I M Kelly
Automotive & Aerospace Ltd

Supplier Requirements Manual

CONTENTS

Management Statement:-

I M Kelly Automotive / Aerospace Ltd, (IMKA), recognise ISO/TS16949, VDA6.3, ISO 9001, AS9100 and ISO14001 standards and other customer specific requirements as they apply to the automotive and aerospace industry. Accordingly, all IMKA, production suppliers are required to establish documents and implement effective production quality and management systems compliant with these requirements, including any customer specific requirements.

This manual reinforces the IMKA Purchase Order Terms & Conditions and identifies IMKA customer specific requirements. ISO9001, AS9100, TS16949, and ISO14001 are applicable to all Supplier manufacturing sites and include production parts, service parts, and production materials supplied to IMKA plants.

IMKA, reserves the right to verify Supplier compliance to ISO 9001, TS16949, AS9100, VDA6.3 or ISO14001 onsite, for those suppliers identified as having a high impact on, safety, fit, form, function, quality, and/or customer down time. Any IMKA personnel, IMKA Customer, or regulatory body, reserves the right to visit the Supplier manufacturing site to verify quality of purchased products and review supporting documentation.

Note: It is the Supplier's responsibility to ensure they have the latest version of this "Supplier Requirements Manual", available on our website at www.imkelly.co.uk. This forms part of the contractual requirements of doing business with IMKA, and satisfies our customer specific requirements with regard to TS16949 & ISO9001.

Registration Requirements:-

- Raw Material Suppliers: Component part suppliers not certified – Automotive & Aerospace Suppliers.
  3rd party registered to ISO9001 or AS9100 is required as a minimum

- Component Part Suppliers certified to ISO9001 or AS9100, VDA6.3 – Automotive Suppliers
  3rd party registered to ISO/TS16949 is a goal that should be aimed for by all of our suppliers

Maintenance of Certificates:-

Whenever a Supplier receives a quality, environmental, or health and safety standard certification for the first time or for renewal, a copy of the certification must be sent to IMKA Quality Department:-
Automotive = Orion Way, Kettering Business Park, Kettering, Northants NN15 6NL, England.
E-mail to qc@imkelly.co.uk or fax to +44 (0)845 460 9292
Aerospace = Moorings Business Park, Channel Way, Coventry, CV6 6RH, England.
E-mail to nturner@imkelly.co.uk or fax to +44 (0)24 7636 7841

If certification is revoked, the Supplier must notify IMKA Quality Department in writing within five working days. Certificates or notice of revocation can be e-mailed to Automotive = qc@imkelly.co.uk or faxed to +44 (0)845 460 9292
Aerospace = nturner@imkelly.co.uk or fax to +44 (0)24 7636 7841

Supplier Code of Conduct

Suppliers shall ensure operations are performed in an appropriate manner. Below is a listing of the basic requirements:-
Compliance with Local Laws and Regulations - Suppliers must adhere to the laws and regulations in the locality in which they reside. This includes all local and national laws or regulations in the country of origin. This includes REACH legislation where suppliers must confirm to IMKA that products supplied, do not breach these regulations.
Compliance with Environmental, Health, and Safety Laws - The Supplier must maintain and operate its manufacturing / production facilities and processes in accordance with local and national laws or regulations in the country of origin. At no time shall any IMKA personnel be exposed to hazardous materials or unsafe conditions because of Supplier shipments to an IMKA location, or while visiting a Supplier's location. For items with inherent hazards, safety notices must be clearly visible. As applicable, documented safety handling and protection, information must be provided. Forced labour or child labour is not be used at any time by our supply base.
Product Safety - In all instances where a product is manufactured to a new design, for a new system, or for a new application, it is important that Supplier and IMKA allocate responsibility for assuring that all performance, endurance, maintenance, safety, and warning requirements are met. It is preferred that this allocation of responsibility be in writing.
Non-Discrimination - Suppliers shall not discriminate against race, colour, sex, religion, age, physical disability, political affiliation, or other defining characteristics as prohibited by local, state, and national laws/regulations in the country of origin.

Project Launch Support:-
During project launches, key suppliers may be required to provide on-site support at IMKA's premises, at the premises of IMKA's customer, or at the site of offshore toolmakers. All such visits are to be at the expense of the supplier.
The Supplier's support representative(s) must be knowledgeable, capable and empowered to make decisions.

Advanced Product Quality Planning (APQP):- (Does not apply to Aerospace)
(Product Realisation Process)
- All suppliers shall produce advance quality plans to support the development of new products and/or services, in accordance with the guidelines in the latest AIAG "Advanced Product Quality Planning and Control Plan" (APQP) manual.
- Specific timings must be agreed with IMKA Supply Chain and Engineering / Project Management.
- Component Review Team meetings will take place with key suppliers to identify both "Significant" and "Critical" characteristics as identified on the design record or through lessons learned from FMEA or other relevant data e.g. field returns.

Failure Mode and Effects Analysis:- (Does not apply to aerospace)
The Supplier shall complete and maintain a design (where applicable), and process FMEA, using a cross functional team. These will identify and assess the effect of potential failures of the design and process; it will determine process variables on which to concentrate. Reference should be made to latest edition of the latest AIAG "Potential Failure Mode and Effects Analysis" manual.

Run @ Rate:- (Does not apply to aerospace)
- All suppliers shall perform a significant production run prior to launch (normally 300 consecutive parts). This is undertaken to ensure that the Supplier's actual production process is able to meet quoted volumes / quality at an acceptable level.
- The Supplier's process shall be able to produce 120% of the quoted volume with production personnel, tooling, and equipment in the quoted production environment. The rate shall be recorded on the Part Submission Warrant, (PSW).

Appearance Items:-
- The Supplier shall ensure that all appearance items are per the design released master samples for Colour, Grain, Gloss, and Metallic Brilliance (Bright work) Colour continuity from batch to batch, shall be maintained to agreed levels.
- Evaluation should be carried out in a controlled lighting environment with D65 and TL84 as a minimum.
- Equipment should be part of the Supplier's regular maintenance and calibration program. AAR's shall have spectrophotometer data readings (DI*, Da*, Db*, DE*).

Manufacturing Feasibility:-
Suppliers shall review and document all appropriate specifications to establish capability to meet design and product/process requirements.

- **Process Capability Study**

Process Capability Index (Cpk) is a comparison of the inherent variability of a process output to specification limits under statistically stable conditions. Most methods for estimating capability require that the characteristic being evaluated is approximately normally distributed, and in statistical control. The distribution should be determined prior to estimating capability. If the process is not in statistical control, all assignable causes must first be identified and removed.
Unless otherwise approved by IMKA, the Supplier shall use the following as acceptance criteria for evaluating initial process study results of special characteristics for processes that appear stable:

Results Interpretation	
Index > 1.67	= The process currently meets acceptance criteria.
1.33 ≤ Index ≤ 1.67	= The process is marginally acceptable.
Index < 1.33	= The process is not acceptable.

- **Inspection, Measuring and Test Equipment**

All suppliers shall have sufficient and adequate Inspection, Measuring and Test Equipment to verify the conformity of the product to its drawing and / or specifications. The equipment shall be maintained and periodically calibrated, which are traceable to National Standards. A unique number / indication of its calibration status shall identify each piece of equipment. A record shall be maintained for each piece of equipment showing the equipment's identity number, frequency of calibration, method and acceptance criteria.

- **Measurement Systems Analysis**

The Supplier must develop or obtain gages and standards to control their processes and to determine product conformance to specifications. Variable gages and measurements are preferred. The Supplier shall perform Measurement Systems Analysis (MSA) studies, e.g., gage repeatability & reproducibility, bias, linearity, stability, for all new or modified gages, measurement, and test equipment. See AIAG MSA Manual.

Statistical Techniques:- (Does not apply to aerospace)

Where "Critical Characteristic" (CC) or Significant Characteristics (SC), are identified on the design record (drawing) the Supplier shall include these in the PFMEA for consideration, CC will require the sign off by the assigned Quality Engineer prior to PPAP sign off and volume supply, unless this is specifically waived in writing.

Automotive Production Part Approval Process:-

- Suppliers shall submit and obtain full approval from IMKA per the latest AIAG "Production Part Approval Process" (PPAP) manual.
- Sample submissions shall consider all 19 elements of the PPAP manual and all documents generated from this process to be retained by the Supplier. These documents can be requested and must be made available to IMKA. As a minimum requirement the PSW, sample part and limited dimensional data, (where agreed), must be submitted for approval, unless otherwise specified in writing by IMKA.
- PPAP documents are submitted to IMKA Quality Department, which can be via post or e-mail:- qc@imkelly.co.uk
- Three (3) samples are submitted (per tool/cover) with dimensional reports for fit and function approval (or as agreed).
- Laboratories should be UKAS accredited, and all work undertaken should be within their scope.
- Suppliers shall provide material substances, and recyclability data via IMDS, (IMK Nº = 10649), and Flammability test data, with every PPAP submission. This is a legal requirement and PPAP approvals may not be given for submissions without this data.
- Suppliers shall obtain this information from their Sub-Suppliers.
- Where Annual layout and material testing is required by an IMKA Customer, this may be passed down to IMKA's Supplier, and documentation to be made available on request. This will be advised to the Supplier in writing.
- Where CCC Certification is required by our customer, suppliers shall comply to the requirements for the use of the logo and all rules that are applicable to this.

NB: DO NOT process or ship parts prior to PPAP approval. This may lead to Rejection and 8D's. Under special circumstances, a waiver may be granted to the supplier that may temporarily approve the supplier to ship. Obtaining this waiver is the Supplier's responsibility. The waiver must include specific reasons, planned corrective action plans, part no's affected, any additional inspection criteria, expiry date and the applicable customer signatures.

Aerospace - First Article Inspection Report – FAIR's

If a First Article Inspection Report is required, it may be noted on the Purchase Order. A FAIR will automatically be required for the following circumstances:-

- A change in the design affecting fit, form, or function of the part.
- A change in manufacturing source(s), process(es), inspection method(s), location of manufacture, tooling or materials, that can potentially affect fit, form or function.
- A change in numerical control program or translation to another media that can potentially affect fit, form, or function.
- A natural or man-made event, which may adversely affect the manufacturing process.
- A lapse in production for two years or as specified by the Customer.
- Special circumstances resulting from product or process problems.

For Aerospace Suppliers, the FAIR must conform to AS9102. The supplier assumes risk for any production prior to FAIR approval. First article parts must be identified as "First Article" by tagging, painting, or other suitable means of identification.

- Laboratories should be UKAS accredited, and all work undertaken should be within their scope.
- Unless otherwise specified by PO/contract, a supplier must provide adequate certification of conformance for all materials and processes specified on the purchase order or contract, for each shipment, this must include flammability test data. Where available, these may be submitted electronically. This is a legal requirement and approvals will not be given for submissions without this data. Suppliers shall obtain this information from their Sub-Suppliers.

Production Location Changes:-

All production location changes to product and/or process shall be requested and approved in writing by IMKA, Quality Dept at:-

Automotive = Orion Way, Kettering Business Park, Kettering, Northants NN15 6NL, England.

Aerospace = Moorings Business Park, Channel Way, Coventry, CV6 6RH, England.

- Level 3 PPAP submission and approval is required as per the latest AIAG PPAP manual prior to shipment of product from the new location for automotive suppliers and a new FAIR for aerospace suppliers.
- All parts from new manufacturing location shall be identified using an "Orange" label giving the part number, quantity, stating "New Manufacturing Location"

Product or Process Changes:-

- The relevant commodity Engineer shall initiate all product or process changes. Implementation via Purchasing and Supply Chain Management, and then approved by Quality Department.
- Samples may be required for review and fit & function prior to sign off.
- Level 3 PPAP submission approvals shall be required, for automotive suppliers and a new FAIR for aerospace suppliers, unless waived by Purchasing in writing.
- All new or modified parts shall be identified using an "Orange" label giving the part number quantity, change control number, and description of the change for the first five shipments.

Leather Standards:-

The Supplier shall asses all natural marks against the "Natural Marking Standards Catalogue" which has been provided by the Original Equipment Manufacture (OEM) or against an IMKA interpretation of the standard. In cases of dispute, the OEM standards will be binding and final. These standards must be read in conjunction with the zoning catalogue and or Mylar trace, to determine the visual impact of the area being assessed. An average Master Hide will be established at the beginning of new programs for haptic, optic and trimming requirements where required.

Transport:-

All suppliers shall ensure that lorry's and trailers are clean and in good condition in order to protect incoming parts from damage or water ingress. They assume liability for safe transport without damage to IMKA and for the usage of any strapping or harnessing required to prevent loads falling over. IMKA reserve the right to refuse delivery if damage is evident or charge Suppliers for repacking / checking the delivery. Hazardous loads will be identified as such.

Volume Amendments:-

The supplier shall assure through careful capacity planning that manufacturing can support increases in volume up to 20% within five working days.

Identification and Labelling:-

Unless instructed otherwise all suppliers to IMKA shall use bar coded Odette format shipping labels, reference should be made to the AIAG shipping/ Parts identification label standard, BAR39 (AIAG-B3). As a minimum labels should carry the following information:-

- Supplier name
- Quantity
- Unit of Measure
- IMK Part Number
- Description
- Batch Number (or equivalent)
- CCC marking / logo if required by IMK.

In order to prevent mislabelling of returnable containers, it is the Supplier's responsibility to remove old labels. Where customer owned packaging is in use, care should be taken, to ensure it is safeguarded.
Where multiple batches of materials are being shipped, the batch number should be listed on the delivery note.

Traceability

- All raw material obtained by the Supplier to meet an order, and all parts incorporated into assemblies which are subsequently supplied to IMKA must be traceable to the manufacturing source and identifiable to the manufactured item.
- Traceability must be maintained through all stages of the Supplier's manufacturing process, including the maintenance of inspection and test records.
- The Supplier shall maintain the identification of the configuration of the product in order to identify any differences between the actual configuration and the agreed configuration.
- For any given IMKA product, the supplier must maintain the ability to retrieve a sequential record of its production, including manufacture, assembly, inspection, and test.
- In the event of certain processes being further sub-contracted, traceability to the 2nd stage control, inspection and/or test records must be maintained.
- The Stockist's processes shall include methods for maintaining the manufacturer's identification and batch/lot traceability and the ability to identify and trace products manufactured from the same batch of raw material or from the same manufacturing batch as well as the ability to trace the product to the ultimate destination (delivery, scrap).

Supplier Performance Rating:-

IMKA's evaluation system uses a number of factors, such as Quality, Cost & Delivery, to develop an overall Supplier performance rating. This rating serves as an objective measure to determine whether IMKA expectations are being met. At IMKA's discretion, IMKA may determine that to address the Suppliers performance deficiencies, a meeting with Supplier's management is necessary. A Supplier documented corrective action and improvement plan is required for such instances. Poor performance may result in loss of business or non-consideration of new business.

Key Suppliers will be subject to a Vendor Scorecard System. This affords the opportunity for IMKA to advise of areas for improvement or sustainment. The scorecard will be issued to vendors on a quarterly basis.

Non-Conforming Product:-

- In the event of delivery of Non-conforming material to IMKA, the following protocol shall apply.
- A rejection note (IRN) shall be raised detailing the Quantity, Part Number, and Reason for rejection.
- This will allow cover as a minimum, the support of Production for one hour and for the associated administration allowing the supplier to take the necessary steps to contain the problem. Any costs associated with IMKA sorting or rectifying supplied components, line stoppages and freight charges due to quality issues will be charged to the supplier. In certain circumstances where a supplier is also a customer charges will be aligned.
- The rejection notes (IRN's), will be charged as follows:-
  - Administration/Fixed charge per incident = £100
  - Containment cost per hour = £25
  - Containment supervision per hour = £50
  - Labour cost for re-work per hour = £70
- Consequential loss due to nonconforming products supplied to IMKA will be added to rejection notes, where appropriate.
- The resulting debit note will be raised by our Accounts Department on the value of goods and shall include the above charges.
- **Non-conforming material will only be held for 7 working days**, in which time it can be viewed or collected. After this period the material will be scrapped at the suppliers cost and no further notification will be given.

The Supplier shall have a system for the control of non-conforming items that must include provision for:-

- Identification of non-conforming material or parts
- Segregation of such material or parts from acceptable items
- Documentation defining the nature of the defect and what remedial / corrective action has been authorised and undertaken. The document must clearly state the defective parts by number and serial/batch number
- Evidence to demonstrate that appropriate action has been taken to prevent recurrence
- The stockist Distributor shall ensure with the manufacturer where necessary that similar supplies are not similarly affected by a non-conformance and shall inform IMKA of any non-conformity affecting product already delivered.
- The Stockist will also be responsible for the withdrawal of products from stock that is suspected as non-compliant.

Control of Reworked Product

Rework is defined as additional operations that are not part of the basic production process flow, which will bring product in full compliance with applicable drawings and specifications. Instructions for rework, including re-inspection requirements, shall be accessible to and utilised by the Suppliers appropriate personnel. All rework shall be documented and accepted by quality. On the other hand, *repair* is defined as using alternative manufacturing techniques, methods, materials, or processes, which *may not* bring product into full compliance with applicable drawings and specifications. Repairs are not allowed without written approval from IMKA.

Scrap Procedure

Non-conforming parts that are deemed non-recoverable, and beyond economical repair, shall be disposed of in such a way, that they can never be salvaged or reconfigured as fit for purpose. Appropriate records of the actions taken will be maintained.

Spare Parts

The supplier shall ensure that, as part of spare parts supply, products can be supplied to IMKA even 15 years after the last delivery. The supplier shall ensure this through suitable tooling management and appropriate stock. This period is subject to the requirements of the Automotive and Aerospace industries. Premature cancellation of the products is only possible with the approval of IMKA.

Mandatory Occurrence Reporting:- (Does not apply to automotive)

Mandatory Occurrence Reporting is EASA part 21 regulatory requirement. The regulations requirement require that the CAA be advised within 72 hours of being discovered any incident, product defect, or malfunction of a hazardous or potentially hazardous nature, which could endanger aircraft. The Supplier's Quality Manager shall inform the IMKA Quality Representative immediately a situation is discovered which could have such an effect.

Problem Resolution:-
The use of Global 8D is recommended and this shall be completed as a minimum to containment, following notification of a rejection.
The Supplier shall promptly acknowledge receipt of notification and communicate to IMKA the immediate containment actions to be taken, within 24 hours
The Supplier shall provide an update of the containment plan to protect IMKA during the interim period, within 72 hours.
The Supplier must submit the completed Corrective Action Report, (or equivalent) indicating the permanent actions taken, or to be taken, to prevent recurrence of the same problem, to prevent the occurrence of similar problems, and the applicable effective dates, within 10 business days. Unless otherwise agreed with IMKA Quality representative.

Preventive Maintenance
The Supplier should identify key process equipment, provide resources for machine / equipment maintenance activities, and develop an effective planned total preventive maintenance system.

Work Instructions
The Supplier shall prepare documented work instructions, as necessary, for all employees having responsibilities for the operation of processes that impact product quality. These instructions shall be maintained current and accessible for use at the workstation.

Concession Application
IMKA policy is to restrict non-conforming parts and hence discourages the submission of Concession Applications for non-conforming materials.
Requests for permission to deviate from the purchase order, drawing, or specification requirements MUST be submitted to IMKA in advance of manufacture and delivery.
IMKA reserve the right to deny a concession / deviation, or request an IMKA Customer to approve a concession request.
If a deviation is approved, the non-conforming parts shall be clearly identified with the Concession Number. The number must be quoted on the documentation delivered to IMKA.
Failure to observe these requirements will result in rejection of parts.

Raw Material, Segregation & Preservation of Product
The Supplier will provide secure facilities, preferably a bonded area, to ensure that material is not used until inspected or otherwise verified as conforming to specification. A clear distinction is required between material in quarantine and material accepted for use and waiting issue.

Materials will be controlled in such a manner to prevent loss of batch traceability and incorrect issue throughout the supply chain.

Where material is procured or made specifically for IMKA orders, positive steps shall be taken to ensure that the designated material and only that material is used on the order.

Materials will be stored and protected in such a manner to prevent damage and deterioration to preserve the conformity of product during internal processing and delivery to the intended destination.

Warranty:-
Costs associated with field failure, which is clearly a result of supplied material / parts will be passed back to the supplier and will include any consequential loss.

Confidentiality:-
Suppliers shall have a system to ensure technical documents, costing data and intellectual property of IMKA, and their customers are protected and not passed to third parties.

Customer Owned Production Tooling:-
Customer owned tools; manufacturing, test, inspection tooling, and equipment shall be permanently marked so that ownership of each item is visible, and can be determined.

Contingency Planning:-
The supplier shall ensure it has a contingency plan to maintain continuity of supply to IMKA. This should consider, but not be limited to, fire, flood, power failure, personnel shortages, IT related issues, and machinery defects. The supplier shall appropriately insure themselves against damages resulting from such occurrences, in order to minimize disruption of supply.

Automotive Record Retention Periods:-

Records shall remain legible, readily identifiable, & retrievable; control of records shall satisfy regulatory requirements.

All Quality performance records and documentation shall be retained for life of vehicle plus 5 **calendar years**.

All quality records for control items or safety critical items shall be retained for life of vehicle plus a minimum of 20 **calendar years**, after service life.

Aerospace Record Retention Periods:-

Records shall remain legible, readily identifiable, & retrievable; control of records shall satisfy regulatory requirements.

FAIR's (First Article Inspection Reports), control plans, tooling records, purchase orders and amendments shall be maintained for **15 calendar years** after the last delivery of that product. Quality performance records (e.g., control charts inspection and test results shall be retained for **15 calendar years** after the year in which they were created.

Records of internal quality system audits and management review shall be retained for **15 calendar years**.

Acronyms & Terms:-

AIAG - Automotive Industry Action Group
APQP - Advanced Product Quality Planning
AAR - Appearance Approval Report
CAA - Civil Aviation Authority
CC's - Critical Characteristics
CP - Control Plan
CpK - Process Capability Index
DFMEA - Design Failure Mode and Effect Analysis
EASA - European Aviation Safety Agency
FAA - Federal Aviation Administration
FAIR - First Article Inspection Report
G8D - Global 8 Discipline (problem solving document)
IMDS - International Material Data System
IRN - IMKA Rejection Notice
MSA - Measurement Systems Analysis
OEM - Original Equipment Manufacturer
PFMEA - Process Failure Mode and Effects Analysis
PPAP - Production Part Approval Process
PSW - Part Submission Warrant
SC's - Significant Characteristics
SPC - Statistical Process Control

Additional Information:-

AIAG Core Tool Manuals from Adare Carwin, see - http://16949-publications.com/

AIAG website see - http://www.aiag.org/scriptcontent/index.cfm

The UKAS accreditation body can be found at - http://www.ukas.org/

For a list of Accreditation Boards from other countries see - http://www.iaf.nu

For ISO/TS 16949, see International Automotive Oversight Bureau at - http://www.iaob.org

FAA website see - http://www.faa.gov/

CAA website see - http://www.caa.co.uk/

EASA website see - http://www.easa.eu.int/ws_prod/index.html

For AS9100, see - http://www.sae.org/iaqg/

For AS9102, see - http://www.sae.org/aaqg/publications/as9102a-faq.htm