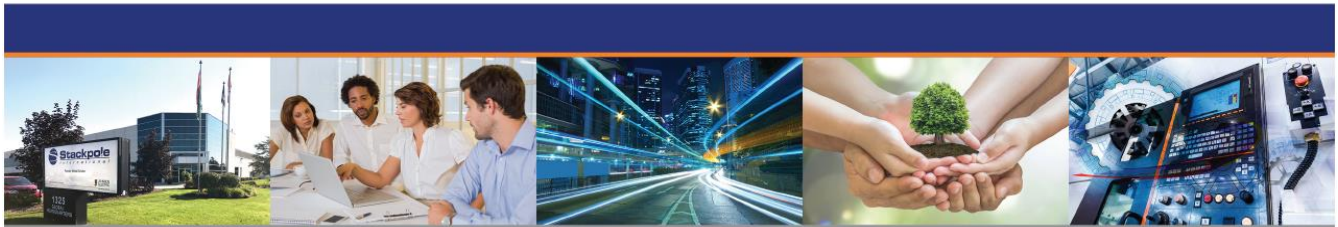


SCM-MAN-0001  
Date: 31MAR2023  
Revision: 5



# SUPPLIER REQUIREMENTS

## Manual

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## INTRODUCTION

Suppliers to Stackpole International, Johnson Electric are required to ensure their quality systems meet the criteria defined by this document, as well as applicable National and International Standards and Guidelines.

Stackpole International expects that suppliers will have questions regarding these requirements from time to time over the course of our partnership. Suppliers are encouraged to contact your Stackpole Supplier Quality Assurance representative for clarification of any standards.

Throughout this document references are made to forms/tools that are to be used when reporting to Stackpole. Should you not have these forms please contact a Stackpole Supplier Quality Assurance representative and they will be provided to you or accessible at [www.stackpole.com](http://www.stackpole.com)

ISO 9001:2015 and IATF 16949:2016, latest editions, are the basic quality system standards for Stackpole and its suppliers. These guidelines were used to develop these Supplier Requirements.

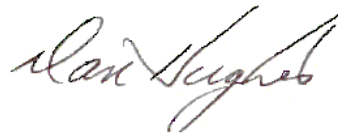
Stackpole requires their suppliers of automotive products and services to develop, implement, and improve a quality management system certified to ISO 9001:2015, unless otherwise authorized by Stackpole, with the ultimate objective of becoming certified to IATF 16949:2016.

MMOG/LE, latest edition is the guideline used by Stackpole to assess the materials management processes of a supplier.

**Note: Within this document, the use of “Stackpole” applies to all Global Stackpole International Divisions for compliance to these guidelines and expectations.**

A handwritten signature in black ink, appearing to read 'Herman'.

Herman Choi  
Head of Global Purchasing

A handwritten signature in black ink, appearing to read 'Dan Hughes'.

Dan Hughes  
Director of Global Quality

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**REVISIONS**

<u>DATE:</u>	<u>REV.</u>	<u>SECTION:</u>	<u>BY:</u>
31.03.2023	5	1.3 2.8 2.9 2.10 3.4 6.1.1 6.3.3 References Appendix I updated. Appendix J updated	SD, BS, CC, MC, AK, DD, HC, DH
14.09.2021	4	All sections updated for clarity Additional sub-sections added 1 - 1.2, 1.3, 1.5, 1.6, 1.7 2 - 2.1, 2.4, 2.5, 2.6 3 - 3, 3.2.1, 3.2.2, 3.6, 3.8, 3.8.1, 3.8.2, 3.10 4 - 4.2 5 - 5.2, 5.3.1, 5.3.2, 5.4.1, 5.4.3 6 - 6.1, 6.2, 6.2.1, 6.3.2, 6.3.3, 6.4.1, 6.4.2, 6.4.3, 6.5 8 - 8.2.2, 8.2.3, 8.3.1, 8.3.2, 8.3.3, 8.3.4, 8.3.5, 8.3.7, 8.3.C, 8.4, 8.5, 8.9.2, 8.10 & 11 (new)	MP, SD, BS, DD, AK, HC, DH
18.12.2017	3	All sections updated for clarity Updated references to IATF 16949:2016 clauses	MM, AG, SD, KM, DH
19.12.2016	2	All sections updated for clarity Added section on Corporate Responsibility that defines Stackpole's core values. Updated section related to Advance Product Quality Planning	MM, AH, KM, DH
09.30.2012		INITIAL RELEASE – GHQ-SCM-MAN-001	AH, DH

## 1. INTRODUCTION

The goal of the Supplier Requirement Manual is to have open communication for suppliers doing business with Stackpole to develop and maintain self-driven systems that steer continuous improvement, reduced variation, and elimination of waste. This manual defines Stackpole's requirements for suppliers to comply within their operations to ensure that parts, services and materials delivered to Stackpole and its customers meet all specifications and to assure the quality of supplied parts and materials.

At Stackpole, we clearly recognize the critical role quality plays in our success. We are committed to meet our customer's quality needs and expectations with excellence by pursuing continuous quality and productivity improvements. A large segment of our quality performance is, of course, dependent on you as our supplier. Our suppliers are expected to have zero defects, superior delivery performance, and on-time responsiveness to any issues.

Quality is a prime consideration for supplier selection and sourcing at Stackpole. Your dedication to quality and strict adherence to the Stackpole Supplier Requirements Manual will clearly document your commitment as a Stackpole supplier.

### 1.1. Purpose of Supplier Requirements Manual (SRM)

The purpose of this SRM manual is to promote a clear understanding of Stackpole's expectations and quality system requirements for suppliers. These requirements include but are not limited to new product development capability and ability to produce quoted volumes with emphasis on prevention of defects and reduced variation. In addition to IATF 16949:2016 requirements, this manual contains the Stackpole Customer Specific requirements which need to be integrated into each supplier's Quality Management System.

### 1.2. Scope (Ref. : IATF 16949:2016, 8.4.1.1)

This manual applies to all suppliers providing products and services that affect customer requirements such as but not limited to sub-assembly, sequencing, sorting, rework, and calibration services in the scope of their definition of externally provided products, processes, and services. (Contact Stackpole Quality Representative for further clarification).

Suppliers who are not certified to IATF 16949:2016 must, at a minimum be certified to the latest ISO 9001:2015 standard and comply with the "Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers" (MAQMSR) Document is available at [www.iatfglobaloversight.org](http://www.iatfglobaloversight.org).

Stackpole customers may have specific requirements with regard to Quality Management Systems (Customer Specific Requirements). Such requirements shall supersede the requirements set forth in this document.

### 1.3. Expectations

Stackpole suppliers are viewed as being fully responsible for the quality and delivery of their products. Suppliers must ensure that all materials are produced in conformance to the required standards.

Suppliers are expected to:

- Ship zero defects
- If Nonconformance arise and a purchased component is affected, all in-house components must be contained and certified at the supplier expense and supplier must be notified
- Provide timely corrective actions that identify root cause and permanently eliminate the defect in the event of a nonconformance (reference 5.3 Supplier Response)
- Execute flawless launches and obtain Full PPAP Approval with each submission

- Deliver the required quantity of product, on-time, with appropriate Advanced Shipment Notification (ASN), paperwork and labels
- Provide exceptional service to each Stackpole division and department
- Provide competitive pricing to win new business
- Embrace continuous improvement programs
- Remain competitive during the program
- Enhance product performance (robustness, quality and warranty)
- Provide sustainable ideas for cost reductions
- Provide quotations using the Stackpole RFQ format in a timely fashion
- Adhere to the Johnson Electric Group Suppliers Terms and Conditions
- Inform ISO 9001:2015 and IATF 16949:2016 certification bodies (e.g. 3<sup>rd</sup> party registrars) of these requirements prior to certification or re-certification audits so they may be included in the audit process
- Meet all timing requirements
  
- Register and maintain active connection to SupplyOn, our supplier portal
  
- Customer quality issues and/or warranty history shall be made available upon request for review
- Supplier performance with current customer(s) shall be made available upon request
- Product capability information shall be made available to the customer upon request

#### **General Expectations:**

- Suppliers agree to abide by applicable international, national, state, and local laws and regulations.
- Suppliers agree to provide documentation to demonstrate financial solvency, as required.

#### 1.4. Supplier Involvement (Ref. : IATF 16949:2016 8.3.2)

Stackpole suppliers have an obligation to establish a cross-functional team to manage the product planning process. Suppliers must expect the same performance from their subcontractors. Stackpole expectations regarding planning for quality are described later in this manual.

#### 1.5. Verification Requirements

Stackpole reserves the right to audit contracted products and applicable processes/systems associated with those products at the suppliers' premises. Stackpole also reserves the right to allow its customers to audit those same products/processes/systems. Stackpole conducts audits and assessments at Supplier sites to verify/confirm supplier compliance to the above said requirements identified as having a high impact to product Quality and on-time delivery and service. A capacity analysis will be conducted at the supplier facility to validate the contracted capacity requirements established by Stackpole. Unless otherwise specified the supplier shall use the capacity analysis form provided by Stackpole. Where equipment and/or processes are shared with other part numbers/customers, the supplier is required to perform a capacity study to ensure that equipment / process capacity is not over sold. Shared capacity loading shall be included in the capacity verification study.

##### 1.5.1 Annual Audit

Stackpole reserves the right to conduct a Supplier Audit. These audits will be conducted annually, or at a more frequent interval based on Supplier Risk (see below).

Supplier Audit - shall be conducted on suppliers based on following risk factors:

- 1) Supplier Performance
- 2) QMS Certification levels
- 3) Supplier Risk Assessment
- 4) Financial Risk / FHR Score

#### 1.6. Supplier Performance Rating System (SPRS) (Ref. : IATF 16949:2016, 8.4.2.4)

The Supplier Performance Rating System (SPRS) is a medium to communicate our expectations to the supply base and encourage the suppliers to maintain highest levels of performance rating for healthy and un-interrupted business with Stackpole. Stackpole will establish and maintain long-term relationships with suppliers who are committed to continuous improvement in quality, cost, delivery and service. This commitment is an expectation of all suppliers who participate in the automotive industry. The Stackpole Supplier Performance Rating System (SPRS) is a means to provide feedback on performance against the expectations described in section 1.3. Suppliers are expected to use the scorecard to help identify opportunities for continuous improvement and improve customer satisfaction. Therefore, suppliers are expected to incorporate SPRS results into the measurement, analysis and improvement process of the Quality Management System.

The SPRS scorecard is issued to suppliers at a minimum quarterly. Suppliers wishing to maintain records of performance need to print the report and archive internally as desired. For additional questions concerning SPRS, contact your Stackpole Buyer or Divisional Quality Department. The rating system includes rating criteria for delivered product conformity to requirements, customer disruptions including yard holds and stop ships, delivery schedule performance, number of occurrences of premium freight and if applicable special status customer notifications from Stackpole's customer related to quality or delivery issues and dealer returns, warranty, field actions, and recalls.

Any Supplier Performance Scorecard <80% will be subject to internal review, including potentially impacting business opportunities.

**Note: Supplier performance rating system presentation and sample scorecard template can be found in the appendix of this manual.**

#### 1.7. Additional Resources

For further explanation of the Stackpole Supplier Requirements Manual, contact your Stackpole Supplier Quality Assurance Representative. Please refer to the Automotive Industry Action Group (AIAG) applicable guidelines Failure Mode and Effect Analysis and AIAG / VDA FMEA Manuals, Advanced Product Quality Planning and Control Plan, Production Part Approval Process, Statistical Process Control, Measurement Systems Analysis and Quality Management Systems for further details (<http://www.aiag.org>).

In addition reference section 6.3.3 – Special Process (CQI) Requirements

Suppliers are expected to have document control systems in place to ensure that the latest released version of the AIAG and/or other International Standards/Guidelines are being used.



## 2. CORPORATE RESPONSIBILITY & SUSTAINABILITY

### 2.1 General Expectations

- Suppliers agree to participate in sustainability-related assessments that may be required by Stackpole International, and possibly conducted by third parties on Stackpole's behalf.
- Suppliers agree that a management representative from their company, with authority to influence their organization, will complete AIAG online sustainability training or equivalent sustainability training provided by the suppliers' company, and provide documentation asserting such requirements were completed.

### 2.2 Health, Safety & Environmental

It is the policy of Stackpole to conduct our business in a manner that protects the environment and the health and safety of our employees, by meeting or exceeding all applicable environmental, health, and safety laws, and regulations. As stated before, Suppliers are encouraged to become certified or to be compliant to the ISO 14001 Environmental Management System (EMS) requirements standard and the ISO 45001 Occupational Health & Safety Management Systems Specifications. As a minimum, Stackpole expects that all suppliers shall have established a commitment to the reduction of waste, of harmful emissions, control of environmental pollution and the provision of a safe work environment for its employees.

This includes compliancy to "End of Life Vehicle" regulations, including adherence as required in the International Material Data System (IMDS) for the supply of materials as required.

Suppliers must comply with customer specific requirements for restricted and reportable substances. If a supplier has questions regarding customer specific requirements for Stackpole product, they should contact the appropriate Stackpole Quality Department.

### 2.3 Safety Data Sheets (SDS) (formerly MSDS)

Prior to production release and/or the supply of product to Stackpole, the supplier must obtain and maintain copies of the Safety Data Sheets (SDS). Copies of the current Safety Data Sheets (SDS) must be provided to the appropriate Stackpole personnel. Specific attention will be paid to the risk phrases, product identifier, and hazardous information and in the handling, storage and disposal of the product. Hard copies are not required providing that the faxed copy or the electronic version cover the sixteen (16) basic sections of most Safety Data Sheets and that all information is legible. It is understood that a "Materials Certification" document or Material Specification document will not be acceptable as an equivalent to the requested Safety Data Sheet.

### 2.4 Government Laws and Regulations

All goods supplied to Buyer shall satisfy current applicable federal, provincial, local and foreign laws and regulations on restricted, toxic and hazardous goods as well as all environmental management, legal and other requirements as applicable. Further, suppliers shall cascade all applicable requirements down the supply chain to the point of manufacture.

Suppliers shall pass down all applicable statutory and regulatory requirements and special product and process characteristics to their suppliers.

## 2.5 Human Rights

Stackpole International - Human Rights Policy communicates the ethical and social values we respect and our commitment to uphold human rights.

Stackpole International pursues and promotes human rights principles in all aspects of our business. The Company is dedicated to the adoption of internationally recognized human rights standards in its global operations. The international sources of law, upon which our human rights standards are based, aim to ensure a consistent world-wide adoption of the principles throughout the group.

The Universal Declaration of Human Rights provides *'a common standard of achievement for all people and all nations'* which Stackpole International observes and promotes. The guidelines of the International Labour Organization Conventions and The Convention for the Rights of the Child are also fundamental to instructing our policy provisions.

These beliefs serve as a framework for the standards of business conduct we expect of any supplier that does business with us. Compliance with these standards will be a mandatory component of our purchase contracts worldwide and must also apply to subcontractors.

- Guided by applicable standards, the prevailing knowledge of the industry and any specific hazards, we expect our suppliers to provide a safe and healthy working environment for all employees.
- Suppliers are to ensure that no discrimination is practiced within their company. Suppliers must adopt an “equality for all” policy to prevent discrimination in hiring, compensation, promotion, training, termination or retirement based on race, caste, colour, national origin, sex, age, religion, disability, marital status, actual or perceived sexual orientation, employment status, political affiliation or any other legally protected status.
- “Suppliers are to provide a workplace in which all employees are treated with dignity, respect, and are able to work in an environment free from harassment and violence (between co-workers, workers and customers, workers and strangers or workers and their domestic/intimate partners). The Company prohibits any form of violence and unlawful harassment on all prohibited grounds of discrimination”.
  
- Suppliers are expected to take reasonable steps to prevent accidents, injury or illness arising out of, associated with or in the course of work, by minimizing so far as is reasonably practicable, the causes of hazards inherent in the working practice and environment; and provide employees with a safe and secure environment for their work.
- All employees shall receive the necessary health and safety training for their line of work.
- Access to clean facilities, drinkable water and, if appropriate, sanitary facilities for food storage /consumption shall be provided.
- Workers shall be compensated with wages and benefits that comply with local law, including minimum wages, overtime hours and legally mandated benefits.
- Working hours shall comply with all applicable local laws regulating hours of work.
- Suppliers are to restrict employment to those who meet the local legal minimum employment age of each country or region. Stackpole International and Johnson Electric believe that promoting fair and appropriate employment is a critical part of our commitment to our people and local communities and expect suppliers to follow these standards. The unlawful employment or exploitation of children in the workplace or the use of forced labor (including any form of human trafficking, forced, bonded or indentured labor) is not permitted or condoned. In accordance with national laws, employment is to be restricted to those who meet the local legal minimum employment age. Furthermore, all temporary workers, and all third party-employed workers who perform work, shall meet these minimum age requirements.

It is our expectation that all our suppliers will maintain these working conditions in their operations, while also promoting adoption of these principles with their own suppliers.

## 2.6 Code of Conduct

Stackpole believes in conducting business with honesty and integrity, both within the group of companies under Johnson Electric (“Company”) and in dealing with business partners, customers, suppliers, competitors, and the communities in which it operates.

Stackpole believes in conducting business with integrity, fairness and respect in all communities where we operate. Our employees will not, directly or indirectly, offer bribes, kickbacks or other similar payments, or authorize an offer of anything of value for the purpose of influencing business decisions and we expect our suppliers to have policies and procedures in place that ensure the absence of similar corrupt practices with their own employees. We will manage our supplier relationships in good faith and we expect suppliers to exercise similar discretion in our relationship and in their relationship with their suppliers. All Stackpole suppliers are required to comply with Johnson Electric’s Code of Ethics and Business Conduct and all applicable federal, provincial, state and local laws, ordinance, rules, codes, standards and regulations.

## 2.7 Conflict Minerals

Under Dodd-Frank legislation and subsequent U.S. Securities and Exchange Commission (SEC) rule which came into effect in 2012, requires manufacturers who file certain reports with the U.S. Securities and Exchange Commission (SEC), must disclose whether products they manufacture, or contract to manufacture, contain conflict minerals that come from sources that support or fund inhumane treatment in the region of the Democratic Republic of the Congo or an adjoining country. Conflict minerals are defined to be tin, tantalum, tungsten and gold (3TG) that are in the final product that enter the market place. In addition, other raw materials such as: Cobalt, Mica and Rubber have been identified as conflict substances.

Our customers require Stackpole to conduct due diligence with our supply base to determine whether conflict minerals are used in the production of parts manufactured by our company. Suppliers contacted by Stackpole, must support Stackpole by accurately providing all requested data and reports by 30 August. Additional information on conflict minerals reporting can be found at <http://www.aiag.org> or <http://www.conflict-minerals.com> and templates at <http://www.responsiblemineralsinitiative.org/conflict-minerals-reporting-template/>

This includes compliancy to “End of Life Vehicle” regulations, including adherence as required in the International Material Data System (IMDS) for the supply of materials as required.

For additional information please refer to Conflict Minerals identify along with Johnson Electric Group Suppliers Terms and Conditions accessed through Stackpole International website:

<https://www.stackpole.com/about/quality-supplier.html>

Or available from purchasing representative

The supplier shall ensure that all supplied products are compliant to safety and environmental rules or regulations from time to time in force in the countries where supplied products are to be sold or used, including those WEEE Directive 2002/96/EC (Waste Electrical and Electronic Equipment), RoHS Directive 2011/65/EU and 2015/863/EU (Restriction of Hazardous Substance), REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) Regulation 1907/2006/EC, and ELV Directive 2000/53/EC (End of Life Vehicles).

Stackpole purchased components might require certification by International Safety Standards, such as UL Certified (Underwriters Laboratories), CSA Certified (Canadian Standards Association), ISO Certified (International Organization for Standardization), SAE Certified, DIN Certified (Deutsches Institut für Normung), 3C (China Compulsory Certified), NSF (National Science Foundation), etc.

Additional CSR should be directed to your Stackpole Operation / Engineering representative.

## 2.8 USMCA and AALA Documents

**General Requirements** – The supplier shall complete the following documents for all products purchased by Stackpole International. This documentation is required to be updated on an annual basis at the beginning of each calendar year. Should any change occur to the information provided on the forms the supplier must provide immediate written notification. Completed documents, as well as any changes and updates, must be returned to the originator.

**USMCA Certificate of Origin:** A Certificate of Origin must be completed by suppliers located in one of the USMCA territories (United States, Mexico and Canada) selling automotive component parts or raw materials to Stackpole International, whether or NOT these products are shipped across the borders. Many of the products sold to Stackpole International are subsequently used as components for assemblies that are shipped across borders, and the component/material information is required to determine the USMCA eligibility and therefore duty status of the assemblies.

**AALA Certificate of Origin:** An American Automobile Labeling ACT (AALA) Certificate of Origin must be completed by suppliers selling original equipment (production) automotive parts/materials to Stackpole International, whether or not these parts are sold for service applications. This information is required by Stackpole International to comply with AALA regulations as an “outside supplier” to vehicle manufacturers.

## 3 ADVANCED PRODUCT QUALITY PLANNING (APQP)

Product quality begins at design. Therefore, from initial product concept through production and service, the supplier and Stackpole must understand and agree on all applicable quality standards and requirements. Agreement must be reached on all critical quality characteristics, control items, annual layout and validation requirements, check fixtures, packaging requirements, and all other quality related matters. These requirements need to be driven by you, as a supplier for your materials, and documented using the Stackpole International internal APQP process with the tracking tools listed below. Manufacturing is a controlled process which must take into account continuous & rigorous monitoring of product and process via analytical techniques such as Statistical Process Control on all key characteristics identified through the APQP process, Stackpole, and the supplier. Stackpole International expect a Phase approached with defined deliverables to be completed and signed off for each phase. (For FPS Business Unit, use Product Development Phase Requirements, and /or for PM Business Unit use Master Project Plan).

### 3.1 APQP Tools

Stackpole requires that suppliers use the advanced quality planning techniques as approved and described in the AIAG Advanced Product Quality Planning and Control Plan manual and other applicable International Standards.

### 3.2 APQP Checklist and Status Reporting (Ref.: IATF 16949:2016 8.2.1)

The supplier shall track and communicate program development activities using the Stackpole APQP matrix available from your Supplier Quality Representative. Updated APQP Matrix/Gap Analysis reports and supporting evidence shall be submitted to the Stackpole upon request. Program timing requirements will be established by the Stackpole Program Team based on the Stackpole Product Development Process (PDP) and customer requirements. Optional formats shall be pre-approved by the Stackpole Program Team.

Stackpole may request the supplier to use customer specific forms as an alternate to the required Stackpole forms. In this case Stackpole will provide the required forms to be completed by supplier.

**APQP-(i):** This is also referred to as Kick-off phase and it begins with awarding business to the supplier. This phase demonstrate supplier's ability to design the process for manufacturing the part. It takes into consideration the time frame in which the supplier finishes tooling designs and discovers if additional tooling is required to meet contracted capacity requirements.

**APQP-(ii):** This phase begins with the shipping approval of the tooling, gauging and other equipment to the supplier's facility. It is the supplier's responsibility to collect necessary information about tooling, equipment, and gauges to produce parts as per drawings provided by Stackpole.

**APQP-(iii):** This APQP phase kicks off with the tooling delivered on supplier facility and ends with the initial production run. This phase focuses on the first off parts review by the supplier and a confirmation towards producing parts in higher numbers.

**APQP-(iv):** This phase is the product/process validation and launch stage of the process. During this period, the supplier completes and submits a Production Product Approval Process (PPAP) package. Additionally, a capacity study shall be required. Contact your Stackpole representative to determine the requirements for every new or modified product design or manufacturing process based on the nature of the engineering changes.

#### 3.2.1 Launch Readiness

This is the phase when awarded business is going to be in production launch stage. Stackpole team will establish the requirements and set priorities in the development phase of the product. (Stackpole Launch Readiness Checklist).

#### 3.2.2 Capacity Verification

The capacity requirement phase starts with the supplier's incoming tooling and gauging equipment to proceed with the production of parts. It is supplier's responsibility to ensure that contracted capacity requirements will be achieved. Unless otherwise specified the supplier shall use the capacity analysis form, provided by Stackpole. Where equipment is shared with other part numbers/customers, the supplier is required to perform a capacity study inclusive of shared loading to ensure that equipment is not over capacity. Changes to increased capacity require a re-submission of Stackpole International Capacity study.

Stackpole reserve the right to conduct customer specific capacity verification on site.

### 3.3 Milestone Reviews

Stackpole may choose to perform Milestone Reviews (MSR) of the supplier's APQP process during the program development stages. MSR meetings will consist of a review of the APQP matrix and supporting evidence as described in 3.2 above by Stackpole Program Team members. This process may also include a production readiness evaluation such as the Stackpole Run-at-Rate. This process may also include a production readiness evaluation using the Stackpole Run-at-Rate form available from your Supplier Quality Representative. Stackpole may also choose to utilize customer-specified formats based on customer requests.

MSR meetings will be established through your Stackpole Program Team.

### 3.4 Packaging (Ref.: IATF 16949:2016 8.5.4)

Suppliers are required to meet the guidelines established by Stackpole to assure proper care and handling of the products. The Stackpole Packaging Approval, SCM-FOR-0031 Data Sheet shall be submitted and approved through the PPAP process. Reference Section 7.3 for additional requirements.

#### 3.4.1 Product Traceability

It is mandatory for all suppliers to have an identification system that distinguishes one lot/batch/part from another when shipping finished product. The traceability system must comply with the FIFO (First In – First Out)

principles for incoming and outgoing material. It is supplier's responsibility to have a robust system for tracing the final product back to raw material, if the need arises.

### 3.5 Measuring Devices (Ref.: IATF 16949:2016 8.5.3 & 7.1.5)

3.5.1 Suppliers are responsible to supply gauges for their own use to ensure only product that meets design specifications is shipped to Stackpole. All customer-owned gauges and fixtures shall be identified as directed by Stackpole. All other gauges and fixtures shall be the supplier's responsibility. All tools and gauges must be properly labeled by the supplier in accordance with Stackpole and APQP requirements.

3.5.2 The supplier shall be responsible for the following:

- Design of the gauge.
- Require gauge design approval from the Stackpole Quality representative.
- Successfully complete a measurement system analysis per the AIAG Measurement Systems Analysis (MSA) Manual. Refer to the MSA Manual for acceptable measurement criteria.
- Maintain the gauge calibration for the life of the program.

Upon program completion, the supplier shall ensure gauges are properly stored to prevent any damage and are readily available for service requirements.

### 3.6 Customer-Owned Supplier Tooling (Ref.: IATF 16949:2016 8.5.3)

3.6.1 All customer-owned tooling shall be identified and maintained for the life of the program per the purchase order / tooling identification documents (Supplier Tooling Standards).

3.6.2 Upon program completion, the supplier shall ensure tooling is properly stored to prevent any damage and is readily available for service requirements or returned to Stackpole if requested.

### 3.7 Boundary Samples (Ref.: IATF 16949:2016 10.2)

When cosmetic issues arise that cannot be addressed by use of the "master samples," the supplier is responsible for establishing approved boundary samples with Stackpole prior to shipping questionable product. PPAP samples shall serve as the "master" for comparison purposes. All "max go" boundary samples require Stackpole Quality Department approval prior to implementation. Any standards developed by the supplier to prevent non-conforming material from passing through do not require Stackpole approval.

### 3.8 FMEA development (Ref.: IATF 16949:2016 8.3.5)

Stackpole requires suppliers to utilize the latest release version of the AIAG Potential Failure Mode and Effects Analysis reference manual / AIAG FMEA or AIAG-VDA FMEA Handbook as required by Stackpole division. Please refer to these manuals for development guidance for both approaches, Rating criteria or 7-Step approach, and quality objectives.

#### 3.8.1 AIAG FMEA Rating criteria

When the severity of a failure mode is 9 or 10, special attention must be given to ensure that the risk is addressed through existing design actions/controls or process preventive/correction action (s), regardless of the RPN. Once all severity rankings are lowered, the supplier team should be addressing other failure mode rankings in occurrence, and then detection

#### 3.8.2 AIAG - VDA FMEA, 7-Step approach

Action Priority (AP) replaces RPN's (Risk Priority Numbers). Examination of S, O, and D ratings individually and in combinations of the three factors for risk-reducing actions prioritized as High, Medium or Low. A High priority is a

request for risk mitigation actions to improve prevention / detection controls or justification why current controls are adequate. Action Priority (AP) is considered High or Medium for severity and occurrence moderate ranks, even when detection controls are effective. Implementing error-proofing solutions is the fastest path to downgrade AP levels from High to Medium and Medium to Low.

Stackpole expects that our suppliers adopt a continual improvement approach and will use the AIAG & VDA FMEAs as a living Document. The AIAG FMEA or AIAG-VDA FMEA documents should always reflect the latest level as well as the latest relevant actions.

### 3.9 International Material Data System – IMDS

Stackpole has adopted the requirement of reporting all substances that are present in the products that we supply to our customers in the automotive market. As a condition of conducting business with Stackpole, suppliers must also meet this requirement.

In order to implement a pro-active system for meeting this requirement, suppliers are required to provide the appropriate supporting documentation that the information has been entered into the IMDS on-line reporting system. The documentation required will be the IMDS version number that the IMDS system assigns to each part upon entry. This documentation is required prior to the time of PPAP submission. Failure to provide the IMDS version number may result in your PPAP submission being returned without evaluation, given rejected status or given limited approval status. Tooling payment may also be impacted due to failure to comply with IMDS requirements. Additionally, use of certain elements such as lead and mercury are prohibited in vehicles and their components, as per the Directive, 2000/53/EC. The details of the directive can be found at:

<https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32000L0053&from=EN>

Suppliers shall make sure that none of the elements described in the Directive should be present in parts or should not exceed set limits, being supplied to Stackpole. To ensure compliance with the various legal and customer requirements, Stackpole requires its suppliers to report information on materials within their respective components. For specific timing of submission requirements please contact the appropriate Stackpole quality or purchasing representative for the division that will be purchasing the product. For additional technical assistance on using the IMDS system, contact the *IMDS Helpdesk*.

### 3.10 Annual Validation Requirements (Ref.: IATF 16949:2016 8.5.1)

The supplier is responsible for performing annual layout, performance and material validation for each part number produced based on the Stackpole approved drawing. Extent of the validation will be determined and agreed upon during the APQP process and reflected on the supplier's Control Plan. Validation results will be retained at the supplier's location and submitted to Stackpole upon request. The supplier must notify the appropriate Stackpole Supplier Quality Department, when review of the data shows non-conformances. Contact your Stackpole Divisional Quality Department with any questions concerning annual layout/validation requirements.

If Stackpole is required to submit a PPAP to its customer; all supplier documentation must not be more than one year old and the supplier may be requested to submit a PPAP if the annual condition is not met. Stackpole will request to update Supplier PPAP's which are more than year old

### 3.11 Total Productive Maintenance (Ref.: IATF 16949:2016 8.2.2 & 8.5.1)

Total Productive Maintenance (TPM) plays an important role in achieving quality objectives. Identification of safety and critical characteristics in the TPM system will allow you to ensure proper controls are in place to closely monitor the TPM process with a focus on these features. Suppliers are required to identify TPM process steps that can affect safety or critical characteristics and ensure these steps are controlled. This information should be reflected in the APQP and TPM Standard Work documents. Suppliers should inform Stackpole as soon as possible in the event of a catastrophic breakdown of a machine, tool and equipment. In lieu of that, supplier should have a contingency plan

(section 8.3) to meet Stackpole's demand of product and must satisfy Stackpole that the supply chain will remain unaffected.

### 3.12 Control Plan Development (Ref.: IATF 16949:2016 8.5.1)

Stackpole requires suppliers to utilize the latest version of the Automotive Industry Action Group (AIAG) Advanced Product Quality Planning and Control Plan reference manual. Please refer to this manual for development guidance for your Prototype, Pre-Launch and Production Control Plans.

Suppliers are required to provide the various levels of Control Plans based on the expected program builds. The Control Plans are subject to review and approval by Stackpole. Control Plan requirements are listed below.

Prototype Control Plan - The prototype phase of the product quality planning period is to effectively assess the product design and development for meeting all of the customer's requirements for fit, function, and durability. The focus will be on dimensional, functional (including subcontracted processing) and statistical analysis of all products shipped for the various prototype builds. The intent is to provide a heightened level of data analysis to support the design validation activity. Unless otherwise specified, this includes numbering/sequencing of parts and data for 100% of all product shipped during this phase of the program launch.

Pre-Launch Control Plan - The pre-launch phase of the product quality planning period is to effectively assess the process design and development for meeting the customer requirements for fit, function, appearance, and durability. The focus will be on the entire process stream, with an increased level of inspection and performance testing (including data analysis) put in place to verify the effectiveness of the process to produce zero defects. This increased level of verification is called launch containment at Stackpole. The control items to be managed and reported through the launch containment process need to be agreed upon by the Stackpole Divisional Quality Department.

The Pre-launch Control Plan would take effect at the completion of the prototype phase. If there is no prototype phase the pre-launch control plan would be implemented as the initial control plan. The pre-launch control plan remains in place until launch containment has verified effectiveness of the production control system. The duration of this control plan will be determined based on the actual results of the supplier to achieve the expected quality requirements for the product being supplied. Release from the pre-launch control plan can only be authorized by the end user Stackpole Division.

Production Control Plan - This control plan is an extension of the pre-launch control plan incorporating lessons learned from the launch. It defines the inspection and testing systems required to meet Stackpole requirements for production. Transition from the pre-launch to the production control plan requires Stackpole approval.

### 3.13 Sub-Tier Supplier Control (Ref: IATF 16949:2016 8.4.3.1)

It is Stackpole's policy for all the Suppliers and their sub-suppliers to abide and adhere by all the rules and regulations pertaining to product quality, on-time delivery and service. It is supplier's responsibility to maintain sub-tier supplier's qualification records such as IATF 16949:2016 certification inclusive of quality, performance test data as applicable on products purchased through these sub-tier suppliers. Supplier must transfer these requirements to its sub-suppliers to meet Stackpole's product specifications and quality standards. Stackpole reserves the right in final approval of supplier's sub-tier supplier.

#### 3.13.1 Sub-Supplier Change Management

The supplier is required to ensure that the sub-suppliers are capable of providing effective support and meeting Stackpole requirements;

The supplier shall select sub-suppliers certified at least ISO 9001 by a certification body bearing the accreditation mark of a recognized IAF MLA member;



The supplier shall monitor the sub-suppliers including (but not limited to) quality performance rating, periodic on-site audit and retain all the records for Stackpole review upon request.

The supplier shall note that Stackpole reserves the right to visit the sub-suppliers:

- Trader who distributing another manufacturers' part / component;
- Sub-supplier supplying Stackpole critical components;
- Serious quality/delivery incident occurred;
- Other situation deemed necessary by Stackpole.

The sub-suppliers who supply automotive products shall be familiar and skilful with automotive core- tools including APQP, FMEA, MSA, SPC and PPAP as mentioned in AIAG manual.

The sub-suppliers shall comply with Stackpole customer specific requirements.

## **4 PRODUCTION PART APPROVAL PROCESS – PPAP (Ref.: IATF 16949:2016 8.3.4.4)**

### **4.1 Procedure**

As a Stackpole supplier, you are responsible for performing inspection and testing to verify conformance to all applicable product requirements. Submission is to be made according to the AIAG Production Part Approval Process (PPAP) manual. Submissions to all Stackpole facilities are to be made in the English language unless specified otherwise by the purchasing division. Please contact your Stackpole Divisional Quality Department with questions concerning PPAP submission requirement.

Suppliers are encouraged to utilize appropriate tools in the product and process planning phase including, but not limited to:

- Design of Experiments (e.g.: Material Characterization)
- Design for Manufacturing
- Failure Modes and Effects Analyses (FMEA)[Process FMEA and Design FMEA]
- Computational Analysis (Simulation, Modeling, etc.) which facilitates ongoing manufacturing activities)
- Finite Element Analyses

**Note: Suppliers are not authorized to begin production or ship material to Stackpole prior to PPAP approval unless an approved waiver has been granted by the Responsible Stackpole Divisional Personnel.**

### **4.2 Product and Process Changes (Change Management)**

#### **4.2.1 Supplier initiated change**

All proposed design and process changes including tooling revision and any contemplating changes at your supplier site(s), shall be submitted to the appropriate Stackpole Quality Department for approval in sufficient time prior to implementation by using the Supplier Engineering Change Request (SECR) form, including timing, so that a plan can be developed and implemented for process re-qualification. Stackpole needs to approve any change in the time schedule and this process will be followed up by the Supplier Quality Department personnel. Suppliers are not authorized to make product/process changes without SECR approval. Upon receiving SECR approval, PPAP requirements must be agreed upon with the Stackpole Quality Department. A copy of the approved SECR is to be provided with the PPAP submission.

The supplier is obligated to identify the first shipment including change with proper identification.

The supplier is subject to disqualification as a supplier and product rejection if any supplier implemented changes have not been authorized by Stackpole.

#### 4.2.2 Stackpole initiated change

Stackpole reserves the right to change specifications. The supplier will be notified by a Stackpole Procurement representative in writing of all proposed changes. Requests will be in the form of official Quotation Request (QR), engineering change notice and/or a revised drawing;

Responses from supplier must include impact on cost, delivery, tooling, quality (ppm), as well as any other items of importance. All responses will be evaluated to ensure that a mutually acceptable plan for implementation is negotiated;

A new or revised purchase order will be issued which will formally authorize implementation of the change; The supplier is not to implement changes into production until qualification is completed and formal written authorization has been obtained by Stackpole.

## 5 NONCONFORMITY and CORRECTIVE ACTION (Ref.: IATF 16949:2016 10.2)

### 5.1 Introduction

This section covers the Stackpole specific requirements for problem-solving and corrective action reporting. It is designed to guide Stackpole suppliers in the development of a corrective action system that will meet Stackpole's minimum requirements. It is to be used in conjunction with IATF 16949:2016 requirements for corrective action.

Stackpole suppliers are responsible for providing defect-free product on time and in the specified quantities to Stackpole. When quality or delivery issues do occur, the supplier is required to initiate problem-solving and corrective action to resolve the issue and prevent recurrence.

Stackpole requires that a systematic, team-oriented problem-solving method be utilized. The team is required to implement short-term and long-term corrective action plans and verify the effectiveness of the corrective action taken to prevent recurrence using statistical methods. Contact your Stackpole Supplier Quality Department for further assistance in team-oriented problem-solving methods.

### 5.2 Supplier CAR Initiation

The supplier will be notified of defective material by the Divisional Quality Department and a Supplier Corrective Action Report (SCAR) or similar 8D-type reporting tool will be required. The SCAR is a document issued by Stackpole when purchased material is identified as not meeting the quality or delivery requirements.

The SCAR form is available from your Stackpole Quality Representative, (Appendix)

Defective material may be identified at Stackpole during incoming inspection, assembly, or packaging. Defective material can also be discovered during an audit, validation, at the customer or through warranty returns.

Stackpole will supply all but 4 fields in the header portion of the SCAR and review for completeness prior to issuing the SCAR to the supplier. The supplier completes 1, 2, 3 and 4. The initial response is due within one business day after notification of issue as part of the initial response.

If a subscribing SupplyOn Problem Solving partner, use of SupplyOn Problem Solver is required. SCAR initiation, notification and response shall be done using defined source, such as; SupplyOn.

### 5.3 Supplier Response

Once the supplier has been notified of the nonconforming material issue, the supplier is required to complete the remaining portions of the SCAR form. Strict adherence to the checklist is recommended as it is the predominant tool used at Stackpole to evaluate the supplier response.

- 5.3.1 The following items require a written response within one business day unless approved by Stackpole.
- Corrective Action Team established.
  - Identify and initiate a short-term containment plan to contain further nonconforming material from reaching the Stackpole work cell. (Reference the SCAR Checklist., section 3)
  - Identify short-term actions with timing to replace nonconforming material with certified material.
  - The containment plan and verification method must be documented by the supplier on the SCAR and returned to the issuing Stackpole Division along with any appropriate attachments. All attachments must reference the SCAR number.
  - Identify all *potential* root causes that resulted in the nonconforming material issue using tools such as fishbone diagrams, 5-why analysis, Is/Is Not comparison and Process FMEA. Forward this analysis with the SCAR response (Reference SCAR Checklist, section 4.1)
- 5.3.2 The following items require a written response (up to D3 containment actions in 1day, up to D5 in 7 days, status “Closed by supplier” in 30 days) after notification of the SCAR document unless approved by Stackpole
- Corrective Action Team membership update
  - Define and verify the root cause (Reference SCAR Checklist, section 4.2). The SCAR Checklist provides a root cause analysis worksheet which may be used by the problem solving team to help identify the true root cause.
  - Identify and implement permanent corrective action (Reference SCAR Checklist, section 5 and 6). Suppliers may be required to identify the initial shipments containing the action using an IPP tag.
  - Verify permanent corrective action using statistical methods (Reference SCAR Checklist, section 7).
  - Update all relevant documentation that is affected to standardize corrective actions into the quality system (Reference SCAR Checklist, section 8).
- 5.3.3 Stackpole may require the supplier to implement verification (audit) activities to confirm that corrective actions continue to be effective over a significant time period (30/60/90 days). Verification results are to be documented on the SCAR when requested (Reference SCAR Checklist, section 9).
- 5.3.4 Stackpole’s Supplier Quality Team may require on-site verification of the corrective actions by performing an audit.

#### 5.4 Charge Back Policy

- 5.4.1 Any costs associated with supplier part quality, recalls, delivery, warranty and PPAP rejection issues that are deemed the supplier’s responsibility will be charged back to the supplier.
- 5.4.2 The supplier, if found responsible, can and will be held accountable and will pay the costs associated with the quality, delivery or warranty issue. Some examples of these costs can include sorting, warehousing, labour, transport, administrative, etc. This can include pass through cost from Stackpole customers. (Contact your Stackpole Purchasing representative for associated costs).
- 5.4.3 The supplier may visit Stackpole upon receipt of a SCAR to review the issue and accept or refute responsibility prior to being charged.

#### 5.5 Controlled Shipping

##### 5.5.1 General

Controlled Shipping is a requirement by Stackpole that a supplier put in place a redundant inspection process to sort for a specific nonconformance, while implementing a root-cause problem solving process. This redundant inspection is in addition to normal controls and actions implemented via the corrective action requirements in section 5.3.1 above. Any additional cost associated with controlled shipping is the responsibility of the supplier. Any deviations to this requirement must be approved by Stackpole.

Stackpole may require the use of a third party contractor to conduct and manage the controlled shipping activity. A third party containment process is generally required when the supplier's own containment process has proven to be ineffective. The third party contractor may be directed by Stackpole. If the third party contractor is selected by the supplier, Stackpole maintains the right of approval for the supplier selected. The data obtained from the third party redundant inspection process as well as any additional audits are critical as both a measure of the effectiveness of the secondary inspection process and the corrective actions taken to eliminate the initial nonconformance. The Controlled Shipping inspection may be required to be performed outside the supplier's facilities at a facility deemed appropriate by Stackpole.

#### 5.5.2 Determination in enacting Controlled Shipping

Stackpole makes the determination whether the supplier can effectively correct the nonconforming material situation through the SCAR process and protect Stackpole from the problem. One or several of the following issues may be considered for implementation of Controlled Shipping:

- Repeat, late or insufficient response to SCARs
- Supplier's current controls are not sufficient to ensure conformance to requirements
- Duration, quantity, and/or severity of the problem
- Internal/External Supplier data
- Major Disruptions and / or Downtime
- Quality Problem in the field including Warranty
- OEM customer required containments
- Expiration/lapse of third party Quality Management System certification - see section 6 of this manual for QMS certification/compliance requirements

#### 5.5.3 Controlled Shipping Process

The following steps will take place when Stackpole places a supplier in Controlled Shipping:

- Stackpole will notify the supplier in writing when Controlled Shipping is required. An explanation for the requirement and description of the process steps will be reviewed at this time. The need for a third party provider, if applicable, will also be communicated.
- The supplier confirms requirements are understood and provides a plan of action to implement the Controlled Shipping process. Planned reporting mechanisms are also presented at this time by the supplier.
- Stackpole reviews the plan and approves or rejects it. If the plan is rejected, Stackpole provides feedback on adjustments required.
- Upon plan approval, Stackpole provides exit criteria to supplier. The duration of Controlled Shipping will typically be 20 days following implementation of permanent corrective actions as described in section 5.3.2 above, or upon verification of certified shipments as determined by your Stackpole representative.

## **6 QUALITY SYSTEM CERTIFICATION AND COMPLIANCE REQUIREMENTS**

- 6.1** Stackpole requires suppliers to implement and maintain a Quality Management System (QMS), which meets the requirements set forth in this manual, with the goal of being compliant to IATF 16949:2016. At a minimum, suppliers need to be certified to ISO 9001:2015 Standard by a 3<sup>rd</sup> Party Registration body bearing the accreditation mark of a recognized IAF MLA

(International Accreditation Forum Multilateral Recognition Arrangement) member and where the accreditation body's main scope includes management system certification to ISO/IEC 17021, with documented plans to achieve IATF 16949:2016 compliance.

All MLA members are listed in [www.iaf.nu](http://www.iaf.nu). All recognized certification bodies are listed at <https://www.iafglobaloversight.org/certification-bodies/under-contract/>

Suppliers, which do not manufacture product such as distributors and service providers, are not eligible for IATF 16949:2016 certification, need to be certified to ISO 9001:2015 Standard with compliance to other customer-defined QMS requirements (such as Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers [MAQMSR] or equivalent) through second-party audits.

Furthermore, Suppliers must notify Stackpole within 10 days if their third party registration status changes.

Stackpole reserves the right to audit compliance to the required quality management system assessment.

Suppliers shall include Stackpole in the listing of customers provided to the registrar prior to ISO 9001:2015 /IATF 16949:2016 audits along with access to this manual and performance results in the Stackpole Supplier Performance Rating System. Suppliers shall request the registrar to include Stackpole Customer Specifics in the appendix of the certificate.

Second Party IATF 16949:2016 compliance approval guidelines – Supplier certification to IATF 16949:2016 is the preferred method for Stackpole suppliers to demonstrate conformance to the IATF 16949:2016 Technical Specification. However, assessment by an OEM or an OEM approved second party will also be recognized as meeting the compliance requirements for IATF 16949:2016 above. The organization performing the audit must meet the following requirements:

- The second party must be IATF 16949:2016 registered
- The second party cannot be on IATF 16949:2016 probation
- The second party must utilize a qualified lead auditor, or qualified internal auditor with evidence of successful completion of training, such as AIAG Internal Auditing for IATF 16949:2016.
- The second party must audit the supplier annually and the supplier must maintain records of the audit and any required corrective actions.
- The duration of the audits must conform to the full application of the Audit Day Requirements table of the “Automotive Certification Scheme for IATF 16949:2016” manual.
- Any of the IATF 16949:2016 accredited Registrars (Certification Bodies) may be utilized as an OEM approved second party.

6.1.1 Suppliers shall maintain an active connection to our supplier portal, SupplyOn. Business Directory (BD) module is used for contact management and for documentation sharing such as certifications, assessments, conflict mineral information, etc. Problem Solver module used for corrective action management for timely resolution and closure of concerns regarding products and services. Stackpole /JE has the right to add suppliers to SupplyOn.

6.2 Suppliers are required to upload copies of QMS Certifications to “SupplyOn” (if you are not a subscriber of SupplyOn user, contact your Purchasing or Quality Representative for direction). Letters of recommendation for certification may also be posted upon receipt from the registrar while delivery of the actual certificate is pending. Suppliers currently certified to ISO 9001:2015 shall document the plan to achieve IATF 16949:2016 compliance and upload the latest version. Contact your Stackpole Quality Department with questions concerning how to upload certificates. Suppliers choosing to demonstrate compliance through second party audit results (see 6.1 above) shall contact their Stackpole Quality Department to review which portions of the second party audit shall be posted.

6.2.1 ISO 9001:2015 or IATF 16949:2016 Deviations (Waivers)

Suppliers requesting deviations (waivers) for ISO 9001:2015 or IATF 16949:2016 Certification must contact and inform Stackpole Quality Department immediately.

6.3 Original Equipment Manufacturers (OEM) Approval List (Ref.: IATF 16949:2016 8.4)

6.3.1 Stackpole suppliers and sub-tiers are required to use Stackpole’s customer approved material and Contractor lists whenever applicable. Typical OEM approved supplier lists for Stackpole products include, but are not limited to, suppliers providing heat treat services, plating services and coating services. Review all Stackpole and OEM specifications carefully on the Engineering drawing and purchase contract to identify required use of OEM approved contractors. Contact your Stackpole Buyer with any questions on material selection. If required, Stackpole will assist suppliers in the OEM approval process. Furthermore, Stackpole will also assist their suppliers in getting their sub-suppliers approved if not in the existing OEM approved list.

6.3.2 Suppliers may be impacted by Customer Specific requirements listed in IATF 16949:2016 as these requirements are applicable throughout the supply chain. Many Customer Specific requirements can be located through the internet at: <https://www.iatfglobaloversight.org/oem-requirements/customer-specific-requirements/>.

6.3.3 Special Process Assessments (Ref.: IATF 16949:2016, 8.4; 9.2)

Suppliers and subcontractors providing specific services to products supplied to Stackpole shall demonstrate compliance to Special Process Assessment published by AIAG- can be found at this link: <http://www.aiag.org/>. Table below details Special Process Assessments:

CQI-9 Special Process: Heat Treat System Assessment  
CQI-11 Special Process: Plating System Assessment  
CQI-12 Special Process: Coating System Assessment  
CQI-15 Special Process: Welding System Assessment  
CQI-17 Special Process: Soldering System Assessment  
CQI-23 Special Process: Molding System Assessment  
CQI-27 Special Process: Casting System Assessment  
CQI-29 Special Process: Brazing System Assessment  
CQI-30 Special Process: Rubber Molding System Assessment  
Other relevant CQI special process standards released by AIAG

All special processes shall be assessed annually using the assessment criteria defined in the above documents. All “not satisfactory” and “needs immediate action” results must be addressed for root cause and corrective action. The corrective actions must include risk containment to immediately protect Stackpole and our customers. Long term actions shall be completed within 90 days unless approved by your Stackpole Supplier Quality Engineer. Records of assessment and actions taken shall be made available to Stackpole by posting to SupplyOn portal. Contact your Stackpole Quality Department upon completion of assessment and upon completion of required corrective actions.

SupplyOn (Users):

CQI Assessments must be uploaded by each applicable supplier, for any of the manufacturing processes identified in the table above. The CQI must be completed on an annual basis, **and the latest version must be used**. When uploading your CQI(s) you must enter the **date the Assessment was completed**, as the “Issued date” and the “Valid until” date must be a maximum of 12 months following that date.

6.4.1 The supplier should be familiar and use additional AIAG CQI Standards such as but not limited to:

- Warranty Management Guideline – CQI-14
- Layered Process Audits – CQI-8, CQI-20
- Effective Problem Solving – CQI-10
- Traceability – CQI-28
- Sub-Tier Supplier Management – CQI-19

6.4.2 Stackpole International subscribes to the GM BIQS guidelines. Suppliers should be familiar with, and utilize the systems outlined in the current GM BIQS documents.

6.4.3 Suppliers need to be aware and familiar with current version of the VDA requirements.

## **7 MATERIALS AND DELIVERY EXPECTATIONS**

### 7.1 Materials Management System

Suppliers to Stackpole are required to use the Global Materials Management Operations Guideline/Logistics Evaluation (Global MMOG/LE) as the basis for their materials management systems. The Global MMOG/LE is a collaborative effort between automotive companies and the supplier community to define the essential components of a materials management process. Copies of the guideline and implementation training can be obtained from the following sources: Automotive Industry Action Group (AIAG) <http://www.aiag.org>; or Odette International Ltd.: <http://www.odette.org>.

**Suppliers may be required to conduct a self-assessment on an annual basis and submit scoring summary results to Stackpole between May 1<sup>st</sup> and July 31<sup>st</sup>.**

### 7.2 Delivery

7.2.1 For production and prototype orders, 100% on-time (zero tolerance) delivery performance which includes correct quantity shipped to release or order is mandatory. Stackpole will monitor supplier delivery performance on a regular basis. If Stackpole has to shut down its production line because of the product quality issues, late delivery, reduced quantity, the supplier will be responsible for all costs incurred including but not limited to rushed shipping or penalties from Stackpole's customers.

7.2.2 Suppliers not meeting the required performance levels must submit a corrective action request. Failing to meet the delivery requirements may result in a charge back to the supplier with the associated premium freight and any out-of-pocket cost incurred by Stackpole.

7.2.3 Stackpole monitors premium freight. A few examples of delivery non-conformances resulting in premium freight are listed below.

- Supplier is behind schedule (past due).
- Supplier missed designated ship date, or excessive carrier waiting time.
- More or fewer than authorized number of shipments per week or month.
- Extra shipment due to rejects or supplier discrepancy or returns.
- Failing to use designated "milk run" of Stackpole appointed carriers.
- Incorrect quantity shipped to release or order.

7.2.4 Material requirements will be communicated via a Stackpole Purchase Order or Material Release. Suppliers should refer to Stackpole's purchase order and/or release, for quantities, dates, revision level, etc. Questions regarding requirements should be directed to your contact at the specific Stackpole site.

7.2.5 Suppliers shall transmit ASN's in accordance to the applicable Stackpole facility requirements, i.e. Electronic Data Interchange (EDI) Transactions, Advanced Shipping Notification (ASN) Transmittals, web-based transactions etc. (Refer to Stackpole specific plant location for requirements.)

### 7.3 Packaging

- 7.3.1 All suppliers shall comply with Stackpole's Supplier Packaging Manual unless otherwise directed otherwise by a specific Stackpole location. The supplier will obtain Packaging requirements Standard specifications and receive approval for supplier proposed packaging concepts (as required) from the applicable Stackpole facility and must be included with the sample submission package.
- 7.3.2 Suppliers shall ensure that all returnable packaging utilized is maintained clean, free, of contamination/debris and the effects of the environment (i.e. snow, ice, water), including free of effluence, and infectivity, in order to sustain product quality for the supply of materials, and the health and safety of people who may come in contact with them. Packaging for shipping products to Stackpole should be in compliance with applicable environmental packaging requirements. Direct material suppliers, supplying to Stackpole are required to obtain Stackpole approval prior to implementing any changes in the packaging.
- 7.3.3 All wood packaging used by supplier must comply with the International Phytosanitary Standard, Invasive Species Pest Management, (ISPM15) for regulated Wood Packaging Material (WPM) entering countries which have adopted this standard. Suppliers shall comply with all operational guidelines and procedures of the customs agency or department of the importing country. All regulated WPM used by suppliers shall be treated and marked according to the ISPM15 standard and applicable importing country regulations.

## **8 GENERAL REQUIREMENTS**

### **8.1 Confidentiality**

Stackpole owns confidential information that relates to Stackpole's products, processes, or operations. Stackpole may elect to share the confidential information with the supplier from time to time. Stackpole is strongly committed to protecting its confidential information; consequently, the supplier may be required to sign or may have signed a Non-Disclosure Agreement (NDA) covering the confidential information.

### **8.2 Commercial**

- 8.2.1 Request for Quotation for materials, goods and services will be solicited from Stackpole's Approved Supplier List by the Purchasing Department along with the specifications, standards, description of work, prints, drawings, etc. Alternatives are encouraged as a means of improving quality, reducing cost or increasing serviceability. Suppliers are encouraged to provide these opportunities as an addendum in their quotation for our consideration. Only quotations solicited by Stackpole's Purchasing Department will be considered.
- 8.2.2 Stackpole standard Purchase Order terms and conditions are understood to be integral of Stackpole's Request for Quote, in addition to all other specifications. Objections to these requirements and terms and conditions must be identified in writing at the time of quotation.
- 8.2.3 Together with Johnson Electric Group Suppliers Terms and Conditions, Stackpole Purchase Orders and any attached exhibits, supplements or schedules, these items constitute the entire agreement between Stackpole and the supplier.
- 8.2.4 The requirements in this manual are an integral part of the purchase order or contract between Stackpole and the supplier. As such, failure to comply with this manual is a material breach of its contract or purchase order with the supplier.
- 8.2.5 Supplier Cost Reduction Program



Stackpole participates in cost reduction programs with its customer as a part of its continuous improvement activities and customer requirements. It is expected that suppliers participate/support Stackpole's Customer Cost Reduction Programs, productivity programs, or other actions in support of continuous improvement and cost reduction initiatives.

- 8.2.6 In the event that there are changes during the product and the process development that involve change in cost, the supplier will provide immediate written notification to Stackpole purchasing and technical personnel detailing a breakdown of the cost changes. Submission of the revised cost does not constitute acceptance and will be subject to review. Only authorized personnel within Stackpole's Purchasing Department are authorized to commit Stackpole financially.
- 8.2.7 Stackpole and/or persons authorized by Stackpole shall be entitled at all reasonable times to check and inspect the materials, tooling, parts, etc. and supplier records thereof, and will visit the supplier facility onsite for those purposes. This shall not absolve the supplier of the responsibility to provide acceptable product, nor shall it preclude subsequent rejection by Stackpole.
- 8.2.8 Supplier will be expected to demonstrate ability to meet contracted capacity requirements.
- 8.2.9 Stackpole reserves the right to modify the requirements in this manual from time to time, and will up-date the supplier accordingly.

### 8.3 Record Retention (Ref.: IATF 16949:2016 7.5.3.2.1)

- 8.3.1 Quality Records: Production part approval records shall be maintained seven years after the part or material is out of production. Production inspection and test records (i.e. control charts, inspection and test results) shall be retained for five calendar years after the end of production in which they were created. Records of inspection shall be maintained for each inspection or test performed, unless waived in writing by Stackpole. The actual test result (variable or attribute) should be recorded. Simple pass/fail records of inspection are not acceptable for variable measurements. Records of internal quality system audits and management review shall be retained for three years as a minimum.
- 8.3.2 Quality performance records (e.g. control charts, inspection and test results) shall be retained for seven years after the end of production in which they were created.
- 8.3.3 Records of internal audits and management review shall be retained for three years.
- 8.3.4 Suppliers shall maintain the 2 prior CQI-9 annual assessment reports, Ford-Specific CQI-9 supplements and related information at the supplier's site and available to Stackpole or Ford upon request. The most recent version shall be the record posted to **SupplyOn**.

A record of compliance to any AIAG Special process assessment does not relieve the supplier of full responsibility for the quality of supplied product.

- 8.3.5 Purchasing Records: Tooling records, purchase orders and amendments shall be maintained for the length of time that the material, part (or family of parts) is active for production and service requirements plus seven calendar years unless otherwise specified by customer or regulatory agency. Stackpole or as required by applicable law. All Stackpole purchase orders/amendments are included in this requirement. Purchase orders/amendments for any Stackpole-owned property, i.e. tooling, equipment, gauging, fixtures, packaging, etc. are also included in this requirement.

8.3.6 Specified retention requirements may be revised at the direction of Stackpole, and Stackpole OE and non-OE customers.

8.3.7 The above requirements do not supersede any governmental regulatory and/or customer specific requirements.

#### 8.4 Contingency Plans (IATF 16949:2016 6.1.2.3)

Suppliers to Stackpole shall:

- a) Identify and evaluate internal and external risks to all manufacturing processes to maintain production.
- b) Identify and define contingency plans according to risk and prepare in the event of key equipment, products, processes, and/or services failures; recurring natural disasters; fire; utility interruptions; labour shortages; EDI communications; transportation or infrastructure disruptions.
- c) include, as a supplement to the contingency plans, a notification process and periodically test and document the contingency plans for effectiveness in accordance with IATF 16949:2016 and made available provided upon request.

The contingency plans shall include provisions to validate that the manufactured product continues to meet Stackpole specifications after the re-start of production following an emergency in which production was stopped and if the regular shutdown processes were not followed.

#### 8.5 Customs and Trade Agreement

It is the supplier's responsibility to comply with relevant customs and related trade agreement regulations. If supply North America, it is a condition of any purchase order that the supplier must supply a complete and accurate USMCA Certificate of Origin, which must be up-dated, as additional materials are ordered, or as changes occur.

#### 8.6 Invoicing for Production or Commercially

8.7 Purchased Items Suppliers' invoices for every international shipment of product or commercially purchased items shall include the following information for each item shipped:

- o a complete noun description (in English, unless otherwise specified);
- o the country of origin;
- o a product identification number;
- o the harmonized tariff number for each product;
- o the price paid or payable by company;
- o any related assists (as contemplated by the customs regulations of the importing country);
- o an itemization of all charges for any related services, and whether these charges are included in the Price paid or payable;
- o Supplier or manufacturer's complete address;
- o the terms of sale;
- o if required by law of the destination country, a list of all serial numbers for products shipped;
- o any additional requirements for invoices required by in the importing or exporting country.

#### 8.8 Preferential Duty Treatment, Country of Origin, Duty Drawback

Suppliers shall provide the company with a valid, accurate completed blanket certificate of origin or manufacturer's affidavit for all products ordered by November 30 for the following calendar year or prior to the first shipment of product sufficient to be used by Company as proof of eligibility for any applicable duty preferential treatment programs (i.e., FTD, GSP) as applicable. Certificate of Origin should include your part number and Stackpole product numbers, with a brief description of the product. If the products are not subject to preferential duty treatment, the suppliers must provide the country of origin of each product or supplier company letterhead for our records. Supplier shall also cooperate with Stackpole in the substantiation of preferential duty program claims, preparation of response to customs inquiries, or other treaty claims that

arise out of product shipped for any order. Upon request, Suppliers agree to provide Stackpole with copies of any documents necessary to allow Stackpole to claim duty drawback.

## 8.9 Stackpole Import Control

8.9.1 Compliance with Customs laws (of the applicable importing country) governing the importation of merchandise is a priority for Stackpole. As such, the management of Stackpole directs all employees involved in purchasing and/or importing merchandise to comply with such provisions at all times. In turn, suppliers to Stackpole must be familiar with the relevant provisions of the law, regulations, rulings, tariff schedules, and decisions applicable to Stackpole's import operations. Further, Suppliers must comply with all purchase order terms and conditions and notes contained thereon.

### 8.9.2 Commercial Documents Required from Suppliers

Commercial invoices prepared by suppliers shall include the following:

- Seller name and address
- Supplier (manufacturer of goods) if different from the seller
- Delivery address
- Purchase order number (one commercial invoice per purchase order)
- Invoice reference number
- Quantity
- Quantity shipped must match the quantity being referenced, as well as being open and shippable in accordance with the most recent purchase order amendment, as issued to the supplier.
- Complete description of product (in English)
- Stackpole's item/part number(s)
- Use supplier part number if no Stackpole part number has been assigned.
- Country of origin (country of manufacture)
- Provide a formal Certificate of Origin if a preferential agreement exists between the destination country and the corresponding country of origin (i.e., USMCA, GSP, etc.).
- Value of goods (both per unit and total)
- The commercial invoice value must match the billing invoice value.
- Terms of Sale (Inco terms 2010)

### 8.9.3 Packing List includes the following

- All information shown on commercial invoice (see above) except for value
- Gross and net weights
- Total number of cartons shipped

### 8.9.4 Marking/Country of Origin Requirements

The country of origin must be marked as follows:

- On the immediate container (the innermost level of packaging)
- On the article itself in compliance with the marking laws of the importing country's customs authorities.
- Conspicuous (*can be easily seen with normal handling*)
- Legible
- Indelible (resists fading)
- Permanent
- In the language required by the country of import, and any additional language as specified by Stackpole.

### 8.9.5 Notifying Party / Customs Broker

If Stackpole is to act as the importer of record, please contact the Logistics personnel at the applicable Stackpole facility.

### 8.9.6 Means of Enforcement

Non-compliance in any of the requirements above will result in Stackpole rejecting and returning merchandise at the suppliers' expense, and thereby may result in the assessment of penalties as well as disqualification as a Stackpole supplier. Supplier shall indemnify, defend, and hold Stackpole harmless from any claims, penalties or damages resulting directly or indirectly from Supplier's failure to comply with this Section.

#### 8.10 Financial Health Risk (FHR)

As a part of customer specific requirements Stackpole is required to assess the financial health of its key suppliers. To avoid any conflict of interests Stackpole International has opted to use a third party provider to solicit the supply base. An introductory letter will be sent out in advance of the activity. All provided information will be held confidential between yourself and the soliciting company. Stackpole will receive a final score from the soliciting company with a potential maximum value of 100.

#### 8.11 Warranty Returns (Automotive Products)

Supplier shall designate a team conforming on a Warranty Champion, Quality Representative, Manufacturing and/or Design Engineer and SQ Engineer as a minimum.

Supplier must implement a Warranty process compliant to CQI-14.

Warranty part shall be analyzed and provide a report in 15 calendar days. Report shall be submitted in an 8D identifying the real root cause of the reported issue.

Supplier shall look across on other product and processes in order to implement same corrective actions with the goal to prevent future quality problems in the field.

## REFERENCES

- ISO 9001, Quality management systems – Requirement, ISO
- IATF 16949, Quality management system requirements for automotive production and relevant service parts organizations, IATF
- Minimum Automotive Quality Management System Requirements for Sub-Tier Suppliers (MAQMSR)
- ISO14001, Environmental management systems – Requirements with guidance for use, ISO
- ISO 45001 Occupational health and safety management systems
- VDA ( <https://www.vda.de/en.html> )
- VDA 6.3, Process Audit standard for Product Development Process / Serial Production and Service Development Process / Providing the Service, VDA
- VDA 6.5, Product Audit, VDA
- Advanced Product Quality Planning and Control Plan (APQP), AIAG
- Production Part Approval Process (PPAP), AIAG
- Potential Failure Mode and Effects Analysis (FMEA), AIAG
- AIAG & VDA FMEA (Failure Mode and Effects Analysis) Handbook
- Statistical Process Control (SPC), AIAG
- Measurement System Analysis (MSA), AIAG
- Special Process: Heat Treat System Assessment (CQI-9), AIAG
- Special Process: Plating System Assessment (CQI-11), AIAG
- Special Process: Coating System Assessment (CQI-12), AIAG
- Special Process: Welding System Assessment (CQI-15), AIAG
- Special Process: Soldering System Assessment (CQI-17), AIAG
- Special Process: Molding System Assessment (CQI-23), AIAG
- Special Process: Casting System Assessment (CQI-27), AIAG
- Special Process: Brazing System Assessment (CQI-29), AIAG
- Special Process: Rubber Molding System Assessment (CQI-30), AIAG

- Automotive Warranty Management Guideline (CQI-14), AIAG
- Sub-Tier Supplier Management Process Guideline (CQI-19), AIAG
- Effective problem Solving practitioner Guide (CQI-20), AIAG
- Layered Process Audit (CQI-8), AIAG
- Other relevant CQI Special Process standards, AIAG
- AIAG MMOG/LE Materials Management Operational Guidelines / Logistics Evaluation

## APPENDIX

### Appendix A

Supplier Engineering Change Request SECR Form

<https://www.stackpole.com/uploads/pdf/download-center/SI%20Supplier%20Engineering%20Change%20Request%20SECR%20Form.pdf>

### Appendix B

Supplier Corrective Action Report Response Checklist

<https://www.stackpole.com/uploads/pdf/download-center/SI%20Supplier%20Corrective%20Action%20Report%20Response%20Checklist.pdf>

### Appendix C

Supplier Corrective Action Report SCAR

<https://www.stackpole.com/uploads/pdf/download-center/SI%20Supplier%20Corrective%20Action%20Report%20SCAR.pdf>

### Appendix D

RCA Worksheet

<https://www.stackpole.com/uploads/pdf/download-center/SI%20RCA%20Worksheet.pdf>

### Appendix E

Run-at-Rate Form

<https://www.stackpole.com/uploads/pdf/download-center/SI%20Run-at-Rate%20Form.pdf>

### Appendix F

Initial Parts Production (IPP) Tag

[https://www.stackpole.com/uploads/pdf/download-center/SI%20Initial%20Parts%20Production%20\(IPP\)%20Tag.pdf](https://www.stackpole.com/uploads/pdf/download-center/SI%20Initial%20Parts%20Production%20(IPP)%20Tag.pdf)

### Appendix G

APQP Element Expectations

<https://www.stackpole.com/uploads/pdf/download-center/SI%20APQP%20Element%20Expectations.pdf>

### Appendix H

SI APQP Requirements Matrix

<https://www.stackpole.com/uploads/pdf/download-center/SI%20APQP%20Requirements%20Matrix.pdf>

### Appendix I

SI Fluid Power Solutions NA Supplier Packaging Manual

<https://www.stackpole.com/uploads/pdf/download-center/SI%20Fluid%20Power%20Solutions%20NA%20Supplier%20Packaging%20Manual.pdf>

### Appendix J

SI Supplier Performance Rating Presentation



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