Supplier Quality Assurance Manual

NSK Corporation
NSK-AKS
NSK NSSA
NSK NBMX
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1. **Scope**
   This manual applies to external Suppliers of materials, products, processes and services providing to NSK Americas excluding NSK Brazil and NPA, (collectively, "NSK").

2. **Purpose**
   The purpose of this manual is to inform NSK Suppliers of the core expectations that are required to do business with NSK. The requirements in this manual shall be considered the base “Customer Specific Requirements” and may be audited for conformance by NSK. Additional requirements may be implemented as required.

3. **References**
   - The Supplier shall maintain the latest revision level of each document as applicable; ISO 9001, IATF 16949, AIAG Core Tools Manuals (APQP, MSA, SPC, PPAP, FMEA) and CQI Standards [www.AIAG.org](http://www.AIAG.org)
   - MAQMSR Minimum Automotive Quality Management System Requirements available at [www.iatfglobaloversight.org](http://www.iatfglobaloversight.org)
   - Supplier Exchange [http://sa.us.nsk.com/supplyWeb/account/login](http://sa.us.nsk.com/supplyWeb/account/login)

**NSK Policies and Forms available at the NSK Supplier Exchange Web Portal:**
- AQM-005 Supplier Audit Workbook
- AQM-005 Supplier Quality Assurance Manual
- AQM-007 Process Change Request form C
- AQM-007 Deviation Request form D
- AQM-008 Supplier Nonconformance Chargeback Policy
- AQM-005 Supplier Acknowledgement form (Exhibit 1)
- AQM-013 Supplier Key Process Control Policy
- AQM-015 Supplier Special Product Labeling
- AQM-015 Special Product Labeling Attach Labels
- AEE-015 Supplier Environmental, Health and Safety Manual
- NSSA-PUR-FRM012 NSSA Supplier Change Request form
- NSSA-PUR-POR012 NSSA Logistics and Packaging Manual
- NSSA-PUR-FRM015 Packaging and Shipping Data Form
- NSSA-PUR-FRM020 Drawing Deviation Request Form Prototype
- NSSA-PUR-FRM025 PFAI Check List
- Ford – Control of Plastic Injection Molding Process
4. Definitions

- **Automotive Industry Action Group (AIAG)** - a North American association that develops and publishes standards for manufacturing with the automotive industry
- **International Automotive Task Force (IATF)** - a group of automotive manufacturers which aims at providing improved quality products to automotive customers
- **International Material Data System (IMDS)** - a global data repository that contains information on materials used by the automotive industry
- **NBMX** - NSK Bearing Manufacturer Mexico S.A. DE C.V., a subsidiary of NSK Americas, Inc.
- **NSK-AKS** - NSK-AKS Precision Ball Company
- **NSK Corporation** - a subsidiary of NSK Americas, Inc.
- **NSK Corporation Supplier** - provides product or services to NSK Clarinda IA plant, NSK Liberty IN plant, NSK Franklin IN plant, NBMX plant or NSK-AKS plant
- **NSSA** - NSK Steering Systems America, Inc., a subsidiary of NSK Americas, Inc.
- **NSSA Supplier** - provides product or services to NSK Bennington VT plant or NSK Dyersburg TN plant
- **Safe Launch** - a method beyond PPAP implemented for initial production of new product to ensure customer requirements are met
- **Safety Data Sheet (SDS)** - a document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products
- **Supplier** - a party that supplies goods or services to NSK
- **Supplier Exchange** - NSK web portal for Suppliers, used for primary Electronic Data Interface (EDI) for production scheduling, Advanced Shipping Notices (ASN), Defective Material Notification (DMN), links to NSK documents and additional items. The Supplier must contact NSK to be set up for the use of this portal. [http://sa.us.nsk.com/supplyWeb/account/login](http://sa.us.nsk.com/supplyWeb/account/login)

5. Acknowledgement

The Supplier shall be familiar with and conforming to the requirements contained in this manual and all other documents referenced herein. The Supplier should return a completed and signed Supplier Acknowledgement form AQM-005 provided by NSK or
available on Supplier Exchange demonstrating that the Supplier has received and agrees to the requirements of this manual.

6. General

6.1. Requirements
This manual is a requirement for all Suppliers in conjunction with ISO 9001, MAQMSR, AIAG Core Tools Manuals, Supplier Environmental, Health and Safety Manual and referenced NSK policies. Any additional requirements noted specifically on a contract, purchase order, drawing or specification must be complied with.

6.2. Changes
NSK reserves the right to make changes to this manual. The Supplier will be notified of any changes and required to adhere to those changes.

6.3. Application
This manual shall apply to any current or future purchase order.

6.4. Certification
NSK requires all Suppliers to be certified to the current IATF 16949 and ISO 9001 standards through third-party audits [1]. The third-party certification must be accredited by IAF MLA. A list of approved Certification Bodies can be found at www.iatfglobaloversight.org. All Suppliers of automotive products or services without IATF 16949 third-party certification will be considered at risk to NSK and our customers. NSK may audit at risk Suppliers to IATF 16949 requirements as an approach to developing Supplier quality management systems.

A current copy of the Supplier’s ISO or IATF Certificate shall be submitted to NSK upon expiry. NSK Procurement must be notified of any changes to the certification status, including initial certification, recertification, or transfer of certification to a new Certification Body, certificate withdrawal, and certificate cancellation without replacement.

[1] All suppliers of products and services that are exclusively non-automotive require certification to ISO 9001 through third-party audits. If a Supplier to NSK is so small as to not have adequate resources to develop a system according to IATF16949 or ISO 9001, certain specified elements may be waived by NSK.

6.5. Communication - Language
The Supplier shall have the ability to communicate necessary information in the NSK specified language and format (e.g. computer-aided design data, electronic data, advanced shipping notices (ASN’s), etc.). NSK’s official business language is English.
6.6. **State of Order- Cleanliness**

The Supplier shall maintain its premises in a state of order, cleanliness and repair to ensure there is no negative impact on the product and manufacturing process needs. The implementation of a defined method is required to maintain this state of order.

### 7. **Record Retention**

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Retention Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPAP</td>
<td>Life of Product +1 yr</td>
</tr>
<tr>
<td>Purchase Orders</td>
<td>5 years</td>
</tr>
<tr>
<td>Process Data</td>
<td>5 years</td>
</tr>
<tr>
<td>Inspection/Testing</td>
<td>20 years</td>
</tr>
<tr>
<td>Calibration</td>
<td>20 years</td>
</tr>
<tr>
<td>Training</td>
<td>20 years</td>
</tr>
<tr>
<td>Drawing/Specification</td>
<td>20 years</td>
</tr>
<tr>
<td>Maintenance</td>
<td>20 years</td>
</tr>
<tr>
<td>Manufacturing Work Instructions</td>
<td>20 years</td>
</tr>
<tr>
<td>Audit (Internal and Supplier)</td>
<td>20 years</td>
</tr>
<tr>
<td>Traceability</td>
<td>20 years</td>
</tr>
<tr>
<td>Problem Solving/Corrective Action</td>
<td>20 years</td>
</tr>
<tr>
<td>Change Point</td>
<td>20 years</td>
</tr>
</tbody>
</table>

8. **Terms and Conditions**

NSK Americas Terms and Conditions shall be adhered to.

9. **Management**

9.1. **Responsibility**

It is the responsibility of the Supplier’s management team to ensure that all of the requirements established by this manual are met throughout the Supplier’s quality management system. Suppliers are expected to support all activities necessary to meet the final Customer requirements. This may include traveling and joint participation in meetings to conduct business.

10. **Resource Management**

10.1. **Competency**

Personnel performing assessments of special processes and dedicated special process experts must be competent on the basis of appropriate education, training, skills and experience. The Supplier shall maintain evidence of training for personnel in any
current, new or modified job affecting product quality, including contract or agency personnel and show competency verification.

10.2. On-site Work
The Supplier shall have people, equipment and facilities to support all NSK sample request and production requirements that will ensure no interruption to NSK manufacturing processes. Any work done off-site must be approved by NSK in advance.

10.3. Treatment of Labor
NSK Suppliers shall abide by the tenets of respectful treatment of all employees. These items include the following of local labor laws as it applies to child labor, forced labor and compensation. Harassment and discrimination of employees shall not be tolerated and employees shall be able to communicate openly with management regarding their work conditions without fear of reprisal.

11. Purchasing
11.1. Approved Sub-tier Suppliers
It is recommended that the Supplier selection process should follow CQI-19.

11.2. Sub-tier Supplier Special Processes
Special processes such as those defined by AIAG: CQI-9 Heat Treat, CQI-11 Plating, CQI-12 Coating, CQI-15 Welding, CQI-17 Soldering, CQI-23 Molding and CQI-27 Castings; shall be assessed to confirm the Sub-tier Suppliers are properly performing annual self assessments according to the CQI manuals.

11.3. Sub-tier Supplier Statutory and Regulatory Conformance
NSK communication of statutory and regulatory requirements to the supplier may take place through direct communication such as Engineering prints, specifications and/or from our Environmental Department or through our Environmental Manual & Policies, available on Supplier Exchange.

Upon request the Supplier shall report to NSK on the conformance to all applicable statutory and regulatory requirements of all purchased products or material used in the product delivered to NSK facilities. NSK will ask the supplier to submit confirmation of compliance. Supplier response to our request may be reflected in the supplier score card.

11.4. Sub-tier Supplier Quality
The Supplier shall monitor the quality of NSK Sub-tier Suppliers and is responsible for the quality of the product received from the Sub-tier Supplier. This applies to both directed and non-directed Sub-tier Suppliers.
12. Planning & Design

12.1. APQP

APQP is required, for guidance on product/process planning the AIAG APQP manual shall be used.

12.2. Contract Review - Feasibility

The Supplier shall investigate, confirm and document the manufacturing feasibility of the proposed products in the contract review process, including risk analysis. Waiving the requirements of a formal review related to the product may only be granted by the NSK Americas Director of Quality or their designee.

12.3. Cross Functional Teams

A multidisciplinary approach shall be used to prepare for product realization including:

- Development and review of FMEA including actions to reduce potential risks
- Development/finalization and monitoring of special characteristics
- Development and review of control plans

12.4. Information Format

The Supplier shall submit product/component development information in the NSK designated format determined at project kick-off if a specific format is requested.

12.5. PPAP

Process Flow Charts, Failure Mode and Effects Analysis (FMEA), and Control Plans may be requested for NSK’s review and approval prior to PPAP submission. The applicable control plan (prototype, pre-launch, mass production) shall be available at the appropriate stage during the APQP process. The control plans shall take into account the Design FMEA (if applicable) and manufacturing Process FMEA outputs. The control plan shall be reviewed and updated when any change affects affecting product, manufacturing process measurement, logistics, supply sources or PFMEA. The control plan shall address every step in the PFMEA. For guidance on Failure Mode and Effects Analysis the AIAG FMEA manual shall be used.

The PFMEA shall be reviewed if a Customer Quality Concern occurs. The PPAP must be submitted to NSK at the requested submission level on or before the date requested by NSK. All PPAP documentation shall be submitted in English if requested. Any certification provided as part of the PPAP submission must be accompanied by a laboratory scope. For guidance on PPAP the AIAG manual shall be used.
12.6. **Inspection**

A description of the gauges, testing equipment, and measurement techniques that will be used to evaluate components may be requested by NSK. This includes, but is not limited to, drawings and details of special gauges, holding fixtures, or coordinate measuring machine (CMM) setups. Whenever practical, duplicate gauging or holding fixtures should be produced for use at NSK in order to facilitate the coordination of measurement techniques. Measurement Systems Analyses (MSAs) are required for all gauges used to measure special characteristics and measurement systems referenced in the control plan. For guidance on Measurement System Analyses the AIAG MSA manual shall be used.

12.7. **Special Characteristics**

12.7.1. **Safety Critical**

The following requirements apply to Safety Critical and Safety Regulated components, assemblies or processes:

- Defined process monitoring.
- Increased part monitoring.
- Nonconforming product control with localized disposition.
- Product or Poka Yoke verification in process or directly following processing prior to movement to the next process may be required.
- Downstream product verification to prevent flow out.

Adherence to applicable NSK Special Process standards.

The NSK Safety Critical Self-Assessment shall be completed annually and may be verified by NSK periodically.

NSK Suppliers shall ensure that all safety critical item requirements are passed down to sub-tier Suppliers when applicable.

12.7.2. **NSSA Suppliers**

Special characteristics are product characteristics or manufacturing process parameters which can affect safety or compliance with regulations, fit, function, performance or subsequent processing of product.

NSSA labels special characteristics as \( S, \ SR, \ F, \ HI, \) and \( S \).

\( S \): Safety Characteristics that could affect safe vehicle operation.
Safety Regulation Characteristics that could affect compliance with government standards.

Functional Characteristics that could affect performance requirements, fit/function, or ease of assembly either at NSSA or the NSSA customer.

High Impact Characteristics that severely affect the operation of the process or subsequent operations. Non-conformances in these characteristics are related to improper manufacturing and/or assembly operations that may result in subsequent operations being skipped or performed incorrectly.

Black Square. Customer interface or attachment point.

The following table details manufacturing Statistical Process Control (SPC) requirements for NSSA special characteristics. For guidance on Statistical Process Control the AIAG SPC manual shall be used.

<table>
<thead>
<tr>
<th>Special Characteristic</th>
<th>Label</th>
<th>PPAP Requirement</th>
<th>Production Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Safety</td>
<td>Ppk &gt; 1.67</td>
<td>In-process SPC Cpk &gt; 1.33 Or 100% in-line inspection</td>
</tr>
<tr>
<td>SR</td>
<td>Safety Regulated</td>
<td>Ppk &gt; 1.67</td>
<td>In-Process SPC Cpk &gt; 1.33 Or 100% in-line inspection</td>
</tr>
<tr>
<td>F</td>
<td>Functional / Customer interface</td>
<td>Ppk &gt; 1.67</td>
<td>In-process SPC Cpk &gt; 1.33 Or 100% in-line inspection</td>
</tr>
<tr>
<td>HI</td>
<td>High Impact</td>
<td>Ppk &gt; 1.67</td>
<td>In-process SPC Cpk &gt; 1.33 Or 100% in-line inspection</td>
</tr>
<tr>
<td></td>
<td>Black Square / Customer interface</td>
<td>Ppk &gt; 1.67</td>
<td>In-process SPC Cpk &gt; 1.33 Or 100% in-line inspection</td>
</tr>
</tbody>
</table>

Conformance to capability requirements shall be satisfied by material certifications with each lot of material for the following properties:

- Mechanical properties of coil steel
- Teflon coating thickness for Teflon-coated steel
NSK reserves the right to request inspection data for any part characteristic at any time.

12.7.3. **NSK Corporation Suppliers**

**NSK Corporation Special Characteristics Chart**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
<th>Production Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>❌ or ☐</td>
<td>Safety Critical</td>
<td>CpK &gt; 1.67 *see additional requirements</td>
</tr>
<tr>
<td>☐</td>
<td>Critical</td>
<td>CpK &gt; 1.67 *see additional requirements</td>
</tr>
</tbody>
</table>

*Additional Requirements:*
- Must be identified on the PFMEA's, Control Plans, Standard Operating Procedures, Work Instructions and Check sheets.
- If the process capability is between 1.33 and 1.67, the inspection frequency shall be more frequent than other characteristics.
- If the process capability is below 1.33, 100% inspection is required unless 100% inspection cannot be performed due to the destructive nature of the inspection. If 100% inspection cannot be performed, process parameters shall be continually monitored.

For guidance on control of special characteristics the AIAG SPC manual shall be used.

NSK reserves the right to request inspection data for any characteristic at any time.

12.8. **Pre-Production and Prototypes**

12.8.1. **Requirements**

For pre-production parts or prototype parts ordered via a discrete purchase order, all characteristics shall conform to drawings, engineering specifications, and any other specified requirements, unless otherwise agreed to in writing. Additional requirements may be communicated by an NSK representative to the Supplier at the time the purchase order is placed.

The Supplier shall maintain control of any outsourced services required to fulfill the purchase order and ensure that all requirements are being met.

12.8.2. **Inspection**

Part inspection to specified requirements shall be completed prior to shipment of parts. Inspection reports, process flow charts, control plans, and other specified
documentation shall be emailed to the NSK representative and any other contact specified on the purchase order prior to part shipment.

12.8.3. **Non-Conforming**

Any product or service non-conformance shall be immediately communicated to the NSK representative. Non-conforming parts can only be shipped upon receipt of written authorization.

12.8.4. **Changes**

Any changes that occur during pre-production builds (prior to the initial PPAP) shall be communicated. This includes changes to materials, tooling, equipment, fixtures, manufacturing location, and secondary operations.

12.8.5. **Labeling**

Pre-production and prototype parts shall be labeled in accordance to the Supplier Special Product Labeling procedure (AQM-015).

13. **Production**

13.1. **Safe Launch**

13.1.1. **Plan**

All new parts supplied to NSK shall follow a Safe Launch Plan, unless waived by the NSK representative. The Safe Launch plan shall include additional off-line inspection for a predetermined time or quantity of parts after PPAP approval. The Safe Launch Plan shall be documented in a pre-launch control plan, work instruction, or other format agreed to by NSK.

13.1.1.1. **Minimum Requirements**

The Safe Launch Plan shall include the following details:

- Minimum duration. (# of parts, # of tool runs, # of production days, etc.)
- Labeling requirements
- Scope (characteristics to be inspected, inspection method, inspection frequency)
- Exit criteria

13.1.2. **Data and Corrective Actions**

The Supplier shall collect and maintain internal data documenting non-conformances found during the Safe Launch period. Corrective actions shall be implemented to eliminate non-conformances. Safe Launch data shall be provided to NSK upon request.
13.2. Special Processes
13.2.1. CQI Standards
The Supplier shall determine if any special processes are being performed and identify them. This determination shall be based on the application section of the AIAG Standards for CQI-9 Heat Treat, CQI-11 Plating, CQI-12 Coating, CQI-15 Welding, CQI-17 Soldering, CQI-23 Molding and CQI-27 Casting. If applicable, a self-assessment according to the CQI standard shall be done by the Supplier.

13.2.2. Self-Assessment
Annual self-assessments shall be completed before the anniversary date of the previous year and made available to NSK within 24 hours upon request. The CQI self-assessments may be requested by NSK before the expiry date for review and approval by NSK.

13.3. Work Instructions
13.3.1. Work Stations
The Supplier shall prepare documented work instruction(s) for all employees having responsibilities for the operations that impact conformity to product requirements. These instructions shall be accessible for use at the work stations. They shall be communicated to and understood by the employees performing the work. The work instructions shall be in the language of the personnel responsible to follow them.

13.3.2. Set-up
Job set-ups shall be verified whenever performed, such as initial run of job, material changeover or job change. Evidence of this verification shall be maintained. Work instructions shall be available for set-up personnel. The Supplier shall use statistical methods of verification when applicable. First-off/Last-off verification shall be performed.

13.4. Traceability
13.4.1. Lot Control
Suppliers shall establish and maintain documented procedures for unique identification of product lots or batches. Lot numbers shall be traceable from raw material receipt through all stages of production by the Supplier, including components, processes and shipments to NSK.

Lots cannot contain more than one material batch or heat number. A new lot number should be assigned for all significant process variations. Examples include, but are not
limited to, material batches, tooling and equipment setups, and operator changes (if the process is highly dependent on operator skill).

Only one lot and part number should be shipped on a pallet unless approved by NSK; however documentation must be provided indicating all lots, part numbers and quantities provided on a given pallet. If mixed pallets are shipped without NSK approval, each pallet may be received as one lot at NSK; If discrepant material is found, the Supplier shall be responsible for any associated liabilities with the larger quantity of product resulting from the mixed pallet unless approval can be shown that NSK approved the mixed pallet shipments.

Mixed pallet shipments for safety critical parts, assemblies or processes should be avoided except for special circumstances and that have NSK approval.

If parts are bulk packed, mixed lots are not allowed in the bulk package.

### 13.4.2. Sub-tier Suppliers

The Sub-tier Suppliers shall have a documented system(s) to trace product to a raw material lot number (heat # if applicable) and date of manufacture or processing.

### 13.4.3. FIFO

All product shall be shipped on a "first in/ first out" (FIFO) method. FIFO shall also be applied to stock room inventory as product is pulled to be used for production.

In certain cases when strict FIFO is not possible (e.g. some steel MFG processes) the Supplier must maintain documented evidence that NSK has agreed with this. In these situations the Suppliers must maintain FIFO as close as possible.

### 13.4.4. Manufacturing Date Labeling

The label shall include a 6 digit manufacturing date code (month-day-year). For example, product produced on April 9, 2015 will have the date code 040915. This date code must appear on both the label and the packing list.

An alternate labeling method may be used if approved by NSK.

### 13.5. Change Control

#### 13.5.1. Process

The Supplier shall have a process to control and react to changes that impact product realization. The process shall include evidence that customer notification was considered. NSK shall be notified, at a minimum, 90 days prior to any planned changes to part design, manufacturing process, manufacturing location, or manufacturing supply chain.
13.5.2. Notification

13.5.2.1. Notification and PPAP Required

For production-approved parts, the following changes require NSK notification prior to implementation and PPAP approval. This is a limited list, additional items listed in AIAG PPAP manual also apply.

- Any changes to a safety critical component, assembly or process shall require notification to NSK prior to change implementation regardless of perceived level of change.
- Changes to part software updates and modifications
- Change to Manufacturing method, machine or equipment
- Any change affecting a special characteristic on related parts

13.5.2.2. Notification Not Required

For production-approved parts, the following changes DO NOT require NSK notification; however, changed parts must meet standard before, during and after change and must have internal quality verification, tracking, traceability and FIFO.

- Normal machine repair and Preventative Maintenance
- Change of manpower / staff
- Minor day-to-day kaizen activity
- Wear replacement of expendable tools, dies, and molds (not including perishable)

13.5.3. Notification Method

13.5.3.1. NSSA Suppliers

The Supplier shall complete an NSSA Supplier Change Request (NSSA-PUR-FRM012) form and submit it to their assigned NSSA Buyer.

13.5.3.2. NSK Corporation Suppliers

The Supplier shall complete the appropriate form, either NSK Corp. Process Change Request form or NSK Corp. Deviation Request form, and submit to the NSK Corp. Procurement Specialist.

13.5.4. Approval

Written approval from an authorized NSK representative is required prior to implementing any proposed change. PPAP requirements will be communicated to the Supplier. The Supplier shall conform to requested PPAP and required Safe Launch activities for any approved change.
13.5.5. Labeling
The first approved shipment of product after the implemented change shall be labeled in accordance to the Supplier Special Product Labeling procedure (AQM-015).

13.6. Production
13.6.1. Tooling
Any tooling owned by NSK (this includes: manufacturing, test and inspection) shall be permanently marked so the ownership of each item is visible. The Supplier shall maintain the tooling and equipment in good working order.

13.6.2. Purchase Orders
The Supplier shall have the capability to accept purchase orders via the Supplier Exchange web portal unless otherwise approved by NSK. The Supplier should contact NSK to get setup for the use of Supplier Exchange.

13.6.3. Packaging and Logistics
Suppliers to NSSA shall contact NSK Purchasing for packaging and logistics requirements.
Suppliers to NSK Corporation shall contact NSK Procurement for packaging and logistics requirements.

13.6.4. Test Equipment and Calibration Service Suppliers
Suppliers of measurement equipment, inspection, test or calibration services must be accredited to ISO/IEC 17025 by an accreditation body of the ILAC MRA (e.g. - A2LA). Calibration reports provided must include the accreditation body logo. NSK may ask for suppliers accreditation certificate to confirm compliance.

14. Monitoring
14.1. Quality Management System (QMS)
14.1.1. QMS Assessments
NSK reserves the right to conduct quality assessments on all Suppliers using the Supplier Audit Workbook AQM-005 form. The purpose of this document is not to duplicate an Δ IATF 16949 audit (although it may cover some of the same elements), but is intended to identify a good fit between NSK needs and the Supplier’s quality system and process controls.

If the Supplier is not Δ IATF 16949 certified, they should complete an annual self-assessment using NSK document Supplier Audit Workbook AQM-005 and may be subject to an annual NSK on-site audit. Supplier self-assessments should be submitted to NSK Procurement or NSK Quality Assurance. If the supplier provides product for the
automotive industry they shall have a plan with the ultimate objective of becoming certified to IATF 16949.

14.1.2. **NSK On-site Assessment**

NSK Supplier Quality Assessments will be conducted with all new Suppliers before the award of any contracts. Selection of periodic audits will be based on risk assessment, quality performance, safety critical nature of the supplied product, part complexity and previous assessment results at a minimum. Supplier audits may also be required as part of a corrective action resulting from poor Supplier Performance Rating or as required by NSK customers.

Typically, NSK will conduct assessments only on Suppliers that supply direct to NSK. However, NSK reserves the right to selectively conduct Supplier Quality Assessments on Sub-tier Suppliers.

14.1.3. **QMS Continual Improvement**

The Supplier shall have a defined and active continual improvement process in place.

14.1.4. **Product Safety**

The Supplier shall have a procedure to meet all of the requirements of the IATF standard concerning Product Safety.

14.2. **Discrepant Product (DP) and Corrective Action**

14.2.1. **DP Found at Supplier**

The Supplier is responsible for supplying product that meets all design record specifications. The Supplier shall not ship any product that does not meet NSK specifications unless a deviation request is granted in writing by the appropriate NSK personnel. NSK shall be informed within two hours in the event that nonconforming product has been shipped without deviation approval.

When DP or abnormal condition is found for a safety critical product, assembly or process, the following controls shall be utilized:

- Stop the line.
- Contact location management and/or leadership.
- Control part disposition such as a locked scrap bin.
- A controlled process restart.
- Quarantine product to last known Good material.
- Root cause analysis with tools such as Fault Tree Analysis (FTA) or 5 Why.
No good parts/product shall be properly tagged and/or placed in an appropriate container such as a red scrap bin or locked box.

14.2.2. **DP Found at NSK**

If non-conforming product is found, NSK will generate a Defective Material Notice (DMN) in the Supplier Exchange web portal. Acknowledgement of the DMN is required within 24 hours. Discrepant product may be returned to the Supplier if on-going production is not affected. Any returned product will affect the Supplier’s quality metric.

14.2.3. **Containment**

If requested, the Supplier shall initiate containment activities at the NSK location within 24 hours of notification of the problem. Containment activities may include sorting, rework, or replacement. Third party services may be required.

14.2.4. **Sort/Rework**

If NSK is required to sort and/or rework nonconforming product to maintain production requirements, the Supplier will be charged a predetermined hourly rate.

In the event the Supplier uses a third party sort company (“Sort Company(ies)”), the Supplier must obtain NSK approval prior to any work performed by the Sort Company. The Supplier shall ensure that such Sort Company complies with the NSK Terms and Conditions. Further, the Supplier shall be liable for any claims which result from the services provided by the Sort Company, including, but not limited to breaches of the NSK Terms and Conditions.

NSK can provide a list of pre-approved Sort Companies that can be used, if requested.

The instructions for the sort work to be performed must be approved by NSK before any work can be done.

14.2.5. **Corrective Actions**

The Supplier shall perform corrective action activities utilizing 8D methodologies and have a determined default time frame for completion of corrective actions within 30 days. The corrective action process shall include a Look Across step. The Supplier shall upload all relevant corrective action reports into Supplier Exchange unless otherwise directed.

14.2.6. **Labeling Certified Product**

Certified product shall be labeled per Special Product Labeling (AQM-015) procedure until corrective actions have been approved and verified. This includes sorted product, reworked product, and corrective action clean points.
14.2.7. **Cost**

The Supplier shall be liable for all costs associated with the sorting, handling and disposition of discrepant product. This may include, but is not limited to, engineering costs, manufacturing downtime, test lab costs, supervision costs, and administrative costs. The Supplier may also be responsible for the cost of any customer-related activities imposed on NSK if the root cause is found to be discrepant product from the Supplier. This includes, but is not limited to, sorts of finished product at NSK customers, field actions, or recalls.

14.3. **Delivery Performance**

Delivery performance applies to all shipments to NSK including initial samples, prototype and mass production requirements.

Supplier responsibilities include:

- On Time Delivery
- Follow Releases
- Correct Barcode labeling according to NSK Specifications
- ASN (Advanced Shipping Notice) for every shipment as required
- Proper packaging according to NSK Specifications
- Expedites of past due product according to NSK specifications
- Use of Supplier Exchange

14.4. **Supplier Performance**

14.4.1. **Rating**

Supplier overall performance is evaluated quarterly by combining information from multiple disciplines within the NSK organization. Overall performance is assessed based on performance indicators in quality, delivery, and purchasing.

Suppliers may be rated on:

- Sort time and cost associated
- Number of DMNs issued
- Repeat issues, for which corrective actions have previously been implemented
- DMN response time
- DMN (8D) closure time
- Supplier PPM
- Delivery performance
  1. On Time Delivery
2. Number of Occurrences of Expedited Freight
3. Advanced Shipping Notice (ASN) accuracy
   - Cost reduction
   - Environmental survey response time
   - Financial Risk Assessment
   - NSK on-site audit findings closed on time
     If the product is received into inventory by NSK it will be considered for Supplier rating information.

14.4.2. Request For Information (RFI)
NSK may make a “Request for Information” (RFI). RFIs will not have a negative impact on the Supplier’s score if the response and closure expectations are met. Upon review of further information, an RFI can be elevated to a DMN.

15. Environmental, Health and Safety
15.1. ISO 14001
Suppliers must have an environmental system that conforms to the requirements set forth in ISO 14001. NSK encourages Suppliers to certify/register the environmental management system.

15.2. International Material Data System (IMDS)
Suppliers shall notify NSK when a submission has been made in the International Material Data System (IMDS) and communicate the relevant ID number. Suppliers providing material shall submit a copy of the approved IMDS submission noting acceptance status with the PPAP submission and may be required to resubmit based on change of revision level, mass, material or substance content. Suppliers providing only a process or service that does not add material are not required to submit IMDS.
NSK IMDS ID number is 5771.

15.3. Waste Control
Any waste generated as a result of actions performed by Suppliers, Contractors and Supplier Representatives shall be controlled so as not to impact the environment inside the building as well as the natural environment. Appropriate containers shall be utilized and proper labeling attached, consistent with Local, State and Federal regulations.

15.4. Safety
Suppliers should be aware of NSK’s commitment to have safe work processes and practices in the value streams that support NSK product manufacturing. NSK encourages their Suppliers to conform to the requirements set forth in OSHAS 18001.
Additionally suppliers shall provide a safe work environment, compliant to applicable regulation. NSK reserves the right to validate compliance through a combination of supplier self-assessments and NSK supplier safe work practice audits.

15.5. **Safety Data Sheet (SDS)**

For Suppliers of actual or potential hazardous substances, a Safety Data Sheet (SDS) shall be provided to the NSK Purchasing department prior to shipment of materials to NSK.

15.6. **Supplier Environmental Health and Safety Manual**

The Supplier shall meet all of the requirements in the Supplier Environmental, Health and Safety Manual. The manual is available in the Supplier Exchange web portal.

16. **Business Interruption & Contingency Plans**

16.1. **Business Interruption**

Suppliers should be aware of NSK’s commitment to ensuring continuity of supply. Suppliers shall provide geographical location with inherent natural catastrophe risk associated with the location as requested by NSK. Suppliers shall produce business interruption plans, as requested by NSK, to provide evidence of supply resiliency for threats that are appropriate for each Supplier such as, but not limited to; earthquake, tsunami, flood, pandemic and fire.

16.2. **Contingency Plans**

Contingency plans shall be in place to satisfy NSK requirements in the event of an emergency such as, but not limited to; utility interruptions, labor shortages, key equipment failure and field failures. In the event any of these interruptions occur that would create an unscheduled halt to production, the Supplier shall notify NSK as soon as possible with information concerning the nature of the problem and plans for immediate actions to assure NSK supply of material is not interrupted. If the Supplier has a unionized work force they must notify NSK annually of the union affiliation and contract expiration date.

*(For easier reference between revisions, the portion of the policy that has been most recently revised has the delta / change symbol Δ placed next to it and is highlighted in yellow.)*

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