

# ***Global Supplier Quality Requirements Manual***

**For use with current editions of  
IATF: 16949:2016 & ISO 9001:2015**



**Table of Contents**

**Introduction with Scope and Quality System Requirements 4**

**1- GENERAL SYSTEM REQUIREMENTS**

- 1.1 Quality System Registration.....5
- 1.2 Supplier Quality Assessment.....5
- 1.3 Suppliers of Special Processes (CQI).....5
- 1.4 Sub-Supplier Management.....5
- 1.5 Process Change Control and Notification.....6
- 1.6 Contingency Planning.....6
- 1.7 Traceability.....6
- 1.8 General Regulatory & Compliance.....6
- 1.9 Exchanges of Design Record- CAD/CAE modeling.....7
- 1.10 Required References.....7

**2- PRODUCT/PROCESS DEVELOPMENT & PART APPROVAL**

- 2.1 Feasibility.....7
- 2.2 Submission Requirement.....8
- 2.3 Customer Specific Requirements.....8
- 2.4 Validation.....8
- 2.5 Embedded Software.....9
- 2.6 Statistical Process Control.....9
- 2.7 Tooling.....10

**3- SERIAL PRODUCTION LIFE**

- 3.1 Control of Nonconforming Material and Corrective Action.....10
- 3.2 Controlled Shipping .....11
- 3.3 Supplier Escalation Process.....11
- 3.4 Supplier Performance .....12
- 3.5 Supplier Charge Back.....12

**4- MATERIALS AND LOGISTICS**

4.1 General Requirements.....13

4.2 Material Planning and Forecasting.....14

4.3 Packaging .....14

4.4 Labeling.....14

4.5 Safety Stock.....14

4.6 Transportation .....14

4.7 Materials Management Operation Guideline (MMOG).....15

**5- WARRANTY**

5.1 General Requirement.....15

Addendum A Label Standard.....16 - 19

Addendum C Extended Material Authorization.....20

**Revision Table** .....21 & 22

## INTRODUCTION

Dear Flex-n Gate Supplier,

Enclosed is the current release of Flex-N-Gate Global Supplier Quality Requirements Manual. The purpose is to communicate our requirements, which are typical of the automotive industry, and to standardize our supplier expectations. This manual does not alter or reduce any other contractual requirements covered by the purchasing documents or requirements of engineering drawings or specifications.

**The scope** of this manual applies to all external suppliers and sub-suppliers of products and services received by our FNG manufacturing locations including any supplier that is Customer Directed. The manual does not apply to internal FNG plants acting as a supplier, shipping product or services into other FNG locations.

**Quality System Requirements:** Suppliers are required to be third party registered to current edition IATF: 16949 or ISO 9001:2015, unless otherwise approved by FNG Purchasing. A copy of the registration certification shall be provided at a minimum annually and after change in registrar or status. If a supplier has a Special Process as defined and recognized by AIAG, the supplier shall also adhere to the CQI standard and indicated requirements.

If a supplier is sourced that does not have certification to the aforementioned requirements the supplier could be subjected to heightened assessments and additional testing requirements. For said suppliers, FNG encourages compliance to MAQMSR (Minimum Automotive Quality Management System Requirements).

The requirements as detailed in this manual define basic requirements and are supplemental to specific requirements as defined by the OEM Customer and program APQP team. Suppliers are to recognize all program Customer Specific Requirements, including but not limited to the following: Ford, General Motors, Stellantis, Honda, Audi, BMW, Volkswagen (PBS, Formel Q, and VDA 6.3 & VDA 6.2), Toyota, Peugeot, Renault and Nissan.

*\* For the most recent and correct revision of the Global Supplier Quality Requirements Manual, suppliers are always to refer to the Flex-N-Gate website under Departments-Purchasing and Codes and Terms of Supply. In addition, suppliers are to obtain their copy of the FNG Supplier Confidentiality & Privacy Code, Privacy Policy, Supplier Business Practices Code, Safety Policy Codes for Contractors, Supply Chain Security Business Partner Survey, Supplier Software System Use Policy, Material Authorization Request form, Transportation Policy, and other important supplier documents at <https://flex-n-gate.com>.*

Regards,

Flex-N-Gate Purchasing

## 1.0 - GENERAL SYSTEM REQUIREMENTS

### 1.1 Quality System Registration

Suppliers are to maintain their QMS registration and have evidence of compliance available upon request. In the instance where a supplier loses or has their registration suspended, they are to communicate to both FNG Purchasing and all FNG plants receiving product or services. In such instance, the supplier must provide an action plan, for review and approval within 30 days of losing certification. The approved action plan must reflect detailed timing of the registration process.

### 1.2 Supplier Quality Assessments

FNG will require suppliers to participate in conducting witnessed or self-assessment audits to ensure the quality of the product or process.

Frequency and type of assessment will be dependent on assessed supplier risk and key performance indicators tracked by the receiving FNG plant.

### 1.3 Suppliers of Special Processes (CQI)

FNG suppliers that provide special processing that fall under the directives identified in the AIAG CQI Assessments are required to complete and submit the appropriate assessment to FNG.

**Note:** Additional assessments may be required per customer-specific requirement or if key supplier performance indicators indicate a risk level warranting a change in frequency or type. This may include additional testing from an approved third party laboratory at the supplier's expense.

### 1.4 Sub-Supplier Management

FNG suppliers are responsible for the quality and delivery of their supplier's products and services. Suppliers shall manage their supply base and have documented evidence-ensuring alignment with the standards set forth within the current automotive quality management standard IATF: 16949.

Documented approval for part or service shall be obtained with evidence retained for life of program from all sub-suppliers and made available to FNG upon request.

- It is expected that for initial sub-supplier PPAP, conducting an on-site process audit (or equivalent) will occur and includes control plan compliance.

FNG reserves the right to carry out process approval at the sub-supplier in instances of major risk or problem to FNG or our customer. Suppliers are expected to have an annual audit plan of their supply base that includes at a minimum, verification of compliance to the intent of:

1. Control of Changes (8.5.6 of IATF: 16949)
2. Control of Non-Conforming Outputs (8.7 of IATF: 16949).
3. Nonconformity and Corrective Action (10.2 of IATF:16948)
  - Suppliers shall inform FNG of any non-conformance identified at the sub-tier level as well as their associated corrective action.

### 1.5 Process Change Control & Notification

FNG requires early notification and consent from all suppliers prior to any process, product or material changes in compliance with PPAP requirements. ***Such notification includes when either the supplier process or product is temporarily running in a deviated status from the PPAP on file. Temporary deviations shall be submitted with alternative controls put in place to mitigate risk associated with the temporary condition. Deviation requests shall be documented and submitted on the Supplier Change Request form (CPUF.00012) and may require the end customer approval.*** Furthermore, the supplier is to ensure all sub-tier suppliers adhere to the same requirement resulting in full notification and approval from FNG of sub-supplier changes (Supplier Change Request CPUF.00012).

Suppliers are also to notify FNG and submit for part approval prior to the first production shipment. This applies to all situations identified in the current version of the AIAG PPAP Manual Section 3- Customer Notification and Submission Requirements. FNG may waive some of the requirement; when this happens, the supplier must nonetheless review all items in the PPAP file and update them as necessary to reflect the new process.

### 1.6 Contingency Planning

Suppliers shall develop a documented contingency plan for potential catastrophes disrupting product flow to FNG and advise FNG in writing at the earliest opportunity. Contingency plans should effectively prevent failure of the supplier to deliver product within the terms of the contract in the event of an emergency such as utility interruptions, labor shortages, key equipment failure, and field returns. *Contingency plans including a strategic bank build to mitigate risk of disrupted supply is required.*

Specifically, suppliers and their supply base with collective bargaining agreements are responsible for communicating contract expiration dates and developing contingency plans six months prior to the end of the contract agreement. Incorporating bank builds and approving alternative sources can be considered with FNG authorization.

### 1.7 Traceability

Suppliers and their sub-suppliers must have an effective lot traceability procedure. Suppliers are to ensure the intent is to have full traceability throughout the entire supply chain back to the raw material. Traceability information must be available upon request with specific quantity, lot size, date and time of manufacturing. Lots should not exceed eight hours or one day of production, at a maximum. In the event of certain commodity-based materials, methods such as “dye lots” or steel coils will be acceptable. Sequence of lots must be identified on the packing label by either a date code or lot/batch number.

**Part Marking-** Each component must be marked to permit the material identification regarding recycling and must be visible after the final assembly; marks must not be visible on show surfaces. In all cases, the marking area must be specified on the supplier drawing following agreement by all concerned parties. The product part(s) must contain the flow chart number of the trademark, OEM &FNG Marking. The marking must be in accordance with the relevant requirement with individual traceability.

## 1.8 General Regulatory & Compliance

Formal and contractual details for supplier compliance obligations are to be located in the FNG's Terms and Conditions of Supply. <https://flex-n-gate.com>. To ensure compliance with Conflict Minerals reporting, please go to [https:// FLEXConflictMinerals@flexngate.com](https://FLEXConflictMinerals@flexngate.com).

## 1.9 Exchanges of Design Record-CAD/CAE modeling

Control of design in development and throughout serial life supplier usage of FNG's PLM DTR system module is required. To send data to FNG you must request access to our PLM DTR module. This request can be made through your FNG Purchasing or Engineering contact. Your company's assigned data transfer coordinator will receive an email from the FNG PLM DTR module notifying them with log in credentials.

<https://plm.flexngate-mi.com/file-requests>

## 1.10 Required References

Suppliers are responsible for obtaining and working in accordance with the automotive industry standard tools and procedures such as the Automotive Industry Action Group core tools:

- Advanced Product Quality Planning (APQP)
- Statistical Process Control (SPC)
- Measurement System Analysis (MSA)
- Failure Mode and Effects Analysis (FMEA)
- Product Part Approval Process (PPAP)
- IATF 16949: 2016 and/or ISO 9001: 2015 and ISO 14001 : 2015
- Customer-specific Requirements
- Sanctioned Interpretations
- CQI-Special Process Assessment

## 2- Product/Process Development & Part Approval

### 2.1 Feasibility

Suppliers are to provide adequate resources to manage APQP/PPAP effectively.

Suppliers are to maintain facility, equipment and process capacity to the terms of the contract.

Submission of a documented 2.1 PPAP Significant Production Run (R@R) as capacity verification to the contracted volumes is required prior to PPAP approval.

A timing goal should be set to achieve PPAP a minimum 60 days prior to start of production to the OEM customer. Timing is also to ensure that appearance parts are provided to FNG in time to achieve AAR submission and PPAP requirements to the customer.

Key characteristics is a product characteristic (material, dimension, performance) or a process parameter whose variation can affect compliance to regulations, safety or the satisfaction of the OEM customer through quality reliability or durability of a Fit, Form and Function with a possibility of impacting the attachment-mount ability and workability of downstream customer processes. These characteristics are to be identified on drawings, the process flow diagrams and the control plans and all engineering

documents. Pass-through characteristics are to be specifically identify in the PFMEA and all characteristics are to be effectively controlled.

## 2.2 Submission Requirement

PPAPs are to be approved and submitted electronically to the FNG receiving plant with a target completion of 30 days prior to first material in-house requirement due date. All PPAPs must be AIAG compliant with a default Level 3, unless specified otherwise by the FNG plant or the customer as is some cases mandated/ directed-buy suppliers.

At a minimum, prior to production launch any parts shipped to FNG must have a warrant, certificate of origin, dimensional layout, material test data and material certifications and evidence of special consideration of any pass-through characteristics; unless otherwise authorized.

*FNG will review the submission and give one of three statuses:*

1. Full approval indicates that the part or material meets all specifications and requirements. The supplier is authorized to ship product. Supplier can only invoice for tooling when they achieve full PPAP approval.
2. Interim approval permits shipment on a limited time or piece quantity basis. A documented action plan is expected to address meeting full approval.
3. Rejected means, that the submission, does not meet the specifications or requirements. The FNG plant will state the reason(s) for rejection on the PPAP warrant and return. A corrected PPAP must be submitted and approved prior to following shipments or authorized deviation given.

Suppliers shall always work towards approved PPAP samples, AAR samples, Master plaques or Boundary samples. Disposing of said items requires FNG authorization.

Furthermore, suppliers shall be responsible for obtaining and ensuring master plaques and samples used in production validation are current and maintained.

## 2.3 Customer Specific Requirements

Suppliers must practice and understand all applicable OEMs' customer specific requirements. CSRs must be identified on their control plan and PFMEA. Suppliers are expected to find CSR on OEM authorized web sites.

## 2.4 Validation

Where certification to Federal Regulations; such as, the Federal Motor Vehicle Safety Standards published under Public Law, are applicable; the supplier is required to certify compliance with such standards prior to initial production shipments and as required thereafter.

All test results must be conducted by an accredited test facility. Whether an internal or external lab, the facility shall have a defined scope that includes its capability to perform the required inspection, test or calibration and either accredited to ISO/IEC 17025 or national equivalent.

### 1) Annual Part Verification/Validation

Suppliers are to complete and retain documentation of a part layout for every year of production. FNG reserves the right to request and obtain proof of annual validation. In addition, suppliers are required to provide annually evidence of compliance:



- CQI Special Assessments, including sub-suppliers
- An updated Pre-Award Survey, with at a minimum key contact list.
- Updated Certificate of Origin
- Customer-Specific Assessments (i.e., PPA, Q1, MMOG, BIQS, etc.)

**2) Raw Material Certifications**

A completed Certificate of Analysis (COA), which includes the engineering specification number, must be provided for every lot and shipment. The COA must contain the actual physical or testing measurement per the OEM customer engineering specification. When requested, SPC data will be provided with each shipment. A copy of the actual physical or testing measurements detailed in the OEM specification must be maintained on file at the production location and available upon request.

Provide material documentation data for entry in one of the below applicable systems:

**International Materials Data System/IMDS and End-of-Life Vehicle/ELV.** Product material content, recyclability, weight, life cycle assessment, shelf life and other applicable information area to be reported via IMDS. The End-of-Life Vehicle (ELV) Directive minimizes environmental impact. The use of hexavalent, cadmium, mercury and lead are prohibited in vehicles and their components.

**2.5 Product with Embedded Software**

If product is provided with embedded software, you must have a process for software quality assurance. You must demonstrate software capability self-assessment through the development of your FMEA and for all risks and failure modes identified. Your process Control Plans must demonstrate the proper quality controls to mitigate failures.

**2.6 Statistical Process Control**

If requested, the supplier will provide evidence of control and on-going capability as required for the submission of the PPAP revalidation. SPC monitoring is required where applicable for prototype, preproduction trial runs, PPAP and continuous improvement monitoring.

Minimum initial process capability values are:

- >= 1.67 for Key Characteristics
- >= 1.33 minimum for Key Characteristics at PPAP
- >= 2.00 for Safety/Regulatory Characteristics

**Long term** process study capabilities must be:

- >= 1.33 for Key Characteristics
- >= 1.67 for Safety/Regulatory Characteristics

Processes must be in statistical control and quality characteristics must be normally distributed.

Significant characteristics (SC) and critical characteristics (CC) capability must be demonstrated by providing reports that include a histogram, control charts and normality test. Reference latest edition of AIAG Statistical Process Control (SPC) manual. The FNG plant will approve any exceptions to the above requirements.

## 2.7 Tooling

The supplier is expected to follow FNG Standard Terms and Conditions of Supply specifically, section Buyer's Property Information for handling of FNG and customer- owned assets. Suppliers are also responsible for tracking and identifying all assets. Relocating, disposing or destruction will only occur with documented approval from the FNG Buyer and the receiving FNG plant. Reference to Terms and Conditions of Supply as found on <https://flex-n-gate.com>.

## 3- Serial Production Life

### 3.1 Control of Nonconforming Material and Corrective Action

The supplier must have a documented nonconforming procedure implemented to ensure that defective product is detected, identified and contained and to prevent introduction into production shipments. Should the supplier suspect that control has been lost and nonconforming product shipped to FNG they are to inform the Quality Departments of all impacted FNG plants.

If FNG identifies a defective product or service, the supplier will receive notification of a nonconformance and a request for corrective action. This could be as result of a part quality problem, miss identification (labeling, traceability issue), delivery or missed ship schedule, testing failure, failed inspection results, late APQP timing, customer concerns or warranty problem. Notification can occur through on-line systems such as e-mail, phone call or other similar process (Discrepant Material Report CQAF.00017).

**Containment actions are to occur immediately upon notification** and remain in place until the FNG plant deems effective corrective action has occurred. The supplier will document and communicate the containment measure and initial root cause investigation within 24 hours.

The formal corrective action detailing root cause and permanent corrective action is due **within 10 working days** (Corrective Action Request CPUF.00023). Validation and closure of the CAR process is authorized by the FNG plant and is to **target a duration of 30 days**. The plant can authorize a longer corrective action process when permanent corrective actions feasibly have longer lead times to implement.

If sorting is required at FNG, the supplier has the option in most cases to sort product himself or herself or to hire a third-party inspection company. It is the responsibility of the supplier to requisition the inspection company and issue the purchase order to initiate containment measures. It is highly recommended that suppliers identify their preferred sorting company prior to needing services.

In the instance, our FNG plant does not have space for sorting activities; the suppliers may be required to arrange for transporting non-conforming material to an offsite location. Assurance must be made that re-packaging, creating new packing slip with accurate quantities, affixing new labels as completed with arrangements to transport the newly certified stock back to FNG. Lot traceability must remain intact.

### 3.2 Controlled Shipping

Controlled shipping is a measure more significant than the sort activities associated with the first escalation in discovery of defective product. When a supplier's performance demonstrates a failure to execute the corrective action process e.g. repeat failures. The next in escalation are two types of controlled shipping actions.

**CS1:** Supplier conducted sort and certification of subsequent part shipments for a prescribed period determined by FNG.

**CS2:** Third party sorting and certification for a prescribed period.

Controlled Shipping is a redundant inspection process for sorting of a specific non-conformance during root cause investigation and verification of the correction action. The redundant inspection is in addition to normal controls and is typically done off line and away from the process that failed.

All controlled shipping actions are the responsibility of the supplier to coordinate and manage. Continued part supply to FNG must meet released quantities and without supply interruption. The supplier and the FNG plant will agree on the method to be used to identify all certified material.

Submission of the sorting data showing inspection results is required. This data will determine the effectiveness of the secondary inspection process and the corrective actions. This data will determine if controlled shipping requirements can be removed.

FNG will notify the supplier they have been placed on Controlled Shipping with either the CS1 or CS2 Letter & Supplier Confirmation (CPUF.00009 & CPUF.00008). Application to be removed from Controlled Shipping is to be requested using the Exist Letter to Level 1 or 2 (CPUF.00010) along with supporting documentation validating the corrective action is effective.

### 3.3 Supplier Escalation Process

A supplier failing to insulate a FNG plant from repeat incidences after reasonable efforts will be subject to an escalation process. FNG also reserves the right to inform the supplier's QMS registrar, if problems are not resolved in a timely manner.

- **Baseline target:** Managed at the plant level and is standard for monitoring the supply chain. Utilizes the corrective action process and our FNG PLM Supplier Nonconformance module. Suppliers should have effective processes in place that allow maintaining this baseline, which stops escalation to Step 1 and further.
- **Step 1:** Managed at the plant level, but escalation may solicit additional resources to drive resolution of problems and improvement. Controlled Shipping Level 1 containment practices may be implemented as well as notification to FNG Purchasing for support. This may result in issuing the supplier a scorecard by the FNG plant with an improvement plan required.
- **Step 2:** Managed at the plant level and escalation may deploy Controlled Shipping Level 2 containment and request of supplier site assessment along with request for Purchasing support. FNG may leverage the customer if supplier is a mandated/directed-buy. Formal development plan may be required.
- **Step 3:** Managed by Purchasing and escalation requires a senior supplier management review with the supplier. Subsequent management reviews might be scheduled as necessary to verify closure to all issues as noted on the action plan. Potential for new business being placed on hold or resourcing could be optioned. In the case of a customer directed- buy, a request to engage or resource could be made to the appropriate customer.

The length of time spent at each step will be determined based on risk and cost being incurred by FNG and our customers, as well as the performance in meeting the improvement plan. FNG's intention is

always to develop a supplier towards improvement prior to giving a status of New Business Hold or resourcing.

### 3.4 Supplier Performance (Monitoring and Scorecard)

The FNG plant Quality team has primary responsibility for obtaining corrective actions from suppliers. Purchasing will become involved when suppliers are not responsive to requests or corrective actions and overall poor performance goes unresolved. The following key performance indicators will be monitored and tracked:

- Delivery performance to schedule
- Part conformance
- FNG and/or OEM customer disruptions
- Dealer returns, field actions, warranty, recalls
- APQP/PPAP Timeliness
- Corrective Action Timeliness

A supplier scorecard will only be issued to a supplier meeting the criteria. Criteria is based on performance over a period time with the above listed inputs.

### 3.5 Supplier Charge Back (CPUP.00009 Supplier Charge Back Procedure)

When a quality or delivery problem is reported and is proven to be the fault of the supplier the below sum is to be used in the calculated costs. Situation must work in accordance with the Supplier Charge Back Procedure (CPUP.00009), which necessitates acquiring agreement with the supplier, and the FNG Buyer prior to attempting cost recovery actions. These charges are only to offset costs incurred by FNG and not intended to be punitive. FNG labor costs will be calculated using only the plant work classification.

#### Potential Costs:

- Per incident, a one-time administration fee of \$120 (3 hours x \$40.00) may be charged, if excessive FNG time is required to coordinate, document and communicate initial containment measures.
- Sorting/ rework performed by FNG labor
- Sorting/rework performed by 3rd Party Sorting Company; Cost payment coordinated directly between supplier and sorting service provider.
- Down time
- Scrap/ all parts rejected due to nonconformance, including finished assembled product.
- Premium freight or related transportation costs.
- Any customer charges to FNG, including claim charges, yard holds, warranty or recall.
- Testing or revalidation
- Costs associated with unauthorized deviations from PPAP or process change at supplier or responsible sub- supplier.
- Travel expenses to the customer or supplier (If excessive and agreed upon).

## 4- MATERIAL AND LOGISTICS

### 4.1 General Requirements

Suppliers shall design and manage their logistics processes to ensure on-time delivery of specified quantities to the FNG plant at the designated time.

Suppliers shall be EDI (electronic data interchange) capable.

An Advanced Shipping Notification (ASN) is required of each shipment leaving the supplier's location. The supplier should have a process in place or a plan to implement a method of scanning labels to create the shipping documents and the ASN. This is proven the most effective method of reducing shipping errors and mitigating downtime as a result.

Suppliers shall ensure that all material shipped is identified on a Packing Slip or Bill of Lading. Specifications may differ by FNG plant, but a minimum of the shipment date, packing slip number, address to and from, part numbers, part description, purchase order number, quantity ordered, quantity shipped, number of cartons/skids/containers shipped and total number of cartons/skids/containers shipped, total weight.

On-time delivery is a fundamental and critical to the success of the supply chain. As such, it is a key component to supplier monitoring and an input for the supplier scorecard. A nonconformance will be issued with a request for corrective action for missing the ship schedule.

Suppliers are to contact the FNG plant when the delivery plan fails or requires premium expedited freight.

### 4.2 Materials Planning and Forecasting

Planning and forecasting is dependent on the FNG plant receiving product and services. Given supplier internal manufacturing processes are diverse and can vary greatly suppliers shall contact the FNG plant Materials team prior to first shipments to coordinate and confirm the release management system.

Communication of material forecasting from the FNG plant through regularly scheduled releases will occur. This is for the suppliers planning purposes only, whereas formal regular releasing of requirements will be updated and communicated weekly.

In the event of a process or product change there is a goal to minimize the amount of obsolescence for the supplier and for FNG. The supplier must ensure it is working within the agreed upon materials planning system to protect against absorbing needless obsolescence costs.

Suppliers needing extended forecasting for long-lead time components or services may use the Extended Material Authorization for [\(Addendum C\)](#) and submit for approval to the FNG Buyer and FNG Plant.

### 4.3 Packaging

Both a production and back-up packaging designs are to be developed in a partnership with FNG as part of APQP and shall be in place prior to a capacity verification activity (Run @ Rate) or first shipment requirements. When applicable, suppliers are required to adhere to AIAG/VDA Standards and Global REACH requirements.

Suppliers are responsible for the removal of all expired labels and debris from containers prior to packing new materials. All containers are to be clean and function as intended and safe for usage.

All solid wood packaging, pallets and crates including dunnage must comply with ISPM #15 (international standards for phytosanitary measures and guidelines for regulating wood packaging material in international trade). Proof of this treatment will need to be marked accordingly on the outside of the packaging material.

#### 4.4 Labeling

Suppliers shall be responsible for the clear identification of products throughout all phases of production. These materials shall contain, as applicable: container labels, master labels, mixed load labels, primary metals label, and part labels, if specified by FNG or customer specification.

All labels must be legible and scan-able, in compliance to this manual ([Addendum A](#)) unless otherwise approved by the FNG plant.

Characters and symbols shall comply with AIAG, B-8 standard-Quality Assurance Guide for Shipping Labels, VDA 4902 Standard and other bar code applications.

#### 4.5 Safety Stock

Fluctuations in demands have become commonplace in the automotive industry. Suppliers are required to carry sufficient inventory to protect FNG and their customers from shortage situations and to accommodate 100% on-time delivery.

Suppliers shall establish minimum inventory required as protection against down time or any identified potential capacity constraint such as labor disruptions, equipment failures, material lead-time, and capacity shortfalls.

#### 4.6 Transportation

All suppliers shall understand and comply with the FNG Transportation Policy. This addresses suppliers with materials entering from a foreign country and their Certificate of Origin requirements as well as C-TPAT/PIP and FTA/Customs Compliance (applicable regions only). Shipments that cross FTA International borders shall also comply with standards outlined in ISO/PAS 17712 and reference in the FNG Transportation Policy and located: <https://flex-n-gate.com>

#### 4.7 Material Management Operation Guideline (MMOG)

Suppliers are urged to complete the MMOG and seek compliance to the contained guideline. This is to reduce the time and work required by suppliers and their customers to define and implement an effective materials process.

These guidelines require the supplier to complete a self-assessment and receive a rating based on their compliance. Deficiency in any critical area automatically requires the supplier to develop an action plan. Suppliers may be required to provide a copy of their MMOG Scoring Summary Results.

## 5- WARRANTY MANAGEMENT

### 5.1 General Requirement

FNG Customers assert increasing importance on product performance and expenses attributed after vehicle sale. With increasing consumer awareness to vehicle performance and reliability, OEM customers extend warranty coverages. It is vital for FNG and their supply base to focus on durable and persisting quality of their products.


- Warranty cost responsibility

OEM customers have stipulated that warranty costs will be shared with their supply base and FNG stipulates the same expectation. All applied OEM warranty system processes, procedures, agreements and requirements will transmit through to the FNG supply base in the same accordance. When a supplier's component is implicated in warranty, recall or campaign of any kind, the supplier will be held responsible for root cause analysis, appeal or rebuttal of claim, and must be prepared to accept all associated costs. As such, suppliers are expected to participate in warranty activities.

- Improvement and corrective action process, regardless if component is returned.

General responsibility and costs for which a supplier is accountable works in conjunction with the Flex-N-Gate Purchase Order and Standard Codes and Terms of Supply as found on our Flex-N-Gate website Department- Purchasing Documents: <https://flex-n-gate.com>.

**Addendum A– FNG ASN format & 2D Label Standard**

|   |   |                |            |             |
|---|---|----------------|------------|-------------|
|  | <b>LABEL REQUIREMENTS STANDARD</b><br>General Notes Regarding All Labels:   |                |            |             |
|   | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">VERSION 2021v3</td> <td style="width: 33%;">26/07/2021</td> <td style="width: 33%;">PAGE 1 of 4</td> </tr> </table> | VERSION 2021v3 | 26/07/2021 | PAGE 1 of 4 |
| VERSION 2021v3  | 26/07/2021  | PAGE 1 of 4    |            |             |

**BARCODE SYMBOLOGY**  
ALL BARCODES ARE TO BE:

**1D - AIAG STANDARD CODE 128** -9.8mils or higher is preferred.

**2D – Data Matrix**, with proper header and footer as well as field separators and field prefixes.

**DATA IDENTIFIERS** – As noted below, these must be included as a prefix in the barcode and must appear within the human readable portion.

**QUIET ZONE** – Must be maintained at the beginning & ending of each barcode segment.

**CHECK DIGITS** – Do Not Use

**REFLECTIVITY AND CONTRAST** – Must meet reflectivity and contrast requirements specified in AIAG-B10, at all electromagnetic wave lengths from B633 to B900 nanometers.

**BARCODE SIZE** – All must be at least .5 inches in height, not to exceed 3 inches wide.

**LABEL LOCATION** - Unless otherwise directed by the destination plant’s purchasing department, two labels must be affixed to each container -one, on the top right hand corner of the front of the container, and one on the top left corner on the adjacent right side. The entire label must be unobstructed so the barcode areas can be scanned.

**LABEL PROTECTION** - Label protection against moisture, weathering, abrasion, etc. may be required and is encouraged wherever practical. Clear plastic pouches are one example of possible protection methods. In choosing any protection method, care must be taken to assure that the labels will still meet reflectivity and contrast.

**LABEL PURPOSE/USE:**

**Container Label:** Customer Segment of an AIAG Label to be used on a single container holding one or more parts with a single part number.

**Master Label:** Customer Segment of an AIAG Label to be used on a pallet or similar pack containing multiple single containers each with its own Container Label. All containers must contain the same part number.

**Mixed Label:** Customer Segment of an AIAG Label to be used on a pallet or similar pack containing multiple single containers each with its own Container Label. Each container contains only one part number, but containers of different part numbers can exist on the same pallet.

**MANDATORY SEGMENTS**  
All segments (human readable and barcode) are required unless stated differently in the examples below.

**SUPPLIER NUMBER**  
*Human Readable Portion at least .25 inches in height, not to exceed 2 inches.* The destination plant’s purchasing department will communicate your number to you. This must match the N1\*SU ID in the EDI 830 received.

**LINE FEED LOCATION**  
*Human readable Portion: at least .25 inches in height*  
The line feed information (if required) will be sent to you in the 830.

**DATE**  
*Human Readable Portion at least .25 inches in height*  
Format DDDMMYYYY and can be Manufacturing, \*Expiry, Shipment, or Label print date.

**MONTH**  
*The Month will be displayed .375 inches in height*  
Format MMM and will be White on Black (inverted).

**PURCHASE ORDER NUMBER**  
*Human readable Portion: at least .25 inches in height*  
This will be the FNG supplied purchase order number, up to 9 digits.

**PART NUMBER**  
*Human readable Portion: at least .375 inches in height*  
This will be the FNG destination plant’s assigned part number. This will be communicated to you on the Purchase Order.

**PART QTY**  
*Human readable Portion: at least .375 inches in height*  
Total quantity of Parts in Container

**UNIT OF MEASURE**  
When the Unit of Measure (UOM) is “piece”, notation is not required. Other-wise, note the UOM in the human readable area only. When used, the UOM shall be directly to the right of the human readable quantity and shall be a minimum of 0.2” high. The unit of measure shall not be bar coded.

**PART DESCRIPTION**  
*Human Readable Portion at least .25 inches in height*  
Supplier generated Description for the purposes of documenting manufacturing specific information. This can be alpha/numeric, not to exceed 10 characters. This may be mandatory if required by the receiving party. Usage to be determined by the buyer.

**FIELD TYPES**  
As noted below

**LICENSE PLATE (VENDOR SERIAL NUMBER)**  
*Human Readable Portion at least .25 inches in height*  
The license plate shall be a combination of the Supplier Code (N1\*SU) and serial number (REF LS) that is found on the ASN (unique ascending sequential number assigned when the label is printed). The maximum length of the license plate number shall be 30 digits. The serial number must not be repeated within two years.

**HEAT TREAT NUMBER / LOT NUMBER**  
Heat Treat Number, Master Coil Number, or Lot Number – Direction given by local destination plants purchasing department.





**LABEL REQUIREMENTS STANDARD**  
General Notes Regarding All Labels:

VERSION 2021v3

26/07/2021

PAGE 2 of 4

**CONTAINER LABEL**

**Label Block Sections Shown in Red:**

(Note: all contents of a block must fit within the block, and not go over lines into other blocks)

1. Supplier Information including name, address, phone number, and part Country of Origin
2. Customer Information. Name, address.
3. 2D Barcode including the information outlined below, with appropriate headers, field separators, field prefixes, footer, etc.
4. Quantity field, included in 2D barcode with Q prefix.
5. Supplier ID (must match N1\*SU ID in ASN), included in 2D barcode with V prefix.
6. PO Number, not included in 2D barcode.
7. Manufacturing/Packing Date, not included in 2D barcode. Date in DDMMYYYY format for the date of manufacture of product. MMM in reverse. \* For Expiration date, see note below.
8. Customer Part Number, included in 2D barcode with P prefix.
9. Customer Part Description, not included in 2D barcode.
10. Line feed, not included in 2D barcode. If the customer plant requests it then the Line Feed (or storage location) is to be included on the label. This will be transmitted to you in the EDI 830 for each part.
11. Vendor 'License Plate' number (N1\*SU ID in ASN, followed by Supplier defined Serial # - Maximum overall 30 digits), included in 1D barcode above the number with 1J prefix. In the 2D barcode, only the Supplier Serial is included, also with the 1J prefix. For example, if N1\*SU ID in ASN is 123456789 and your supplier serial is 00555666777, then in this block the text will read 12345678900555666777 and this same number will be in the 1D barcode prefixed by 1J. In the 2D, only the 00555666777 will be presented with the 1J prefix (same serial transmitted in your 856 EDI ASN).
12. Lot number. Included in the 2D barcode with 1T prefix only if the part is under LOT control. If LOT control is not needed, the human readable section may contain the Mfg. Date and Time if desired.
13. Vendor area. Vendor can put any information they need, including their own serial for scanning purposes, etc. in this area.



Label Size: 4X6

**2D Barcode Format:** (note only the supplier serial in the 1J section, the DUNS is separate in the V section), see note below if using Expiration date.

\*>\*06\*/1J00555666777\*/PCKT4B-17F011-ACLGTA\*/Q50\*/V123456789\*/1T1234567890123456E2\*<\*

Message Header: \*>

Format Header: \*06

Field Separators: \*/ (at the beginning of each field before the prefix, including the first field after the header).

Format Trailer: E2\*

Message Trailer: <\*

**\*Expiration Dates:** If a product has an expiration date, and the receiving plant requires this info on the container label, the following changes **MUST** be made:

- Section 7 (Date Change):
  - o Date to be replaced with the Expiration date in the same format, instead of using the Manufactured date.
- Section 3 (2D Barcode Change):
  - o 2D barcode must include the Expiration date in the format 5DDMMYYYY (5D is the expiration date prefix. This data must be outside of the Format Trailer (E2\*), but inside of the Message Trailer (<\*). A field identifier (\*/) is not required.
  - o 2D Barcode Format:
    - \*>\*06\*/1J00555666777\*/PCKT4B-17F011-ACLGTA\*/Q50\*/V123456789\*/1T1234567890123456E2\*5D26072021<\*



**LABEL REQUIREMENTS STANDARD**

General Notes Regarding All Labels:

VERSION 2021v3

26/07/2021

PAGE 3 of 4

**MASTER LABEL**

**Label Block Sections Shown in Red:**

(Note: all contents of a block must fit within the block, and not go over lines into other blocks)

1. Supplier Information including name, address, phone number, and part Country of Origin
2. Customer Information including name, address.
3. MASTER LABEL identifier at top of the label format.
4. 2D Barcode including the information outlined below, with appropriate headers, field separators, field prefixes, footer, etc.
5. Quantity field, for full quantity of the master (all containers on master), included in 2D barcode with Q prefix.
6. Supplier ID (must match N1\*SU ID in ASN), included in 2D barcode with V prefix.
7. PO Number, not included in 2D barcode.
8. Customer Part Number, included in 2D barcode with P prefix.
9. Customer Part Description, not included in 2D barcode.
10. Line feed, not included in 2D barcode. If the customer plant requests it then the Line Feed (or storage location) is to be included on the label. This will be transmitted to you in the EDI 830 for each part.
11. Vendor 'License Plate' number (N1\*SU ID in ASN, followed by Supplier defined Serial # - Maximum overall 30 digits), included in 1D barcode above the number with 6J prefix. In the 2D barcode, only the Supplier Serial is included, also with the 6J prefix. For example, if N1\*SU ID in ASN is 123456789 and your supplier serial is 00555666777, then in this block the text will read 12345678900555666777 and this same number will be in the 1D barcode prefixed by 6J. In the 2D, only the 00555666777 will be presented with the 6J prefix (same serial transmitted in your 856 EDI ASN).
12. Date (DD/MM/YY or DD/MM/YYYY), not included in 2D barcode. This can be the manufacture or pack date if all containers are the same, or the label date.
13. Vendor area. Vendor can put any information they need, including their own serial for scanning purposes, etc. in this area.



Label Size: 4X6

**2D Barcode Format:** (note only the supplier serial in the 6J section, the DUNS is separate in the V section)

\*>\*06\*/6J00123456789\*/PC51001\*/Q5000\*/V123456789E2\*<\*

Message Header: \*>

Format Header: \*06

Field Separators: \*/ (at the beginning of each field before the prefix, including the first field after the header).

Format Trailer: E2\*

Message Trailer: <\*



**LABEL REQUIREMENTS STANDARD**

General Notes Regarding All Labels:

VERSION 2021v3

26/07/2021

PAGE 4 of 4

**MIXED LABEL**

**Label Block Sections Shown in Red:**

(Note: all contents of a block must fit within the block, and not go over lines into other blocks)

1. Supplier Information including name, address, phone number, and part Country of Origin
2. Customer Information including name, address.
3. 2D Barcode including the information outlined below, with appropriate headers, field separators, field prefixes, footer, etc. For the mixed load an additional field included in the 2D but not visually presented on the label is:
  - Supplier Code (must match N1 \*SU ID in ASN) with V prefix.

This should match the same field on the container labels contained within the mixed load.

4. Part information for items contained within the Mixed Load. Info for each part (up to 4 per Mixed Load) includes Part Number, Total Quantity, Number of Packs, and Quantity per Pack. This info is not included in 2D barcode.
5. Vendor 'License Plate' number (N1 \*SU ID in ASN, followed by Supplier defined Serial # - Maximum overall 30 digits), included in 1D barcode above the number with 5J prefix. In the 2D barcode, only the Supplier Serial is included, also with the 5J prefix. For example, if N1 \*SU ID in ASN is 123456789 and your supplier serial is 00555666777, then in this block the text will read 12345678900555666777 and this same number will be in the 1D barcode prefixed by 5J. In the 2D, only the 00555666777 will be presented with the 5J prefix (same serial transmitted in your 856 EDI ASN).
6. MIXED LOAD identifier at bottom of the label format.
7. Date (DD/MM/YY or DD/MM/YYYY), not included in 2D barcode. This can be the manufacture or pack date if all containers are the same, or the label date.
8. Vendor area. Vendor can put any information they need, including their own serial for scanning purposes, etc. in this area.



Label Size: 4X6

**2D Barcode Format:** (note only the supplier serial in the 5J section, the DUNS is separate in the V section)

\*>\*06\*/5J00123456789\*/V123456789E2\*<\*

Message Header: \*>

Format Header: \*06

Field Separators: \*/ (at the beginning of each field before the prefix, including the first field after the header).

Format Trailer: E2\*

Message Trailer: <\*

Addendum C-- Extended Material Authorization (CPUF.00013)

THE FOLLOWING INFORMATION IS REQUIRED FROM A SUPPLIER REQUESTION MATERIAL AUTHORIZATION THAT EXCEEDS THE STANDARD PROVIDED

Material Authorization / lead time Request Justification

Part number (s) Part Description Model Year (Attach list of applicable for a group of parts)

Supplier Code Supplier Name Supplier Contact Name Phone Number

Requested RAW: Weeks Requested FAB: Weeks Requested LEAD TIME: days

Definitions (See below for a dditional detailed definitions) Raw Material = Material and/or purchased components received by a supplier before any additional value is added by that supplier. Fab Material = Material to which a supplier has performed a service, altered or added any value. Lead Time = The number of days that it takes for a supplier to respond to a significant increase in requirements and maintain that increase within their stated tool capacity.

Previous RAW, FAB and Lead Time: Raw FAB Lead Time Part Number Model Year

Justification and manufacturing process description with measurements (in days) from receipt of release until availability of the part. (Attach additional sheets if necessary)

Lead time / Authorization Continuous Improvement Plan Date of Completion New Authorization New Lead Time

- 1. 2. 3.

Buyer Section The following inform is required from the buyer.

P.O. Number (s) Buyer Name Phone Number: Buyer Comments (optional)

Approval Authority

Buyer Purchasing Mgr. Director

Copy approvals to affected Ventra Plant Material Planners for required systems updates.

| Date of Revision | Rev. # | Section #  | Details of Change   |
|------------------|--------|--|---|
| 10/13/23         | 18     | 3.5 Supplier Charge-back   | Reaffirm that only actual costs are used during a supplier charge back activity.  |
| 6/28/23          | 17     | 1.5 and 1.6  | 1.5 – Added requirements for temporary deviation of processes, and shifted requirements of bank builds for contingency plans to section 1.6   |
| 11/24/21         | 16     | Scope, 2.8 & 4.4   | Cite manual does not apply to other FNG plants acting as supplier. Reference specific documents found on FNG Website. Remove Pre-Production forms. Include revised label standard.  |
| 7/21/20          | 15     | All  | Sequenced to align with program life cycle and to improve overall flow of information. Removed redundant information and direct reader to parent document. In some cases, AIAG, the FNG Website, PLM or Intelix. Some addendums were removed for similar reasoning. Added sections Suppliers of Special Processes and Sub-Supplier Management, Feasibility, Statistical Process Control, Embedded Software. |
| 1/10/20          | 14     | Addendum N   | CAD/Drawing submittal and approval via PLM  |
| 8/1/19           | 13     | Cost Recovery  | To further detail agreement with supplier must occur prior to debit memo and to engage buyer for negotiation, if needed. Added 2 images to cover.   |
| 9/14/18          | 12     | Cover Letter   |   |
| 8/24/18          | 11     | Pre-Production Build Control<br>Addendum M   | Cite VW Group CSR<br><br>Detail and cite CQAP.00011 Pre-Production Build Control Procedure and associated documents   |
| 6/25/2018        | 10     | Cover Letter, Transpiration, Supplier Charge Back, Material Requirements, Labeling | Formatting fixed throughout document  |
| 5/16/18          | 009    | Addendum A,C, G, H, I, J, K  | Removed reference to transition to IATF, updated Transpiration Policy to reference FNG Website, placed all references to cost recovery charges in Addendum B, updated Material Requirements inventory requirements and updated labeling spec to current AIAG format.  |
| 8/16/17          | 008    | Addendum (new)   | Revised to new corporate form and to remove references to Veltri.   |
| 8/2/2017         |        | Tooling  | Added Suspect Material Notice (SQCN) for use with supplier chargebacks and sorts. With will replace Addendum G January 2018. Both are available for usage now.<br><br>Added notes regarding boundary samples, master plaques and FNG approved and supplied parts for production approval and inspections.   |
| 7/17/17          | H      | Warranty   | Defined clearer supplier responsibility with OEM warranty system. OEM warranty system processes, procedures and associated costs will be applied to supplier. Reference to FNG Standard Terms &   |

|           |   |  |   |
|-----------|---|--|---|
| 5/17/17   | H | PPAP Submission Criteria   | Conditions of Supply.<br><br>Additional responsibilities defined of the Tier-2 for the Tier 3 supplier: on-site Control Plan (or equivalent) audit at initial PPAP & continuation if FNG plant metrics indicate poor performance.   |
| 4/28/2017 | H | PPAP Submission Criteria   | Clearly defined supplier as responsible for all sub tier supplier performance, PPAP requirements and compliance to FNG specifics. Revised to improve  |
| 4/28/2017 | H | Quality System Registration, Required References, Supplier Quality Assessments | Update to reference new IATF requirements. Notation that the manual applies to all sub tier suppliers, externally provided processes, products and services. Clarification for Required References the supplier must consider receiving OEM. Remarkd that risk assessments and supplier performance may warrant different assessment frequencies and type.  |
| 4/28/2017 | H | Cover, CSQRM letter and Acknowledgement page.                                  | Cover- title page change to <i>Global Supplier Quality Requirements</i> Manual and references to mandatory ISO & IATF transition. Index page corrections. CSQRM letter and Acknowledgement page to new name, revision and contact information. New requirements. Supplier responsible for working with latest revision.   |
| 12/1/2016 | G | Shipping and JIT Delivery  | Page 20 added verbiage on formal notifications for expedites  |
| 7/25/2016 | F | Cover, References, Addendums   | Removed obsolete logos on cover page, added new supplier notification forms, updated transportation policy info, Removed reference to QSB and added BIQS.   |
| 6/18/13   | E | Post Index, 2. References,   | Added Acknowledgement Letter & Sign-off and added; ISO14001 Req. References; #5 Supplier Quality Assessments; New 1 <sup>st</sup> 3 par. to Submission Criteria, Cert of Origin/ NAFTA Reqmt; Annual Part Verification/Validation reqmt details frequency and bullet list & fee for noncompliance; C. Escalation Process and associated documents; #9 Outside Source for Sorting par.3; #7 CAR minimum; references and links to new addendums and letter 'C' to Supplier Development Added addendums F-L for form examples. |
| 3/9/12    | D | #5 Transportation –NEW, #6 Requirements A#2 - C of A; Supplier Performance #2  | Added a new section Transportation (now #5) and renumbered the sections; PPAP #2 Certificate of Analysis requirements for detail to be included on the certificate for Plastics and Metals per the PO/Contract; added org. change updates to Supplier Performance.  |
| 8/26/11   | C | QMS: #5, #6, #8, #9B, Material Requirements: #7                                | Changes in product/process submission requirements; added bailment; CS-added example criteria; added reference to Par 5A; 1 <sup>st</sup> paragraph (Package and Label) added last sentence and 3 <sup>rd</sup> par. Changed shall to should.; added EXAMPLE to Addendums A & D   |
| 3/16/11   | B | 1. Quality System  | Clarified requirement for certification and references to environmental requirements  |
| 2/18/11   | A | All  | Official Release  |