

Supplier Quality Systems Requirements Manual



Brink Towing Systems

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Brink Group

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Supplier Quality Systems Requirements Manual

1. Introduction

1.1 Scope

The details stipulated within this manual are the minimum mandatory requirements for “approved” production goods and service suppliers to Brink Towing Systems (further called BTS).

BTS is committed to provide on time, quality products and services that meet our customers needs and requires a commitment from our suppliers to provide the same to us. Creating win/win relationships strengthened by success remains a cornerstone in meeting changing customer expectations.

1.2 Purpose

The purpose of this document is to communicate BTS’s requirements with respect to the quality management system of those companies that supply production goods and/or services to BTS.

BTS requires that its suppliers:

- a) Implement appropriate systems and controls to ensure the 100% on-time in-full delivery of conforming, defect free products to BTS (OTIF).
- b) Manage facilities, processes, quality systems and personnel to consistently and cost effectively produce products and furnish services that meet the needs of BTS and its customers.
- c) Develop and implement a documented Quality System, in accordance with the requirements of ISO/TS-16949 and the AIAG Advanced Product Quality Planning and Control Plan reference manuals in order to assure that all BTS requirements are met.
- d) Provide objective evidence that all supplied products and services satisfy AIAG Production Part Approval Process requirements including acceptable process capabilities for Special Characteristics.
- e) Utilize appropriate statistical techniques for on-going process control and improvement (as established in the AIAG Fundamental Statistical Process Control reference manual).
- f) Continuously improve by reducing part-to-part variation and eliminating all waste.
- g) Conduct its operations to and assure that all materials and products provided to BTS meet or exceed all applicable environmental laws and regulations of the jurisdictions in which the supplier does business. Suppliers must meet the same requirements that our customers demand from us. Also, suppliers are strongly encouraged to install environmental systems in their facilities that are compliant to ISO 14001.
- h) Meet the requirements of BTS with regard to the use, control and supply of returnable packaging. Suppliers are responsible for requesting any specific packaging documentation directly from BTS production plants, as required.
- i) Are preferably capable of receiving and sending EDI transactions (e.g., receiving Releases, sending Advanced Shipping Notices).

1.3 Background

The BTS Supplier Quality System Requirements (SQSR) are based upon the latest edition of ISO/TS-16949 Quality System Requirements. These requirements are an integral and legally binding aspect of the BTS Purchase Order. Although this does not alter or reduce any other requirements of the contract, it is intended to provide a concise understanding of our quality expectations.

This manual supersedes all BTS supplier quality systems requirements manuals.

2. Quality Systems Requirements

2.1 General Quality Systems Requirements

Present and potential suppliers to BTS, must operate within a comprehensive quality system. Suppliers shall provide written confirmation and objective evidence of third party certification to an active version of ISO/TS 16949. Certification to ISO 9001 will be accepted as a first step in achieving this goal.

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Certified suppliers must submit their initial and renewal quality system certifications to BTS Procurement within 10 days of receiving the certificate from their registrar. Also, suppliers are required to immediately notify all BTS receiving sites and their buyer if their registrar places them on "Probation". Suppliers who are not ISO/TS 16949 certified are requested to have a working plan to become compliant to ISO/TS 16949, or are waived by Brink in formal writing.

Suppliers are required to follow the requirements of the current version of the Production Part Approval Process (PPAP) manual and meet the intent of the requirements specified in the following AIAG Reference Manuals: Advanced Product Quality Planning and Control Plan (APQP), Potential Failure Mode and Effects Analysis (FMEA), Measurement Systems Analysis (MSA), and Statistical Process Control (SPC). Additional requirements are noted in this Supplier Quality System Requirements manual. BTS may communicate other requirements as our needs or the needs of our customers change. It is the responsibility of BTS's suppliers, both present and new, to obtain and maintain the current issue of all ISO/TS 16949 and AIAG related documents (see 3.2 Supporting Industry Documents for ordering information).

Comments or questions regarding the BTS Supplier Quality System Requirements manual may be directed to the appropriate BTS plant supplier quality engineer.

2.2 Advanced Product Quality Planning (APQP)

Suppliers are required to generate an Advanced Product Quality Plan in accordance with the AIAG APQP reference manual for review by BTS. This plan shall include, but is not limited to:

- a) Notification of risks that affect product integrity or the project plan.
- b) Implementation of error-proofing (Poka Yoke) to achieve Zero Defects to BTS.
- c) Identification of changes needed to product or process specifications.

2.3 Pre-Award Meeting

A Pre-Award Meeting for present and potential suppliers offering new products or services may be required prior to Purchase Order issuance (unless formally deviated by BTS based upon historical evidence of successful adherence to BTS's requirements). Technical, quality, manufacturing, engineering, purchasing, delivery, and business issues shall be reviewed during this meeting to provide the supplier with a thorough understanding of BTS requirements. Under most circumstances, Purchasing will schedule the meeting and include cross-functional membership as appropriate.

2.4 Engineering Prototype Sample Submissions

Engineering prototype parts with documentation of specification conformance shall be submitted to BTS by the supplier as instructed by BTS. Each sample or prototype must be clearly labelled as such and accompanied by a completed Dimensional Results, Material Test Results, and Performance Test Results reports as described in the AIAG PPAP manual. Specific instructions, in addition to these stated requirements, may be agreed upon and documented by BTS.

2.5 Special Characteristics

Special Characteristics are any product or process characteristics that affect safety or compliance with regulations, fit, function, performance or subsequent processing of product.

In accordance with the requirements of ISO/TS-16949, Special Characteristics shall be identified and specifically addressed in the DFMEA, PFMEA, Control Plans, Process Flows, Work Instructions and other associated documents. BTS designated Special Characteristics are identified on drawings/specifications or in a separate document that cross-references these characteristics to the drawings/specifications. Suppliers are responsible to fully understand the usage of their product and also identify Special Characteristics, as appropriate. This includes "black box" suppliers. Suppliers are also responsible for ensuring that relevant Special Characteristics are explained, understood and controlled by their sub-suppliers.

2.6 Process Capability and Control

Suppliers are required to meet the process capability requirements as defined in the AIAG PPAP and SPC reference manuals, unless otherwise specified by BTS. The supplier is responsible to ensure process capability and control requirements are documented in their control plan and that capability indices are achieved and improved throughout production.

2.7 Sub-Supplier Control

Each BTS supplier is responsible for the control and continuous improvement efforts of its suppliers. However, BTS reserves the right to visit sub-suppliers.

BTS suppliers shall require their suppliers of production goods and services to conform to the requirements specified herein and must implement and document appropriate controls.

2.8 Supplier Tooling, Gaging and Returnable Containers

Supplier tooling (dies, patterns, moulds, special tooling) and gaging shall be permanently marked with a unique serial number and company name so that the ownership of each item can be easily identified. Returnable containers shall be permanently marked with the company name of ownership. For BTS or OEM owned tooling, a BTS or OEM asset tag may also be required.

The supplier shall establish preventive/predictive maintenance procedures on all tooling. Evidence of procedure execution shall be made available upon request. Preventive/predictive maintenance schedules and tool history records shall be documented and available for review.

No supplier tooling shall be sold or consigned to another entity without proper notification and written consent from BTS. In such cases, or in case of tooling relocation to an alternate supplier location or facility, it is the supplier's responsibility to contact BTS regarding potential re-PPAP requirements prior to moving the tool.

2.9 Early Production and Pilot Part Requirements

Suppliers are required to meet BTS's Early Production/Pilot Part requirements. Required documentation (e.g., Control Plans) must be kept current.

Suppliers are expected to clearly identify "early production" or "pilot parts" to ensure that the BTS receiving site does not mix such parts with "regular" production parts. Suppliers are also expected to work closely with BTS plant responsible personnel to minimize unnecessary obsolescence.

Labelling must be done per BTS receiving site requirements and shall be differentiated from regular production shipping labels, unless the parts are already PPAP approved. In particular, the Supplier Identification, Part Number, Engineering Level, and Quantity must be clearly displayed on the part-packaging label to ensure easy, visible segregation of containers/parts. In addition, a brightly coloured sheet of paper (A5 or greater), must be attached to at least 2 sides of the container or material, stating one of the following:

- Pre-Production Materials
- Pre-Production Parts
- Pilot Materials
- Pilot Parts

2.10 Manufacturing Process Review (*Supplier Audit*)

A systematic review of a supplier's manufacturing process may be conducted at the supplier's facility prior to AIAG PPAP submission or tool launch. This process may be a BTS or BTS customer specified process (e.g. Run at Rate).

2.11 Production Part Approval Process (PPAP)

All production part sample submissions shall be in accordance with the AIAG PPAP manual requirements as stipulated by BTS on BTS document KZ159. Level 3 PPAP, supplied electronically, is the default submission level unless otherwise agreed upon with the relevant receiving site Quality department. Supplier PPAP packages shall include all component (internal and sub-supplier) PSW's at a minimum and may require additional PPAP documentation as per the receiving site Quality department. PPAP's shall be submitted to each BTS receiving site Quality department and any associated PPAP sample parts shall be clearly labelled as such.

Full or interim approved PPAP is required prior to shipping parts to BTS for production. Any production shipments received by BTS prior to obtaining this approval will be rejected. Any exceptions must be documented and approved on an BTS deviation.

2.12 Changes to Approved Product and Processes

Suppliers and sub-suppliers are not to make any unauthorized changes to a product (e.g., material, component, subassembly, etc.) or the process used to produce a product that has been previously PPAP approved by BTS. This includes changes to Process Control Plans.

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BTS notification and submission requirements are clearly outlined in Section I.3 of the AIAG PPAP manual. The appropriate BTS Procurement and receiving site Quality representative shall be notified of intentions to change a product or process prior to making any changes. The supplier must submit a Supplier Request for Product or Process Change and receive written authorization to proceed with the change from the BTS's receiving site Quality department prior to change implementation. Any such change made without prior written approval by BTS would not only constitute a breach of our purchase order terms and conditions, but would also be a serious breach of standard automotive practice. Suppliers who do not adhere to this requirement will be held responsible for all damages, losses and liabilities attributable to any unapproved change made by you or one of your suppliers (e.g., customer rejections, customer line stoppage penalty fees, field failures costs, warranty expense). In addition the supplier may be placed on New Business Hold.

2.13 Annual Re-qualification / Product audit

Unless waived in writing by BTS, the supplier shall inspect and test annually a sample of each active product supplied to assure conformance to all BTS specified requirements (e.g. dimensional, material and performance). These inspection requirements shall be included in the supplier's production control plan. Material testing shall be carried out by a qualified laboratory. Annual validation documentation shall be on file at the supplier and available to BTS upon request. If a non-conformance is found during the annual validation, the supplier must notify the BTS using plant quality department immediately so that appropriate action can be determined and implemented.

Whenever BTS is required to submit PPAP to their customer, suppliers with PPAP documentation over one year old may be required to re-PPAP as directed by the BTS receiving site Quality department.

2.14 Certificates of Conformance

A signed certificate of conformance will be maintained on file at the supplier and may be required to accompany each shipment of specified components or materials. The certificate of conformance must contain the actual results of physical testing, measurements and/or analysis specified by the contract confirming compliance with all identified requirements (in example 3.1 certificates).

2.15 IMDS Requirements

The European End-of-Life-Vehicles (ELV) Directive 2000/53EC that was entered into force on October 21, 2000, imposes specific rules for materials used in cars. All suppliers of BTS are responsible to ensure that the ELV-Directive is fulfilled, and need to inform BTS about the contents of every part you deliver to BTS through the IMDS.

In order to ensure regulatory compliance to the ELV-Directive and any applicable substance regulations over time, it is necessary to document the material and substance composition of the entire vehicle. IMDS (International Material Data System) allows the OEM's and suppliers to collect and to manage the information regarding the material and substance composition of all the components of a vehicle so that compliance to the ELV-Directive is documented. BTS suppliers are required to report the contents of the products they supply to BTS in the IMDS under IMDS ID Number 9047. Refer to the following link for more information about IMDS: <http://www.mdsystem.com>

Liability rests with the supplier in the event of that components being supplied to BTS do not conform to the relevant statutory requirements. Any and all costs incurred in such instances will have to be borne to their full extent by the supplier, not by BTS.

2.16 Prohibited and restricted substances

BTS has listed prohibited and restricted substances in a black&grey list to assure all materials and processes in use for products provided to BTS do meet, or exceed all applicable environmental laws and regulations of the jurisdictions in which the supplier does business. It is required that all parts supplied to BTS will meet those requirements listed in the Brink P&R list.

2.17 Conflict Minerals Submission

ALL suppliers that provide products to Brink which include tin, tantalum, tungsten, or gold have to confirm that the smelters used have been validated as compliant in accordance with the Conflict-Free Smelter (CFS) Program and listed on the Compliant Smelter List according to EICC GeSI (<http://www.conflictreesmelter.org>)

2.18 CQI-9 Heat Treatment Assessment

Organizations and suppliers providing heat treated products and heat-treating services shall demonstrate compliance to CQI-9 "Special Process: Heat Treat System Assessment".

All heat-treating processes at each supplier and (3rd party) manufacturing site shall be assessed annually.

2.19 CQI-12 Coating System Assessment

Organizations and suppliers providing coating services shall demonstrate compliance to CQI-12 "Special Process: Coating System Assessment".

All coating processes at each supplier and organization manufacturing site shall be assessed annually, unless otherwise specified by the customer.

2.20 CQI-15 Welding System Assessment

Organizations and suppliers providing welding services shall demonstrate compliance to CQI-15 "Special Process: Welding System Assessment".

All welding processes at each supplier and organization manufacturing site shall be assessed annually, unless otherwise specified by the customer.

2.21 MMOG/LE

The supplier shall meet the requirements as specified in MMOG/LE, available through AIAG <http://www.aiag.org/>

2.22 Verification Review of Purchased Product and Production Process

The supplier shall allow BTS, an approved 3rd party representative or our customers the right to verify, at the supplier's premises that the (subcontracted) products and processes conform to specified requirements. Prior to conducting such verification reviews, the responsible BTS contact shall specify both the arrangements and method of performing the reviews.

2.23 Traceability, Product Identification and Packaging

Each container, rack, box, or pallet of material shipped to BTS shall be identified as instructed by the BTS receiving site. Unique requirements will be identified and documented by BTS.

Labelling must be done per BTS receiving site requirements. At a minimum, the Supplier Identification, Part Number, Engineering Level, Quantity and Batch/Lot Number must be clearly legible in both human readable and bar coded form (bar code 128) on the part-packaging label. All bar codes must be scanned by the supplier to verify readability.

Identification shall permit traceability back to the specific supplier raw materials lot numbers, as well as the manufacturing, inspection and test records. The supplier should also be able to trace where products made under similar conditions (same raw material lot, same manufacturing line/batch, etc.) were shipped. Suppliers are required to utilize and ship material on a first in first out basis. Sequence of batches must be identified on the packaging label by either a date code or batch/lot number. Safety related identification criteria shall conform to all government regulatory and BTS requirements. No exceptions to this requirement shall be permitted unless waived in writing by BTS.

Suppliers shall ensure their products are transported in a manner that prevents damage, corrosion or deterioration to the product. Suppliers shall maintain documentation detailing proper packaging, cleanliness level, storage and shipping instructions of its products. These instructions must conform to the BTS receiving site requirements.

2.24 Delivery Performance

The supplier shall provide 100% conformance to the delivery requirements as specified by the BTS receiving site. Costs incurred by BTS as a result of a delivery non-conformance caused by a supplier shall be the responsibility of the supplier.

Upon request, suppliers shall submit corrective action plans for delivery non-conformances.

2.25 Contingency Plans

Suppliers are required to prepare contingency plans (e.g. utility interruptions, labour shortages, key equipment failure and field returns) to reasonably protect BTS's supply of product in the event of an emergency, excluding natural disasters and acts of God.

2.26 Continuous Improvement

The supplier shall continually improve quality, delivery, cost and other services provided. To aid in fulfillment of this requirement the supplier's organization shall establish, monitor, prioritize, and act upon key performance objectives and targets. The objectives and targets should be established based upon (at a minimum) business plans, management systems, product quality, process capability, and customer satisfaction goals. Actions taken to regain previously sustained levels of performance are corrective actions, not continuous improvement.

BTS reserves the right to visit any supplier site to assess its continuous improvement programs and lean manufacturing practices, and make recommendations for improvement. In addition, BTS may deploy personnel to focus on a specific improvement issues. Savings generated from these exercises will be translated into price reductions.

2.27 Supplier Problem Solving and Avoidance

Suppliers shall have trained (preferably certified) personnel with the ability to quickly and permanently resolve product and process issues using data driven problem resolution tools and techniques. Problem resolution must be conducted using a defined, structured process like the 8-Discipline process, Six Sigma DMAIC (Define, Measure, Analyse, Improve, Control) or any process that includes verification of the root cause and validation of corrective action effectiveness.

Data driven techniques should also be used during the process design, verification and validation phases of the APQP process in order to prevent problems with new or changing products and processes. These data driven tools and techniques include but are not limited to: Failure Mode and Effects Analysis (FMEA), Measurement System Analysis (MSA), Statistical Process Control (SPC), Design of Experiments (DOE) and Taguchi Methods.

Product design responsible suppliers must use reliability methods during the product design, verification and validation phases of the APQP process in order to assure the robustness and durability of their product design for the intended application or as specified by BTS.

2.28 Supplier 4-Step Incoming Quality Process

BTS utilizes a 4-Step Incoming Quality Process to resolve supplier performance issues (e.g., quality, delivery, etc.). The four basic steps are shown in the diagram below:

Step 1 – Remedial Communication

A non-conformance report (e.g. NCR) is issued when an BTS receiving site receives material or service that fails to conform to applicable quality and delivery specifications. Within 24 hours of receipt of the non-conformance report, the supplier is required to submit a formal, interim Problem Solving Report to the BTS receiving plant quality department. At a minimum, this corrective action shall identify the problem, the immediate containment actions that have been implemented to assure nonconforming product is not shipped to BTS, and the potential root cause(s) of the problem. For non-conformances related to Motor Vehicle or Environmental Safety or which cause a major disruption (e.g., stop shipment, line shutdown,), an action plan is required immediately after notification.

8D shall be submitted no later than thirty (30) calendar days after receipt of the non-conformance report, unless otherwise specified by BTS.

Costs and charges incurred by BTS associated with shipping, handling, processing, reworking, inspecting, engineering verification and replacing supplier responsible defective material including the costs of value-added operations prior to its discovery are the responsibility of the supplier.

Step 2 – Working Meeting

A working meeting is a BTS plant led activity to address specific supplier performance issues not resolved in a timely fashion at Step 1. Working meetings focus on the development of an action plan to prevent or eliminate the root cause of the issue. The supplier is expected to submit periodic updates until the issue is resolved.

Step 3 – Incoming Quality (IQ) Meeting

An IQ meeting is a BTS plant led activity to address supplier performance issues not resolved in a timely fashion at Step 2. The purpose of the IQ Meeting is to identify, and mutually agree to, all actions required for the permanent resolution of the systemic and particular issues that led to the Supplier's unsatisfactory performance. The supplier shall come prepared to address the following:

- Summary of events relating to the Supplier's performance concerns.

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- Completed QRCM Problem Solving Report (8D) including containment actions, root cause analysis, corrective action and verification data and status.
- Preventive action plans and status to address systemic root cause(s)
- Strategic improvement plans

At the IQ meeting, BTS and the Supplier must agree on the Exit Criteria. In addition, action plans that exceed 90 days duration may require supplier justification and may warrant interim IQ meeting reviews. The supplier is expected to submit periodic updates until the issue is resolved.

Step 4 – Super IQ Meeting

A Super IQ meeting is a activity involving the Executive Management of both BTS and the supplier. The meeting addresses issues not resolved in a timely fashion during Step 3.

The supplier will be prohibited from bidding on new business and may be in jeopardy of losing current business at this stage of the 4 Step process. Suppliers who are placed on New Business Hold must remain in tolerance for six consecutive months in order to be removed from New Business Hold. Suppliers will be formally notified by their BTS buyer when they are placed on or removed off of New Business Hold.

BTS may request an extra audit from the supplier's registrar in cases of on-going performance issues. The cost of the audit will be the responsibility of the supplier.

2.29 Product or Process Deviations

It is the policy of BTS to **not** accept product that does not meet the requirements of the applicable drawings and specifications. Requests for deviations on nonconforming product shall be submitted to the BTS receiving plant for review and approval and to obtain BTS customer approval, as required, prior to shipment. Deviations shall be approved only for a specific time period order or quantity of parts. No permanent deviations are permitted.

A deviation request shall be accompanied by a QRCM Problem Solving Report. This report shall include the identification of a clean point and the manner in which product will be identified, including how traceability will be maintained.

2.30 Charges for Supplier Responsible Non-conformances

An appropriate charge may be imposed by the BTS receiving plant for the following reasons:

- a) Non-conformance Report or Nonconforming Service.
- b) Non-conforming Product Deviation Requests.
- c) PPAP submission rejections, delays or shipments of unapproved product.
- d) Delivery Performance Failures (in addition to any specific costs incurred by BTS associated with the failure).

A supplier who causes an BTS line or final customer shutdown, may be required to reimburse BTS for the full cost of production downtime, as well as any OEM imposed charges.

If a supplier believes that they have been unfairly charged for administrative fees, they shall contact their Procurement representative to initiate a dispute resolution process. Note: Dispute resolution regarding actual non-conformances should be handled through the plant Quality representative.

2.31 Record Retention

Suppliers are required to maintain production part approval process (PPAP) packages, annual layout and validation records, tooling records, traceability records, engineering records, purchase orders and amendments for the length of time that the part (or part family) is active for production and service requirements plus one calendar year or a minimum of 10 years whichever is longer, unless otherwise specified by BTS. Corrective Action records are to be retained for 5 years. Quality performance records such as control charts and inspection and test results are retained for 10 years.

The above time periods are considered "minimum". All retention times shall meet or exceed the above requirements and any governmental requirements.