KOLLMORGEN®

Because Motion Matters™

Supplier Quality Manual

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Supplier Quality Manual

1.0 Purpose

The purpose of this document is to define supplier requirements for managing quality, delivery, cost, communications, part qualification, and production sustainability.

2.0 Scope

This Supplier Quality Manual applies to all suppliers that provide production material or services to Kollmorgen. This includes supplier designed products that are incorporated into a Kollmorgen assembly/product and finished goods branded by Kollmorgen. Individual Kollmorgen facilities may have additional facility specific requirements, and will establish specific processes for carrying out these requirements. If a conflict exists between the requirements presented in this manual and individual facility requirements, the more stringent requirements will apply.

3.0 Achieving Quality and Delivery

Kollmorgen expects the following from our suppliers:

- Products and services shall comply with all Kollmorgen specifications and requirements. **UNDER NO CIRCUMSTANCES WILL VERBAL CONVERSATIONS OR EMAIL AGREEMENTS BE CONSIDERED VALID FOR SPECIFICATION CHANGES UNLESS ACCOMPANIED BY AN ENGINEERING APPROVED DRAWING REVISION OR SIGNED SUPPLIER DEVIATION REQUEST.** Suppliers shall review, understand, and communicate any questions concerning specification and process requirements to the appropriate Kollmorgen point of contact
- Suppliers shall comply with all Kollmorgen design, process control, and process capability requirements.
- Suppliers shall comply with all Supplier Corrective Action Requests and assist Kollmorgen with efficient and effective problem resolution.
- Suppliers shall control their sub suppliers to ensure compliance with all Kollmorgen specifications and process requirements.
- Suppliers shall have a quality system in place and be able to demonstrate compliance with Kollmorgen specification and process requirements. Current ISO 9001 or other recognized quality system certification is preferred. A passing score on a Kollmorgen quality system audit may be used in lieu of third-party certifications.
- Suppliers shall have the ability to manage changes to Kollmorgen specifications and process requirements.
- Suppliers are required to communicate the proper use of their product or service to Kollmorgen.
- Suppliers shall package all shipments to adequately protect shipment from damage during transport, including odd lots and air shipments. If a dispute arises

concerning responsibility for damage, the supplier may be required to prove that their packaging is adequate through the use of third-party lab tests and reports.

- Suppliers shall not implement changes that may impact form, fit, function, interchangeability, reliability, or durability of their products or processes without written notification and approval by Kollmorgen. This requirement also applies to changes relative to manufacturability or cost savings initiatives. See Section 9.0
- Suppliers shall notify Kollmorgen of any situation with a known or perceived negative impact to product quality, reliability and, or safety.

4.0 Part Qualification

Part qualification may be required for any of the following conditions or situations:

1. New part or design
2. New supplier
3. New supplier plant or manufacturing location
4. Change in form, fit or function
5. Modifications required by an engineering change order
6. Use of an optional process or material that was not included in the original qualification
7. Production from new or modified tools (except perishable tools), dies, molds, patterns, including additional or replacement tooling
8. Production following any change in process or method of manufacture
9. Production from tooling and equipment transferred to/from a different plant or manufacturing location
10. Change of source for subcontracted parts, materials or services (e.g. heat-treating, plating)
11. Product re-released after the tooling has been inactive from volume production for twelve (12) months or more

5.0 Kollmorgen Part Qualification Process (KPQP)

Kollmorgen will provide the supplier with a list of requirements needed for part qualification in the form of a written Qualification Plan. The supplier is expected to complete all required sections and deliverables of the Qualification plan before or at the time of First Article Submission. Serial production may not begin until the Qualification Plan and First Article submission are approved by Kollmorgen.

At Kollmorgen's discretion, a Producibility Review may be required where the Kollmorgen Supply Chain and Technical Teams review part technical requirements in detail with the Supplier's Supply Chain and Technical Teams to ensure a flawless launch of the project.

Part Qualification Approval: Kollmorgen is responsible for communicating part qualification status to the supplier. Part qualification status is defined as:

- **Approved:** All qualification requirements met. Written approval provided by Kollmorgen authority.

- **Conditional Approval:** Not all qualification requirements met. Written conditional approval provided by Kollmorgen authority stating conditional requirements. Conditional requirements specified and agreed to by Kollmorgen and the supplier.
- **Rejected:** Fails to meet Kollmorgen requirements. Not approved.

6.0 Critical and Significant Characteristics

Critical Characteristics are depicted on Kollmorgen designs with a black diamond (◆) and identify product characteristics that if not controlled within the specified limits, *will have an unacceptable affect* to form, fit, function, safety, performance, agency approvals, or any government regulations.

Significant Characteristics are depicted with a black triangle (▼) and identify product characteristics that if not controlled within the specified limits, *may negatively affect* form, fit, function, safety, performance, agency approvals, or any government regulations.

Process Capability:
Characteristics that are designated as **Critical** must have one or more of the following that provides appropriate detection to insure product is made within print specifications:

- 100% inspection
- Poka Yoke / Error-proofed process
- Statistical Process Control limits with defined inspection frequency and reaction plan
- Demonstrated Ppk value of > 1.67

Characteristics that are designated as **Significant** must have one or more of the following that provides appropriate detection to insure product is made within print specifications:

- Inspection frequency suitable to insure any non-conforming product is detected and contained.
- Poka Yoke / Error-proofed process
- Statistical Process Control limits with defined inspection frequency and reaction plan
- Demonstrated Ppk value of > 1.33

7.0 Expected Supplier Performance

Kollmorgen expects suppliers to deliver good quality product on time. In support of this expectation, Kollmorgen utilizes supplier scorecards which includes scores for Quality and Delivery. Unless other goals are indicated on the supplier scorecard or through contract, the following goals will apply:

- Quality Performance Below 100 PPM (Parts Per Million)
    - Parts Per Million PPM = (Defects/Receipts)*1,000,000
- On Time Delivery above ≥95%

- On time is between 3 working days early and 0 working days late to Kollmorgen request date.

8.0 Supplier Corrective Action Requests (SCAR)

If a non-conformance is discovered, ALL parts/components in question must be identified and segregated. Kollmorgen will evaluate the non-conformance situation and determine the necessary actions required to contain and disposition the affected parts. As needed, Kollmorgen will issue a supplier corrective action request (SCAR) to the supplier.

The supplier's SCAR response must address all requirements as depicted and defined within the SCAR. The following requirements must be met:

1. The supplier is required to communicate Immediate Containment Actions to Kollmorgen and acknowledge receipt of the SCAR within **24 hours** from the date of notification.
2. The supplier is required to provide an initial situation update within **72 hours** of notification.
3. The supplier is required to complete failure analysis leading to the determination of root cause within **10 business days**. A formal report is required.
4. Permanent corrective action is required to be completed and implemented with **30 days** of initial notification.
5. Corrective actions are subject to periodic verification of effectiveness and sustainment, usually at **30-, 60- and 90-day** intervals.
6. If Kollmorgen disagrees with a portion of the SCAR response, supplier feedback regarding the area of disagreement is requested within **48 hours**.

9.0 Supplier Deviation Request/Supplier Change Request

In certain instances, it may be permissible for the supplier to temporarily deviate from Kollmorgen requirements and specifications. Request for such deviations shall be made using the Kollmorgen Supplier Deviation Request (SDR) form.
A deviation request may arise from situations including (but not limited to) the following:

1. Non-conforming material
2. Any deviation from specified requirements
3. A substitution of material
4. Change in process
5. Change in supplier
6. Change in manufacturing location
7. New or modified tools (except perishable tools), dies, molds, patterns, including additional or replacement tooling
8. Tooling and equipment transferred to/from a different plant location

The Supplier Deviation Request form must provide all required and pertinent information concerning the requested deviation. If non-conforming material is associated with the

SDR, the supplier is responsible for the segregation of the non-conforming material until SDR approval is granted and SCAR procedures will be implemented at the request of Kollmorgen. Any discrepant material received at Kollmorgen without an approved SDR may be rejected and returned to the supplier at the supplier's expense with all additional handling and shipping costs incurred by the supplier. No discrepant or suspect material shall be processed or delivered until an SDR is formally approved by Kollmorgen.

Once approved, all material shipped to Kollmorgen must be accompanied by a copy of the signed and approved SDR. For process deviations, the supplier must make the necessary changes to update process documentation such as the Control Plan, Process FMEA, and Work Instructions.

10.0 Shipping Label and Packing Slip Requirements

At a minimum, all Shipping Labels and Packing Slips must include:

Kollmorgen PO Number
Quantity (Pieces)
Supplier Name & Manufacturing Location

As specified in Section 9.0, approved supplier deviation requests must be included with the packing slip information.

11.0 Counterfeit Part Policy

Please visit http://www.kollmorgen.com/en-us/service-and-support/partners/supplier-forms/ and review the Kollmorgen Standard Operating Procedure for counterfeit parts. Compliance is required.

12.0 Supplier Code of Conduct

Please visit http://www.kollmorgen.com/en-us/service-and-support/partners/supplier-terms-conditions/ and review the Kollmorgen Supplier Code of Conduct. Compliance is required.

13.0 Supplier Information and Forms

Please visit http://www.kollmorgen.com/en-us/service-and-support/partners/supplier-forms/ for location and current contact information as well form templates provided for your convenience. Please use the appropriate template or form as directed by the Kollmorgen representative that is managing your project or issue. Each respective Kollmorgen site may have additional forms or templates that they require.