



Purpose

The purpose of this Supplier Quality Assurance Manual is to communicate Precision-Tech requirements for the structure of fundamental quality management systems of those companies that supply goods and services to Precision-Tech.

General

PRECISION-TECH has designated the ISO/TS16949:2002 standard as its quality system and requires all suppliers of goods and services to our plant to achieve a minimum requirement of ISO9001:2000. These requirements supplement and are an extension of the purchase order. Although this does not alter or reduce any other requirements of the purchase order, it does provide a concise understanding of PRECISION-TECH quality expectations.

All suppliers are expected to be able to demonstrate that they are pursuing and implementing quality systems that conform to the minimum requirements in ISO9001:2000 unless otherwise exempted at the sole discretion of Precision-Tech.

Supporting Documents

Supporting documents referenced in this document and their sources are listed below. It is the responsibility of current and prospective suppliers, to obtain and maintain the current issue of these documents.

ISO / TS	Quality System Requirements
APQP	Advanced Product Quality Planning and Control Plan
FMEA	Failure Mode and Effect Analysis
PPAP	Production Part Approval Process
MSA	Measurement Systems Analysis
SPC	Statistical Process Control

These documents are available from the Automotive Industry Action Group (AIAG):

Automotive Industry Action Group
26200 Lahser Road, Suite 200
Southfield, Michigan 48034
Phone: (248) 358-3570
Fax: (248) 358-3253
Internet: [Http://www.aiag.org](http://www.aiag.org)

Precision-Tech requires that suppliers:

- Manage facilities, processes, quality systems, and personnel to consistently and cost effectively produce products and provide services that meet the needs of Precision-Tech and its customers.
- Work with Precision-Tech to develop, implement, and maintain FMEA's and Control Plans to assure that product and service requirements are met.
- Provide objective evidence that initial sample requirements have been met and that acceptable process capabilities for all characteristics have been met.
- Be committed to continuous process improvement by emphasizing reduction of part to part variation and waste through defect prevention.
- Utilize appropriate statistical techniques for on-going process control and improvement.



Supplier Approval Requirements

Purchasing Contact

Potential suppliers and Buyer / Operations & Supply Chain Manager discuss mutual business opportunities.

Supplier Audits

Potential suppliers may be subject to an on-site audit by Precision-Tech. A quality system audit may be required prior to the approval of the initial purchase agreement. This survey will be conducted by a PRECISION-TECH representative(s) and will verify the existence of quality systems and disciplines necessary to meet PRECISION-TECH requirements. PRECISION-TECH has the right to assess current suppliers prior to placement of significant new business, or as part of PRECISION-TECH's supplier quality surveillance program.

Special Characteristics

Suppliers will be notified of Key Control Characteristics or other customer designations by the quality department or by reviewing the part drawing. It is the supplier's responsibility to incorporate these characteristics into the control plans of the products Supply to PRECISION-TECH and be able to demonstrate process capability at the time of PPAP and upon request from PRECISION-TECH. Suppliers are expected to have their processes under statistical control consistent with the guidelines of the Measuring Systems Analysis Reference Manual. All process control forms indicating steps that affect Special Characteristics shall be marked with Precision-Techs' symbol (or Customer symbol, if required) for those Special Characteristics marked on design records. The FMEA's, control plans, operator instructions and inspection sheets shall consist of the special characteristics symbol.

Failure to comply may result in an administration fee of \$250.

Production Part Approval Process (PPAP)

The PPAP level of submission will be Level 3 and be compliant with the AIAG PPAP manual. Additional PPAP requirements may be added in order to comply with customer requirements. Test data, control plans and PFMEA's must be less than 1 year old at the time of PPAP. The supplier should also demonstrate that previous nonformances have been incorporated into the existing living documentation (i.e. process flow chart, control plan and PFMEA).

The first shipment of material or parts must be clearly identified to the attention of the quality department. The PPAP package must be submitted before or with the first shipment of product. Any deviations to this must be documented on a GM1411 form (PPAP Manual) and be submitted prior to the first shipment of material. A nonconformance will be logged for PPAP nonconformance's.

Failure to comply may result in an administration fee of \$250.



Supplier Evaluation

PRECISION-TECH maintains Supplier Performance Ratings (SPR) in order to evaluate key suppliers. PRECISION-TECH uses these records to decide which suppliers should be considered for continuation, expansion, or termination of business. The following are the categories of our Rating System:

- PPM Defective
- On-time Delivery
- Pricing
- Price reductions through continuous improvement

Engineering Change Request

PRECISION-TECH encourages suppliers to submit suggestions that will improve product quality or reliability, reduce costs, and be mutually beneficial. If the supplier has a concern or suggestion that can be resolved only with engineering assistance, a complete description and documentation should be submitted to the Buyer. The results of the engineering review will be communicated to the supplier by Purchasing.

Supplier Pre-Approval Request for Deviation

The supplier is responsible to know the quality level of material before it is shipped. If the supplier finds non-conforming material the supplier may request consideration of product acceptance. A written approval must be submitted to the Buyer and must be approved prior to shipment.

Discrepant Material Reports & Nonconforming Material

A Supplier Corrective Action Report and 8D report will be issued to the supplier when PRECISION-TECH receives nonconforming material. A written corrective action response directed to the Quality Assurance Manager is required from the supplier detailing the root cause of the discrepancy with both short-term and long-term corrective actions with effective dates. The 8D report must be returned within 15 days or as described on the Supplier Corrective Action Report.

The disposition of non-conforming material must be provided within 7 business days. A charge of \$100 per day will be applied to any nonconforming material that remains on site. The supplier can expect all PRECISION-TECH incurred expenses to be debited for each Supplier Corrective Action Report issued or any rejection that PRECISION-TECH may receive from its customers.

Packaging and Shipping Identification

Product is to be packaged in such a manner as to provide adequate protection against product degradation. Each container shall be clearly marked and identified with the following, when applicable:

- PRECISION-TECH purchase order number
- PRECISION-TECH part number
- PRECISION-TECH lot number
- Heat number
- Date of manufacture
- Quantity
- Engineering change level
- Lot control number
- Bar coding



- PRECISION-TECH engineering deviation number

A signed certificate of conformance may be required to accompany each shipment. The certificate must contain the actual results of physical, chemical or dimensional measurements.

An administrative fee of \$100 may apply if this data does not arrive before or with the shipment.

Specific information concerning these items may be obtained from the quality department.

Record Retention Guidelines

Contact Precision-Tech Quality Manager for specific record retention requirements.

Supplier Initiated Cost Reduction Proposals

Through efforts of improving productivity and consolidated purchasing, suppliers are expected to submit annual cost reductions to the Buyer/ Operations and Supply Chain Manager.

Contingency plans

Precision-Tech requires all suppliers to prepare contingency plans to satisfy requirements in the event of an emergency such as utility interruptions, labor shortages, and key equipment failure and field returns.

MATERIAL RECEIVING REQUIREMENTS

Material Certification Reports

Data must arrive before or at the time of shipment.

Packaging

Each container, skid or package is to be marked with, as a minimum, the complete product description, mill heat number, PRECISION-TECH part number, weight shipped, purchase order number and release number as applicable, quantity and supplier name.

Statistical Process Control (SPC)

Data is to be Supply before or at the time of shipment (when required on a PRECISION-TECH approved supplier control plan).

Receiving Hours

Suppliers are required to contact PRECISION-TECH Operations department for receiving hours.

Quality Standards

All material and parts will be Supply in accordance with ISO9001/TS 16949:2002 and/or Precision-Tech approved quality standards and ultimate customer requirements.

Processor Traceability Standard

This standard applies to processes where the supplier is to perform inspection and testing using a drawing or standard (for example: forging, heat-treating, machining, ecoating, plating, washing, stamping, etc).

Confidentially

Suppliers shall ensure that the confidentiality of customer-contracted products and projects under development, and related product information are not distributed or shared without the written consent of Precision-Tech.



Change control

Suppliers shall utilize a contract review process to control and react to changes that impact product realization. The effects of any changes shall be assessed and verification activities shall be defined to ensure compliance with customer requirements. Changes shall be validated before implementation.

Rust Prevention

Research in the rust inhibitor industry has shown that the levels of concentration must be changed through the year to compensate for humidity in the processing environment and during transit between companies.

PRECISION-TECH has put preventive measures in place to reduce the risk of rust on its parts. If a rust inhibitor is used in your process, the supplier is required to:

- 1) Provide a copy of the MSDS and any product technical references to PRECISION-TECH.
- 2) Ensure that parts are protected before, during and after processing.
- 3) Make employees aware of these requirements and forward copies of training records to PRECISION-TECH.
- 4) The supplier's control plan and PFMEA must reflect the severity of rust and clearly show where and when the prevention and inspection is taking place.

PRECISION-TECH will charge back any costs incurred from rust if these requirements have not been followed.



Supplier Manual Acknowledgement

I hereby acknowledge receipt of PRECISION-TECH's Supplier Quality Manual at the revision level indicated below.

Name: _____ Title: _____

Signature: _____ Date: _____

Company: _____

Revision Record

Rev. #	Date	Revision Change

Approved by: *Hemmarine Ramcharan*
Quality Manager

Geran Kopic
Operations and Supply Chain Manager