

# Triumph Aerospace Systems Group Supplier Quality Assurance Manual (SQAM)

This Supplier Quality Assurance Manual contains requirements that are applicable when invoked by Triumph Aerospace Systems Business Unit and Group Purchase Orders.

Effective Date: 10 September 2007

Approved in concurrence with the Business Unit Quality Leadership listed on  
Page 2 of the Triumph Aerospace Systems Group Quality Manual and:



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This Supplier Quality Manual is applicable to the following Triumph Aerospace Systems Group Business Units:

|  |  |
|--|--|
| Triumph Aerospace Systems - Seattle<br>17945 NE 65th Street, Suite 200<br>Redmond, WA 98052  | Triumph Controls – Shelbyville<br>1960 North Michigan Road<br>Shelbyville, IN 46176      |
| Triumph Aerospace Systems - Wichita<br>9323 East 34th Street North<br>Wichita, KS 67226      | Triumph Fabrications – Hot Springs<br>115 Centennial Drive<br>Hot Springs, AR 71913      |
| Triumph Aerospace Systems – Newport News<br>703 Middle Ground Road<br>Newport News, VA 23606 | Triumph Fabrications - Fort Worth<br>7445 E. Lancaster<br>Fort Worth, TX 76112           |
| Triumph Actuation Systems – Bethel<br>19 Stony Hill Road<br>Bethel, CT 06801                 | Triumph Fabrications - San Diego<br>203 N. Johnson Avenue<br>El Cajon, CA 92020          |
| Triumph Actuation Systems – Bloomfield<br>1395 Blue Hills Avenue<br>Bloomfield, CT 06002     | Triumph Fabrications - Shelbyville<br>850 Elston Drive<br>Shelbyville, IN 46176          |
| Triumph Actuation Systems - Clemmons<br>4520 Hampton Road<br>Clemmons, NC 27012              | Triumph Gear Systems - Macomb<br>15375 23 Mile Road<br>Macomb, MI 48042                  |
| Triumph Actuation Systems - East Lyme<br>29 Industrial Park Road<br>East Lyme, CT 06333      | Triumph Gear Systems - Park City<br>6125 Silver Creek Drive<br>Park City, UT 84068       |
| Triumph Actuation Systems - Freeport<br>417 South Main Street<br>Freeport, NY 11520          | Triumph Structures - Kansas City<br>4020 E. 138th Street<br>Grandview, MO 64030          |
| Triumph Actuation Systems - Valencia<br>24910 Avenue Tibbetts<br>Valencia, CA 91355          | Triumph Structures - Los Angeles<br>17055 East Gale Avenue<br>City of Industry, CA 91745 |
| Triumph Composite Systems<br>1514 S. Flint Road<br>Spokane, WA 99224                         | Triumph Structures – Wichita<br>3258 South Hoover Road<br>Wichita, KS 67215              |
| Triumph Controls – North Wales<br>205 Church Road<br>North Wales, PA 19454-0901              | Triumph Thermal Systems<br>200 Railroad St.<br>Forest, OH 45843                          |

When TASG is referenced, it shall denote Triumph Aerospace Systems Group. Applicable TASG Business Unit shall denote individual Triumph Aerospace Business Unit sites.

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## Referenced Documents

SAE AS9100 - Quality Management Systems – Aerospace - Requirements

SAE AS9102 - Aerospace First Article Inspection Requirement

SAE AS9120 - Quality Management Systems - Aerospace Requirements for Stockist Distributors

SAE AS9003 - Inspection and Test Quality System

ISO 9001:2000 - Quality Management Systems -- Requirements



## Section 1                    **Triumph Aerospace Systems Group Supplier Quality Assurance Manual (SQAM)**

### **Overview**

The Triumph Aerospace Systems Group of Business Units is emerging as a leader in the production of aerospace components and product integration to the aerospace industry. As we continue to grow, Triumph Aerospace is striving to become the Supplier of choice for aerospace prime contractors. We also endeavor to be the Customer of choice for our Suppliers.

As Triumph Aerospace is continually on the move to improve this position, our industry demands a total commitment to continuous quality improvement and process performance from both Triumph Aerospace and our Suppliers.

It is the responsibility of the Triumph Aerospace Systems Group Supply Chain Management team to establish and develop Suppliers with demonstrated capabilities, to consistently evaluate the aerospace business climate and protect itself and its Customer's by securing reliable material sources. We are also required to ensure our Suppliers consistently meet Triumph Aerospace Systems Groups specified requirements for quality and delivery, maximize the Suppliers total value while also aggressively minimizing all associated procurement costs.

Triumph Aerospace Systems Group is committed to eliminating occurrences of nonconforming product and processes as well as their related cost and schedule impact to our Customer's. Triumph Aerospace Systems Group recognizes that communication is vitally important to the support and success of our Customer's.

### **Triumph Group Supply Chain Management Vision**

***To establish a dynamic, global, supply network that maximizes the combined strength of The Triumph Aerospace Systems Group Business Units, provides common processes and integrated systems, identifies Suppliers and capitalizes on their skills with the objective of exceeding our Customer's' expectations for first time quality, on time delivery and long term cost management.***

In order to achieve these objectives, Triumph Aerospace Systems Group expects no less than this same level of commitment to product and service excellence and continuous improvement from its Suppliers.

As expected by our Customer's, Triumph Aerospace Systems Group requires its Suppliers to recognize their responsibility for the quality of the products that they and their sub-tier Suppliers provide.

To meet this commitment, it is necessary that Triumph Aerospace Systems Group Suppliers develop, execute, and sustain key business, operational and process management practices that demonstrate that we are capable of effectively meeting and exceeding the contractual obligations to the satisfaction of Triumph Aerospace Systems Group and our Customer's.

*This document is considered a contractual obligation of Triumph Aerospace Systems Business Unit Suppliers, when referenced in part or in whole by Triumph Aerospace Systems Group purchase orders.*

The Triumph Aerospace Systems Group Supplier Quality Assurance Manual contains prescribed methods for interaction between Triumph Aerospace Systems Group, Triumph Aerospace Systems Business Units and its

Suppliers. These methods shall be adhered to at all times to ensure the conformance of products and services to specified requirements.

The strategic goals of this manual are to communicate:

1. Triumph Aerospace Systems Group and Business Units Quality System Requirements and Policies,
2. The Supplier's obligations in the area of sub-tier Supplier management and the requirement for robust quality planning,
3. The criteria by which Suppliers will be qualified, measured and compared vs. their commodity peers,
4. The First Article Inspection Requirements for Triumph Aerospace Systems Business Units,
5. Delivered product requirements, the management of Supplier nonconforming product and Supplier product escapes,
6. Qualification conditions for inspection delegation,
7. The process for submitting requests for variations, deviations and process changes,
8. Facilitation of effective corrective / preventive actions for purchased parts, materials and/or audit and survey findings identified by Triumph Aerospace Systems Group and or its Customer's,
9. Actions related to Supplier performance improvement and potential Supplier termination.

## **1.1 Using the Triumph Aerospace Systems Group SQAM**

The Triumph Aerospace Systems Group Supplier Quality Manual will be maintained on our interactive Supplier web portal [triumphsupplysource.com](http://triumphsupplysource.com). Any printed or paper copies of this document or associated forms shall be verified against the on-line version for currency.

### **1.1.1 Table of Contents**

The Table of Contents is hyperlinked to assist users in easily moving to the Sections within the text of the Supplier Quality Manual.

### **1.1.2 Internal Document Links**

Clicking the Triumph Aerospace Systems Group document hyperlinks in the "Referenced Documents" will link you to the appropriate Supplier procedure that addresses this topic.

Clicking the external document hyperlinks in the "Referenced Documents" will link you to the appropriate website where the document is available.

## **Section 2            Supplier System Requirements, Assessments and Approvals**

### **Overview**

Triumph Aerospace Systems Group maintains an Approved Supplier List (ASL) as a basis for identifying direct part/material and processing Suppliers who meet the standards necessary to fulfill its procurement needs.

### **2.1            Supplier Designations**

Triumph Aerospace Systems Group has designated Suppliers in categories to best manage their performance and identify Suppliers with the greatest potential to become Strategic Supplier Partners. Suppliers designations are available on their profile available on triumphsupplysource.com.

#### **2.1.1        Strategic Supplier Partner**

A Strategic Supplier Partner consistently meets Triumph Aerospace Systems Group Quality and Delivery performance requirements. They have a strong commitment to investing in new aerospace technologies to provide themselves and Triumph Aerospace Systems Group with a competitive business advantage. Strategic Supplier Partners share a vision for market direction and strategy with Triumph Aerospace Systems Group.

Strategic Supplier Partners continuously invest in their plant, equipment and people, actively promote lean practices and are responsive to requests for corrective action. A Strategic Supplier Partner strives for continuous improvement, Customer satisfaction and actively addresses cost containment activities to ensure continued business growth.

Triumph Aerospace Systems Group Strategic Supplier Partners may be past or present cost and risk sharing partners. The Supplier's product volume or amount of Triumph spend is not necessarily a defining factor for a Strategic Supplier Partner.

#### **2.1.2        Core Suppliers**

A Core Supplier consistently meets the requirements of Quality and Delivery performance and has a willingness to invest in plant, equipment and people as necessary. Core Suppliers implement lean practices, are responsive to requests for corrective action and strive to meet Customer requirements.

It is understood that some of our Core Suppliers have a limited financial capability to cost or risk share.

#### **2.1.3        Limited Use Suppliers**

Limited Use Suppliers are Suppliers that often provide unique or specialized products or services or are capable of exceptional "short-term" cost or delivery performance. They may also in some cases lack consistency in meeting the requirements of Quality and Delivery performance and Customer satisfaction. The company may have a limited capability to self invest and implement lean practices. Use of Supplier may also be by Customer mandate.

Suppliers who have been inconsistent in meeting Quality and Delivery performance requirements will be used on a limited basis and their performance shall be monitored closely.

### 2.1.4 Transitional Suppliers

Suppliers that continually present poor Quality or Delivery performance, an unwillingness or inability to invest in its business, a demonstrated lack of Customer commitment or other determining factors may be considered a Transitional Supplier.

## 2.2 Quality System Requirements

To be considered eligible for the Triumph Aerospace Systems Group Approved Supplier List (ASL), prospective new Suppliers must meet the following criteria as applicable:

| Supplier Designation              | Applicable Quality System Registration Requirement   | Description of Supplier Activity   |
|-----------------------------------|--|--|
| <b>Strategic Supplier Partner</b> | AS / EN9100  | Companies with design authority, manufacturers with fabrication, assembly, processing and test capabilities; major build to print manufacturers. See para. 2.1.1 for additional information.     |
| <b>Core Supplier</b>              | AS / EN9100 or AS9003 or Triumph approval audit<br><i>(AS9003 or Triumph approval audits may only be utilized for Suppliers to whom it is impractical to achieve AS/EN 9100. These situations will be decided on a case by case basis by Triumph Business Unit and Group Management.)</i>  | Build to print manufacturers with fabrication, assembly, processing and test capabilities. See para. 2.1.2 for additional information.   |
|                                   | AS / EN9100, AS9003 or AC7004  | Processors. See para. 2.1.2 for additional information.  |
|                                   | AS9120   | Distributors. See para. 2.1.2 for additional information.  |
| <b>Limited Use Supplier</b>       | AS / EN9100 or AS9003 or ISO 9001:2000 or TASG approval audit<br><i>(AS9003 or Triumph approval audits may only be utilized for Suppliers to whom it is impractical to achieve AS/EN 9100. These situations will be decided on a case by case basis)</i><br><br><i>(ISO 9001:2000 may be utilized for Suppliers which produce commercial products who's primary use is not for aerospace applications or who's work content is not predominantly aerospace. These situations will be decided on a case by case basis by Business Unit and Group Management.)</i> | Service providers, Customer directed sources, test labs, calibration labs, raw material or standard hardware producers, short term delivery sources. See para. 2.1.3 for additional information. |

**Table 1**

For our current Suppliers, the Quality system certifications noted in Table 1 shall be necessary within 18 months of the original release date of this document. Supplier Designations as listed in Table 1 are available within the





Supplier's profile on triumphsupplysource.com. Triumph Aerospace Systems Group will recognize only Quality System certifications issued by an accredited Certification/Registration Body (CRB). The accredited AS9100 CRB listing can be found on the SAE web page: [www.sae.org/oasis](http://www.sae.org/oasis). **Suppliers that cannot or will not meet this requirement shall contact their Triumph Aerospace Systems Business Unit Buyer immediately.**

Suppliers may be requested to provide Triumph Aerospace access to their IAQG OASIS database, AS9100 audit record or copies of their past audit reports. Suppliers that do not provide this access or copies may be subject to additional Triumph Aerospace approval audits. Access to the Supplier's OASIS records or previous audit reports does not necessarily preclude the requirement for a Triumph approval audit.

Changes to a Supplier's ownership, facility location or changes in senior Quality management may subject a Supplier's Quality System to reexamination by Triumph Aerospace. Suppliers shall notify the appropriate Triumph Aerospace Business Unit Buyer of any of the changes noted above.

Upon completion of Quality System registration, Suppliers shall provide a copy of their registration certificates to the appropriate Triumph Aerospace Systems Business Unit. Any changes to the registration such as a change of the CRB, scope change, withdrawal or disapproval must also be forwarded to the appropriate Triumph Aerospace Business Unit immediately.

Once added to the Triumph Group ASL, the Supplier must continue to demonstrate an acceptable level of performance as noted in Section 4 in order to remain eligible for new business and to maintain their approved status.

### **2.2.1 Customer-Directed Sources**

Supplier's of direct components / materials and/or outside processing services who are directed for use by one or more Triumph Aerospace Systems Group Customer's will be added to the Approved Supplier List (ASL). Customer-directed sources may also be required to complete a Triumph Aerospace Systems Group Supplier Assessment.

### **2.2.2 Maintenance of Approved Supplier Status**

Triumph Aerospace Systems Supplier Quality and Supply Chain Management monitor Supplier performance on a monthly basis using a Supplier Quality Performance Rating (SQPR). Suppliers who demonstrate continued unsatisfactory performance as detailed in Section 4 may be subject to formal Supplier Corrective Action Requests per Section 9 and/or other more extensive performance improvement actions. In those cases where Supplier performance does not respond to this action, Suppliers may be removed from the ASL per the Supplier Performance Improvement Program as described in Section 10.

Suppliers shall notify the appropriate Triumph Aerospace Systems Business Unit of the loss of Quality System registration, FAA or Nadcap approvals, or any major Nadcap nonconformance that has been designated as having "product impact" that may affect any Triumph Aerospace Systems products.

Suppliers may also lose their Triumph Aerospace Systems Group approved Supplier status for failing to maintain their appropriate Quality System, FAA or Nadcap registrations or for any other significant quality related issues.

Disapproval of a Supplier on the basis of Quality System failures shall ultimately be the decision of the Triumph Aerospace Business Unit Senior Quality Representative in conjunction with the Group Director of Supplier Quality.

## **2.3 Supplier Evaluation**

The Triumph Aerospace Systems Group utilizes Supplier applications, assessment or self-surveys and process reviews to approve Suppliers for the Triumph Group Approved Supplier Listing, maintain Supplier approvals and improve Supplier performance.

### **2.3.1 New Supplier Applications**

A Supplier Application shall be completed for all prospective Suppliers using electronic web Form SCMP 3.1 (a) located on triumphsupplysource.com

After completion of the Supplier Application, the submittals be reviewed by Triumph Quality and Purchasing/Supply Chain Management to determine whether the prospective Supplier shall advance within the new Supplier approval process and undergo:

- 2.3.1.1 Supplier Assessment,
- 2.3.1.2 Supplier Self-Survey,
- 2.3.1.3 Be recommend for direct placement on the Group ASL or
- 2.3.1.4 Be declined from consideration

### **2.3.1 Supplier Approval Assessments and Self-Surveys**

Approval assessments and Self-Surveys are used to conduct a comprehensive evaluation of Supplier's strengths and weaknesses and provide direction regarding developmental needs and opportunities. The method of assessment may be an on-site visit by Triumph personnel or a self-survey completed by the Supplier and reviewed by Triumph personnel. The method of audit is based upon the scope and criticality of the work to be performed. For sustaining Supplier's, past performance will also play a part in determining how frequent an assessment or self-survey may be employed.

Triumph Aerospace Systems Group and / or Business Units may conduct approval assessments or self-surveys for initial Supplier approval.

Triumph Aerospace Systems Group or appropriate Business Unit personnel will notify those Suppliers it wishes to assess in advance and coordinate mutually agreeable dates and schedules for conducting assessments or self-surveys.

Prior to any on-site assessment, documentation and operational evidence to demonstrate performance should be organized to facilitate timely presentation and review by Triumph Aerospace Systems Group or Business Unit personnel. Triumph Aerospace Systems Group or Business Unit personnel cannot conclude compliance unless they are presented with objective, verifiable evidence that the criteria have been met.

Prior to any on-site assessment, Suppliers are encouraged to self-survey themselves to the applicable criteria. Nonconformances identified during the Triumph approval assessment may require initiation of process improvement plans or formal Supplier corrective action requests in order to document the resolution.

### **2.3.2 Supplier Process Reviews (SPR's)**

Triumph Aerospace Systems Group, their Customer's or regulatory bodies retain the authority to conduct periodic detailed on-site examinations of a manufacturer's processes, procedures, and controls used in the fabrication, assembly, inspection, and delivery of individual purchased parts/materials.

The objective of such examinations is to help improve the Supplier's manufacturing and support processes and to achieve continuous improvement with respect to quality and related costs. Supplier Process Reviews are a process based review of the Supplier's practiced business and manufacturing process controls against their internal procedures as well as purchase order and contractual requirements. SPR's may also be initiated when significant changes in a Supplier's facility occur; major management changes, facility upgrades, equipment movement, major capacity changes, etc.

Nonconformances identified during SPR's may require initiation of formal Supplier Corrective Action Requests in order to document the resolution. Triumph Aerospace Systems Group and / or their Business Units will utilize SPR results as a basis for determining the amount and nature of additional Supplier oversight required.

The appropriate Triumph Aerospace Systems Business Unit will follow-up with Suppliers to review the implementation of development strategies. This follow-up will occur through subsequent on-site assessments and/or a specific request to the Supplier to provide evidence to substantiate the successful implementation of targeted improvements.

## Section 3           Supplier Responsibilities

### Overview

Triumph Aerospace Systems Business Units identify and apply specific requirements via the purchase order and this Supplier Quality Assurance Manual. In addition to identifying the applicable technical requirements as specified within engineering drawings / blueprints, material and processing specifications, etc., Triumph Aerospace Systems Business Unit purchase orders may contain a number of additional Quality Assurance Requirement clauses. These clauses detail requirements for information flow down to sub-contractors, document and data controls, sub-tier Supplier controls and record retention.

Acceptance of the purchase order constitutes acceptance and accountability for achievement of all requirements listed on the purchase order and the requirements contained herein.

It is the Supplier's responsibility to perform an in depth review of the Purchasing Documentation to ensure that the Supplier can and will comply with the requirements therein. It is also the Supplier's responsibility to request or otherwise obtain subordinate documents, specifications and data referenced within the Purchasing Documentation. Failures resulting from a lack of review and / or compliance with subordinate requirements documents will be considered the responsibility of the Supplier. Any requests or deviation shall be forwarded to the issuing Triumph Aerospace Systems Business Unit for agreement or re-assignment of the Purchase Order.

The Supplier must obtain any agreements deviating from the issued Purchase Order in writing. No verbal agreements will be recognized under any circumstances and all liability as a result of the Supplier accepting verbal changes to the Purchase Order shall be the responsibility of the Supplier.

Changes to the Quality Requirements must be concurred with the respective Triumph Aerospace Systems Business Unit Supplier Quality or Quality Procurement representatives. Procurement Representatives do not hold the authority to modify, rescind or otherwise alter the Triumph Aerospace Systems Quality Requirements.

### 3.1           Quality Assurance Requirements

Triumph Aerospace Systems Business Unit purchase orders for direct parts / materials and outside processing services will include a number of clauses relating to specific quality assurance requirements. Applicable *Quality Assurance Requirements* or quality clauses may be assigned on a part number or contract number basis and are identified on Triumph Aerospace Systems Business Unit purchase orders.

#### 3.1.1           Identifying Applicable Quality Assurance Requirements

Triumph Aerospace Systems Quality Assurance Requirements are Business Unit specific and apply only to the Business Unit issuing the specific purchase order.

Triumph Aerospace Systems Business Unit Quality Assurance Requirements encompass a broad range of additionally imposed contractual requirements, including but not limited to:

##### 3.1.1.1       Critical Part/Material Traceability and / or Serialization Requirements,

- 3.1.1.2 Triumph Aerospace Systems Group or Business Unit and its Customer's or regulatory bodies Right of Entry for review of Products / Processes / Systems,
- 3.1.1.3 First Article Requirements,
- 3.1.1.4 Record Retention Requirements,
- 3.1.1.5 Special Restrictions on the Use of Qualified Sources,
- 3.1.1.6 Special Control and Disposition of Nonconforming Materials,
- 3.1.1.7 Program, Customer-specific or DFAR Quality Requirements.

The Quality Assurance Requirements selected for individual purchase orders will vary based upon a number of factors including the criticality of the procured part/material and the needs of individual programs and Triumph Aerospace Systems Business Unit Customer's. Applicable Quality Assurance Requirement clauses are assigned and are identified uniquely on Triumph Aerospace Business Unit purchase orders.

### **3.1.2 Integration of Quality Assurance Requirements into Production Processes**

Suppliers are expected to review all applicable Quality Assurance Requirements and clauses as a part of their Contract Review and Quality Planning processes. Requirements imposed by Quality Assurance Requirements are contractual and shall be integrated into the Supplier's Quality Systems and / or product-specific planning and related controls to ensure consistent compliance for all parts / materials supplied.

At the discretion of the respective Triumph Aerospace Systems Business Unit it may be required to submit a formal Quality Plan that specifically addresses how the Supplier will comply with the flowed down requirements. The Quality Plan need only identify those processes that are not already specifically covered within the Supplier established Quality System.

The appropriate Triumph Aerospace Systems Business Unit Buyers will assist Suppliers in gaining the necessary access to this site for purposes of reviewing Quality Assurance Requirements.

## **3.2 Sub-Tier Supplier Controls**

It is the contractual requirement of Suppliers to ensure items procured to support Triumph Aerospace Systems Business Unit purchase orders meet and conform to all specified requirements. Triumph Aerospace Systems Business Units do not authorize delegated product inspection on behalf of the Supplier without the written approval from Triumph Aerospace Systems Business Units.

### **3.2.1 Requirement Flow Down**

The Supplier shall be responsible for flow down of all the requirements and provisions of the Triumph Aerospace Systems Business Unit purchase order and this document to the Supplier's sub-contractors. Deviations to this document or the Triumph Aerospace Systems Business Unit purchase order are not authorized without consent of the appropriate Triumph Aerospace Systems Business Unit. When

Customer specific documents are flowed down to the Supplier, the Supplier shall also flow down the same documents to their sub-tier Suppliers as applicable to the process / service being provided to the Supplier by its sub-tiers.

### **3.2.2 Sub-Tier Supplier Management by Triumph Aerospace Systems Group Suppliers**

Triumph Aerospace Suppliers are responsible for management of their subcontractors. This management shall include compliance in addition to acceptable quality performance. Triumph Aerospace required Quality System standards AS / EN9100, AS9003, AC7004 and ISO 9001:2000 all require Suppliers to provide purchasing information to their Suppliers that adequately describes the product to be purchased. It is recommended that Suppliers provide specific information in lieu of general reference to specification or documentation.

### **3.2.3 Triumph Aerospace Systems Group Suppliers Management of Sub-tier Suppliers**

It is strongly recommended that Suppliers to Triumph Aerospace Systems Business Units utilize sub-tiers that are certified to AS / EN 9100, AS9003, AC7004 or ISO 9001:2000 by a recognized RAB agency (as noted in Table 1). Sub-tier Suppliers can be categorized as compliant if a compliance audit is performed by the Supplier and the results are available for review by Triumph Aerospace Systems Group or Business Unit. Any risk of utilizing sub-tiers without the recommended Quality System capability shall be borne solely by the Supplier.

### **3.2.4 Special Process Approvals**

Triumph Aerospace Systems Group Suppliers are also required to utilize prime contractor approved Suppliers when designated, e.g. Boeing D1-4426. Triumph Aerospace Systems Group Suppliers and their sub-tiers are responsible to ensure that only approved process sources are used. When required, Nadcap approved processors shall be utilized.

Customer approval does not assure nor imply that work performed by a processor listed on the approved processor list is acceptable. Triumph Aerospace Systems Group Suppliers and their sub-tier Suppliers are responsible to assure that a processor meets all contract, purchase order, drawing and process specification requirements. When processors are not designated, the Supplier must approve the processor and the Supplier becomes responsible for the processors performance as an approved Supplier.

## **3.3 Drawings Specifications and Quality Requirements**

The Supplier's Quality System shall assure that the applicable drawings, specifications, and quality requirements revisions are compatible with current purchase order agreements and are available and in use by the Supplier's manufacturing and inspection areas. Military Standards and Specifications utilized shall be to the latest revision in effect on the date of Process or Manufacturing Process Performance, unless otherwise specified.

For specifications controlled by OEM and / or industry sources, Suppliers shall independently verify the latest revision of the same and utilize the information in support of Purchase Order performance. Triumph Aerospace Systems Business Unit's will not provide applicable revision levels for these type of documents.



Suppliers may contact applicable Triumph Aerospace Systems Business Unit Supplier Quality representative for information in regards to OEM or industry web access points where the required revisions are available.

It is the responsibility of the Supplier to notify the appropriate Triumph Aerospace Systems Business Unit when Engineering does not agree with the revision data provided upon the purchase order. Product or process nonconformance resulting from the failure of the Supplier to notify the applicable Triumph Aerospace Systems Business Unit, shall be deemed Supplier responsibility.

### **3.4 Records Retention**

The Supplier shall maintain adequate records of all inspections and tests per Triumph Business Unit Purchase Order requirements. As appropriate, the records shall indicate the nature and quantity of nonconformances, the quantities approved and rejected, the nature of corrective action taken and the final sign off by Quality personnel. This information and all supporting documentation such as raw material certifications, special processing records and certifications, manufacturing records, e.g., routers and travelers, shall be retained and remain continually accessible at no cost by Triumph Aerospace by the Supplier in accordance with the terms of the purchase order.

The appropriate Triumph Aerospace Systems Business Unit shall be notified prior to destruction of any of the noted records.

## Section 4 Supplier Measurement

### Overview

Each month, Triumph Aerospace Systems Group and its Business Unit(s) monitor the performance of their direct part / material and processing Suppliers using Supplier Quality Performance Ratings (SQPR's). SQPR's are the Suppliers demonstrated performance with respect to product quality (percentage of supplied materials / services which meet all specified requirements).

For example:

1 piece nonconforming / 1500 pieces delivered = 99.93% first pass acceptance yield

Distinct nonconformances reported by the Supplier shall not be counted against the Supplier's quality rating. Repeat nonconformances that at the judgment of Triumph Business Unit Quality are not adequately addressed by the Supplier utilizing corrective action may be counted against the Suppliers quality rating. Negative trends or duplications in the Supplier's reported nonconformances may also be given due attention and consideration as a reflection of the Supplier's corrective action process viability.

Triumph Aerospace Systems Group Suppliers who do not maintain a satisfactory SQPR score may be required to provide formal documented corrective action plans and / or to participate in formal performance reviews with Triumph Aerospace Systems Group or its Business Units. Where these remedial activities are unsuccessful, Suppliers may be subject to the Supplier Performance Improvement Program and eventual removal from the Approved Supplier List (ASL).

| Triumph Aerospace Systems Group<br>Supplier Quality Performance Rating (SQPR) Thresholds – 6 Month Rolling Performance |                |               |  |                        |
|--|----------------|---------------|--|------------------------|
| Performance Level Designation  | High Threshold | Low Threshold | Supplier Performance Position  |                        |
| Gold   | 100%           | 100%          | Excellent Supplier Performance   | Acceptable Performance |
| Silver   | 99.99%         | 99.80%        | Very Good Supplier Performance   |                        |
| Bronze   | 99.79%         | 99.50%        | Acceptable Performance   |                        |
| Yellow   | 99.49%         | 98.0%         | Marginal Performance<br>Informal Supplier Improvement may be Requested   |                        |
| Red  | <98.0%         | -             | Unsatisfactory Performance<br>Formal Supplier Corrective Action Required |                        |

Table 2



## 4.2 Supplier Quality Performance Rating (SQPR) Reporting

Resultant scores are provided to individual Suppliers through Supplier access of the Triumph Aerospace Systems Group triumphsuppliesource.com Supplier Portal. It is the Supplier's responsibility to access the triumphsuppliesource.com Supplier Portal on a monthly basis and review performance data. The Supplier's performance shall be measured by their 6 month rolling SQPR.

On a monthly basis, Suppliers shall access triumphsuppliesource.com with their secure password and review the performance data available for their business.

## 4.3 Supplier Quality Performance Rating (SQPR) Thresholds

Table 2 illustrates Supplier Quality Performance Rating (SQPR) thresholds for Triumph Aerospace Systems Group Suppliers.

### 4.3.1 Gold Suppliers - Excellent Performance

Suppliers whose rolling 6 month SQPR ratings demonstrate excellent (SQPR = 100) will retain their existing business and will be considered eligible for new business opportunities, single source Supplier opportunities, Supplier partnerships and business collaboration.

### 4.3.2 Silver Suppliers – Very Good Performance

Suppliers whose 6 month rolling SQPR ratings demonstrate very good performance (SQPR > 99.80) will retain their existing business and will be considered eligible for new business opportunities.

### 4.3.3 Bronze Suppliers – Satisfactory Performance

Suppliers whose 6 month rolling SQPR ratings demonstrate satisfactory performance (SQPR > 99.50) will retain their existing business and will be considered eligible for new business opportunities.

### 4.3.4 Yellow Suppliers - Marginal Performance

Those Suppliers whose 6 month rolling SQPR ratings demonstrate marginally acceptable performance (99.49 < SQPR < 98) will be allowed to retain existing business but may not be considered eligible for new business opportunities unless specifically directed to do so by a Triumph Aerospace Customer.

### 4.3.5 Red Suppliers - Unsatisfactory Performance

Those Suppliers whose SQPR ratings demonstrate weak performance (SQPR < 98) may not be considered eligible for new business opportunities and may be subject to formal Supplier Corrective Action and / or more extensive remedial action as described in Section 10, Supplier Performance Improvement Program (SPIP). Suppliers subject to SPIP shall both achieve and sustain targeted improvements or they may have their existing business re-sourced and be removed from the Triumph Aerospace Systems Group Approved Supplier List.

Failure to achieve or maintain an acceptable Quality level may also result in on-site assessments or source inspection control requirements being imposed by Triumph Aerospace Systems Group or its

Business Units. Any source inspection requirements, performed at either the Supplier's facility or a Triumph Aerospace Systems Business Unit, imposed by the Triumph Aerospace Business Unit on a Supplier due to performance issues may be done at the Supplier's' expense.

#### **4.4 Supplier Appeal Process**

Suppliers may contest a specific nonconformance by submitting an electronic appeal via the triumphsupplysource.com website, in writing to the appropriate Triumph Aerospace Systems Business Unit within 10 working days of issuance of their SQPR Report. The Triumph Aerospace Business Unit will review the appeal and respond within an additional 10 working day period.

## **Section 5 Supplier First Article Inspection Requirements**

### **Overview**

Triumph Aerospace Systems Group requires Supplier's of direct production parts to employ a First Article Inspection process in accordance with SAE AS9102. The purpose of this requirement is to develop objective evidence to support that all engineering design and specification requirements are properly understood, accounted for and verified.

The First Article part / assembly must be a true representative of the designed manufacturing / fabrication process. Therefore, Suppliers shall not use prototype parts, or parts manufactured using methods different from those intended for the normal production process, for the FAI. The "First Part" produced may not qualify as the First Article if changes to the process are made subsequent to it's delivery.

Supplier must notify the Triumph Aerospace Systems Business Unit if the first delivered unit does not represent the process(es) under which the subsequent production deliveries will be produced.

Suppliers that proceed at risk and produce products prior to acceptance of the First Article by Triumph Aerospace Business Units shall not have recourse to recover losses resultant from a failed First Article. All costs associated with the result of a rejected Supplier First Article produced at risk by the Supplier, shall be borne by the Supplier.

The requirement for First Article Inspection excludes supplied basic raw materials such as metallic plate/sheet, chemicals, fibers, fabrics, and outside processing services unless otherwise a part of approval processes administered by a Triumph Aerospace Systems Group Customer.

### **5.1 First Article Requirements**

Partial or complete re-accomplishment of the First Article Inspection for affected characteristics is required for changes in product design; any change in the Supplier's manufacturing process, or other events as prescribed within AS9102.

The following are requirements of the Triumph Aerospace Systems Group First Article Inspection process:

#### **5.1.1 First Article Shall Be Performed In Accordance With AS9102**

Prior to shipment of production parts, Triumph Aerospace Systems Group Suppliers are required to conduct and submit for Triumph Aerospace Systems Business Units review / approval a complete, independent, and documented physical and functional inspection to verify that prescribed production methods have produced an acceptable item in accordance with engineering drawings, planning, purchase order, engineering specifications, and/or other applicable design documents.

This data is to be developed and documented in accordance with methods prescribed within SAE AS9102 - Aerospace First Article Inspection Requirement (latest revision). Suppliers are to utilize the forms associated with this standard where possible. A Supplier's' equivalent forms may be used in place of those contained within SAE AS9102, provided all content prescribed within SAE AS9102 is included. Suppliers may acquire copies of SAE AS9102 and the associated forms at the following web-site address: [www.sae.org](http://www.sae.org).

### **5.1.2 First Article Inspection Reports Must be Included with Shipment**

Suppliers are to coordinate the transmission of their First Article Inspection Reports and the associated part through their Triumph Aerospace Systems Business Unit Buyer. Unless otherwise authorized, a copy of the completed First Article Inspection Report shall be provided to the appropriate Triumph Aerospace Systems Business Unit for its review and approval.

The Supplier is required to retain the master First Article reports and associated data as described in paragraph 3.4, Record Retention and maintain the FAI records ready for review by Triumph Aerospace Systems Group or its Business Units upon request.

With the exception of catalog or standard hardware, raw material Certificates of Conformance (C of C) are not an acceptable substitute for full Chemical and Physical Certification (Mill Certifications) on First Article Units.

For critical and other select parts, Triumph Aerospace Systems Business Units may elect to have the Supplier withhold their First Article submission in order to allow Business Unit Supplier Quality to conduct a verification of the First Article part and data at the Supplier's production facility. Arrangements for this review will be addressed by a specific Quality Assurance Requirement and be coordinated in advance between the appropriate Business Unit and the Supplier.

### **5.1.3 First Article Parts Shall be Identified as First Article**

To facilitate Triumph Aerospace Systems Business Unit identification and verification of First Article parts and data, Suppliers are required to identify the part tagging or packaging by a suitable means that conspicuously identifies the First Article part as such.

### **5.1.4 Triumph Aerospace Systems Business Unit Review and Approval of Individual Part First Article Submissions**

Triumph Aerospace Systems Business Unit Quality Assurance personnel will review the First Article inspection report data for compliance to engineering requirements and for required content in accordance with SAE AS9102. Triumph Aerospace Systems Business Units may also re-inspect parts to validate Supplier First Article reports.

Suppliers will be notified of the rejection of their First Article submission through their Triumph Aerospace Systems Business Unit.

Rejected First Articles will require resubmission of the complete or partial First Articles data and where requested, parts. Partial or complete re-accomplishment of the First Article Inspection for affected characteristics is required for changes in product design; any change in the Supplier's manufacturing process, or other events as prescribed within SAE AS9102 and this Supplier Quality Assurance Manual.

Triumph Aerospace Business Units may also require any sample parts used in the first article process. Triumph Aerospace Systems Business Unit Quality Assurance personnel reserve the right to review the First Article part and associated data to assure Supplier compliance to engineering requirements and for required content in accordance with AS9102.

A rejected First Article shall require a Supplier Corrective Action Request to be issued by the respective Triumph Aerospace Business Unit in order to identify how the rejected First Article rejection was not detected by the Supplier's Quality System.

#### **5.1.5 Triumph Aerospace Systems Business Unit Review and Validation of Supplier First Article Processes**

Where appropriate Triumph Aerospace Systems Business Unit Supplier Quality may utilize specifically tailored Supplier Process Reviews (SPR's) in order to validate the thoroughness and effectiveness of those processes developed and deployed by individual Suppliers for purposes of generating and verifying their First Article documentation in accordance with SAE AS9102. Those Suppliers whose processes are successfully validated in this manner will still be required to transmit their First Article Reports along with the labeled parts from which the data were derived but will not be required to seek Triumph Aerospace Systems Group First Article Verification approval for individual parts prior to commencing ongoing production shipments.

## **Section 6 Delivered Product Requirements**

### **Overview**

Supplier-responsible nonconformances are defined as any violation of a specified contractual requirement imposed by a Triumph Aerospace Systems Business Unit purchase order.

This includes technical engineering requirements defined on blueprints, specifications, etc. as well as requirements for Certificates of Conformance, quantified test results, use of appropriately qualified sources, special part / material identification requirements, or any other requirement imposed by Triumph Aerospace Systems Quality Assurance Requirements applied to the subject purchase order. The use of verbal communication and emails are not acceptable methods of communicating purchase order / contract requirements.

### **6.1 Triumph Supplied Material**

If Triumph supplied parts or material is found to be nonconforming upon receipt, the Supplier is to notify the appropriate Triumph Aerospace Business Unit Buyer listed on the purchase order. The continued use of this material without the permission of Triumph Aerospace Systems Business Unit constitutes an acceptance of part or material quality and any costs related to repair or replacement.

#### **6.1.1 Repair**

Under no circumstances shall a Supplier or a Supplier's sub-tier Supplier perform any repair procedures / operations without specific written authorization from the appropriate Triumph Aerospace Systems Business Unit. To accelerate the repair process, it is recommended that the Suppliers submit their repair plan upon nonconformance notification to Triumph Aerospace.

#### **6.1.2 Reworked/Replaced Material**

When returning previously rejected material to a Triumph Aerospace Business Unit, the Supplier shall reference the Rejection Notice number on the shipping documents (including Certificate of Conformance), and shall state if the items have been replaced or reworked. Under no circumstances should reworked or replaced material be combined with any other material.

### **6.2 Recording & Reporting of Supplier-Responsible Nonconformances**

Nonconforming parts / materials or processing shall be coordinated through the applicable Triumph Aerospace Systems Business Unit. Such documents will be developed as a result of Supplier-responsible nonconformances encountered at any point in the value chain established between Triumph Aerospace Systems Business Units and its Suppliers.

Nonconformance documents are to be submitted to the appropriate Triumph Aerospace Systems Business Unit Buyer.

### **6.2.1 Supplier Responsibilities Upon Notification of Nonconformances**

Suppliers are expected to immediately route nonconformance information internally to their appropriate Operations and Quality personnel. Once notified, Suppliers are required to undertake immediate containment action to minimize or eliminate any further impact to Triumph Aerospace Systems Group and its Customer's as a result of similar nonconformances, which may be in-process, in the Supplier's inventory, or in the process of delivery. Containment shall include parts nonconformance that may be in the field.

Suppliers will also be expected to participate in discussions with their Triumph Aerospace Systems Buyer regarding appropriate disposition options for nonconformances encountered as well as the future availability of known-acceptable replacement stock as required.

When schedule permits, Suppliers may request return of nonconforming parts / materials, at their expense, when such parts/materials are not otherwise suitable for immediate use or rework by the appropriate Triumph Aerospace Systems Business Unit. Alternately, when schedule permits, Suppliers are encouraged to examine nonconformances at the appropriate Triumph Aerospace Systems Business Unit prior to final disposition in order to aid the development of timely and appropriate corrective / preventive actions.

### **6.2.2 Supplier-Responsible Nonconformance Cost Recovery**

Per Purchase Order terms and conditions and at the discretion of the Triumph Aerospace Systems Business Unit, Suppliers may be subject to charges for recovery of costs associated with any / all Supplier-responsible nonconforming parts/materials. Such charges will include:

- 6.2.2.1 A \$200.00 (USD) administrative charge for each nonconformance document generated by a Triumph Aerospace Systems Business Unit Supplier,
- 6.2.2.2 A \$50.00 (USD) administrative charge for each request for error corrections required to a material certificate or Certificate of Conformance generated by a Triumph Aerospace Systems Supplier,
- 6.2.2.3 A "to be determined" rework charge (USD) for each part requiring rework by Triumph Aerospace Systems Business Unit or Triumph Aerospace Systems Group Customer personnel, (amount as determined by actual rework cost),
- 6.2.2.4 Part and / or material charges (USD) per purchase order or contract pricing for each part and / or material scrapped at Triumph Aerospace Systems Business Units or its Customer (amount as determined by scrap cost).

Additional charges may also apply where parts or materials, as supplied by Triumph Aerospace Systems Business Unit and/or its Customer, require scrapping at the Supplier as a result of the Suppliers actions (amount as determined by scrap cost).

Additional charges may also apply where supplied parts / materials require extraordinary rework at Triumph Aerospace Systems Business Units or its Customer, e.g., an assembly needing to be disassembled, part removed and replaced due to bad part / material, etc. (amount as determined by actual rework cost).

### **6.3 Quality Escape Notification**

In the event that a Supplier knows or suspects that it may have delivered nonconforming goods to a Triumph Aerospace Systems Business Unit, the Supplier is required to promptly notify their Triumph Aerospace Systems Business Unit Buyer. Such notifications shall describe the affected part numbers, the specific nonconforming conditions, the scope of the escape, the quantities affected, applicable part serial number / batch / lot identification information, and the availability of replacement stock. Any similar goods held by the Supplier shall be inspected and when found nonconforming, contained to prevent shipment. Supplier root cause, corrective action will also be initiated immediately and submitted with the notification form.

Non-recurring instances of escapes reported by the Supplier, in some cases may not be counted against the Supplier's Quality Performance Rating.

**NOTE: Suppliers may lose their approved Supplier status and be removed from the Triumph Aerospace Systems Group ASL for failing to report a known product quality escape.**

### **6.4 Statement of Quality – Certificate of Conformance**

A statement of quality shall be required with each shipment. The statement of quality must certify that all inspections and tests have been performed. This statement is not required to be notarized, but it must be signed and dated by the Supplier's authorized Quality Assurance personnel. Computer generated facsimile signatures will be acceptable if prior approval from Triumph Aerospace Systems Business Unit Quality Assurance has been established.

#### **6.4.1 Certification of Conformance (C of C) Form and Content**

All certifications of conformance shall be traceable to the material submitted and at a minimum shall contain:

- 6.4.1.1 Suppliers name,
- 6.4.1.2 Suppliers address,
- 6.4.1.3 Purchase order number
- 6.4.1.4 Purchase order item number,
- 6.4.1.5 Drawing number and revision,
- 6.4.1.6 Quantity delivered,
- 6.4.1.7 Serial number(s) (as required),
- 6.4.1.8 When applicable, nonconformance reference number.

Product deliveries that have been subjected to Aerospace Industry designated "Special Processes" shall at a minimum be accompanied by the Processor's Certification for the Special Process or the following:

- 6.4.1.9 Name of special process facility,



- 6.4.1.10 Address of special process facility,
- 6.4.1.11 Special process designation, nomenclature and revision,
- 6.4.1.12 Date that special process was performed.

When Triumph Business Unit purchase order requirements exceed the requirements of 6.4.1, the purchase order requirement shall take precedence.

## 6.5 Marking, Packaging and Handling

In performance of the contract, the Supplier shall assure that all articles are packaged in a manner and with materials necessary to prevent deterioration, corrosion, or damage. Requirements for packaging shall consider conditions affecting the article while at the Supplier's facility, transportation to destination, and the expected or specified conditions at the destination.

The Supplier shall provide special handling for articles sensitive to handling damage. During fabrication and processing, special carts, boxes, containers and transportation vehicles shall be used as necessary to prevent damage due to handling. **During individual packaging of parts, the use of staples is prohibited.** This requirement excludes multi-part box packaging. All parts shall be checked by the Supplier for damage at receipt (when applicable) and prior to shipment.

When specific packaging requirements are flowed down to the respective Triumph Aerospace Systems Business Unit by their Customer, the same requirements shall be flowed to the Supplier. These requirements may supersede the requirements of this section, e.g. government specification packaging.

## 6.6 Inspection Sampling

In some cases, Inspection sampling methods are specifically prescribed or even prohibited by Triumph Aerospace Systems Customer's. Prior to implementation of any sampling, sampling plans and procedures must be submitted to and approved by Triumph Aerospace Systems Business Unit Quality Assurance.

A procedure in accordance with ARP9013 "Statistical Product Acceptance Requirements" shall be in place to support the utilization of sampling plans.

## Section 7: Supplier Inspection Delegation Process

### Overview

Triumph Aerospace Systems Group Supplier Inspection Delegation is a two tiered system that can delegate either specific part level inspection approval authority or site level inspection approval authority depending upon the complexity, criticality and type of commodity being considered.

### 7.1 Supplier Inspection Delegation Process

Application of inspection delegation authority is at the discretion of Triumph Aerospace Business Units and may be revoked at any time. Delegated inspection processes **MAY NOT** be delegated by the delegated Supplier to a sub-tier.

#### 7.1.1 Method One – Specific Supplier Delegation

7.1.1.1 Method One Delegation is the designation of inspection authority to a Supplier based on a specific Supplier employee, that employee's qualifications and an evaluation of aptitude,

7.1.1.2 Method One Delegation is also based on specific part numbers / specific commodities and the Supplier's manufacturing location,

7.1.1.3 This approval allows the appropriate Triumph Aerospace Business Unit the receipt of parts / commodities without performance of 100% receiving inspection,

7.1.1.4 Method One Supplier delegation requires individual Supplier employee certification, a Quality System as required per this document and maintenance of a delivered acceptance yield for the specific part numbers of  $\geq 99.5\%$ ,

7.1.1.5 For the subject part numbers, AS9102 compliant first articles must be up to date and approved by the appropriate Triumph Aerospace Systems Business Unit.

## Section 8                    **Supplier Requests for Process Changes or Temporary and Permanent Specification Deviations**

### **Overview**

Once an approved First Article Inspection Report and part have been provided to and approved by a Triumph Aerospace Systems Business Unit, Suppliers are not to make any significant changes to the process that produces the part (e.g., methods, materials, machinery, etc.) or the location at which the part is produced without prior written authorization from the same Triumph Aerospace Systems Business Unit. Ultimate approval of these process changes or deviations may be at the discretion of Triumph Aerospace Systems Customers.

Suppliers are not to ship parts or materials that violate engineering specifications or other contractual requirements without prior written authorization from the appropriate Triumph Aerospace Systems Business Unit.

### **8.1                    Supplier Manufacturing Process Change Approvals**

In the event that it becomes necessary or desirable to significantly modify the manufacturing process or change the location of the manufacturing process, Suppliers are required to perform a First Article Inspection per Section 5 of this document.

#### **8.1.1                    Manufacturing Process Changes**

Any manufacture of parts utilizing changed processes without prior Triumph Aerospace Systems Business Unit approval will be done so at the Supplier's risk.

#### **8.1.2                    Initiating Requests for Manufacturing Process Changes**

In the event that a change to the established part / process is substantial enough to require a new AS9102 First Article Inspection, the Suppliers shall make the request to their Triumph Aerospace Systems Business Unit Buyer.

When making a process change request, the Supplier shall inform their Business Unit Buyer of the following:

- 8.1.2.1    Supplier name and address,
- 8.1.2.2    Process description,
- 8.1.2.3    Part numbers affected,
- 8.1.2.4    Proposed change effectivity date,
- 8.1.2.5    Purchase order numbers affected,
- 8.1.2.6    Define if process change is temporary or permanent,
- 8.1.2.7    Description of required change (cite any applicable document title and revision),

- 8.1.2.8 Benefit to be derived by the Triumph Aerospace Systems Business Unit,
- 8.1.2.9 Reason for process change,
- 8.1.2.10 Data substantiating Supplier's ability to reliably meet proposed change,
- 8.1.2.11 Explanation of how the change will be verified to ensure the Supplier is producing materials in accordance with all specified requirements.

Typically this will include a detailed description of a proposed partial or complete First Article Inspection in accordance with AS9102.

The Triumph Aerospace Systems Business Unit Buyer will route it to Triumph Aerospace Systems Business Unit Supplier Quality. Suppliers will receive notification of acceptance or rejection of the request from their Triumph Aerospace Systems Business Unit Buyer in the form of the approved or rejected request.

### **8.1.3 Production Shipment Approval for Authorized Process Changes**

- 8.1.3.1 Suppliers are not authorized to ship parts from modified processes until they have received documented authorization in the form of a notification of process change from the Suppliers Triumph Aerospace Systems Business Unit Buyer and,
- 8.1.3.2 Achieved applicable First Article process validation as described in Section 5 of this Manual.

After a Supplier has received the necessary approval to proceed with a proposed process change, they may also be required to develop and transmit appropriate First Article data (and labeled part as appropriate) prior to commencing ongoing production shipments. This will enable the Supplier and the Triumph Aerospace Systems Business Unit to substantiate that the change has not had any substantial detrimental impact on the Suppliers ability to produce parts in accordance with all specified requirements.

## **8.2 Temporary Specification Deviations**

A deviation is a temporary modification to specifications as approved by the appropriate design authority. In the event that a temporary specification deviation is considered necessary, Suppliers must submit a formal documented (written) request through their Triumph Aerospace Systems Business Unit Buyer and obtain documented (written) approval prior to shipment to Triumph Aerospace Systems Business Unit.

Temporary specification deviations are to be requested by Suppliers when there is a need for temporary relief from engineering specifications for a limited number of parts / material or for a limited time.

Suppliers should initiate specification deviation requests only after all efforts to meet Triumph Aerospace Systems Business Unit purchase order requirements have been exhausted. Suppliers must withhold shipment of production parts / materials that do not meet contractual requirements pending receipt of an approved request for temporary specification deviation request that authorizes a "use as is" disposition.

### **8.2.1 Specification Deviation / Change Requests Shall Include:**

- 8.2.1.1 Supplier name and address,
- 8.2.1.2 Specification title, number and applicable paragraphs,
- 8.2.1.3 Specification revision level,
- 8.2.1.4 Part numbers affected,
- 8.2.1.5 Part / material description,
- 8.2.1.6 Purchase order numbers affected,
- 8.2.1.7 Define if request is a temporary deviation or permanent change,
- 8.2.1.8 Description of the required deviation / change,
- 8.2.1.9 Reason for the specification deviation / change,
- 8.2.1.10 Data substantiating the Suppliers ability to reliably meet proposed deviation / change,
- 8.2.1.11 Explanation of how the change will be verified to ensure the Supplier is producing materials in accordance with all specified requirements.

Suppliers may also ship parts based on alternate dispositions such as rework at Supplier, rework at Triumph Aerospace Systems Business Unit, or ship to Triumph Aerospace Systems Business Unit for Engineering analysis / review when documented within a Triumph Aerospace Systems Business Unit response.

### **8.3 Permanent Specification Changes**

If a permanent specification change is required, Suppliers must also request and obtain formal documented (written) approval through their Triumph Aerospace Systems Business Unit Buyer prior to shipment of such materials. See para. 8.2.1 for information to be submitted by the Supplier.

Permanent specification change requests are to be initiated only when the Supplier has determined that established processes are not able to produce product in compliance with existing engineering requirements and that necessary improvement to processes and / or appropriate control systems are believed to be unwarranted.

Suppliers are to submit permanent specification change requests to their Triumph Aerospace Systems Business Unit Buyer. The Triumph Aerospace Systems Business Unit Buyer will coordinate the review of the request by Business Unit Engineering and / or applicable Customer's. The Supplier will withhold shipment of production parts / materials pending receipt of the approved change request, the modified applicable engineering documentation from Triumph Aerospace Systems Business Unit and / or its Customer, and an updated Triumph Aerospace Systems Business Unit purchase order where appropriate.

## Section 9: Corrective Action and Continuous Improvement

### Overview

Triumph Aerospace Systems Group requires its Suppliers to employ a closed loop, Corrective and Preventive Action methodology in order to address product, process, performance, Quality System and audit nonconformances. Each Supplier Corrective Action Request requires the Supplier to utilize the following two step approach in order to successfully and permanently resolve the condition.

#### 9.1 Initiation of a Supplier Corrective Action Request

A Supplier Corrective Action Request should be given the highest priority within the Supplier's operations and thus requires the urgent and active participation of the Supplier's management team. A request for Supplier corrective action can be prompted by either nonconforming supplied parts / materials, a performance, Quality System issue or process / assessment finding that has produced a need for corrective action.

Triumph Aerospace Systems Group and / or its Business Units shall initiate the Supplier Corrective Action Request process by documenting the nonconforming product, process, Quality System or performance condition and notifying the Supplier.

The appropriate Triumph Aerospace Systems Business Unit Quality personnel will review the Supplier's response for timeliness, completeness of the submission and the suitability of the responses. Late and / or rejected responses will be recorded and the data reviewed to determine Supplier capability to perform adequate corrective action.

Suppliers who demonstrate a consistent inability to provide acceptable responses to Supplier Corrective Action Requests or within the deadlines established are subject to a probationary status or introduction to the Supplier Performance Improvement Process detailed in Section 10.

## **Section 10            Supplier Performance Improvement Program (SPIP)**

### **Overview**

The Supplier Performance Improvement Program is utilized by Triumph Aerospace Systems Group and its Business Units to address chronic and / or severe performance issues with approved Suppliers. This process utilizes root cause corrective action to correct Supplier performance issues. Where necessary, Triumph may terminate business with Suppliers that demonstrate they are incapable of the required improvement.

Triumph Aerospace Systems Business Unit Procurement manages the SPIP process with Suppliers. Once a Supplier is placed in SPIP, the Supplier may become ineligible for new work until all issues are successfully corrected and sustained performance improvement is achieved. All Triumph Aerospace Business Units shall be notified of any Supplier designated for the SPIP process.

For Suppliers successfully recovering from performance issues, the Supplier shall be taken out of SPIP and designated as probationary. Any recurrence of the same issues during the Supplier's probationary period will result in the Supplier being placed back in SPIP or considered for immediate termination.

Suppliers terminated from the Triumph Aerospace Systems Group ASL shall be required to participate in a Supplier Assessment Audit prior to the Supplier being considered for Triumph Aerospace Systems Group ASL approval reinstatement.

## Definitions and Acronyms

**ASL:** Approved Supplier List – a list of those direct part/material and processing sources deemed capable of supporting TASG procurement needs.

**AS9102:** The SAE Aerospace Standard (AS) that establishes documentation requirements for the First Article Inspection.

**AS9102 First Article Inspection:** The SAE Aerospace Standard (AS) that establishes requirements for First Article Inspection. Method of gathering objective evidence to support that all design and specification requirements are properly understood, accounted for, and verified.

**Business Unit:** An individual Triumph Aerospace Systems Group site

**Certificate of Conformance:** A statement of quality by the Supplier that ensures all inspections and tests have been performed. It must be signed and dated by an authorized agent of the Supplier with appropriate identification of the position held by the signer.

**Corrective & Preventive Action:** Actions planned and implemented to contain, correct, and prevent the causes of a product, process, or system nonconformance.

**DFAR:** Defense Federal Acquisition Regulation.

**Disposition:** Engineering determination of the appropriate further actions associated with nonconforming parts/materials. Typical options include Scrap, Rework, Use as Is, etc.

**First Article Inspection:** The development of objective evidence to support that all engineering design and specification requirements are properly understood, accounted for, and verified.

**On-Site Supplier Assessment:** An on-site review of a Supplier's processes, systems, and capabilities as conducted by Triumph Aerospace Systems Group personnel, Customer or regulatory authority.

**Permanent Specification Change:** A modification to any specified product requirement (blueprint, specification, etc.) as approved by the appropriate design authority which is unbounded by quantity or time.

**Process Change:** Any change to the materials, methods, machinery, or location from that previously approved by a Triumph Aerospace Systems Group Business Unit .

**Quality Assurance Requirements:** A defined special purchase order condition relative to quality assurance needs for procured direct parts/materials or processing services.

**SPIP:** Supplier Performance Improvement Program. The process used to address unsatisfactory Supplier performance.

**SPR:** Supplier Process Reviews - Periodic detailed on-site examination of the manufacturing processes, procedures, and controls used in the fabrication, assembly, inspection, and delivery of individual purchased parts/materials.





**SQPR:** Supplier Quality Performance Rating – the Triumph Aerospace Systems Group quantified measure of Supplier performance.

**SQPR Report Scorecard:** Monthly report detailing the performance rating (SQPR) for the Supplier. This report combines the Supplier Quality Rating and the Supplier Responsiveness Rating.

**Supplier Corrective Action Request (SCAR):** A request to a Supplier for formal documented corrective and preventive action in response to a nonconformance or performance concern.

**Supplier-Responsible Nonconformance:** Any violation of a specified contractual requirement imposed by a Triumph Aerospace Systems purchase order.

**Temporary Specification Change:** A modification to any specified product requirement (blueprint, specification, etc.) as approved by the appropriate design authority which is bounded by quantity or time.

**triumphsupplysource.com:** Triumph Aerospace Systems Group Supply Chain Management web site.

## Revision History

| <b>Revision</b> | <b>Description of Change</b> | <b>Effectivity Date</b> |
|-----------------|------------------------------|-------------------------|
| Original        | Initial Release              | 10 September 2007       |