



**Nitto Denko Automotive Supplier Quality Manual**

**SUPPLIER**

**QUALITY**

**MANUAL**

Supply Chain Management  
July 31, 2009  
Revision #2



# Nitto Denko Automotive Supplier Quality Manual

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1.1-2

Revision Page

DATE	SECTION	PAGE	DESCRIPTION OF REVISION	SIGNATURE
7/31/09	All		Major revision and re-issue	Supply Chain Ted Jones

The revision pages will keep a record of all revisions to this manual. Any revisions and effective dates of the revisions will be documented.

Nitto Denko Automotive will make available the most current revision of our Supplier Quality Manual. Nitto Denko Automotive Suppliers are encouraged to review the Supplier Quality Manual Information on a regular basis to ensure that all information is current. Nitto Denko Automotive, Ohio, Inc. may make changes to this manual without notice.

### 3. PARTNERSHIP GUIDELINES

#### 3.1 GENERAL

This manual is intended to help our suppliers understand the requirements and expectations of Nitto Denko Automotive, Ohio Inc.

Our Customers evaluate Nitto Denko Automotive, Ohio Inc. products continuously. Quality products are critical to our company’s continued successes and as such, our future depends upon maintaining the highest quality automotive products available. Within this manual, are the necessary standards which contribute to quality levels acceptable to our Customers.

Nitto Denko Automotive is committed to continual improvement in as a means of meeting our customers’ expectations. In order to achieve this we need to form partnerships with our suppliers by maintaining, and improving communications within our quality systems.

#### 3.2 QUALITY IMPROVEMENT

We define quality as the measure of the consistency and continual improvement in products and/or services provided. This definition incorporates measures of variation from the target specifications to identify consistency, and communication with the customer to understand the desired service. There must be a strong continuously improving quality system in place to support these activities.

Seven areas of concentration in the pursuit of excellence are as follows:

- Know the Customer
- Cross Functional Teams that Involve Everyone
- Constantly Re-evaluate processes and controls
- Mastering the Art of Relationships Between Diverse Groups
- Concentrating on Those Things You Do Best
- Demonstrate Leadership by Doing Something Extra
- Learn From the Best

Nitto Denko Automotive expectation is that its suppliers will pursue this philosophy of continual improvement. We must help each other not only survive, but to prosper in this highly competitive marketplace.



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## 4. ELEMENTS OF SUPPLIER QUALITY

This section defines the elemental standards required for our suppliers to achieve acceptable quality levels. The elements described below are requirements for each supplier to meet or exceed our needs.

### 4.1 Product Quality

The supplier will comply with all specifications as mutually agreed upon. Suppliers should strive not only to meet the standard or specification but be good enough to reduce variation (increase  $C_{pk}$ ). Nitto Denko Automotive requires that each supplier maintain a minimum of 1.33  $cpk$  for each part supplied.

Product(s) supplied to Nitto Denko Automotive must meet material or product specification(s) that make supplemental inspection of the product(s) after receipt by Nitto Denko Automotive not required. All products or material must be assured to 100% compliance to the specification(s).

### 4.2 Product Quality Assurance and Liability

Nitto Denko Automotive suppliers are held responsible for any liabilities or costs that result from quality and/or delivery deviations of the supplier's product as supplied to Nitto Denko Automotive. This includes, but is not limited to, warranty claims, sort activity, re-inspection costs, product replacement and/or recall costs and supplemental testing/technical analysis/failure investigation as a result of a supplier-caused issue.

In the event of any quality or delivery failure, full technical and process investigation is required to accurately and completely identify root cause(s) and implement permanent corrective actions. Nitto Denko Automotive, Customers require these post-failure actions (including interim containment measures) to be executed rapidly (typically, a minimum of effective containment is within 24 hours and root cause analysis within 14 business days). The product supplier is responsible for completing these actions.

### 4.3 Reputation

Nitto Denko Automotive strives to maintain World Class Standards with our Suppliers and Customers that promotes a positive, responsible public reputation known for Price, Quality and Delivery.

### 4.4 Value Engineering

Nitto Denko Automotive suppliers will continuously pursue process improvements and controls that result in lower cost and higher quality products.

### 4.5 Inventory

Suppliers will support initiatives to reduce inventory levels, at all Nitto Denko Automotive manufacturing facilities as well as lead-time reduction for products supplied to our facilities.

### 4.6 Defect Replacement

In the event of a confirmed quality defect, the supplier is responsible to deliver replacement product immediately after notification and verification of a defect. This includes replacements for actual defective



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product(s) or material as well as temporary replacements for any product(s) placed in our quarantine areas as a containment measure.

### 4.7 Customer Orientation

The Supplier will provide on-site support, either at Nitto Denko Automotive, Ohio Inc. or at any Nitto Denko Automotive customer, if requested, immediately after notification of a major problem.

### 4.8 Management Commitment to Quality

The Supplier will actively participate in all jointly agreed to programs which will enhance the skills and capability of both the Supplier and Nitto Denko Automotive.

The Supplier will cooperate with Nitto Denko Automotive with regard to information which is relevant to the evaluation of products supplied to Nitto Denko Automotive. This will include dimensional and other data studies, and specific SPC data as necessary necessary.

### 4.9 New Launch

During the launch of a new part(s) or engineering change, the supplier shall develop a manufacturing plan to facilitate a seamless transition of parts into the supply stream. This plan must show evidence (data) that the process is in conformance as planned and the proper controls are in place to protect Nitto Denko Automotive from any quality issues. The plan will remain in effect until process stability is demonstrated.

## 5. SUPPLIER QUALITY SYSTEM EVALUATION

### 5.1 INTRODUCTION

Nitto Denko Automotive is committed to the manufacturing philosophies of product quality control as well as continual improvement. As part of our ongoing commitment to our customers, We are requesting that our suppliers maintain a Quality System that will ensure that we receive the highest quality materials. To that end, Nitto Denko Automotive requires that a minimum registration compliance to ISO 9001:2000 standard with conformity to the ISO/TS16949 standard. This requirement may be waived under special circumstances from Senior Nitto Denko Automotive Management.

If the Supplier is registered to ISO 9001:2000, TS16949, then Nitto Denko Automotive will expect the supplier to adhere to that standard. The supplier must supply Nitto Denko Automotive with a copy of their registration certificate(s), and notify Nitto Denko Automotive of any changes in their certification status.

It is a Nitto Denko Automotive requirement that our automotive component suppliers:

- Shall establish, document, and maintain a quality system as a means of ensuring that products conform to specified requirements based on ISO/TS standards.
- Work toward the implementation of ISO 9001:2000, TS16949 as their fundamental quality system requirement.



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- Comply with or be working toward an Environmental Management System as a means of ensuring that Nitto Denko Automotive and supplier processes continue to have a positive impact on the environment.
- Shall establish, document, and maintain a system that monitors the delivery process including accuracy of packaging, labeling, count, and transportation.

To this end, each supplier may be audited on the systems described above. If actual performance in any area changes considerably, Nitto Denko Automotive may decide to perform a special audit on pertinent processes and systems. Our auditors will evaluate these systems based on ISO/TS16949 guidelines.

### 5.2 AUDIT PROCEDURE

#### 5.2.1 Preparation

Nitto Denko Automotive will contact the supplier to set up a date and scope for the audit. Time will be allowed for the supplier to make preparations for the audit. As part of the preparation for the audit, the supplier will be expected to complete the Supplier Survey Form (Ref: form QUA-0046). Suppliers having no quality system certification may be audited using the complete ISO/TS 16949 standard and all related documentation as a guideline. In all cases, when preparing for an audit the ISO/TS 16949 standard is used as a reference.

#### 5.2.2 Audit Agenda

Prior to the audit Nitto Denko Automotive will provide an agenda listing the scope of the audit and a proposed schedule. The intent is to provide the supplier with a guideline for planning and allocation of the proper resources to support the audit process. The agenda will list the specific areas of the supplier's management system to be audited within a specific timeframe. Specific documents required for review during the audit may include but not limited to:

- An Organizational Chart
- Failure Modes and Effects Analysis examples
- Control Plans or an equivalent document Quality Manual
- Policy / Procedure Manual
- Surveys/audits performed on sub-contractors
- Gauge calibration records
- Gauge capability studies
- Process capability studies
- SPC records
- Employee training plans
- Corrective actions/Countermeasures reports (both internal and Customer driven)
- Environmental Management System Manual and Procedures
- Cost Improvement and Delivery System Documentation

Plant tours will be utilized to verify the application of policies, procedures, work instructions and records, to evaluate the effectiveness of the system. This tour may include, but not be limited to, the following areas:

- Contract Review Function
- Design Control \*
- Document and Data Control
- Purchasing Function
- Product Identification and Traceability (storage areas incoming, in-process, and final)



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- Process Control
- Inspection, Testing, or Laboratory Gauging/Calibration Systems
- Defective Product Hold/Quarantine Areas
- Packaging and Storage Areas
- SPC Systems
- Servicing \*

\* If applicable to the Supplier

## 5.2.4 Remarks

At the conclusion of the evaluation, the auditor(s) will discuss their findings, including strong points, weak points, nonconformities, and potential areas for improvement. A completed report will be mailed to the Supplier's contact person within three weeks of the survey date.

If the supplier receives results that exceed 4 or more minor nonconformities and/or 1 or more major nonconformities, the supplier will be required to submit a corrective action plan within one month of the survey. Nitto Denko Automotive will evaluate the submitted corrective action plan to determine its acceptability. If the plan is acceptable, Nitto Denko Automotive will confirm the corrective action implementation by scheduling a follow up visit. If the plan is unacceptable it will be returned to the supplier. The supplier will be expected to reconsider the corrective action and supply a new plan to Nitto Denko Automotive.

Nitto Denko Automotive will take into consideration willingness to work toward ISO/TS 16949 compliance when making comparisons between suppliers of the same product. It is our hope that we can work with our suppliers to achieve continual improvements.

Re-audit schedule

No major nonconformities	3 years
1 or more major nonconformities	2 year



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## 6. SUPPLIER RATING SYSTEM

### 6.1 Supplier Rating System

Performance monitoring and two-way feedback are critical to maintaining a solid business relationship and ensuring optimum efficiency. The Nitto Denko Automotive Supplier Rating System provides a quantitative and consistent process to measure supplier performance in all critical areas. This process is designed to improve incoming quality, maintain uninterrupted supply, and improve communications within the Supply Chain. This system is comprised of regular feedback to suppliers. Methods of communication may be in the form of Scorecards, e-mail feedback and or other communication designed to improve communications or products and services. Questions concerning the system or a particular rating should be communicated to the Quality Department Manager or Representative of Nitto Denko Automotive.

Current contact:

Ted Jones

Quality Supervisor

Nitto Denko Automotive, Ohio Inc.

1620 S. Main Street

Piqua, Ohio

Phone: 937-773-4820 ext 218

E-mail [ted\\_jones@oh.nitto.com](mailto:ted_jones@oh.nitto.com)

#### 6.1.2 Ratings

Overview-

The four performance areas that impact ratings are as follows:

-Quality (40 percent weighting)

-Delivery (30 percent weighting)

Significant Occurrence (10 percent weighting)

-Customer Service (20 percent weighting)

For suppliers the quality score is based on:

1. The number of occurrences' per month

2. The number of Corrective Action Requests

3. Delivery performance based on time delivery performance

4. Any issue that creates downtime, quality issues at any Nitto Denko Automotive, Ohio Inc. Customer or facility. OEM or warranty claim.

5. Premium freight will be tracked and considered an occurrence.

All elements add up to a total possible score of 100 points. Targets for each performance element will be set by commodity following the first full rating year (four quarters). The quarterly rating will be used to calculate a 12-month average.



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## 7. SUPPLIER PROBLEM RESOLUTION

### 7.1 INTRODUCTION

When a product defect issue is found at Nitto Denko Automotive or at any Nitto Denko Automotive customer that involves a supplier part; the supplier shall give reasonable support to Nitto Denko Automotive when requested until the issue is resolved. This includes, but is not limited to: On-site defect review, engineering support, testing data, and or laboratory support.

### 7.2 DEVIATION FOR NON-CONFORMING MATERIAL

In certain instances, material not conforming to standards or specifications may be used if agreed upon by Nitto Denko Automotive, Ohio Inc.

Requests for deviations must be submitted to Nitto Denko Automotive Quality Department for review by the Quality, Purchasing, and Production Departments. Contact the Quality Manager in Ohio at: **937-773-4820 ext 223** or E-mail to: Brenda\_Branson [@oh.nitto.com](mailto:branson@oh.nitto.com) ; Alabama, E-mail to: Deborah\_Dragoo@al.nitto.com

The Supplier is responsible for segregating the non-conforming products until a deviation is granted, and must abide by the conditions specifically stated in the deviation.

A Request for Deviation must be approved by Nitto Denko Automotive Quality Department prior to shipment of any non-conforming material.

Deviation materials and shipping papers must be positively identified as such prior to shipment from the Supplier's facility.

If a Supplier discovers that non-conforming material has been inadvertently shipped without deviation authority, contact Nitto Denko Automotive immediately by telephone, followed by completing the [Supplier Request for Deviation](#) (SQM-SRD) form. Nitto Denko Automotive Quality, Purchasing, and Production Departments must sign this document with either approval or disapproval and the results conveyed to the Supplier.

### 7.3 PROBLEM REPORTING AND RESOLUTION

The following procedure describes the method for reporting and resolving problems. Generally, problems for which Nitto Denko Automotive does not request a long-term corrective action require only Step 1 (shown below). If a long-term corrective action is requested, Steps 1 and 2 (shown below) are required. If the problem requires a long-term solution (usually exceeding 90 days), then Steps 1, 2, and 3 are required.



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## 7.3.1 STEP 1: Notification of Quality Concerns

### Nitto Denko Automotive

Supply the following information within 48 hours of identifying the problem:

Fill out [Supplier Problem Notification/Tracking Form SQM-SPN](#) (See Appendix B), section numbers 1, 2, 3, 4, and 5, which address the following items:

- Name and telephone number of contact person.
- Product description, manufacturing date, shift, time, and lot numbers.
- Scope of the problem, and whether replacement is needed.
- What assistance is required.
- Send samples if possible

Include as much detail as possible.

### SUPPLIER

Documentation is completed for every quality concern.

**See Section 5 of the Supplier Problem Notification / Tracking Form** for specific requests and dates.

The **Problem Notification/Tracking Form**, with Section # 6 completed and signed, is electronically transmitted to AGC WITHIN 48 HOURS. The following information is required in Section # 6:

- Opening date, reference number
- Champion (Responsible person)
- Quick-fix solutions
- Root cause (best guess) - when samples received, a "looks like" analysis must be included.
- Results of investigation/internal audit/containment actions and follow-up date

Fill out and sign Section # 7 with supporting data, verifying effectiveness of the short-term corrective action (C/A) WITHIN 7 DAYS.

If more than 7 days are needed, then a written request may be made to the Quality Assurance Division for an extension of the 7-day deadline.

### Nitto Denko Automotive

If a long term corrective action is not required, and the verification of the short-term countermeasures is acceptable, then Nitto Denko Automotive signs Section # 10 and transmits a copy to the Supplier.



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### 7.3.2 STEP 2: *Long-Term C/A is Requested by AGC*

#### SUPPLIER

Within 14 business days (unless otherwise noted in Section 5), submit the completed [5 PRINCIPLES worksheet form SQM-5P](#) (See Appendix B), or equivalent (by prior arrangement only).

Present a report on the effectiveness of the permanent countermeasures to Nitto Denko Automotive within 30 days of acceptable completion of the C/A documentation (or other arrangements by mutual consent). An example of this is all the data from section #9 on form 4010 used to verify the Corrective action effectiveness.

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If approved, either through presentation or other arrangements, the C/A is closed and Section 10 is signed. If not approved, go back to Step 2.

### 7.3.3 STEP 3: *If a Permanent Solution cannot be Implemented or Verified in 30 Days (unless noted in Section 5), then the C/A requires a Long-Term Solution.*

#### SUPPLIER

Provide a written request for an extension to exceed 30 days with explanation of why needed, and assurance that containment measures are in place for future runs and current inventory.

Provide a permanent, verified C/A within the time frame of the requested extension.

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If approved, the C/A is closed and Section 10 is signed. If not approved, go back to Step 3.

*NOTE: ANY TIME A C/A IS REQUIRED, IT IS UP TO THE SUPPLIER TO MAINTAIN FOLLOW-UP COMMUNICATION IN WRITTEN FORM.*

*NOTE: ANY TIME-PERIOD REFERRED TO IN THIS DOCUMENT (UNLESS OTHERWISE NOTED) BEGINS AT THE DATE THAT THE PROBLEM WAS OPENED AT AGC AND NOTIFICATION SENT TO SUPPLIER.*

**7.3.4 5 Principles for Problem Solving** *5 Principles for Problem Solving* is a methodology for solving problems. AGC requires its suppliers to use this methodology (or equivalent, with prior permission) to solve problems when a long-term corrective action is requested. The form **5 Principles for Problem Solving**, and supplemental help ([Aid to the 5 Principles for Problem Solving Worksheet](#), Form SQM – Aid to 5P) for using this methodology are found in Appendix B.



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## 8. SUPPLIER CHANGE NOTIFICATION/APPROVAL PROCESS

### 8.1 INTRODUCTION

Significant changes to the supplier's product, process, or packaging need to be communicated to and approved by Nitto Denko Automotive. This policy protects and strengthens the partnership between Nitto Denko Automotive and its suppliers. Significant changes may appear, on the surface, to have no effect on the product, but may affect Nitto Denko Automotive. Changes to any of the following must be communicated to and approved by Nitto Denko Automotive in advance of the change:

- Plant Location
- Production Process
- Production Conditions (major)
- Raw Materials Manufacturer
- Packaging
- Labeling

For some changes, the product may need to go through the PPAP procedure, if requested by Nitto Denko Automotive. (see Section 10).

Once approval has been given to make the requested change(s) to any of these conditions, ***the first production shipment of goods after the change has been made shall be marked with labels that clearly show that the shipment is the first produced under the altered conditions.*** (Supplier Change Approval Form SQM-SCA P in Appendix A)

### 8.2 PLANT LOCATION

Any supplier location change for Nitto Denko Automotive product (temporary or permanent) must be approved by Nitto Denko Automotive prior to the change using the **Supplier Change Approval** Form (SQM – SCA P) in Appendix A.

### 8.3 PRODUCTION PROCESS

Any significant change to the supplier's production equipment must be approved by Nitto Denko Automotive using the **Supplier Change Approval** Form (SQM – SCA P) in Appendix A.

### 8.4 PRODUCTION CONDITIONS

Any significant change to the production conditions that could affect the product quality or function of AGC process must be approved by Nitto Denko Automotive. Use the **Supplier Change Approval** Form (SQM – SCA P) in Appendix A.

### 8.5 RAW MATERIALS MANUFACTURER



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Any changes to the packaging (different pallets, piece counts) or vendor changes of anything that touches the product, anything that might affect our process, must be approved using the **Supplier Change Approval** Form (SQM – SCA P) in Appendix A.

### 8.6 LABELING

Any changes to the labeling must be approved using the **Supplier Change Approval** Form (SQM – SCA P) in Appendix A.

## 9. PRODUCT CERTIFICATION REPORTS

### 9.1 INTRODUCTION

Product Certification Reports will be required from raw materials and component suppliers as required depending on the product and the material characteristics.

When requested, a Certificate of Compliance, Certificate of Analysis, Certification of Materials, and SPC data must be supplied. Nitto Denko Automotive expects its suppliers to implement and use statistical tools (such as SPC, capability studies, etc.) in their processes to monitor and control the quality of their part during production.

### 9.2 PROCEDURE

Supplier product and test data for important characteristics will be specified by Nitto Denko Automotive in the negotiated specifications (or by other means) and is to be mailed periodically to Nitto Denko Automotive Quality Department. This data is preferred in graphical form for easy interpretation. Usually, a histogram, trend chart, and  $C_{pk}$  trend chart is requested for each critical characteristic. A listing of the product produced during that time period is usually required.

## 10. SUPPLIER APPROVAL

### 10.1 INTRODUCTION

Before a potential supplier can be approved, the supplier will be requested to provide a general information about the potential Supplier's business. Information about his quality system, a specification sign-off (if appropriate), a trial submission (if appropriate), and a probation period. If the potential supplier becomes unwilling or unable to continue the quality of product or service, that supplier may lose the "Approved Supplier" status. The flow diagram on the next page illustrates the process.

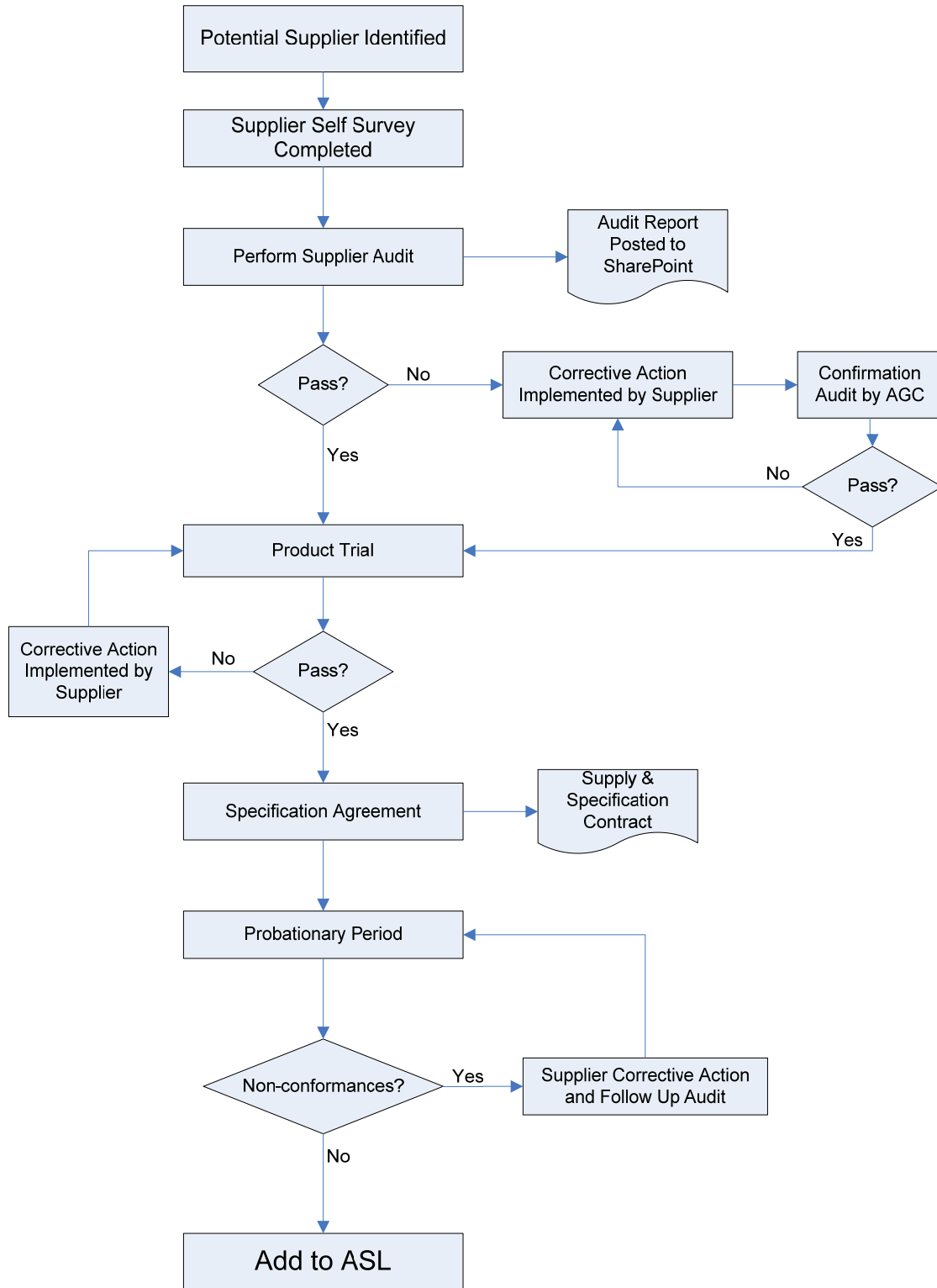
### 10.2 QUALITY SYSTEM VERIFICATION

Nitto Denko Automotive will assess the potential supplier on the basis of the ability of their quality system to fulfill all the requirements of the ISO/TS 16949 standard. The quality system verification is explained in section 5 "Supplier Quality System Evaluation" of this manual. Definitions for Major and Minor non-conformities as they apply to the assessment process can also be found in the IATF Rules for achieving IATF Recognition (Available from AIAG).



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## New Supplier Approval Process





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## 11. PRODUCTION PART APPROVAL PROCESS (PPAP)

### 11.1 INTRODUCTION

As a supplier to the automotive industry, Nitto Denko Automotive is held to the ISO/TS16949 standard, and requires adherence to those same standards from its suppliers. Direct materials suppliers are required to submit representative production samples of the product being offered, as well as inspection and test reports. The purpose of these reports is to demonstrate that Nitto Denko Automotive GC's specification requirements are understood by the supplier, and that the supplier's process are capable of meeting those requirements during an actual production run.

For specific information on Production Part Approval Process, please see the current edition of ***Production Part Approval Process (PPAP)***, available from AIAG.

The Production Part Approval Process (PPAP) applies to all production commodities (i.e., raw materials and components), and is required prior to the first quantity shipment in the situations described in "When Submission is Required." This includes first parts shipped when a process or product change is made.

Materials used during production, inspection, and packaging that do not become part of the product will be discussed in section 12 of this document, ***Supplier Approval for Supplementary Goods***.

#### Requirements for Production Part Approval

The following documents and items must be completed/available by the Supplier for each applicable composition when any of the situations in "When Submission is Required" occur. Direction on which of these items must be provided to the customer is defined in Submission Levels.

- Production Part Submission Warrant (Form PSW)
- Limited product samples (quantities TBD by Nitto Denko Automotive.), sent to the Nitto Denko Automotive facilities involved.
- Master Samples are to be retained by the supplier.
- All applicable Specifications/Material Standards and any referenced documentation.
- Dimensional results referenced to the requirement in the appropriate Specification/Material Standard.
- Material test results as specified in appropriate material specification.
- Process Flow Diagrams.
- Process FMEA's.
- Control Plans which include all product and process-related Significant or Key characteristics. Unique Control Plans will be established for each product family, and each unique composition, where composition impacts originally submitted Control Plans.
- Process Capability results showing conformance to customer requirements for Key, Significant, Safety, Critical and Compliance-related characteristics, with supporting historical or trend data. Measurement System variation (Gage R&R) studies for all equipment used for statistical studies for new or modified gages, measurement, and test equipment (Refer to AIAG Measurement Systems Analysis Manual).

**NOTE:** For submissions due to engineering changes at the Supplier, the inspection and testing requirements will be determined by the extent of the changes. In some instances the evaluation may be limited to the areas directly affected by the change. The AGC Supplier Quality Engineer at the affected plant(s) will be able to offer guidance on requirements in this case.



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## 11.2 SUBMISSION LEVELS

Nitto Denko Automotive will identify the PPAP SUBMISSION LEVEL that will be required from each supplier, or supplier-part number combination. Factors which will determine the level required are:

- Supplier quality rating status
- Part criticality
- Experience with prior part submissions

It is possible that the different Nitto Denko Automotive plants may assign different submission levels to the same Supplier, or to different manufacturing locations of the same supplier.

The levels are:

Level 1 Warrant only, to be submitted to Nitto Denko Automotive. \*\*

Level 2 Warrant with product samples and limited supporting data submitted to Nitto Denko Automotive. \*\*

Level 3 Warrant with product samples and complete supporting data submitted to Nitto Denko Automotive. \*\*

(\*\* Customer Specific Documentation may be required in addition to PPAP Submission)

## 11.3 PROCESS REQUIREMENTS

Refer to *Production Part Approval Process Manual* available from AIAG

## 11.4 PREPARING THE SAMPLES

When samples are required, Nitto Denko Automotive suppliers will have the responsibility of performing on those samples the inspection and tests necessary to assure that the samples conform to standards and specifications. A **Production Part Approval--Dimensional Results** Form or a **Production Part Approval--Material Test Results** Form (See *Production Part Approval Process Manual*) shall be completed and addressed to the QC Department at the affected Nitto Denko Automotive Plant. Below is a list of sample requirements:

- Before shipment of parts, the affected Nitto Denko Automotive Plant will identify how many samples should be submitted.
- Each sample shall be marked with a unique number that corresponds to its test result number on the **Results** Report.
- The samples must be tagged with an [Initial Samples/Parts Tag](#) (Form SQM - ISPT) with pertinent information provided.

Each characteristic submitted for approval must meet agreed specifications.

## 11.5 RECORD & MASTER SAMPLE RETENTION



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The supplier will retain copies of **all** production part approval documentation identified in Section 11.2, including SPC results, regardless of the submission level requested by. This record will show conformance to all dimensional, physical, performance, and other test specifications, and will be maintained for a period of **seven years**.

## 11.6 PART SUBMISSION STATUS

Refer to *Production Part Approval Process Manual*.

## 11.7 REQUIREMENTS FOR Raw Materials

### 11.7.1 Scope

As stated in the AIAG Production Part Approval Process (PPAP) reference manual, the applicability of PPAP to a Supplier of bulk, raw material or indirect materials is the customer's decision. The purpose of this section is to define the PPAP requirement as applicable to Raw Material Producers supplying to Nitto Denko Automotive manufacturing facilities.

### 11.7.2 When Submission is Required

- Following significant repairs/changes to the process which may impact product quality or process capability, e.g., lip change.
- Initial production for Nitto Denko Automotive of a unique material composition from an individual Supplier location.
- Production initiated after a particular process has been inactive for 18 months or longer.
- Following a customer request to suspend shipment due to a Supplier concern.

### 11.7.3 Submission Levels

Nitto Denko Automotive will identify the submission level that will be used with each supplier, or supplier and part number combination. The customer's choice of levels for a supplier will be determined by such factors as:

- Supplier Compliance with ISO/TS 16949:2002 requirements
- Supplier quality recognition status (e.g., Quality Excellence)
- Part criticality, experience with prior part submission
- Supplier expertise with specific commodity

The submission levels are: (See Retention/Submission requirements table for exact requirements.)

Level 1 - Warrant only submitted to Nitto Denko Automotive.

Level 2 - Warrant with limited product samples (type and quantity to be defined by Nitto Denko Automotive sent to each plant with data on "key" characteristics (with material and dimension data).

Level 3 - Warrant with limited product samples (type and quantity to be defined by AGC) sent to each plant with data on "key" characteristics. Initial trial containers defined by AGC (sent with notification to each receiving plant prior to full production approval along with complete/full data).



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***LEVEL 3 is the default level, utilized for all submissions unless specifically advised otherwise by the responsible part approval activity***

All of the forms referenced in this Production Part Approval Process section may be replaced by computer-generated exact facsimiles. Acceptability of these facsimiles must be confirmed with the responsible part approval activity prior to the first submission.

## 11.7.4 Process Requirements

- Auxiliary Drawings and Sketches
- Part Specific Inspection or Test Device
- Customer-identified Special (Key) Characteristics - Dimensional and Material or As Specified
- Preliminary Process Capability Studies - An acceptable level of process capability must be determined prior to submission for all characteristics designated as key that can be evaluated using variables data. Process capability will be depicted by
  - Providing statistical summary data collected during the production run (Average, Max, Min, Std. Dev.) and
  - Providing a process performance index  $P_{pk}$  where variation is estimated using the standard deviation of the sample set from normal product sampling measures.
  - Appearance Approval Requirements
  - Dimensional Evaluation (Analysis of data to be generated with measurements performed per control plan, with sufficient data samples for estimation of process variation)
- Material Tests
- Analysis of data to be generated with measurements performed per control plan, with sufficient data samples for estimation of process variation. Include key characteristics per the Material Specification.

## 11.7.7 Preparing the Samples

It is the Supplier's responsibility to perform the inspection and tests required on the limited product samples

- The standard *Production Part Approval --Dimensional Results* or *Production Part Approval -- Material Test Results* Forms will be completed unless otherwise an alternate form is specified by Nitto Denko Automotive Before shipment of parts, the affected Nitto Denko Automotive plant will identify the appropriate PPAP submission level. Samples should be supplied as defined for the appropriate level unless indicated by the affected Nitto Denko Automotive facility.
- Each sample will be marked with a unique number that corresponds to its test result number on the *Dimension Results* or *Material Test Results* form.
- Samples must be tagged with an **Initial Samples/Parts Tag** (Form SQM - ISPT) with pertinent information provided.
- Each characteristic submitted for approval must meet agreed specifications.

## 11.7.9 Record and Master Sample Retention



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The Supplier will retain copies of all production part approval documentation regardless of the submission level requested by AGC. This record will show conformance to all dimensional, physical performance, and other test specifications, and will be maintained for a period of five years. The requirement for master samples may be waived upon Nitto Denko Automotive approval of the supplier's alternative plan.

### 11.7.10 Part Submission Status

Suppliers will be notified by Nitto Denko Automotive **Supplier PPAP Submission Review Sheet** (Form SRS) as to the disposition of the submission. After sample approval, suppliers are responsible for assuring that future production continues to meet all specification requirements.

***Suppliers must never ship their products for production use before receiving Nitto Denko Automotive approval.***

- **Production Approval** indicates that the part meets all Nitto Denko Automotive specifications and requirements. The supplier is therefore authorized to ship the part for production use subject to releases from the Nitto Denko Automotive scheduling activity.
- **Interim Approval** permits shipment of material for production requirements on a limited time or piece quantity basis. Interim Approval will only be granted when the supplier has:
  - Clearly defined the root cause of the non-conformities preventing production approval, and
  - Prepared an interim approval action plan agreed upon by Nitto Denko Automotive. Re-submission to obtain "production approval" is required unless the supplier is advised that Nitto Denko Automotive has revised the drawings or specifications to agree with the part as manufactured.
- Material covered by an interim approval that fails to meet the agreed-upon action plan, either by the expiration date or the number of pieces or the authorized quantity, will be rejected. No additional shipments are authorized unless an extension of the action plan is granted.
- **Rejected** means that the submission, the production lot from which it was taken, and accompanying documentation do not meet Nitto Denko Automotive requirements. Corrected product and documentation must be submitted and approved before production quantities may be shipped.

## 12. RAW MATERIAL / PRODUCT APPROVAL PROCESS



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## 12.1 INTRODUCTION

The term “Raw Material or Product” refers to materials that are used in the production, inspection, and packaging of the product, but are not incorporated into the product by Nitto Denko Automotive.

## 12.2 WHEN CERTIFICATION OF RAW MATERIAL OR PRODUCTS ARE REQUIRED

From suppliers, Nitto Denko Automotive, Ohio Inc. may require submission of representative samples of the product being offered, and/or certification reports. The purpose of the certification is to assure Nitto Denko Automotive that products meet the stated requirements.

“Off-the-shelf” from supply houses are not included in sample requirements, but some materials or products may require a certificate traceable to NIST.

Exempt also are items in which dimensional certifications are not helpful. Examples of candidates for samples and supplier certification are custom made, one-of-a-kind measuring and gauging devices, value-added operations (such as those provided by assembly companies before delivery of specialized material or products, and packaging materials (or any other indirect supplies) with special requirements.

Certifications will be required only if requested by Nitto Denko Automotive Request for certification data usually is made at the time of the first purchase, and continues throughout the business relationship. Occasionally, a supplier may be asked to provide certifications for all materials shipped to Nitto Denko Automotive after a certain future date.



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## APPENDIX A

### GLOSSARY

AIAG	Automotive Industry Action Group
CRITICAL CHARACTERISTICS	Same as Key Characteristics: Those specified in the applicable to Nitto Denko Automotive specification requirements.
FMEA	Failure Mode and Effects Analysis: See <b><i>Potential Failure Mode and Effects Analysis Manual</i></b> , published by the Automotive Industry Action Group
KEY CHARACTERISTICS	Those characteristics which are specified in the application to Nitto Denko Automotive specification requirements
PPAP	Production Part Approval Process: The process by which new suppliers, new production processes, new locations, etc. are granted approval to ship product to Nitto Denko Automotive Reference: <b><i>Production Part Approval Process (PPAP)</i></b> . Available from Automotive Industry Action Group (AIAG) by telephoning (810) 358-3003
QSA	Quality System Assessment; See <b><i>Quality System Assessment</i></b> , published by the Automotive Industry Action Group.
SPC	Statistical Process Control; See <b><i>Fundamental SPC Manual</i></b> , published by the Automotive Industry Action Group.



## APPENDIX B

### FORMS AND FORMATS

SQM – Aid to 5P	Aid to the 5 Principles for Problem Solving Worksheet
SQM - SSSR	Receipt Acknowledgement Form for Supplier Quality Manual
SQM – SPN	Supplier Problem Notification/Tracking Form (front and back)
SQM – 5P	5 Principles for Problem Solving Worksheet (3 sheets) <i>(Form is available in Microsoft Excel 5.0 on diskette by request.)</i>
SQM – SCA P	Supplier Change Approval Form for Location, Production Line, Process, Conditions, Packaging, Labeling, Raw Materials, etc.
SQM - ISPT	Initial Samples/Parts Tag
SQM - SCSN	Supplier Change Shipment Notification
PSW	Part Submission Warrant
SDS	Glass Sample Data Summary Form
SRS	Supplier PPAP Submission Review Sheet