



Supplier Quality Manual

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1.1 Statement of Purpose and Intent

A total commitment to customer satisfaction and continuous quality improvement, must be shared by Vivid Design Group, Inc., and all our suppliers. As part of the supply chain, together we must maintain effective quality management systems if we are to remain competitive in the market place. Vivid Design Group (VDG) quality is complemented by the combined efforts of our suppliers.

It is the intent of Vivid Design Group to purchase from suppliers who consistently meet our expectations for quality, delivery, value and service. This manual is a tool to inform suppliers of Vivid Design Group's expectations and how they will be measured against these requirements. The requirements set forth in this manual apply to suppliers providing production materials, production or service parts, painting, or other finishing services to Vivid Design Group.

1.2 Application

The requirements stated in this manual do not replace or supersede any of the purchase order, engineering drawing or specification requirements. They do not relieve the supplier from the responsibility of ensuring that all materials supplied meet all of the requirements specified by Vivid Design Group.

1.3 Validation of Supplier Quality Systems

As a supplier to the automotive industry, Vivid Design Group adheres to the requirements of ISO 9000 as the fundamental quality management system standards. Vivid Design Group prefers suppliers to be third party certified to ISO 9000 or ISO/TS 19649, depending on customer requirements.

Vivid Design Group recognizes ISO 17025, in lieu of the above referenced standards for laboratory and calibration services.

To assure Vivid Design Group's expectations are met, on site-surveys, self- surveys and supplier profile information may be requested from potential or current suppliers. Other disciplines subject to evaluation via on-site surveys may include, but are not limited to, management structure, cost, delivery, technology, and the supplier's expertise in Lean/Synchronous production techniques.

2.0 Supply Base Management

2.1 Organizational Responsibility

All raw material and component purchases are managed through the Vivid Design Group purchasing structure. Under this structure, each raw material or component is assigned an internal part number, to ensure consistent sourcing considerations across all suppliers providing said part number. The VDG Material Coordination department along with the VDG Purchasing department is responsible for establishing a list of suppliers approved to submit quotes, awarding new business, and establishing commercial terms and conditions.

2.2 New Suppliers

A new supplier is a company that has never done business with Vivid Design Group, or a past supplier who has not supplied product within the last two years. All new suppliers must be qualified prior to the awarding of new business. The complete list of current / approved suppliers is maintained by the VDG Materials Coordination department. Profiles are updated when a supplier's information changes. Requests for updates are made annually.

3.0 Quality Planning

3.1 Advanced Product Quality Planning

Product quality planning is a structured method of defining and establishing the steps necessary to assure that a product satisfies the customer. Suppliers are encouraged to become involved early in the product development process. Suppliers are responsible to understand the user of their material and its impact on the quality of the finished product. All aspects of material performance and expectation should be clearly understood by the supplier. Suppliers shall implement project planning techniques to ensure timely delivery of material or components, and achievement of program cost and timing goals.

3.2 Prototype Parts

Prototype parts or sample material may be required for functional testing and plant trial run purposes. Facility personnel will coordinate requirements with suppliers.

3.3 PPAP

Vivid Design Group follows the Production Part Approval Process (PPAP) for validation of purchased material required for production applications. PPAP submissions are to be directed to the Quality Department or Program Manager. Suppliers are responsible to keep up-to-date with any and all end customer specific requirements.

3.4 Submission Requirements

The default PPAP submission level will be level 3 requirements. Vivid Design Group requires that all PPAP documentation be completed and available for review, regardless of the submission level requested. Once the PPAP submission has been approved by VDG, product may be functionally tested and validated if required. Final approval results in the part / process considered production ready and ongoing supplier performance measurement and maintenance is in accordance with the performance measurement section of this document.

3.5 Process Flow Diagram; PFMEA, Control Plan(s), and Equipment List

The supplier shall author a Process Flow Diagram, Process Failure Mode and Effects Analysis, Control Plan and Equipment List if required for each material / component it provides to Vivid Design Group, in accordance to guidelines and requirements specified in the AIAG core tool manuals and any customer specific requirements.

The Process Flow Diagram shall describe the production process steps and sequence, as appropriate. For bulk materials, an equivalent to a Process Flow Diagram is a Process Flow Description.

The supplier shall author a Process Failure Mode and Effects Analysis to determine potential failure modes / points within the manufacturing flow processes in order to control / limit associated risk.

A Control Plan shall be authored by the supplier as countermeasure to the identified potential failure modes associated with the manufacturing process.

4.0 Ongoing Quality Requirements

4.1 Material Certifications and Certificates of Compliance

Approved suppliers may be required to submit certificates of compliance or material certifications with each shipment of material. These certificates should state actual test results or measurements for each characteristic listed on the purchasing specification or blueprint or VDG-provided inspection criteria. The material certification is to identify the purchase order, lot or batch and specific quantity of material covered by the certification. The Material Certification is to be provided to VDG Purchasing before or at the time of material arrival. When not required to send material certifications, the supplier will maintain records of material compliance at the supplier facility the records shall be made available upon request by Vivid Design Group.

4.2 SPC and Process Capability

Statistical Process Control information may be required to be submitted to Vivid Design Group on a regular basis, as supporting verification of material quality.

Significant characteristics identified by specifications or component prints or other Quality Acceptance Criteria shall be recorded and monitored with out-of-control conditions noted and acted upon. Suppliers shall ensure that out-of-control material is verified as compliant to specifications before release for shipment to Vivid Design Group. Special causes of variation should be investigated, identified and eliminated.

4.3 Nonconforming Material

Suppliers are obligated to inform Vivid Design Group of nonconforming or suspect material that may be in transit or already delivered. Product approved by means of measurement found to be out of calibration status constitutes "suspect" condition and should be treated as such. Such action is appreciated by VDG, and will reduce the severity of the quality incident. Communication should be to the Vivid Design Group Quality Manager/Engineering or Material Coordination Department Manager.

4.4 Containment of Nonconforming Material at Supplier Facility

Nonconforming material shall be immediately contained by the supplier and be re-inspected. If the defect root cause is not immediately evident, the supplier is obligated to implement a 100% inspection of subsequent material shipments to Vivid Design Group. Recurrence of the defect in subsequent shipments will require containment and 100% inspection of all material until such time it has been determined that the defect is permanently corrected, and corrective actions have been accepted by Vivid Design Group. The supplier is to propose a method, and to obtain agreement on, identification of inspected material (certified shipments) with Vivid Design Group Quality Department personnel.

4.5 Delivered Nonconforming Material

Suppliers are expected to react immediately and authoritatively to contain the nonconforming material and ensure the impact on Vivid Design Group production is minimal. VDG has the option to request assistance from the supplier for on-site inspection of non-conforming material at either, or both, Vivid Design Group and the end user facility.

Nonconforming material will count against the supplier's quality performance score and PPM rating. Quality performance will be communicated to the supplier through the Supplier Performance Report provided by the VDG Material Coordination / Quality Department.

4.6 Disposition of Nonconforming Material

Vivid Design Group utilizes a structured system to identify, contain, and disposition supplier nonconforming, suspect material. A multi-discipline team convenes as necessary to evaluate the risks of using the nonconforming material, and to consider the impact on the production schedule and customer delivery.

4.7 Chargeback

If a shipment of nonconforming product results in the requirement for the Vivid Design Group to implement containment and inspection actions, the supplier is held responsible for the cost of labor, material handling and rejections.

If such containment action is required, the supplier will be contacted by a VDG representative for approval to:

1. Sort parts in-house (use of VDG personnel will not alleviate supplier cost)
2. Use a third party sorting source at supplier's expense
3. Scrap parts in-house
4. Return product to supplier (at suppliers expense) via method and carrier of supplier choice

4.8 Supplier Corrective Action Requests

Vivid Design Group will issue a request for corrective action when a delivery or quality issue occurs. Issued supplier corrective actions impact a supplier's performance rating. Issues requiring a response from the supplier will be communicated to the supplier in a timely manner. Suppliers are expected to use structured problem-solving techniques to generate a timely response, with corrective actions that permanently eliminate the root cause of the defect. Structured responses are expected in common electronic format and should be submitted via e-mail to the appropriate VDG personnel.

4.9 Structured Problem Solving

Structured problem solving is a given standard within the automotive industry, and suppliers to Vivid Design Group are expected to implement and support a system of structured problem solving. Suppliers are welcome to use their systems or the Vivid Design Group system, as long as a cross-functional team is able to identify the root cause of a problem and implement permanent corrective actions. The root cause definition should include the "process" root cause (how did the nonconformance occur?) and the "non-detect" root cause (how did the nonconformance get shipped from the supplier facility?). Suppliers should evaluate the effectiveness of the corrective actions for long-term system support within their organization.

4.10 Material / Process / Equipment Changes

Vivid Design Group expects our suppliers to demonstrate an effective change management process to ensure that changes do not adversely affect the material quality of operational process efficiency / effectiveness. All potential changes should be requested in writing, and must have the approval of appropriate VDG personnel. The best approach is "When in doubt, seek guidance out." Vivid Design Group may require test samples for plant trial run requirements, prior to implementation. Failure to seek approval for changes negatively impacting material could result in "chargeback" actions taken (see section 4.8). Upon review of the request for changes, the supplier will be notified of PPAP submission requirements of approval with waiver.

4.11 Packaging / Labeling

Labeling requirements are developed as output of Advanced Product Quality Planning activities and are agreed upon prior to delivery of material. Vivid Design Group Engineering department personnel will work with the supplier to develop packaging specifications, quantities and label identification requirements for material safety, accuracy in performance reporting, quality issue containment practices and logistics information requirements. Suppliers should suggest to the VDG Engineering department personnel label content requirements to minimize impact on supplier containment activities/quantities, while maximizing traceability effectiveness.

5.0 Supplier Performance

5.1 Purpose

The purpose of providing supplier performance feedback is to communicate to suppliers Vivid Design Group's assessment of their performance, so that appropriate improvements can be implemented. Feedback also provides an internal measurement system in order to better evaluate and manage our supply base, along with assisting in determining new business awards.

5.2 Ongoing Quality Registration

Suppliers are responsible for maintaining current ISO 9000 or ISO/TS 16949 registration, if they supply items affecting product quality. Evidence of current registration must be presented prior to the supplier being approved and entered into the approved supplier list. Suppliers are responsible for providing evidence of current registration, to ensure that a lapse does not occur. This evidence must be supplied to Vivid Design Group's Quality or Materials Coordination Department.

5.3 Frequency of On-Site Assessments

Supplier performance feedback will be provided to current suppliers on an annual basis, where applicable. Overall performance of suppliers assists in determining assessment visitation requirements. Suppliers demonstrating and maintaining an "Excellent" rating will be scheduled for assessments bi-annually. "Marginal" ratings may require more frequent partnership cooperation in successfully minimizing risk to Vivid Design Group.

5.4 Performance Rating

Suppliers are rated with respect to their quality and delivery performance. Vivid Design Group utilizes statistical data to provide an objective performance rating for critical suppliers and to identify action requirements for unacceptable levels of performance. Quality and delivery performance will be based on total accepted/delivered items divided by total received and multiplied by 100. A PPM (parts per million) delivered level will be based on total number of parts rejected, divided by the total number of parts shipped and multiplied by 100. This number is reflected as a percentage in the supplier performance report. The overall critical supplier performance rating is obtained by combining the Quality/Delivery and PPM performance percentage ratings.

5.5 Certified Supplier

Vivid Design Group will certify suppliers, where appropriate, to minimize continual verification of incoming purchased product. Certain supplier incoming quality will be monitored on an ongoing basis, until VDG's incoming quality inspection requirements validate the direct release of products supplied.

Suppliers placed on "Certified" status by VDG may be asked to provide Material Certifications and/or Certificates of Compliance (see section 4.1).

Critical suppliers can obtain "Certified" status by delivering consecutive shipments with no quality or delivery issues. Suppliers may become disqualified from "Certification" status for any rejection of product at customer plant operations, any discrepancies identified during a performance reporting period, any missed shipments during a performance reporting period or any end customer complaint.

5.6 Unsatisfactory Levels of Performance

A supplier with an “Unsatisfactory” level of performance will be notified in writing of the necessary corrective action requirement from Vivid Design Group Purchasing Department. Consecutive “Unsatisfactory” levels of performance will require a formal corrective action plan, with a specific timetable to improve the performance rating. In the event a critical supplier is responsible for a quality issue involving end customer disruptions and/or field return, a formal Corrective Action Request will be issued, with a report on the identification of causal factors and countermeasure implementation, performed at the customer’s location. In the event the formal corrective action plan is not acceptable, or the rating does not improve within the agreed-to time frame, the supplier may be prohibited from receiving new purchase orders until there is satisfactory resolution. Suppliers who demonstrate unwillingness to achieve mutual agreeable, satisfactory and effective corrective action countermeasures, or continue to maintain an “Unsatisfactory” level of performance, may be removed from the approved supplier listing.