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Supplier Quality Assurance Manual (SQAM)

Rev. A 3/30/18

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1 Purpose

The purpose of this manual is to communicate the Spring Dynamics, Inc. (SDI) quality requirements and expectations to the supply base. It is the intent of SDI to do business with suppliers who can provide materials, processes and services that consistently meet specifications at a competitive price and be delivered on-time. This manual is intended to inform suppliers of the requirements regarding SDI specific supplier management, responsibilities, communication and reporting processes. Additional requirements are listed in the *Spring Dynamics, Inc. Terms and Conditions* available on the company website www.springdynamics.com and on Spring Dynamics issued purchase orders.

In cases of conflicting supplier requirements, the *Spring Dynamics, Inc. Terms and Conditions* supersedes the Spring Dynamics issued Purchase Order which supersedes the Spring Dynamics, Inc. Supplier Quality Assurance Manual.

All questions regarding supplier requirements should be directed to the Spring Dynamic's Quality Manager at qualitymanager@springdynamics.com.

2 Scope

The content of this manual applies to all SDI direct suppliers of production material, components, production processing, services and calibration (i.e. suppliers of spring wire, dampening components, coatings, testing and calibration).

3 Quality System Requirements

SDI encourages suppliers to develop fundamental quality systems that provide for continuous improvement with a focus on defect prevention while reducing risk, variation and waste.

Production material and processing suppliers to Spring Dynamics must be third-party certified to ISO 9001 (current edition) by an accredited certification body. The certification issued must bear the accreditation mark of a recognized IAF MLA member and where the accreditation body's main scope includes management system certification to ISO/IEC 17021. ISO 9001 certified suppliers are encouraged to use the Automotive Quality Management System Standard IATF 16949 as the basis for their quality system development.

Suppliers that provide external laboratory services, such as inspection, test and calibration must be certified to ISO/IEC 17025 (current edition) or national equivalent. In addition, these suppliers shall have a defined laboratory scope that includes applicable inspection, test or calibration. When a qualified laboratory is not available for a given piece of equipment, calibration services may be performed by the equipment manufacturer.

If a supplier's quality management system registration status changes, the supplier must notify Spring Dynamics Quality department immediately.

Suppliers must comply with all laws regarding the responsible procurement of conflict minerals and to perform their due diligence to understand the source of conflict minerals in product supplied to Spring Dynamics, Inc.

4 Approved Supplier List

Production materials, processes and services will only be purchased from suppliers on the Spring Dynamics “Approved Supplier List”. SDI evaluates and selects suppliers based on their ability to supply materials or services in accordance with specified requirements and expectations at a competitive cost.

5 Supplier Assessments

With prior notification, SDI may conduct a Quality System Audit at the suppliers’ facilities. The goal of the audit is to understand suppliers’ capabilities and/or as an ongoing continual improvement action. A potential supplier will be audited as part of SDI sourcing process. This supplier audit may be conducted by SDI personnel at the supplier’s facility or by the supplier in the form of a Supplier Development Survey provided by SDI. Current suppliers may be audited more frequently if there are ongoing or high impact quality and/or delivery problems.

Following the audit, SDI will notify the supplier of findings and any required corrective actions. Results of the audit and corrective actions will be used in the sourcing decision and supplier status on the Approved Supplier List.

Suppliers are also required to annually complete and submit to SDI, applicable AIAG special process self assessments such as CQI-9 (Heat Treat System), CQI-11 (Plating System), CQI-12 (Coating System) or other CQI assessments as applicable.

6 Performance Ratings (Scorecards)

Spring Dynamics utilizes monthly Supplier Performance Ratings (a.k.a. Scorecards) to objectively measure supplier performance and determine if SDI expectations are being met. Supplier Performance Ratings use multiple factors such as quality, delivery, documentation and customer service to develop an overall performance rating. Key direct suppliers are eligible to begin the performance rating process directly after PPAP approval is awarded. At the discretion of SDI management, small, low volume and low impact suppliers may not be included in the monthly Supplier Performance Rating system.

Supplier Performance Ratings are based on a 100-point scoring system using four weighted sections. The Quality section is worth 40 points with 5 points deducted for each DMN/NCR. The Delivery section is worth 40 points with 5 points deducted for each late/past due shipment. The Documentation section is worth 10 points with points deducted for missing, incorrect or late documentation (i.e. shipper, certificates of conformance, annual assessments, etc.). The Customer Service section is worth 10 points with points deducted for poor customer service (i.e. unresolved issues, repeat issues, late quote submissions, failure to respond in a timely manner to SDI inquiries, etc.).

Supplier Performance Ratings are e-mailed or faxed to the supplier each month. All supplier questions or challenges of the rating should be sent to the SDI Quality Manager for review within five business days.

Suppliers are required to maintain a minimum score of 75 points each month. If a supplier's score is below 75 a formal supplier corrective action is required to address their unacceptable overall performance level.

If a supplier's performance remains below 75 for consecutive months, the Quality Manager may conduct a meeting with supplier's top management and with SDI management to address unresolved issues. At the discretion of SDI top management, the supplier's status may be changed to "New Business Hold" on the Approved Supplier List (ASL).

Suppliers on New Business Hold status are not permitted to quote any new business. If the supplier's performance rating remains below 75 while on New Business Hold status, SDI management may begin supplier de-sourcing actions.

Suppliers can be returned to "Approved" status on the ASL when their monthly performance rating improves to 75 or greater and formal corrective actions have been implemented to improve their supplier performance. It is at the discretion of SDI top management how soon the supplier's status is changed once the conditions are met.

Also noted on the monthly Supplier Performance Ratings are special notifications, premium freight, supplier caused shutdowns and current supplier ASL status (Approved, Interim or New Business Hold).

7 Quoting

Suppliers will receive a formal Request for Quote (RFQ) from Spring Dynamics when a quote for new or changed product or material is needed. The RFQ will include the quote due date. Supplier quotes can be submitted on any format that includes all information required by the SDI purchasing group.

Suppliers are required to perform an internal risk assessment of all products, materials or processes being quoted to SDI. Risk assessments shall include, at a minimum, product requirements, processing, tooling, production capacity, packaging and product liability.

All products and materials quoted must conform to applicable statutory and regulatory requirements.

8 Advanced Product Quality Planning (APQP)

Once a supplier is selected to supply product, SDI may begin formal advanced product quality planning activities with the supplier. The APQP activities at SDI are based on the AIAG Advanced Product Quality Planning and Control Plan guidelines along with applicable ISO 9001 and IATF 16949 requirements. APQP is designed to communicate product quality expectations and verify that the supplier has adequate processes in place to assure smooth start-ups.

Timing will be established and communicated during the source selection process. SDI will work closely, as needed, with supplier in the development and implementation of APQP documents and processes.

Supplier must establish a cross-functional team to manage the requirements of APQP.

SDI may conduct a launch readiness review at the supplier's facility. This review will include inspections of the supplier's documents and processes associated with the production of parts for SDI.

Supplier may be required to run production trials (run at rate) prior to mass production to determine the capability of their processes to meet required production rate and quality levels. Should the supplier trials prove unsuccessful corrective actions must be completed prior to start of mass production.

As part of the supplier's internal APQP process, all applicable statutory, regulatory and special characteristics must be communicated and cascaded down their supply chain to the point of manufacture.

9 Production Product Approval Process (PPAP)

Suppliers are required to obtain approval for mass production prior to shipment utilizing the production part approval process. SDI requires suppliers to meet the requirements of the current edition of the AIAG Production Part Approval Process manual. The purpose of the PPAP process is to verify that a supplier's production process is capable of meeting SDI specifications and quality expectations.

Supplier shall conduct a level 3 PPAP unless otherwise specified by the SDI Quality department. SDI will send the supplier a *PPAP Request Form* that details what items are required to be submitted with their PPAP and when the PPAP is due. All materials and processing shall utilize the normal production equipment, tooling, materials and processes that will be used in mass production.

Supplier is required to re-submit PPAP if any of the following occur:

- Engineering change;
- New, additional, refurbished or transferred tooling;
- Change to optional construction or material;
- Sub-supplier or material source change;
- Change in part, material or service processing;
- Change of production or processing location;
- Other circumstances when directed by Spring Dynamics.
- Annual Re-validations, if requested by Spring Dynamics.

Suppliers are required to notify Spring Dynamics prior to implementing any changes that require re-submission of PPAP. At no time is it permissible to ship production product, materials or processed product to SDI without prior PPAP approval from SDI.

Spring Dynamics formally approves, conditionally approves or rejects supplier PPAP submissions via a signed Part Submission Warrant. The warrant will be sent to the supplier along with any details that need to be addressed, if applicable.

All supplier PPAPs require the submission of an IMDS (International Material Data System) via the www.mdssystem.com website. IMDS shall be submitted directly to Spring Dynamics using IMDS Company I.D. No. 9123.

Initial process capability for special characteristics shall meet $Ppk \geq 1.67$ (for new processes) and $Cpk > 1.33$ (for established processes). Attribute special characteristics require 100% conformance (zero defects) unless otherwise agreed upon by SDI Quality Manager.

Spring Dynamics does not require suppliers to perform annual layouts or validations but reserves the right to request them, as deemed necessary. Request for annual validation will be made using the *PPAP Request Form*.

10 Supplier Temporary Deviation

Suppliers can request a temporary deviation for product or processing that does not conform to specifications and/or does not meet PPAP approved methods. Deviation request must be submitted to SDI Quality Manager in writing (fax, letter, or e-mail) using the *Supplier Deviation Request form*. Appropriate SDI personnel will review the deviation request and formally approve or deny the request using the Supplier Deviation Request form. Deviation request may require notification and approval of the SDI customer. Deviation request will be reviewed in a timely manner but could take several days to weeks for approval based on circumstances.

Suppliers are prohibited from shipping any deviated product to Spring Dynamics prior to deviation request approval from Spring Dynamics. All deviated product/materials must be identified as specified on the approved Supplier Deviation Request form.

11 Supplier Engineering Change Request

If a supplier wishes to make a permanent change to a part, drawing or standard, a *Supplier Engineering Change Request form* must be submitted to the SDI Engineering Manager. The Engineering Manager and other appropriate personnel will review the request in a timely manner and formally approve or reject the request via the Supplier Engineering Change Request form. Most supplier engineering changes require Spring Dynamics to re-PPAP to our customer. This process could take several days, weeks or months depending on the circumstances.

Suppliers are prohibited from implementing the engineering change prior to formal approval by SDI. All engineering changes will require a supplier PPAP submission.

12 Problem Resolution

Upon rejection of received nonconforming material, SDI may issue a Defective Material Notice (DMN) or Nonconforming Report (NCR). The supplier will be notified of the SDI rejection in writing (typically e-mail) and may be followed up by a telephone call based on impact and urgency of the issue.

Return Material Authorization (RMA) must be provided for material that is defective or considered suspect and needs to be returned to the supplier or scrapped out at SDI.

Spring Dynamics reserves the right to sort suspect material to avoid production shutdowns or late/missed shipments to customers. The supplier will be held accountable for charge back rates as outlined in the Cost Recovery section of this manual. This may include SDI costs incurred if supplier issue spills over to SDI customer location(s).

Within 24 hours of reject notification, the supplier must:

- Send acknowledgement of rejection notification back to SDI
- Inform SDI of plan to sort, authorize sort or replace rejected and suspect material.
- Implement full containment actions of suspect stock not at SDI location.

Within 30 business days (or other agreed upon timeframe by SDI Operations Manager) of reject notification, the supplier must:

- State a clear statement of nonconformance that led to the rejection.
- Define Root Cause(s) of nonconformance.
- Determine and implement permanent corrective actions that prevent root cause from recurrence.
- Verify the permanent corrective actions are implemented and effective.

Spring Dynamics reserves the right to keep open DMN or NCR issues until all suspect material has disposition, been sorted, returned or scrapped and the supplier corrective action has been accepted by SDI Quality Manager.

13 Supplier Corrective Action

Suppliers are required to submit a formal corrective action report for all DMN, NCR and unacceptable monthly supplier performance ratings. Formal corrective actions shall be submitted to Spring Dynamics on the *Supplier Corrective Action form* or equivalent format. Spring Dynamics will formally accept or reject all supplier corrective action submissions. The supplier accepts responsibility to improve corrective actions until deemed acceptable by Spring Dynamics. Failure to provide an acceptable formal corrective action will result in lower monthly Supplier Performance Ratings. Continued failure to provide acceptable formal corrective action could result in change of supplier approval status which may include resourcing of supplier work.

14 Containment of Defective and Suspect Product

Supplier is responsible for implementing actions to protect SDI from receiving additional material that does not meet the quality requirements and specifications set by SDI.

Supplier may be placed into controlled containment because of SDI receipt of defective material. Supplier may be required to take immediate actions to cease shipping defective material. These actions may include some or all the following:

- Sending 100% certified parts for all shipments to SDI
- Marking certified parts as agreed to by SDI
- Sending certified replacement parts to replace suspect parts in-transit and in SDI inventory
- Utilizing a certified part identification label to identify certified shipments
- Collecting daily sort data and reporting findings to SDI.

Supplier will be released from controlled containment once the DMN or NCR response has been approved and the first corrected shipment of material has been approved by SDI quality department through all applicable processing and inspection steps.

15 Supplier Development

Spring Dynamics will provide assistance to a supplier having trouble meeting performance levels and specifications set by SDI. Assistance will be given on a case by case basis with resources deemed appropriate by SDI top management. Suppliers can request assistance at any time by contacting the SDI Quality Manager.

Suppliers are required to complete an annual Supplier Development Self Survey when requested by the SDI Quality Manager. Survey requests are based on the previous year's survey results and the supplier's current quality system certification level and status. The survey is intended to measure the supplier's progress towards conformance to IATF 16949. Spring Dynamics highly recommends that all suppliers pursue conformance to the IATF 16949 standard (current edition).

16 Supplier Quality Meetings

A poor performing supplier may be required to attend improvement meetings when supplier performance drops below acceptable levels. The purpose of the meeting is for the supplier to present containment and corrective actions to improve their performance in the deficient areas identified by SDI.

A supplier will be notified of meetings in advance and may be required to provide cross-functional team.

17 Cost Recovery

Supplier will be responsible for all costs associated with SDI receiving defective material or SDI customers receiving defective material due to a supplier quality issue. Cost may include, but are not limited to:

- | | |
|------------------------------|-------------------------|
| -Administrative | -Third part containment |
| -Sorting of suspect material | -Scrap |
| -Rework | -PPAP rejection |
| -Customer charges | -Overtime |
| -Premium freight | -Laboratory testing |
| -Production downtime | -Travel |

All costs will be debited from the suppliers' account. Upon notification of the intent to debit, supplier will have 10 days to appeal the charges. If there is no response from the supplier SDI will consider the lack of response as acceptance of the charges.

Re-work or sorting due to unacceptable supplier quality will be billed at a rate up to \$45.00/hr. USD depending on the nature of the activity. Authorization from the supplier will be obtained and charges will be debited against current invoices.

A 10% handling charge may be added to all rejected parts costs for additional inspection and material costs. The purchasing department reserves the right to charge back any premium freight incurred due to late, rejected, or missed shipments unless the cause is assignable to SDI.

A minimum of 2 hours of additional administrative charges may be assessed for each incident at an hourly rate of \$75.00/hr USD.

18 Delivery Requirements

Supplier is required to achieve and maintain 100% on time delivery. If a supplier is unable to deliver material by the required due date, it is the supplier's responsibility to notify SDI as soon as possible.

Supplier must also notify SDI purchasing and quality departments anytime suspect material has been, or may have been, shipped into SDI.

Supplier delivery requirements are outlined on the SDI purchase order or as quoted by the supplier. Delivery requirements shall also apply to suppliers that provide outside processing in the form of turnaround times (typically days).

19 Shipping Labels

All material and component containers must be labeled.

Material labels (i.e. spring wire) must contain the following information, at minimum:

- Purchase order number
- Material Identification (size, grade, specification, standard, etc. as applicable)
- Net Weight in pounds (lbs.)
- Supplier Name
- Heat Number
- Lot Traceability (i.e. serial number or coil ID number)

Component labels (i.e. sleeves and tape) must contain the following information, at minimum:

- Purchase order number
- Component Identification (as noted on SDI Purchase Order)
- Quantity
- Supplier Name

-Lot Traceability (i.e. lot number or manufactured date)

Outside Process labels (i.e. coating, plating and treatments) must use the provided SDI serialized Plex container label. All product containers must be returned to SDI with the same SDI label that they were shipped to the supplier with. All products shall be processed at the supplier utilizing a container by container processing method that prevents products from crossing over into other containers. This requirement applies to all containers including containers of the same part number.

All suppliers are required to have full lot traceability back to the manufacturing/processing dates, materials, inspections, tests, etc. The traceability system must be tied to a label field such as lot number or similar. Suppliers providing an outside process to SDI product shall link their internal traceability system to the unique SDI serial number of each container.

When shipping a new revision level due to an engineering change, the first shipment must be prominently identified stating that this is a new revision level. Failure to do so may result in charge backs due to mixing revision levels in SDI inventory.

It is unacceptable to ship containers with multiple part numbers, materials or processing mixed together without prior notification to SDI and written acceptance by the SDI Material Manager.

20 Packaging

The supplier has overall responsibility for the design of the packaging system and the quality of the packaging materials unless packaging is supplied by SDI.

SDI has a 40-pound (18.14 kg) weight limit for all materials shipped in small containers that are designed to be handled manually. Materials and Components must be shipped in the standard package quantities as quoted or noted by the SDI purchase order.

Each shipment must be accompanied by a packing slip, either attached to the shipment or hand delivered by the carrier's driver. Each packing slip must contain at a minimum the following:

- SDI part number or other appropriate identification as noted on SDI purchase order.
- Purchase order number
- Quantity of lifts, skids, cartons, etc (as applicable)
- Piece count or weight per part number/item.
- Supplier name
- Packing slip number

Failure to provide this basic packing slip information may result in a delay of payment on the supplier's invoice and reflect poorly on the supplier's monthly performance rating.

Containers shall meet all current International and governmental regulations (i.e. NAFTA requirements).

The packaging system shall ensure part integrity during transportation and subsequent handling and storage through point of use. For this reason, the supplier should develop methods to test the pack design under simulated real-life conditions. Suppliers shall provide SDI with validation results and testing documentation as requested.

All packaging materials should be recyclable, reusable or returnable. The use of expendable packaging such as non-recyclable plastics requires pre-approval by SDI.

Suppliers will be responsible for cleaning returnable containers and dunnage, removing labels and sorting for damage. Suppliers are also responsible for maintaining inventory counts on returnable containers and maintaining a sufficient supply of expendable backup material for emergency situations. Back up packs shall have the same pack dimensions, pack quantities and part orientation as the returnable container.

21 Certificates of Conformance

Suppliers of material, components, plating and coating shall provide a formal certificate of conformance or equivalent for each lot, container or heat, as applicable. Certificates must include a clear statement of conformance to applicable specifications/standards along with all applicable inspection or test result data.

Certificates can be e-mailed to SDI Quality department prior to shipment or sent as hard copy with the shipment. Incoming products will not pass through receiving inspections without certificates of conformance or equivalent (i.e. material certificates, coating certificates, etc.). Failure to provide timely certificates will negatively impact the supplier's monthly performance rating.

22 Customer Property

SDI will control the ownership of all returnable container systems.

If tooling is to be paid for by SDI, suppliers will be paid for tooling contingent on a full PPAP approval and SDI receipt of payment from our customer, if applicable.

Maintenance, refurbishment and replacement of SDI owned tooling are the responsibility of the supplier regardless of production volumes.

If the supplier is tool design responsible, then reproducible tooling prints shall be completed by supplier within 6 weeks after PPAP approval on all new program tools, tools undergoing an engineering change and current tools that are revised. Supplier, upon request from SDI, shall provide reproducible tooling prints for existing tools.

SDI decision to remove tools from a supplier will be done so without fee or additional charges from the supplier.

SDI will determine the disposition of all SDI owned tooling and such disposition shall be communicated to the organization in writing by SDI with a formal letter and a Return Material Authorization. Organizations are not to dispose of any SDI owned tooling without prior approval from SDI.

23 Lead Time

The shipment lead-time will be quoted in calendar days and should quantify the time from receipt of order to ship availability. Suppliers shall meet all quoted lead times or lead times noted on the applicable SDI purchase order.

24 Contingency Plans and Notification

Suppliers are required to promptly notify Spring Dynamics in writing (letter, fax or e-mail) of any potential or anticipated work stoppages. This includes the possibility of union strike or other work force availability issues.

Suppliers shall have on file formal contingency plans to satisfy Spring Dynamic's requirements in the event of an emergency such as utility interruptions, labor shortages, key equipment failure and field returns. The contingency plans shall include immediate notification of the situation to Spring Dynamics, Inc.

25 Service Parts

Suppliers shall maintain the ability to provide parts to SDI for seven years after the last active model year to satisfy service requirements, unless otherwise stated.

26 Record Retention

Suppliers shall retain key quality records per a defined method that ensures records are legible, readily identifiable and retrievable. Quality records shall be provided to SDI in a timely manner upon request. Key quality records are defined as:

- Inspection and Test Results
- Identification and Traceability
- Production Part Approvals (PPAP)
- Purchase Orders and Contracts
- SDI Approved Deviations

Part specific key quality records shall be retained for one year after the active and service life of the part or 20 years, whichever is longer.

27 SQAM Revision Table

SQAM Revision	Revision Details	Authorized By
REL (5/16/16)	Original Release of Supplier Quality Assurance Manual	Jessica Marco, John Redner & Steve Caskey
A (3/30/18)	Replace ISO/TS 16949 with IATF 16949. Added requirement to cascade down through the supply chain applicable requirements.	Jessica Marco, John Redner, Jeff White & Steve Caskey