BACHMAN
MACHINE COMPANY

QUALITY MANUAL

An ISO 9001 & IATF 16949 registered QMS

REVISION: M
June 21, 2019

_____   _____
President   *Q.A. Manager*

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AMENDMENT RECORD

This manual will be maintained by the Quality Assurance Manager, who will process the authorized changes, and control distribution. A controlled Master Copy will be the final authority, and maintained in accordance with our document control process.

REV	DATE	SECTION	DETAILS	SIGNATURE
C	04/15/04	8.12	Added details	P. Parker
D	02/28/06		Company Background, Policy Statements, Objectives	Ed Ide
E	07/10/06		Interaction Matrix and Process/Performance Matrix	Ed Ide
F	01/30/07		Lab Scope	Ed Ide
G	12/16/08		Re-structure Key Process Matrix & Interaction	Ed Ide
H	02/01/12		General updates – redefined Key processes and included EHS provisions	Ed Ide
I	01/15/15		Revised Organizational Chart	Ed Ide
J	01/29/16		Quality Objectives changed – reduced inventory turns from 10 to 6	Ed Ide
K	10/03/17		Re-structured to align with ISO 9001:2015 and IATF 16949:2016	Ed Ide
L	01/11/19		Revised Organizational Chart	Ed Ide
M	06/21/19		Revised Lab Scope to better align with ISO 9001 and IATF 16949	Ed Ide

COMPANY BACKGROUND

Bachman Machine Company was started in 1927, by William N. Bachman in St. Louis Missouri. While leasing a store front building at 1019 N. Seventh Street, he offered services in production and specialized machining, as well as Tool & Die components.

His craftsmanship was well received, and in a few short years he was able to expand his small machine shop, hire one other employee and by 1929, was ready to broaden the scope of his business. Armed with a growing reputation in Tool & Die and machine shop services, he leased a larger building at 1025 N. Sixth Street and bought his first punch press, enabling him to offer production stampings to his expanding customer base.

The depressed economy of the 1930's brought much challenge to small businesses and eager to solidify his financial stability and independence. He purchased his own building at 4301 North Eleventh Street. The growth of the company continued, and in 1946 he bought property at our current location and built additional manufacturing space.

Each expansion endeavor was well timed and done without compromising the requirements of his customers. To continue this tradition, in the early 1950's he was joined in business by his two sons, Harold W Bachman, and William G Bachman.

The construction of Interstate 70 had begun in 1958 which required the Bachman family to give up their Eleventh Street facility. As a result, a new building was added to their Broadway location, and given our current mailing address of 4321 North Broadway. Further expansions were made in 1963, 65, 69, 82, and finally in 1988 to complete our current 85,000 square foot facility.

In 1999, Bachman Machine Company had successfully completed the transition to 3rd generation ownership; William G. Bachman Jr, Terry Bachman Aslin, and Clay C. Bachman. These partners are committed to continue the success of their business by aggressively seeking methods to optimize the benefits to all stakeholders of the company…. Customers, Suppliers, Employees, and Ownership.

We currently house a fully equipped Tool & Die shop, including a Design/Engineering department, a Stamping department with a full line of Punch Press, Tapping, Assembly, and Robotic Welding equipment. Additionally we have an expertly staffed, and very well equipped CNC Production Machining department and our entire company is guided by a well designed management system, certified to both ISO 9001 and IATF 16949.

QUALITY POLICY STATEMENT

"TOTAL COMMITMENT TO QUALITY"

January 2006

Bachman Machine Company has been in business since 1927 and continues to provide machine trade products and services to industry. We're a world class producer of metal stampings, progressive Dies, CNC precision machining, assembly, and welding, and have remained successful through ingenuity of design, craftsmanship, competitive pricing, and persistent attention to customer satisfaction. In doing so we receive fair profit, and provide value to the all stakeholders of the company…. Customers, Suppliers, Employees, and Ownership.

"Total Commitment to Quality" is a statement that characterizes our intended mindset at Bachman Machine Company. Realizing that every associate has a significant affect on success, it is our fervent objective to foster a consistent, and mindful awareness to requirements. We believe that a mindset of *"Total Commitment to Quality,"* ensures the premeditated delivery of the best possible outcome, from every work process, on a daily basis.

"Total Commitment to Quality" must also convey our desire to drive continual improvement efforts in every facet of our business. Our methods will specifically focus on prevention rather than detection, and motivate employees to contribute to persistent failure reduction.

Once again *"Total Commitment to Quality"* is our policy statement, and is established to clearly indicate the sincere attitude of all Bachman Machine Company associates. It is considered essential for the long term success of this company.

Respectfully,

Bill Bachman Jr.
President

4.0 Context of the Organization

Bachman Machine Company seeks to produce capital goods that exploit our core competencies and expertise. This includes, design and build of Tool & Dies and associated components, CNC machining and production of metal stampings and associated sub-assemblies and other value added operations as appropriate.

Conceptually, there are four main themes and/or initiatives associated with how we've developed our business framework.

1. Understanding our business and its context.
2. Understanding the needs and expectations of all stakeholders.
3. Determining the scope of an essential management system, i.e. "Quality Management System" or QMS.
4. Establishing a QMS and its relevant processes.

1. Understanding our organization and its context is a key component to establishing our QMS. With this in mind, we've determine external and internal issues that are relevant to our business and may affect our ability to achieve success. From our perspective, external and internal issues relevant to our business include, but may not be limited to, the following:

Internal Issues	External Issues
Organizational performance	Competitive products and services.
Results from customer reviews, complaints and feedback	Raw material availability and prices
Internal audits and self-assessment results	Competitive products and services.
Employee satisfaction data analysis	Opportunities and conditions related to outsourcing.
Actual versus intended internal values and culture.	Technology trends
Analysis of quality cost data	Benchmarking best-in-class performers in and outside the current marketplace
	Economic environment and trends.
	Potential changes in statutes and regulations

Note: The above list is expressed merely for illustrative purposes, to provoke thought and discussion. It should not be considered finite, or an exhaustive or complete summary of all the issues affecting our business.

2. Understanding the needs and expectations of interested parties is a vital component to business development and planning the associated provisions. From our perspective, parties relevant to our business include, but may not be limited to, the following:

Interested Parties = Customers, end users (as applicable), employees, suppliers, and regulatory bodies (as applicable).

We'll pursue the requirements of these parties, specific to our business. We'll also monitor and review information about these parties and their relevant requirements.

3. Determining the scope of the quality management system – As mentioned above, we are a business that seeks to produce capital goods that exploit our core competencies and expertise. This includes design and build of Tool & Dies and associated components, CNC machining and production of metal stampings and associated sub-assemblies and other value added operations as appropriate. Our customers are both automotive and non-automotive. Consequently, we've developed a QMS and business structure aligning to customer requirements as well as ISO 9001 and IATF 16949.

We currently have one manufacturing facility located at 4321 N. Broadway, St. Louis, MO 63147, which houses 3 main departments or "profit centers", i.e. Tool room, Production and NC. We also operate one remote support facility for warehousing only, currently at 107 Ferry Street, St. Louis, MO 63147.

Below is a graphic meant to express our QMS boundaries and applicability, relevant to ISO & IATF certification:

Bachman Machine Company
QMS boundaries and applicability of
ISO 9001 & IATF 16949 certification

Tool Room
ISO 9001*

Design & build Tool & Dies and associated components. Also provides supports to the production dept. as needed.

*Note: Production support functions are subject to IATF 16949 requirements.

Production
ISO 9001 & IATF 16949

Stamping, assembly and other value added operations as necessary; both auto and non-auto customers.

Note: Receives support from Tool Room

NC
ISO 9001

CNC machining, primarily for non-automotive customers.

Off-Site Warehousing
ISO 9001 & IATF 16949

Remote support: (Warehousing only), to support all three departments as necessary

The documented scope and exclusions of our QMS is as follows:

Scope: **ISO 9001** = Design and manufacture of progressive and transfer dies. Manufacture and supply of metal stampings, sub-assemblies and precision machined parts mainly for the automotive, appliance and off-road equipment industries.

IATF 16949 = Manufacture of metal stampings and sub assemblies

Exclusions: **ISO 9001:** No Exclusions

IATF 16949: Product Design and Development

Included in the scope of our QMS, are **"Customer Specific Requirements – (CSR)"** as applicable. CSR's are usually a published manual (electronic or hard copy), with requirements supplemental to those expressed on blueprints, engineering specs, purchase orders, and other customer generated documents. Specific identification and provisions for CSR's are explained in procedure PQ9 and associated work documents.

4. Quality management system and its processes - It's our intent to establish, implement, maintain and continually improve our QMS, including the processes, support activities and their interactions. See "Process Map and Interaction" section (Pgs. 16 – 19).

5.0 Leadership

Leadership and commitment – Executive management will demonstrate leadership and commitment to the Quality Management System (QMS) by:
   a) taking accountability for effectiveness of the QMS;
   b) ensuring that the documented Quality Policy and Quality Objectives are established, and are compatible with the strategic direction of the business;
   c) ensuring integration of the QMS requirements into the business processes;
   d) promoting the use of the process approach and risk-based thinking;
   e) ensuring that the resources needed for the business are available;
   f) communicating the importance of effective management and of conforming to the QMS requirements.
   g) ensuring that the QMS achieves its intended results;
   h) engaging, directing and supporting people to contribute to the effectiveness of the QMS;
   i) promoting improvement
   j) supporting other relevant management roles to demonstrate their leadership as applicable to their areas of responsibility.

Corporate responsibility – Integrated into our business model is a purposeful objective to demonstrate responsible business character. All stake holders, including customers, employees, suppliers, investors and the surrounding communities, can be assured of our attention to matters of social, environmental, legal, economic and labor practices will be ethical and trustworthy.

Process effectiveness and efficiency – Executive management will review process effectiveness and efficiency and respond accordingly to ensure successful QMS performance.

Process owners - will be chosen to responsibly achieve business objectives and they will know their roles and be competent to perform them.

Customer Focus – Executive management will demonstrate leadership and commitment with respect to customer focus by ensuring that:
   a) Customer and applicable statutory and regulatory requirements are determined, understood and consistently met;
   b) The risks and opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed;
   c) The focus on enhancing customer satisfaction is maintained.

Quality Policy – Executive management will establish, implement and maintain a quality policy that;
   a) is appropriate to the purpose and context of the organization and supports its strategic direction;
   b) provides a framework for setting quality objectives;
   c) includes a commitment to satisfy applicable requirements;
   d) includes a commitment to continual improvement of the QMS

Communicating the Quality Policy – The Quality Policy will:
   a) be available and be maintained as documented information;
   b) be communicated, understood and applied within our business
   c) be available to relevant interested parties, as appropriate.

Roles, responsibilities and authorities – Executive management will ensure that the responsibilities and authorities for relevant roles are assigned, communicated and understood within the organization. Below is a list of key responsibilities and delegated authorities.

Roles, responsibilities and authorities – contd'

Responsibility	Authority
Ensuring that the QMS conforms to business requirements	Management Rep.
Ensuring the processes are delivering their intended outputs	Production Managers
Reporting on the performance of the QMS and on opportunities for improvement, in particular to top management	Management Rep.
Ensuring the promotion of customer focus throughout the organization	Quality Manager
Ensuring that the integrity of the QMS is maintained when changes to the QMS are planned and implemented.	Management Rep.
Ensure that customer requirements are met	Quality Manager
Selection of Special Characteristics	Quality Manager
Setting quality objectives and related training	Production Managers
Corrective and preventive actions	Quality Manager
Process design and development	Production Managers
Capacity analysis	Production Managers
Logistics information	Materials Manager
Customer scorecards	Quality Manager
Customer portals	Customer Service Reps

Additionally, top management will ensure that:
   a) personnel responsible for conformity to product requirements have the authority to stop shipments and stop production to correct quality problems;
   b) personnel with authority and responsibility for corrective action are promptly informed of products or processes that do not conform to requirements to ensure that nonconforming product is not shipped to the customer and that all potential nonconforming product is identified and contained;
   c) production operations across all shifts are staffed with personnel in charge of, or delegated responsibility for, ensuring conformity to product requirements.

6.0 Planning

When planning for our quality management system (QMS), we consider the context of our business and the needs and expectations of interested parties. Consistent with this knowledge, we determine risks and opportunities that need to be addressed to:
   a) give assurance that the QMS can achieve its intended result(s);
   b) enhance desirable effects;
   c) prevent, or reduce undesired effects;
   d) achieve improvement
Secondly, we'll plan actions to address these risks and opportunities, integrate and incorporate them into the QMS and evaluate the effectiveness of these actions.

Risk Analysis – Within our QMS, we routinely incorporate risk based thinking, consistent with our procedure PQ6 "Risk Management". The basis for risk analysis come from a variety of resources such as lessons learned, product audits, customer returns and repairs, customer complaints, scrap, and rework.

Note: Actions taken to address risks and opportunities will be proportionate to the potential impact on products.

Preventive action – Consistent with risk management, we'll determine and implement action(s) to eliminate potential nonconformities which include:
   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) documented information of action taken;
e) reviewing the effectiveness of the preventive action taken;
f) utilizing lessons learned to prevent recurrence in similar processes.

Resulting preventive actions shall be appropriate to the severity of any anticipated nonconformity. See procedure PQ5, "Problem Solving – Corrective/Preventive Action".

Contingency Plans – In an effort to maintaining supply continuity to our customers, we've anticipated certain internal and external risks that impact our processes and associated equipment, facilities, infrastructure, work force and supply chain. Consequently, we've developed contingency plans and an associated procedure, to describe and direct our contingent actions. For specific information, see procedure PQ8.

Quality Objectives – In paving the way for our policy statement, "***Total Commitment to Quality***", we've developed a QMS that compares performance trends to requirements and goals. Much data is collected, and below is a subset deemed most important to measure this performance.

Quality Objectives	
Metric	**Goal**
Internal Defect Rate	2500 dppm (defective parts per million)
Customer Defect Rate	10 dppm
Production Efficiency	78% Minimum
Inventory Turns	6
Delivery Performance	99% On time delivery

Additionally, (process specific) objectives will be established at relevant functions that shall:
a) be consistent with our policy statement
b) be measurable
c) take into account applicable requirements
d) be relevant to conformity of products and enhancement of customer satisfaction
e) be monitored
f) be communicated
g) be updated as appropriate

Quality objective metrics and/or goals will be reviewed annually for continued suitability and changed as appropriate.

Planning of Changes – regarding changes to our QMS, we will first consider:
a) the purpose of the changes and their potential consequences;
b) maintaining the integrity of our QMS
c) the availability of resources;
d) the allocation or reallocation of responsibilities and authorities.

7.0 Support

Resources - In support of our Quality Management System (QMS) it's our intent to provide adequate resources. We endeavor to consider strengths and weaknesses of existing resources and obtain new resources as needed.

Human Resources - It's our intent to cultivate a well trained and informed labor force to better ensure customer satisfaction and profitability. Employment resources will be maintained to effectively manage our QMS and to operate and control of our processes.

Infrastructure - Buildings, associated utilities, equipment, hardware and software, transportation, information and communication resources will be satisfied to a level that ensures business success.

Environment for the operation of processes – We aim to provide and maintain work environments conducive to operation success. Our purposeful attention to physical aspects of temperature, heat, humidity, light, airflow, noise, cleanliness and safety, as well as social and psychological human factors will ensure a good work atmosphere.

Organizational knowledge – We've determine the knowledge and skill sets necessary for successful operation of our QMS and related processes. Our knowledge is strongly protected and when addressing trends and changing needs, we'll consider our current status and determine how to acquire additional knowledge and skills as necessary.

Competence – Consistent with cultivating a well trained and informed labor force, we will ensure the following:
   a) Determine the necessary competence of employees doing work under our control;
   b) Ensure that these employees are competent on the basis of appropriate education, training, or experience;
   c) Where applicable, take actions to acquire the necessary competence and evaluate effectiveness of the actions taken;
   d) Retain appropriate records as evidence of competence and associated actions.

Awareness – We will ensure that employees under our control are aware of:
   a) the Quality policy;
   b) relevant quality objectives;
   c) their contribution to the effectiveness of our QMS, including the benefits of improved performance;
   d) the implication of not conforming with the QMS requirements.

Employee motivation and empowerment –We'll endeavor to motivate employees to achieve quality objectives, to make continual improvements, and to create an environment that promotes innovation.

For additional information on Competence, Awareness and Motivation, see our procedure PHR1 "Training, Competency, Awareness and Motivation".

Communication - We will insure that appropriate internal and external communication is conducted and is effectively administered.

Documented information – We will insure that documented information is available, and effectively presents appropriate aspects of our QMS. All documents will be controlled in accordance to our procedures PQ1 "Document Control" and PQ2 "Records Control.

8.0 Operation

It's our intent to use a multidisciplinary approach to plan and develop processes needed for production. The QMS will be the basis for our planning activity, and conformance to customer specifications will be the primary objective.

Operational planning and control – We will plan, implement and control the processes needed to meet both internal and external requirements. We will:
   a) determine requirements;
   b) establish criteria for the processes and acceptance of products;

c) determine resources needed;
d) implementing adequate controls on processes
e) determining, maintaining and retaining documented information to the extent necessary;

Additionally, we will control planned changes and review the consequences of unintended changes, taking action to mitigate any adverse effects as necessary. We will also ensure that outsourced processes are controlled.

Confidentiality – We will ensure the confidentiality of customer products and all related information.

Customer communication – Communication with customers shall include;
a) Providing information relating to products and services;
b) Handling enquiries, 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 requirement for contingency actions, when relevant.

Determine the requirements for products – When determining the requirements for the products and services, The requirements for the products and services are defined, including any statutory and regulatory requirements, and that we can meet the requirements.

Review requirements – We will conduct a review before committing to supply products and services to a customer, to include:
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 the specified or intended use, when known;
c) Requirements specified internally
d) Statutory and regulatory requirements applicable to the products and services;
e) Contract or order requirements differing from those previously expressed.

We will ensure that contract or order requirements differing from those previously defined are resolved.

Customer requirements shall be confirmed before acceptance, when the customer does not provide a document statement of their requirements.

We will retain documented information as applicable on the results of the review and on any new requirements for the products and services.

Changes to requirements – We will ensure that relevant documented information is amended, and that relevant persons are made aware of the changed requirements, when the requirements for products and services are changed.

Process Design and Development – We establish, implement and maintain design and development processes that appropriately ensure the subsequent products meet customer requirements. For further details see procedure PQ11 "Process Design and Development".

Control of external processes, products and services – It's our intent, to ensure that externally provided processes, products and services conform to requirements. Control of our supply chain is further explained in procedure PQ14, "Supply Chain Management".

Control of production – It's our aim to control our production processes by incorporating methods that include (as applicable):
a) The availability of documented information that defines product characteristics and the results to be

achieved;

b) The availability and use of suitable monitoring and measuring resources;
c) The implementation of monitoring and measurement activities at appropriate stages to verify that criteria for control of process outputs and acceptance criteria for products and services, have been met;
d) The use of suitable infrastructure and environment for the processes;
e) The appointment of competent people;
f) The validation and periodic revalidation of process inputs, where the resulting output cannot be verified by subsequent inspection and testing;
g) Provisions to prevent human error as appropriate;
h) The implementation of release, delivery and post-delivery activities.

Additional examples of control are evidenced by our; control plans, standardized work, verification of job setups, verification after shutdown, total productive maintenance, and management of production tooling.

Identification and traceability – We will use a suitable means to identify product consistent with customer and internal requirements. For further details, see procedure PQ16, "Identification and Traceability".

Customer or external provider's property – We will exercise adequate care for property belonging to customers or other external providers while it is under our control. The property will be identified, verified and protected as appropriate, for use in our production processes. When the property is lost, damaged or otherwise found unusable, we will report the status to the customer or owner, and document the circumstance as appropriate.

Preservation – Outputs from our production processes will be preserved to the extent necessary to ensure conformity to requirements. Preservation can include identification, handling, contamination control, packaging, storage, transmission, transportation and protection.

Post-delivery activities – We will meet requirements for post-delivery activities in accordance with customer requirements. Although there are no official "service agreements", we stand behind our products in good faith and make every reasonable effort to support customers and maintain good satisfaction.

Control of changes - We will review and control changes as appropriate to ensure conformity to requirements. Details of change control are further explained in procedure PQ15, "Planning and Control of Changes".

Release of Product – We will implement planned arrangements, at appropriate stages, to verify that product requirements have been met. Release of products shall not proceed until the planned arrangements have been satisfied, unless otherwise approved be a relevant authority and, as applicable, by the customer.

Control of nonconforming product – We will ensure that product that does not conform to requirements is identified and controlled to prevent its unintended use or delivery. Details are further explained in procedure PQ4, "Control of Nonconforming Product".

9.0 Performance Evaluation

Monitoring, measurement, analysis and evaluation – Regarding performance evaluation of our QMS, we will determine:
a) What needs to be monitored and measured
b) The methods for monitoring, measurement, analysis and evaluation needed to ensure valid results;
c) When the monitoring and measurement shall be performed;
d) When the results from monitoring and measurements shall be analyzed and evaluated.
We will evaluate the performance and the effectiveness of the QMS and will retain appropriate documented

information as evidence of the results.

Customer satisfaction – We will monitor customer's perceptions of the degree to which their needs and expectations have been fulfilled, We will determine the methods for obtaining, monitoring and reviewing this information.

Analysis and evaluation – We will analyze and evaluate appropriate data and information arising from monitoring and measurement. The results of analysis will be used to evaluate:
   a) Conformity of products ;
   b) The degree of customer satisfaction
   c) The performance and effectiveness of the QMS
   d) If planning has been implemented effectively
   e) The effectiveness of actions taken to address risks and opportunities
   f) The performance of external providers
   g) The need for improvements to the QMS

Internal Audit – We will conduct internal audits at planned intervals to provide information on whether the QMS conforms to our internal requirements as well as the requirements of ISO 9001 and as appropriate IATF 16949. For further details see procedure PQ3, "Internal Audits"

Management Review – We will conduct management review of our QMS at planned intervals to ensure its continued suitability, adequacy, effectiveness and alignment with our strategic direction and goals.

10.0 Improvement

We will determine and select opportunities for improvements and implement any necessary actions to meet internal and external requirements as appropriate. These actions will include:
   a) improving products and processes to meet requirements as well as to address future needs and expectations;
   b) corrective, preventing or reducing undesired effects;
   c) improving the performance and effectiveness of the quality management system.

   Note: Examples of improvement may include correction, corrective action, continual improvement, innovation and re-organization.

Nonconformity and corrective action – When a nonconformity occurs, including any arising from complaints, we shall:
   a) React to the nonconformity and as applicable;
   b) Evaluate the need for action to eliminate the cause(s) of the nonconformity;
   c) Implement and actions needed
   d) Review the effectiveness of any corrective action taken
   e) Update the risks and opportunities determined during initial planning, as appropriate
   f) Make changes to the QMS, as appropriate

Problem solving – We will use a systematic approach to solving problems. For more detailed information see procedure PQ5, "Problem Solving – Corrective/Preventive Action".

Error proofing – We will use appropriate error proofing methods. For more details see procedure PQ17, "Error Proofing".

Continual improvement – We will strive for continual improvement in the effectiveness of our QMS. The means by which to do so will include but may not be limited to: audit results, analysis of data, corrective and preventive action, and management review. For more details, see procedure PQ20, "Continual Improvement".

Organizational Chart

Bachman Machine Co.   &   The Plastics Molding Co.

President and CEO

BMC General Manager

PMC General/Sales Manager

Tool & Die Manager

Prod./Purch. Manager

N.C. Manager

Quality Manager

Shared   Resources

PMC (See Pg. 2)

Maintenance Techs.

Supply Chain Coordinator

Shipping & Receiving

Production Supervisors

Production Employees

Buyer CSR

N.C. Programmer

Inspectors

N.C. Supervisors

N.C. Employees

Inspectors

Sales Engineer

Accounting Manager

QMS Rep.

Information Systems

H.R. Manager

Admin. Ass.

Designers

TR Emp.

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June 2019

Organizational Chart

Bachman Machine Co.   &   The Plastics Molding Co.

Context of our organization

Bachman Machine Co.
Quality Management System

Leadership

Planning

Support

Operations
(See detailed Process Maps for each)

Tool Room	**Production**	**N.C.**
Design and Build Tool & Die	Stamping, Assembly & Welding	CNC Machining

Performance Evaluation

Management Review & Improvement

Needs & expectations of interested parties

Employees

Customers

Suppliers

End Users
as applicable

Community of Interested Parties

Regulatory Bodies
as applicable

Production Process
(Stamping, Assembly, Weld)
Process Owner = Production Dept. Manager

Suppliers

Customers
Matls. Mgt.
ERP system
Ownership

Inputs

RFQ's
CSR's
P.O.
Risk anal.
Perf. evals.
Labor
Capital
Raw Matls.
Sub comps.
Suppliers
Knowledge
Prod sched.

Process

Quoting

PO Receipt

Contract Review

Process Design

ERP System Control

Production

Delivery

Invoice & Collections

Performance Evaluation

Management Review

Improve with new knowledge & direction

Outputs

Finished goods
Waste
Revenue
Perf. eval.
Risk anal.

Customers

Customers
End Users
Subsequent processes
Matls Mgt.
Accounting

Support Functions

Sales
Quality
Materials
Maintenance
Human Res.
Accounting
I.S.
Mgt. Review
Warehousing

NC Process
(CNC Machining)
Process Owner = NC Dept. Manager

Suppliers	Inputs	Process	Outputs	Customers
Customers Matls. Mgt. ERP system Ownership	RFQ's CSR's P.O. Risk anal. Perf. evals. Labor Capital Raw Matls. Sub comps. Suppliers Knowledge Prod sched.	Quoting ↓ PO Receipt ↓ Contract Review ↓ Process Design ↓ ERP System Control ↓ Production ↓ Delivery ↓ Invoice & Collections ↓ Performance Evaluation ↓ Management Review	Finished goods Waste Revenue Perf. eval. Risk anal.	Customers End Users Subsequent processes Matls Mgt. Accounting

Support Functions

Sales
Quality
Materials
Maintenance
Human Res.
Accounting
I.S.
Mgt. Review
Warehousing

Improve with new knowledge & direction

Tool & Die Process
(Design and Build)
Process Owner = Tool Room Dept. Manager

Suppliers

Inputs

Process

Outputs

Customers

Suppliers	Inputs	Process	Outputs	Customers
Customers Matls. Mgt. ERP system Ownership	RFQ's CSR's P.O. Risk anal. Perf. evals. Labor Capital Raw Matls. Sub comps. Suppliers Knowledge	Quoting	Finished goods Waste Revenue Perf. eval. Risk anal.	Customers End Users Subsequent processes Matls Mgt. Accounting

Process flow (top to bottom):

Quoting → PO Receipt → Contract Review → Tool Design → Design Verifi. → Design Approval → ERP System Control → Production → Design / Tool Validation → Delivery → Invoice & Collections → Performance Evaluation → Management Review

Support Functions

Sales
Quality
Materials
Maintenance
Human Res.
Accounting
I.S.
Mgt. Review
Warehousing

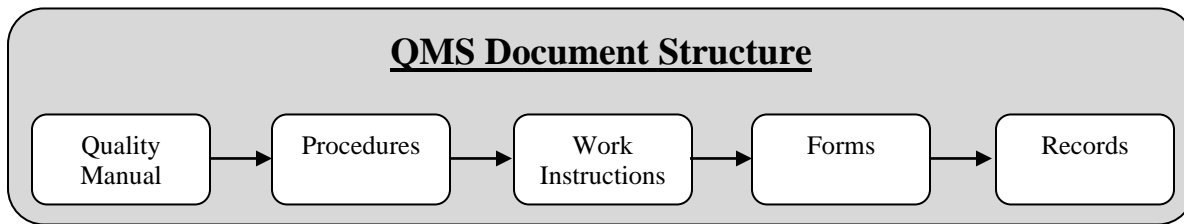Improve with new knowledge & direction

Lab. Scope

The Lab. at Bachman Machine Company was established with an objective to measure the degree of conformity to requirements. Activities performed within this lab include, but may not be limited to, blue print interpretation, dimensional measurements, surface plate layout, programming for computer assisted inspection equipment, statistical data collection/analysis, measurement system analysis, gage verification and records control.

Standard measurement equipment used in the lab consist of, but may not be limited to micrometers, calipers, height gages, surface plates, and bore gages. Additionally, we utilize hardness testers, coordinate measuring machines, and optical gauging equipment.

Lab. personnel will report to the Quality Manager and must demonstrate knowledge and skills commensurate to the requirements of their assigned job activities. The Quality Manager will assess and record the competency of lab personnel consistent with the annual review process.

The following is a table indicating those lab procedures and technical requirements deemed necessary to accomplish the lab objectives.

Lab Procedure	Technical Requirements
Incoming Material Dock Audit	GI-Q1
1st, Last & In-process Inspection	GI-Q2
Outgoing Dock Audit	GI-Q3
Gage Calibration	PQ-10
Gage Verification - Variable	GI-Q7
Gage Verification - Attribute	GI-Q8
MSA Studies	I.A.W. MSA Reference Manual - (current edition)
Dimensional Measurements	I.A.W. The Quality Technician's Handbook

QMS Document Structure

```
Quality     →    Procedures    →    Work        →    Forms    →    Records
Manual                               Instructions
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Below is an index of top level procedures (for ref. only), to work in concert with this Quality Manual.

To see the actual procedure, see our internal web site or the Quality Manager.

Procedure Index (for reference only)	
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Beneath these top level procedures, are a collection of work instructions, forms and records to direct and document activities within our Quality Management System.