GLE Precision

AS9100D:2016-09

Supplier Quality Manual

"Quality Creates Customer Enthusiasm."

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1.0 Forward

GLE PRECISION (GLE). has been producing the highest-quality vacuum and air melt alloy castings available for top companies in the aerospace, manufacturing, turbine, and medical industries since the 1970's.

GLE PRECISION. places high importance on customer needs by monitoring trends in the marketplace, and at the customer level. This open exchange of ideas stimulates new ideas for improving the quality and performance of the products that we supply them. Additionally, we make sure that giving our employees the resources necessary to perform their tasks in a professional and cost effective manner satisfies our customers.

The Quality Manager of the company approves the Supplier Quality Handbook and its stated principles.

The Supplier Quality Handbook is stored electronically and is password protected. The file has write-protected status and can only be modified by the Quality Manager. The Supplier Quality Handbook may be issued as either a controlled or uncontrolled document.

GLE contact information:

General Number	(989) 652-6136
Designee	ext. 115
Fax Number	(989) 652-6170

1.1 Purpose

The purpose of this document is providing our suppliers or potential suppliers with an understanding of the requirements to supply GLE.

1.2 General

GLE realizes that only through the long-term partnership with its suppliers, will it be able to achieve the goal of exceeding internal and external customer expectations. GLE will involve various suppliers in Supplier Agreements in an attempt to establish these long-term partnerships. The following performance guidelines are meant for suppliers of GLE PRECISION.

1.3 GLE's **Commitment**

Clear communication of expectations to the supplier, including: quality system requirements, material specifications, technical requirements, delivery expectations, cost reduction goals, quality improvement goals, and customer service requirements.

Evaluation and selection of new suppliers based on their ability to meet these expectations. Provide feedback to current suppliers on performance with regards to these expectations.

Establish long-term relationships with suppliers who are able to meet or exceed these expectations. Act in an open and ethical manner with all supplier interactions.

2.0 *Supplier Partnership*

2.1 General

At GLE, we recognize the critical role quality plays in our success. Our Quality Policy Statement is as follows:

Quality Policy Statement:

GLE Precision strives to be a leading provider of precision machined hard materials. Precise and accurate machining of Aerospace, Medical, Tech, and other industry components are achieved through continual quality improvement, monitored processes, coordinated quality and management actions. GLE strives to ensure our customers the highest quality products and services, by committing to satisfying all applicable requirements of ISO 9001:2015, AS 9100D and our quality objectives.

Our attainment of this goal is dependent on the quality of materials received from our supply chain. We expect product received to be 100% defect free.

Quality is the major consideration for supplier selection at GLE.
Your dedication to quality with strict adherence to the GLE Supplier Handbook, quality requirements, material specifications, packaging and shipping requirements will clearly solidify your value as a GLE Supplier.

2.2 Requirements for Suppliers

Meet GLE expectations. React with concern when requirements aren't met and take the steps necessary to resolve deficiencies and prevent their reoccurrence. Embrace the concept of continuous improvement and zero nonconformities in all GLE products.

Show a willingness to establish a long-term relationship with GLE. Maintain ethical standards and act in an open and honest manner in all GLE interactions.

2.3 Acknowledgement

GLE Management Representative shall distribute copies of this Supplier Quality Handbook to all current and potential suppliers. The acceptance of any Supply Agreement or Purchase Order constitutes an agreement to comply with and provide material and/or services in accordance with this GLE Supplier Quality Handbook.

2.4 GLE Supplier Quality Contact Information

Questions or concerns regarding this Supplier Quality Handbook should be directed to the Quality Process Engineer, Thomas White at the following:

Phone: (989) 652-6136 ext.115 E-mail: Thomas.white@gle-precision.com

3.0 Quality Requirements

3.1 General

ISO 9001 and AS9100 defines the fundamental quality system expectations of the aerospace industry, in order to meet customer requirements. The goal of ISO 9001 and AS9100 is the development of fundamental quality systems that provide for continuous improvement, emphasizing defect protection, the reduction of variation and waste in the supply chain, as well as improved efficiency, delivery, company morale, and internal/external communications.

It is the expectation of GLE that all suppliers of production materials establish, document, and maintain effective quality systems based on ISO 9001 or AS9100 unless waived by GLE. Additional GLE specific requirements are listed below. GLE reserves the right to add requirements for specific materials, services, or suppliers.

3.2 Production Part Approval Process (PPAP) And Flow Down Requirements (IF REQUIRED)

GLE will request a PPAP depending on the criticality of the raw materials(s) being produced. GLE uses the Automotive Industry Action Group (AIAG) Production Part Approval Process Manual as the basis for approving new production parts and/or materials. The AIAG method is a widely accepted method in many industries. All PPAP's submitted must be Level 1 and submitted unless otherwise specified.

At a minimum, supplier PPAP packages shall include Part Submission Warrants (PSWs) and may require additional PPAP documentation as per our customers' requirements.

PPAPs shall be submitted to each GLE Quality department and any associated PPAP sample material shall be clearly labeled as such. The supplier must identify the samples in some manner (ex: number or tag each container) which allow proper identification.

Full or interim approved PPAP is required prior to shipping material to GLE for production. Any production shipments received by GLE prior to obtaining this approval will be rejected. Any exceptions must be documented and approved by GLE.

The supplier shall adhere to all flow down requirements as required by our customers. In the event the said organization cannot meet the requirements GLE requires immediate notification.

3.3 Pre-Production Requirements (IF REQUIRED)

Suppliers shall meet GLE Pre-Production requirements. These requirements will be documented by formal communication. Required documentation (e.g., Control Plans) must be kept current.

Suppliers are expected to clearly identify Pre-Production to ensure that the GLE does not mix such material with "regular" production material.

Labeling must be done per GLE requirements and shall be differentiated from regular production shipping labels unless the parts are already PPAP approved. In particular, the Supplier Identification, Raw Material and Quantity must be clearly displayed on the packaging label to ensure easy, visible segregation of containers.

3.4 Incoming Product Quality

All materials received must conform to agreed requirements / specifications and are subject to inspection and approval. If product does not meet requirements, GLE reserves the right to withhold payment, reject and/or return at the expense of the supplier, all or any portion of shipment if non-conformed.

3.5 Incoming Inspections

If material is rejected because of nonconformance to specification, the following actions will be taken:

- Rejected product will be returned to supplier, freight and charge back will be charged to supplier.
- Reject and scrap, supplier will incur costs of product.

<u>Chemistry Analysis must accompany alloy material as specified at the time of order.</u>

3.6 Request for Temporary Product Specification or Substitution and Process Changes

Prior to supply of any process change or material substitution or temporary product specification change, the supplier must:

- Must contact the GLE Quality Representative or Plant Manager and get a written deviation to supply product prior to shipment. This will state the maximum quantity or period for which the deviation shall apply.

- Must include a copy of the signed deviation with each shipment of nonconforming product.

Technical Data Sheets and Certificates of Analysis are required, as specified, for all product supplied. The supplier will be fully exposed to all warranty claims and rework or reject costs, for shipments of product that do not conform to specification.

3.7 Request for Permanent Product Change

In the event there is a need for permanent specification change or product substitution, the request must be approved by GLE Engineering Manager or Plant Manager. To request the change the supplier must complete the Engineering Change Request form and submit for approval.

If the change is needed immediately to continue supply of material, the suppler must follow the temporary product specification process outlined in 3.6 of this manual.

Failure will fully exposed the supplier to all warranty claims and rework or reject costs, for shipments of product that do not conform to specification.

3.8 Rejection and Charge Back Policy

In the event material is rejected due to nonconformance to specification, expired or incorrect, the following actions will be taken:

- Rejected product will be returned to supplier, freight and charge back will be charged to supplier.

If we have reject material, we will communicate the problem to you at that time to discuss action needed. The supplier's personnel will replace the raw material to solve the problem. GLE may seek to recover from a supplier any damage resulting from a delivery of nonconforming product, which may additionally include the following:

- If the reject is a repeat issue (same material, same rejection reason within a 12 month Period), the supplier will be expected to bear (reasonable) costs associated with the impact on GLE.
- If the product fails due to the nonconforming material and is discovered in production or beyond (i.e., at one of GLE customers or in the field), regardless if it is a repeat the supplier will be expected to bear (reasonable) costs associated with the impact on GLE.

The supplier may also be held responsible for resulting charges imposed by GLE customer, such as warranty claims or costs associated with a recall.

*It should be noted that these charges would be invoked only when a supplier's product does not conform to contractual requirements and/or specifications.

3.9 Contingency Plans

Any interruption in supply could result in GLE not meeting its requirement of 100% on time delivery. This could result not meeting its customer demand. The supplier shall prepare contingency plans to satisfy GLE requirements in the event of an emergency such as utility interruptions, labor shortages and key equipment failure and field returns.

When the supplier knows in advance of an impending production interruption, the supplier shall notify all GLE Plant Manager and/or Designee at least 24 hours, if possible, before that interruption. The nature of the problem shall be communicated with the immediate actions taken to assure supply of product.

Production interruptions may include (but are not limited to) natural disasters, political unrest, war, capacity issues, quality issues, labor strikes or other events that prevent the supplier from meeting the specified capacity volumes. The supplier is required to advise GLE of the plan for recovery and work toward minimizing its effect on the GLE plant. Upon request, the supplier shall provide their contingency plans to GLE.

3.10 Counterfeit Part Prevention

GLE suppliers shall ensure their employees are aware of:

- Their contribution to product or service conformity of GLE articles.
- Their contribution to product safety.
- The importance of ethical behavior.
- The risk of counterfeit product, and notification of suspected counterfeit material/product

Counterfeit part prevention processes shall consider:

- Training of appropriate persons in the awareness and prevention of counterfeit parts
- Application of a parts obsolescence monitoring program

- Controls for acquiring externally provided product from original or authorized manufacturers
- Authorized distributors, or other approved sources
- Requirements for assuring traceability of parts and components
- Verification and test methodologies to detect counterfeit parts
- Monitoring of counterfeit parts reporting from external sources
- Quarantine and reporting of suspect or detected counterfeit parts

4.0 Supplier Monitoring and Development

4.1 General

Suppliers are expected to implement a robust Quality Management System (QMS) that promotes defect free products through prevention, monitoring, and ongoing improvement.

Comments or questions regarding the GLE Supplier Quality Handbook may be directed to GLE' Quality Manager or President.

4.2 Supplier Quality Standards

Current and potential suppliers to GLE must meet one of the following minimum quality system requirements:

- Registration to ISO 9001, AS9100, TS16949, ISO 17025 or NADCAP by an accredited third-party registration body or
- Conformity to ISO 9001 utilizing an accredited second party audit process through a third-party body. Certification is preferred.

Any deviations from this quality certification requirement will require the approval of the GLE Quality Manager. It is the responsibility of distributors or non-manufacturing suppliers on contract with GLE to ensure that their suppliers are certified to either ISO 9001 or have a formal quality system. Suppliers are required to immediately notify GLE, if their Registrar (certification body or accreditation body) revokes their certificate, places them on probation, or institutes any other change in their certificates status.

Suppliers shall provide their valid quality management certificate to GLE.
Supplier certificates should be in English or include an accurate English translation on the certificate. Suppliers are responsible for the information on their certificate and that this information matches the contract with GLE.

4.3 On-Site Audits

GLE suppliers are responsible for the control and continuous improvement efforts of its suppliers. GLE reserves the right to visit sub-suppliers to assure that the materials and services conform to specified requirements. These visits may involve customers or an approved 2nd or 3rd party representative of GLE. This includes any regulatory body that may want to perform an onsite audit. All records shall be made available for any audit.

GLE suppliers shall require their suppliers of production goods and services to conform to the requirements specified herein and must implement and document appropriate controls. Suppliers to GLE must select their suppliers based on GLE expectation of zero defects, and on their capability to continually maintain robust processes throughout the life of the product.

4.4 Supplier Monitoring

The GLE Scorecard provides on-going assessment of quality and delivery performance. Suppliers should be aware of performance and ensure action plans are developed as applicable. As needed, GLE Quality Manager will contact the said supplier to review performance scores regarding their scores.

Scorecard categories monitor occurrences of late shipments, quality performance and customer issues. The scorecard is internal to GLE and we will provide the data as needed.

GLE utilizes a Supplier Corrective Action Report (SCAR) to resolve supplier performance issues (ex. quality, delivery, customer satisfaction, etc.)

A reported nonconformance is issued when a GLE identifies material that fails to conform to applicable quality and delivery specifications.

4.5 Verification of Supplier's Products and services at Supplier's premises.

When required, GLE shall have the right to verify that products or services supplied conform to specified requirements.

4.6 Suppler Desourcing

If the event the suppler becomes undevelopable, GLE reserves the right to remove the suppler from the Approved Supplier List (ASL). Suppliers with unsatisfactory quality or delivery may lead to desourcing. Our attempts to correct problems per clause 5.0 Corrective Action Process, are unsuccessful then this may lead to removal as an approved supplier.

5.0 Supplier Corrective Action

5.1 Corrective Action Request

GLE will ask the Supplier to complete a corrective action for product non-conformance, late delivery, customer complaints, or failure to deliver required documents. This request will be emailed to the supplier from the Quality Manager. A corrective action form will be required to be complete. The supplier can use their form or use the one that is sent with the notification.

5.2 Response Time

GLE expects the supplier to provide a containment response within 48 hours of the formal notification. Full response to the corrective action request is due within 10 business days of the formal request. Failure to meet timelines will result in escalation to GLE President. Please submit by email.

6.0 Documentation and Record Requirements

6.1 Documentation

Suppliers shall have a process to control and maintain records. Records may include, but not limited to, material testing, certificates of conformance or analysis, employee training / competence, purchase orders and amendments, sub-supplier traceability records, internal quality records and any process conformance record.

Suppliers are required to provide shipping documentation of its product upon delivery. One packing slip must accompany each and every shipment to GLE.

6.2 PPAP Documentation or First Article Inspection Data (IF REQUIRED)

A Level 1 PPAP per the AIAG Production Part Approval Process standard is our minimum requirement. The requested documents must be submitted and received before first production shipment arrives. In the event First Article inspections are required, the supplier agrees to provide the proper agreed upon inspection data to GLE.

6.3 Certificate of Analysis / Certificate of Conformance

As required, provide a Certificate of Analysis (COA), with the product to be supplied for delivery. The COA must contain:

- The manufacturing date and
- The expiration date.

As required, provide a Certificate of Conformance (COC), with the product to be supplied for delivery. The COC must contain:

- Part Number
- Specifications relating to the process
- Serial numbers, as required.

At the time of the purchase order is issued follow all the specified requirements for the product. It is the supplier's responsibility to ensure all incoming paperwork, test results and certificates are correct. Failure to do so may delay payment.

6.4 Product Safety and Safety Data Sheet (SDS)

The supplier is required to ensure their employees are aware any product safety concerns and communicate their contribution to product safety. The supplier is responsible for sending the Safety Data Sheet (SDS) annually. The supplier is to ensure the SDS has accurate information. GLE requires the shelf life to be identified on the SDS. Failure to do so may delay payment.

7.0 *Purchasing*

7.1 Quotes

All quotations shall include a piece or lot price, costs for packaging the item, and delivery cost when applicable.

7.2 Purchase Orders

Purchase orders are generated by GLE for any goods or services requested from a suppler. The purchase order will define the requirements for the following:

- Item Code(s) / Part Number (s)
- Description
- Required Date
- Quantity
- Unit Cost / Extended Cost
- Special Instructions (including any ITAR requirements)

These purchase contracts constitute an offer of purchase, which may only be accepted subject to GLE standard Terms and Conditions of sale. Any expression of acceptance by the supplier, including shipment of product, will constitute acceptance of the Terms and Conditions. No Terms or Conditions shall be changed unless specifically agreed upon in writing by GLE. Payment for any materials shall be net 60 days, unless otherwise specified. Freight shall be pre-paid unless otherwise specified.

7.3 Pricing

Supplier's invoice prices must match the purchase order price exactly to ensure timely payment. Any price changes must be agreed upon and documented in writing before they can go into effect. The purchase order defines the agreed price. Any price changes must be communicated in writing in advance of change. In the event invoice prices that do not match purchase order prices the invoice will be corrected. Payment will be issued with a conforming invoice.

7.4 Delivery Responsibility and Cost

Packaging and Freight cost are included in the purchase price unless otherwise specified. Material in transit is the responsibility of the supplier unless otherwise agreed upon.

7.5 Supplier Contacts

The supplier shall communicate key contacts to GLE. Supplier to provide the applicable contact names, phone numbers, and email addresses for:

- CEO/President
- Plant Manager
- Quality Manager
- Sales Manager
- Logistics Manager
- 24-Hour / Emergency Contact

Annex A

Required References and Terms

The Automotive Industry Action Group (AIAG) has published several manuals that standardize procedures, reporting formats, and technical nomenclature required by the Automotive Industry and adopted in nonautomotive sectors. As a supplier for GLE, it is your responsibility to obtain a copy of each of the publications listed below as needed. Publications can be found at www.aiag.org or by phone at (248) 358-3003.

- Technical Specifications / ISO 9001 Quality Management Systems
- Production Part Approval Process (PPAP)
- Statistical Process Control Reference Manual (SPC)
- Measurement Systems Analysis Reference Manual (MSA)
- Advanced Product Quality Planning and Control Plan Reference Manual (APQP)
- Potential Failure Mode and Effects Analysis Reference Manual (FMEA)

Terms & Definitions

Contract	Where the word contract is used it can relate to either a formal contract or a quotation prepared by the President.
Document	Where the word *document or documentation* is used, it can relate to either text document, drawing or computer file.
President	Executive Manager of GLE PRECISION.
Management Staff	Plant Manager, Human Resources Manager, Engineering Manager, and Quality Manager, all whom play a significant role in the day-to-day management of the company and the controls of projects. Each member of the Management staff may be responsible for several tasks associated with projects dependent on the workload of the company and the individual.
Record	A quality record may be in documented or electronic format
Responsibility	Where the phrase *is responsible for* or similar phrasing is used in this text, it implies that the required actions undertaken by the position holder or their delegate, and that each has the responsibility and authority to undertake the assigned task.
Signature	Where in the quality management system it states that a document is signed to indicate approval or acceptance, this implies that either a full signature or initials are acceptable.

Annex B

Supplier Acknowledgement

GLE Supplier:_____

GLE
Address 6950 Junction Rd
City, State, Zip, Bridgeport, Michigan, 48722

Sent Via: Email to _____

Re: Supplier Quality Handbook Acknowledgement

To Whom It May Concern:

As a supplier, we have read and understand our part in supplying you quality products and/or services. We agree to comply with all the specified requirements in the Supplier Quality Handbook.

By signing this acknowledgment, I have the authority for the organization that I represent to agree to the specified requirements.

Regards,

_____
Signature

_____
Printed Name

_____
Title

_____
Date