Approvals:

_____ _____

President Vice President

Quality Management System Manual

IATF16949:2016
ISO9001:2015

Table of Contents

Section 1.0 References

Section 2.0 Documented Procedures

Section 3.0 Process Interactions

Section 4.0 Context of the Organization
- 4.1 Understanding the Organization and its Context
- 4.2 Understanding the Needs and Expectations of Interested Parties
- 4.3 Determining the Scope of the Quality Management System
- 4.4 Quality Management System and its processes

Section 5.0 Leadership
- 5.1 Leadership and Commitment
- 5.2 Quality Policy
- 5.3 Organizational Roles, Responsibilities, and Authorities

Section 6.0 Planning
- 6.1 Actions to Address Risks and Opportunities
- 6.2 Quality Objectives and Planning to Achieve Them
- 6.3 Planning of Changes

Section 7.0 Support
- 7.1 Resources
- 7.2 Competence
- 7.3 Awareness
- 7.4 Communication
- 7.5 Documented Information

Section 8.0 Operation
- 8.1 Operational Planning and Control
- 8.2 Requirements for Products and Services
- 8.3 Design and Development of Products and Services
- 8.4 Control of Externally Provided Processes, Products, and Services
- 8.5 Production and Service Provision
- 8.6 Release of Products and Services
- 8.7 Control of Nonconforming Outputs

Section 9.0 Performance Evaluation
- 9.1 Monitoring, Measurement, Analysis, and Evaluation
- 9.2 Internal Audit
- 9.3 Management Review

Section 10.0 Improvement
- 10.1 General
- 10.2 Nonconformity and Corrective Action
- 10.3 Continual Improvement

1.0 REFERENCES

1.1 ISO9001:2015 Quality Management System Requirements

1.2 IATF 16949:2016 Quality Management System Requirements – particular requirements for the application of the automotive production and relevant service parts organizations

2.0 DOCUMENTED PROCEDURES

Trans-Matic's Quality Management System (QMS) Procedures are located in the Document Control System in Plex. Folders include: Assembly, Engineering, Executive, Human Resources, IT, Logistics, Operations, Purchasing, Quality, Safety, Sales, and Toolroom.

3.0 PROCESS INTERACTIONS

Trans-Matic has reviewed our organization, and determined the processes needed for the QMS and their application throughout the organization, per 4.4.1 of the standard, and has:

3.1 Determined the inputs required and outputs expected from the processes.

3.2 Determined the sequence and interaction of these processes.

3.3 Determined and applied the criteria and methods (including monitoring, measurements and related performance indicators) needed to ensure the effective operation and control of these processes.

3.4 Determined the resources needed and ensure their availability.

3.5 Assigned responsibilities and authorities for these processes.

3.6 Addressed the risks and opportunities as specified in 6.1.

3.7 Evaluated these processes and implemented any changes needed to ensure the processes achieve their intended results.

3.8 Improves the processes of the QMS.

Process Name:	Document Number:
Process Interaction	TS-100
*+#Quoting Process	TS-COP-102
New Tooling:	
*APQP Process	TS-COP-103
*#Tool Design Process	TS-COP-104
*#Tool Build and Fit-up Groom Process	TS-COP-105
*OSP/Raw Material/Purchased Parts Process	TS-COP-107
PPAP Submission Process	TS-COP-108
*Existing Order Process	TS-COP-109
*Production Scheduling Process	TS-COP-110
Production Movement Process	TS-COP-111
Package/Store/Ship Procedure	TS-COP-112
Human Resources:	
*Training/Competency Process	TS-SOP-113
*Open Position Process	TS-SOP-114
Maintenance Work Order Process	TS-SOP-115
Engineering Change Process	TS-SOP-116
Customer Concerns	TS-SOP-122
*Management Responsibility Process	TS-MOP-119
Continual Improvement Process	TS-MOP-121
Internal Audit Process	TS-SOP-124

* Satellite receives support from Corporate in these functions.
+ Transmatic's Corporate office supports the efforts of TMPMF with these processes, as needed, but TMPMF has their own process maps.
#Transmatic's Corporate office supports the efforts of TMPMX with these processes, as needed, but TMPMX has their own process maps.

4.0 CONTEXT OF THE ORGANIZATION

4.1 Trans-Matic has determined its External and Internal Issues that are relevant to its purpose and strategic direction and that can affect its ability to achieve the intended results of its QMS. These issues are identified in ED-031 and are monitored and reviewed by Top Management at least annually. Changes are an input to Management Review.

4.2 Trans-Matic has determined the Interested Parties that are relevant to its QMS and the needs of those parties have been identified in form **ED-032.** These needs are monitored and reviewed by Top Management at least annually. Changes are an input to Mgt. Review.

4.3 Scope of the Quality Management System:

a) The scope at each facility is the inclusion of all activities, products, and services that are performed at that location, including the surrounding property owned by Trans-Matic. See below for a list of locations and products and services.

b) External and Internal Issues and Requirements of Relevant Interested Parties have been considered when defining the scope.

c) Customer-specific requirements (which include Tier I customers and OEMs) are evaluated and included in the scope of Trans-Matic's QMS. Program Managers and Account Managers identify and review customer-specific requirements during the Quoting and APQP phases. Quality Engineers review relevant requirements during the PPAP phase. Customer input information can include Supplier Manuals, purchasing agreements, drawings, product packaging and labeling information, special characteristics and process control. The QMS also provides procedures to address customers' issues, which include order processing, production, delivery, and customer satisfaction. Refer to Customer-specific Req. Matrix, **form 17609QA**, Customer Manuals List, and QP-ET-110.

d) Trans-Matic manufactures products for automotive and non-automotive industries, but it is not responsible for the design of the product. For this reason, product design is excluded from the scope of the IATF 16949:2016 and ISO9001 Quality Management System. Trans-Matic has responsibility for process design and it is included within the scope of the QMS.

e) Trans-Matic does not use any imbedded software.

f) Trans-Matic's QMS represents the documented summary of the quality system for Trans-Matic Manufacturing, with locations in:

Corporate Office and
Holland Production Center - HPC
300 E. 48th St.
Holland, MI 49423
Deep Drawn Metal Stampings and Assemblies

Holland Distribution Center (Site Extension)
471 East 40th St.
Holland, MI 49423
Packaging, Storing, Sorting, and Low Volume Assemblies

Arizona Production Center – APC - Satellite Plant
4250 E. Oasis St.
Mesa, AZ 85215

g) Transmatic's Corporate Office also supports the Transmatic Precision Metalforming Company, Ltd., China (TMPMF), located at: No. 369-9, Tayuan Road, New District, Suzhou City, Jiangsu Province, China, with the following functions as needed:
4.3.g.1 Quoting
TMPMF has their own Quality System Documentation Manual.

h) Transmatic's Corporate Office also supports Transmatic Precision Metalforming de Mexico S. de R.L. de C.V. (TMPMX), located at: Parque Industrial Finsa Santa Catarina 1, Servidumbre de Paso #3193 Col. El Palmar, Sta. Catarina, N.L. C.P.66367, Mexico, with the following functions as needed:
4.3.h.1 Quoting
4.3.h.2 Tool Design
4.3.h.3 Tool Build/Fitup/Groom
TMPMX has their own Quality System Documentation Manual.

4.4 The Quality Management System and its processes are described on Page 3. The organization ensures conformance of all products and processes, and those that are outsourced, to all applicable customer, statutory, and regulatory requirements. Trans-Matic does not have any service parts.

4.4.1.2 Product Safety – refer to Procedure QP-QA-209.

5.0 LEADERSHIP

5.1 Executive Team (E.T.) – Trans-Matic's Top Management Team, consisting of the President; the Vice Presidents of: Global Operations, Finance, Engineering, Quality, and Manufacturing, and Sales and Marketing. Top Management has the ultimate responsibility and accountability for the effectiveness of the Quality Management System. Top Management:

a) Is accountable for the effectiveness of the QMS.
b) Ensures that the Quality Policy and Quality Objectives and established and are compatible with the context and strategic direction of the organization.
c) Ensures that the QMS requirements are integrated into the organization's business processes.
d) Promotes the use of the process approach and risk-based thinking.
e) Ensures that the resources needed for the QMS are allocated to meet customer requirements.
f) Communicates the importance of effective quality management and of conforming to the QMS requirements.
g) Ensures that the QMS achieves its intended results.
h) Engages, directs, and supports persons to contribute to the effectiveness of the QMS.
i) Promotes improvement.

j) Supports other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.

k) Has defined and implemented corporate responsibility policies, including anti-bribery policy, employee code of conduct, and ethics escalation policy (whistle-blowing). Refer to the Employee Handbook for details.

l) Reviews the effectiveness and efficiency of the QMS's production realization processes and support processes and the results of review activities are included as an input to Management Review. Refer to TS-MOP-119 for inputs/outputs to Management Review.

m) Identified Process Owners who are responsible for managing the processes and related outputs. Process Owners understand their roles and are competent to perform these roles. (Refer to each Process Map for Owner.)

5.1.1 Demonstrates 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) Risks and Opportunities that can affect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed. Risk-based thinking is encouraged throughout the organization.

c) The focus on enhancing customer satisfaction is maintained.

5.2 Quality Policy and Commitment to Quality

Customer satisfaction is the primary goal of all our efforts. We are committed to excel in this area and will use all resources effectively and efficiently to provide superior value in the services we render and the products we produce. Our management style drives us to provide and maintain an environment that encourages all employees to pursue never-ending improvement in the quality and productivity of products and services throughout our company. Quality of product and service is the responsibility of everyone in and associated with Trans-matic.

We have established our commitments and expectations to our customers, employees, investors, partners and suppliers, and our industry and community, in order of priority, in our Corporate Charter and Fundamental Principles. These commitments and expectations are posted throughout the organization. In addition, these commitments and expectations, as well as the importance of meeting customer and regulatory requirements, are discussed in new employee orientation to ensure they are understood by every employee.

The Quality Policy card is distributed to all new employees (Refer to Orientation Checklist, Form#16022HR), and the policy is reviewed during QMS Awareness Training. Contract employees are also given a Quality Policy card on their first day on the job. A quality brochure is handed out to all employees each year. **Online survey training tools** can also be utilized to enhance awareness.

Trans-Matic's Mission:
"Built upon a heritage of craftsmanship, Trans-Matic seeks to be the leading global supplier of choice for challenging deep drawn metal components and value added assembly solutions."

Trans-Matic's Quality Policy:
Trans-matic strives to be the leading global supplier of choice for challenging deep drawn metal components and value added solutions. We are committed to continually improving the effectiveness of our quality management system, while following our policies and procedures, and complying with our customer's specifications and all regulatory and statutory requirements. We achieve our quality policy commitments through setting and attaining our Quality Objectives:

- QUALITY - Trans-Matic will monitor PPM calculations, scrap and sorting costs and the number of customer concerns in order to assess the need for corrective action if any of these indicators result in a negative trend.
- DELIVERY -Trans-Matic will always have a delivery goal of 100% on time complete shipments for production orders, proto-types and new tooling jobs.
- COST - Trans-Matic will monitor operating expenses and labor expenses to ensure we maintain profitability while continuing to meet customer expectations.

5.3 Organizational Roles, Responsibilities, and Authorities –
Management Representative – Top Management has assigned the Quality Systems Facilitator as both the Management Representative for the Holland facility and the Corporate Management Representative. At the Arizona Production Center (APC), the Management Representative is the Quality Manager. The Management Representative has been assigned by Top Management to be responsible for:

a) Ensuring that the QMS conforms to the requirements of the IATF16949 standard
b) Along with Process Owners and VP of Global Ops, ensuring the processes are delivering their intended outputs.
c) Reporting on the performance of the QMS and as a basis for improvement.
d) Along with the Customer Representatives, ensuring the promotion of customer focus throughout the organization.
e) Ensuring that the integrity of the QMS is maintained when changes to the QMS are planned and implemented.

5.3.1 Customer Representative – The Account Managers, Program Managers, Quality Manager and Quality Engineers, and Customer Service Personnel at Trans-Matic represent the customer to ensure that customer requirements are met. These requirements include the selection of special characteristics, including safety characteristics, setting quality objectives and related training, corrective and preventive actions, capacity analysis, logistics information, customer scorecards, and customer portals. The appropriate Quality Engineer shall promptly inform management of products or processes that do not conform to requirements. The Quality Engineer and/or Quality Manager are responsible for reviewing Customer Scorecards and acting upon negative trends. Review of Customer Quality Manuals/Portals is addressed in QP-ET-110.

a) Personnel who are responsible for performing work affecting conformity to product requirements -- including any production personnel who inspect the parts -- have the authority to stop production so that quality problems can be corrected.

b) Personnel with the 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. Production operations on all shifts are staffed with personnel in charge of, or delegated responsibility for, ensuring product conformity to product requirements. Refer to WI-QA-703.

6 PLANNING

6.1 Actions to address Risks and Opportunities

6.1.1 The organization has considered the issues referred to in 4.1 and has determined the risks and opportunities that need to be addressed in order to give assurance that the QMS can achieve its intended results, enhance desirable effects, prevent or reduce undesired effects, and achieve improvement. Refer to Form#17199QA for details.

6.1.2 The organization has planned actions to address these risks and opportunities, including how to integrate and implement the actions into the QMS processes, and evaluate the effectiveness of these actions. Actions taken are proportionate to the potential impact on conformity of products.

6.1.2.1 Risk Analysis – included, at a minimum, are lessons learned from product recalls, product audits, field returns and repairs, if applicable, as well as complaints, scrap, and rework.

6.1.2.2Preventive Action – must determine and implement actions to eliminate causes of potential nonconformities in order to prevent their occurrence and will be appropriate to the severity of the potential issues. Refer to QP-QA-827.

6.1.2.3Contingency Plans – Internal and External risks are evaluated for all manufacturing processes and infrastructure equipment essential to maintain production output and to ensure that customer requirements are met. They are defined according to risk and impact to customer. Refer to QP-OP-217 for details.

6.2 Quality Objectives and Planning to Achieve Them

6.2.1 Quality Objectives have been established at relevant functions, levels, processes. Refer to IATF16949 Metrics and Departmental Lean Initiatives. The annual Quality Objectives, which are consistent with the Quality Policy for all Trans-Matic sites, are developed during the annual business planning process. The quality specific objectives are captured in the metrics. They are measurable, they take into account applicable requirements, and are relevant to conformity of products and services and to enhance customer satisfaction. The metrics are monitored, communicated, and updated each month.

6.2.2 When planning how to achieve the quality objectives, the organization determines what will be done, what resources will be required, when it will be completed, and how the results will be evaluated.
Top management ensures that quality objectives to meet customer requirements are defined, established, and maintained for relevant functions, processes, and levels throughout the organization. Results of the organization's review regarding interested parties and their relevant requirements shall be considered when the organization establishes its annual quality objectives and related performances targets (Internal and external).

6.3 Planning of Changes –changes to the QMS are carried out in a planned manner. Considerations are given to the purpose of the changes and their potential consequences, the integrity of the QMS, the available resources, and the allocation or reallocation of responsibilities and authorities. Refer to ECR Process TS-SOP-116 and Scope Change WI-ENG-201.

7 Support

7.1 Resources

a) The organization has determined and provides the resources needed for the establishment, implementation, maintenance, and continual improvement of the Quality Management System. Included in this determination are the people, infrastructure, plant, facility, and equipment planning, as well as the environment for the operation of processes, and the monitoring and measuring resources needed. Refer to HR procedures (for human resources), OP procedures (for infrastructure, plant, facility, and equipment, and environment for the operation of processes) and QA procedures (for monitoring and measuring).

b) Organizational knowledge – the organization has determined the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This knowledge is maintained and made available to the extend necessary. When addressing changing needs and trends, current knowledge is considered and the organization has determined how to acquire or access any necessary additional knowledge and required updates. Organizational knowledge is specific to Trans-Matic and generally gained by experience. It is used and shared to achieve the objectives of the organization. Organizational

knowledge is shared during on-the-job training and Quarterly Performance Meetings.

7.2 Competence –

7.2.1 The organization has determined the necessary competence of persons doing work under its control that affects the performance and effectiveness of the Quality Management System. Particular attention is given to the satisfaction of customer requirements. Refer the HR procedures and process maps.

7.2.2 On-the-job training – is provided, including customer requirements training for persons in new or modified roles affecting conformity to quality requirements, internal requirements, and regulatory or legislative requirements. This shall include contract personnel. Level of detail is commensurate with level of education and complexity of tasks. Refer to HR procedures and process maps.

7.2.3 Internal Auditor Competency is addressed in QP-QA-806.

7.2.4 Second Party Auditor Competency is addressed in QP-PUR-101.

7.3 Awareness – refer to HR procedures and process maps, and page 6 of this document.

7.4 Communication – the organization has determined the internal and external communications relevant to the Quality Management System, including what, when, with whom, how and who communicates. Refer to QP-ET-105 for details.

7.5 Documented Information – refer to QP-QA-801 (Document Control), QP-QA-823 (Records Control), WI-QA-802 (Initiating a Document), and WI-QA-805 (Accessing Documents). Engineering Spec review is addressed in QP-QA-201. Customer-specific requirements are addressed in 4.3.

8 Operation

8.1 Operational Planning and Control – These requirements are addressed in the APQP Procedure (QP-QA-201), Quoting Process Map (TS-COP-102) and Sales Procedures. Confidentiality of customer-contracted products and projects are addressed in QP-ET-111.

8.2 Requirements for Products and Services

8.2.1 Customer Communication is addressed in QP-ET-110.

8.2.2 Determining the requirements for products and services is addressed in the APQP Procedure and the APQP Workbook, along with the Quoting Process Map and the Sales Procedures.

8.2.3 Review of requirements for products and services are addressed by the same procedures in 8.2.2 above.

8.2.4 Changes to requirements for products and services – Prior to PPAP Approval – WI-ENG-201 and Form #17172PM are utilized. After PPAP Approval – follow the ECR Process Map (TS-SOP-116) and corresponding procedures.

8.3 Design and Development of Products and Services is addressed in the QP-ENG series and WI-ENG series.

8.4 Control of Externally Provided Processes, Products, and Services is addressed in the Purchasing procedures, Supplier Procedures, and Purchasing Process Map (TS-COP-107).

8.5 Production and Service Provision – refer to DCS procedures and work instructions for details.

8.6 Release of Products and Services is addressed in the procedures outlined in 8.4 above.

8.7 Control of Nonconforming Outputs is addressed in WI-QA-703.

9 Performance Evaluation – refer to Quality Procedures and Work Instructions.

9.1 Monitoring, Measurement, Analysis, and Evaluation

9.1.1 The organization performs process studies on all new manufacturing processes to verify process capability and to provide additional input for process control, including those for special characteristics. Manufacturing process capability or performance results shall be maintained as specified by the customer's part approval process requirements. The process flow diagram, PFMEA, and control plan are implemented and adhere to measurement techniques, sampling plans, acceptance criteria, records of actual measurement values and/or test results for variable data, and reaction plans and escalation process when acceptance criteria are not met. The reaction plan indicated on the control plan is evaluated for impact on compliance to specifications for characteristics that are either not statistically capable or are unstable and a corrective plan is developed and implemented. This includes the identification of statistical tools and the application of statistical concepts.

9.1.2 Customer Satisfaction – The organization monitors customer satisfaction through continual evaluation of internal and external performance indicators to ensure compliance to the product and process specifications and other customer requirements.

9.1.3 Analysis and evaluation – appropriate data and information arising from monitoring and measuring is analyzed and evaluated.

9.2 Internal Audit Process is described in TS-SOP-124, QP-QA-805, 806, and WI-QA-801.

9.3 Management Review is described in TS-MOP-119.

10 Improvement

10.1 General – Trans-Matic determines and selects opportunities for improvement and implements any necessary actions to meet customer requirements and enhance customer satisfaction - including improving products and services to meet requirements and address future needs/expectations; correcting, preventing or reducing undesired effects; and improving the performance and effectiveness of the QMS.

10.2 Nonconformity and Corrective Action is addressed in QP-QA-200. Trans-Matic does not provide warranties for their products.

10.3 Continual Improvement is addressed in TS-MOP-121 and QP-ET-109.