Magnet-Schultz of America Inc.
401 Plaza Drive
Westmont, IL 60559
Phone: (630) 780-0600

Web Page: www.Magnet-SchultzAmerica.com

MSA Supplier Quality Manual

TABLE OF CONTENTS

1.0 Purpose

The purpose of this manual is to provide supplemental information and additional requirements to Magnet-Schultz of America's suppliers so that Magnet-Schultz of America can achieve the intended results of our internal Quality Management System. This document will be of support to our suppliers to provide specific actions that are referenced in the Supplier Quality Manual relative to the need for developing a quality system that will support the production and delivery of quality components, raw materials & services utilized in our products.

Compliance to the requirements stated within this manual shall apply as part of the accepted purchase order agreements. If amendments to these requirements are negotiated and agreed upon, those amendments shall be documented as exceptions to the purchase order agreement. Such exceptions shall be requested in writing and require a signed approval from MSA's Purchasing and/or Quality Departments.

2.0 Scope

This manual serves as the general quality requirements for Magnet-Schultz of America's Suppliers and their sub-tier suppliers. This manual is intended to define the requirements necessary to ensure that all products and services purchased by Magnet-Schultz of America comply with specified requirements detailed upon purchase order such as but not limited to quality, reliability and delivery. In addition, MSA ensures the same requirements are met for any calibration service provider.

3.0 Terms and Definitions

MSA…Magnet-Schultz of America

SQM… Supplier Quality Manual

PPAP… Production Part Approval Process

PPM… Part Per Million

Scrap… Non-conforming Material dispositioned as unusable

TDN… Temporary Deviation Notice

ECO… Engineering Change Order

QMS… Quality Management System

PCN… Process Change Notification

MRB… Material Review Board

AVL… Approved Vendor List

Cpk… Process Capability

OTD… On time Delivery

CAPA… Corrective and Preventive Action

4.0 Responsibility

Adherence to this procedure is the responsibility of the applicable suppliers to MSA, MSA's Quality Department, Purchasing Department, Program Managers and Project Engineers.

All suppliers are required to achieve compliance to latest revision of ISO: 9001. A copy of the suppliers 3rd party certification shall be provided to MSA prior to becoming an approved supplier to MSA.

In the scenario that a supplier has not achieved full certification to ISO: 9001, written approval from MSA's Quality Department shall be granted prior to becoming an approved supplier to MSA. Also in this scenario MSA's Supplier Quality Manual will act as the minimum requirements for such suppliers QMS.

Note: Suppliers are required to utilize this document as the minimum requirements for being a supplier to MSA and it is against this standard that all suppliers will be assessed.

5.0 Procedure

5.1 Quality Management System Requirements

5.1.1 Drawings and Specifications

It is the supplier's full responsibility to ensure that copies of all applicable drawings and specifications are available, up to date and are fully understood by the personnel in the supplier's organization directly responsible for assuring compliance with the stated requirements. If copies are not in the supplier's possession, or when clarification and/or interpretation are required, it is the supplier's responsibility to obtain the necessary information through the Purchasing Department of MSA.

Note: Prints supplied with any P.O. are printed to the revision current at the time of issue. They are intended for use to produce parts for the specific P.O. they were generated for and should not be used for any subsequent P.O. even for the same part number.

5.1.2 Design and Process Change Control

All suppliers to MSA shall have a change control procedure in place prior to becoming an approved supplier. MSA wants to make all suppliers aware of the risks involved in un-controlled changes to designs, processes and/or their sub-tier processes.

Suppliers shall have written authorization/approval from MSA's Quality Department prior to incorporating any changes into their product or processes on any product or service supplied to MSA. Such changes shall be documented by a suppliers PCN form. In the scenario the supplier does not have such form MSA will provide a PCN form for documenting such changes.

Shipments incorporating such changes shall not be made until authorized by MSA's Quality Department. Suppliers are required to maintain control records documenting the effectivity dates and/or serial numbers of all engineering and process changes. The control system shall ensure removal of obsolete product and information from all points of use and provide for identification and disposition of affected product.

5.1.3 Lot Control

Suppliers are required to have lot identification control procedures in place to identify product from receipt of raw material through their internal processes on to shipment of finished product. In addition; all product delivered to MSA shall have a supplier lot number visible from the outside of the container in which the product is shipped in.

All suppliers shall retain appropriate material certifications on all raw materials used to produce any product delivered to MSA.

Note: All material is subject to Certificate of Conformance. If the documentation is not sent with the product or services, it shall be available upon request.

5.1.4 Qualification of Personnel

The supplier's QMS shall provide for the qualification and training of personnel performing critical inspections and production operations. Operator training records are to be made available upon request by MSA.

5.1.5 Control of Measurement and Test Equipment

All measuring and test equipment, including production tools and fixtures used as a means of inspection, shall be checked prior to use, or at established intervals, to assure continued accuracy. Calibration shall be in accordance with recognized measurement standards. Controls of all measuring and test equipment are to be maintained with the listing location, results of last the calibration and the date of next scheduled calibration. These records shall be available for review by MSA upon request.

5.1.6 Control of Inspection and Testing

During the course of procurement and production, the supplier's inspection and testing frequencies shall be adequate to assure continuous control in consistently providing products that conform to MSA's specifications. Inspection and traceability records shall be maintained for a minimum of ten (10) years.

The supplier's QMS shall provide for material identification to control and to prevent the use or shipment of materials, which do not conform to MSA's specifications. Non-conforming material shall be identified and removed promptly from normal production lines and placed in a controlled MRB area.

5.1.7 Control of Nonconforming Material

As stated in Section 5.1.6 suppliers shall have a QMS that provides for adequate control of nonconforming material. The suppliers QMS shall include a system for identifying, documenting, evaluating, segregating, disposing of, and/or reworking nonconforming product.

The supplier shall immediately notify MSA's purchasing department or Quality Department of any non-conforming material produced during normal production that may affect the quality, OTD and or durability of a product delivered to MSA. Once MSA has been notified a disposition will be made on the nonconforming material. Such information will be communicated to the supplier in a timely manner.

5.1.8 Corrective and Preventive Action

The supplier shall establish and maintain documented procedures internally for implementing corrective and preventive actions (CAPA). Documented procedures shall include methods for:

- Reviewing nonconformities including customer complaints
- Determining root cause
- Evaluating actions needed to prevent recurrence
- Implementation of those actions
- Validating that the action taken was implemented effectively

In the event MSA receives nonconforming material, MSA has the authority to initiate a SCAR to be completed within 30 business days of the occurrence. Such event requires an immediate containment plan to be communicated immediately to MSA.

MSA will always provide the supplier with an 8D SCAR form, but it is not required if the supplier has an established form that meets the minimum requirements below.

- Establish a team (D1): Team members that are responsible for the SCAR *expected within 24 hours.*
- Problem description (D2): Describe the nonconformance *expected within 24 hours.*
- Containment plan (D3): Describe in detail what steps have been taken to ensure that all suspect products has been located and contained. When did the process go out of control and what quantity of product/lots are suspect *expected within 24 hours.*
- Root analysis (D4): Why did the nonconformance occur? How did it escape? *Expected within 5 days.*
- Corrective actions (D5): How is the issue going to be corrected? What will be change? *Expected within 10 days.*
- Implementation actions (D6): What was implemented and when was it implemented? *Expected within 10-15 days.*
- Future Prevention (D7): What was done to prevent the nonconformance from occurring again? *Expected within 30 days.*
- Verify and recognize (D8): Verify that the actions taken fully resolved the issue i.e. “over the past 3 lots this defect did not occur”. *Expected within 30 days.*

Note: If the supplier cannot achieve the SCAR requirements within 30 days of the occurrence a request for an extension may granted by MSA’s Quality Department.

5.1.9 Purchase Order Information

The purchase order is the controlling document that identifies and specifies the requirements of the product being ordered and after acknowledgment is considered a contract.

The purchase order may directly state all requirements or may reference other documents that state the product requirements, such as the MSA Supplier Quality Manual (This document – although the requirements herein described are applicable whether or not called out on the P.O):

- International Standards (ex. ISO, AS9100, etc.)
- Industry Accepted Standards (ex. AMS, ASTM, etc.)
- Product Drawings

The supplier is responsible to review the purchase order and ensure that all referenced documents are available, current, and understood. MSA is responsible for providing suppliers with the

necessary MSA drawings, procedures and specifications. Suppliers are responsible for obtaining general industry standards and specifications. Verbal updates alone to a document are not acceptable.

The supplier is responsible to ensure that all stated requirements can be met before the acceptance of any purchase order.

5.1.10 Magnet-Schultz of America Owned Property

MSA requires all tooling purchased by MSA to produce production parts & or services to be properly identified.
MSA has the authority to request for objective evidence that tooling is being identified at any time.

5.2 PPAP Requirements

5.2.1 Overview

MSA requires its suppliers to submit PPAP documents and representative production samples to MSA's Quality Department prior to shipping against a production purchase order. The initial PPAP and sample submission is to be filed in accordance with the AIAG PPAP submission requirements along with MSA specific requirements.

MSA's Quality Department is responsible for sending the supplier a PPAP submission requirements form (QMS-F-0010) upon quotation of any products and or services. This document outlines the requirements for each PPAP submission level (1-5) and is the suppliers' responsibility to communicate any misunderstandings.

5.2.2 SPC Requirements

Critical features will be defined by MSA prior to the release of PPAP orders to the supplier.

Critical features are defined on MSA drawings with a △ and are required to have an initial process capability study (Cpk) of 1.67 or greater to be approved for in-process inspection. Failure to meet this requirement will require 100% inspection. It is the supplier's responsibility to inform MSA's Quality Department of any issues with meeting MSA's SPC requirements.

All critical features shall maintain a 1.33 Cpk or greater over the life of the product. MSA holds the authority to audit this on an annual basis.

If a supplier control plan is requested, all critical features are required to be present on the suppliers control plan.

Gage R & R studies shall be completed on all gages, attribute or variable, used to inspect MSA's critical features. All Gage R & R require a % R & R of 10% or lower to be acceptable.

Note: *It is the supplier's responsibility to inform MSA's Quality Department of any issues with meeting MSA's SPC requirements. Failure to meet any of MSA's SPC requirements shall have written approval from MSA's quality department for full PPAP approval.*

6.0 Supplier Monitoring

MSA monitors each supplier's quality, delivery and responsiveness to performance. Data is tabulated and downloaded monthly for internal review and analysis by MSA Quality and Purchasing. Suppliers are provided a "Supplier Score Card" quarterly to monitor their performance and continuous improvement or the need for corrective action.

6.1 Supplier Performance Rating = Quality Rating + Delivery Rating + Responsiveness Rating

MSA at a minimum, uses the following supplier performance indicators:

a) Delivered product conformity to requirements;
b) Customer disruptions at the following plant, including at yard holds and stop ships;
c) Delivery schedule performance;
d) Number of occurrences of premium freight.

If provided by the customer, MSA will also include the following, as appropriate, in their supplier performance monitoring:

e) Special status customer notifications related to quality or delivery issues;
f) Dealer returns, warranty, field actions, and recalls.

6.2 Second – party audits

MSA will include a second- party audit process in their supplier management approach. Second –party audit may be used for the following:

a) supplier risk management;
b) supplier monitoring;
c) supplier QMS development;
d) product audits;
e) process audits;

Based on a risk analysis, including product safety/ regulatory requirements, performance of the supplier, and QMS certification level, at a minimum, MSA will document the criteria for determining the need, type, frequency, and scope of second – party audits. MSA retains records of the second –party audit reports.

If the scope of the second –party audit is to assess the supplier's quality management system, then the approach shall be consistent with the automotive process approach.

6.3 Supplier Development

MSA will determine the priority, type, extent, and timing of required supplier development actions for its active suppliers. Determination inputs will include but are not limited to the following:

a) performance issues identified through supplier monitoring;
b) second- party audit findings;
c) third-party quality management system certification status;
d) Risk analysis.

MSA will implement actions necessary to resolve open (unsatisfactory) performance issues and pursue opportunities for continual improvement.

7.0 Regulatory Requirements

REACH and RoHS

MSA maintains conformity with RoHS-the restriction of the use of certain hazardous substances in electrical and electrical appliances.

MSA's solenoid products are defined as "Articles" under the REACH regulations Article 3(3). There is no known or intended release of chemical substances from MSA products under normal or foreseeable conditions.

MSA certifies that our products are compliant with the European Union Regulation governing the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) and do not contain substances above 0.1% weight of a Substance of Very High Concern (SVHC) listed in Annex XIV.

MSA maintains compliance to California's prop 65 as well. Proposition 65, officially known as the Safe Drinking Water and Toxic Enforcement Act of 1986, initiated November 1986.

Magnet-Schultz of America will maintain these compliances unless directed otherwise by our customer's requirements.

We expect our suppliers are aware, understand, and comply with these compliances, and to ensure that all necessary actions are taken to meet these directive requirements.

REVISION HISTORY

Rev.	Originator	Description of Changes	Date of Release
A	Don Koziel	IATF transition	3/4/2020
2	Nick Kelly	Updated for IATF requirements	1/3/2020
1	Nick Kelly	Initial release	10/1/18