

## **SUPPLIER QUALITY EXPECTATIONS index B**

### **Commitment to Excellence**

- In direct support of Palumbo industries commitment to excellence and desire to “exceed **our** customer’s expectations” it is expected that our suppliers work toward exceeding Palumbo industries supply base expectations and requirements.
- Excellence means perfection in all that you do: perfect planning, perfect execution, perfect communications, perfect parts. This is demonstrated through consistent delivery of quality products to Palumbo industries and our customers. Our suppliers are expected to have zero incidents, zero disruptions, provide products with zero defectives, flawless delivery performance and on time responsiveness to issues.
- Suppliers must have a philosophy of total quality commitment, with subsequent planning and actions, that drives for perfection. This commitment starts with top leadership and driven through all levels and aspects of their operations. Commitment to Six Sigma techniques and quality is an expectation.
- Suppliers should have in place First Time Quality tracking methods, with appropriate alarms and actions defined. This data should be utilized to continue to drive continuous improvement in their processes and operations.

### **Quality System Requirement**

- Suppliers should be IATF 16949 version IATF 16949:2016.
- ISO 9001 :2015.
- ISO 14001 :2015.
- ISO/TS 16949 version 2016 Third Party certified.
- Compliance to ISO TS 16949 means compliance to IATF.  
Supplier should reference current AIAG procedures for APQP, PPAP, MSA, FMEA, QS9000 and SPC.
- As complementary initiatives, we require our Suppliers to comply with the International Safety and Environmental rules. To that extend, we encourage our Suppliers to be certified as per the following standards:
  - ISO 14001 version 2015 - for Environmental Management Systems
  - OHSAS 18001 version 2015 - for Occupational Health & Safety Management Systems

## Managing Supply Chain

- Suppliers are expected to ensure the quality and capacity of materials and component parts coming from their sub suppliers, through supplier selection and on-going monitoring. For more specific information, reference Section 4.6 of the AIAG QS9000 manual.

### APQP

- Technical Review
- Feasibility Letter
- Supplier Assessment
- Supplier Kick Off Meeting
- Timing Charts & Open Issues List
- DFMEA
- Design Review
- Gage Review
- Process Flow
- PFMEA
- Control Plan
- Program Reviews
- Early Production Containment
- PPAP
- Run at rate
- Lessons Learned

### Production Cycle

- Supplier Quality Action Plan (SQAP)
- Supplier Requested Change Process
- Production Process Audit
- CAR/Supplier recharge
- 5 why analysis technique
- Controlled Shipping

## Supplier's Involvement prior to Sourcing

- You will be requested to participate in a **Technical Review** with Palumbo industries Personnel.
- The following are some of the key requirements:
  - Participate in **Design Reviews**
  - Provide and maintain **Timing Charts and Open Issues tracking Lists**
  - Provide and maintain **Process Flow, PFMEA and Process Control Plan(s)**
  - Perform and provide **Measurement System Analysis & Correlation/ Gage Reviews**
  - Complete Part Certification (**PPAP**) requirements, prior to shipment of initial production. --- please follow last edition of AIAG PPAP requirements
  - Perform and pass **Run at Rate**
- For APQP, all suppliers are expected to meet program timing, keep commitment dates, and support early builds and pre-launch requirements.
- All communications / documents must be in English, unless there is prior agreement.

## Performance Monitoring

- Palumbo industries will track supplier quality performance; including the following: Defective parts per million, number of disruptions, overall responsiveness, Problem Reports, Controlled shipping status, and program execution.
- Supplier targets:
  - Quality target = 100 PPM
  - The achievement of “0 defect” objective is expected for Customer Interfaces (engine / car attachment)
  - OTD = 90% min. without delay of delivery for the customer.
- Suppliers will be requested to complete and update a Supplier Quality Action Plan for communications back to Palumbo industries on problem resolution, actions and timetable.

## Change Management

- **In case of any product specification modification (ex.: drawing change), during production, the Supplier shall provide PPAP submission (related to the new configuration) prior to make this change effective in production.**  
PPAP level is at discretion of Palumbo industries Supplier Quality Engineer.
- Suppliers shall not make any changes without prior written notification and approval from Palumbo industries.  
These include changes to part design (i.e.: drawing or specification rev. level), material, sub-tier supplier, manufacturing location or process. (Reference AIAG PPAP, 3rd edition.)

## Problem Resolution

- When a problem does occur, we expect our suppliers to immediately put their operations in containment and to protect Palumbo industries from receiving any defective material.
- Suppliers will receive a **CAR, (Corrective Action Report and Resolution)**.
- Suppliers are expected to monitor the CAR system for problems. The initial response to a problem (essentially the containment plan) is due within 24 hours. Final response, (with verified root cause analysis), is due within 15 calendar days, unless additional time has been requested and approved. The relevant actions are to be 100% implemented within the 30 calendar days.
- Suppliers will be requested to complete a **5-Why Analysis** as a means of ascertaining root cause analysis and verification.
- Although the CAR system is a communication tool for reporting and resolving problems and should be freely used for this purpose, it is expected that suppliers work towards reducing their number of CAR's over time. Repeat CAR's of the same problem and lack of a response to a CAR or resolving the issue is not acceptable.

- Suppliers have financial responsibilities for non-conforming materials and their effects, which may include warranty issues and cost recoveries for sorting, re-work, scrap, premium transportation and other related types of charges. Suppliers will be recharged for these issues.
- Palumbo industries place suppliers in **Controlled Shipping Level CA / CN / CR or Level E**, at the supplier's expense, as a further means to ensure that no defective parts reach Palumbo industries or Palumbo industries customer. Use of these levels of containment depends on the severity of the problem and the supplier's actions to correct it.

### **Supplier Production Problem Management**

- When an incident (1) does occur in the Supplier production lines, we expect our suppliers to immediately put their operations in containment and to protect Palumbo industries or Palumbo industries customers from receiving any defective material.
- Suppliers will advise immediately Palumbo industries, and submit to each of them a concession request for their acknowledgement and / or recommendations.
- Suppliers shall not deliver parts without prior written recommendations and approval from Palumbo industries.
- Suppliers will be requested to monitor their production as per specific containment and / or Palumbo industries recommendations until the process is back to the conditions described in the PPAP documentation (Process map, control plan,..)
- Suppliers are expected to indicate to Palumbo industries when the process is returning to the PPAP conditions

Note (1):

An incident is defined as an event that will lead the Supplier to temporarily produce under different conditions than those described in the approved PPAP:

- replacement of an automatic operation with a manual operation,
- measuring equipment break-down and / or replacement,
- poka-yoke / mistake proofing system out of order,
- etc ...