



QUALITY FIRST

SUPPLIER REQUIREMENTS MANUAL

Document 82000030, Revision 13

* All previous editions are obsolete and must not be used *

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Revision History

REV	Date released	Description of change	Affected sections	Originator
A	06.09.89	New Release	-	CRL
B	29.03.91	100% Revision of Quality First	ALL	OHS
C	01.02.97	Revision to incorporate AIAG Standards, General updates	ALL	JS
D	01.06.00	General Updates to all Sections	ALL	JS/LS
E	19.01.01	Revised to incorporate requirements of KSS supplied component management system	ALL	PD/DM/JS
F	21.10.03	Revised to incorporate ISO/TS 16949:2002 requirements / Added Regrind, IMDS/DFE, and Service Component PPAP requirements / Changed corrective action response timing from 5 to 10 days / Added Sections 18.0 and 19.0 / Incorporate name change, general review and updates	2.0/5.0/15.0/18.0/19.0	PD/JS
G	31.03.05	General updates – changes underlined	Various	JS
H	02.02.06	Added Plant PPAP Analyst; Roy Deutschmann was Jim Scarpa; Tim Quinn was Andrea Carletti		MR
9	31.10.08	Global Update. Completely revised edition	ALL	NC
10	08.04.09 ECP 35140	Revision to update Heat Treat Audit requirements and add other Special Process requirements Addition of RPS Report as required Corrective Action format Addition of REACH Requirements Addition of Child Labor Requirements Revision to supplier performance tracking frequency.	10,11, 16, 18, 30	NC
11	06/11/09 ECP 36002	Clarify Supplier Labor Requirements	2.1	NC
12	30 Sep 09 ECP36683	Updated IMDS requirements	5.0	P. Becker
13	1/26/11 ECP 42436	Updated ISO/TS certification requirement to current revision, Addition on English requirement in documentation, clarification of supplier site approval.	Various	NC

MESSAGE TO SUPPLIERS

“QUALITY” can be simply defined as doing something right the first time. “QUALITY” is achieved through the continual reduction of variation in product and service required to achieve a degree of excellence that meets or exceeds customer expectations. “QUALITY” is not a philosophy, statement, or program, “QUALITY” is a way of life. It is the driving force for achieving total customer satisfaction profitably.

Key Safety Systems cannot achieve “QUALITY” without the full support, commitment and expertise of our entire supply base. Key Safety Systems is committed to internal excellence and expects the same from its supply base.

This manual is designed to outline and communicate the Key Safety Systems supplier quality requirements and to ensure a thorough understanding of what is required to become, and remain, an Approved supplier.

We thank you for your continued support, as well as your commitment to meet our “QUALITY” objectives.

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1.0 INTRODUCTION

The Key Safety Systems, Inc. (hereafter referred to as “KSS”) Procurement group is the supplier’s first line of communication and permission-granting authority whenever components or services are contracted and are provided to KSS. KSS Procurement coordinates supplier information and provides the appropriate KSS support activity to the supplier, while relying upon the supplier’s expertise with regard to manufacturing and quality of the product.

While various KSS activities may assist a supplier in achieving quality requirements and improving quality, ***the responsibility for supplier quality remains with the supplier.***

1.1 PURPOSE

This manual is intended to communicate uniform quality requirements which KSS expects of all suppliers. It provides general instruction and outlines procedures which are to be followed in order to become, and remain, an approved supplier.

1.2 SCOPE

This Quality First manual applies to all prototype and production intent product related materials (raw materials, processing, components, sub-assemblies, and assemblies) procured by KSS. This manual is a Quality Standard and requires the formation and maintenance of a documented, active, and effective quality system by all suppliers to KSS.

This Quality Standard establishes specific minimum requirements. It shall be the supplier’s responsibility to implement and maintain any additional controls deemed necessary to continually ensure “fitness for use”, reliability, and product conformance.

This manual describes the process by which a supplier of components, products, systems, and services can get qualified to supply KSS. It is designed to outline and communicate the KSS supplier quality requirements and to ensure a thorough understanding of what is required to become and remain an Approved supplier. These requirements also apply to KSS internal suppliers (KSS supplying to KSS).

The process includes the initial qualification of the supplier, which will permit KSS to determine if a new supplier meets the minimum requirements established by KSS and can be added to the KSS Approved Supplier List ASL and/or remain an approved Supplier. The next step covers the qualification of the Supplier's process (manufacturing, designing, sub-contracting) which will be used to supply KSS with a specific component, system, or service.

Suppliers are expected to meet the requirements stated herein. These requirements do not supersede any of the purchase order, engineering drawing or specification requirements, or relieve the supplier of exercising independent expertise and skill in providing products and services to KSS.

1.3. REFERENCE DOCUMENTS

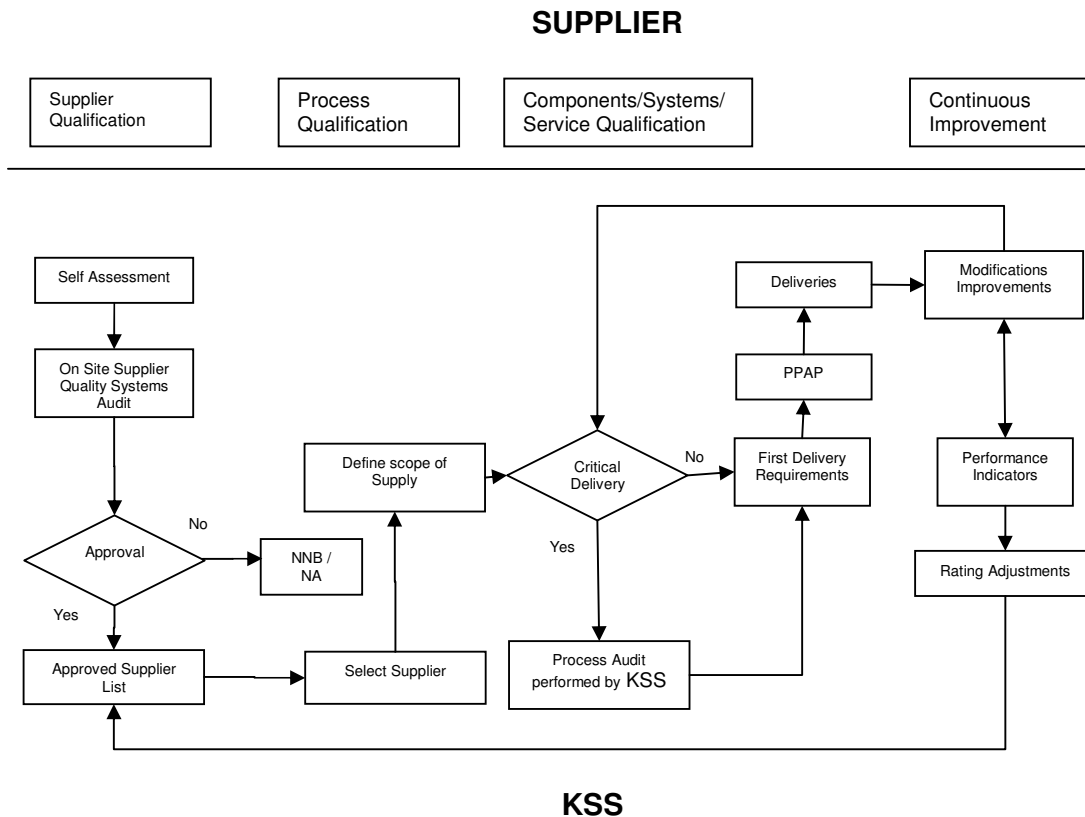
This Supplier Requirements Manual, as well as all referenced procedures and forms can be found on the Key Safety Systems internet site (www.keysafetyinc.com) by following the "Supplier Info" link. Other reference documents are as follows:

- Technical Specification ISO/TS 16949:2002
- Advanced Product Quality Planning & Control Plan (APQP), AIAG
- Measurement Systems Analysis Manual (MSA), AIAG
- Statistical Process Control Manual (SPC), AIAG
- Potential Failure Mode and Effects Analysis (FMEA), AIAG
- Production Part Approval Process (PPAP), AIAG

2.0 SUPPLIER SELECTION AND APPROVAL

It is required that suppliers be ISO 9001:2000 or ISO/TS 16949:2002 third party registered by an accredited third-party certification body prior to being approved for business awards.

Suppliers are selected and approved by KSS on a supplier manufacturing location by location basis (i.e., approval of one supplier manufacturing facility does not constitute approval of any other facility).



NNB: No New Business
 NA: Not Approved

2.1 Supplier Qualification

The supplier selection process formally starts within the Procurement organization. The initial step in Supplier qualification is based on the KSS Procurement Supplier Assessment Questionnaire. The Supplier may be visited by KSS to validate information provided in the Questionnaire and further evaluate their capability and Systems.

KSS will provide the suppliers with:

- KSS Supplier Manual (Quality First)
- KSS Purchasing Terms and Conditions
- Confidentiality agreement

These key documents present KSS basic Cooperation Requirements. No acceptance of these results in the stop of process and/or no new business.

The qualification is valid for one particular Supplier site.

Suppliers must conform to all applicable labor laws. Utilization of forced labor or child labor by suppliers is strictly prohibited. Suppliers found to be in violation of this requirement will be immediately placed on Desource status and potential new suppliers will automatically be disqualified from the supplier selection and approval process.

2.2 Supplier Commercial Assessment Questionnaire

All potential new suppliers must complete the Supplier Commercial Assessment Questionnaire.

Suppliers must review the questionnaire and respond to all questions providing as much documentation as necessary to support their self-assessment. Once completed, the questionnaire and all supporting documentation are to be sent to respective KSS Commodity Manager.

The purpose of the Assessment Questionnaire is to give an initial overview of the supplier's organisation. After the completed questionnaire has been evaluated by KSS Commodity Managers, a decision will be made whether or not to proceed with the on-site portion of the approval process.

2.3 Review and Site Visit

Upon determination to move forward with qualification of the potential supplier, the Commodity Manager will involve the responsible Supplier Development Engineer (SDE), via submission of the Audit Request Form to the SDE department. This begins the On-site portion of the approval process.

2.3.1 Supplier Quality Systems Audit

On site audits shall be conducted as part of the initial introduction as a new supplier, or new supplier location, prior to sourcing. This audit assesses the supplier's entire Quality System and is based on the principles established in ISO 9001 and ISO/TS 16949. Notification of the audit will be given well in advance. The SDE shall contact the supplier to schedule the onsite audit. At this time, the supplier will also be provided with the KSS Supplier Quality Systems Audit form and asked to perform a self-assessment in preparation. The Self Assessment shall be provided to the SDE prior to the on site audit. This will allow the supplier to prepare evidence in advance of the visit, and serves to offer a comparison between the Supplier and SDE assessment.

Suppliers must achieve a score of at least 80% to pass the audit. Once the Audit is successfully completed, the Supplier's location is considered approved. Each Supplier Production facility must be approved individually, and suppliers are only authorized to produce KSS product from approved sites. Supplier shall be required to provide corrective actions to any non-conformances identified in the audit and complete implementation in timeframe provided.

Suppliers failing to pass the Audit may be considered for development. This consideration will be given at the discretion of the SDE and Purchasing management. Supplier will be on hold for business pending achievement of passing score.

As part of KSS's Supplier Development program and Supplier Control process, all approved Suppliers may be subject to an ongoing Supplier Verification audit. Selected suppliers will be audited as necessary to verify conformance. These audits may be made up of a cross-functional team consisting of Quality, Procurement and Production personnel. The purpose of a cross-functional team is to substantiate the effectiveness of the supplier's administration, manufacturing and quality system.

2.3.2 Approved Supplier List

KSS maintains a controlled Approved Supplier List (ASL) which consists of all suppliers approved to supply products/services to KSS. A similar list shall exist for in-direct / non-production suppliers. It is the vehicle to inform all employees of the status of the KSS supply base for production and non-production materials and services. The ASL is revised as a supplier's status changes.

KSS Purchasing will select a supplier from the KSS Supplier List, based on its technical ability to supply a specific component, system, or service, and to meet Quality, Costs and Delivery criteria. KSS will determine the criticality of the component, system, or service to be supplied via KSS Risk Assessment form, and communicate the status to the supplier. This will determine the level of control and follow-up required by KSS.

3.0 GENERAL SUPPLIER QUALITY SYSTEM REQUIREMENTS AND ASSESSMENT

KSS recognizes the ISO/TS 16949:2002 standard as the supplier quality system requirements.

Suppliers are required to provide to KSS Procurement a copy of their quality system registration certificate at RFQ if not already on file, and provide updates if / when any changes are made to the certificate (scope, expiration dates, standards, etc.). If at any time a supplier's Quality System registration is allowed to expire, or is rescinded by the registrar, KSS Supplier Quality must be notified immediately.

The ISO/TS16949:2002, and ISO 9001:2000 standards and supplements are available directly from the AIAG.

4.0 ADVANCED PRODUCT QUALITY PLANNING (Procedure # 1005484)

Advanced Product Quality Planning is the process of establishing quality objectives (the voice of the customer) and establishing the schedules or plans for consistently meeting or exceeding these objectives. It is the cornerstone of nonconformance prevention and continual improvement.

Advanced Quality Planning and use of the KSS Early Supplier Involvement (ESI) methodologies is required in the following situations:

- During the development of new processes and products
- Prior to significant changes in processes and products (as determined by KSS).
- Before tooling is transferred to new producers or new plants

KSS Procurement may schedule and facilitate ESI meetings with suppliers. KSS SDE will track APQP timing, milestones, and completion with selected suppliers / components as determined during ESI.

KSS recognize ESI as key element to define customer requirement. Supplier representatives from Engineering, Program Management, Quality, and Logistics are required to support this meeting.

The Supplier is required to:

- Establish Target timing for all APQP Activities on the KSS Supplier APQP Tracking sheet
- Provide bi-weekly status updates to SDE on the KSS Supplier APQP Tracking sheet together with Tooling Progress Report (TPR)
- Communicate any issues to SDE
- Maintain Evidence Book containing documentation of all APQP Activities and deliver it to KSS on request
- Provide Process Flow Diagram PFMEA Control Plans upon request for review prior to PPAP Submission.

Suppliers shall convene quality-planning teams for every new or changed product. These teams shall use the quality planning techniques identified in the AIAG APQP manual, as well as KSS specific requirements, throughout the process development and pre-production phases.

Typically, the teams include the design, manufacturing and quality engineers, production, Procurement, and other personnel. Supplier APQP teams may include at the supplier's request KSS Procurement, Supplier Quality, and/or Product Engineering personnel.

KSS recognizes the AIAG Advanced Product Quality Planning (APQP) manual as the supplier APQP requirements. Suppliers are required to comply with this manual.

The APQP manual is available directly from the AIAG.

Suppliers will create and adapt APQP process to provide all the necessary information and assurance that the Supplier's process will be capable of delivering defect free components, systems, or service on a continuous basis.

4.1 ESI (Procedure #1012767)

During ESI KSS will build an Action Item Register where each single commitment will be recorded.

Minimum requirements to be reviewed during ESI.

1. Drawing:

- Check if each element of the drawing is clear for supplier
- Check if each note in the drawing is understandable
- Check if the specifications are available for supplier
- Check if released drawing or signed marked drawing is delivered to supplier
- Check if material is well described and available in the region

2. KSS testing requirement (special customer requirements)

3. Sample Requirements:

- Quantities
- Due Dates

4. Special requirements about control system (Customer directed methodology or frequency of assessment)

5. Logistic requirements like packaging, delivery frequency, delivery conditions plus all specific requirements of logistic team. If KSS will not define special packaging, supplier is obliged to present proposal for acceptance.
6. Tooling concept for review. KSS will only verify minimal technical requirements are met. Supplier maintains responsibility for proper tool function.
7. Basic tooling information collected for the tool log
8. Intended capacity, including all sources (tool, equipment, personnel)
9. Feasibility agreement
10. APQP timing to meet program requirement
11. Previous quality issues with those types of parts
12. Supplier Ramp-Up Questionnaire
13. Raw Material, Production and Delivery Lead times

KSS Procurement will provide all the documents formats before ESI meeting. Supplier has to collect information before the meeting to be able to complete APQP planning and tool log,

Parts related to High Impact Supplier Program will be defined by SDE. Special actions connected with this part will be corporate into ESI AIR

4.2 Drawings and Specifications

The supplier must maintain the latest revisions of the KSS drawing and specifications as part of quality documents. All technical changes and/or reviews must be documented, stating clearly what changes, date of changes, revision of changes, etc.

4.3 PROCESS FLOW DIAGRAM

Flow Diagrams of the process establish and document the relationships between operations and control points. Flow Diagrams provide essential information for other quality planning techniques such as the process FMEA and the Control Plan. Flow diagrams are required for PPAP approval and shall be tied to Control Plan and PFMEA operation steps numerically.

Refer to the AIAG APQP manual for specific details on creating Process Flow Diagrams.

4.4 FAILURE MODE AND EFFECTS ANALYSIS (FMEA)

FMEA assists in the prevention of nonconforming materials and components through a structured analysis of potential failure modes. FMEA's shall be used in both product design and manufacturing process planning. FMEA's are required for all new or changed products and processes. FMEA's are "living documents" and must be updated for design and process changes, as well as lessons learned throughout the product life.

FMEA's are used at two distinct times in the product life cycle:

Design FMEA's are to be initiated by the design responsible personnel as an integral part of the design and development process (for design responsible suppliers only). This requirement includes suppliers

that develop “black box” and “gray box” designs. In all cases, DFMEA’s are to address both the system and component levels.

Process FMEA’s identify potential process concerns and the actions taken, and to be taken to prevent them. PFMEA’s are to be prepared by the supplier prior to the commencement of tooling. Ideally, a DFMEA should be available prior to the preparation of the PFMEA, however, the DFMEA is not a precondition for the PFMEA, and the lack of a design FMEA should never delay development of a PFMEA.

KSS may require preliminary PFMEA’s to be submitted in advance of PPAP as part of the APQP process. PFMEA’s are required for PPAP approval. DFMEA’s are required only if the supplier is responsible for the design of the supplied products.

Refer to the AIAG FMEA manual for specific details on creating FMEA’s. Suppliers are required to adhere to KSS specific requirements in addition to AIAG and ISO/TS requirements.

4.5 CONTROL PLAN

A Control Plan is a document that summarizes the supplier’s methods to assure continual conformance to drawing, specification, and Quality First requirements, as well as “fitness for use” for a specific part or family of parts. It provides an effective way for suppliers to develop and document quality controls for products and to review changes made after production begins. All Control Plans must be based upon a C=O sample plan.

Refinements to Control Plans are encouraged as more data about the process becomes available. Changes of significance (form, fit, function, durability, appearance or level of control) are to be approved by KSS via PPAP submission. Changes of no significance (document format, spelling, etc.) do not require KSS approval. If there is any question concerning approval requirements, contact KSS Plant SQE for direction.

The starting point for a Control Plan is the list of control characteristics. Up to this stage of the quality planning process, the list will have been developed from the following sources:

Product and process characteristics known to be significant (SC) / critical (CC) by the supplier, based on product and process knowledge, as well as knowledge of customer requirements.

CC/SC’s identified by KSS on engineering drawings and specifications.

Product and process characteristics identified during APQP, and via FMEA.

Product and process characteristics identified in KSS ESI and APQP meetings.

Note:

Refer to Appendix I for KSS special characteristics and their definitions. Appendix I is effective for all components tooled after the Revision D (June 2000) edition of this KSS Quality First Manual. Components tooled prior to this release are grandfathered with their current symbol requirements and definitions as documented in previous KSS correspondence.

Once the control characteristics are identified, control methods must be developed and documented in the Control Plan. The goal of control characteristic monitoring is to determine when action is required to maintain process stability and product conformance, and conversely when no action should be taken (avoidance of over control) because such unnecessary actions would destabilize the process. Control Plans shall detail all controls from receipt of raw materials through finished product shipment and shall not focus exclusively on CC/SCs. Control Plans shall include provisions to sample product from all streams of production for all control plan characteristics (i.e. multiple out dies, multiple cavity tools, etc.).

All control plans must include reference to a minimum annual dimensional layout, functional test, chemical test, and / or material analysis by the supplier. Control plans submitted without this reference will not be accepted. KSS designated CC/SC's must have SPC control referenced in the control plan and CC's must have process "mistake proofing" to further assure 100% quality is received at KSS at all times. Mistake proofing controls shall be referenced in the control plan, including the supplier's method of minimum daily verification of the continued function of such controls.

KSS may require preliminary control plans to be submitted in advance of PPAP as part of the APQP process. Completed control plans must be submitted for PPAP approval.

IMPORTANT NOTE:

KSS relies upon the supplier to be the expert with regard to the manufacturing and quality of the product being purchased. KSS approval of supplier control plans is required to ensure conformance to the AIAG and KSS "Quality First" requirements. KSS approval of a supplier's control plan is in no way to be interpreted as unconditional approval of the process, or quality of materials / components produced by the process and supplied under that control plan. The responsibility for supplier quality remains with the supplier at all times.

Links between PFMEA, Process Flow Chart and Control Plan MUST be established and easily recognizable on all these documents! All references indicated on Process Flow charts and Control Plans must be available and provided on request.

Refer to the AIAG APQP manual for specific details on creating control plans. Suppliers are required to adhere to KSS specific requirements in addition to AIAG and ISO/TS requirements.

4.6 GAGING REQUIREMENTS

When specified on the KSS purchase order, it is the responsibility of the supplier to supply gages for components. This may include gages for supplier and KSS use. All gages are to be designed and built per KSS's Gage and Fixture Design and Build Standards.

Preliminary gage discussion shall begin during the Early Supplier Involvement (ESI) meetings facilitated by KSS Procurement.

4.7 MEASUREMENT SYSTEM ANALYSIS (MSA)

Product and process conformance must be determined by measurements made with appropriate test equipment and gages. The supplier must establish the error of measurement to specification ratio since the test equipment or gage is a significant part of the process. Any error in these measurements, whether known or unknown, has a direct bearing on the ability to judge process / product conformance and capability.

KSS requires that test equipment and gages used to evaluate any control plan characteristic have Gage R&R studies conducted which meet the requirements of the AIAG MSA Manual, or be removed from service and replaced with a conforming gage. Variable gaging shall be used wherever possible. GR&R studies shall be submitted for all CC/SC gaging for PPAP approval.

Refer to the AIAG Measurement Systems Analysis (MSA) manual for specific details on conducting GR&R studies.

4.8 PROCESS CAPABILITY / STATISTICAL PROCESS CONTROL (SPC)

Statistical Process Control (SPC) must be used as an integral part of the supplier's process to provide the information necessary for those process parameters and product characteristics, sometimes referred to as Control, Significant, Critical, Key (see Appendix I), that effect the form, fit, function, durability or appearance of the product. Variables control charts are the preferred method of SPC.

Suppliers are expected to utilize data from the Control Charts to identify opportunities for continually reducing variation in process output. At a minimum, all KSS drawing and specification designated CC/SCs must have on-going statistical controls or mistake-proofing. These controls must be referenced in the supplier's control plan. KSS does not consider data logs as an acceptable substitute for control charts.

When unique process conditions, historical data, or other factors suggest an exception to the use of Statistical Controls, supporting rationale must be provided with a proposed Control Plan and PSW to KSS Plant SQE for approval.

Refer to the AIAG Statistical Process Control (SPC) manual for specific details on appropriate implementation of SPC, as well as available SPC methods.

Pp / Ppk studies for all KSS designated CC/SC characteristics must be submitted for PPAP approval. Attribute characteristics require a statement of conformance of a minimum of 300 consecutively passed parts. This equates to a process reliability of 0.99 at 95% confidence and should be so stated in the supplier's PPAP submission.

Cp / Cpk studies for all KSS designated CC/SC characteristics may be required to be submitted with certification packages for production shipments commencing with Production Validation, or at any time upon request. See Section 6.0 - "Shipment Certification Requirements" for complete instructions.

Minimum acceptable Pp/Ppk and Cp/Cpk indices are detailed in the AIAG PPAP manual. When such indices are below these minimum requirements, reaction conditions specified in the PPAP Manual shall be followed. Failure to do so will result in PPAP and/or shipment rejection. Suppliers that do not meet the target value will be required to develop improvement action plans to reduce process variation and meet required target.

4.9 LOT SIZE

Supplier lots must be the quantity of product produced under similar conditions such that the product within the lot is expected to be homogeneous in all significant attributes. Maximum lot size shall be limited as follows:

- One shift of production
- One batch of product produced in a batch process.
- One slit coil for heat treated or HSLA product.

Note:

Some processes may require that a lot number change based upon major process changes, set-ups, or adjustments within the material lot; in these cases, the material lot identifier must be readily traceable from the lot number change.

Each lot number must contain homogeneous components or raw materials. If a specific product and / or manufacturing process does not lend itself to these requirements, alternate methods may be used if approved in advance by KSS Supplier Quality.

4.10 LOT TRACEABILITY

For all KSS products, the supplier shall establish and maintain procedures for identifying the product during all stages of production including receipt, work in process, storage, and delivery. In addition, lot traceability of all sub-components, raw materials and process inspection data shall be maintained. Each production lot (as defined in Section 4.7) shall be identified by a supplier lot number. The supplier may ship more than one lot per pallet, but each container on the pallet must contain only parts from one lot, unless the parts are individually and discretely serialized.

The supplier lot traceability system must provide for the following situations:

- Permit isolation of suspect product on a precise basis based upon lot number on each container.
- Barcode identification of supplier lot number on each container. This lot number must be the key to all traceability in the supplier's system.
- Localize causes of failure and take corrective action at minimal cost to supplier and KSS.
- Determine traceability to component lot numbers and production / quality data specific to the lot number identified on the container (backward traceability).
- Determine supplier finished product lot number(s) produced with a given lot of components or on a given shift of production (forward traceability).
- Each lot of die colorant for plastics.

4.11 RECORD RETENTION

Supplier records shall be retained for the length of time required by the ISO/TS standard and referenced AIAG documents. Suppliers must have a procedure for record retention, which defines the retention period for all records (those referenced in ISO/TS and other records generated by a supplier), as well as archive and disposal procedures. Quality records shall be made available to KSS upon request.

4.12 PRODUCT HANDLING, STORAGE AND DELIVERY

Suppliers shall establish, document and maintain procedures for handling, storage and delivery of product per ISO/TS requirements. Suppliers must also conform to any specific requirements documented on the KSS purchase order or drawing / engineering specification. KSS specific requirements follow:

Handling: The supplier shall utilize methods of handling that prevent damage or deterioration before, during, and after the manufacturing process.

Storage: The supplier shall utilize secure storage areas to prevent damage or deterioration of product pending use or delivery. Appropriate methods for authorizing receipt and dispatch to and from such areas shall be stipulated in order to maintain control and assure FIFO (First In – First Out). In order to detect deterioration, the condition of product in stock shall be assessed during the supplier's "Internal Quality Audit" process per ISO/TS requirements. Shelf life shall be monitored, as applicable, to ensure products shipped to KSS have greater than 50% of the original shelf life remaining, unless approved in advance by KSS Production Control. Shelf life expiration date and / or product manufacture date must be identified on each carton / container. Special storage condition requirements (i.e., temperature / humidity levels) shall be determined, and implemented, to prevent deterioration during storage at supplier locations.

Delivery: The supplier shall arrange for the protection of product quality subsequent to manufacture. This protection shall include delivery to destination. The supplier is responsible to design and utilize packaging which is most cost effective and ensures that when the product reaches KSS it is conforming

and “fit for use”, regardless of F.O.B. terms, (with the exception of blatant carrier damage and / or neglect). Suppliers are responsible to ship finished product to KSS on a FIFO basis.

Suppliers shall notify KSS Plant Material Control and Purchasing in advance of any planned shutdowns or extended downtime that will effect shipment schedules. This notice shall be communicated as far in advance as necessary to provide sufficient time for the supplier to produce and ship inventory to cover the downtime period.

Suppliers are required to ship on time per KSS release schedules and quantities. Over shipments may be rejected and returned at the suppliers expense, short shipments may require expedited shipments at the supplier’s expense. Additionally, packing slips must accurately reflect the KSS purchase order number, part number, revision level, and quantity shipped. Discrepancies may result in customs issues where KSS is moving the material across borders for production. Such incidents may result in a supplier chargeback to recover any related costs to KSS.

4.13 PROTOTYPE / PRE-PRODUCTION PRODUCT

All prototype or pre-production product supplied to KSS is expected to conform to the applicable drawing, specification, and purchase order requirements in their entirety. Dimensional layout and Material Certification Reports are required to be provided with Pre-production and prototype. If such requirements cannot be met for any reason, the supplier shall notify KSS at the time of order placement, or immediately following subsequent discovery of any discrepancy and request disposition. Non-conforming product shipped without KSS written authorization is subject to rejection / return and chargeback for any related costs incurred by KSS as a result of the non-conformance (product built, test failure, customer impact / costs, etc.).

4.14 Process Audit

KSS may perform a process audit at the supplier site according to KSS Process Audit Questionnaire. Process audits may be performed by KSS for critical components, products, systems, or services, in the case of recurring non-conformances, or any other reason at KSS discretion.

4.15 First Delivery Inspection Report (Initial Submission Report)

The supplier shall provide a First Delivery Inspection Report for Prototype and First off tool samples. This is required for the first batch produced from a new or modified drawing, after a change of the manufacturing process, or as directed by KSS purchase order. A First Delivery Inspection is a representative sample from the batch, which shall be 100% inspected for conformance to mechanical and/or performance requirements and should also include Material Certifications.

Supplier will develop a plan to monitor the initial delivery of components, products, systems or services to ensure that the manufacturing/delivery process is generating the quality level expected by KSS. The plan may involve submittal of initial samples or demonstration of services by the supplier.

Initial or samples, if required, must be manufactured with the final means and representative of series production component or systems. They must be dispatched on time for the attention of KSS Supply Chain department. A specific label 'Initial Samples' with at least the following information: quantity, number, and index of the drawing, will be provided by Suppliers.

The plan should include necessary actions to detect and contain any nonconformity. Plan should also include corrective actions to be taken in case of non-conformance. This plan should be submitted and approved by KSS.

4.15 RUN AT RATE (Procedure # 1005108) / LAUNCH READINESS REVIEW

To ensure that new components meet yield, rate, and quality requirements, Run at Rates are required. Run at Rates are mandatory on newly tooled components, components with significant volume increases or components with changes that require significant process or assembly changes. Run at Rates may be customer monitored (witnessed by KSS personnel), or supplier monitored (performed by the supplier with results submitted to KSS). Run at Rates shall be successfully completed prior to PPAP approval. If this is not accomplished, a provisional PPAP approval may be issued at the discretion of KSS Plant SQE.

Specific Run at Rate requirements will be established during ESI. This includes Supplier Ramp-Up Questionnaire – Self Assessment. Suppliers must submit this questionnaire accompanied by supporting documents to respective Commodity Manager / SDE prior to Run at Rate. This will be reviewed by SDE during Customer monitored Run at Rate.

Additionally, KSS may decide to conduct a Launch Readiness Review (LRR) on-site. Suppliers will be notified in advance of this requirement and will be provided with specific requirements (agenda, LRR checklist, etc.) in order to prepare for the review.

4.16 HIGH IMPACT SUPPLIER PROGRAM

The KSS High Impact Supplier Program is a process to further engage suppliers of critical components / materials in the launch phase at KSS plants. The program requires suppliers of high impact components / materials to support certain pre-production build events (such as PV, initial production launch, etc.) at KSS plants to assist in root cause analysis and resolution of any quality and assembly issues encountered during these builds related to supplied components / materials. This program is for the combined benefit of KSS and our suppliers and will enable us to quickly and effectively root cause issues, both KSS and supplier related, and develop improvement plans. This will enable us to reduce the time and effort required to solve problems. Suppliers selected to participate in this program will be notified by KSS in advance of the build events.

4.17 Tooling

4.17.1 Tooling Progress Report (TPR)

- Tooling engineering shall support monitoring the schedule of the tooling timeline.
- Supplier must submit a BI-weekly TPR to SDE representative and Tooling Engineer.
- The TPR shall list all major steps through the design, construction and qualification process, up to the Production Part Approval Process (PPAP) stage. Note: The dates should coincide with those found on the APQP document.

4.17.2 Tooling Documentation

4.17.2.1 Tool drawings

The supplier is required to submit one (1) complete set of “As- Built” tool drawings (in the form of either blue prints and/or electronic file (in a KSS approved format) to KSS Tool Engineering along with additional support documents as required. This documentation must be received before Tool build.

4.17.2.2 Tool Identification

Each individual die, mould, fixture, equipment, etc. purchased by KSS must be labelled to permanently identify it as property of Key Safety Systems. The label must include tool and part number.

Tooling paid for by Key Safety Systems' customer will be identified with the customer's supplied information to their specifications.

4.17.3 Tool Log

It is a KSS System to maintain basic information about tools owned by KSS. Suppliers must provide information about tools according to the specified format. All changes of status must be communicated to KSS.

4.17.4 Tooling Storage

The supplier is required to provide an accessible storage area where all tagged KSS / Customer tools are located. If any tooling is stored off-site, approval must be supplied by KSS Purchasing Department prior to any tool movement. The supplier will be responsible for proper storage and apply proper protective methods and provide a list of tooling inventory. Purchasing admin must be notified in order to update tooling log.

4.17.5 Tool inventory

We request every supplier to provide KSS information every second year or on request.

5.0 PRODUCTION PART APPROVAL PROCESS (PPAP)

The intent of this section is to specify uniform industry requirement of the supplier to follow, when preparing samples and documentation for production approval. Notification of the PPAP requirement will be stated to the supplier on the KSS purchase order. Levels of submission will be allocated to the supplier based on the product supplied.

KSS recognizes the AIAG Production Part Approval Process (PPAP) manual as the requirements for production part approval. PPAP submission date commitments are to be provided by suppliers for all new and changed parts and commitment dates are to be met at all times. If any supplier or KSS issue causes a date to be jeopardized, the supplier must immediately communicate this to the KSS SQE and Purchasing and agree upon a revised submission date that will support program timing.

PPAP submissions are expected to be 100% complete and conforming to applicable requirements upon initial submission. All PPAP documentation must be submitted in English. Submissions in other languages will be rejected.

It is the supplier's responsibility to resolve any issues preventing complete and conforming submission in advance of the submission date. Incomplete and non-conforming PPAP's will be rejected. PPAP submission dates that are not met, or PPAP's that are rejected may result in the issuance of a QN by KSS and corrective action response / implementation by the supplier (see section 16.0).

PPAP approval must be granted by the KSS Plant SQE and / or Plant PPAP Analyst prior to any production shipments by the supplier, including PV (production validation). Unless agreed to in writing by KSS Plant SQE prior to submission, all PPAP packages are to be scanned and submitted electronically in Adobe .pdf file format.

Unless otherwise specified by KSS Plant SQE and / or Plant PPAP Analyst, the required PPAP submission level is 3. For source controlled products with third party owned tooling (i.e., automotive OEM connectors, terminals, etc.), PPAP submission to KSS shall be a copy of the approval document from the governing customer and a Level 1 Part Submission Warrant from the supplier.

Each supplier PPAP submission must include actual dimensional, material and test data (as applicable) documenting conformance to all print characteristics, notes and referenced specifications. **Blanket statements of conformance are not acceptable.**

Proprietary Documents: Proprietary documents may be excluded from PPAP submission upon approval of KSS Plant SQE and / or Plant PPAP Analyst. When such conditions exist, the supplier shall notify KSS in the ESI meeting and include a letter in the PPAP submission adequately justifying the reason the document is proprietary and stating that the document is available for review by KSS at the supplier location, or at KSS upon request.

Dimensional Layout Requirement: KSS requires that a minimum two piece dimensional layout be performed. For multiple cavity / die tooling, a minimum of one part layout per cavity / die is required. All dimensional, material, and performance data must be less than one year old at the time of PPAP submission.

Performance Requirements: KSS requires a minimum of 3 pieces to be tested, or as indicated in the performance specification.

Sub-Assembly PPAP Submissions: Where KSS maintains design control of components purchased in assembly, KSS requires that sub-supplier PPAP submissions be submitted along with the supplier's PPAP submission to KSS. Example: KSS purchases an assembly from a supplier, the supplier submits assembly PPAP package and approved sub-component PPAP packages (copies). The KSS supplier is responsible to manage the quality and PPAP approval of all sub-supplied components and materials.

Sub-Supplier Initial Sample Approval

Suppliers will maintain approved samples of key components, products, or systems manufactured by their sub-suppliers, which will be used in the supply of the KSS component, system, or service in question. Initial Samples reports shall be kept by the supplier at KSS's disposal.

Master Samples: The supplier is to submit 2 PPAP master samples (minimum one part per cavity / die) with the PPAP submission and retain the balance of the master samples as indicated in the AIAG PPAP manual. Master samples are to be identified and numbered to ensure traceability of the sample to the corresponding layout data. KSS and / or the supplier may use these supplier-retained samples for future reference. As such, they must be easily identified and retrievable. If submission of master samples is not practical (i.e. chemicals), contact KSS Plant SQE and / or Plant PPAP Analyst for direction.

Colour / Appearance Approval Submissions: The sample size for Colour and Appearance Approval is a minimum of 12 pieces (with a minimum of 3 pieces per cavity). Fewer parts submitted will result in rejection. Colour and Appearance Submissions should take place prior to submission of the PPAP package to KSS, and approved AAR's shall be included with the PPAP submission.

Regrind: The use of plastic regrind in moulding processes shall meet the following requirements:

1. PPAP and AAR (for appearance items only) samples shall represent the maximum regrind percentage allowable for production to ensure dimensional and functional performance (as applicable) with regrind.
2. The use of regrind shall be limited to the maximum allowable percentage referenced on KSS drawings, and specifications.
3. If there is no maximum regrind specified on the KSS drawing for a particular component, zero regrind is allowable. In these circumstances, suppliers may request KSS approval to allow the use of regrind via the SREA process.
4. Any changes in the use of regrind after initial PPAP approval shall be approved by KSS via the SREA process. A revised control plan, dimensional layout, and functional test results (as applicable) shall be included.
5. Where regrind is allowed / approved, suppliers shall implement controls to ensure regrind is strictly limited to the maximum allowable percentage, proper moisture levels of the regrind are controlled, contamination is prevented, and multi-generation regrind is not used.

Perishable / Expendable / Refurbished Tooling: Perishable / Expendable tooling is defined as tooling that has limited useful life and is expected to be replaced during normal production activity (i.e. die cast tooling). Controls for Perishable / Expendable tooling shall be referenced in the supplier's control plan and shall include the a 2 piece 100% dimensional layout (minimum one piece per cavity for multiple cavity tools and dies), capability studies on significant characteristics as defined in Appendix I, and any affected component performance or functional requirements upon replacement and prior to shipment. Tooling changes and maintenance activities shall be identified and tracked in the supplier's lot traceability system. These requirements also apply to normal tool / die / mold refurbishment.

Bulk Material: Bulk material is defined as standard, commercially available material and does not require PPAP resubmission when changing sub-suppliers (i.e. metal products; rod, sheet, or coil; standard plastic: resins and chemicals). At a minimum, a Level 1 Warrant with applicable conformance testing / analysis data is required for bulk material PPAP. Welded or rolled tubing and customized special material requires full PPAP submission when changing sub-suppliers. All suppliers used must be approved by KSS and must meet all KSS quality requirements.

Packaging: PPAP submission is not required for packaging and packaging materials supplied to KSS (i.e. boxes, dividers, plastic wrap, box labels, etc.). Evidence of industry standard testing may be requested by KSS.

International Material Data System (IMDS) Requirements: It is the supplier's responsibility to complete the Design for Environment (DFE) requirements and enter all material information into the IMDS (www.mdsystem.com) prior to PPAP approval. Suppliers are required to complete the Restricted Materials and Recyclability Reporting Certification (Document # 82000482). The approved DFE certification is to be included in the PPAP submission. This requires: a) compliance to KSS' restricted materials specification (E3593200), and b) reporting via the IMDS. In addition, all plastic parts shall be identified with appropriate ISO marking codes.

Annual Validation / PPAP Requirements: Annual validation is required to be performed by the supplier and be documented in the control plan (see section 4.3). Results shall be maintained by the supplier and be made available to KSS upon request. Annual PPAP submissions are not required to be submitted to KSS unless specifically requested by Plant SQE. Conformance to this requirement is subject to random audit by KSS.

Service Component PPAP Requirements: The AIAG PPAP manual does not require a formal PPAP submission for service component orders, even if tooling has been inactive for 12 months or more—this clause applies to production volume components only. When service parts are ordered by KSS, it is required that suppliers implement the same controls as documented on the most recent control plan PPAP approved for volume production. Any changes to the control plan for service must be approved in advance by KSS Plant SQE and / or Plant PPAP Analyst.

Lack of PPAP approval is not an acceptable excuse for not meeting KSS shipment releases. It is the supplier's responsibility to submit a complete, conforming PPAP package on time to KSS Plant SQE and / or Plant PPAP Analyst. First Time Submission Approval is expected of all suppliers. If lack of PPAP approval may affect the supplier's ability to ship product on time per KSS releases, the issue must immediately be brought to the attention of KSS Plant SQE and / or Plant PPAP Analyst, Procurement, and Production Control.

Refer to the AIAG PPAP manual for specific details on PPAP requirements. Suppliers are required to adhere to KSS specific requirements in addition to AIAG and ISO/TS requirements.

6.0 SHIPMENT CERTIFICATION REQUIREMENTS

KSS will reject all shipments that are received without all required quality data and certifications.

6.1 Launch Containment Requirements (Procedure # 1005106)

The KSS Launch Containment System (LCS) is used for components identified as critical or those considered to be a high quality risk at initial volume production (product launch), following approved implementation of significant design / process changes, and for products produced following extended periods of downtime or plant shutdown (one week or more). LCS duration is the first 10 shipments, or first five months, whichever is less. LCS criteria will be established, agreed and documented during ESI meetings.

The KSS LCS is **an independent “eyes of the customer” dock audit** from all containers of 30 randomly selected samples for each part number shipped. Previous control charts or data is unacceptable as a substitute for this requirement except in cases where such inspection is destructive or impossible after the fact.

Characteristics chosen for final independent dock audit by KSS may be significant characteristics, process control characteristics (overall measurement across parting lines, burr/flash measurements, etc.) or characteristics of suspect capability.

LCS data is to be submitted with applicable shipments. An orange LCS sticker will be affixed to the upper right corner of the container that has the LCS data reporting information.

KSS Plant SQE will review and approve all exceptions or clarifications to these requirements.

6.2 ON-GOING SHIPMENT CERTIFICATION

At the request of KSS Plant SQE, each shipment must include data demonstrating conformance of raw materials data (i.e. steel, plastic, and chemicals), dimensional inspection, test, and / or SPC data to KSS requirements.

The supplier must provide data at the request of KSS within 24 hours for any characteristic in the approved control plan, even if the data is not required to be submitted with each shipment.

7.0 NOTIFICATION OF QUALITY CONCERNS

KSS requires that suppliers formally notify the affected KSS manufacturing plant(s) of any quality concerns within 24 hours of discovery without exception. This applies to all quality concerns identified by suppliers for which product shipped is suspect. If exposure has not been determined within 24 hours of discovery and product shipped to KSS has not been proven to be void of the concern, notification is required. Suppliers should be prepared to present the concern in detail, the exposure of the concern (i.e., what lot number(s) is / are affected), the containment and corrective action plan.

8.0 REWORK / REPAIR

Rework consists of any actions to the product that are not part of the documented and PPAP approved production process. For certain commodities, unique terminology exists (“reformulation” for chemical processes, “repair” for electronics) which describes synonymous concepts to rework. Since any action to salvage a product which does not originally meet customer requirements is both a source of variation and inherently costly, KSS’s goal is to eliminate such actions.

When rework is necessary as an isolated measure, the supplier must develop written procedures. These procedures must provide for additional inspection and testing after rework to ensure conformance to KSS specifications prior to shipment or further processing.

In all cases, rework must be approved in advance by KSS via the SREA process (see Section 16.0). The SREA must be submitted along with all rework procedures, control plans and technical justifications.

Where on-line repair is part of the manufacturing process, disposition of such activities will be made by KSS as part of the PPAP process. As such, all PPAP documentation must reflect repair procedures and controls (Process Flow Diagram, PFMEA, and Control Plan). If the repair is not included in the PPAP approved documents, it is not approved by KSS.

9.0 RETURNED PRODUCT ANALYSIS

The supplier is required to analyze nonconforming product returned from KSS manufacturing plants, engineering tests and vehicles in the field. Records of the results of these analyses must be submitted to KSS upon completion.

Suppliers shall submit corrective actions for any defects discovered during analysis to KSS Plant SQE (see Section 16.0 - "Corrective Action").

9.1 COST RECOVERY FOR NONCONFORMING PRODUCT

The supplier shall absorb any costs associated with nonconforming product as received or processed through a KSS manufacturing plant. These costs shall include, but not be limited to: premium freight (inbound and outbound), scrap, returned material, labour (sorting, rework, repair, teardown, overtime, downtime, etc.), testing beyond normal requirements, customer communications, liaison visits, customs fees, and related customer charge-backs.

Written notification to the supplier as well as written agreement from the supplier shall be obtained by KSS prior to any debit memos being issued. Supplier approval / dispute response to chargeback requests from KSS plants is required within 2 business days of notice. Any supplier disputes must be accompanied by factual reasons that the chargeback, or portions thereof, are not the supplier's responsibility. Lack of timely response may result in supplier chargeback and product return (as applicable) utilizing the KSS QN number as the RMA number.

10.0 HEAT TREATED PARTS

KSS requires that all heat treat suppliers follow the heat treating requirements documented on part prints and in any referenced KSS, industry, or customer specifications, as well as comply with KSS heat treat audit requirements. All heat treat sources utilized by suppliers and their sub-suppliers shall be approved by KSS individually via successful completion of AIAG CQI-9 Special Process: Heat Treat System Assessment, and PPAP submission. Unapproved heat treat sources shall not be used without specific approval of KSS via PPAP submission. Annual supplier heat treat self-assessments are to be conducted to the AIAG CQI-9 requirements and provided to KSS upon request.

11.0 SPECIAL PROCESS REQUIREMENTS

KSS Requires that suppliers maintain evidence of conformance to all applicable AIAG Special Process requirements for the products they provide. These requirements include, but are not limited to the following: CQI-8, CQI-9, CQI-11, CQI-12. Evidence of conformance to AIAG Requirements is to be provided to KSS upon Request.

13.0 SUPPLIER CONTROL OF SUBCONTRACTORS

Suppliers to KSS shall select subcontractors on the basis of their ability to meet subcontract requirements, including KSS quality requirements defined herein.

The KSS supplier shall ensure that subcontractor quality and system controls are effective and meet KSS Quality First requirements. The supplier shall be prepared to show documented evidence of subcontractor quality levels at the request of KSS and also provide KSS, and KSS customers, access to subcontractor facilities and records if requested at any time.

Suppliers shall target subcontracted business with ISO/TS 16949:2002 or ISO 9000:2000 compliant suppliers.

Suppliers are fully responsible for the quality and “fitness for use” of goods and/or services subcontracted. KSS recommendation or stipulation of a subcontractor shall in no way relieve the supplier of full responsibility for ensuring the subcontractor, and the products they supply, meet all KSS requirements.

14.0 SUPPLIER INITIATED CHANGES

KSS encourages material, design, and process improvements to enhance quality and reduce cost. However, ALL changes as specified in the AIAG PPAP manual requiring customer notification (Table I.3.1) or customer PPAP submission (Table I.3.2) require KSS approval prior to implementation at the supplier location. All such changes shall be submitted to KSS via SREA (see section 15.0 for further detail on the SREA process) a minimum of 90 days prior to planned implementation. SREA's shall include the justification for the change and the proposed validation / PPAP plan. KSS approval of the SREA is approval to proceed with validation of the change as detailed in the SREA, it is not approval of the change. Final change approval occurs once the change has been successfully validated and the PPAP is approved by KSS.

The first step in gaining approval is to contact the KSS Buyer and review the proposed change, as well as the proposed PPAP plan for validation and approval of the change. This plan shall include a timing chart detailing phase in/out and associated tasks and timing to prevent supply shortages. Upon concurrence of the buyer, and SREA shall be submitted to the KSS Plant SQE as described above. Approval to proceed with the validation process will be given, or additional validation requirements will be discussed and agreed to by the parties.

The next step is to successfully complete the validation process as agreed and submit a PPAP package to KSS Plant SQE. In certain cases, KSS may require product testing and/or be required to gain approval from customer(s). Once this process is completed to KSS's satisfaction, the PPAP will be approved and the supplier may begin production incorporating the change.

See AIAG PPAP manual for specific instruction as to when to submit PPAP for changes.

Important Note: Suppliers must receive written PPAP approval from KSS Plant SQE prior to shipping product produced incorporating a change as defined above. If there is any doubt regarding approval requirements of a change, contact KSS Plant SQE for assistance. Failure to obtain change approval in advance of shipment will result in product rejection and financial liability for all affected KSS raw, work-in-process and finished goods inventory.

15.0 SUPPLIER REQUEST FOR ENGINEERING APPROVAL (SREA)

KSS requires that suppliers ship product which conform 100% to the engineering print requirements and referenced specifications. Additionally, KSS requires that the manufacturing process remain consistent with those utilized to produce the PPAP approved product. These requirements are to be followed without exception.

If, at any time, a supplier desires to ship product which does not conform to KSS's prints and referenced specifications, or is produced from a “changed” process (see Section 14.0 for complete definition), KSS approval is required in advance of shipment (conformance deviations) and in advance of implementation (changes) via the Supplier Request for Engineering Approval (SREA) form. Blank forms and completion

instructions are located on the KSS internet site. Verbal direction, discussions and/or approvals from KSS are not valid without a fully approved SREA.

Important Note: Failure to obtain SREA approval in advance of shipment will result in product rejection and financial liability for all affected KSS raw, work-in-process and finished goods inventory. In case where a component is common to more than one KSS location, it is the supplier's responsibility to advise and obtain approval from each location, prior to shipping any product.

The supplier shall complete the SREA form and forward it to KSS Plant SQE for processing. Sufficient detail, supporting data, corrective actions, etc. shall be included to facilitate the approval process. The supplier may be requested to submit additional information prior to approval, as determined by KSS. Submission of an SREA is in no way approval to ship deviated product or implement changes. Receipt of a fully signed and numbered SREA is approval.

The lack of SREA approval is not an acceptable excuse for not meeting KSS shipment releases. If SREA approval may affect the supplier's ability to ship product on time per KSS releases, the issue must immediately be brought to the attention of KSS Plant SQE, Procurement, and Production Control in each facility affected.

Affected shipments shall be identified with the appropriate SREA tracking number on each carton/container to ensure material is properly identified when received at KSS plants.

16.0 CORRECTIVE ACTION

It is required that suppliers maintain a system for corrective action of quality concerns. This system must include a multi-disciplined problem solving methodology and follow-up of corrective action implementation and effectiveness.

Any supplier quality concerns detected at KSS and KSS customer locations will be formally directed to the appropriate supplier contact.

All Supplier Corrective Action Responses are required to be submitted utilizing the KSS Robust Problem Solving Report format.

The required supplier response is as follows:

Within 1 Business Day of Notification:

Initial response due to KSS Plant SQE detailing the following:

- Containment actions (at supplier and KSS) (Notes 1 & 2)
- Suspect inventory, lot numbers, etc.
- Return authorization number

Within 5 Business Days of Notification:

Completed corrective action plan due to KSS Plant SQE detailing the following:

- Initial response information
- Root cause
- Permanent corrective action(s) taken with completion dates (Note 3).

- Verification of permanent corrective action(s) taken (Note 3).
- Recurrence prevention plan (Note 3).

Notes:

1. Defect containment by the supplier at KSS locations is expected within 24 hours (i.e. on-site sorting) wherever possible. This is to be coordinated with KSS Plant SQE. Supplier quality ratings are computed by returned parts per million shipped ratios. Suppliers who do not support on-site containment will be subjected to the full lot quantity returned, as opposed to the actual number of defects, in the computation of the PPM rating. Any issues that make on site sorting impractical may be discussed with KSS Plant SQE and alternate actions taken. Replacement material requirements are to be coordinated with the KSS Production Control department.
2. All certified material must be identified by an agreed colored dot or mark on/by each shipping label on each carton. This must continue until permanent corrective action has been implemented and approved by KSS Plant SQE.
3. If it is not possible to implement and verify permanent corrective actions in the five (5) business day window, KSS Plant SQE must receive the supplier's plan to permanently resolve the issue by this date with all associated task completion dates and responsible persons documented. Completed corrective action plans, with actual task completion dates and verification records, must be submitted to KSS Plant SQE as agreed between the supplier and SQE.
4. Late initial (24 hour) and / or final (5 day) corrective action responses may result in the issuance of a customer satisfaction QN at the discretion of the KSS Plant SQE.

Note: KSS Plant SQE will review and approve closure of all Corrective Actions. KSS Plant SQE reserves the right to require additional controls to be implemented and / or additional documentation to be provided to effectively resolve supplier quality issues.

Listed below are various types of corrective actions and their effect on corrective action closure:

- **Type I:** Design, material, or drawing change. Corrective action may be closed upon implementation and verification of the change.
- **Type II:** Mistake proofing device or other systemic process error proofing is implemented. This can include automated inspection equipment. Corrective action may be closed upon completion of a 30 day evaluation of effectiveness.
- **Type III:** Inspection / training only. Insufficient for corrective action closure.

17.0 SUPPLIER CS1 / CS2 CONTAINMENT AND PHASE REVIEW PROGRAM (Procedure # 1005485)

For suppliers with chronic or repetitive quality issues, KSS Plant SQE reserves the right to impose additional containment measures (at supplier expense) to ensure conforming product is received at KSS plants.

CS1 Containment:

The supplier is required to perform a 100% certification of all products prior to shipment through an additional, off-line inspection process. This measure would be in addition to any existing controls and containment measures previously implemented. This level is imposed on suppliers who have failed to contain or correct quality issues effectively, and immediately.

CS2 Containment:

The supplier is required to subcontract a third party product certification contractor to independently 100% certify all products prior to shipment to KSS. This level is imposed on suppliers who fail to contain or correct quality issues through the Level 1 Containment program.

Suppliers required to implement either Level 1 or 2 Containment will be notified by KSS Plant SQE. These additional containment measures are intended to be interim steps to ensure conforming product is shipped to KSS. Permanent actions to prevent recurrence are expected to be implemented in conjunction with these containment programs. Once permanent actions are implemented and verified effective for 30 days, containment may cease with the approval of KSS Plant SQE.

Each container of certified material must be clearly identified with a listing of all conditions for which the material has been certified.

In addition, KSS reserves the right to notify third party Quality System registrars of quality system failure if open quality issues are not resolved by this time. The supplier will be notified prior to this action being taken.

Supplier Phase Review Program:

The Supplier Phase Reviews are intended to heighten the awareness of KSS's supply base to quality performance and to focus the quality improvement efforts of KSS's suppliers toward a shared objective with the company.

KSS Plant SQE or SDE will initiate Phase Review meetings at a specified KSS location for suppliers with significant quality issues, chronic quality issues or negatively trending quality performance. At these meetings, suppliers will be required to present corrective action plans to KSS Plant Management, Supplier Quality, and Procurement, (and others at plant discretion). The program consists of three phases, as detailed below:

Phase 1:

Suppliers will be selected for a Phase 1 review based on the following criteria:

- Repetitive quality issues
- Highest monthly PPM
- Chronic monthly PPM activity
- Negatively trending PPM activity
- Quality accidents causing significant impact to the production operations and / or KSS customers.

Requires on-site attendance of the Plant and Quality Managers to review corrective action plans in detail.

Phase 2:

Suppliers will be selected for a Phase 2 review if issues are not completely resolved as committed during the Phase 1 review. Requires on-site attendance of Operations and Quality Executives to review corrective actions in detail. "New Business Hold" status may be imposed on the offending supplier location.

Phase 3:

Suppliers will be selected for a Phase 3 review if issues are not completely resolved as committed during the Phase 2 review. Requires on-site attendance of top management (President) to review systemic reasons for corrective action failure and plans to resolve. "New Business Hold" status is required for all supplier locations. Supplier will not be allowed to quote on new business until the issues are resolved and closed by KSS Plant SQE.

18. SUPPLIER RATING SYSTEM (SRS) / PERFORMANCE INDICATOR

KSS operates a SRS to monitor and measure the performance of all Manufacturing Resource Suppliers. The process is an ongoing, comprehensive supplier monitoring and feedback procedure that allows KSS to communicate with its supplier base, recognizing both high performance suppliers, as well as low performing suppliers.

The following indices have been established as counting measures used to measure the supplier's performance.

➤ Quality Indices

- PPM (Parts per million) score

PPM levels for product quality will be calculated using the following formula:

$$PPM = \frac{x}{N} \times 1000000$$

x = No. of DEFECTIVE parts

N = No. of parts received

➤ Delivery Indices

- On Time Deliveries (OTD)

OTD (%) = No. of On Time Deliveries / No. of Total Deliveries x100

Any supplier that does not maintain acceptable performance requirements in any of the above established measurables shall conduct a systemic review of their quality system an action plan stating the supplier's intentions to show significant improvement towards meeting the required measurable within 30 days. Supplier may be invited to the KSS Plant location to present the action plan to KSS SDE and Quality functions. (KSS Supplier Week meetings)

KSS will provide assistance to resolve supplier related issues. However, repeated failure to comply with KSS requirements will inevitably result in New Business Hold status and ultimately the development of a de-sourcing plan for all products/services provided to KSS by the delinquent supplier.

Suppliers will be rated Monthly by KSS Procurement on the basis of their ongoing quality and delivery performing to KSS plant locations.

The KSS requirement for quality performance measured in PPM defect rate is zero at all times. The KSS requirement for on-time delivery is 100% at all times. Any deviation from the above requirements require the implementation of documented corrective action to meet these requirements.

Suppliers are encouraged to review ratings for accuracy and resolve any disputes with the responsible KSS plant. Any disputes which cannot be resolved with the plant must be elevated to KSS procurement for final arbitration by the supplier. All PPM disputes must be submitted within 30 days of QN issuance. All agreed PPM reductions shall be documented by the Plant SQE and provided to the supplier and SDE.

19.0 BARCODE CONTAINER SHIPPING LABEL REQUIREMENTS (Procedure # 82000438)

It is the responsibility of the supplier to provide barcoded container shipping labels that meet KSS's requirements as defined in the Barcode Label Requirements procedure (82000438). Strict adherence to these specifications for the barcode identification labels will reduce implementation cost and increase

benefits throughout industry. Failure to comply with these requirements may result in rejection of the shipment.

20.0 ACCESS TO FACILITIES AND RECORDS

Suppliers shall allow KSS, and KSS customers, access to any facility and quality records associated with the production and supply of products directly to, or on behalf of KSS. This requirement extends to all sub-contractors as well.

21.0 Notification of Organization Changes and Quality Concerns.

Changes to the supplier's organization that may affect quality and/or finance, shall be notified in advance to KSS. These changes may include; Company ownership, company name, manufacturing location, quality approvals, significant changes to process or inspection techniques, shutdowns.

KSS requires that suppliers formally notify the affected KSS manufacturing plant(s) of any quality concerns within 24 hours of discovery without exception. This applies to all quality concerns identified by suppliers for which product shipped is suspect. If exposure has not been determined within 24 hours of discovery and product shipped to KSS has not been proven to be void of the concern, notification is required. Suppliers should be prepared to present the concern in detail, the exposure of the concern (i.e., what lot number(s) is / are affected), the containment and corrective action plan.

22.0 Purchase Order Requirements.

The supplier shall adhere to all Purchase Order Terms & Conditions plus stated special instructions. The PO is the controlling document and will communicate any deviations to the requirements stated within this manual authorized to the supplier.

23.0 Sub-contracting

Supplier shall not sub-contract any work awarded by KSS without the prior written approval from KSS.

When sub-contracting approval is granted the supplier shall ensure where applicable that in the first instance KSS customer approved suppliers are utilised, and secondly if a special process is required.

The supplier should ensure that subcontractors are evaluated and selected on their ability to meet specified requirements. A list of approved subcontractors shall be maintained. Purchasing documents shall clearly describe the relevant drawings and specifications including issue status and the quality requirements to be applied.

24.0 Protection of KSS and their customer proprietary information.

Any information the supplier receives from KSS must be kept confidential and never disclosed to any third party without the prior written agreement of KSS. The proprietary information can include, but is not restricted to all versions of electronic data, drawings and documentation, Tooling and materials. Under no circumstance is the supplier to make a direct approach to KSS's customers in relation to agreed business dealings.

25.0 Supplier Quality System Requirements

KSS requires all suppliers to acknowledge and retain total ownership for the quality of their products and to develop Quality Assurance Systems which ensure that the requirements of the purchase order are fully met.

The development of these systems should provide for continuing improvement in product quality, leading to the attainment of zero defects, whilst also providing speedy and effective corrective action in the event of defective products being delivered to KSS.

It is expected that all suppliers to KSS will meet the requirements of this section which is numbered and based on ISO 9001 Quality System standard. Suppliers are evaluated and selected on an individual merit basis for the product/service they supply. Non ISO approved organisations will be expected to demonstrate adequate management and controls of their processes that satisfies KSS's minimum requirements.

26.0 Quality Management System.

Suppliers must agree to introduce and maintain a quality management system according to ISO 9001:2008 or TS 16949:2009 with certification via third party registrar recognized by KSS.

Suppliers must send a copy of their quality system certifications to KSS. Suppliers must immediately notify KSS of any changes to their Certification Status.

The supplier shall establish and maintain a clearly documented quality system that provides a means of ensuring that products conform to specified requirements. This system shall control the issue of drawings, specifications, procedures etc. Provision shall be made for the control of obsolete copies and their subsequent archiving and disposition.

27.0 Management Responsibility.

The supplier shall make known a person to KSS, who will have the necessary authority to assume responsibility for product quality. In addition, escalation contact matrix shall be provided and maintained with current contacts.

28.0 Resource Management.

The supplier shall determine and provide the resources needed to maintain the quality system and continually improve its effectiveness, and enhance customer satisfaction by meeting KSS's requirements.

Personnel performing work affecting product quality shall be competent on the basis of appropriate education, training, skills and experience.

The supplier shall determine, provide and maintain the infrastructure needed to achieve conformity to product requirements.

29.0 MEASUREMENT, ANALYSIS AND IMPROVEMENT

29.1 Monitoring and Measurement of Product

The supplier shall monitor and measure all the characteristics of the product identified on the drawings and specifications, to verify that the product requirements have been met. This shall be carried out at appropriate stages of the product realization process in accordance with the planned arrangements.

29.2 Control of Nonconforming Product

The supplier shall ensure that products which do not conform to product requirement are identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with non-conforming product shall be defined in a documented procedure. Nonconforming products that are received by KSS will be processed and the supplier will be liable for non-conformance administration costs and in the case of Ship to Stock items any costs associated with downstream manufacturing or recall. The supplier accepts the principle of such reasonable administration costs and the processing of debit notes where Nonconforming goods are identified after invoices have been paid.

29.3 Containment of Nonconforming Supply

In the event a non-conforming material, component, system, or service is detected, KSS will determine the best method of securing conforming supply to meet our production requirements:

- KSS to return the entire lot of non-conforming material, component or systems to suppliers
- Suppliers to sort/rework/repair the non-conformance at KSS site
- KSS to identify an external resource (certified by KSS Quality Department) to perform the sort/rework/repair
- KSS personnel to perform sort/rework/repair

30.0 REACH Requirements

As of June 2007, the European Regulation (EC) 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) has entered into force. REACH affects all industries - including automotive - that conduct business in the EU or supply parts/materials to companies that supply to the EU.

In order to be compliant with the REACH regulation, we require our suppliers to utilize the on-line "auto-REACH" application (www.auto-reach.com). Late or incomplete registration will raise concerns that our common legal responsibilities under REACH are at risk, and it may affect future business.

The REACH regulation requires companies within the European Union to register chemicals that are manufactured in or imported into the EU. If you are not a chemical manufacturer or importer, you are still responsible to monitor the Substances of Very High Concern (SVHC) lists as they are being published to determine if your products contain them. (A preliminary list has been published and - along with other useful information and links - is available from the "auto-REACH" website.)

The automotive supply chain around the world has developed an "Automotive Industry Guideline on REACH" which can be used as a quick overview on REACH, its requirements and the recommended actions. This guideline may be found at www.acea.be/reach.

The European Chemicals Agency (ECHA) website is <http://echa.europa.eu/>.

Guidance Documents on the ECHA site may be found at http://reach.jrc.it/guidance_en.htm.

Appendix I

Significant Characteristic Guidelines

<i>(Important)</i>	<i>SC (Significant)</i>	<i>CC (Critical)</i>
<p>Definition:</p> <ul style="list-style-type: none"> ➤ Monitors features that are representative of overall part function/appearance and/or tooling integrity <p>Used For:</p> <ul style="list-style-type: none"> a) KSS Incoming Inspection dimension/feature (per plant procedure) b) Must be included in supplier control plan as item that is periodically checked 	<p>Definition:</p> <ul style="list-style-type: none"> ➤ Identifies features that are significant to maintain which, if discrepant, could hinder or affect the design or functional intent of the component/assembly <p>Used for:</p> <ul style="list-style-type: none"> a) Customer specified critical or significant characteristic (on Top end drawing). <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> b) Critical to form, fit, or function <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> c) Customer or component part mating feature <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> d) Dimensions susceptible to excessive tool wear <ul style="list-style-type: none"> ➤ Supplier must prove capability at PPAP per AIAG. ➤ On-going statistical controls must be specifically addressed in supplier control plan (Frequency of check approved by KSS during PPAP). ➤ Supplier data must be submitted to KSS when requested ➤ KSS Incoming Inspection dimension/feature 	<p>Definition:</p> <ul style="list-style-type: none"> ➤ Identifies features that are critical to maintain which, if discrepant, could hinder or affect the design or functional intent of the component/assembly AND are related to Safety, Performance, or Regulation items <p>Used for:</p> <ul style="list-style-type: none"> a) Customer specified critical or significant characteristic (on Top end drawing). <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> b) Critical to form, fit, or function <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> c) Customer or component part mating feature <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> d) Dimensions susceptible to excessive tool wear <p style="text-align: center;">+ / or</p> <ul style="list-style-type: none"> e) Safety, Performance or Regulation item <ul style="list-style-type: none"> ➤ Supplier must prove capability at PPAP per AIAG. ➤ Requires mistake-proofing and/or functional verification in assembly OR 100% inspection (by supplier or KSS) with method approved by KSS SUPPLIER QUALITY. ➤ On-going statistical controls must be specifically addressed in supplier control plan (Frequency of check approved by KSS during PPAP). ➤ Supplier must show process parameter capability ➤ Must be specifically addressed in supplier control plan (Frequency of check approved by KSS during PPAP) ➤ KSS Incoming Inspection dimension/feature <i>Should be used sparingly</i>