GLOBAL SUPPLIER REQUIREMENTS & GUIDELINES

Version 3

MAN-00007 / 3

Table of Contents

Table of Contents

Introduction

1.0 Purpose

To define Litens' minimum Quality System requirements and expectations by directing the supplier to recognized industry standards for quality systems and providing additional or alternative Litens-specific quality system requirements that must be satisfied.

2.0 Scope

The supplier requirements contained herein apply to all parties who agree to contract to Litens Automotive Group globally for the purpose of supplying products or services that will be used in Litens' products.

3.0 Approach

The words "shall," "will" and "must" indicate mandatory requirements. Suppliers choosing other approaches must be able to show that their approach meets the intent of the requirement.

4.0 Implementation

Suppliers are required to implement, maintain and continually improve on all of the requirements contained herein or referred to in this document. Conformance to such requirements will be evaluated in accordance with a recognized industrial standard (TS/ISO/VDA) Quality System Assessment manual.

5.0 Minimum Requirements.

	Minimum Requirement
All components and services for production use	Current version of TS 16949 or ISO 9001 or VDA standard third party registered by an accredited registrar
Commercial off the shelf commodity	Meets all defined specifications with material certifications & legislated / environmental requirements

6.0 Supplier Approval Status

The three levels of approval status are as follows:

Supplier Approval Status	Approval Status Description
Approved Suppliers	Meets all requirements
HOLD – No New Business	May solicit quotes but will not award any new job until the HOLD status is removed
Unapproved	May solicit quotes but will not be awarded any job until the supplier is approved

An approved supplier may have to re-qualify for approved status in case of changes to ownership or to management responsibility for quality or change in financial standing of the company as appropriate.

Litens reserves the right to enforce, in full or in part, any of the above criteria.

7.0 Supplier Performance Reporting

Litens issues supplier performance report cards. The purpose of the report card is to provide suppliers with feedback for continual improvement activities.

The report card results will be reviewed periodically by Litens' management. Chronic poor performance may result in a change of vendor approval status.

The supplier's report card may consist of a rating in the following areas:

- Supplier Delivery Performance
- Supplier Quality Performance (PPM)

8.0 Delivery Performance Ratings

It is each supplier’s responsibility to establish systems to support 100% on-time delivery and to complete internal corrective actions to improve delivery and communication of delivery problems.

It is each supplier’s responsibility to ship material according to the specified transportation mode, routing, standard pack, container or other Litens requirements.

Delivery Performance Ratings will be assigned and may require further actions as below:

- 100% - Meets requirement - no action required.
- 90-99% - An internal corrective / preventive action to be completed and documented.
- 89% and below - A full, completed 8D report shall be submitted to Litens with dated action plan. This report shall be sent to Litens within 10 business days of receipt of the Supplier Performance Report card. At Litens' discretion, the supplier's Senior Management may be required to meet with Litens to discuss the documented and dated action plan

Additional corrective actions may be requested for potential or actual issues concerning delivery, transportation mode, routing, standard pack, container type or any other requirements.

9.0 Annual PPM Performance Ratings

PPM Performance Ratings will be as follows:

- 0 ppm - Meets requirement - no action required
- From 1 PPM up to commodity target PPM - A documented and dated action plan is required by Litens in response to each DMR issued.
- Above target PPM - A full, completed corrective action report shall be submitted to Litens with dated action plan. At Litens' discretion, the supplier's Senior Management may be required to meet with Litens to discuss the action plan.
- Regardless of the supplier's PPM Performance Rating, the supplier shall be responsible for all quality issues that may arise. (see Supplier Quality Systems Requirements section 5.0 Nonconforming Product)

10.0 Supplier PPAP Performance

- 100 % on time, completed PPAP package with conforming parts (approved by Litens) - Meets requirements - no action required.
- Failure to meet the above – Upon request from Litens' Tooling Manager, a full completed Corrective Action response shall be submitted to Litens' with a dated action plan.

* All responses from the above items must be submitted to Litens within 10 business days of the report being issued to the suppliers.

1.0 Quality System

1.1. The supplier shall participate in Litens' Product Realization Process (APQP) and take appropriate actions as requested by Litens. The level of participation will be based on the project timing, project risk assessment, and product complexity. The supplier shall work in conjunction with Litens PE to verify that sufficient actions are taken in order to reach the reliability target for both the component itself and its manufacturing process.

1.2. The supplier shall communicate their internal APQP status to Litens' Tooling Manager as requested. The frequency and method of APQP status reporting will be defined by Litens' Tooling Manager.

1.3. Litens reserves the right to take appropriate actions on consistent quality / delivery issues including Controlled Shipping, Enhanced Controlled Shipping, Need for improvement Status, New Business Hold, etc. as the situation may warrant or to cascade customer complaints / actions.

1.4 Supplier Contact Information

It is the supplier's responsibility to ensure that their contact information is kept up to date. The supplier must notify the appropriate Litens manufacturing site(s) whenever there is either a temporary or permanent a change to the suppliers' management team or key contact personnel.

2.0 Design Control (Design Responsible Suppliers Only)

2.1. Reference Litens' drawing title block for Litens identified special characteristics.

2.2. Request for design changes must be communicated using Litens' Engineering Change Order / Product Deviation Notice Form.

3.0 Process Control

3.1. The supplier shall submit Litens' SPC Status Worksheet or equivalent on a quarterly basis to Litens Quality Assurance Department for all statistically designated characteristics. Corrective actions are to be included with the summary for any characteristics not meeting the minimum Cpk requirement. Action plans shall be put in place to increase Cpk values by a process of continually reducing the causes of variability.

3.2. Special Characteristics

Product characteristics (e.g. dimension, property, function, chemistry, appearance or finish), or process characteristics (e.g. temperature, pressure, force) that require additional control to ensure consistency and compliance to meeting customer / engineering requirements and/or government regulations (e.g.. fit, function, performance, noise & vibration, durability, safety, legal).

3.2.1. "SPC Characteristic" S-Cone 

Definition: A variable characteristic subject to in-process variation. The anticipated variation within specification could significantly affect customer satisfaction with a product (i.e. fit, function, performance)

The following specifies the minimum requirements for any dimension designated as an SPC Characteristic

Must be statistically monitored using an appropriate control chart method (e.g. X-Bar and Range (R) chart).
Gauge capability (R&R) must be demonstrated per current AIAG MSA or VDA 5 manual.
Capability Index (Ppk) must be equal to or greater than 1.67 for short term studies, (e.g. PPAP submission), unless otherwise specified.
Capability Index (Cpk) must be equal to or greater than 1.33 for long term studies (e.g. mass production), unless otherwise specified.
If capability is not met, 100 percent inspection is required until the process is stabilized and capability can be met.
Sample size and frequency of inspection must be documented on Control Plan.
For multiple cavity tools, measurement data from all cavities must be combined for the capability analysis, unless otherwise specified.

SPC records and documents are to be made available upon request.

3.2.2. "Major Characteristic" M-cone 

Definition: A variable characteristic not subjected to major in-process variations. The customer is equally satisfied across the entire specification, with high customer dissatisfaction immediately outside of the specification.

The following specifies the minimum requirements for any dimension designated as a Major Characteristic:

Dimensions must not exceed engineering specification limits on any part.
Dimensions should have a tendency to be mean centered.
Sample size and frequency of inspection must be documented on control plan.
Records and documents are to be made available upon request.
Where required, error-proofing methods must be implemented to ensure that major characteristics are monitored and are compliant.
A major characteristic symbol may be used with an additional note indicating 100% verification of conformance to requirements (e.g.  100% air gauge inspection required).

3.2.3. "Pass Through Characteristic (PTC)" M-Cone PTC,  PTC

Pass Through Characteristics are defined as product characteristics for features of parts supplied to or by Litens that are not controlled or functionally verified by Litens and/or are not controlled by subsequent processing of the customer (i.e. defective PTC's may affect the fit or function at the customer's assembly plant, vehicle operations or the buying public).

The following specifies the minimum requirements for any dimension designated as a Pass Through Characteristic  PTC:
Where required, Pass Through Characteristics are evaluated jointly between the customer, Litens and the sub-supplier (if applicable) during the development of the PFMEA / Control Plan.
Where required, error-proofing methods are implemented to ensure that PTC's are monitored and are compliant.
Records and documents are to be made available upon request.

3.3. Error Proofing

Process control techniques which assure that all parts manufactured meet the design specification. Examples include:
Error proofing in design or process to prevent manufacture of discrepant parts
Error detection in-station (automatic gauging with auto stop feature) to prevent pass through of discrepant parts
Error detection in-station or subsequent operation by multiple layers of acceptance (e.g. supply, select, install, verify), so discrepant part cannot be accepted.
100% inspection in-station or subsequent operations

3.4. Annual Layout

The supplier must conduct a complete layout on each component annually to verify that the component meets all dimensional requirements and specifications identified on the drawing. This report must be kept on file by the supplier and provided to Litens within 24 hours upon request.

3.5. AIAG CQI Assessments

The supplier must complete the current versions of all appropriate AIAG CQI assessments annually.
These assessments include:
- CQI-9 Heat Treat System Assessment
- CQI-11 Plating System Assessment.
- CQI-12 Coating System Assessment
- CQI-15 Welding
- CQI-17 Soldering System Assessment
- CQI-23 Molding System Assessment

A copy of each assessment must be forwarded to Litens upon completion. When any of these processes are outsourced, the supplier shall ensure that these assessments are completed/acted upon by the sub-tier suppliers. If any “Not Satisfactory” or “Needs Immediate Action” findings are identified, an action plan must be submitted to identify the corrective actions and the timing for completion. The supplier must be able to provide information regarding the assessor’s qualifications.

3.6 Component/Material Specifications

The supplier is required to ensure that all components meet all specifications that are indicated on the drawing. This includes Litens ES (Engineering Specification) requirements when they are stated on drawing. Conformance to all specifications must be verified by the supplier annually at minimum. A

record of this conformance must be maintained by the supplier and provided to Litens upon request.

3.7 Component/Raw Material Handling

All parts, including those dropped on the floor or those removed from the normal process flow must be reinspected using a suitable inspection procedure (approved by Litens) before being reintroduced into the production flow. If there is and doubt, the part must be scrapped.

The supplier must ensure that all raw material, components and packaging material is stored in an appropriate location while in their facility and are protected from damage or exposure to negative environmental conditions such as humidity.

If any product has a shelf life, this must be described and communicated to Litens PE.

4.0 Lot Traceability

All suppliers must have a robust lot traceability system in place as per TS-16949 / ISO 9001 / VDA requirements,

- The system must effectively record all appropriate production information regarding the component including raw material, processing parameters and inspection records (including sub-components).
- The lot size must be appropriate to allow for effective containment should a quality issue arise.
- All sub-suppliers must also maintain an effective lot control system.
- All records must be filed so that they can be quickly and accurately accessed. Typically, once a component non-conformance is identified, a response to Litens identifying all suspect material is required within 24 hours.
- The record retention requirement for lot control documentation is 2 years.

5.0 Nonconforming Product

5.1 When parts are declared defective by Litens' Quality Assurance Department, the defective material may need to be replaced. Once Litens' QA has informed the supplier about the rejected material, the supplier shall provide a

Supplier Delivery Schedule for replacement parts to the Litens' Release Analyst/Expeditor. After the schedule has been received and agreed upon, the Release Analyst/Expeditor will issue the appropriate release.

Suppliers shall ship the replacement material to Litens at their own cost. Suppliers can contact the Release Analyst/Expeditor to request authorization to ship replacement material, or to have defective material returned, using the Pre-Scheduled Delivery Route. If approved, freight charges may not apply.

Please note that when a quantity of parts is returned as being defective, the "cum received" for that item will be reduced by an equal quantity.

5.2 Where Nonconforming Product has been identified, part replacement costs will be recovered and all indirect cost will be tracked by Litens. The amount of supplier charge back will be negotiated prior to a debit memo being issued.

5.3 It is the supplier's responsibility to contact all other Litens facilities that may be affected by a quality issue. The Litens facility that provides the initial notification of a nonconforming part shall be considered to be the lead plant. The supplier must follow the individual instructions from any other Litens facility in regard to sorting parts or supplying certified replacement components.

5.4 When a DMR is issued, there is often a need to have suspect components that are in Litens' facility, or in transit, sorted and certified prior to being used at Litens.

5.5 In order to control who will conduct the sorting activity, a list of Litens approved third party sorting companies has been compiled and has been posted on Litens' website under links/supplier information/guides. Suppliers are directed to use only the companies identified on this list.

6.0 Corrective and Preventive Action

6.1 Where defective material has been identified either internally or by Litens' customer, a detailed written corrective action report in a format approved by Litens must be submitted to Litens' Q.A. Department. The initial corrective action report, identifying the containment actions must be submitted in writing within 24 hours of receipt of the notification of nonconformance. In addition to the formal written initial report, the supplier is expected to use any other form of communication necessary to ensure that appropriate containment activities are implemented as soon as possible. The final report must be submitted within 15 calendar days unless otherwise stated by Litens' QA. The final report must include a detailed description of the corrective actions, including targeted completion dates for any actions that are not yet completed. The

supplier must provide updates to Litens describing the status of the completion of the corrective actions.

7.0 Production Part Approval Process

7.1 The request for PPAP components will be issued by Litens' Tooling Manager who will also supply an approved production drawing which will be identified with a watermark containing the words " Final Approval Production ". This drawing shall be used to produce the PPAP parts and all subsequent production components. Any other drawings or models provided by any other Litens personnel shall be considered as reference material only.

7.2 PPAP samples to Litens are to be submitted in accordance with the requirements as stated in the latest edition of the AIAG or VDA PPAP manuals. Unless otherwise stated, the default PPAP submission is Level 3 and the corresponding sample quantity to be submitted is 1000 pieces or as specified by Litens' Tooling Manager.

7.3 A Litens production approved drawing must be included with all sample submissions unless specifically waived (in writing) by Litens' Quality Assurance Manager.

7.4 Reference Litens' drawing title block for Litens-identified special characteristics.

7.5 Material and finish certifications must be submitted to Litens with each sample submission as per the AIAG or VDA PPAP Manual, and shall be supported by inspection and test data for specifications covering raw material, processed material, plating, finishing, heat treating, etc. Thereafter, all material certifications must be made available within 24 hours, upon request. All Material Certifications must be no more than 1 year old.

7.6 A certificate of Origin must be submitted for the sample part (a running list of all parts shipped to Litens is preferable). Additionally, prior to January 1st each New Year, Certificates of Origin must be updated and forwarded to the attention of Litens' Import / Export Compliance Officer for all parts shipped to Litens. Reference AIAG Information Kit For Importing Into The United States for the form that must be used www.aiag.org.

7.7 Each sample submission must be packaged separately and identified as "Sample Submission for PPAP Approval".

7.8 All submissions shall provide an IMDS number on the PSW.

7.9 Material compliance - chemicals or substances (including recyclability) as related to parts / components supplied must fulfill the latest End of Life Vehicle Directive (ELV). Specifically all delivered parts/components shall not contain any prohibited substances as deemed to be banned by the ELV. Any presence of restricted materials/substances must be declared, and will require phase-out plans to meet specific compliance deadlines as indicated in the ELV. Refer to Litens supplier web site and refer to the direct link to the ELV Directive 2000/53/EC, for the latest specific environmental requirements.

7.10 When requested, a supplier is required to submit a completed timeline on all new production releases as well as current components which are receiving physical revision.

7.11 After an electronic drawing for a new or revised part has been issued to the supplier, a reply e-mail is required to verify acceptance.

7.12 All Litens owned tools must be identified with a "Property of Litens Automotive" tag. The supplier may be required to attach other tags to the tools as directed by Litens' Tooling Manager.

7.13 A Tooling Bailee Acknowledgment, signed by a binding member of the company and a tooling record must be submitted with the PPAP package.

7.14 If a component is PPAP approved by any Litens location, the supplier may ship the same component (same Engineering revision level) to any other Litens location globally without an additional PPAP submission.

7.15 Language

Litens reserves the right to determine the language to be used on correspondence and documentation. In most cases the language will be determined by the Litens design responsible or manufacturing site. In some cases it will be acceptable to use the suppliers' local language for internal documents. However, Litens may request that these be translated.

8.0 Prototype Part Submission

8.1 Suppliers are required to complete the Part Submission Warrant in accordance with the AIAG or VDA PPAP Manual.

8.2 Suppliers must perform a complete dimensional layout of all characteristics on one piece per cavity for each "run" produced. A run is considered to be a continuous flow of manufacturing with one setup. In the event that a component does not meet all drawing specifications, the supplier must obtain written approval from the responsible Litens engineer before the part is

shipped to Litens. A cover letter, prepared by the supplier and concurred with the Litens engineer, must accompany each shipment of prototype parts that do not meet Litens' requirements.

8.3 Plating/finishing and material certifications / warrants must be submitted with the prototype components.

8.4 For prototypes with a run size of 1 to 29 pieces,100% variable inspection is required for all statistically designated characteristics (S cone Ⓢ▷). For prototypes with a run size of 30 or more, variable inspection is required on a minimum of 30 pieces. If capability cannot be demonstrated for a statistically designated characteristic, 100% variable inspection of the characteristic is required.

8.5 For prototype parts, 100% inspection is required for characteristics designated with an M-Cone Ⓜ▷ due to the smaller batch size associated with prototype parts.

8.6 Each sample submission must be packaged separately and clearly identified as Prototype Build Material.

8.7 All prototypes and samples supplied for testing must meet all requirements and specifications on the drawings including ES requirements. Any deviation from this must be communicated to and approved in writing by Litens' PE.

8.8 Prototypes or samples may be produced by via limited production runs or by a prototype process. Suppliers must have in place appropriate Control Plans, process set up parameter records, lot traceability records and dimensional inspection sheets.

8.9 All prototypes and samples are to be produced using a regular series production representative manufacturing process and raw materials. Any deviations to this must be communicated to and approved in writing by Litens' PE. Samples commonly known as "ringers" (i.e. imposters, similar to other samples, special process built or special build (non-production intent or non-representative process and/or materials) that are used to gain a competitive advantage over and above regular series production) are strictly forbidden, not allowed to be provided by or used by the supplier. Samples that are used for testing shall be selected at random from a given lot of parts.

9.0 Supplier Development

9.1 The supplier is expected to participate in cost saving initiatives. Supplier originated savings initiatives shall include the use of, but not be limited to, the following strategies where applicable.

- New technologies
- In-house improvements
- Process improvements
- Inventory reduction
- Supplier sub-supply source improvement initiatives
- Retooling (recavitation)
- Part commonization (volume related savings)
- Freight and F.O.B. issues
- Packaging, including returnable containers
- Tooling cost savings (prototype & production)
- Design oriented issues
- Weight reduction
- Alternate processes
- Process simplification driven by design issues
- Payment terms
- Other activities that contribute to waste elimination, cost savings and future cost avoidance.

10.0 Supplier Initiated Product or Process Changes

Litens has introduced a Supplier Request for Change (SRC) form. All suppliers must use this form to notify Litens of any supplier initiated changes.

The AIAG or VDA PPAP manual must be adhered to in regards to customer notification and submission requirements.

Suppliers must notify Litens prior to introducing any changes including, but not limited to the following:

- Changes to the tooling or machines.
- Additional tooling or machines to increase capacity.
- Relocation of manufacturing facility.
- Relocation or repositioning of machines or assembly lines.
- Changes to an existing process.
- Changes to test or inspection methods.
- Changes to sub-suppliers components or processes.

The SRC form has been posted on Litens' website (www.litens.com/ links/Supplier Information/Forms)

When a supplier anticipates the need to initiate a change, they must download the SRC, enter the required information (including full details and a proposed timing plan), and send it to their primary Litens Buyer to obtain input/approval. If multiple Litens sites are impacted, the supplier is to submit the SRC only to the Litens facility that placed the initial order for the component. Litens will review the request and send a response back to the supplier indicating whether or not their proposal will move forward.

Any impact that a change may have to the fit, function, performance, durability or appearance shall be reviewed by Litens PE. A revalidation plan shall be established and completed prior to implementation.

It is clearly stated that this is only a request for change and the supplier must not implement any change until it is approved by Litens and they receive instructions and PPAP approval.

11.0 Process Audit - Process Sign-Off (PSO) / VDA 6.3

11.1 A PSO or VDA 6.3 Process Audit may be conducted on any new suppliers on any new or modified parts or processes. An audit may also be conducted on any current part or process at the discretion of Litens Automotive. The purpose of the audit is to verify that a supplier's quality planning has been successfully executed and that their production processes are capable of producing quality parts in sufficient quantity for production.

A process audit is a systematic review of the supplier's planned and actual manufacturing process at the quoted peak daily line rate, including manpower, facilities, equipment, material, methods, procedures, software level and tooling.

11.2 Process Audit Requirements and Documentation

Audits will be conducted using Litens' Process Sign-Off Form or the VDA 6.3 Audit Form.

When the supplier is notified of an upcoming audit, they must prepare documentation. The documents shall be compiled in an electronic file with dividing tabs for each checklist element. This file shall be presented to Litens during the audit. Litens may also request that key documents be presented at least two weeks before the scheduled on-site visit to allow Litens' audit team to review and comment on the documentation.

The Process Sign-Off (PSO) and VDA 6.3 Process Audit forms are posted on Litens website.(www.litens.com/links/Supplier Information/Forms)

12.0 Quality Systems Audit

12.1 Litens reserves the right to audit a supplier's quality system at any time, upon reasonable notice. Litens reserves the right to audit / visit supplier related operations with a customer or with a party identified by our customer.

13.0 Potential Disruptions to the Supply of Components

13.1 The supplier shall notify Litens immediately when there is a potential for any disruption to the supply of components. Causes for disruption may include, but are not limited to the following:

- component quality issues (identified internally or externally)
- sub-tier supply chain issues
- natural disasters
- line or plant stoppages
- transportation issues

14.0 Holidays, Vacations & Shut Downs

14.1 Litens' Holidays, Vacations & Shutdowns

If a scheduled ship day or delivery day falls on any of Litens' recognized holidays or planned shut downs, suppliers shall contact the Release Analyst/Expeditor or Inventory Analyst for instructions. The requirements may be brought forward, pushed back, or dropped depending on variables in our production cycle. Do not assume that Litens will not require parts due to the holiday.

Suppliers will be notified of alternate contact(s) when the Release Analyst/ Expeditor will be away on vacation.

14.2 Supplier Holidays, Vacations & Shutdowns

If a scheduled ship day falls on a supplier's non-production day, the supplier shall contact Litens' Release Analyst/Expeditor or Inventory Analyst for instructions at least one month in advance.

When Litens' normal contact(s) at the supplier is going to be away for vacation or other reasons, suppliers will provide an alternate contact(s). All supplier requirements including delivery performance will not be jeopardized or compromised due to vacations.

Suppliers shall provide Litens with dates of holiday shutdowns as soon as they are known so that Litens may plan accordingly.

15.0 Handling, Storage, Packaging, Preservation and Delivery

REFERENCE LITENS WEBSITE (Logistics / Material Control) or contact Litens

REFERENCE LITENS WEBSITE or CONTACT LITENS.