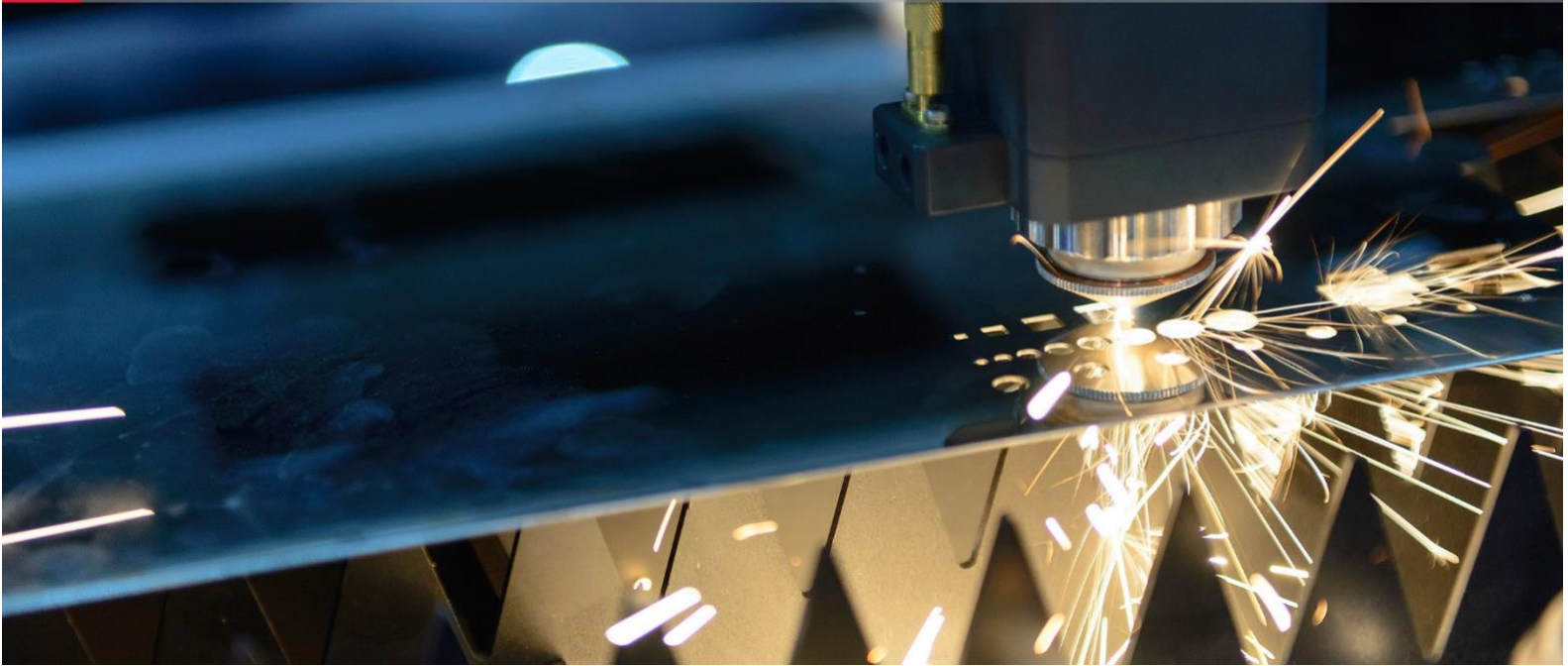


SUPPLIER QUALITY MANUAL



LINK[®] driven to *outperform*[®]



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1.0 PURPOSE

The purpose of this manual is to communicate Link's quality requirements and business performance expectations to our suppliers. It is the intent of Link to align with responsible business partners who can provide parts, materials, processes, and services consistently to specifications, at a competitive price, and in accordance with the defined delivery schedule. Aligning with the OEM customers' expectations, our goal is to participate in a robust, ethical, and socially responsible supply chain. The manual is intended to assist suppliers in their understanding of their requirements regarding specific management, communication, and reporting processes and how we need you to participate in Link's Quality Management System.

2.0 SCOPE

The contents of this manual apply to all Link suppliers of materials and services.

3.0 QUALITY SYSTEM REQUIREMENTS

Link encourages suppliers to develop fundamental quality systems that provide for continuous improvement and emphasize defect prevention while reducing variation and waste.

The Supplier's manufacturing system shall be compliant with the applicable requirements of the ISO 9001:2015 standard with the goal of conformity to the ISO/IATF 16949:2016 for suppliers of critical components for the heavy truck industry. Justification for non-compliant processes and an explanation of the controls that will be implemented to improve those processes must be provided in writing to Link.

A copy of the Supplier's certificate of registration to Quality System standards shall be provided to Link upon request. Subsequent updates to registration certificates must also be communicated to Link.

Changes to the Supplier's Quality System registration status shall be communicated immediately to Link.

3.1 RECORDS RETENTION

Production part approvals, tooling records, APQP records, purchase orders and amendments shall be maintained for the length of time that the part (or family of parts) is active for production and service requirements PLUS one calendar year unless otherwise specified by the Link's customer.

NOTE: All customer purchase orders/amendments are included in this requirement. Organization purchase orders/amendments for customer-owned tooling are included in this requirement.

Quality performance records (e.g., control plans, inspection, and test results) shall be retained for three calendar years after the year they were created unless otherwise specified.

Records of internal quality system audits and management review shall be retained for three years. Retention periods longer than those specified above may be specified by an organization in their procedures. The organization shall eventually dispose of those records.

These requirements do not supersede any regulatory requirements. All specified retention periods shall be considered "minimums."



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4.0 APPROVED SUPPLIER STATUS

Production parts, materials, processes, and services will only be purchased from suppliers with an active status within Link's system. Link evaluates and selects suppliers based on their ability to supply products or services in accordance with specified requirements. Issues preventing a supplier from meeting specified quality system and performance requirements may result in resourcing activities or reduction in future business opportunities.

5.0 SUPPLIER ASSESSMENT

With prior notification, Link may conduct quality system audits at a supplier's facilities. The goal of the audits is to understand the suppliers' capabilities and quality systems and identify continuous improvement opportunities.

New or prospective suppliers may be audited as part of Link's strategic sourcing process. Current suppliers may be audited if there are ongoing quality problems or strategic initiatives for continuous improvement.

Tooling moves to a different manufacturing facility may require a quality system audit of the new facility. Suppliers are prohibited from moving tools without prior notification and approval from Link.

Suppliers will be sent a pre-assessment survey before the audit date. This pre-assessment should be returned prior to Link conducting the audit. Following the audit Link will forward our findings and any needed corrective actions on part of the supplier. The results of the audit and the survey will be utilized in the selection process.

6.0 ADVANCED PRODUCT QUALITY PLANNING (APQP)

When a supplier is selected to supply product Link may begin formal APQP activities with the supplier. APQP is designed to communicate product quality expectations and verify that suppliers have adequate processes in place to ensure successful product launches. Link will review APQP requirements with suppliers at the beginning of the process.

Customer timing is normally established and communicated during the start of the project. Link will determine which elements of APQP are required and determine an agreed upon timeline for completion. Link will collaborate closely with suppliers in the development and implementation of all documents and processes to meet the varied OEM requirements.

Link may conduct a Launch Readiness Review at the supplier's facility if needed. This review will include inspections of the supplier's documents and processes associated with the production of parts for Link.

Suppliers may be required to run Production Trials (Run at Rate) prior to production release to determine the capability of their processes to meet required production rate and quality levels. Should supplier trials prove unsuccessful, corrective actions must be completed prior to start of production. Link requires immediate notification of any circumstance that jeopardizes the agreed timing plans. The supplier should prepare contingency plans to satisfy requirements in the event of an emergency such as utility interruptions, labor shortages, key equipment failure and field returns.

7.0 PRODUCTION PART APPROVAL PROCESS

If required, suppliers shall submit PPAPs per the AIAG manual; PPAP level and/or other requirements as specified with the purchase order. If a third-party lab is employed for testing related to any aspect of the PPAP submission, the lab must be accredited to ISO / IEC 17025 or national equivalent.

8.0 PROCESS CONTROL


The supplier must establish and maintain manufacturing documentation adapted to their manufacturing process. The supplier must document the inspection and test results, which show that the special (critical) characteristics meet the set requirements. The supplier must have capability data for special characteristics that are identified as such on the drawing.



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Suppliers are encouraged to use statistical techniques including:

Gauge R&R Study	Predictive Maintenance	Defect Analysis
Sampling and Process Analysis	Process Analysis with Control Charting Methods	SPC Methods

Special characteristics will be identified on the drawing with the following symbol. 

Certain parts may have Safety Critical Characteristics identified on the vendor print. For purchased components special characteristic symbols must be present on all vendor FMEA's, Control Plans, Operator Instructions and other such documents and must be reviewed at the time of vendor PPAP. In these cases, the vendor will be notified of the special process documentation, training and identification required. This will typically require the vendor to submit additional documentation that is not typically submitted with a PPAP and may even require a Link audit of these special processes.

9.0 TEMPORARY DEVIATION

If it is communicated that a supplier's product does not conform to Link specifications and lead-time does not allow permanent corrective action due to Link's production requirements a temporary deviation request must be submitted to Link and approved prior to shipping non-conforming material.

If a supplier manufactures a product on a process other than the approved process a temporary deviation request must be submitted to Link and approved prior to shipping non-conforming material.

Link approval will be based on how deviations might impact the form, fit and function of the parts and could be subject to Link customer approval. Early and thorough communication is necessary to ensure all approvals and needed testing and validation can be complete.

Deviation requests must include details of the non-conformance and the number of parts affected. E-mail is the primary tool for requests and approvals. Contacting your Link buyer and quality team member directly is required for time sensitive matters.

10.0 CUSTOMER SPECIFIC REQUIREMENTS (CQIs)

Special processes should be monitored using guidelines stated in the AIAG Special Processes documents. Suppliers are required to conform with relevant AIAG special processes including: CQI-9 Heat Treat Systems Assessment, CQI-11 Plating Systems Assessment, CQI-12 Coating System Assessment, CQI-15 Welding System Assessment, CQI-17 Soldering System Assessment, CQI-23 Molding System Assessment, CQI-27 Casting System Assessment, CQI-29 Brazen Systems Assessment. In addition, CQI-19 Sub-Tier Supplier Management Process Guidelines and CQI-28 Traceability Guidelines or other standards and/or guidelines specified on product drawings/specifications or other contractual provisions must be met.

Ongoing assessments shall be conducted, at a minimum, annually, to ensure continuous compliance.

11.0 PROCESS CHANGE

A new PPAP must be submitted and approved by Link prior to any of the following changes being implemented:

- Change in the manufacturing process, equipment, or tooling.
- Additional tooling or added cavities to tooling currently approved for production.
- Manufacturing location changes
- Sub-supplier changes

Like deviations and ECRs, process changes may require Link and Link customer testing and validation. The timing of the process change request should consider the downstream lead time of the appropriate approval process. None of these changes can occur prior to approval of the change request.



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12.0 ENGINEERING CHANGE REQUEST (ECR)

Should a supplier wish to make a permanent change to a part or drawing an Engineering Change Request (ECR) must be submitted to Link and approved prior to any change. E-mail is the primary tool for requests and approvals.

Like deviations and process changes, ECRs may require Link and Link customer testing and validation. The timing of the ECR should consider the downstream lead time of the appropriate approval process.

13.0 PROBLEM RESOLUTION

Upon receipt of nonconforming material Link may request a corrective action (CA). Nonconforming material can be found during incoming inspection, an audit, assembly, or the warranty return process.

If problems are found during pre-production fitting trials or are considered minor issues Link will issue NCRs or quality alerts to the supplier describing the problem.

Return Material Authorizations (RMA) must be provided for material that is defective or considered suspect and needs to be returned to the supplier within 10 days of request from Link.

Link reserves the right to initiate the sort of suspect material to avoid shutdown of its production lines at the supplier's expense.

After the request for a corrective action is submitted; the suppliers must:

- Acknowledge the receipt of the corrective action within 48 hours.
- Implement containment actions to protect Link from receiving more nonconforming products.
- Inform Link of the plan to replace suspect material.
- Identify short term corrective actions.
- Send initial CA responses to be reviewed by Link quality personnel.
- Define and verify Root Causes occurrence of the defect and failures of detection within the agreed period with Link quality personnel.
- Implement permanent corrective actions for root cause and escape.
- Verify and validate permanent corrective actions.

Link will analyze the final CA response and provide the supplier with a decision on closure of the CA. CA responses will be accepted, conditionally accepted, or rejected. Link prefers the 8D problem solving process for documenting the CA. Final approval and closure of CAs will be at the discretion of Link quality personnel.

As part of the corrective action process a supplier may be placed into a "receipt inspection" status because of Link or Link's customer has received defective material. Suppliers will be required to take immediate actions to cease shipping defective material. These actions include:

- Sending 100% certified parts for all shipments to Link.
- Marking certified parts as agreed to by Link.
- Sending certified replacement parts to replace suspect parts in-transit and in Link inventory.
- Utilizing a Certified Part identification label to identify certified shipments.
- Collecting daily sort data and reporting findings to Link.

Suppliers will be released from "receipt inspection" status once the CA has been approved.



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13.1 SUPPLIER DEVELOPMENT

Link will provide quarterly scorecards monitoring the key performance indicators monitoring the supplier's performance. Those KPIs consist of an overall score based upon on-time delivery, lead time, pricing, quality PPM performance, and other business alignment ratings. Link will aid suppliers having trouble meeting performance levels and specifications set by Link. Link will assist in:

- Development in ISO & IATF program requirements.
- Resolution of critical issues that impact Link and our downstream customers.
- Assist suppliers with improvement activities to build a stronger supply chain.
- Work with potential suppliers to improve capabilities to be eligible for supplying Link with parts and services.
- Conduct specific training when a need has been identified.

13.2 COST RECOVERY

While Link strives to maintain positive supplier relationships suppliers will be responsible for costs associated with Link or Link's customers receiving defective material or late products. Costs may include, but are not limited to:

- Administrative fees
- Sorting of suspect material
- Rework
- Customer Charges
- Premium Freight
- Production Downtime
- Third party containment and inspection
- Scrap
- Scrap of related components
- Overtime
- Laboratory Testing
- Travel

Requests for RMA's shall be provided within 10 working days. After that period, Link will debit the supplier's account and scrap the suspect material. A NAFTA document generation fee of \$25 will be debited if international shipping documents are not provided. All costs will be debited from the supplier's account. Upon notification of the intent to debit, suppliers will have 60 days to appeal the charges. If there is no response from the supplier Link will consider this lack of response as acceptance of the charges.

14.0 DELIVERY REQUIREMENTS

Suppliers are required to achieve 100% on time delivery. If a supplier is unable to deliver a product by the required due date it is the responsibility of the supplier to notify Link. The supplier may be responsible for expedited shipment if Link's delivery performance is jeopardized.

15.0 PACKAGING

Each supplier must adequately plan for packaging. Link encourages supplier-initiated packaging improvements. Suppliers will provide packaging that provides protection from any damage that may occur. Packaging, labeling, and shipping materials must comply with the requirements of common carriers, in a manner to secure the lowest transportation costs.

Expendable materials and packaging must be legal and safe for standard "light industry" disposal. The maximum acceptable weight is 50 pounds, unless approved by Link in writing.

Whenever possible, only one part number and one supplier lot should be packaged in a shipping container. When more than one part number or lot number is packaged in a shipping container, each part number and/or lot number must be separately packaged (i.e., bags or boxes) inside the container, with each labeled as to the contents.

16.0 LABELING

Each shipping container should comply with AIAG standards and must contain the following information:



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- Part No. / Barcode 39 From PO – no dashes
- Rev. From PO
- Unit From PO
- Qty / Barcode 39 Vendor – Actual Ship Qty
- PO No. / Barcode 39 From PO
- Supplier From PO
- Serial/Lot No. Vendor – if required
- Vendor Part No /Barcode Optional
- Right Hand Margin Vendor info – optional

Part No. 123456789 	A REV.	EA Unit	Vendor Name Vendor Address Vendor City, State zip
Quantity 100 	Description TEST LABEL FOR APPROVAL		TO: LINK MFG, LTD 223 15th Street N.E. Sioux Center, IA
Purchase Order No. P27415 	Serial No.		
Supplier Vendor Name	Vendor Part No. 123456789 		

17.0 SUPPLY CHAIN SUSTAINABILITY

Along with Link, our suppliers shall implement appropriate measures to avoid or refrain from using substances and materials with adverse effects on the environment or health of its team members or that come from unapproved conflict-affected and high-risk areas. We will comply with all applicable import and export laws. Suppliers shall make decisions solely based on objective criteria to avoid conflicts of interests, breaches of confidentiality and intellectual property rights, and all forms of corruption.

Requirements on Business Partners

Link prefers to work with component suppliers, consultants, distributors, and other business partners that share the principles expressed in our Code of Conduct. Link encourages its business partners to apply standards of business conduct consistent with the principles of our Code of Conduct to create a sustainable and robust supply chain.

17.1 SUSTAINABLE MINERALS PROGRAM

The Sustainable Minerals Program aims to identify suppliers whose parts contain [Conflict Minerals](#) and/or [Cobalt](#) and to conduct an assessment on the origin of those substances in order to secure that no social nor environmental abuses are connected to the parts the Link group purchases. This assessment is performed using the tools (CMRT & EMRT) and the methodology provided by the [Responsible Minerals Initiative](#).

We are looking for your company's response regarding both [Conflict Minerals](#) and [Extended Minerals](#) through the latest templates. You should also be aware that we will only be accepting CMRTs and EMRTs in the latest version of the template; older versions are not acceptable.

If your products do not contain any Conflict or Extended Minerals you will still need to complete the reporting templates annually.

18.0 INTERNATIONAL MATERIAL DATA SYSTEM (IMDS)

Link uses the IMDS (www.mdsystem.com) as the system for suppliers to report and declare the substances used in your parts. Each supplier will create an MDS in IMDS and submit the MDS to us for review. We will review the MDS and then either accept or reject. An MDS accepted by Link means that the information in the MDS and substances in your part meet our requirements. A MDS can be rejected for several reasons, such as incorrect part number, prohibited substances and incorrect tree structure. Suppliers will be notified with Link's "Supplier Quality Requirements Request Form" and submissions sent to Link IMDS account 107688.