HBPO
THE MODULE COMPANY

Always in front!

Supplier Manual

HBPO North America

1 Intention

The intention of this manual is to facilitate the communication of HBPO North America's supplier requirements to its supply partners (any company providing pre-production, production or service parts to HBPO).

HBPO requires that its suppliers:

- Acknowledge that achievement of ZERO DEFECTS is a fundamental objective for quality and delivery performance. Manage facilities, processes, quality systems and personnel to consistently and cost effectively produce products that meets or exceeds the needs of HBPO and its Customers.
- Develop and implement advanced product quality planning, practices and procedures in accordance with TS16949 specifications, utilizing the AIAG Advanced Product Quality Planning (APQP), Failure Mode Effects Analysis (FMEA) and Control Plan reference manuals, unless otherwise specified by HBPO and/or its Customer.
- Provide objective evidence that supplied products satisfy all part approval requirements including acceptable process capabilities for all part characteristics that have been determined to be of significance.
- Utilize appropriate statistical techniques for on-going process control and improvement (as established in the AIAG Statistical Process Control / MSA manual).
- Be committed to continuous improvement in all areas by emphasizing variation reduction, process efficiency, and waste elimination.
- Operate an environmental management system which will observe the standard regulations applied nationally and in the industry (e.g., ISO14001), minimize the consumption of natural resources and meet the requirements of HBPO (and its customers) for the recycling and disposal of the supplied products in a demonstrable manner.
- Meet the HBPO requirements in regards to the use, control and supply of returnable packaging.
- Obtain and maintain current issues of all the related quality manuals/specifications (see Appendix A).
- Develop processes to comply with Customer Specific Requirements (i.e., HBPO and OEM).

2 Scope

The details stipulated within this manual are intended as the minimum mandatory requirements for HBPO's supply partners (any company providing pre-production, production or service parts to HBPO).

3 Responsibility

HBPO Quality Management (HBPO-QM) is responsible for the creation, maintenance and approval of this document. All HBPO departments are responsible for the department-specific content contained in this manual.

4 Description

The HBPO supplier requirements are based upon the latest edition of the ISO/TS16949 standard for automotive quality systems. HBPO also recognizes the ISO14001 Environmental Management Standard and other related customer-specific requirements as they apply to automotive production, assembly and relevant service part organizations. This supplier manual is designed to work in conjunction with all other HBPO supplier agreements and does not supersede any of these agreements.

4.1 INTRODUCTION

Always in front

Growing complexity in vehicle construction is accompanied by increasingly limited resources available to research and development. As a result many manufacturers are relying on the technological know-how of module specialists such as HBPO. In the field of integrated front-end modules we are the world's only supplier offering the entire process chain, from design via development and assembly right down to logistics operations – while at the same time setting new benchmarks on the market with solutions which are as technically advanced as they are financially attractive.

Feel free to learn more about the HBPO Group at our website:

www.hbpogroup.com

HBPO Quality Policy

We meet or exceed the expectations of our customers, share-holders, partners and employees thanks to first-class products and services, quality, dedication and innovation. We guarantee this through our continuous improvement, efficient processes and employees who accept responsibility for their own actions.

4.2 SUPPLIER APPROVAL

The supplier will be assessed using the HBPO Supplier Assessment Tool (**HBPO-F-703**). This will be made available to the supplier to perform a self-assessment if they wish to be a part of the bidding process. In order to become a supply partner to HBPO, an on-site assessment must be completed by HBPO personnel to verify the supplier's self-assessment findings.

If it is determined that supplier development is needed, the goal is to have supplier compliance to an industry recognized quality management system within 18 months from the first Supplier Assessment date. Minimum supplier compliance shall be certification by an accredited certification body to the ISO9001 Quality Management standard (latest release); plus any requirements specified by HBPO. The supplier shall also guarantee ongoing effort to permanently improve this system in accordance with the latest technical developments, in order to eventually meet the requirements of ISO/TS16949 (latest release). Assessment by an OEM or an OEM approved second party may be recognized as meeting supplier quality system compliance requirements.

Suppliers are expected to comply with the guidelines specified in the following AIAG Reference Manuals: Advanced Product Quality Planning (APQP), Production Part Approval Process (PPAP), Failure Mode and Effects Analysis (FMEA), Measurement Systems Analysis (MSA), and Statistical Process Control (SPC). Additional requirements are noted in this supplier manual, and others may be communicated by HBPO as our requirements or the requirements of our Customers change.

The supplier will be required to sign a Purchasing Confidentiality Agreement regarding HBPO requirements in reference to information disclosure prior to any product development documents, media and information sharing and / or supplier visits to HBPO plants.

4.2.1 Sub-Supplier Approval

Each supplier to HBPO is responsible for the control and continuous improvement efforts of its sub-suppliers. Sub-suppliers that provide production goods and services must implement and document appropriate controls. On a periodic basis, the supplier shall review sub-supplier controls, quality management systems, and improvement plans. They shall require their sub-suppliers to conform to the requirements specified herein. For the purpose of sub-supplier development, compliance to the ISO9000 Quality Management Series of Standards, ISO/TS16949, AVSQ, EAQF, or VDA6, as applicable, are acceptable systems.

HBPO reserves the right for on-site visits to sub-supplier facilities.

4.2.2 Business Award

A supplier sourcing meeting for present and potential suppliers offering new products or services may be required upon business award to the supplier. Technical, quality, manufacturing, engineering, purchasing, delivery, and business issues can be reviewed during this meeting to provide the supplier with a thorough understanding of HBPO expectations, as well as an opportunity for a team-based introduction. Meeting minutes should be kept, and any action plans arising from the meeting should be signed by both parties.

Upon award of business the following requirements shall be met prior to Purchase Order issuance:

- Agreements reviewed and signed by Supplier:
  - Purchasing Confidentiality Agreement (**HBPO-F-710**)
  - General Supply Agreement (**HBPO-F-105**)
  - Quality Assurance Agreement (**HBPO-F-012**)
  - Warranty Agreement (**HBPO-F-085**)
  - General Logistics Agreement (**HBPO-F-732**)
- Chargeback amounts associated with any non-conformance issue will be reviewed with the supplier.
- Supplier is required to provide detailed company information and key plant contacts to HBPO using the HBPO Supplier Profile (**HBPO-F-762**) form.

4.3 PART SPECIFIC REQUIREMENTS

4.3.1 Manufacturing Location / Capacity

It is HBPO's intent to purchase material only from approved sources.

Plant layouts should minimize material travel and handling, facilitate synchronous material flow and maximize value-added use of floor space.

Supplier must meet volume requirements stated in the HBPO Request for Quote, or stated by the OEM.

4.3.2 Electronic Data Interchange (EDI) Requirements

Supplier shall make use of a computerized system for the receipt of Customer planning information and ship schedules and for on-line transmittal of Advance Shipment Notification (ASN) transmitted at the time of shipment.

Suppliers shall have a back up method in the event that the on-line system fails.

4.3.3 Supplier Logistics, Packaging and Label Guidelines

The Standard Logistic Specification Requirement (**HBPO-F-082**) defines the requirements of HBPO to the supplier and secures the process of the supply chain. It is valid in connection with the main delivery contract. It includes, among others, guidelines for package cleanliness, protection, closure and safety. A current version of the specification is available for download at www.hbpogroup.com. The document can be found under: English version > Core Competencies > Purchasing & Procurement > Information for Suppliers.

Each container, rack, box, or pallet of material shipped to HBPO shall be identified as instructed by HBPO, including traceability back to specific supplier manufacturing and inspection records.

Suppliers shall be responsible for maintaining written instructions, detailing proper packaging, storage, and shipping of its products that conform to the HBPO requirements to prevent damage, deterioration, etc.

Other HBPO logistic, packaging, and labeling documents for reference:

- Packaging Approval (**HBPO-F-055**)
- Packaging Instruction (**HBPO-F-090**)
- Specification Sheet Special Containers (**HBPO-F-084**)
- Logistic Cost Calculation (**HBPO-F-053**)
- Standard Logistic Label Requirement Specification (**HBPO-I-722**)

4.3.4 Materials Reporting

All suppliers must provide evidence of materials, substances, and recyclability data submission and acceptance. This is normally done through the use of the International Material Data System (IMDS).

- Part approvals will not be granted without approved IMDS submissions when necessary.
- Print out of the 'Recipient Data' from IMDS is considered valid evidence of submission.
- Suppliers are responsible for cascading this requirement to their respective Sub-Suppliers.

4.3.5 Delivery Requirements

HBPO requires 100% on time delivery. Costs incurred as a result of delivery non-conformance shall be the responsibility of the supplier. When notified of a delivery non-conformance, the supplier, at a minimum, shall follow the HBPO corrective action reporting process, which is outlined in the official rejection notice sent to the supplier.

4.4 ENGINEERING

4.4.1 Special (Key Product) Characteristics

Special Characteristics or Key Product Characteristics are product and/or process characteristics that have a significant impact on subsequent operations, product function, safety, or customer satisfaction.

The supplier shall provide evidence via supporting documents in respect to the identification of Special (Key Product) Characteristics per requirements stated in the ISO/TS16949 specification (7.3.2.3 Special Characteristics).

At a minimum, all customer characteristics and product performance functions should be identified as Special Characteristics. Characteristics deemed safety related or safety critical, should utilize a distinguishing symbol so as to denote their importance above other Special Characteristic symbols.

4.4.2 Material and Process Specifications

The supplier shall adhere to material and process specifications established for the acceptability of Special Characteristics.

Process specifications shall include those required by HBPO for identification and packaging of materials as stated in the Standard Logistic Specification Requirements.

Supporting documents are to include evidence to demonstrate the use of customer-specific (HBPO /OEM) material identification requirements outlined in engineering specifications and/or design records.

4.4.3 Tolerancing / GD&T / Measurement / Part Identification

The supplier shall adhere to specified product and/or process tolerances for measurable characteristics used to manufacture or assemble a component or system that has a significant impact on the function, quality or reliability of that part or system.

Measurements are to be taken with approved measurement and test equipment that has been inspected, calibrated and determined to have acceptable gage error through Measurement System Analysis (Gage R&R), reference 3.1 for more details.

Parts and gages shall be identified within the supplier's system through the use of a unique identification number that shall be traceable through all aspects of production and the end use.

CMM measurement reporting shall be done in accordance with the HBPO CMM Reporting guideline (**HBPO-I-752**) unless otherwise agreed to with HBPO prior to beginning the measurement process.

4.4.4 Warranty / Product Safety and Liability

Due care and product safety shall be included in the supplier's design control, process control, policies and practices. Characteristics and Performance requirements which affect the safe operation of the product shall be identified in accordance with the requirements for Special Characteristics.

The supplier shall consider product liability during process design and/or product design. For Product Liability the supplier must perform a Product Liability risk assessment, Design Reviews, Design Verification and Product Validation testing. Documented proof of these efforts will be made available to HBPO upon request. For the purposes of a risk assessment HPBO utilizes the AIAG Potential Failure Mode and Effects Analysis (FMEA). The supplier may utilize this or any method which accomplishes the goal of protecting themselves against Product Liability.

Product traceability shall be established and linked to unique label serial numbers as per HBPO's Standard Logistic Label Requirement Specification (**HBPO-I-722**). Traceability shall be able to verify product history, processing steps, location, raw material lots used within one (1) shift worth of production unless otherwise agreed by HBPO.

4.4.5 Plant Specific Design & Build Standards

Supplier shall adhere to relevant design and build standards necessary to ensure that parts comply with fitness for use requirements.

4.5 QUALITY

4.5.1 Preproduction Quality

Preproduction parts with documentation of specification conformance shall be submitted by the supplier for engineering validation testing to the stipulated HBPO site as instructed by the HBPO Project Team.

Each sample or prototype, at a minimum, must be accompanied by a completed dimensional results report, material test results report, and performance test results report as described in the AIAG PPAP manual.

Any specific instructions, in addition to these stated requirements, should be agreed to and documented prior to the supplier undertaking any effort to produce the prototype parts.

4.5.2 Quality Planning Requirements

The Advanced Quality Planning process utilized is intended to identify for the HBPO Project Team:

- The Plan to meet and exceed customer expectations (both internal & external).
- All potential and real risks that affect product integrity.
- All opportunities to incorporate mistake-proofing techniques (poka-yoke) in accordance with a Zero Defect objective.
- Early detection of changes in product or manufacturing processes.

The supplier may be required to follow specific OEM dictated process/product development and/or documentation.

Adherence to minimum required capabilities for all product significant characteristics is required.

Quality planning shall also include packaging and labeling requirements referenced in the Standard Logistic Specification Requirement (**HBPO-F-082**)

4.5.3 Manufacturing Process Review

At the discretion of the HBPO project team, a systematic and sequential review of a supplier's manufacturing process may be conducted at the supplier's facility prior to part approval submission. The process to be utilized for the review may be a customer specified process (e.g., Chrysler PSO, Ford Capacity Analysis Report, etc.) or HBPO's audit process, as determined by the HBPO project team.

Process review shall include a witnessed Production Trial Run (Run at Rate) which should include a minimum of 300 samples or 8 hrs of production (which ever greater) unless approved otherwise by HBPO due to product / process constraints.

The Production Trial Run (PTR) or Run at Rate (R@R) shall demonstrate 115 % capacity of quoted volume.

4.5.4 Capability / SPC Requirements

Product or process characteristics identified as Special Characteristics are expected to achieve a process capability greater than 1.33 Cpk (1.67 Ppk).

The certificate of analysis must contain the actual results of physical testing and/or measurements specified by the engineering specification/ design record.

SPC data must be documented on special characteristics. For additional information, refer to the AIAG SPC and MSA (Measuring Systems Analysis) manuals.

4.5.5 Rating System

HBPO will provide Supplier PPM and Delivery performance upon request. Automated reporting system will be available at later time.

4.5.6 Known Problems

The supplier shall maintain records of known problems with implementation of a disciplined approach for analyzing problems to determine and eliminate root causes (i.e. Chrysler 8-step Process, Ford Global 8D, General Motors PR&R [GP-5], VW- etc.).

4.5.7 Return Material Policy

It is the policy of HBPO **not** to accept product that does not meet the requirements of the applicable drawings and specifications.

Costs associated with the returned material (i.e. non-conformance, delivery, etc.) through shipping, handling, processing, inspection and replacement including value-added operations shall be charged to and paid by the supplier.

4.5.8 Quality Inspection Report (Corrective Action System)

A Quality Inspection Report may be issued for received material or service that fails to conform to applicable quality and delivery specifications.

Non-conformances related to packaging issues may also initiate a Quality Inspection Report for failure to comply with Standard Logistic Specification Requirements.

A completed root cause analysis (e.g. 8-d, 8-step), listing corrective actions, verification of corrective action, and system prevention actions must be submitted no later than seven (7) days after notification of the non-conformance and /or receipt of Quality Inspection Report. In case of delay due to the nature of the non-conformance or other unforeseen events, Supplier is required to notify HBPO with a feasible completion date (subject to HBPO agreement).

4.5.9 Responsiveness to Problems

HBPO shall require all suppliers to provide an initial response within 24 hours to problems that arise from non-conforming goods and/or services. Initial response at minimum has to outline problem acknowledgement and initial containment plan.

Failure to respond to problem and/or continued (repeat) poor performance may result in the supplier being placed on “containment status”.

Suppliers who have been placed on “containment status”, due to continued poor performance and/or failure to achieve goals and objectives, will be required:

- To establish and communicate to HBPO a plan for containment.
- To communicate the manner in which product shall be identified as 100% certified for quality assured/inspected by container and individual product.
- To provide on-site support, in conjunction with HBPO personnel, and to HBPO Customers, as required, as part of the containment action.
- In those circumstances that prevent the supplier from providing expedient and efficient containment actions, the supplier shall utilize the services of a third party inspection body to reinforce containment action plans (HBPO approved third party containment service or OEM approved and/or requested third party containment service).
- To accept all costs associated with shipping, handling, processing, reworking, inspecting and replacing defective material including the costs of value-added operations prior to the discovery of the non-conformance.

4.5.10 Incoming Quality (IQ) and Escalation Process

Suppliers who do not meet HBPO performance expectations may be selected to attend an IQ Meeting. IQ Meetings are plant led meetings designed to assist Suppliers in effectively closing their open issues. The criteria upon which a supplier may be invited to an IQ Meeting include, but are not limited to, unsatisfactory:

- PPM Performance
- Delivery Performance
- Number of non-conformance reports / Quality Inspection Reports (QIRs)
- Corrective Action analysis / response
- Recurring Issues
- PPAP Performance
- HBPO Customer complaint / rejection

An outcome of the IQ Meeting is a mutually agreed upon action plan with realistic goals and targets against which the supplier is monitored to effective closure of the issue. Action plans that exceed 90 days duration may require the supplier's justification and may warrant interim IQ meeting reviews.

When adequate resolution has not been met in an acceptable amount of time, the supplier may be nominated to participate in the Escalation Process. The Escalation Process (**HBPO-P-011**) is a corporate led activity involving Executive Management of HBPO and the supplier. At the discretion of HBPO, once a supplier has reached the IQ / Escalation Process levels; the supplier may be prohibited from bidding upon new business or may have their current business resourced.

4.5.11 Cost Recovery Mechanism

Costs associated with shipping, handling, processing, reworking, inspecting, and replacing defective material including the costs of value-added operations prior to its discovery shall be charged to, and paid by, the supplier at a rate outlined by the associated HBPO assembly facility.

Items on the Quality Inspection Report **(HBPO-F-702)** that list costs associated with non-conformances are listed below (these may not reflect all costs):

- Quality Inspection Report (Non-conformance Report) or Non-Conforming Service.
- Supplier Temporary Deviation Requests.
- PPAP submission rejections or shipments of unapproved product.
- Delivery performance failures (in addition to any actual costs associated with the failure such as lost jobs, assembly downtime, HBPO staff support to expedite / manage non-standard delivery, etc.).

Appendix E illustrates an example of a Quality Inspection Report **(HBPO-F-702)** used to communicate non-conformances to supply base.

4.5.12 Record Retention

Suppliers shall maintain records to demonstrate conformance to specified requirements and the effective operation of the Quality System. Record retention shall be in accordance with the ISO/TS16949 and/or OEM requirements.

4.6 TOOLING

4.6.1 Tool Ownership / Identification

Supplier tooling shall be "permanently" marked so that the ownership of each item is visually apparent.

The supplier shall comply with all OEM tooling standards for identification, if applicable.

Supplier shall establish and implement a system for tooling management including maintenance, storage, set up, change programs (where appropriate) and modifications (with documentation).

4.6.2 Part Processing

Suppliers shall provide appropriate technical resources for tool and gage design, fabrication and full dimensional inspection as well as implement a system to track and follow up on these activities if any of the work is subcontracted.

4.6.3 Preventive Maintenance Requirements

The supplier shall establish preventive / predictive maintenance procedures on all tooling and gages. Preventive / predictive maintenance schedules and tool history records shall be documented and available for review.

4.7 SUPPLIER CHANGES

4.7.1 Supplier Change Approval

The supplier shall notify HBPO of all requests to change a product or process, and obtain HBPO approval prior to implementing the change. The supplier is required to submit a change implementation plan, including a timeline, and must inform HBPO whenever a deviation to the approved initial change plan occurs (this may require re-approval).

If supplier, or any of its sub-suppliers, require changes to be made to previously approved production processes, the supplier shall inform HBPO of any such facts in writing (initially, an e-mail is sufficient, but supplier is expected to use the HBPO supplier change process for approval) at least 3 months prior to implementation (or specific OEM requirement). Should the supplier not be aware of such changes before the 3 month time period, the Supplier shall, at minimum, inform HBPO in good time and without undue delay, in order to allow HBPO and its OEM customer as much time as possible to examine whether the changes may have any adverse effects on their own processes as well as to gain approval from HBPO and its OEM Customer for the proposed change. Any supplier or sub-supplier driven costs due to the changes are the responsibility of the Supplier or their sub-supplier, unless agreed to otherwise by HBPO or the OEM.

Examples of changes that require notification and approval include, but are not limited to, the following:

- Manufacturing location changes and/or manufacturing process changes
- Adding an additional, duplicate or optional line
- Material changes and/or material source changes
- Design changes (part, process, packaging, etc)
- Engineering / testing / material specification changes

Requests for change should be submitted for approval using the Supplier Engineering Approval Request (**HBPO-F-730**) form. See Appendix C for a sample of this form.

All changes will require PPAP resubmission and approval prior to acceptance of shipments by HBPO, unless otherwise agreed to in writing by HBPO.

First Shipment of new approved product or process shall be identified with Special Notification Label (**HBPO-F-707**). See Appendix D for a sample of this form.

4.7.2 Supplier Deviation Approval

HBPO shall be notified in case of product or process deviation to the approved process / product specification, fit or function, sub-supplier deviation, etc.

Examples of deviation reasoning include, but are not limited to, the following:

- Parts are less PPAP approval (non-PSW parts)
- Parts are dimensionally out of tolerance
- Parts are reworked via special means (outside parameters of approved process)
- Parts do not meet engineering or quality standards for HBPO or OEM

The appropriate sections of the Supplier Engineering Approval Request (**HBPO-F-730**) form shall be completed by the supplier and returned to one of the respective HBPO project team members or HBPO Plant Quality Management for approval. See Appendix C for a sample of this form.

Written approval from HBPO must be received prior to product shipment or non-conformance (Quality Inspection Report) will be issued.

First shipment of new approved product or process shall be identified with Special Notification Label, see Appendix D.

4.8 PRODUCTION PART APPROVAL

4.8.1 General Information

In the absence of a required OEM specific part approval process for sub-suppliers, all production part sample submissions shall be in accordance with the requirements stipulated by the HBPO PD Team and/or the AIAG PPAP manual. Additional expectations listed below shall also be observed. Typically, PPAP submissions should be forwarded to the HBPO Supplier Quality Assurance representative at the respective HBPO assembly facility.

NOTE: In situations that involve product or components designated as safety critical, no deviations or concessions shall be permitted on features that affect the functionality and reliability of the product without the appropriate validation and Customer approvals.

4.8.2 Part Submission Warrant (PSW)

A Part Submission Warrant shall be required for all-newly tooled or revised products in which the supplier confirms that inspections and tests on production parts show conformance to HBPO requirements.

Any shipment of production product without first obtaining either a signed, approved PPAP part submission warrant (PSW) or an approved engineering deviation, shall classify the shipment as defective product.

Conditions under which the supplier may be required to resubmit a Part Submission Warrant (PSW) are clearly stated in the AIAG PPAP manual. Failure to comply with these requirements shall make the supplier fully responsible for those costs resulting in failures attributable to the change.

4.8.3 PPAP Check List

HBPO requires the submission of a PPAP Check List with each PPAP submission (regardless of the submission level). See Appendix F**.** It is the responsibility of the supplier to properly identify all of the required PPAP documents by document name/number and revision level. PPAP's submitted without the proper documentation identification and revision levels will be rejected.

4.8.4 Dimensional Results

Suppliers shall provide evidence that dimensional verifications required by the design record and the Control Plan have been completed and that the results indicate compliance with specified requirements.

Sample size for dimension verification is six (6) parts per tool / cavity unless approved otherwise by an HBPO Supplier Quality representative.

4.8.5 Material, Performance and Durability Test Results

Supplier shall perform tests for all parts and product materials when chemical, physical, metallurgical performance, durability or functional requirements are specified by the design record or Control Plan.

Test result reports shall indicate:

- Design record change level of the part(s) tested, number, date and change level of the specifications to which the part was tested.
- Date the testing took place.

- Any authorized engineering change documents that have not been incorporated in the design record.

The supplier must also be able to demonstrate adherence to package design and durability requirements as specified in paragraph 2.1 of the Standard Logistic Specification Requirement (**HBPO-F-082**).

4.8.6 Initial Process Studies

The supplier shall perform a short-term study to obtain early information on the performance of new or revised process relative to HBPO requirements. These studies should be based on as many measurements as possible.

These studies shall include capability and performance indices (Cpk and Ppk) to measure part and process performance.

The size of the process study lot will be agreed upon with HBPO in advance of the study.

4.8.7 Measurement System Analysis

The supplier shall have applicable Measurement System Analysis studies (i.e. Gage R&R, bias, linearity, stability studies) for all equipment used for Special Characteristics, for new or modified gages, and measurement and test equipment.

4.8.8 Checking Aids / Fixtures

The supplier shall provide, where applicable, any part-specific assembly or component checking aid and certify that all aspects agree with part dimensional requirements. The supplier shall comply with the HBPO Gage Standards (**HBPO-I-758**) in addition to OEM specific gage requirements.

4.8.9 Sample Product / Sample Size / Submission Level

Supplier shall provide sample product as requested by HBPO and as defined by the submission request (PPAP Checklist). The sample size will be minimum six (6) per tool/ cavity or defined in writing HBPO in advance of the submission.

Supplier shall use **Level 3** submission as the default level unless specified otherwise by HBPO. Reference the current edition of AIAG PPAP for more information on submission levels.

4.9 ANNUAL VALIDATION

The annual validation requirement for production and service parts shall include the requirements below and any additional OEM Customer specific requirements, unless an approved deviation is granted by HBPO.

- In the case that a production approved part does not receive a PPAP approval within any 12 month span, the supplier shall submit a 6 piece full dimensional layout for each part supplied to HBPO. The last approved PPAP must be either Level 3 PPAP or an approved submission that included a minimum of six (6) pieces full dimensional layout per tool / cavity.
- Material / Product Testing as per HBPO approved Supplier DVP&R (if applicable) and/or Control Plan.

Confirmation may be performed by both HBPO and its customers, if necessary, at the supplier's premises to ensure that the product and subcontracted product(s) conform to specified requirements. Confirmation may include Quality Systems/ Process Audit performed by HBPO, especially if supplier has been involved in the HBPO Escalation Process (**HBPO-P-011**) within last 12 months.

Prior to conducting such verification reviews, the responsible HBPO contact should specify both the arrangements and method of performing the reviews.

4.10 SUPPLIER SPECIFIC REQUIREMENTS

4.10.1 Service Parts

Service parts are defined as components supplied to the previous engineering level or model year as replacement parts to OEM or aftermarket customers.

Part volume, supply demand and expectations shall be defined by HBPO Purchasing prior to production start, but HBPO retains the right to change service requirements at any time during the life of the service program.

Packing specification, storage and delivery shall be defined and approved by HBPO in accordance to the Standard Logistic Specification Requirement (**HBPO-F-082**).

When product is produced using an HBPO approved process (PPAP already obtained for tool, machine, equipment, etc.) and the tool has not been inactive for over one (1) year; no PPAP re-submission is required.

When service parts are produced using a new tool or equipment, at a new location, or using new material, or a new supplier / sub-supplier or tool has been inactive for over one (1) year, the supplier shall submit **Level 2 PPAP** submission as default with limited supporting documents (subject to change based on PPAP request for the specific part) such as:

- Six (6) pieces full dimensional layout per tool / cavity and samples from Production Run.
- 30 pieces capability data for Special Characteristics (if production run was over 300 pieces).
- 100% inspection required for Special Characteristics (if production run is less than 300 pieces).
- Any other requirements/documents as defined in the HBPO PPAP Checklist (**HBPO-F-761**).

NOTES: The Supplier Engineering Approval Request (**HBPO-F-730**) process applies to service parts. See Section 2.5 for more detail. **Supplier is not authorized to ship production parts until PSW is approved**.

4.10.2 Directed Product

❖ Production Part Approval Process (PPAP)

Directed part supplier is required to provide copy of OEM Approved PSW / Screen shot or print out from OEM System with evidence of completed PPAP.

❖ Directed Part Deviation

In the case when PPAP is not approved for a directed part or the part does not meet engineering specification, a copy of the OEM approved deviation is required (e.g. Chrysler IAA, Ford WERS Alert, etc.).

The first shipment of product with deviation shall be identified with the Special Notification Label, see Appendix D.

❖ Engineering Changes/ Preproduction/ Pilot/ Test Samples

OEM specific documentation authorizing the shipment of engineering changes, prototypes, pilots, or test samples shall be provided to HBPO prior to shipping such products (these documents shall be in OEM specified format (e.g., Forever requirement approval (Chrysler), PER (Chrysler), WERS (Ford), etc.).

HBPO requires all suppliers to identify first shipment of product with new engineering level.

All shall be identified with Special Notification Label, see Appendix D.

❖ Quality Inspection Reports (OEM Nonconformance System)

Quality Inspection Reports will be utilized in conjunction with OEM Non-conformance tracking system (such as Chrysler NCT System, Ford QR, etc.).

4.10.3 Supplier Lessons Learned

Supplier shall develop a Lessons Learned process for product in order to continuously improve its performance. Evidence of lessons learned shall be available for review based on HBPO request.

4.10.4 Contingency Plan / Crisis Management

Supplier shall prepare contingency plans to ensure HBPO requirements are addressed in the case of disaster or unplanned events (refer to TS16949 specification):

Contingency Plans/ Crisis Management shall ensure:

- Maximum protection of employees and assets
- Rapid response to a critical incident or business interruption
- The impact on a company's ability to conduct business is limited
- Immediate recovery of critical business processes and the return to normal operations
- Reduction of the potential for a critical incident through prudent preventive and training measures

Examples that should be addressed include, but are not limited to, the following:

- Labor interruptions
- IT / Computer Disaster Recovery Plan (EDI capability, e-mail, etc.)
- Utility Disruption Plan
- Facility Damage Recovery Plan
- Employee Crisis Counseling Plan
- HVAC System Shutdown Plan
- Internal and External Critical Contact List
- Transportation / Border Crossing Restriction Plan

NOTE: Crisis Management for Automotive Supplier is a publication provided by AIAG.

4.11 APPENDICES

Appendix A: SUPPORTING DOCUMENTS

The following publications are available from the Automotive Industry Action Group (AIAG).

These documents contain information that is mandatory for suppliers to the HBPO Quality System.

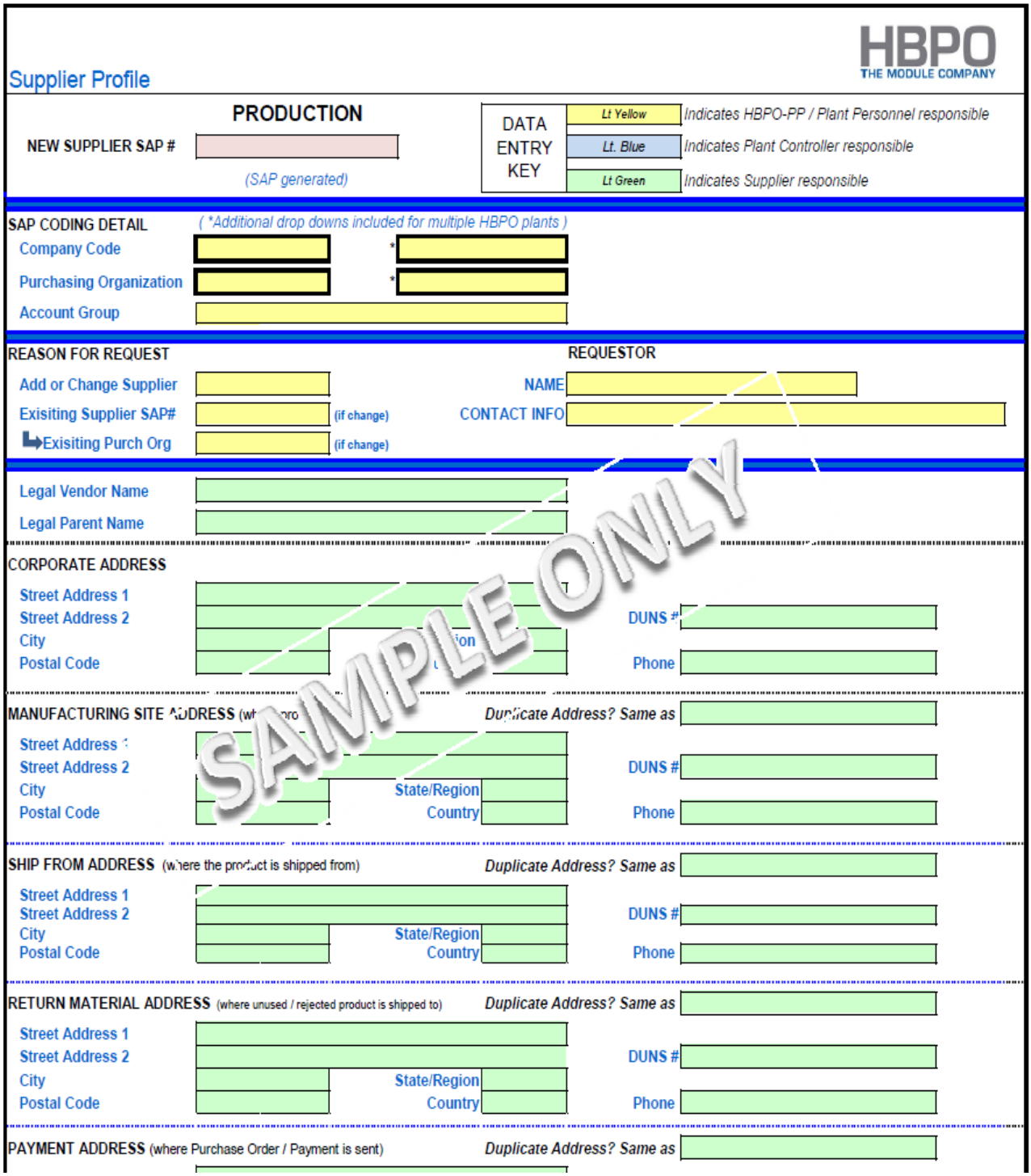
- ISO/TS16949 Technical Specification (Includes ISO9001)
- Production Part Approval Process (PPAP)
- Advanced Product Quality Planning and Control Plan (APQP)
- Potential Failure Modes and Effects Analysis (FMEA)
- Measurement Systems Analysis (MSA)
- Statistical Process Control (SPC)

All current editions of these manuals and specifications apply.

Contact Information:

If you have comments or questions regarding HBPOs' Supplier Manual, please call HBPOs' Supplier Quality Management at 248-430-2700.

Appendix B: SUPPLIER PROFILE



Supplier Profile

HBPO
THE MODULE COMPANY

PRODUCTION

NEW SUPPLIER SAP #

(SAP generated)

DATA ENTRY KEY

Lt Yellow	Indicates HBPO-PP / Plant Personnel responsible
Lt. Blue	Indicates Plant Controller responsible
Lt Green	Indicates Supplier responsible

SAP CODING DETAIL (*Additional drop downs included for multiple HBPO plants)

Company Code *

Purchasing Organization *

Account Group

REASON FOR REQUEST

Add or Change Supplier

Exisiting Supplier SAP# (if change)

Exisiting Purch Org (if change)

REQUESTOR

NAME

CONTACT INFO

Legal Vendor Name

Legal Parent Name

CORPORATE ADDRESS

Street Address 1

Street Address 2

City

Postal Code

DUNS #

Phone

MANUFACTURING SITE ADDRESS (wh ro

Duplicate Address? Same as

Street Address 1

Street Address 2

City

Postal Code

State/Region

Country

DUNS #

Phone

SHIP FROM ADDRESS (where the product is shipped from)

Duplicate Address? Same as

Street Address 1

Street Address 2

City

Postal Code

State/Region

Country

DUNS #

Phone

RETURN MATERIAL ADDRESS (where unused / rejected product is shipped to)

Duplicate Address? Same as

Street Address 1

Street Address 2

City

Postal Code

State/Region

Country

DUNS #

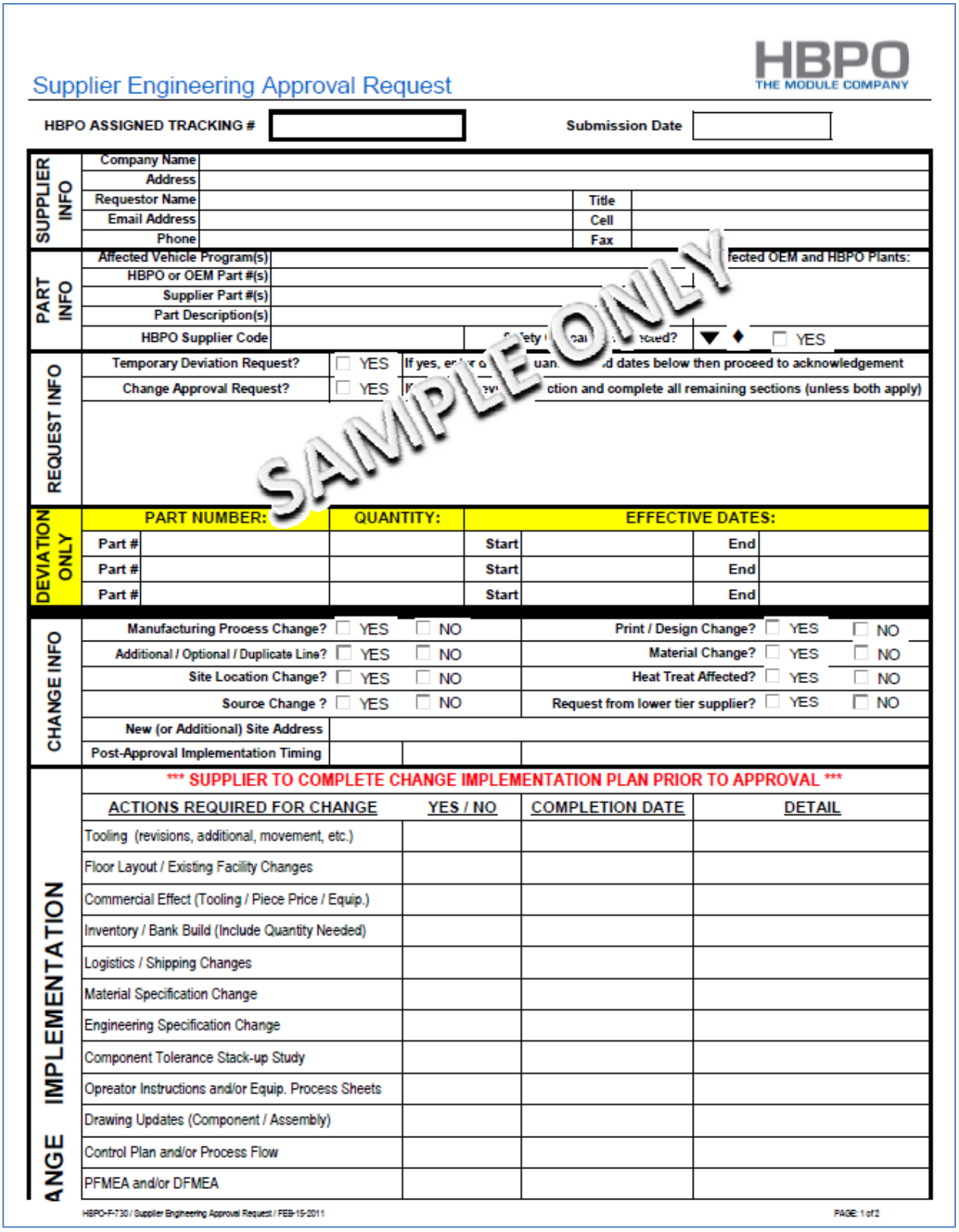
Phone

PAYMENT ADDRESS (where Purchase Order / Payment is sent)

Duplicate Address? Same as

SAMPLE ONLY

Appendix C: SUPPLIER ENGINEERING APPROVAL REQUEST



HBPO THE MODULE COMPANY

Supplier Engineering Approval Request

HBPO ASSIGNED TRACKING # | **Submission Date**

SUPPLIER INFO

Company Name			
Address			
Requestor Name		Title	
Email Address		Cell	
Phone		Fax	

PART INFO

Affected Vehicle Program(s)		fected OEM and HBPO Plants:	
HBPO or OEM Part #(s)			
Supplier Part #(s)			
Part Description(s)			
HBPO Supplier Code		Safety [illegible] ected?	▼ ♦ ☐ YES

REQUEST INFO

Temporary Deviation Request?	☐ YES	If yes, [illegible] uan[illegible]d dates below then proceed to acknowledgement
Change Approval Request?	☐ YES	[illegible] ction and complete all remaining sections (unless both apply)

SAMPLE ONLY

DEVIATION ONLY

PART NUMBER:		QUANTITY:	EFFECTIVE DATES:			
Part #			Start		End	
Part #			Start		End	
Part #			Start		End	

CHANGE INFO

Manufacturing Process Change?	☐ YES	☐ NO	Print / Design Change?	☐ YES ☐ NO
Additional / Optional / Duplicate Line?	☐ YES	☐ NO	Material Change?	☐ YES ☐ NO
Site Location Change?	☐ YES	☐ NO	Heat Treat Affected?	☐ YES ☐ NO
Source Change ?	☐ YES	☐ NO	Request from lower tier supplier?	☐ YES ☐ NO
New (or Additional) Site Address				
Post-Approval Implementation Timing				

CHANGE IMPLEMENTATION

*** SUPPLIER TO COMPLETE CHANGE IMPLEMENTATION PLAN PRIOR TO APPROVAL ***

ACTIONS REQUIRED FOR CHANGE	YES / NO	COMPLETION DATE	DETAIL
Tooling (revisions, additional, movement, etc.)			
Floor Layout / Existing Facility Changes			
Commercial Effect (Tooling / Piece Price / Equip.)			
Inventory / Bank Build (Include Quantity Needed)			
Logistics / Shipping Changes			
Material Specification Change			
Engineering Specification Change			
Component Tolerance Stack-up Study			
Opreator Instructions and/or Equip. Process Sheets			
Drawing Updates (Component / Assembly)			
Control Plan and/or Process Flow			
PFMEA and/or DFMEA			

HBPO-F-730 / Supplier Engineering Approval Request / FEB-15-2011 PAGE: 1 of 2

Appendix D: SPECIAL NOTIFICATION LABEL

Special Notification Label

PART NAME: _____

PART NUMBER: _____

ENG. REVISION: _____

SUPPLIER NAME: _____

REASON: (complete table below)

	DESCRIPTION	SHIP DATE
CERTIFIED STOCK:		
TEMPORARY DEVIATION: (IAA / HBPO DEV #)		
PPAP SAMPLES:		
ENGINEERING SAMPLES:		
PILOT SAMPLES:		
Sample Part Instruction HBPO Use Only:		Part use sign off: _____
Authorized By:	Name:	Title:
	Signature:	Date:

INSTRUCTION:

Please print this sheet on Neon Pink 8 1/2 x 11 paper and attach on TWO SIDES under the shipping labels as directed by Packaging Specs.

If other colour is used, communicate identification change to your HBPO Representative.

Appendix E: QUALITY INSPECTION REPORT

Quality Inspection Report

Supplier Name:		**Supplier Contact Person:**	
Part No:	**Part Name:**	**Revision Level:**	**Revision Date:**
QIR No:	**Goods Receipt No:**	**Receiving Date:**	**Delivery Note No:**
Delivery Quantity:		**Quantity of Suspect Parts:**	

Problem Description:

SAMPLE ONLY

Disposition and Action Required by Supplier:

Written follow-up of initiated corrective actions, including containment due:

Appendix F: PPAP CHECKLIST

HBPO THE MODULE COMPANY

PPAP Checklist

Supplier Name: _____ SQE Assigned: _____

Mfg Loc: _____ QE Assigned: _____

Part Number _____ Drawing Number: _____

Part Name: _____ Drawing Level & Date: _____

Program(s): _____

Submission Lvl: ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 If other, state reason:

Reason: ☐ INITIAL ☐ ENGINEERING CHANGE ☐ TRANSFER ☐ ANNUAL ☐ BULK ☐ OTHER

PPAP Index	Required	Included	Item Description	Acceptable*	Responsible	Completion Date	Remarks, comments & actions
1			**Design Records**				
			Part Drawing / Print with GD&T or Tolerancing				
			Specifications (call outs)				
			Bill of Material (BOM)+Supplier name+p/n				
			Reporting of part composition through IMDS or equivalent				
			Parts Marking, Branding and Identification				
2			**Engineering Change Documents**				
			Engineering Change Notice, SREA, etc.				
			Tool, Fixture & Gaging Sourcing				
			Tooling revision verification				
3			**Customer Engineering Approval**				
			Engineering Approval evidence				
4			**Design Failure Mode and effects Analysis (DFMEA)**				
			DFMEA				
			Mistake Proofing (poke-yoke) for design				
			Action plan for rolling top 5 high RPN				
			Lesson learned summary				
			A1 DFMEA Checklist (AIAG)				
5			**Process Flow Diagrams**				
			Manufacturing Feasibility sign-off sheet				
			Numbered Process Flow Diagram				
			Manufacturing floor plan				
			Work Station Layout				
			A5 Floor Plan Checklist (AIAG)				
			A6 Process Flow Checklist (AIAG)				

Appendix G: DEFINITIONS AND ACRONYMS

ACRONYM	MEANING
A2LA	American Association for Laboratory Accreditation
AIAG	Automotive Industry Action Group
APQP	Advanced Product Quality Planning
ASN	Advance Shipment Notification
AVSQ	ANFIA Valutazione Sistemi Qualita (Italy)
EAQF	Evaluation Aptitude Qualite Fournisseur (France)
FMEA	Failure Mode and Effects Analysis
GD&T	Geometric Dimensioning and Tolerancing
I.D.	Identification
IEC	International Electrotechnical Commission
IQ	Incoming Quality (Meeting)
ISO	International Organization for Standardization
IT	Information Technology
MSA	Measurement System Analysis
QIR	Quality Inspection Report
OEM	Original Equipment Manufacturer

Appendix H: LIST OF REFERENCED DOCUMENTS

LO: Logistics

HBPO-F-053 Logistic Cost Calculation
HBPO-F-055 Packaging Approval
HBPO-F-075 System Days
HBPO-F-090 Packaging Instruction
HBPO-F-082 Standard Logistic Specification Requirement
HBPO-F-084 Specification Sheet Special Containers
HBPO-F-732 General Logistics Agreement
HBPO-I-722 Standard Logistic Label Requirement Specification

PP: Purchasing and Procurement

HBPO-F-710 Purchasing Confidentiality Agreement
HBPO-F-105 General Purchasing Agreement
HBPO-F-762 Supplier Profile

QM: Quality Management

HBPO-F-012 Quality Assurance Agreement
HBPO-F-761 PPAP Checklist
HBPO-F-085 Warranty Agreement
HBPO-F-703 Supplier Assessment Tool
HBPO-F-730 Supplier Engineering Approval Request
HBPO-I-758 Corporate Gauge Standards
HBPO-I-752 CMM Reporting
HBPO-P-011 Escalation Procedure for Suppliers

QA: Quality Assurance

HBPO-F-702 Quality Inspection Report
HBPO-F-707 Special Notification Label