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**BRIDGESTONE TG AUSTRALIA PTY. LTD.**

**SUPPLIER MANUAL**

**OCTOBER 2009**

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### 1. INTRODUCTION

#### A. **Scope**

The BSTG Supplier Quality Assurance Manual applies to those companies which supply materials and subcomponents intended for direct inclusion into finished products for the automotive industry, or aid in production related processes.

#### B. **Applicability**

This document and current editions of the following quality system models, detail the system requirements for supply of product to BSTG

- TS/ISO 16949
- ISO 9001
- Production Part Approval Process (PPAP)
- Advanced Product Quality Planning (APQP)
- Statistical Process Control (SPC)
- Potential Failure Mode and Effects Analysis (PFMEA)
- Measurement Systems Analysis
- BSTG customer specific requirements as appropriate: TMCA 6S, Ford Q1, Holden Manuals etc)

The above documents are available internationally via AIAG USA or FAPM in Australia. All ISO related documents may be obtained from SAI-Global.

#### C. **Quality System Certification**

BSTG requires that suppliers shall be third party certified to a current edition of ISO 9001 as a minimum, unless otherwise approved by BSTG's customers.

Preferred alternative is a current edition of ISO/TS 16949

#### D. **Environment**

BSTG is committed to the continual improvement of its Environmental Management System, certified to a current edition of ISO14001, and encourages and supports suppliers who follow sound environmental principles.

#### E. **Materials Use Restrictions**

Where customer drawings stipulate materials use restrictions, International Material Data System Global (IMDS) shall be applied regardless of the customer.

International Material Data System Global is an automotive industry material data system which is available on the world wide web at the following location

<http://www.mdsystem.com/index.jsp>

#### F. **Clarification**

Clarification of any of the requirements in this document may be forwarded to the attention of the BSTG Quality Assurance Department.

#### G. **Critical / Safety Characteristics**

Critical / Safety Characteristics are designated by use of the symbol 'S' inside of an inverted

diamond on BSTG system documentation and should be referenced in the supplier documentation where applicable (for example Failure Mode and Effect Analysis, Process Control Plans, part drawings). The creation of inspection requirements related to critical characteristics will only be developed by BSTG.

#### **H. Material Certification**

Material Certification is required to ensure that materials supplied to BSTG meet the agreed specification. Where considered necessary, BSTG will request that prior to delivery of material, certification is provided to the Purchasing Department, but at all other times, material certification or test results be available within 24 hours of a BSTG request. For bulk deliveries, a Tanker Clearance Certificate must be provided on arrival of the material at BSTG

### **2. SUPPLIER PERFORMANCE – MONITORING & RATING**

#### **A. Performance Rating - Overall**

Supplier performance rating is conducted by the BSTG Purchasing Department on a monthly basis and is communicated to the supplier when three consecutive months of a D Rating or ongoing poor performance is encountered. Supplier management may be requested to attend at BSTG to present a performance improvement plan. Where poor performance is due to ongoing quality problems, supplier quality performance will be monitored in Parts Per Million (PPM) for a 12 month period, with a Parts Per Million target being 0 ppm by the end of that period.

The rating calculation is by a demerit system, and is a combination of delivery performance and quality performance as documented below.

Rating	Demerit Point Score	Performance
A	0	(good)
B	5	(satisfactory)
C	10	(improvement required)
D	11+	(unacceptable)

#### **B. Quality Performance**

Each incident has its quality performance rating notified through issue of the Supplier Quality Problem Report (SQPR). Ratings are scored using a point system, as shown in the table below.

Supplier related Occupational Health Safety and Welfare and Environmental issues shall also be communicated to the supplier via the issue of the Supplier Quality Problem Report form.

Problem	Demerit Points
Critical / Safety / Environment	20
Major – Fit / Function	15
Major – Appearance	10
Minor	5
History	
Nil previous occurrences	0
Previously occurred – once	5
Previously occurred – numerous	10
Reaction to Problem	
No immediate response	+10
No effective containment action	+20
Root cause not adequately defined	+20
Root cause response late	+5pt / week

**C. Delivery Performance**

100% on time delivery performance is expected of suppliers to BSTG. Late delivery performance shall be communicated to suppliers through issuing of the Supplier Delivery Performance Report (SDPR), by the BSTG Purchasing Officer. Also, early or over-delivery are not acceptable to BSTG without prior documented consent from the BSTG Purchasing Officer.

Demerit points shall be allocated in accordance with the table below.

Description	Demerit Points
SDPR Raised	5
No counter measure reply	+5
Inadequate response	+5
Multiple SDPR's issued for month	+10

**3. PPAP - PRODUCTION PART APPROVAL PROCESS**

**A. Scope**

The use of PPAP (Production Part Approval Process) methodologies and paperwork is a prerequisite for supply of all components and materials for direct inclusion in the manufacture of production components.

**B. Submission levels**

Level 2 is the default submission level for components supplied to BSTG.

The extent of submission for materials shall be as agreed with the BSTG Quality Engineer with assistance from the BSTG Materials / Process Development Manager or delegate. Variation from the above shall be advised by the BSTG Quality Engineer.

**C. Advanced Product Quality Planning (APQP)**

Suppliers of components to BSTG are required to apply Advanced Product Quality Planning (APQP) methodologies through the design and engineering stages, up to and including volume production. The following documentation is required to be submitted at PPAP (in all cases), or upon request by BSTG Quality Engineer, Product Engineer or Purchasing Department:

- design FMEA (as appropriate)
- process FMEA
- process control plan

- process flow chart

Even if parts or assemblies have previously been or are currently supplied to end customers or other members within the Toyoda Gosei Ltd group of companies, PPAP submissions are still required.

**D. Inherited Parts**

Where BSTG are required to 'inherit' parts or assemblies from a supplier who was previously supplying the end customer, or other members within the Toyoda Gosei Ltd group of companies, the same requirements shall be necessary in the form of PPAP submissions.

**E. General**

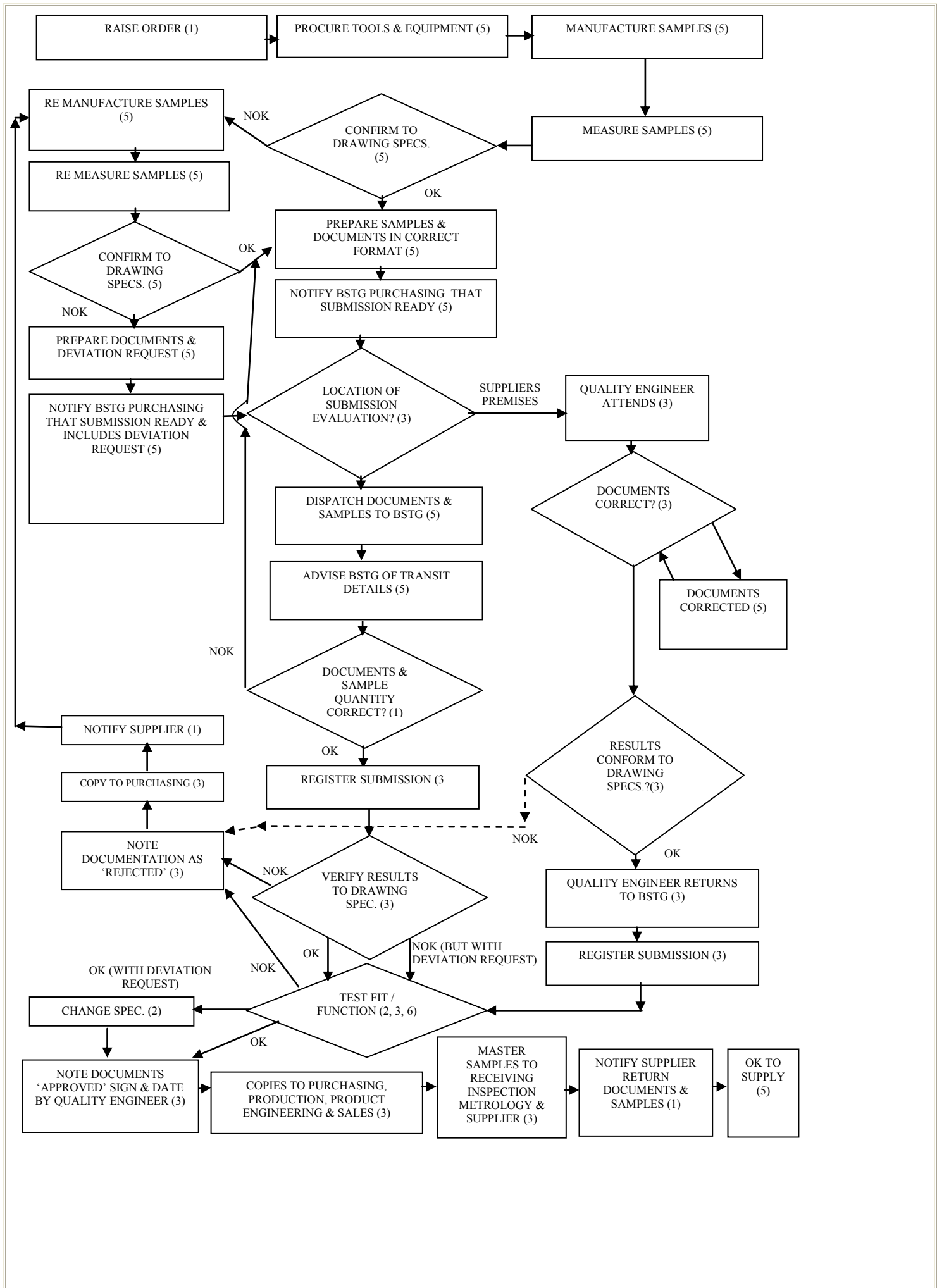
- a. It is the supplier's responsibility to ensure that only parts conforming to all nominated specification characteristic requirements are supplied as sample or production parts.
- b. Sample quantity for all submissions of components to BSTG shall be 6 samples minimum.
- c. If components are from multi- cavity tooling a complete dimensional report is required for one part minimum from each cavity.
- d. If hand made or mocked up parts are required to be submitted, they shall be clearly indicated as such on submission documentation. Parts meeting this description shall not be granted Full Approval.
- e. It is the supplier's responsibility to ensure that all characteristics shown on the agreed engineering drawing shall be addressed in the submission paperwork, including all requirements within engineering and material test specifications nominated. E.g.; HN#####, ES-X##### etc.
- f. Actual dimensional / test results are required. Statements of conformance will not be acceptance as evidence of conformance.
- g. Dimensional / test results submitted for PPAP shall be no greater than 12 months old at time of documentation submission to BSTG.
- h. Submission disposition (Approved / Limited Approval / Rejected) shall be advised to the supplier, in writing, by the BSTG Purchasing Department.
- i. Where submissions have been granted Limited Approval / Rejected, corrected samples and satisfactory resubmission are required prior to commencement of production volumes. Corrective actions and timing for resubmission shall be negotiated with the BSTG Quality Assurance Department.
- j. The supplier shall ensure the relevant buyer in the BSTG Purchasing Department shall be copied in on all correspondence to BSTG.

**F. PPAP Approval Flow Chart**

Flow diagram code:

No. Who:

- 1) Supply
- 2) Product Engineering
- 3) Quality Assurance
- 4) Sales
- 5) Supplier
- 6) Production



#### 4. **BSTG REQUIREMENT**

##### A. **Record Retention**

Where the end customer does not define the specific records to be maintained, Production Part Approvals (PPAP), inspection & test data, and tooling records are to be maintained by the supplier.

In order to ensure that all end customer requirements are met by suppliers, BSTG request that all quality records pertaining to critical / safety characteristic parts are maintained for a period of 25 years, and those pertaining to part performance and history are maintained for a period of 10 years minimum after end of product life.


All records pertaining to critical / safety characteristics parts shall be retrievable within a time period of 24 hours. All other records shall be retrievable within 3 working days.

##### B. **Breakpoint Deliveries**

It is the supplier's responsibility to identify modified or otherwise designated deliveries of material delivered to BSTG through the application of a Breakpoint label.

- a. Australian based suppliers are required to use the FCAI industry standard label shown below. Internationally based suppliers may use a locally accepted equivalent, provided that space is available for the initiator's name, recipient's name, concession / change details, part number and the supplier's name.
- b. To ensure that Breakpoint labels are easily noticed by BSTG stores personnel, labels should be placed on the outside of cartons and no less than 100mm X 150mm in size.
- c. Advance notice (2 working days minimum) shall be provided to BSTG Purchasing Department prior to despatch of 'Breakpointed' product to BSTG.
- d. Following the issue suppliers are to breakpoint the following 2 production deliveries as certified stock.
- e. A breakpoint label is to be attached to the outside of each container of each delivery lot, and marked to the attention of the BSTG Quality Engineer.

FCAI / FAPM Industry Standard Breakpoint Label Example:

PART NUMBER		
RAISED BY	QUANTITY	DETAIL OF CHANGE
ATTENTION TO		
BREAK POINT DATE		
APPROVED/CONCESSION		CHANGE REFERENCE No.
		ISSUE LEVEL
 SUPPLIER		

**C. Deviation / Waiver Request**

Conditions necessitating deviation - a deviation request may be sought by the supplier under the following circumstances:

- Goods from a supplier do not meet specified requirements, when the deficiency does not adversely affect appearance or functionality of the part, or any possible product liability.
- Goods require rework due to a quality concern.
- There is a necessary change in production method or optional constructional material; for a temporary period only.
- A supplier requests an exemption from a specified management system / customer requirement.

Complete a copy of the Supplier Deviation Request form with the relevant details and the period / quantity of parts that the deviation is required for.

Send the completed form to the BSTG Purchasing Department, together with supporting test data / samples if appropriate.

Approval / rejection will be advised in writing by the BSTG Purchasing Department or BSTG Quality Engineer as appropriate.

It is the supplier's responsibility to maintain a record of the quantity / period authorised, and manage said product or system requirement accordingly. Upon expiry of the deviation period, the supplier shall comply with the original or superseding requirements. Products supplied under deviation may require further verification upon receipt at BSTG.

**D. Verification of Goods Delivered to BSTG**

It is the suppliers' responsibility to determine and conduct suitable and effective verification activities to ensure that product delivered to BSTG meets agreed requirements. Such activities shall be documented in the suppliers' Process Control Plan documentation.

BSTG reserves the right to conduct system / process / product audits at the supplier's premises to ensure that verification and control activities are undertaken as documented. BSTG conducts systemic reviews of suppliers to ensure implementation of corrective actions across the supplier facilities for all issues resulting in stop ship or field action.

BSTG recommends the use of error proofing practices for verification of critical / safety characteristics parts.

BSTG will accept the following as evidence of supplier verification activity:

- Receipt of SPC data on a regular basis (quarterly minimum)
- Inspection reports / test results / certificates of analysis

BSTG conducts receiving inspection activity on a needs basis only. That is, BSTG assumes all verification documentation is correct and that product is to BSTG requirements unless packaging is visibly damaged on arrival.

For bulk chemical deliveries for inclusion into bulk storage tanks - please refer to 4.E below.

#### E. **Bulk Tanker Deliveries**

Only bulk tanker supplied liquids that have been certified as being correct to type and specification shall be introduced to BSTG bulk storage tanks.

- a. To ensure the above the following documentation must accompany or precede the delivery and shall be presented to the BSTG Laboratory Technician at the time of the delivery:-
  - Certificate of analysis - matching the agreed raw material specification, and shall supply actual test results achieved and display batch use by date. General statements of conformance will not be accepted.
  - Tanker Clearance (cleanliness) Certificate – shall indicate previous load and tank cleanliness details.
- b. A sample of material shall be taken in a clean container, sealed and labelled appropriately, and passed to the BSTG Laboratory Technician for receiving inspection testing. (FTIR purity scan).
- c. Where possible tanker deliveries should occur between the hours of 8:30am - 12:00pm. In circumstances where BSTG Laboratory staff are not available BSTG Stores / Security Office staff may take sample and documentation stated in 4 E a above, and forward to the BSTG Laboratory for testing at the soonest available opportunity.

If the subsequent receiving inspection activity finds the liquid to not be within specification, the supplier shall be responsible for recovery and replacement of all material held in that bulk storage tank, which would then be deemed as contaminated.

#### F. **Reporting Quality Problems and Corrective Actions**

##### a. **Supplier Quality Problem Report**

Problems with supplied material will be communicated to the supplier through the issue of a Supplier Quality Problem Report (SQPR), by the BSTG Quality Engineer.

##### b. **Containment**

- I. Upon receipt of a Supplier Quality Problem Report, it is the supplier's responsibility to undertake immediate containment actions in order to prevent release of further nonconforming product to BSTG, and detail short term fix on the Supplier Quality Problem Report response form within 24 hours.

- II. The supplier may be requested to attend at BSTG, or provide labour, to conduct inspection activity of existing stock located at BSTG, at supplier's own cost.
- III. In the event that the supplier is unable to arrange for inspection activity on site at BSTG, the BSTG Quality Engineer may arrange alternative labour on the supplier's behalf. The costs for such activity are then to be recorded, and an invoice supplied to the supplier to recover costs.

c. Root cause investigation and corrective actions

- I. Suppliers are to have a problem solving methodology.
- II. BSTG may conduct an audit at the supplier's premises to verify effectiveness of corrective actions implemented by suppliers.
- III. Thorough investigation into the root cause shall be conducted by the supplier, and details of root cause, corrective action and implementation dates shall be communicated to the BSTG Quality Engineer on the Supplier Quality Problem Report Response form within 5 working days of receipt of the Supplier Quality Problem Report.
- IV. Evidence of implementation of corrective and preventive actions shall also be presented to the BSTG Quality Engineer upon request.

d. Follow up activities

Following the issue of a Supplier Quality Problem Report, it is a BSTG requirement that the supplier breakpoints for the period stated in the topic 'Break Point Deliveries' stated above.

**G. Confidentiality Agreements**

Some information provided to suppliers by BSTG and its customers require a confidentiality agreement. This documentation shall be organised by the BSTG responsible officer, and shall be acknowledged signed by the supplier's senior management upon request.

This, and BSTG Terms and Conditions are covered in BSTG's Request for Quotation documentation.

**H. Material Handling**

Material handling at BSTG is conducted using forklift trucks, tow motors and trailers, together with limited use of pedestrian operated pallet trucks and conveyors.

In order to make full use of this equipment, BSTG insist that wherever practicable and economically justified, goods are supplied in unit loads, so that unloading of vehicles can be carried out mechanically and a quick turn around of vehicles can be assured.

a. Identification and labelling

Whenever practicable, the FCAI standard labelling should be used displaying BSTG part number, product description, pack quantity and traceability reference.

b. Pack sizes and weights

- I. Pack size and method shall be agreed between the supplier and BSTG prior to

first production shipment. BSTG Packaging Data Sheet shall be completed by the supplier and approved within BSTG. The packaging data sheet should be submitted at the time of quotation.

- II. The manually handled pack size, weight, handling frequency and other factors should be considered in package design to ensure that risks of injury are minimised. Risk assessments should be conducted by the supplier for packaging proposals, and should be reviewed by BSTG in accordance with appropriate OHS&W and Environmental requirements. It is preferred that when manual handling is required, individual containers do not exceed 16 Kgs weight and are designed to be easily lifted by one person.
- III. It is essential that adopted packing methods are economical, adhere to legislative, regulatory and BSTG requirements.
- IV. Recyclable / returnable packaging is preferred where practical.
- V. All deliveries shall be on Australian Standard\* sized pallets unless prior written approval is given by the BSTG Stores Team Coordinator. If not, suppliers may be requested to unload products or materials onto standard pallets.
- VI. Note: (\*)Australian Standard sized pallet: 1165mm x 1165mm, 7 x top slats, 5 x bottom slats, & 3 x load support beams.

c. Unit Loads

- I. Unit load gross weight must not exceed 1500 kg at 600 mm (24 inches) load centres. In special circumstances, approval is to be sought from the BSTG Stores Team Coordinator.
- II. Overall height of unit (pallet) loads should not exceed 1200 mm (approximately 4 feet).
- III. Specialised stillages and containers may be used for special applications, so that loads can maximise utilisation of transport vehicles and warehouse facilities.

d. Safety

- I. Shipping Containers shall be maintained in a good state of repair and must be designed in such a way that handling without special safety precautions is possible.
- II. Stillages must locate positively when stacked to satisfy safety requirements.
- III. Inflammable and hazardous materials must be packed and transported in accordance with applicable regulations.
- IV. All pallets must be in good repair without loose or missing boards.

## 5. WARRANTY CRITERIA

BSTG requires the suppliers, as the experts in the components supplied, to be committed to a programme of continuous quality improvement. In the event of field concerns the supplier is to put in place a system of containment, root cause investigation and permanent corrective action as a matter of priority. BSTG expects all suppliers to accept the warranty period as per the OE customer accepted vehicle warranty period.

### A. Warranty Claim and Cost Reimbursement

The primary focus for warranty from the supplier must be corrective actions. BSTG will seek

reasonable costs reimbursement based on charges from the end customer to include part costs, handling costs, labour costs and administration costs as part of warranty investigation and design responsibility. BSTG will provide an invoice for warranty costs recovery.

## **B. Report of Investigation for Warranty Components**

BSTG will supply a detailed claim with supporting data, plus components where appropriate, to enable the supplier to fully investigate the condition. Where components have been returned to the supplier, BSTG requests a monthly report detailing full root cause, corrective actions and Breakpoint details.

## **6. REVISION STATUS**

Revision Level	Date Issued	Revision Details
Initial	25 October 1999	-
Second Issue	07 December 2000	Inclusion of Environmental Policy and subsequent environmental considerations, Supplier Deviation form.
Third Issue	2 April 2005	Reissued in revised format Available via BSTG website
Fourth edition	1 November 2005	Reissued with APQP update
Fifth edition	24 March 2006	- GADSL replaces GMW3059 - PPAP of parts - breakpoint details amended - recovery of costs for inspection conducted for suppliers
Sixth edition	13 August 2007	updated record retention, system, critical characteristic symbol and PPAP level requirements
Seventh edition	26 November 2007	problem solving methodology, reviews, audits, critical characteristic requirements added
eight edition	22 October 2009	Changes to problem solving, manual name, BSTG audits and warranty criteria added.

## **7. ATTACHMENTS**

- [Supplier Deviation Request Form](#)
- [Supplier Quality Problem Report \(SQPR\) Response Form](#)
- [Tanker Clearance Certificate](#)