience and ongoing job performance.

Sager has documented procedures for determining competence, identifying training needs and providing for the training of all personnel performing activities affecting the quality of Sager's service. Records are maintained as part of the Training procedures.

7.3 Awareness

The Quality Council is responsible for ensuring that their employees are aware of the relevance and importance of their activities and how these tasks contribute to the achievement of Sager's quality objectives and compliance to the quality policy. The quality policy is posted throughout the facility. Employees are aware the implications of nonconformance and also of their contribution to product safety and the importance of ethical behavior.

7.4 Communication

The Quality Council ensures internal communication takes place regarding the effectiveness of the quality management system on a biannual basis. Internal communication methods include:

- a) Use of corrective and preventive action processes to report nonconformities or suggestions for improvement.

- b) Use of the results of analysis of data.
- c) Meetings (periodic, scheduled and/or unscheduled) to discuss aspects of the QMS.
- d) Use of the results of the internal audit process.
- e) Regular company meetings with all employees.
- f) Internal emails or memos to employees.
- g) The Quality Council's "open door" policy which allows any employee access to discussions on improving the quality system.

7.5 Documented Information

7.5.1 General

In accordance with the requirements of AS9100 and ISO9001 Sager has established, implemented and maintains documented procedures to control all documentation and data that relate to Quality System requirements.

7.5.2 Creating and Updating

The appropriate department shall file external documentation as received and remove any obsolete document upon notification by customer. Revision control will be the responsibility of the issuing party.

When creating and updating documented information, Sager shall ensure appropriate:

- a) Identification and description (e.g. title, date, author, reference number).
- b) Format (e.g. language, software version, graphics) and media (e.g. paper, electronic).
- c) Review and approval for suitability and adequacy.

7.5.3 Control of Documented Information

All documents directly affecting the quality function are reviewed and approved for adequacy by designated department personnel prior to issue. This is done according to Document Control procedures.

Procedures are maintained within Sager's internal portal according to documented procedures. This ensures that current revisions are available to all employees at all locations.

The same departments that have performed the original approval normally perform document changes and these changes are done in accordance with the Document Control procedures.

Revision information is maintained by the Quality Department and is distributed upon request.

The Quality Department maintains a master list for each department indicating the current revision levels of all quality documents and records. Because current documents are available on the computer, users can be sure that they are using the latest document issue.

8 Operation

8.1 Operational Planning and Control

Sager plans and develops the processes needed for product requirements and services. Planning of product requirements is consistent with the other processes of the management system (see QMS Appendix E). Such planning considers the information related to the context of the organization (see section 4.0), resources and capabilities, as well as product and service requirements. Sager shall plan, implement and control the processes to implement the actions determined in clause 6 by:

- a) Determination of requirements for the products and services should include 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, if applicable;
 - 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.
- b) Establish criteria for
 - a. The processes
 - b. The acceptance of products and services

According to the nature of the product and depending on the specific requirements, statistical techniques can be used to support:

- Design verification
 - Process control
 - o Selection and verification of key characteristics;
 - o Process capability measurements;
 - o Statistical process control;
 - o Design of experiments
 - Verification;
 - Failure mode, effects and criticality analysis.
- c) Determining the resources needs to achieve conformity to the product and service requirements and to meet on time delivery of products and services;
 - d) Implementing control of the processes in accordance with the criteria;
 - e) Determining, maintaining, and retaining documented information to the extent necessary:
 - a. To have confidence that the processes have been carried out as planned;
 - b. To demonstrate the conformity of products and services to their requirements;
 - f) Determining the processes and controls needed to manage critical items, including production process controls when key characteristics have been identified;

- g) Engaging representatives of affected organization functions for operational planning and control;
- h) Determining the process and resources to support the use and maintenance of products and services;
- i) Determining the products and services to be obtained from external providers;
- j) Establishing the controls needed to prevent the delivery of nonconforming products and services to the customer.

8.1.1 Operational Risk Management

Sager shall plan, implement, and control a process for managing operational risks to the achievement of applicable requirements, which includes:

- a) Assignment of responsibility for operational risk management
- b) Definition of risk assessment criteria (impact, likelihood and risk acceptance);
- c) Identification, assessment, and communication of risks throughout operations;
- d) Identification, implementation, and management of actions to mitigate risks that exceed the defined risk acceptance criteria;
- e) Acceptance of risks remaining after implementation of mitigating actions.

8.1.2 Configuration Management

Configuration management consists of unique part numbers assigned to product by both the manufacturer and by Sager. If a part is changed for any reason, the manufacturer will sell the product to Sager with another unique part number assigned by the manufacturer. Customer part numbers / aliases are not part of Configuration Management.

8.1.3 Product Safety

Sager shall plan, implement and control the processes needed to assure product safety during the entire product life cycle, as appropriate to the organization and the product. Examples of these processes include:

- Assessment of hazards and management of associated risks (see 8.1.1);
- Management of safety critical items;
- Analysis and reporting of occurred events affecting safety;
- Communication of these events and training of persons.

8.1.4 Prevention of Counterfeit Parts

Sager shall only purchase parts for resell from the Manufacturer or from the Manufacturer's Authorized Distributor. When Sager purchases from an Authorized Distributor the distributor's authorization with the manufacturer shall be verified and documented. Sager's counterfeit mitigation procedures are based upon AS6496.

Sager employees receive training on the identification and prevention of counterfeit parts being introduced in to the supply chain. Throughout all stages of the fulfillment process, inventory is verified for kind, count and condition. Where Sager proposes to verify purchased product at its supplier's premises, Sager shall specify verification arrangements and the method of product release in the associated Sager purchase orders.

Where specified in the contract, our customer shall be afforded the right to verify at source and/or upon receipt that purchased product conforms to specified requirements. This may include review of supplier paperwork.

Acceptance by the customer of products in question does not relieve Sager from ongoing verification procedures and does not restrict the customer from later rejecting the product.

8.2 Requirements for Products and Services

As a minimum, contracts are reviewed by the Sales Department before acceptance for:

- Order requirements being clearly defined and documented.
- Delivery time required for parts.
- Customer-specific standards and requirements.
- Special packaging and shipping requirements.
- Sager's ability to meet the customer's requirements.
- Inventory or credit risks using internal classification system.

The following departments are consulted, as necessary, during the contract review process: Marketing, Sales, Distribution Center, Finance and Operations.

Any exceptions to the customer's specifications are agreed upon and communicated with the customer prior to accepting or altering an order or contract. The results of the contract review process are documented by the Sales department and retained in the computer database.

Sager maintains documented procedures that describe the customer order maintenance process per the Sales Key Processes.

8.2.1 Customer Communication

Communication methods are dictated by Sager's customers. Order requirements are typically communicated via phone, e-mail or EDI. The same is true with customer complaints. Sager will make every effort to utilize the required tools and methods to ensure effective communication and customer satisfaction.

Sager has implemented effective communication with customers in relation to:

- a) Providing information relating to products and services;
- b) Handling inquiries, contracts or orders, including changes;
- c) Obtaining customer feedback relating to products and services, including customer complaints;
- d) Handling or controlling customer property;

- e) Establishing specific requirements for contingency actions, when relevant.

Results of any customer communication will be reviewed during Management Review.

8.2.2 Determining the Requirements for Products and Services

During the intake of new business, Sager captures:

- a) Requirements specified by the customer, including the requirements for delivery and post-delivery activities;
- b) Requirements not stated by the customer but necessary for specified or intended use, where known;
- c) Statutory and regulatory requirements related to the product;
- d) Any additional requirements determined by Sager;
- e) Special requirements specified by the customer, or identified by Sager to meet other customer requirements;
- f) Operational risks associated with meeting customer requirements.

8.2.3 Review of the Requirements for Products and Services

Sager maintains documented procedures that describe the customer order maintenance process. Any exceptions to the customer's specifications are agreed upon and communicated with the customer prior to accepting or altering an order or contract. The results of the contract review process are documented by the Sales department and retained in the computer database.

8.2.4 Changes to Requirements for Products and Service

Any changes or amendments to the original order shall be documented and retained, and all internal and external parties are informed of the changes.

8.3 Design and Development of Products and Services (See 1.3 Exclusion)

8.3.1 General

Sager maintains a design and development process that ensures the subsequent provision of products and services.

8.3.2 Design and Development Planning

In determining the stages and controls for design and development, Sager considers:

- a. The nature, duration, and complexity of the design and development activities;
- b. The required process stages, including applicable design and development reviews;
- c. The required design and development verification and validation activities;
- d. The responsibilities and authorities involved in the design and development process;
- e. The internal and external resource needs for the design and development of products and services;
- f. The needs to control interfaces between persons involved in the design and development process;

- g. The need for involvement of customers and users in the design and development process;
- h. The requirements for subsequent provision of products and services;
- i. The level of control expected for the design and development process by customers and other relevant interested parties;
- j. The documented information needed to demonstrate that design and development requirements have been met.

Sager divides the design and development effort into distinct activities, and defines the tasks, necessary resources, responsibilities, design content, and inputs and outputs for each activity.

8.3.3 Design and Development Inputs

Sager determines the requirements essential for the specific types of products and services to be designed and developed. Sager considers:

- a. Functional and performance requirements;
- b. Information derived from previous similar design and development activities;
- c. Statutory and regulatory requirements;
- d. Standards or codes of practice that the Sager has committed to implement;
- e. Potential consequences of failure due to the nature of the products and services;
- f. The potential consequences of obsolescence.

Inputs shall be adequate for design and development purposes, complete and unambiguous.

Sager retains documented information on design and development inputs.

8.3.4 Design and Development Controls

Sager applies controls to the design and development process to ensure that:

- a. The results to be achieved are defined;
- b. Reviews are conducted to evaluate the ability of the results of design and development to meet requirements;
- c. Verification activities are conducted to ensure that design and development outputs meet the input requirements;
- d. Validation activities are conducted to ensure that the resulting products and services meet the requirements for the specific application or intended use;
- e. Any necessary actions are taken on problems determined during the review, or verification and validation activities;
- f. Documented information on these activities is retained;
- g. Progression to the next stage is authorized.

Participants in the design and development reviews include representatives of functions concerned with the design and development stage(s) being reviewed.

When tests are necessary for the verification and validation, these tests are planned, controlled, reviewed and documented to ensure and prove the following:

- a. Test plans or specifications identify the test item being tested and the resources being used, define test objectives and conditions, parameters to be recorded and relevant acceptance criteria;
- b. Test procedures describe the test methods to be used, how to perform the test, and how to record the results;
- c. The correct configuration of the test items is submitted for the test;
- d. The requirements of the test plan and the test procedures are observed;
- e. The acceptance criteria are met.

Sager controls all monitoring and measuring devices used for testing as defined in clause 7.1.5.

Sager ensures that, at the completion of design and development, reports, calculations and test results are able to demonstrate that the design for the product or service meets the specific requirements for all identified operational conditions.

8.3.5 Design and Development Outputs

Sager ensures that design and development outputs:

- a. Meet the input requirements;
- b. Are adequate for the subsequent processes for the provision of products and service;
- c. Include or reference monitoring and measuring requirements, and acceptance criteria;
- d. Specify the characteristics of products and services that are essential for their intended purpose and their safe and proper provision;
- e. Specify and critical items, including any key characteristics, and specific actions to be taken for these items;
- f. Are approved by authorized person(s) prior to release.

Sager defines the data required to allow the product to be identified, manufactured, verified, used and maintained. This data includes:

- The drawings, parts lists and specifications necessary to define the configuration and the design features of the product;
- The material, process, manufacturing, assembly, handling, packaging and preservation data needed to provide and maintain a conforming product or service;
- The technical data and repair schemes for operating and maintaining the product.

Sager retains documented information on design and development outputs.

8.3.6 Design and Development Changes

Sager identifies, reviews and controls changes made during and subsequent to, the design and development of products and services, to the extent necessary to ensure that there is no adverse impact on conformity to requirements. Sager notifies its customer, prior to implementation, about changes that could affect the customer requirements.

Sager retains documented information on:

- a. Design and development changes;
- b. The results of reviews;
- c. The authorization of the changes;
- d. The actions taken to prevent adverse impacts.

Design and development changes are controlled in accordance with the configuration management process requirements.

8.4 Control of Externally Provided Processes, Products and Services

8.4.1 General

Sager has established, implemented and maintains a process to plan and control the temporary or permanent transfer of work and has a process in place to verify the conformity of the transfer to requirements. Typically, this applies to Sager transferring product from our main Distribution Center to one of our third party warehouse locations.

Sager identifies and manages risks associated with external providers of processes, products and services through periodic review of key metrics. Sager accepts accountability and responsibility for conformance of products from customer approved providers.

It is the responsibility of the Marketing Department to purchase, from preferred and approved suppliers, products and services that conform to specified requirements.

- a) Sager maintains a register of suppliers, which includes their current approval status. Authorized suppliers are Sager's preferred supplier, which is identified on Sager's line card. Approved suppliers are designated as Non-Authorized suppliers that are authorized for the sale of their product. Supplier Marketing is responsible for maintaining and updating the Approved Suppliers Register.
- b) Suppliers are selected and maintained based upon their ability to meet Sager Quality standards and specifications. Selection is done by Sager's Management using various criteria including: product offering and technology, quality, exclusivity, representation network, service, profitability and where appropriate, records of previously demonstrated capability and performance. There are documented procedures outlining this process. Our customers mandate which products and suppliers they want to purchase. As a distributor, it is our job to monitor supplier performance and take action, as required, to provide customers with the best level of service and satisfaction possible.

- c) Supplier Quality Meetings are held throughout the year to monitor supplier performance, which includes, but is not limited to, on-time delivery, acknowledgement rating and quality specific issues. Action items are created if the suppliers do not meet Sager's performance criteria. Corrective Actions are initiated for any supplier that is determined to be failing to meet customer product requirements.
- d) Sager will ensure, when appropriate, that all applicable suppliers as well as Sager use customer-approved special process sources.
- e) Suppliers and items are categorized based on various risk factors. Business strategies are created and adjusted based on these classifications.
- f) Sager's supplier selection process is designed to prevent the purchase of counterfeit/suspect unapproved products. Sager only sells products that we are contractually authorized to sell. Any exceptions are documented with the customer at time of quotation and are noted with an asterisk on shipping paperwork.

8.4.2 Type and Extent of Control

Sager ensures that externally provided processes do not adversely affect the organizations ability to consistently deliver conforming products. Sager also ensures that externally provided processes remain within control of Sager's QMS. The external provider performance is reviewed and discussed monthly by Supplier Marketing and bi-annually during management review.

Sager inspects incoming product for kind, count and condition and processes discrepancies via the Receiving Exceptions work instructions. Sager does not currently receive raw materials.

8.4.3 Information for External Parties

Sager management shall communicate to external providers its requirements for:

- a) The processes, products and services to be provided;
- b) The approval of:
 - 1. Products and services;
 - 2. Methods, processes and equipment;
 - 3. The release of products and services.
- c) Competence, including any required qualification of persons;
- d) The external providers' interactions with Sager;
- e) Control and monitoring of the external providers' performance to be applied to Sager;
- f) Verification or validation activities that Sager, or its customer, intends to perform at the external providers' premises;
- g) Design and development control;
- h) Special Requirements, critical items, or key characteristics;
- i) Test, inspection and verification;
- j) The use of statistical techniques for product acceptance and related instructions for acceptance by Sager;
- k) The need to:
 - 1. Implement a quality management system;

2. Use customer designated or approved external providers, including process sources;
 3. Notify Sager of nonconforming processes, products or services and obtain approval for their disposition;
 4. Prevent the use of suspected unapproved and counterfeit parts;
 5. Notify Sager of changes to processes, products or services, including changes to their external providers or locations of manufacture;
 6. Flow down to external providers applicable requirements including customer requirements;
 7. Provide a certificate of conformity, test reports, or authorized release certificate, as applicable;
 8. Retain documented information, including retention periods and disposition requirements.
- l) The right of access by Sager, their customer, and regulatory authorities to the applicable areas of facilities and to applicable documented information, at any level of the supply chain.
- m) Ensuring that persons are aware of:
1. Their contribution to product or service conformity;
 2. Their contribution to product safety;
 3. The importance of ethical behavior.

8.5 Production and Service Provision

8.5.1 Control of Production and Service Provision

To control its provision of parts or services, Sager considers, as applicable, the following:

- a) The availability of information or records that define the characteristics of the parts, as well as the results to be achieved;
- b) The availability and use of suitable monitoring and measuring resources;
- c) The implementation of monitoring and measurement activities;
- d) The use of suitable infrastructure and environment;
- e) The appointment of competent persons, including any required qualifications;
- f) The validation, and periodic revalidation, of the ability to achieve planned results of the processes for production and service provision, where the resulting output cannot be verified by subsequent monitoring or measurement. These processes can be referred to as special processes;
- g) The implementation of actions to prevent human error;
- h) The implementation of release, delivery and post-delivery activities;
- i) The establishment of criteria for workmanship;
- j) The accountability for all products;
- k) The control and monitoring of identified critical items, including key characteristics, in accordance with the established processes;
- l) The determination of methods to measure variable data;
- m) The identification of in-process inspection/verification points when adequate verification of conformity cannot be performed at later stages;

- n) The availability of evidence that all production, inspection, and verification operations have been completed as planned, or as otherwise documented and authorized;
- o) The provision for prevention, detection, and removal of foreign objects;
- p) The control and monitoring of utilities and supplies;
- q) 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.

At this time, Sager does not utilize any in-house “special processes” where the result of the process cannot be verified by subsequent monitoring or measurement.

8.5.1.1 Control of Equipment, Tools and Software Program

Equipment, tools and software programs used to automate, control, monitor, or measure processes are validated and maintained. Storage requirements are defined for distribution equipment or tooling including any necessary periodic preservation or condition checks.

8.5.1.2 Validation and Control of Special Processes

For processes where the resulting output cannot be verified by subsequent monitoring or measurement, the organization shall establish arrangements for these processes including, as applicable;

- a) Definition of criteria for the review and approval of the processes;
- b) Determination of conditions to maintain the approval;
- c) Approval of facilities and equipment;
- d) Qualification of persons;
- e) Use of specific methods and procedures for implementation and monitoring of the processes;
- f) Requirements for documented information to be retained.

8.5.1.3 Production Process Verification

The organization shall implement production process verification activities to ensure the production process is able to produce products that meet the requirements. These activities can include risk assessments, capacity studies, capability studies, and control plans. The organization shall use a representative from the first production run of a new part or assembly to verify that the production processes, production documentation, and tooling are able to produce parts and assemblies that meet requirements. This activity shall be repeated when changes occur that invalidate the original results. This activity can be referred to as First Article Inspection (FAI). The organization shall retain documented information on the results of the production process verification.

8.5.2 Identification and Traceability

Received product is identified by purchase order, part number and quantity. If further identification is required, the product shall be delivered to the Non-Conforming area. Inventory Control personnel may contact the supplier or appropriate buyer to complete the verification process.

Purchase order information does not provide lot traceability. Product identification and traceability is maintained using bar-code labels during every phase of the warehouse process (receiving, put away,

picking, packaging/shipping). Traceability beyond the source of supply is treated as a customer special request and handled according to the documented sales procedures. Records are maintained where applicable.

8.5.3 Property Belonging to Customers or External Providers

Sager shall exercise care with customer / external provider property while it is under Sager's control or if it is being used by Sager. Sager shall identify, verify, protect and safeguard customer / external provider property provided for use. If customer / external provider property becomes lost, damaged or otherwise made unusable, Sager will identify and record the issue as well as report such to the customer / external provider.

8.5.4 Preservation

Sager's processes for handling, storing, packaging, preserving and delivering inventory are described in the Warehouse and Inventory Control procedures.

Only authorized personnel may handle product. Inventory shall be handled in such a fashion as to protect against damage and preserve its integrity as a quality product. Whenever possible, product is kept in the manufacturer's original packaging in order to minimize handling.

Preservation of product shall also include, where applicable in accordance with product specifications and applicable statutory and regulatory requirements, provisions for:

- a) Cleaning – Sager does not sell product that needs cleaning.
- b) Prevention, detection and removal of foreign objects.
- c) Special handling for sensitive products – Sager has ESD procedures in place as well as a segregated ESD/Moisture Sensitive stocking area.
- d) Marking and labeling including safety warnings - Products are shipped in packages that clearly identify the part number. Each product is identified by a unique Sager part number that references the supplier and the manufacturer's part number, ensuring segregation of similar products. Shipping documentation is printed out and affixed to the shipment.
- e) Shelf life control and stock rotation – Sager routinely performs cycle counts and stock rotations. Stock rotation schedules are created based upon product age and excess availability. At this time, the condition of the product is assessed. Damaged and/or questionable material will be segregated and handled as non-conforming product.
- f) Sager provides special handling and storage for hazardous materials.

Inventory shall be stored in structurally sound and well-maintained warehousing facilities. Storage methods are determined by the product's manufacturer, size, quantity and type. Whenever possible, material is kept in the manufacturer's original packaging. When necessary, inventory shall be stored in appropriate containers to prevent deterioration.

Where contractually specified, Sager shall extend protection to include delivery to destination.

8.5.5 Post-Delivery Activities

As applicable, Sager conducts the following activities which are considered “post-delivery activities”:

- Customer surveys;
- Statutory and regulatory requirements;
- Customer requirements;
- Corrective actions;
- Returns processing;
- Collection and analysis of in-service data;
- Control, updating, and provision of technical documentation relating to product use, maintenance, repair, and overhaul;
- Controls required for work undertaken external to the organization;
- Product/Customer support

Post-delivery activities are conducted in compliance with the management system defined herein which includes investigation and reporting.

8.5.6 Control of Changes

Sager reviews and controls both planned and unplanned changes to processes to the extent necessary to ensure continuing conformity with all requirements.

Service provision changes are authorized by sales, the Director of Operations Service and Logistics, and the manager responsible for Special Programs.

8.6 Release of Products and Services

Acceptance criteria for parts are defined in appropriate subordinate documentation. Reviews and inspections are conducted at appropriate stages to verify that the product and service requirements have been met. This is done before parts are released or services are delivered. Requested documents can be obtained from the external provider. Each shipment is provided with a certificate of conformity which identifies product conformance to customer requirements and manufacturer’s specifications. When required to demonstrate product qualification, the organization shall ensure that retained documented information provides evidence that the products and services meet the defined requirements.

8.7 Control of Nonconforming Outputs

Sager has Inventory Control Procedures for identifying, documenting, evaluating, segregating, and dispositioning of nonconforming product.

Product that has been identified as possibly nonconforming, receiving exceptions, and all customer returns are stored in a separate Inventory Control area that is physically isolated from regular stock. The computer system prohibits products in Inventory Control from shipping to customers.

Qualified Inventory Control, Quality, or Engineering personnel perform determination of nonconformance. Product is inspected for kind (correct manufacturer part number), count, and

condition (visual inspection). Where failure of a technical nature is suspected, material is treated as nonconforming. Only product found to be conforming is returned to regular stock.

Qualified personnel notify Sales and Marketing of the presence and disposition of nonconforming product when appropriate. Customers are notified when previously shipped product may present a risk to them.

Sager Distribution does not repair, re-work, re-grade or accept product by concession. The Power Solutions Center (PSC) only repairs product if it is a Qualified VAR for the Supplier or for the VA content added by the PSC. Product found to be nonconforming is returned to the original supplier for repair or replacement, or it is scrapped. Where appropriate, a Corrective Action will be issued to address non-conformity.

In situations where product passes kind, count and condition inspections but does not meet customer-specific requirements, associated shipments will be held until the account is contacted and customer authorization is received. If the product is not accepted, it will be moved to the Inventory Control and handled according to documented Inventory Control procedures.

Product dispositioned for scrap is conspicuously and permanently marked, or positively controlled, until physically rendered unusable.

9 Performance and Evaluation

9.1 Monitoring, Measurement, Analysis and Evaluation

9.1.1 General

Sager maintains monitoring, measurement, analysis and improvement processes needed to ensure quality system conformity and effectiveness. These processes also ensure customer expectations are continually achieved. These are monitored through the established Sager Quality Objectives.

Statistical techniques may be employed to collect, analyze, and interpret data relating to the performance of both Sager and its suppliers. Any statistical measurements used shall be incorporated within the departmental procedures that verify the acceptability of process and product. These measurements shall be reviewed as part of the Management Review process.

9.1.2 Customer Satisfaction

As one of the measurements of the performance of the quality management system, Sager monitors information relating to customer perception as to whether Sager has fulfilled customer requirements. The methods used to obtain this information are through customer surveys, customer report cards and Sager management visits.

- Recording customer complaints;

- Product rejections or returns;
- Repeat orders for product;
- Changing volume of orders for product;
- Trends in on-time delivery;
- Obtain customer scorecards from certain customers;
- Submittal of customer satisfaction surveys.

The Corrective Action system shall be used to develop and implement plans for customer satisfaction improvement that address deficiencies identified by these evaluations, and assess the effectiveness of the results.

9.1.3 Analysis and Evaluation

Sager shall analyze and evaluate appropriate data and information arising from monitoring and measurement. The results of the analysis shall be used to evaluate:

- a) Conformity of products and services;
- b) The degree of customer satisfaction;
- c) The performance and effectiveness of the Quality Management System
- d) The effectiveness of planning;
- e) The effectiveness of actions taken to address risks and opportunities;
- f) The performance of external providers;
- g) Other improvements to the management system.

9.2 Internal Audit

Internal quality audits are planned and conducted for each identified key process a minimum of once every year to monitor the effectiveness of the overall system and to ensure that all quality-related activities comply with written procedures and the requirements of AS9100, ISO9001 and AS6496.

Audit frequency is scheduled, and shall be adjusted, to give priority and heightened attention to areas based on the status and importance of their activities. Results of previous audits are also used to determine frequency of area audits.

The Director of Quality and Logistics is responsible for the creation and maintenance of the internal audit schedule.

When outside consultants are used to complete Sager's internal audits, the Quality Council shall review the results of the audit in the meeting immediately following the completion of the audit. The Quality Council shall complete a review of the internal audit procedures followed and determine if they were effective. The consultant may not perform the audit on the internal audit processes.

Internal auditors shall not audit their own work in order to remain impartial and insure objectivity. The results of the audit shall be documented according to Sager's Internal Audit Procedure, and brought to the attention of the personnel having responsibility for the area being audited. It is the area manager's responsibility to take timely action on the deficiencies found by the audit.

The results of audits are recorded and maintained according to the Quality Records procedure. These audit reports are used to help plan follow up audits and verify the effectiveness of any action taken against non-conformances noted in previous audits.

9.3 Management Review

9.3.1 General

Management Review meetings are held with the Quality Council on a bi annual basis to review the Quality System and ensure that it is effectively satisfying the requirements of AS9100, ISO9001 and AS6496, the quality policy, and Sager's business needs. Records are maintained for each management review meeting.

9.3.2 Management Review Inputs

The management review shall be planned and carried out, taking in to consideration;

- a) The status of actions from previous management reviews.
- b) Changes in external and internal issues that are relevant to the Quality Management System.
- c) Information on the performance and effectiveness of the Quality Management System, including trends in;
 - 1. Customer satisfaction and feedback from relevant interested parties.
 - 2. The extent to which quality objectives have been met.
 - 3. Process performance and conformity of products and services.
 - 4. Non-conformities and corrective actions.
 - 5. Monitoring and measurement results.
 - 6. Audit results.
 - 7. The performance of external providers.
 - 8. On time delivery performance.
- d) The adequacy of resources.
- e) The effectiveness of actions taken to address risks and opportunities.
- f) Opportunities for improvement.

9.3.3 Management Review Outputs

During Management Review meetings, management will make appropriate decisions and take actions regarding the following:

- a) Opportunities for improvement.
- b) Any need for changes to the Quality Management System.
- c) Resource needs.
- d) Risks identified.

The responsibility for required actions is assigned to members of the management team. Decisions made regarding action items (due dates, description of action item, action taken) are recorded on a Management Review Action Item List. Meeting notes are also recorded.

10 Improvement

10.1 General

Sager uses the management system to improve its processes, products and services. Such improvements aim to address the needs and expectations of customers as well as other interested parties, to the extent possible.

Improvement shall be driven by an analysis of data related to:

- a) Conformity of products and services;
- b) The degree of customer satisfaction;
- c) The performance and effectiveness of the management system;
- d) The effectiveness of planning;
- e) The effectiveness of actions taken to address risks and opportunities;
- f) The performance of external providers;
- g) Other improvements to the management system;
- h) Correcting, preventing, or reducing undesirable effects.

10.2 Nonconformity and Corrective Action

Sager maintains documented procedures that describe how a corrective action is implemented. The Director of Quality and Logistics is responsible for overseeing this process and ensuring that the action taken is commensurate with the amount of risk encountered.

Sager has a comprehensive corrective action program, which includes the investigation and correction of product and process complaints. The system handles corrective action, customer complaints, suppliers and quality system non-conformances. Failure of product, process or quality requirements is an indication that the process or system was not followed or is inadequate. The process determines the causes of the nonconformity, including, as applicable, those related to human factors.

There are procedures in place describing the corrective action process. These procedures include a process for escalation to a higher level of management should a timely corrective action not be implemented.

Any changes to documented procedures, as a result of corrective action requests, will be handled according to Document Control procedures.

The Director of Quality and Logistics receives copies of all corrective action requests and is responsible for follow-up to ensure that the corrective action is in place and that it is effective

10.3 Continual Improvement

Sager is continuously looking for ways to improve customer satisfaction as well as its business practices. Sager relies heavily on its Quality Management System to drive these improvements.

Internal audits are used to evaluate compliance to AS9100, ISO9001 and documented system requirements. These reviews are also conducted to identify ways to improve Sager's operational processes and related systems. By doing this, the auditors and management team validate that Sager's Quality System is not only conforming but also functional and effective.

Management Review is another process used to drive continuous improvement. Various sources of data are reviewed and discussed. Issues are prioritized and action items are established all with the goal of fulfilling Sager's quality policy.

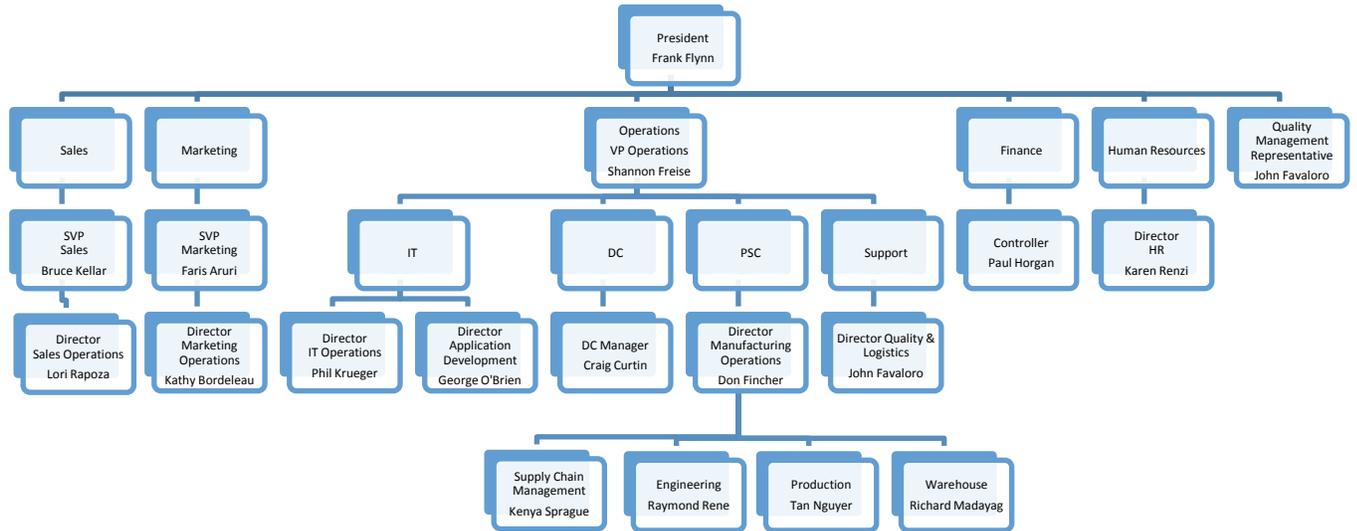
Appendix A. Quality Manual Revision History

| Rev | Revised By | Date | Nature of Revision |
|-----|------------|----------|--|
| 0 | | 06/21/93 | Original Version |
| 1 | M. Norton | 02/09/94 | Complete Re-write |
| 2 | M. Norton | 08/29/94 | Removed all references to North Star due to 09/01/94 consolidation. Changed ASQC standard from 1987 to 1994. Customer complaints are handled according to documented procedures – not necessarily the Corrective Action process. Modified inspection process to include the use of computerized information. Changed Organization Chart and Descriptors |
| 3 | M. Norton | 12/05/94 | Major re-write to reflect changes in the ISO standard and Lloyd's Non-Conformance Notes. Replaced "Document Control personnel" with the Quality Department. |
| 4 | M. Norton | 05/10/95 | Changed Sager Electrical Supply to Sager Electronics. Added Revision pages for each appendix. Added Related Documents (Appendix D). Changed ASQC Q92 to Q9002. Changed 4.1.2.3 from Quality Department to Quality Mgr. Changed 4.5.2 to remove or mark obsolete documents. Clarified lot traceability policy in 4.8. |
| 5 | D. Ratay | 03/14/96 | Changed "site" reference to include references to "Service Centers" throughout manual. Changed 4.1.2.3 to reflect Quality Rep accountability and role of line management in reporting quality system performance. Changed several clauses to account for current Purchasing/Marketing structure. Changed reference from "Warehouse" to "Distribution Center" throughout manual. Changed 4.9.2 to include Moisture Sensitive Components in Special Processes. Changed 4.17 to include preventive action. Changed Appendix B to current organizational chart. Changed Appendix C to current organizational descriptors. |
| 6 | D. Ratay | 10/09/96 | Changed 4.1.3 to reflect the type of CARs reviewed at the Management Rev. Meeting. |
| 7 | T. Fraser | 09/08/97 | Revised 4.1.2.3 to include new role of Quality Committee. Revised all references of QAM to SQSR. |
| 8 | T. Fraser | 09/28/98 | Revised 4.1.3 to reflect roles in evaluation of supplier's, revised how often locations are audited, explained new Improvement Initiative process, and updated Corrective Action process. Revised 4.17 to reflect how often sales locations are audited, took out mention of corrective action. All internal non-conformances are now documented via Improvement Initiatives. Revised 4.18 to reflect Improvement Initiative process. |
| 9 | J. Briggs | 02/02/99 | Revised all references of Sr. Quality System Rep to Director of Operations & Quality Systems. Revised all references to the Purchasing Department to the Product Marketing Department. Sager has combined both the Marketing & Purchasing Departments into one department. Revised 4.1.3 (Discrepant Material or Product) Revised 4.10.2.1 (Included Quality Committee as a means of generating supplier corrective action) |

| | | | |
|-----|-------------|----------|--|
| | | | Revised 4.10.4 (Final Inspection & Testing to reflect current process) Revised 4.10.5 (Inspection & Test Records to reflect current process) |
| 10 | S. Mattern | 09/29/00 | Revised Introduction: Added Vision Statement and Mission Statement Revised 4.1 (Lotus Notes databases for Corrective Actions and Improvement Initiatives) Revised 4.5 (Document and Data Control) Revised 4.13 (Control of Non-conforming Product) to reflect current process. Revised 4.15 (Unique Product Identification) Revised references from Dir. Of Operations and Quality Systems to Director of Quality, from Product Marketing to Purchasing, from Product Manager to Buyer. Removed references to Quality Committee Removed references to Work Instructions |
| 11 | L. Kimball | 09/25/01 | Revised 4.1.3 (Management Review) removed reference to quarterly updates. |
| 11A | L. Kimball | 01/18/02 | Updated Vision Statement and removed Mission Statement. |
| 12 | M. Mahoney | 10/01/02 | Complete rewrite. Changed to reflect the requirements of ISO9001:2000. |
| 12A | M. Mahoney | 11/11/02 | Revised 4.1 – Added paragraph to explain reason for design control exclusions. |
| 13 | M. Mahoney | 06/20/03 | Revised 4.1 – More clearly identified exclusions. Revised 8.2.4 – Added text to more clearly indicate what happens to rejected product. |
| 14 | M. Mahoney | 07/28/04 | Revised 4.2.1 – Added reference to process flow diagram in Appendix E Revised 7.5.4 – Added sentence to further clarify customer property exclusion. |
| 15 | M. Mahoney | 01/28/05 | Revised – Added references to Appendices F and G. Revised – Added reference to Business Solutions group. Revised – 5.2 Removed references to the Distributing Confidence Sales model. Minor verbiage changes. |
| 16 | M. Mahoney | 08/01/05 | Added Scope Statement to the Introduction Revised – 7.5.1 to clarify that Sager does not engage in any post-sale activities or servicing |
| 17 | T. Condon | 12/11/07 | Revised – 5.6.3 removed reference to “Distributing Confidence” Meetings 7.4.2 – removed (duplicate paragraph) Revised – 8.5.1 removed reference to verification audits. Removed reference to Senior Management and updated to Executive Council |
| 18 | T. Condon | 09/15/09 | Revised Quality Manual to reflect the new version of ISO9001:2008 as well as to incorporate AS9100 (the aerospace standard). |
| 19 | T. Condon | 11/15/11 | Revised Quality Manual to reflect the new version AS9120 Rev A standard. |
| 20 | T. Condon | 06/28/12 | Revised Quality Manual to reflect changes due to TTI acquisition and some “title” changes at Sager. |
| 21 | T. Condon | 10/15/15 | Updated Quality Manual and included reference of conforming to Counterfeit Standard/AS6496 |
| 22 | J. Favaloro | 08/25/17 | Major re-write of Quality Manual to reflect the new version AS9120 Rev B standard |
| 23 | J. Favaloro | 11/09/17 | Updated section 1.3 to provide justification to the design and development exclusion taken in section 8.3. Update organizational chart |
| 24 | J Favaloro | 03/09/18 | Major re-write of Quality Manual to reflect the new version AS9100 Rev D Standard. Updated Organizational Chart and Interaction of Processes |

| | | | |
|-----------|-------------|----------|---|
| 25 | J. Favaloro | 04/18/18 | Updated manual to include section 8.3 Design and Development of Products and Services for PSC. Middleborough will continue to take the exclusion to that section. Updated Interaction or Processes (IOP) and Organizational Chart, for PSC. |
| 26 | J. Favaloro | 08/14/18 | Updated IOP to reflect PSC processes as part of overall process flow map. |

Appendix B. Organizational Chart



Revision History

| Rev | Revised By | Date | Nature of Revision |
|-----|------------|----------|------------------------------|
| 0 | D. Ratay | 05/10/95 | Original Version |
| 1 | D. Ratay | 03/21/96 | Current Organizational Chart |
| 2 | D. Ratay | 10/09/06 | Current Organizational Chart |
| 3 | T. Fraser | 09/08/97 | Current Organizational Chart |
| 4 | T. Fraser | 03/10/98 | Current Organizational Chart |
| 5 | T. Fraser | 09/28/98 | Current Organizational Chart |
| 6 | T. Fraser | 02/02/99 | Current Organizational Chart |
| 7 | S. Mattern | 09/29/00 | Current Organizational Chart |
| 8 | L. Kimball | 09/24/01 | Current Organizational Chart |
| 9 | L. Kimball | 01/18/02 | Current Organizational Chart |
| 10 | R. Norton | 09/20/02 | Current Organizational Chart |
| 11 | R. Norton | 06/20/03 | Current Organizational Chart |
| 12 | M. Mahoney | 07/28/04 | Current Organizational Chart |
| 13 | M. Mahoney | 01/24/05 | Current Organizational Chart |
| 14 | T. Condon | 11/20/07 | Current Organizational Chart |
| 15 | M. Mahoney | 01/25/10 | Current Organizational Chart |
| 16 | T. Condon | 06/28/12 | Current Organizational Chart |

| Rev | Revised By | Date | Nature of Revision |
|------------|-------------------|-------------|--|
| 17 | T. Condon | 10/15/15 | Current Organizational Chart |
| 18 | J. Favaloro | 07/24/17 | Current Organizational Chart |
| 19 | J. Favaloro | 11/09/17 | Current Organizational Chart |
| 20 | J. Favaloro | 03/27/18 | Updated Chart with Process Owner Names |
| 21 | J. Favaloro | 05/07/18 | Added PSC Process Owners |
| | | | |
| | | | |

Appendix C. Organizational Descriptors

Organizational Descriptors

The overall responsibility for quality in the organization rests with President of Sager Electronics. He has defined the Quality Policy for the company and is committed to its implementation.

The responsibility for further detailing of the quality program and for its execution is delegated to the VP of Operations.

The Quality Representative is responsible for the following:

- Planning the overall Quality Program.
- Ensuring the Quality System is properly implemented and maintained.
- Verifying that AS9100, ISO9001:2015 and AS6496 requirements are being satisfied within the confines of Sager's Quality System.
- Overseeing the Internal Audit process.
- Overseeing the Corrective and Preventive Action/Improvement Initiative processes.
- Overseeing the Document Control process.
- Overseeing the Management Review process.
- Ensuring that the documents and data that relate to AS9100, ISO 9001:2015 and AS6496 requirements are controlled.
- Ensuring that necessary documents are approved by appropriate personnel.
- Ensuring that current issues of documents are available where necessary.
- Ensuring that obsolete documents are promptly removed from all points of use.

Each department manager is responsible for the following:

- Ensuring that the requirements of the Quality System are implemented, understood, and maintained within their assigned area.
- Ensuring proper maintenance of quality procedures and supporting metrics.
- Handling of quality issues that are initiated within or involve their assigned area.
- Maintaining open and continual lines of communication with the Operations Support Coordinator.
- Participating in the Corrective & Preventive Action/Improvement Initiative processes in order to prevent and correct Quality System problems.
- Overseeing Quality training within their department or location.

Each Internal Auditor is responsible for the following:

- Performing systematic and independent examinations to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.
- Recording the findings of their audits and submitting them to the Director of Quality and Logistics

Revision History

| Rev | Revised By | Date | Nature of Revision |
|-----|-------------|------------|--|
| 0 | | 04/25/95 | Original Version |
| 1 | D. Ratay | 03/14/96 | Updated Organization Accountability |
| 2 | D. Ratay | 10/09/96 | Updated Organization Accountability |
| 3 | T. Fraser | 09/08/97 | Updated Organization Accountability |
| 4 | T. Fraser | 09/28/98 | Updated Organization Accountability |
| 5 | T. Fraser | 02/02/99 | Updated Organization Accountability |
| 6 | S. Mattern | 09/29/2000 | Updated Organization Accountability |
| 7 | M. Mahoney | 09/20/02 | Updated Organization Accountability |
| 8 | M. Mahoney | 07/28/04 | Replaced references to 9002 to 9001:2000. |
| 9 | M. Mahoney | 01/24/04 | Added references to Business Solutions |
| 10 | T. Condon | 09/15/09 | Updated new standard references. |
| 11 | T. Condon | 11/15/11 | Updated new standard references. |
| 12 | T. Condon | 06/28/12 | Changed reference of CEO to President due to TTI acquisition along with EVP to VP Operations. |
| 13 | T. Condon | 10/15/15 | Added reference to AS6496 |
| 14 | J. Favaloro | 7/24/2017 | Updated for ISO 9001:2015 & AS9100B. Changed Quality Department reference to Operations Support Coordinator. |

Appendix D. Incorporated Documents

Required Procedures

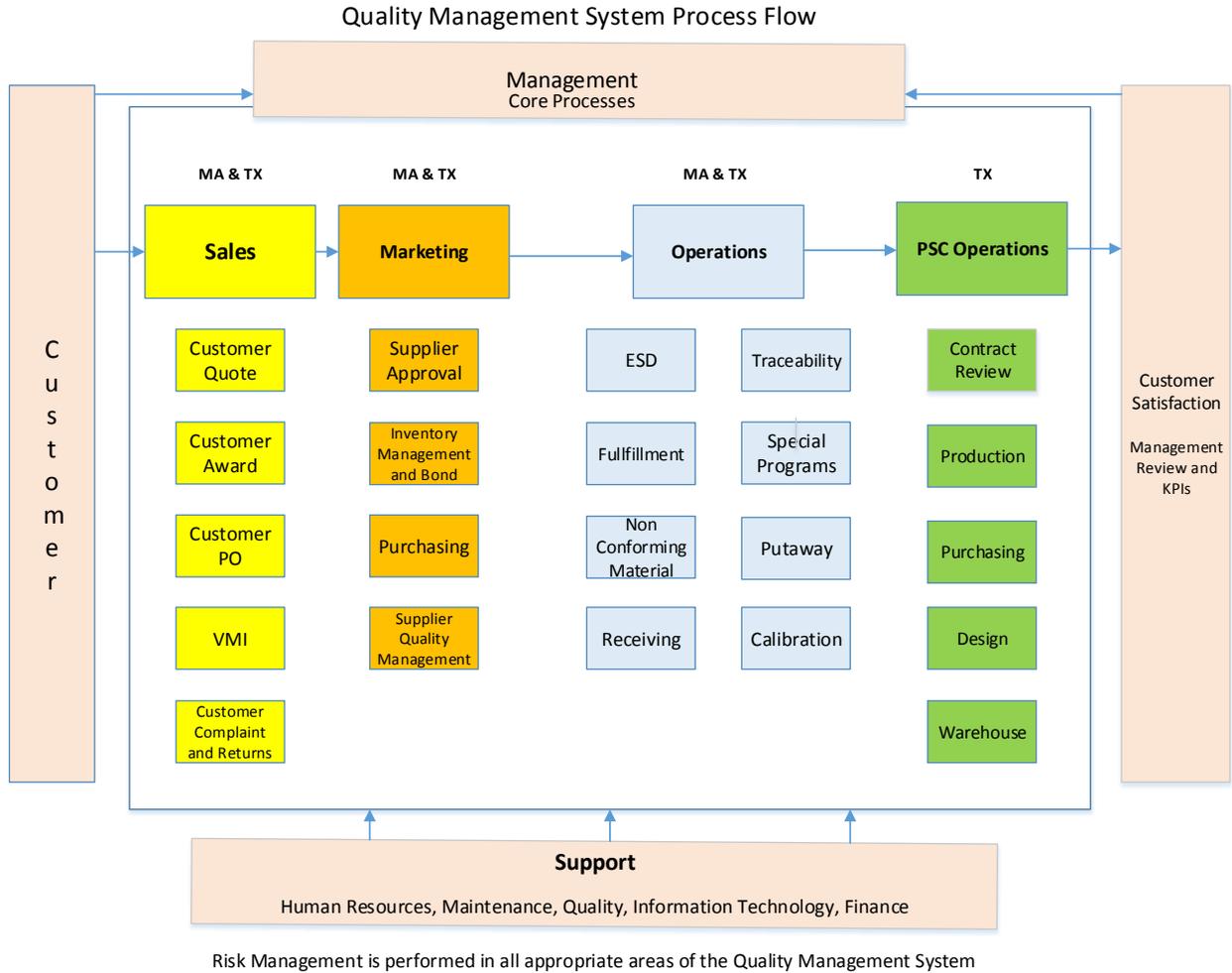
| Section | Procedure |
|---|--|
| Creating and Updating(7.5.2) | Document Control |
| Control of Documented Information (7.5.3) | Quality Records |
| Control of Non-Conforming Outputs (8.7, 10.2) | RMA Processing in IC001 Withdrawal of Suspect Product |
| Internal Audit (9.2) | Internal Audit Process |
| Nonconformity and Corrective Action (10.2) | Corrective Action Process |
| Actions to Address Risks and Opportunities (6.1, 10.3) | Risk Assessment Improvement Initiative |

Revision History

| Rev | Revised By | Date | Nature of Revision |
|-----|------------|----------|--|
| 0 | | 05/10/95 | Original Version |
| 1 | D. Ratay | 10/10/95 | Added the following procedures: MK-001, MK-002, MK-003, MK-004, MK-006, PR-016, WH-008 |
| 2 | D. Ratay | 03/14/96 | Added the following procedures: SA-022, PR-019, TR-001, TR-002, TR-003, TR-004 Changed titles on the following procedures: SA-004, SA-017, PR-018 |
| 3 | D. Ratay | 10/09/96 | Added the following procedures: CP-002, GS-001, GS-002, IC-007, SA-020, SA-024, TR-005, TR-006, TR-007 |
| 4 | T. Fraser | 09/08/97 | Added the following procedures: DC-004, WH-009, CP-007 All previous DP procedures are now referenced as IT |
| 5 | T. Fraser | 03/10/98 | Added the following procedures: WH-012, TR-009 Renamed/Renumbered the following procedures: IC-001, CP-009 |
| 6 | T. Fraser | 09/28/98 | Added the following procedures:CA-002, SA-026, SA-028, TR-010, TR-012 Changed title of Management Verification to Verification Audit (IA-003) |
| 7 | T. Fraser | 02/02/99 | Added the following procedure: IT-005 Changed title of Inventory Control Support Requests to Distribution Center Support Requests (WH-005). Made the Annual Training Plan procedure (TR-009) obsolete. |
| 8 | S. Mattern | 09/29/00 | Complete re-write to accommodate new OUR Guides procedure set. (transition in process) |
| 9 | L. Kimball | 09/25/01 | Transition in Process () items updated. 'Adding an Order' changed to 'Entering a Sales Order'. 'Entering a One Step Credit or Debit' changed to 'Entering Credit or Debit Adjustment'. 'Order Picking' changed to 'Picking Stock Items'. 'Notification of Suspect Product' changed to 'Notification of Non-Conforming Product'. Added the following procedures: Help Desk Requests, Intranet Updates, Implementing Lotus Notes DB, Maintaining a Lotus Notes DB, PC Training for Sales Locations, Vendor Training, Training Requests & Enrollment, Literature Library, Expediting an |

| Rev | Revised By | Date | Nature of Revision |
|-----|-------------|----------|--|
| 10 | M. Mahoney | 09/20/02 | Order, Purchasing Requests, Placing S/O Lines on Purchasing Hold. Added the following procedures: - Bond Approval Process - Customer Delivery Notification - DC Requests - IT Production System Changes - Receiving Discrepancy - Third Party Warehousing Removed the following procedures: - Approval of Purchased Software - Implementing a Lotus Notes Database - Maintaining a Lotus Notes Database |
| 11 | M. Mahoney | 10/01/02 | Complete rewrite. Revised to reflect ISO9001:2000 requirements. |
| 12 | M. Mahoney | 07/01/03 | Added the following procedures: - Preventive Action - Sales Development Survey |
| 13 | M. Mahoney | 07/28/04 | Obsolete procedures removed based on document consolidation. |
| 14 | M. Mahoney | 08/01/05 | Added Employee Training procedure which supersedes the following: • Changing Training Requirements • Identifying Training Needs • PC Training for Sales Locations • Training Confirmation • Training Outline • Training Reporting • Training Requests & Enrollments • Vendor Training |
| 15 | T. Condon | 12/14/06 | • Removed obsolete procedures and updated the DC document set titles to reflect the Optum 7i upgrade. |
| 16 | T. Condon | 12/10/07 | Removed the following procedures: • Entering a Sales Order • Checking Price and Availability Added the new Quote to Order procedure. |
| 17 | T. Condon | 10/05/09 | Per our pre-assessment audit, it was recommended that we only list the required documents. |
| 18 | T. Condon | 09/09/14 | Originally had 4 procedures explaining document control process – have since combined all 4 procedures into 1 procedure |
| 19 | J. Favaloro | 07/24/17 | Changed reference #s and wording to comply with 2015 standard. Removed reference to preventative action process. |

Appendix E. Quality Management System Process Flow



Appendix F. Outsourced Activities

Outsourced Processes

| Process | Responsible Department | Corresponding Procedure(s) |
|----------------------------|------------------------|----------------------------|
| Calibration | Distribution Center | Calibration |
| Third-Party Warehousing | Distribution Center | Third-Party Warehousing |
| Internal Audit | Quality | Internal Audit |
| Equipment Maintenance / PM | Distribution Center | Maintenance |

Revision History

| Rev | Revised By | Date | |
|-----|-------------|----------|-----------------------------|
| 0 | M. Mahoney | 01/24/05 | Original Version |
| 1 | J. Favaloro | 08/31/17 | Added Internal Audit |
| 2 | J. Favaloro | 03/09/18 | Added Equipment Maintenance |

Appendix G. Quality Objectives

Quality Objectives

| Objective | Metric |
|---|--------|
| On-Time Delivery to Sager Customers | 93.0% |
| Quality Performance (internal errors) | 99.65% |
| Supplier Acknowledgement Summary Rating | 98.5% |
| Supplier On-Time Delivery to Sager | 90.0% |

To review a complete set of Quality system performance measurements, see the Management Review metrics posted on the portal

Revision History

| Rev | Revised By | Date | Nature of Revision |
|-----|-------------|----------|---|
| 0 | M. Mahoney | 01/24/05 | Original Version |
| 1 | M. Mahoney | 08/01/05 | Achieved original objectives. Established new objectives at the Q2-2005 Management Review Meeting. |
| 2 | T. Condon | 03/09/06 | Revised Quality Objective # 2 |
| 3 | T. Condon | 09/05/06 | Revised Quality Objective # 1 |
| 4 | T. Condon | 12/04/07 | Replaced Quality Objective # 2 – the “I” Item Availability was removed due to the implementation of the new Purchasing software – had to reclassify item types. The new Quality Objective is now “Sager Stocking Item Availability” and the target goal has been set at 85.0% |
| 5 | T. Condon | 12/31/07 | Replaced Quality Objective # 1 with Increase the # of lines sold into an account (Top 250, Top 500, and Top 1,000) |
| 6 | T. Condon | 08/01/08 | Revised target for Sager Stocking Item Availability (Was at 85%, revised to 90%) |
| 7 | T. Condon | 09/15/09 | Revised Quality Objectives – previous objectives were department oriented, needed companywide objectives where everyone could contribute in achieving the goals set forth. |
| 8 | T. Condon | 02/10/10 | Quality Objective targets were revised |
| 9 | T. Condon | 07/30/10 | Quality Objective # 2 was revised as we achieved the goal consistently... |
| 10 | J. Favaloro | 08/25/17 | Added Supplier Acknowledgement Summary Rating of 98.5% |