



Grede Supplier Quality Manual

Date: September 29,2021

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1.0 POLICY

1.1. It is Grede's policy to conduct business with suppliers that continually demonstrate the ability to provide products, processes and services that meet or exceed Grede quality requirements.

1.1.1. Customer confidentiality is required for all products.

1.2. Grede requires:

1.2.1. Defect free products and services

1.2.2. 100% on time delivery

1.2.3. Continual improvement

1.2.4. Responsive customer services

1.2.5. GREDE-Q-015-P Safety Critical Processes

1.2.6. GREDE-Q-019-F Product Safety Audit

1.2.7. GREDE-P-002-F Supplier GQS annual self-assessment

1.2.8. Suppliers will be advised and must meet all statutory and regulatory requirements in the country of receipt, the country of shipment, and the customer-identified country of destination, if provided.

1.3. Advance notification of supplier proposed material or process changes shall be provided to Grede including:

1.3.1. Changes in product design

1.3.2. Changes in material

1.3.3. Changes in manufacturing processes

1.3.4. Changes in manufacturing location

1.3.5. Changes in sub-supplier sourcing of goods and services provided to Grede

2.0 PURPOSE

2.1. To communicate Grede specific requirements and expectations to the supply base. The Supplier Quality Manual is not provided as a full and definitive statement of all Grede policies, requirements or expectations. The Grede Purchase Order Terms and Conditions, specific contractual provisions, the language on the Purchase Order, and the Grede Supplier Quality Manual all apply in defining the expectation for a supplier's relationship with Grede.

2.2. To inform suppliers of requirements for notification and approval of proposed supplier changes.

3.0 SCOPE

3.1. Grede categorizes suppliers into three groups; **Key, Non-Key or Inspection**. Exhibit 1 defines the requirements for each Group. (Any changes to group assignment must be approved by Grede Plant Purchasing and Quality.

4.0 SUPPLIER GROUPS:

4.1. Key suppliers provide value added services or components or provide products that directly affect product quality. They are required to have approval prior to initial production shipment or shipment of any material featuring a change. Value added services include casting, machining, heat treating, assembly,

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plating, painting, coating, finishing, grinding, shot blast, trim, and items that are cast into, the finished product.

4.1.1. Key suppliers will provide capability for CC/SC features. At PPAP: CC features require >2.0 Cpk/Ppk, SC features require >1.67 Cpk/Ppk. In production: CC features require >1.67 Cpk/Ppk, SC features require >1.33 Cpk/Ppk.

4.1.2. Certificate of compliance is to be provided for all shipments of product with CC/SC features."

4.1.3. Complete Grede Safety Critical Training – Sent to suppliers that supply safety product and report on CC/SC features. Documents are to be signed and returned to Grede annually.

4.2. Non-Key suppliers provide materials or services used in, or in support of, the manufacturing process.

4.3. Inspection suppliers are external sorting companies, external labs and calibration firms.

4.4. Additional requirements over and above this manual will be defined in the purchase order.

4.5. Any deviation from the requirements in this manual will be documented in the purchase order.

5.0 QUALITY SYSTEM REQUIREMENTS:

5.1. Third party registration to latest version of ISO 9001 or IATF16949 is required for supplier in the Key category. A copy of the Supplier Quality System Certification shall be provided to Grede

5.1.1. Grede reserves the right to verify conformance at any time through an on-site assessment. A product safety audit will be performed at each supplier that has CC/SC features on a safety product.

5.1.2. Waivers to the ISO/ IATF registration requirement require written approval of the Plant Quality Manager and Purchasing Manager. Grede customer approval may also be required.

5.1.3. Key suppliers registered to ISO9001 shall be working towards compliance with IATF 16949.

5.1.3.1. Plan for compliance to IATF standard must be provided

5.1.4. Grede Quality Manager and Supplier Quality Engineer shall be notified in writing of any change in the supplier's quality system certification status.

5.2. The minimum requirement for Non-key suppliers is completion of a self-survey approved by Grede quality and purchasing management.

5.3. Providers of calibration and PPAP test services shall be accredited to ISO/IEC17025.

5.4. Product traceability is required for all Safety critical castings throughout the process including suppliers to Tier 2. All sub tier safety suppliers are to be identified.

5.5. Suppliers are responsible for identifying and managing risk Safety critical characteristics from their sub suppliers.

6.0 CHANGES AND DEVIATIONS:

6.1. Change notification guidelines are defined in the current AIAG Production Part Approval Process (PPAP) manual under "Customer Notification and Submission Requirements.

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6.1.1. **Note:** Changes in material source or manufacturing location require notification per the PPAP manual. A supplier, for example, may not change material sources without Grede approval. This includes all Suppliers to tier 2.

6.2. All process and product changes must be submitted in writing to Grede Plant Purchasing and Quality for approval.

6.3. Grede Quality and Purchasing Departments shall communicate change control requirements in writing to the supplier.

6.4. The Supplier shall not ship product featuring the change until written approval is received from Grede Purchasing.

6.5. Supplier request for deviation must be formally submitted to Purchasing and Quality in writing.
6.5.1. The Supplier is not permitted to ship out of specification material unless approved written deviation is obtained.

6.6. E-mail is the primary tool for communicating requests and approvals.

7.0 PACKAGING AND SHIPPING:

7.1. Returnable and new containers must have proper labeling attached in proper location. Any old labels must be removed from the containers, pallet and top caps before those containers are used for new product shipping.

8.0 NONCONFORMING MATERIAL:

8.1. The Supplier is responsible for all sorting, inspection, and other related costs incurred by Grede due to shipment of non-conforming material.

8.2. A Supplier request for deviation must be formally submitted to Purchasing and Quality in writing.

8.3. The Supplier is not permitted to ship nonconforming material until approved written deviation is obtained from Quality.

8.4. E-mail is the primary tool for requests and approvals.

9.0 PRODUCTION PART APPROVAL PROCESS (PPAP):

9.1. PPAP will be required when specified in Purchase Order.

9.2. Level three PPAP per the AIAG manual is required unless otherwise specified in the purchase order.

9.3. Annual PPAP will be required from Suppliers that have added value to parts including but not limited to:

Machining - Annual Certificate of Compliance of dimensional layout results showing conformance to key characteristic, Safety critical characteristics or dimensions requested.

Heat Treat Data Report – Certificate of Compliance report for each part number heat treated with hardness results. Annually one CQI-9; complete each section type of process provided.

- 10.1.1. Delivered Quality
- 10.1.2. On-Time Delivery
- 10.1.3 Productivity
- 10.1.4. Supplier Relations

11.3. Grede Customers may accompany Grede Personnel when appropriate.

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Exhibit 1 – Grede Suppliers Groups

Group Name	Key	Non-Key	Inspection
Group Description	Suppliers of value-added services or components or materials that directly affect product quality	Suppliers of materials & services used in, or in support of, the manufacturing process.	Inspection suppliers
Examples	<ul style="list-style-type: none"> -Machining -Heat treat -Assembly -Plating -Painting -Coating -Finishing -Shot blast -Trim -Grinding -Components cast into, or assembled onto the finished product -Alloys -Castings 	<ul style="list-style-type: none"> -Scrap -Sand & Additives -Molten metal filters -Fixtures/gages -Patterns -Molds -Ladles -Mold coating and sprays -Thermocouples -Shipping boxes -Cutting tools -Critical gasses -Laboratory supplies -Analytical reference standards 	<ul style="list-style-type: none"> -External sorting companies -External labs -Calibration
PPAP required	Yes**	No	No
Notification of proposed changes required (See section 6)	Yes	Yes	Yes
ISO 9001 or IATF 16949 IATF Registration Plan registration required	Yes Yes	No No	Yes* Yes*

*Providers of calibration services and PPAP test services shall be accredited to ISO/IEC17025.

**Supplier PPAP requirements for initial production and proposed changes will be determined by Grede QA and specified in the P.O.

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Acknowledgment of receipt Supplier Quality Manual

Supplier Name: _____

Supplier Location: _____

Date of receipt: _____

Supplier - Quality Manager (Print) _____

Supplier - Quality Manager (Sign) _____

Sign and return a scanned copy to Grede Corporate Quality