



# Supplier Q+ Survey and Audit Kit



---

# Table of Contents

Page

## I. Purpose and Overview

Purpose .....	I-1
Survey .....	I-1
Audit .....	I-1
Audit Levels .....	I-2
Q-Plus Certification .....	I-2

## II. Glossary

## III. Survey

Survey Instructions .....	III-1
Survey Supplier Profile	
Supplier Information .....	III-3
Survey Information .....	III-3
Survey Evaluation .....	III-3
Areas for Improvement .....	III-4
Survey Criteria .....	III-5

## IV. Audit Instructions, Report, & Evaluation

Audit Instructions .....	IV-1
Audit Report	
Supplier Information .....	IV-3
Audit Information .....	IV-3
Audit Results .....	IV-3
Summary of Levels Achieved .....	IV-4
Areas for Improvement .....	IV-6
Audit Evaluation .....	IV-8

## V. Audit Criteria

1.0 Management Responsibility .....	1-1
2.0 Quality System .....	2-1
3.0 Design Control .....	3-1
4.0 Drawing and Change Control .....	4-1
5.0 Purchased Material Control .....	5-1
6.0 Process Control .....	6-1
7.0 Inspection and Testing .....	7-1
8.0 Control of Measuring and Test Equipment .....	8-1
9.0 Material Control .....	9-1
10.0 Corrective and Preventing Action .....	10-1
11.0 Handling, Storage, Packaging, and Delivery .....	11-1
12.0 Training .....	12-1
13.0 Environmental, Health, and Safety .....	13-1*
14.0 Electronic Component Manufacturing .....	14-1*

## VI. Improvement Plan

\*Optional sections.

---

## Purpose and Overview

United Technologies Corporation (UTC) requires assessments be made of their suppliers in support of supply chain management activities. These assessments are initially conducted by the supplier (through a self-assessment) and later by UTC. Two formats are available for these assessments: a survey utilizing a checklist and a more detailed site audit. These activities are part of the UTC Q+ Process.

---

### Purpose

#### *Continuous improvement*

The self assessment and the survey are intended to help the supplier reach quality goals through the never-ending process of continuous improvement. Both the self assessment and survey criteria are intended as a *guide* to the quality system and process control, *rather than an absolute* description of what is required to assure quality in products and services.

#### *Provide decision-making information.*

United Technologies' policy is to establish supplier partnerships utilizing long term contracts whenever possible. In order to make proper decisions in this regard it is important that UTC know the strengths and weaknesses of potential suppliers. Information from the Q+ Process is also used in making factory decisions such as incoming inspection requirements and inventory stockage.

#### *Identify areas for improvement and assist UTC supplier development process*

Through both the surveys and the audits, the strengths and areas for improvement of a supplier are identified. The supplier develops an improvement plan based on the results of these assessments, thus improving the overall quality, reliability, and total cost of components supplied to UTC. UTC has an active Supplier Development program whereby UTC assists suppliers in improving the quality of their product/system. These improvements are mutually beneficial to the supplier and to UTC.

---

### Q+ Criteria

*The UTC Q+ Process is based on 12 categories and with 24 specific criteria. There are additional categories, which apply in special cases.*

The Q+ Process uses a module approach with 12 categories based on ISO 9000 sections. These categories are broken down further to 24 criteria, which address specific aspects of a supplier's quality system. There are additional criteria that may be applied to specific commodities or suppliers with special needs.

Each criterion has four possible levels of compliance. Each UTC Supplier will be assessed, overall, at the lowest compliance level obtained in any of the Q+ Criteria.

## Audit

*The Q+ Audit is an on-site inspection of a supplier's facilities utilizing the Q+ Criteria.*

An audit team, normally from UTC but possibly from a third-party who has attended the appropriate training, performs an onsite evaluation of the supplier, and from the available evidence, assesses the supplier's compliance at one of four Levels for each of the Q+ Criteria. The audit is designed to provide a fair appraisal of the supplier's quality system, process controls, and commitment to quality initiatives at the time of the visit. Once the audit has been completed, all non-aerospace divisions of UTC adhere to the results.

To become a candidate for Q-Plus Certification, the supplier must achieve Level 3 compliance or better for all criteria.

---

## Survey

*The Q+ Survey is a combination questionnaire and checklist and which cover all the Q+ Criteria.*

The Q+ Survey consists of a checklist and a limited questionnaire, which provide guidelines for evaluating a supplier's quality system and process control without the need for an on-site audit. This form is normally completed before a site audit is scheduled. In most cases the supplier will complete this form but for some basic commodities and distributors UTC may complete it. The answers to the survey will be based on the details listed on the Q+ Audit.

---

## Self- Assessment

*Prior to an on-site audit by a UTC team, the supplier will normally be asked to complete a self-assessment.*

The supplier will normally conduct a self-assessment using the Q+ Survey form. Occasionally a supplier will attend detailed training on our audit process and will then be able to conduct a self-assessment using the Q+ Audit form. In either case the self-assessment will be based on the specific criteria listed on the Q+ Audit. Normally, on-site audits by UTC teams will not be conducted until a self-assessment indicates a quality system compliant to Level 2 of Q+.

---

## Q+ Levels

The Q+ compliance levels are defined below. The definitions are cumulative; each level includes the characteristics listed, and the characteristics of all previous levels.

- |                |   |
|----------------|---|
| <b>Level 1</b> | Non-compliance (requires improvement)<br>No procedure; no historical documentation; no measures; fragmented instructions; no corrective action activity   |
| <b>Level 2</b> | Compliance (meets minimum requirements for <b>qualified</b> supplier)<br>Documented procedures; defined instructions; published results, shared throughout the organization; corrective action evident; documented training |
| <b>Level 3</b> | Q-Plus compliance (candidate for <b>Q-Plus Certification</b> )<br>Measureable results that are based on statistics, with a solid feedback and improvement program   |
| <b>Level 4</b> | Quality-enhanced system<br>System maintenance evident; internal audits conducted; objective evidence of proactive continuous improvement  |

## Q-Plus Certification

*To attain Q-Plus Certification*

The supplier must meet the following requirements to attain Q-Plus Certification:

- Achieve Level 3 or better compliance on all Q+ Criteria items, and maintain or improve that Level subject to a periodic re-assessment.
- Maintain the following PPM levels (rolling 12 months measured at UTC):
  - Castings  $\leq$  2000 ppm
  - PC mounted components  $\leq$  50 ppm
  - Raw material and all other commodities  $\leq$  500 ppm
- A candidate Supplier (plant) must have no currently existing materials or components with epidemic failure as defined by UTC commodity managers (e.g. percent failure, financial impact, product recall, safety, etc.) in the previous 12 months prior to the date of certification or have any unresolved issues with any prior epidemic failure(s).

## Changing assessment levels

*In the event of un-acceptable performance or re-audits, the compliance level of a supplier may be changed.*

Action for unacceptable performance by a certified supplier will be taken as follows:

- Step one: **Notification** (corrective action notice)
  - UTC will send a corrective action notice to any supplier with unacceptable PPM levels or with lots rejected at receiving inspection or in process or with unacceptable re-assessments.
  - The supplier will submit an acceptable plan to improve performance within 90 days, on the improvement plan form in the last section of this kit. For unacceptable reassessments, the supplier will have a chance to explain any errors resulting from changes in an individual auditor's perspective.
- Step two: **Probation**
  - Monthly PPM levels must return to required levels and/or receiving inspection/in-process rejections must not recur within 60 days of issuance of the corrective action notice.
  - Suppliers not meeting this requirement will be placed on certification probation.
- Step three: **De-certification**
  - Certified suppliers must achieve acceptable monthly PPM levels and/or have no receiving inspection/in-process rejections within 30 days of being placed on probation. Suppliers not meeting this requirement will be de-certified.
  - Any supplier with an unsatisfactory PPM level, who regains an acceptable level through corrective action, but returns to an unsatisfactory level within 12 months, will be de-certified.
  - Any current Certified Suppliers (plants) having material or components with epidemic failure as defined by UTC

(e.g. percent failure, financial impact, product recall, safety, etc.) must satisfactorily support UTC in problem resolution (e.g. containment, financial support, technical support, effective and timely corrective action, etc.). Failure to implement timely corrective action and provide appropriate financial support by a Certified Supplier, in the event on an epidemic failure, will result in De-certification and potential loss of future business.

**Note:** Suppliers certified under previous surveys must achieve Level 3 (minimum) at time of re-survey. Suppliers not achieving this level will receive notification and must reach Level 3 within the timeframe stated, or they will be de-certified. Suppliers that are de-certified must meet all certification requirements to become candidates for re-certification.

---

### **“ACE”**

*United Technologies has adopted a corporate wide quality program: “Achieving Competitive Excellence” or “ACE”.*

While United Technologies does not require its suppliers to adopt its quality system it does recognize the fact that supplier partnerships require a mutual understanding and compatibility of quality systems in order to achieve the synergy necessary to excel. For this reason all suppliers are invited to participate in awareness training on our ACE program. Supplier-Partners are encouraged to attend more detailed training on ACE.

---

### **Questions/Comments**

*UTC wants this program to stay focused on its purpose.*

This program exists to help UTC obtain partnerships with its suppliers. For this reason any comments on the Q+ Process’ applicability to a specific commodity or industry will be welcomed. Although this program aims for accurate assessments, time constraints may result in an occasional inaccurate statement of fact in the assessment. The supplier should not hesitate to bring any such questions to the attention of the UTC contact person for resolution.

---

---

# Glossary

<b>Advanced quality planning</b>	Planning ahead of time for quality control through the complete cycle of a new process, production activity, contract, or project.
<b>AOQ</b>	Average outgoing quality. Average quality of outgoing product from all accepted lots and from all rejected lots which have been screened.
<b>AOQL</b>	Average outgoing quality limit. Upper limit of average quality of outgoing product from accepted lots and from rejected lots which have been screened.
<b>Approved Supplier List</b>	Record of suppliers which have been rated by a company's supplier appraisal system and found to be acceptable.
<b>Attribute data</b>	Data based upon inspection and test methods which permit only two outcomes, such as pass/fail/; accept/reject; go/no-go. Either defectives (units) or defects (characteristics) are counted and plotted in defective or fraction defective charts, and defects (count) or defects-per-unit (count-per-unit) charts.
<b>Audit</b>	Qualitative physical evaluation of elements and requirements within the quality management system, performed to determine adherence to the documented objectives, process, procedures, methods, and instructions. The quality management system audit is intended to provide objective evidence to reduce, prevent, and eliminate nonconformances as well as assist in the continuous improvement process.
<b>Benchmarking</b>	Improvement process in which a company measures its performance against that of best-in-class companies, determines how those companies achieve their performance levels, and uses the information to improve its own performance. Subjects that can be benchmarked include strategies, operations, processes, and procedures.
<b>Calibration</b>	Comparison of observed measurement values and the true value of the characteristic being measured, the difference of which is the accuracy of the measurement system.
<b>Capable process</b>	A process which is in a state of statistical control and meets required tolerances and/or customer expectations.

Continued on the next page.

**Capability index**

Numerical reciprocal of Capability ratio. A comparison of the available tolerance to the portion of the tolerance consumed by a process in a state of statistical control, expressed as a decimal fraction.

**Short-term or machine capability index (Cp)**

A measurement of short-term potential capability in a single production run where all sources of common cause variation expected in materials, tools, operator-to-operator environmental conditions, etc. have been minimized.

*Centered or centerable:*

$$Cp = \frac{TOL}{6\sigma} \quad \sigma = \bar{R} \div d_2$$

*Non-centered or one-sided tolerance:*

$$Cpk = \frac{AVAIL\ TOL}{3\sigma} \quad \sigma = \bar{R} \div d_2$$

**Long-term or process capability index (Pp)**

A measurement of long-term performance capability where all or most sources of common cause variation are included.

*Centered or centerable:*

$$Pp = \frac{TOL}{6\sigma} \quad \sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

*Non-centered or one-sided tolerance:*

$$Ppk = \frac{AVAIL\ TOL}{3\sigma} \quad \sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

**Note:** All formulas assume the characteristic being measured is in the form of a normal distribution.

Continued on the next page.

**Capability ratio**

A measurement of the amount of available tolerance consumed by a process in a state of statistical control, expressed as a decimal fraction or percent of tolerance.

**Short-term (CR) or machine capability ratio (MCR)**

A measurement of short-term potential capability in a single production run where all sources of common cause variation expected in materials, tools, operator-to-operator environmental conditions, etc. have been minimized.

*Centered or centerable:*

$$CR = MCR = \frac{6\sigma}{TOL} \quad \sigma = \bar{R} \div d_2$$

*Non-centered or one-sided tolerance:*

$$CR = MCR = \frac{3\sigma}{AVAIL TOL} \quad \sigma = \bar{R} \div d_2$$

**Long-term (PR) or process capability ratio (PCR)**

A measurement of long-term performance capability where all or most sources of common cause variation are included.

*Centered or centerable:*

$$PR = PCR = \frac{6\sigma}{TOL} \quad \sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

*Non-centered or one-sided tolerance:*

$$PR = PCR = \frac{3\sigma}{AVAIL TOL} \quad \sigma = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n-1}}$$

**Note:** All formulas assume the characteristic being measured is in the form of a normal distribution.

**Cause and effect diagram**

Tool for systematically reviewing all process inputs to determine the root cause of a problem.

**Change Cycle Time**

Duration of process for modifying a component or part.

**Conformance**

Meeting customer needs and freedom from deficiencies.

**Continuous improvement**

Ongoing improvement of products, services, or processes.

**Control chart**

Graphical display of statistics taken from subgroup data, with central lines and appropriate control limits. The chart is used to detect changes - favorable or unfavorable - in a process.

<b>Control plans</b>	The control plan is a detailed, step-by-step listing by which the part, component, etc., is to be manufactured, inspected, and tested. In effect, the plan describes the actions that are required at each phase of the process including receiving, in-process, out-going, and periodic requirements to assure that all process outputs will be in a state of control. During regular production runs, the control plan provides the process monitoring and control methods that will be used to control characteristics.
<b>Corrective action</b>	Implementation of a solution resulting in the reduction or elimination of an identified problem.
<b>Cost of quality</b>	Four categories of costs associated with providing poor-quality products or services: <ul style="list-style-type: none"><li>• Internal failure costs: costs associated with defects found before the customer receives the product or service.</li><li>• External failure costs: costs associated with defects found after the customer receives the product or service.</li><li>• Appraisal costs: costs incurred to determine the degree of conformance to quality requirements</li><li>• Prevention costs: costs incurred to keep failure and appraisal costs to a minimum.</li></ul>
<b>Cpk</b>	See Capability ratio.
<b>CR</b>	See Capability ratio.
<b>Cycle time reduction</b>	Proactive measures taken to reduce production time, typically by elimination of non-value-added activity.
<b>Defect</b>	Non-fulfillment by a product or service of a requirement or reasonable expectation for use.
<b>Design of experiments (DOE)</b>	Branch of applied statistics dealing with planning, conducting, analyzing, and interpreting controlled tests, by permitting simultaneous varying of input factors to evaluate factors that control the value of a parameter or group of parameters.
<b>Deviation/substitution</b>	Written authorization, prior to production or before provision of a service, to depart from specified requirements for a specified quantity or for a specified time.
<b>ESD</b>	Electrostatic discharge (ESD) is defined as the transfer of charge between bodies at different electrical potentials. Electrostatic discharge can change the electrical characteristics of a semiconductor device, degrading or destroying it. Electrostatic discharge also may upset the normal operation of an electronic system, causing equipment malfunction or failure. Electrostatic damage to electronic devices can occur at any point from manufacture to field service. Damage results from handling the devices in uncontrolled surroundings or when poor ESD control practices are used.
<b>EH&amp;S</b>	Environment, Health, and Safety

<b>Environmental Stress Screening (ESS)</b>	Test conducted at lower levels of the product to identify early failures due to weak parts, workmanship defects, and other reasons for nonconformance. ESS tests can also be combined with life testing to help identify weak points in new designs.
<b>Failure Mode Effect Analysis (FMEA)</b>	<p>A systematic technique to:</p> <ul style="list-style-type: none"> <li>• Identify potential failure modes</li> <li>• Identify possible causes and effects of potential failure modes</li> <li>• Evaluate and manage risk by prioritizing failure modes according to: <ul style="list-style-type: none"> <li>– Occurrence probability</li> <li>– Severity</li> <li>– Detection probability</li> </ul> </li> <li>• Identify control methods to eliminate or minimize the effect of potential failures</li> <li>• Provide a means of systematically adding to organizational knowledge</li> </ul>
<b>First article approval</b>	Detailed inspection under actual operating conditions of a new part from a supplier, or of a part made using a new tool, fixture, or die.
<b>First pass yield</b>	The parts or product that go through the entire manufacturing process without being rejected or reworked
<b>First Sample Inspection</b>	Certification that the first item produced from a newly set-up machine (or re-adjusted) machine or process is acceptable.
<b>Flowchart</b>	Graphical representation of the steps in a process, used to better understand processes.
<b>FMECA</b>	Failure mode, effect, and critically analysis. Procedure in which each potential failure mode in every sub-item of an item is analyzed to determine its effect on other sub-items and on the required function of the item.
<b>Gauge Control</b>	General system for insuring that gauges are correct. This includes calibration, usage, storage, and gauge R&R.
<b>Gauge repeatability and reproducibility (GR&amp;R)</b>	<p>Gauge repeatability &amp; reproducibility. Variation in measurements contributed by the gauge, specifically:</p> <p><b>Repeatability:</b> variation in a measurement system caused by the combined sources of measurement variation of a gauge or test equipment when used by one operator or under one set of environmental conditions</p> <p><b>Reproducibility:</b> variation in measurement averages when more than one operator or set of environmental conditions are imposed on the gauge or piece of test equipment.</p>
<b>HALT</b>	Highly Accelerated Life Test. Life testing under accelerated conditions.
<b>HAST</b>	Highly Accelerated Stress Testing. Stress testing under accelerated conditions.
<b>Histogram</b>	Graphic summary of the slope, central tendencies (mean, median, and mode) and capability in a set of data.

<b>In-control process</b>	A process in which variation can be attributed to a constant system of common or chance causes. The mean and standard deviation of the system are essentially constant over time. Variation is predictable and stable over time. See also Out-of-control process.
<b>Industrial Average</b>	What is normal for a given industry. This may be defined by the supplier with justification.
<b>Inspection</b>	Measuring, examining, testing, or gauging one or more characteristics of a product or service and comparing the results with specified requirements to determine whether conformity is achieved for each characteristic.
<b>JIT (just in time) manufacturing</b>	Optimal material requirement planning system for a manufacturing process in which there is little or no manufacturing material inventory on hand at the manufacturing site and little or no incoming inspection.
<b>Kaizen</b>	Japanese term for continuous improvement.
<b>Kanban</b>	Method for managing parts provided just in time.
<b>Key characteristic</b>	Characteristic for which quality planning actions must be included in the control plan.
<b>Key component</b>	Any component necessary for proper function of a system; a component that cannot be replaced without re-design and product testing due to function or safety; a component obtained from a "sole" qualified supplier.
<b>Life Testing</b>	A program used to determine how long a product will last under given circumstances.
<b>LCL</b>	Lower control limit. In conjunction with the upper control limit (UCL), establishes boundaries for subgroup statistical plotting to determine if the variation in data being plotted is due to common (chance) or special (assignable) causes.
<b>Lot traceability</b>	Ability to trace the history, application, or location of an entity (items or activity) by means of recorded identification.
<b>Material Review Board</b>	Group that reviews material that does not conform to standards, determines its disposition, and drives development of effective corrective action to prevent recurrence.
<b>MCR</b>	Machine capability ratio. See Capability ratio.
<b>Mistake proofing</b>	Simple ideas and methods in product and process design to eliminate both human and mechanical error.
<b>Nonconformance</b>	Non-fulfillment of a specified requirement
<b>Out-of-control process</b>	A process in which variation cannot be attributed to common or chance causes. Special or assignable causes act upon the system, resulting in unpredictable behavior. The mean and/or standard deviation are not constant over time. See also In-control process
<b>Pareto Chart</b>	A Pareto chart is a method of analyzing and displaying information. It is used to identify the most important causes or effects so that corrective action can be directed where it will do the most good.

<b>Pilot Application</b>	The use of a product, process, or tool under limited, controlled conditions prior to full implementation.
<b>Ppk</b>	See Capability index.
<b>PPM</b>	Parts Per Million. PPM is a method of stating the performance of a product in terms of actual nonconforming material
<b>Prevention vs detection</b>	Two types of quality activities: those designed to prevent nonconformances in products and services, and those designed to detect non-conformances already in products and services.
<b>Preventive maintenance</b>	Periodic maintenance provided to prevent machine breakdown.
<b>Problem solving</b>	Performance improvement process involving: <ul style="list-style-type: none"> <li>• Problem definition</li> <li>• Root cause analysis</li> <li>• Planning and implementing short- and long-term actions</li> <li>• Verifying results</li> </ul>
<b>Process capability index</b>	See Capability index.
<b>Process control</b>	Systematic evaluation of performance of a process, taking corrective action if performance does not meet standards, and applying the feedback to maintain process stability.
<b>Process improvement</b>	Systematic, management-lead approach to the continuous improvement of processes through the elimination of non-value-added activity.
<b>Process simplification</b>	Technique used during development of a process to eliminate process error.
<b>Quality Clinic Process Chart (QCPC)</b>	QCPC is a structured process to identify problems and provide visibility for identified problems and the status of problem resolution.
<b>Quality information system</b>	System to gather, organize, analyze, and communicate quality data
<b>Quality manual</b>	Document that describes the quality philosophy, policy, objectives, processes, and practices of the company.
<b>Quality plan</b>	Document setting out the quality control requirements for a particular product, process, service, contract, or project. The plan details specific practices, resources, and activities to be carried out to ensure specifications are met.
<b>Quality planning</b>	Activities that establish the objectives and requirements for quality and for the application of quality system elements.
<b>Quality policy</b>	Overall direction of an organization with regard to quality, as formally expressed by top management.
<b>Quality system</b>	System by which business is conducted and through which the quality policies and strategies are implemented.
<b>Reliability</b>	Probability an item will perform its intended function satisfactorily for a specified interval under specified conditions, assuming the item is capable of performing satisfactorily.

<b>Run Chart</b>	A method of graphically presenting data which allows the data to be analyzed for trends or patterns over a specified period of time.
<b>Sampling Plan</b>	A plan that details the process of evaluating a portion of a product for the purpose of accepting or rejecting an entire lot as wither conforming or nonconforming to a quality specification.
<b>Scrap</b>	Labor, material, and overhead on defective product that cannot be repaired economically.
<b>Skill Matrix</b>	A method of tracking the skills and training accomplishments of employees.
<b>Specification</b>	Document that states the requirements to which a given product or service must conform.
<b>Statistical process control (SPC)</b>	Application of statistical techniques to measure and analyze the variation in processes. Part of statistical quality control.
<b>Statistical quality control (SQC)</b>	Application of statistical techniques to measure and improve the quality of processes. Includes SPC, diagnostic tools, sampling plans, and other statistical techniques.
<b>Taguchi methods</b>	Engineering and statistical methods named after their developer, Genichi Taguchi. These methods optimize product design and manufacturing processes, for rapid improvements in cost and quality.
<b>Teamwork</b>	Full participation of all workers in joint efforts to produce products and services and achieve continuous improvement.
<b>Total quality management</b>	A management approach to long-term success through customer satisfaction, based on the participation of all members of an organization in improving processes, products, services, and the culture they work in.
<b>UCL</b>	Upper control limit. See LCL (Lower control limit).
<b>Variable data</b>	Data on a product or process characteristic, recorded in units which are being measured, for example, <i>mm</i> , <i>Kg</i> , <i>PSI</i> , <i>amps</i> .
<b>Variation</b>	Change in data, a characteristic, or a function that is caused by one of four factors: special causes, common causes, tampering, or structural variation.
<b>Value Analysis</b>	A method for analyzing a product or process in order to reduce costs. The method uses a systematic format for eliminating nonessential functions (those not adding value) thus reducing overall cost. When this method is used during the early design and development phases it is generally referred to as value engineering.
<b>Value Engineering</b>	A planned, clean sheet approach to problem solving, focusing on specific product design and process characteristics. It is employed to maximize value prior to expenditures of facilities and tooling money.
<b>Visual Factory</b>	The use of visual indicators, signals, and controls to direct and support activities in the workplace.
<b>5-S</b>	A process to build and sustain a quality work environment. The five principles are: sort, straighten, shine, standardize and sustain.

# Survey Instructions

Please follow these instructions for completing the Supplier Survey. If you have any questions during the survey, please do not hesitate to **ask for clarification** from your UTC plant contacts.

- |                         |  |
|-------------------------|--|
| <b>Team</b>             | 1. Form a team to conduct the survey.<br>The team should include a cross section of functions and levels that reflects the scope and diversity of the operation supplying components to UTC.   |
| <b>Evidence</b>         | 2. Assemble the evidence for each item of the survey.<br>Include copies of all systems documentation, procedures, forms, graphs and charts, and other materials you refer to in responding to the survey items. You will be expected to have this material available at the site audit when it takes place.  |
| <b>Response</b>         | 3. Read each survey item before beginning your response. <ul style="list-style-type: none"><li>– For additional information about what to include in your response, you can refer to the Audit Criteria in sections III and V of the <i>Supplier Q+ Survey and Audit Kit</i>.</li><li>– You must show evidence of at least Level 2 compliance to receive a site audit, so you should at a minimum show how your operation complies with the requirements of each Level 2 question (A, B, etc.) for each audit item (1.1, 1.2, etc.).</li><li>– The UTC plant leading the audit will specify pertinent material and objective evidence required to be submitted with the survey (if any).</li></ul> |
| <b>Profile</b>          | 4. Fill in the Survey Supplier Profile: <ul style="list-style-type: none"><li>• Supplier Information</li><li>• Survey Information</li><li>• Survey Evaluation</li><li>• Areas for Improvement</li></ul>  |
| <b>Improvement Plan</b> | 5. All areas that do not have system <b>documentation and implementation</b> must be listed on the areas for improvement form and have an improvement plan developed for them. All areas marked in the following columns fall into this category: <ul style="list-style-type: none"><li>• No System or Informal System</li><li>• Informal System</li><li>• Partially Documented/Partially Implemented System</li></ul>   |
| <b>Submission</b>       | 6. Assemble and submit the survey. <ul style="list-style-type: none"><li>• Make a copy of the survey including the profile and improvement plan.</li><li>• Return the completed survey, with the profile and improvement plan, to the audit team leader.</li></ul>   |



# Q+ Supplier Survey: Supplier Profile

## Supplier Information

Supplier: \_\_\_\_\_ Street: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 Products manufactured: \_\_\_\_\_

Union contract: Y  N  Union: \_\_\_\_\_ Contract expires: \_\_\_\_\_  
 Plant area: \_\_\_\_\_ Shifts: \_\_\_\_\_ Percent capacity: \_\_\_\_\_  
 Total employment: \_\_\_\_\_ Direct labor: \_\_\_\_\_ QA employees: \_\_\_\_\_  
 QA Manager: \_\_\_\_\_ Reports to: \_\_\_\_\_ Title: \_\_\_\_\_  
 UTC plants as customers: \_\_\_\_\_  
 Certified by other companies? Y  N  If yes, by whom? \_\_\_\_\_

## Survey Information

UTC Division: \_\_\_\_\_ Date of Survey: \_\_\_\_\_

<u>Name</u>	<u>Position</u>	<u>Phone</u>	<u>Fax</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

UTC Survey Contact(s)

<u>Name</u>	<u>Position</u>	<u>Phone</u>	<u>Fax</u>
_____	_____	_____	_____
_____	_____	_____	_____

## Survey Evaluation

Please provide any comments you may have on how to improve the survey process.

Turn the page to list the areas for improvement you found during the survey.



# Q-Plus Supplier Survey

	L-1		L-2	L-3	L-4	
	No System or Informal System*	Partially Documented/ Partially Implemented System*	Documented System, Fully Implemented	D'cmntd System, Implemented & Measured Results	D'cmntd System, Implm'td, Meas'rd & Continuous Improvement	List Supporting Procedures/ Documents

## 1.0 MANAGEMENT RESPONSIBILITY

1.1 Quality policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Quality objectives w/ measurement system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.2 Defined organizational structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Support of quality system throughout org.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1.3 Quality improvement plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Measured continuous improvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

## 2.0 QUALITY SYSTEM

2.1 Quality manual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.2 Quality planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
2.3 Quality measurement system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
System for evaluating internal and external failure costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

## 3.0 DESIGN CONTROL

3.1 Product introduction system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
First article approval	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Reliability analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Internal and external (customers and suppliers) cross functional participation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Design verification/validation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

## 4.0 DOCUMENT AND CONTRACT CONTROL

4.1 Drawing & specification change procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Control of marked-up & obsolete drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
4.2 Contract review procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

## 5.0 PURCHASED MATERIAL CONTROL

5.1 Purchase material control procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Source selection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Incoming material control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Supplier measurement (rating) system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Supplier results reporting (to suppliers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Supplier evaluation system (survey/audit)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**\* Improvement plans are required for all areas marked in these columns. A documented system, fully implemented must be accomplished prior to a site audit.**

## Q-Plus Supplier Survey

	L-1	L-2	L-3	L-4	List Supporting Procedures/ Documents
	No System or Informal System*	Partially Documented/ Partially Implemented System*	Documented System, Fully Implemented	Documented System, Implemented & Measured Results	Documented System, Implemented, Measured & Continuous Improvement

### 6.0 PROCESS CONTROL

6.1 Control plans and flow charts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.2 Operator instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.3 Process capability studies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
First pass yields	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
6.4 Preventive maintenance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 7.0 INSPECTION AND TESTING

7.1 Tester, inspector, and technician training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Testing procedures with parameters and frequencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
7.2 Final inspection procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 8.0 CONTROL OF MEASURING AND TEST EQUIPMENT

8.1 Calibration system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Calibration status and traceability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gauge storage and handling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gauge repeatability and reproducibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 9.0 MATERIAL CONTROL

9.1 Handling and disposition of non-conforming material	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
9.2 Material identification system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Material traceability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 10.0 CORRECTIVE AND PREVENTIVE ACTION

10.1 Root cause analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Corrective action process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Customer complaints/field failures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
10.2 Use of mistakeproofing techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Product and process FMEAs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 11.0 HANDLING, STORAGE, PACKAGING, AND DELIVERY

11.1 Special customer handling, storage, and delivery requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Handling and storage methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Packaging development approval system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Inventory control system	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**\* Improvement plans are required for all areas marked in these columns. A documented system, fully implemented must be accomplished prior to a site audit.**

# Q-Plus Supplier Survey

	L-1	L-2	L-3	L-4	List Supporting Procedures/ Documents
	No System or Informal System*	Partially Documented/ Partially Implemented System*	Documented System, Fully Implemented	D'cmntd System, Implemented & Measured Results	D'cmntd System, Implm'td, Meas'rd & Continuous Improvement

## 12.0 TRAINING

12.1 Training program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Training records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Certification for key processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Training effectiveness measurements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
12.2 Quality-related training and education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**\* Improvement plans are required for all areas marked in these columns. A documented system, fully implemented must be accomplished prior to a site audit.**

Issues	Comments			
What are the short-term machine capabilities (Cpk's) of key processes?				
What are the first pass yields percentages in final assembly?				
What percents of lots inspected at receiving inspection are rejected?				
What percent of material used (not included in off-al) is scrapped?				
What is the gauge repeatability and reproducibility (Gauge R&R) of gauges used to measure key characteristics				
How many CAR's (corrective action requests) were issued to your plant by all UTC plants in the last 12 months?				
How many lots from your plant were rejected by all UTC plants in the last 12 months?				
What critical components and/or processes are outsourced?				
How many hours training does each employee receive annually?				
List other UTC plants that are your customers and PPM's at those plants for the last 12 months	Plant	-----	PPM	-----
	Plant	-----	PPM	-----
	Plant	-----	PPM	-----

**Q-Plus Supplier Survey**

**Other Comments**

## Q-Plus Supplier Survey — Environment, Health, and Safety Module

	L-1		L-2		L-3	L-4
	No System or Informal System*	Partially Documented/ Partially Implemented System*	Documented System, Fully Implemented	D'cmntd System, Implemented & Measured Results	D'cmntd System, Implm'td, Meas'rd & Continuous Improvemnt	List Supporting Procedures/ Documents

### 13.0 Environmental, Health and Safety

13.1 Personal Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Equipment Process Hazard Program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Certification for key processes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Metrics Used	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

**Other Comments**

## Q-Plus Supplier Survey — Electronic Assemblies Module

	L-1	L-2	L-3	L-4	List Supporting Procedures/ Documents
	No System or Informal System*	Partially Documented/ Partially Implemented System*	Document System, Fully Implemented	D'cmntd System, Implemented & Measured Results	D'cmntd System, Implm'td, Meas'rd & Continuous Improvment

### 14.1 ELECTROSTATIC DISCHARGE PROTECTION

Training program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Redundant ESD Grounding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
ESD Improvement Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### FACTORY FLOOR CLEANLINESS & ORDERLINESS

Training program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Audit checklist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sustaining	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Management commitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Visual controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 14.2 CONTROL OF WAVESOLDER MACHINES

Wavesolder machines are process capable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Solder waves are routinely monitored	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### HANDLING & STORAGE OF COMPONENTS/WIP

No solderable areas touched by bare hands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Humidity controlled & documented to <50%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Dust containment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Components and PCB boards exposed to the atmosphere < 72 hours prior to solder wave.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Component leads firmly held when formed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Replacement components at repair stations are under lot control and ESD control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Soldering irons at repair stations are calibrated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### INFORMATION FROM DATA

Product failure data is collected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Process failure data is collected	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Total preventive maintenance program in place	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### 14.3 ENVIRONMENTAL STRESS SCREENING OF ELECTRONIC ASSEMBLIES

Temperature ramped high/low applied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Pressure applied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Humidity applied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Power on/bias test applied	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
HALT capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
HAST capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

### FAILURE ANALYSIS AND ROOT CAUSE CORRECTIVE ACTION

At the electronic assembly level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
At the printed circuit board level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
At the electronic component level	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Printed circuit board qualification capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Customer/field return failure analysis capability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

\* Improvement plans are required for all areas marked in these columns. A documented system, fully implemented must be accomplished prior to a site survey.

---

# Audit Instructions

- |                       |  |
|-----------------------|--|
| <b>Date</b>           | 1. When UTC evaluates your Survey at Level 2 compliance or better, your audit team leader will contact you to schedule a site audit. You will mutually agree on a date.  |
| <b>Typical agenda</b> | <p>A site audit typically requires 1-2 days.</p> <p>The typical sequence of activities during a site audit is as follows:</p> <ul style="list-style-type: none"><li>– Introductions</li><li>– Audit examination and verification</li><li>– Facility tour</li><li>– Additional audit examination and verification</li><li>– Wrap-up meeting; summary of areas for improvement</li></ul>   |
| <b>Preparation</b>    | 2. Prepare for the site audit: <ul style="list-style-type: none"><li>• Review your audit responses, improvement plan and implementation to date, and any discussions you have had with UTC about your survey.</li><li>• Assemble the materials used as evidence in the survey and to show progress on the improvement plan, including:<ul style="list-style-type: none"><li>– Documentation, procedures, and forms</li><li>– Graphs and charts</li><li>– Any other materials</li></ul></li><li>• Review the audit criteria items and be sure you are ready to respond to each one.</li><li>• Involve the survey team and other members of your organization in preparation as appropriate to your process.</li><li>• If you have any questions as you prepare for the site audit, please do not hesitate to contact your audit team leader.</li></ul>  |
| <b>Site Audit</b>     | 3. Have the General Manager, Plant Manager, Quality Manager, and others as appropriate participate in each phase of the site audit: audit examination and verification, facility tour, additional examination and verification, and wrap-up meeting. <ul style="list-style-type: none"><li>• Expect UTC to:<ul style="list-style-type: none"><li>– Begin with an opening conference</li><li>– Adhere to the site audit schedule</li><li>– Provide a thorough and complete evaluation of your quality system and processes for every audit item</li><li>– Present for discussion all categories where the quality system or process controls are found to be lacking or inadequate</li><li>– Establish your level of compliance on each audit criteria item</li><li>– Seek consensus on these finding with your management team</li><li>– Note these findings on the areas for improvement form in the Audit Report</li></ul></li></ul> |

- 
- Be sure you fully state your concerns related to any findings regarding systems or processes found to be lacking or inadequate.
  - Be sure you fully understand any findings and conclusions and the UTC justification.
- Report**
4. Within two weeks of the audit, UTC will send a completed Audit Report to you.  
A copy will also be sent to the Corporate Supplier Quality Assurance office, and the survey team will enter the results into the computerized tracking system.
- Improvement plan**
5. Prepare a written improvement plan that addresses the findings listed on the areas for improvement form in the Audit Report.
- Submit the plan on the improvement plan form in the last section of this kit.
  - Forward the plan to the survey team leader within 30 days of receiving the Audit Report.
- Evaluation**
6. Send a copy of the Audit Evaluation to the Corporate Supplier Quality Assurance office as soon as possible after the site audit.
- Implementation**
7. Implement the improvement plan and review performance.
- Compliance**
8. Continue to work with your audit team until you achieve compliance. As required:
- Submit objective evidence and measurements to UTC.
  - Provide opportunities for the audit team to visit the plant again.
  - Go through the re-audit process if applicable.

# Q-Plus Supplier Audit Report

Prepared by: \_\_\_\_\_ Position: \_\_\_\_\_ Date: \_\_\_\_\_

## Supplier Information

Supplier: \_\_\_\_\_ Street: \_\_\_\_\_

City: \_\_\_\_\_ State \_\_\_\_\_ Country: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Products Manufactured: \_\_\_\_\_

Union Contract: Y  N  Union: \_\_\_\_\_ Contract Expires: \_\_\_\_\_

Plant Area: \_\_\_\_\_ Shifts: \_\_\_\_\_ Percent Capacity: \_\_\_\_\_

Total Employment: \_\_\_\_\_ Direct Labor: \_\_\_\_\_ QA Employees: \_\_\_\_\_

QA Manager: \_\_\_\_\_ Reports to: \_\_\_\_\_ Title: \_\_\_\_\_

UTC Plants as Customers: \_\_\_\_\_

Certified/Other Companies: Y  N  By whom? \_\_\_\_\_

ISO 9000 Registered: N  9001  9002  9003

## Audit Information

UTC Division: \_\_\_\_\_ Self Audit?  Date of Audit: \_\_\_\_\_

### Audit Team

Name

Position /Location

Phone

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

### Supplier Contacts

Name

Position

Phone

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**Audit Results**

<b>Reason For Audit:</b>	<b>Initial</b> _____	<b>Follow up audit</b> _____	<b>Re-audit</b> _____	
<b>Results of Audit:</b>	<b>L-1</b> _____	<b>L-2</b> _____	<b>L-3</b> _____	<b>L-4</b> _____
<b>No. of Questions at:</b>	<b>L-1</b> _____	<b>L-2</b> _____	<b>L-3</b> _____	<b>L-4</b> _____
<b>Estimated date to reach Q+ compliance:</b>	Sections: 1-12 <input type="checkbox"/> 13 <input type="checkbox"/> 14 <input type="checkbox"/> 15 <input type="checkbox"/>			

### Summary of Levels Achieved

<b>Supplier:</b>		<b>Location:</b>		<b>Date:</b>	
------------------	--	------------------	--	--------------	--

Mark an X in the box corresponding to the Level achieved for each item.					
Cat.	Audit item	L-1	L-2	L-3	L-4
<b>1.0</b>	1.1 Management defines and documents its quality policy, objectives, and commitment.				
	1.2 Management defines the organizational structure that supports the quality policy, objectives, and system.				
	1.3 A documented system is in place to measure and improve the following: internal and external failure costs; failure rate percentage; first pass yield; reduced changeover and setup times; productivity (output/input); customer rejections; field failure rates				
<b>2.0</b>	2.1 The quality system is documented, maintained, and communicated throughout the organization.				
	2.2 Quality planning is conducted as the essential foundation for quality system development and implementation.				
	2.3 Failure costs are evaluated as a means of measuring quality system performance.				
<b>3.0</b>	3.1 A new product design control system for new products and value engineering exists to ensure design objectives are met.				
<b>4.0</b>	4.1 A system exists to support change and revision control of all drawings, specifications, procedures, and work instructions, and to ensure only the latest revision is available at the point of use.				
	4.2 A system exists to ensure that initial contracts, and changes to contracts, are carried out as desired by the customer.				
<b>5.0</b>	5.1 A purchased material control system ensures conformance to requirements.				
<b>6.0</b>	6.1 The supplier uses control plans and flow charts that detail the quality planning activities required to ensure conformance to quality requirements.				
	6.2 The supplier has documented operator instructions, implemented for all operations involving key characteristics.				
	6.3 The supplier applies appropriate techniques to certify and control process and to verify adequacy of these techniques to drive and increase process improvement to increase first pass yields.				
	6.4 An effective preventive maintenance system is documented and implemented.				

### Summary of Levels Achieved

<b>Supplier:</b>		<b>Location:</b>		<b>Date:</b>	
------------------	--	------------------	--	--------------	--

Mark an X in the box corresponding to the Level achieved for each item.					
Cat.	Audit item	L-1	L-2	L-3	L-4
<b>7.0</b>	7.1 Inspection and testing systems are developed and implemented to support product integrity.				
	7.2. Final inspection and audits are performed to verify that the product is acceptable for release.				
<b>8.0</b>	8.1 A documented system is in place for the identification, control, and calibration of all test and inspection equipment.				
<b>9.0</b>	9.1 At all stages of production, non-conforming product is segregated, identified, and evaluated, and disposition is made.				
	9.2 Production material and product are identified as to quality status throughout manufacturing operations.				
<b>10.0</b>	10.1 There is an effective corrective action system for investigating the root cause of non-conforming material at all stages of use.				
	10.2 The supplier identifies and uses measures, including statistical techniques, as a basis for prevention of non-conformance and control of quality.				
<b>11.0</b>	11.1 The supplier provides a method and means for handling, storage, packaging, and delivery that preserves product quality throughout the process.				
<b>12.0</b>	12.1 The supplier has a training process that is effective and meets the needs of the supplier's organization.				
	12.2 Quality and related education and training address the knowledge and skills employees need to meet their objectives as part of the company's quality and operational performance improvement plans.				
<b>13.0*</b>	13.1 The Supplier shows concern for the welfare of his workers and society by maintaining a basic environmental, health and safety system.				
<b>14.0*</b>	14.1 Adequate Electrostatic Discharge and Environmental Controls exist to ensure protection of the product or components during receipt, storage, picking, assembly and finished goods storage.				
	14.2 Effective procedures and controls are in place to ensure all manufacturing processes, including soldering, are sufficient and produce defect free products.				
	14.3 Electronic assemblies have been subjected to proper environmental stress screening and/or functionality testing if specified on the routing sheet.				

\* Additional sections to be used as necessary.







---

# 1.0 MANAGEMENT RESPONSIBILITY

## 1.1 Management defines and documents its quality policy, objectives and commitment.

Level	Survey Comments
<b>L-1</b> A. The supplier's quality policy is not fully documented, communicated, understood, and implemented at all levels of the organization.	
<b>L-2</b> A. <i>The supplier's quality policy is documented, signed, and dated.</i>  B. The quality policy is communicated, understood, and implemented at all levels of the organization.	
<b>L-3</b> A. Individual department objectives are written to support the quality policy.  B. A measurement system is in place to verify that objectives supporting the quality policy are attained.  C. Management verifies the organization's compliance with the policy.	
<b>L-4</b> A. Compliance with the quality policy at all levels of the organization is evaluated through the internal audit system.	

---

### Survey level --item 1.1

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**1.1 Management defines and documents its quality policy, objectives and commitment.**

**Justification for level:**

## 1.2 Management defines the organizational structure that supports the quality policy, quality objectives, and quality system.

Level	Survey Comments
<b>L-1</b> A. There is no documented organization structure.	
<b>L-2</b> A. The organization chart reflects the current reporting structure.  B. <i>Management objectives include assigned responsibilities for supporting the quality policy, quality objectives, and quality system.</i>	
<b>L-3</b> A. There is evidence of freedom within the organization to exercise authority and responsibility as follows: <ul style="list-style-type: none"> <li>• Prevent recurrence of non-conformance's</li> <li>• Identify and record quality problems</li> <li>• Initiate and verify corrective action</li> <li>• Control the process in the future</li> </ul>	
<b>L-4</b> A. <i>Management reviews the organizational structure for quality effectiveness.</i>	

**1.2 Management defines the organizational structure that supports the quality policy, quality objectives, and quality system.**

---

**Survey level --item 1.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

### 1.3 A documented system is in place to measure and improve the following:

- Internal and external failure costs
- Failure rate percentage
- First pass yield
- Reduced changeover and setup times
- Productivity (output/input)
- Customer rejections
- Field failure rates

#### Level

#### Survey Comments

- L-1**
- A. There is no plan for continuous improvement.
- B. There are no measures.
- C. Measures are not analyzed as a basis for continuous improvement.

- L-2**
- A. Detailed improvement plans are implemented, identifying and reducing defect rates using tools such as:
- Failure mode effect analysis (FMEA)
  - Mistake proofing
  - Advanced quality planning
  - Root cause analysis
  - Cause and effect diagrams (fishbone diagrams)
  - Statistical methods:
    - Control charts
    - Histograms
    - Pareto charts
    - Run charts
    - Scatter diagrams
    - QCPC

- L-3**
- A. Statistical techniques are used to track continuous improvement from setting annual objectives through attaining results.
- B. Continuous improvement results are published and shared throughout the organization.

**1.3 A documented system is in place to measure and improve the following:**

- Internal and external failure costs
- Failure rate percentage
- First pass yield
- Reduced changeover and setup times
- Productivity (output/input)
- Customer rejections
- Field failure rates

**Level**

**Survey Comments**

**L-4** A. Field failure rates are analyzed and this analysis drives continuous improvement.

---

**Survey level --item 1.3**

(Mark an **X** in the box corresponding to the level achieved.)

L-1

L-2

L-3

L-4

**Justification for level:**

---

## 2.0 QUALITY SYSTEM

### 2.1 The quality system is documented, maintained, and communicated throughout the organization.

#### Level

#### Survey Comments

**L-1** A. *Quality manuals, procedures, and control plans do not exist, or are incomplete, fragmented, and outdated, or improperly documented.*

B. The link is vague between the quality manual and procedures.

**L-2** A. The Quality Manual and supporting quality systems fully address produce acceptability at all stages.

B. *The Quality Manual has controlled copies with revision levels.*

C. The Quality Manual is a working document and communicated to all employees when applicable.

D. The supplier's facility is perceived as an environment of high quality as evidenced by good housing-keeping and material practices.

E. *A deviation and substitution procedure or procedures are documented.*

**L-3** A. System effectiveness is verified by evaluating statistical trends of key quality indicators as identified on the quality plan.

B. Key items of information needed for the day to day operation of the organization are visually evident through posting of information, labeling of storage bins, etc.

## 2.1 The quality system is documented, maintained, and communicated throughout the organization.

### Level

### Survey Comments

- L-4**
- A. The Quality system is reviewed regularly by management. Revisions are made for continuous improvement and communicated throughout the organization.
  - B. Each segment of the quality system is subjected to an internal documentation audit at least once annually.
  - C. Management has a process implemented with metrics for reviewing the implementation of good housing keeping (such as 5-S) or visual display of information (such as 'visual factory')

---

### Survey level --item 2.1

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

### Justification for level:

## 2.2 Quality Planning is conducted as the essential foundation for quality system development and implementation.

Level	Survey Comments
<b>L-1</b> A. <i>There is little or no evidence of quality planning.</i>	
<b>L-2</b> A. Quality planning addresses, and sets goals for, the following: <ul style="list-style-type: none"> <li>• Verification of conformance to engineering and customer requirements.</li> <li>• Internal failure rates and costs.</li> <li>• External failure rates and costs.</li> <li>• Customer complaints.</li> <li>• Quality Information System.</li> <li>• Customer satisfaction indices.</li> <li>• Root cause analysis of failures</li> </ul> B. Sufficient resources have been identified to support the quality plan.	
<b>L-3</b> A. Continuous improvement in quality measurements is part of management objectives. B. Feasibility reviews are conducted to confirm the compatibility of design with the manufacturing process. C. Quality planning supports strategic business goals.	

**2.2 Management defines the organizational structure that supports the quality policy, quality objectives, and quality system.**

**Level**

**Survey Comments**

- L-4**
- A. There is documented evidence that management reviews quality-planning activities.
  - B. Long term plans are reviewed annually for inclusion of continuous improvement.
  - C. The quality planning process is subjected to internal audits.

---

**Survey level --item 2.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 2.3 Failure costs are evaluated as a means of measuring quality system performance.

Level	Survey Comments
<p><b>L-1</b></p> <p>A. Failure cost records are incomplete or not reported throughout the organization.</p> <p>B. Scrap and rework are recorded, but considered a 'cost of doing business'.</p> <p>C. Some scrap and rework are recorded, without annual goals for improvement.</p>	
<p><b>L-2</b></p> <p>A. An effective system is in place to track and report the following throughout the organization.</p> <ul style="list-style-type: none"> <li>• Internal scrap and rework</li> <li>• External scrap and rework</li> <li>• Warranty cost</li> </ul> <p>B. Scrap is tracked as a percentage.</p>	
<p><b>L-3</b></p> <p>A. Proactive initiatives to reduce internal and external failure costs are documented and annual goals established with management commitment.</p> <p>B. Objectives are set and data tracked to lowering internal and external failure costs on an organizational and departmental basis.</p> <p>C. Scrap and rework (not including normal process scrap such as edge trim, knockouts, etc) are at or below the average for that particular industry.</p>	

**2.3 Failure costs are evaluated as a means of measuring quality system performance.**

**Level**

**Survey Comments**

- L-4**
- A. Field failure rates are analyzed and this analysis drives continuous improvement.
  - B. Failure costs are available for use in short term planning purposes.
  - C. Objectives are being met and data indicates continual improvement in internal and external failure costs
  - D. Scrap and rework is 25% or better of industry average.

---

**Survey level --item 2.3**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 3.0 DESIGN CONTROL

### 3.1 A design control system for new products and value engineering of existing products exists to ensure design objectives are met.

Level	Survey Comments
<b>L-1</b> A. Design engineering works independently of other disciplines. <ul style="list-style-type: none"><li>• No formal design review system exists</li><li>• Product change system is fragmented</li></ul>	
<b>L-2</b> A. Product introduction procedures exist that include: <ul style="list-style-type: none"><li>• Cross functional teams</li><li>• Formal design reviews, with minutes, conducted according to the design plan. Cross functional participation is required at all design reviews</li><li>• Design control plans address customer-identified key characteristics</li><li>• Written approval from the customer is obtained prior to design or process changes by the supplier.</li></ul> B. First article approval is required for all new or revised products or processes.	
<b>L-3</b> A. Customers and suppliers are actively involved in the design process.  B. Product introduction methodology, such as FMEA and design validation, is conducted prior to the introduction of a new process or product.  C. Product qualification is verified against design objectives, with appropriate documentation using appropriate processes such as life testing.	

**3.1 A new product design control system exists to ensure design objectives are met.**

**Level**

**Survey Comments**

**L-3** D. Reliability, availability and maintainability analysis is conducted.

**L-4** A. *Internal audits are conducted to verify design compliance with established procedures and practices.*  
B. Design process improvement activities are documented and measured.  
C. Advanced technologies such as design for experiment (DOE) are used where appropriate.

---

**Survey level --item 3.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 4.0 DRAWING, CONTRACT AND CHANGE CONTROL

### 4.1 A system exists to support change and revision control of all drawings, specifications, procedures, and work instructions, and to ensure only the latest revision is available at the point of use.

Level	Survey Comments
<p><b>L-1</b></p> <p>A. <i>No documented drawing control procedures exist.</i></p> <p>B. No drawing and specification history file exists.</p> <p>C. Instructions are fragmented.</p> <p>D. <i>"Marked up" drawings are used in manufacturing of products.</i></p>	
<p><b>L-2</b></p> <p>A. <i>Documented procedures have been developed and implemented to govern drawing and specification changes. These procedures address:</i></p> <ul style="list-style-type: none"><li><i>• Authorization requirements and routing process</i></li><li><i>• Drawing and specification history file retention</i></li></ul> <p>B. There is no evidence of "marked up" or obsolete drawings in the manufacturing process.</p>	
<p><b>L-3</b></p> <p>A. There is a centralized drawing revision history and control system, maintained by revision authority.</p> <p>B. The customer is notified of the implementation date on all changes and they meet customer introduction schedules.</p>	

**4.1 A system exists to support change and revision control of all drawings, specifications, procedures, and work instructions, and to ensure only the latest revision is available at the point of use.**

**Level**

**Survey Comments**

- L-4** A. Product introduction and change cycle times are monitored for continuous improvement.
- B. *Audits are conducted to assure compliance with drawing and specification revision at point and time of use.*

---

**Survey level --item 4.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 4.2 A system exists to ensure that initial contracts and changes to contracts are carried out as desired by the customer.

Level	Survey Comments
<b>L-1</b> A. <i>No documented contract control procedures exist.</i>  B. <i>No contract review history file exists.</i>	
<b>L-2</b> A. <i>Written procedures detail the contract review process.</i>  B. <i>Records exist to show results of contract reviews.</i>	
<b>L-3</b> A. All contracts undergo review and are verified as to supplier's ability to meet delivery date, quantity and any special features.  B. Supplier tracks and reviews cases where errors in contracts fulfillment have been discovered.	
<b>L-4</b> A. Processes are adjusted in response to contract review findings.  B. <i>The contract review process is audited for compliance and adequacy.</i>	

**4.2 A system exists to ensure that initial contracts and changes to contracts are carried out as desired by the customer.**

---

**Survey level --item 4.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 5.0 PURCHASED MATERIAL CONTROL

### 5.1 A purchased material control system ensures conformance to requirements.

Level	Survey Comments
<b>L-1</b> A. The supplier's purchased material management process lacks focus.  B. <i>No purchased material control procedure exists.</i>  C. <i>The approved supplier list is incomplete or non-existent</i>	
<b>L-2</b> A. There is a purchased material control procedure that includes as a minimum: <ul style="list-style-type: none"><li>• <i>Formal purchase order policy defined.</i></li><li>• Source selection needs documented.</li><li>• First sample inspection procedure is in place.</li><li>• <i>Current drawings/specifications kept.</i></li><li>• Incoming material control system exists.</li><li>• Records of supplier performance, including quality, delivery, and pricing.</li><li>• Supplier corrective action system is documented and in place.</li><li>• <i>Approved supplier list exists.</i></li></ul>	
<b>L-3</b> A. There is a documented supplier evaluation program, such as supplier audits.  B. A documented system exists for joint planning with suppliers.	

**5.1 A purchased material control system ensures conformance to requirements.**

**Level**

**Survey Comments**

**L-3** C. A periodic review of supplier performance is conducted and results are published and reported to the supplier.

**L-4** A. Proactive supplier and customer relationships are evident (examples: workshops, training, symposiums, design process improvement, and continuous improvement.  
B. *The purchased material control system is audited for compliance to standards.*

---

**Survey level --item 5.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 6.0 PROCESS CONTROL

### 6.1 The supplier uses control plans and flow charts that detail the quality planning activities required to ensure conformance to quality requirements.

Level	Survey Comments
<b>L-1</b> A. <i>Control plans are not documented or are incomplete.</i>	
<b>L-2</b> A. Control plans have been developed for all controlled, critical, and significant items and are mutually agreed upon, with sign off by the customer.  B. <i>Operator instructions agree with control plans and flow charts.</i>  C. <i>Control plans are controlled documents.</i>	
<b>L-3</b> A. The supplier uses their control plans for quality planning activities on new or changed processes.  B. Control plans refer to gauge repeatability and reproducibility studies and process capability of key characteristics.  C. Control plans are reviewed routinely for effectiveness and updated in a timely manner.	
<b>L-4</b> A. <i>Internal audits are conducted to see that control plans are up-to-date and being followed.</i>  B. FMEAs are updated at all design and process changes and validated with statistics.	

**6.1 The supplier uses control plans and flow charts that detail the quality planning activities required to ensure conformance to quality requirements.**

---

**Survey level --item 6.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 6.2 The supplier has documented operator instructions, implemented for all operations involving key characteristics.

Level	Survey Comments
<b>L-1</b> A. <i>Some written operator instructions exist, but generally these instructions lack sufficient detail.</i>	
<b>L-2</b> A. <i>Documented instructions are available at all key operations and/or for all key characteristics, and contain the following information:</i> <ul style="list-style-type: none"> <li>• <i>Revision, approval, and dates</i></li> <li>• <i>Part name, part number, operation name, and operation number</i></li> <li>• <i>Applicable specifications with latest revision</i></li> <li>• <i>Tools and gauging requirements</i></li> </ul> B. <i>Instructions are accessible at workstations and communicate requirements in an easily understandable way.</i>  C. <i>Instructions document the identification and handling of non-conforming materials.</i>  D. <i>Employees are performing functions according to the instructions.</i>	
<b>L-3</b> A. <i>Instructions include visual details, for example, illustrations, pictures, component parts.</i>  B. <i>Key characteristics are listed with audit sample size and frequency requirements.</i>  C. <i>Instructions specify application of statistical methods required by the mutually agreed to control plan.</i>	

**6.2 The supplier has documented operator instructions, implemented for all operations involving key characteristics.**

**Level**

**Survey Comments**

**L-4** A. Documented evidence shows that cross-functional teams evaluate and improve the effectiveness of operator instructions and are responsible for recommending changes for improvement.

---

**Survey level --item 6.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

### 6.3 The supplier applies appropriate techniques to certify and control process and to verify adequacy of these techniques to drive and increase process improvement to increase first pass yields.

Level	Survey Comments
<p><b>L-1</b></p> <p>A. The supplier is in the initial phases of implementing statistical techniques. Pilot applications exist within manufacturing operations.</p> <p>B. Statistical methods are used within manufacturing operations by quality control personnel only.</p>	
<p><b>L-2</b></p> <p>A. All key processes and equipment have been evaluated as to the appropriate control methodology defined in the control plan.</p> <p>B. The supplier knows first pass yields, and has plans for improvement.</p> <p>C. Process capability studies are conducted on all new and modified key processes/equipment.</p>	
<p><b>L-3</b></p> <p>A. The supplier maintains records that demonstrate short-term machine capability (Cpk) of <math>\geq 1.67</math> and long-term process capability (Ppk) of <math>\geq 1.33</math> on all key characteristics.</p> <p>B. Special causes of variation are investigated and appropriate corrective actions are taken and documented.</p> <p>D. The supplier's first pass yields in final assembly are 95% or greater.</p>	

**6.3 The supplier applies appropriate statistical techniques to certify and control process and to verify adequacy of these techniques to drive and increase process improvement to increase first pass yields.**

**Level**

**Survey Comments**

- L-4**
- A. Management reviews statistical trends and documented evidence exists showing continuous improvement.
  - B. The supplier's first pass yields are 98% or greater.
  - C. The supplier maintains records that demonstrate short-term machine capability (Cpk) of  $\geq 2.0$  and long-term process capability (Ppk) of  $\geq 1.67$ .
  - D. Periodic, formal reviews of each key process are held and the processes' ability to produce to requirements certified.

---

**Survey level --item 6.3**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 6.4 An effective preventive maintenance system is documented and implemented.

### Level

### Survey Comments

- L-1** A. Process equipment is repaired on an as-needed basis.

--

- L-2** A. Documented preventive maintenance procedures are implemented.
- B. There is objective evidence that preventive maintenance is performed following the documented procedure.
- C. Complete maintenance records are available for all machines and process equipment.

--

- L-3** A. Unscheduled downtime is monitored and appropriate corrective action taken.
- B. Critical spare parts are identified and readily available.
- C. Operator checklist, including daily walkabout is developed and used.

--

- L-4** A. The preventive maintenance system is reviewed on a routine basis to address the effects of process changes.

--

**6.4 An effective preventive maintenance system is documented and implemented.**

---

**Survey level --item 6.4**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 7.0 INSPECTION AND TESTING

### 7.1 Inspection and testing systems are developed and implemented to support product integrity.

#### Level

#### Survey Comments

- L-1**
- A. *There is no inspection and testing procedure.*
  - B. *Instructions are verbal and/or incomplete.*
  - C. *Equipment and test parameters are not controlled.*
- L-2**
- A. *Written procedures detail inspection and test parameters.*
  - B. *All personnel conducting inspections, including operators performing self-inspections, are trained with the defined parameters and methods.*
  - C. *Inspection test results are known and published.*
  - D. *It is possible to trace the individual responsible for testing.*
  - E. *Records are maintained.*
- L-3**
- A. *Statistical analysis is used to evaluate changes in trends where applicable.*
  - B. *Sampling Plans are developed in support of the quality plan and are based on standard sampling plans and tables.*

**7.1 Inspection and testing systems are developed and implemented to support product integrity.**

**Level**

**Survey Comments**

C. Formally structured tester, inspector, and technician training programs are implemented.

- L-4**
- A. Test parameters complement or duplicate the customer's application.
  - B. Internal audits are conducted for effectiveness and conformance to established procedures.
  - C. Objective evidence exists to support continuous improvement activity.
  - D. Testers, inspectors, and technicians are certified to specific requirements with a defined re-certification period.

**Survey level --item 7.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 7.2 Final inspection and audits are performed to verify that the product is acceptable for release.

Level	Survey Comments
<b>L-1</b> A. There are no formal final inspection procedures.  B. <i>Instructions are verbal or incomplete.</i>	
<b>L-2</b> A. Written final inspection procedures exist that include: <ul style="list-style-type: none"><li>• Audit frequency</li><li>• Audit characteristics check list</li><li>• Responsible individuals (independent of operator)</li><li>• Product description (acceptance or rejection)</li><li>• Customer notification and recall</li><li>• Records retention policy</li><li>• Training requirement</li></ul> B. Audits are conducted according to procedure.	
<b>L-3</b> A. Final Inspection and audit results are analyzed and published.  B. The supplier documents and maintains an index and trends for outgoing quality.  C. Plans for continuous improvement are documented.	

**7.2 Final inspection and pack audits are performed to verify that the product is acceptable for release.**

**Level**

**Survey Comments**

- L-4** A. Outgoing quality data is analyzed and used to improve procedures.
- B. Objective evidence exists to show continuous improvement activity is effective.

---

**Survey level --item 7.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 8.0 CONTROL OF TEST AND MEASURING EQUIPMENT

### 8.1 A documented system is in place for the identification, control, and calibration of all test and inspection equipment.

Level	Survey Comments
<b>L-1</b> A. <i>Gauge control and calibration are conducted on an informal basis.</i>  B. <i>Not all gauges are included in the control and calibration process.</i>	
<b>L-2</b> A. <i>There is a documented and recorded calibration procedure, verifying that each piece of test and inspection equipment is calibrated at prescribed intervals and in the correct environment.</i>  B. <i>All gauges and test equipment are calibrated against measuring standards traceable to their respective national standard and records and documents are retained on file.</i>  C. <i>All equipment is individually traceable throughout the system and each piece has visual indication of calibration status.</i>  D. <i>Records are maintained showing equipment calibration and repair.</i>  E. <i>Out-of-calibration &amp;/or certification equipment is segregated and controlled to preclude use.</i>  F. <i>There is appropriate action taken, including notification of customers, for non-conforming products and processes. (E.I. Out of calibration)</i>  G. <i>Gauges are stored in a manner that prevents damage.</i>	
<b>L-3</b> A. <i>Pro-active gauge control and calibration is in place and operational.</i>  B. <i>Calibration results are evaluated for calibration frequency.</i>	

**8.1 A documented system is in place for the identification, control, and calibration of all test and inspection equipment.**

**Level**

**Survey Comments**

- L-3** C. Procedures are in use that require repeatability and reproducibility studies on all gauges and test equipment used to control key characteristics. Procedures specify:
- Performance requirement
  - Frequency
  - Responsibility
  - Action for non-conforming gauge
  - Gauge repeatability studies are performed as called for by FMEAs, or the control plan or flow chart
- D. *A detailed procedure is in place that covers operator responsibility for out-of-calibration gauges.*

- L-4** A. *Internal audits are conducted to evaluate conformance to procedures.*
- B. Key characteristic gauges and test equipment have less than 20% R&R error and a plan is in place for continuous error reduction.
- C. Management periodically reviews the calibration process for continuous improvement opportunities.

**Survey level --item 8.1**

(Mark an **X** in the box corresponding to the level achieved.)

<input type="checkbox"/> <b>L-1</b>	<input type="checkbox"/> <b>L-2</b>	<input type="checkbox"/> <b>L-3</b>	<input type="checkbox"/> <b>L-4</b>
-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------

**Justification for level:**

---

## 9.0 MATERIAL CONTROL

### 9.1 At all stages of production, non-conforming product is segregated, identified, and evaluated and disposition is made.

Level	Survey Comments
<b>L-1</b> A. <i>There is no non-conforming material system in place.</i>	
<b>L-2</b> A. <i>A well-identified area is used for all non-conforming material.</i>  B. <i>Material is properly identified, segregated, evaluated, and disposition is made according to a documented procedure.</i>	
<b>L-3</b> A. <i>Training for handling of non-conforming material has been conducted for personnel affected.</i>  B. <i>Repaired and reworked product is re-inspected against the same test requirements it failed.</i>  C. <i>Prior to shipment, non-conforming products are reported to the customer for approval of the deviation. Deviations have expirations dates and quantities authorized, with lot traceability.</i>  D. <i>The non-conforming material procedure requires review and disposition.</i>	
<b>L-4</b> A. <i>Internal audits are conducted to verify conformance to the system.</i>  B. <i>All non-conforming product has been dispositioned and removed from segregation area within one week.</i>	

**9.1 At all stages of production, non-conforming product is segregated, identified, and evaluated and disposition is made.**

---

**Survey level --item 9.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 9.2 Production material and product are identified as to quality status throughout manufacturing operations.

Level	Survey Comments
<p><b>L-1</b> A. <i>Identification for quality status is inconsistent, incomplete, or not traceable.</i></p> <p>B. <i>No written quality status procedures are available.</i></p>	
<p><b>L-2</b> A. Product and material inspection status are identified as to verification of acceptance or rejection, and traceable to inspection and test location. Sufficient resources have been identified to support the quality plan.</p> <p>B. Procedures provide the following controls:</p> <ul style="list-style-type: none"> <li>• Verification of material according to quality plan.</li> <li>• Establishment of product conformance.</li> <li>• Holding of non-conforming product.</li> <li>• Identification and segregation.</li> <li>• Material traceability with information easily obtained.</li> </ul>	
<p><b>L-3</b> A. <i>The procedure for releasing in-process material prior to verification activities is documented and followed.</i></p> <p>B. <i>Material traceability is maintained and readily obtainable in conformance with control requirements.</i></p>	
<p><b>L-4</b> A. <i>Internal audits check for conformance to the system.</i></p>	

**9.2 Production material and product are identified as to quality status throughout manufacturing operations.**

---

**Survey level --item 9.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 10.0 CORRECTIVE AND PREVENTIVE ACTION

### 10.1 There is an effective corrective action system for investigating the root cause of non-conforming material at all stages of use.

#### Level

#### Survey Comments

- L-1**
- A. *Written corrective action procedures are inadequate, out-of-date, or non-existent.*
  - B. *Tracking, documenting & reporting is informal.*
  - C. *Corrective action is reactive and is usually a temporary fix.*

- L-2**
- A. *Corrective action procedures exist in the quality system and a form is issued for out-of-control processes and includes the following:*
    - Determining & documenting root cause
    - Establishing corrective action steps
    - Assigning responsible individuals
    - Establishing implementation dates
    - Quarantine and disposition of defective inventory
  - B. *Customer complaints and field failures are addressed under the corrective action system.*
  - C. *Preliminary short-term actions are implemented in  $\leq 24$  hours for all instances of non-conformance.*
  - D. *Corrective actions are verified for effectiveness.*

- L-3**
- A. *Corrective actions are measured statistically and reviewed by management.*

**10.1 There is an effective corrective action system for investigating the root cause of non-conforming material at all stages of use.**

**Level**

**Survey Comments**

- L-3**
- B. Tools are used to continuously analyze key processes in order to identify and prioritize process problems and inefficiencies.
  - C. Continuous improvement goals are set to accelerate implementation of corrective action and improve system effectiveness.

- L-4**
- A. Root cause analysis and preventive procedures are reviewed periodically for effectiveness and improvement.
  - B. The system provides a closed loop for customer satisfaction with objective evidence.
  - C. *Internal audits of the system are part of the quality plan.*

**Survey level --item 10.1**

(Mark an **X** in the box corresponding to the level achieved.)

<input type="checkbox"/> <b>L-1</b>	<input type="checkbox"/> <b>L-2</b>	<input type="checkbox"/> <b>L-3</b>	<input type="checkbox"/> <b>L-4</b>
-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------

**Justification for level:**

**10.2 The supplier identifies and uses measures, including statistical techniques, as a basis for prevention of non-conformance and control of quality.**

Level	Survey Comments
<b>L-1</b> A. Limited understanding and usage of preventive techniques are evident.	
<b>L-2</b> A. Mistake proofing techniques and devices such as asymmetrical designs, wiring templates, locator or guide pins, etc., are used to prevent defects.	
<b>L-3</b> A. Product and process FMEAs address all customer-identified key characteristics.  B. All key processes are regularly analyzed for opportunities to implement mistake proofing techniques and devices such as asymmetrical designs, wiring templates, locator or guide pins, etc., in order to prevent defects	
<b>L-4</b> A. An aggressive, pro-active program is in place to encourage identification of mistake proofing techniques and devices. Successful results are publicized.  B. Advanced statistical techniques, such as design of experiments (DOE) and Taguchi methods, are used within manufacturing and engineering operations.	

**Survey level --item 10.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**10.2 The supplier identifies and uses measures, including statistical techniques, as a basis for prevention of non-conformance and control of quality.**

**Justification for level:**

---

## 11.0 HANDLING, STORAGE, PACKAGING, AND DELIVERY

### 11.1 The supplier provides a method and means for handling, storage, packaging, and delivery that preserves product quality throughout the process.

#### Level

#### Survey Comments

- L-1** A. *Procedures to control the quality of product during packaging and warehousing are informal or non-existent.*
- B. *There are incomplete guidelines for packaging and warehousing.*

--

- L-2** A. The supplier reviews and has procedures for satisfying customer specifications pertaining to handling, packaging, labeling, bar-coding, and delivery.
- B. *The supplier's procedure also covers special customer requirements, such as those for replacement components.*
- C. *The supplier's material handling and storage methods prevent product damage or deterioration.*
- D. Bulk containers holding multiple items have a label that clearly identifies the contents.
- E. Any changes to packaging, labeling, bar-coding, or shipment routing are approved by the customer prior to implementation.

--

- L-3** A. Scheduled audits are conducted on packaging and labeling (including electronic verification of bar-codes) prior to shipment.

--

- L-4** A. *Internal audits are conducted to track conformance to procedure.*

--

**11.1 The supplier provides a method and means for handling, storage, packaging, and delivery that preserves both in-process and final product quality.**

**Level**

**Survey Comments**

- B. The supplier uses techniques to improve his performance such as Kanban or other JIT techniques.
- C. Packaging is periodically analyzed for adequacy in preventing damage and deterioration.
- D. The supplier uses Kanban or other JIT techniques to reduce handling and in-process inventories.
- E. The supplier is using returnable containers where applicable.

---

**Survey level --item 11.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 12.0 TRAINING

### 12.1 The supplier has a training process that is effective and meets the needs of the supplier's organization.

Level	Survey Comments
<b>L-1</b> A. <i>No formalized training process exists.</i> <ul style="list-style-type: none"><li>• <i>Training is sporadic</i></li><li>• <i>Training is vague.</i></li></ul>	
<b>L-2</b> A. <i>The supplier has documented training program consisting of the following:</i> <ul style="list-style-type: none"><li>• <i>Needs assessment</i></li><li>• <i>Documented achievement and required level</i></li><li>• <i>Basic training package</i></li><li>• <i>Visual and written instructions</i></li><li>• <i>Measurement of results.</i></li></ul> B. <i>Training records are maintained.</i>	
<b>L-3</b> A. The program allows for certification of special process operators (for example, brazing, welding, and testing.)  B. The program includes specialized training for cross functional team participation (for example, value analysis, continuous improvement)  C. Structured measurement indices are used in evaluating training effectiveness.	

**12.1 The supplier has a training process that is effective and meets the needs of the supplier's organization.**

**Level**

**Survey Comments**

- L-4**
- A. Internal audits are performed for effectiveness of the training process and conformance to established procedures.
  
  - B. Management reviews training effectiveness for continuous improvement.
  
  - C. Recognition processes are in place.
  
  - D. Operator skill matrixes are documented for all key processes.

**Survey level --item 12.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 12.2 Quality and related education and training address the knowledge and skills employees need to meet their objectives as part of the company's quality and operational performance improvement plans.

Level	Survey Comments
<b>L-1</b> A. No formal quality and related education program exists.	
<b>L-2</b> A. <i>Training in quality and related education programs are offered by the supplier.</i>	
<b>L-3</b> A. The supplier makes training available in areas such as the following: <ul style="list-style-type: none"> <li>• Teamwork</li> <li>• Problems solving</li> <li>• Process control</li> <li>• EH&amp;S</li> <li>• Process improvement</li> <li>• Waste reduction</li> <li>• Cycle time reduction.</li> </ul> B. Employees receive a minimum of 20 hours of quality or product skill related training each year.	
<b>L-4</b> A. Measurable goals are established and followed for training, as a part of the employee's objectives.  B. Training needs are planned yearly with employee's participation.  C. Employees participate in quality and related education programs which are available throughout the area colleges, universities, professional organizations or government agencies.	

**12.2 Quality and related education and training address the knowledge and skills employees need to meet their objectives as part of the company's quality and operational performance improvement plans.**

**Level**

**Survey Comments**

**L-4** C. Employees receive a minimum of 40 hours of quality or product skill related training each year.

---

**Survey level --item 12.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 13.0 ENVIRONMENTAL, HEALTH AND SAFETY

### 13.1 The supplier shows concern for the welfare of his workers and society by maintaining a basic environmental, health and safety system.

Level	Survey Comments
<b>L-1</b> A. Limited recognition of EH&S requirements. Procedures, policies and plans do not exist or exist in a partially deployed or partially implemented system.	
<b>L-2</b> A. There is a documented, fully implemented EH&S Management System which addresses most critical hazards and risks  B. Personal protection (e.g. eye protection, safety shoes, welding curtains) are evident and in use  C. Some equipment process hazards are addressed.	
<b>L-3</b> A. Fully documented and implemented EH&S Management System in place to proactively identify and address hazards and risks before they impact workers, the environment or the general public.  B. Equipment and process hazards are systematically identified and addressed.  C. Metrics are established, reviewed periodically and a plan is developed for continuous improvement.	
<b>L-4</b> A. Comprehensive EH&S Management System in place with metrics indicating continuous improvement.	

**13.1 The supplier shows concern for the safety of his workers and society by maintaining a basic environmental, health and safety system.**

**Level**

**Survey Comments**

- L-4** B. Preventive measures are reviewed periodically for effectiveness and improvement.
- C. Root cause analysis is performed for all EH&S incident including near misses. Corrective actions are established, implemented and effectiveness evaluated.

---

**Survey level --item 13.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

---

## 14.0 ELECTRONIC COMPONENT MANUFACTURING

### 14.1 Adequate Electrostatic Discharge and Environmental Controls exist to ensure protection of the product or components during receipt, storage, picking, assembly and finished goods storage.

#### Level

#### Survey Comments

- L-1**
- A. Procedures, policies and plans for ESD control do not exist or exist in a partially deployed or partially implemented system.
- B. Procedures, policies and plans for environmental (e.g. dust and humidity) control do not exist or exist in a partially deployed or partially implemented system.

- L-2**
- A. There is a documented, fully implemented ESD control system in place that provides for:
- Redundant ESD grounding
  - Training for Employees
  - Grounding of tables, mats, chairs, etc.
- B. There is a documented, fully implemented environmental control system, addressing dust, humidity and 5-S in place.

- L-3**
- A. The ESD Program includes collection and analysis of data and provides for an improvement plan.
- B. The Environmental Control Plan includes collection and analysis of data and provides for an improvement plan. Humidity is <50%

- L-4**
- A. The dust containment program includes the use of overpressure.

**14.1 Adequate Electrostatic Discharge and Environmental Controls exist to ensure protection of the product or components during receipt, storage, picking, assembly and finished goods storage.**

---

**Survey level --item 14.1**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## 14.2 Effective procedures and controls are in place to ensure all manufacturing processes, including soldering are sufficient and produce defect free products.

### Level

### Survey Comments

- L-1**
- A. Partially documented or partially implemented systems are in place for controlling manufacturing processes.
  - B. Partially documented or partially implemented systems are in place for controlling component testing processes.
  - C. Soldering is done manually with no special controls in place.

--

- L-2**
- A. The monitoring of solder waves is fully documented and implemented.
  - B. Procedures are documented and implemented to ensure solderable areas are not touched by hand.
  - C. Replacement components are afforded the full measure of ESD protection
  - D. Soldering Irons at all stations are calibrated

--

- L-3**
- A. Process Capability studies are undertaken for all wave solder machines.
  - B. Process results are measured, collected and analyzed.

--

**14.2 Effective procedures and controls are in place to ensure all manufacturing processes, including soldering are sufficient and produce defect free products.**

**Level**

**Survey Comments**

**L-4** A. The manufacturing process has an effective continuous improvement program in place.

---

**Survey level --item 14.2**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

### 14.3 Electronic assemblies have been subjected to proper environmental stress screening and/or functionality testing if specified on the routing sheet.

Level	Survey Comments
<b>L-1</b> A. Testing of components is not documented, not implemented fully or not done.	
<b>L-2</b> A. Failure analysis is undertaken at the PCB, electronic assembly and electronic component levels.  B. A documented and fully implemented system is in place to conduct environmental stress screening using the application of pressure and humidity as well as power on/off basis testing.	
<b>L-3</b> A. The environmental stress-screening program includes measurement and analysis of results.  B. HALT (Highly Accelerated Life Test) testing is implemented and results measured.  C. HAST (Highly Accelerated Stress Testing) testing is implemented and results measured.	
<b>L-4</b> A. The Environmental Stress Screening (ESS) program results in continuous improvement of the process and product.	

**14.3 Electronic assemblies have been subjected to proper environmental stress screening and/or functionality testing if specified on the routing sheet.**

---

**Survey level --item 14.3**

(Mark an **X** in the box corresponding to the level achieved.)

**L-1**

**L-2**

**L-3**

**L-4**

**Justification for level:**

## Q+ Process Evaluation

Please take a moment to evaluate the UTC Q+ process.

Mark an X in the box corresponding to your opinion →		Poor		Avg		High	
Item	Issue	1	2	3	4	5	N/O*
1	Please rate the clarity of the notification to your company of the Q+ process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	To what degree do the Q+ Survey and Audit materials meet your expectations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	How well did the instructions in the Q+ Survey and Audit kit meet your needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	To what degree, (within 30 days?), did UTC respond to your survey?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	How efficiently was the site audit scheduled to your's and UTC's mutual needs and satisfaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	To what degree did UTC adhere to the site survey schedule and Q+ Criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	What was your impression of the audit's opening orientation and conference conducted by UTC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	How well did the UTC team provide a complete evaluation of your Quality system vs. Audit Criteria?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Please rate the opportunity that you were given by the team to fully state your concerns of the findings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	How well were you satisfied with the justification of the conclusions and how your concerns were handled?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	What level of professionalism was demonstrated by the team throughout the Q+ process?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b><u>Please provide any comments you have which will help improve the Q+ Process.</u></b></p>							

Please return this evaluation to the appropriate address:

\*N/O no Opinion

<p><u>Supplier:</u></p> <hr/> <p><u>Auditor(s):</u></p> <hr/>
---

Carrier  
 Carrier Corporation  
 Corporate Supplier Quality  
 PO Box 4808  
 Carrier Parkway, TR18S  
 Syracuse, NY 13221

Otis  
 Mr. Mike Shaw  
 Otis Elevator Company  
 5 Farm Springs Rd  
 Farmington, CT 06013  
 Fax: 860-676-6922

Fax: 315-432-6972

<b>IMPROVEMENT PLAN</b>			
<b>Supplier Name:</b>		<b>Page:</b>	<b>of</b>
<b><u>Issue Champion (owner):</u></b>	<b><u>Date:</u></b>		
<b>Problem statement: (developed from areas not addressed on the survey or from findings on the survey; one sheet for each problem):</b>			
<b>Ideal state:</b>			
<b>Item Number:</b>	<b>Dates actually reviewed (Note after each review):</b>		
<b>Actions</b>	<b>Responsible</b>	<b>Date Due</b>	<b>Date Completed</b>