External Provider Quality Manual

	MAK CONTROLS AND SYSTEMS PRIVATE LIMITED

EXTERNAL PROVIDER QUALITY MANUAL

ISSUE 01

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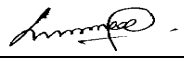
	Signature	
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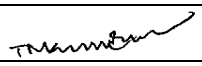
	Signature	
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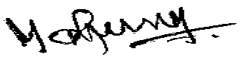
	Signature	
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Section / Doc. No.	Reason for change	Issue. No.	Rev. No.	Page No.	Date	Authority
0	Initial release	01	00	All	01.02.2018	
All	MAK Logo changed	01	01	All	03.01.2019	
4.8.1 4.8.2 4.9 5.3.3 5.4.1	a) Escalation process added b) Suspension of MAK approval added c) Packaging and shipping requirements updated d) Raw material traceability – Note updated e) Random sampling table added	01	02	18,19 29,30	06.05.2019	

Abbreviation	Description
8D Report	8 Discipline
BOI	Bought out items
EPP	Externally provided process / Products
FIFO	First In – First Out
FMEA	Failure mode effective analysis
OEM	Original equipment manufacturer
PPM	Parts per million
PPAP	Production part approval process
PSW	Part submission warrant
QAP	Quality assurance plan
QIP	Quality improvement plan
SCM	Supply chain management
SOP	Standard operating process
SPC	Statistical process control

PREFACE

This manual has been created to assist our external providers in understanding the purchasing expectations and quality requirements for products / components supplied to the MAK Controls Group. The manual is also a tool to assist MAK Controls in complying with the AS 9100 Rev D and to develop our external providers.

In order for MAK Controls to maintain compliance to the AS 9100 Rev D requirements, external providers to MAK Controls encouraged certification by an accredited certification body to a current version of the ISO 9001 Quality Management System.

When circumstances dictate the requirements of this manual may be modified to comply with the requirements for the supply of aviation & defence products. Additionally external providers of fabricated and machined parts and products may be excused from the ISO 9001 accreditation requirement.

Through implementation and adherence to the standards stated herein, MAK Controls looks forward to a long-term and mutually beneficial relationship with our external providers.

LIST OF CONTENTS

SECTION 1: INTRODUCTION

1.1. SCOPE OF THE MANUAL

This manual has been developed to communicate the operating principles, general expectations, requirements, and procedures of MAK Controls. Adherence to the guidelines described in this manual is required by all MAK Controls external providers. Acceptance of any and/or all purchase orders constitutes acceptance and commitment on behalf of the recipient to comply with this manual's content. This manual is provided as a supplement to, and does not replace or alter, any purchase agreement the general purchase conditions or requirements included in applicable engineering drawings, specifications and other contractual documents. This manual describes the minimum requirements for which the external provider has responsibility. However, system improvements that exceed the requirements specified within this manual are always encouraged.

1.2. PURPOSE

MAK Controls quality policy states, "**MAK Controls and Systems Private Limited is committed to Design, Manufacture & Supply "State of the Art" Ground Support Equipment for aircraft & any other specialized product that bears the ability to fulfil the customer requirements at par with international standards and applicable requirements.**

We are committed to enhance customer satisfaction by providing value for their money and achieve excellence in business to conquer global market through continual improvement efforts of the quality management system on process, product & service performances."

1.3. APPLICATION

The expectations and requirements described in this manual apply to all external providers of externally provided products (BOI), processes (SCM) and services. External providers must meet all applicable requirements specified herein.

1.4. IMPLEMENTATION

External providers are responsible for the development, documentation, implementation, and maintenance of a quality system that complies with the MAK Standard. External providers are encouraged to become certified to the quality management system standard ISO 9001:2015.

When circumstances dictate the requirements of this manual may be modified to comply with the requirements for the supply of aviation products. Additionally external providers of architectural parts and products may be excused from the ISO 9001 accreditation requirement.

SECTION 2: MAK CONTROLS

2.1. ENGINEERING / TECHNICAL SUPPORT

MAK Controls is dedicated to the manufacture of the highest quality products. In order for this objective to be achieved, all external providers should offer engineering and technical support to MAK Controls when said support is requested.

2.2. MANUFACTURE CAPABILITY / CAPACITY / LOCATION

External providers are expected to have the resources necessary (people, property, facilities, equipment, and materials) to supply the products required to accommodate MAK Controls production schedule. This is a requirement to be able to be a preferred external provider to MAK Controls.

2.3. CONSISTENT QUALITY

Zero-defect products are required from external providers to MAK Controls. Any deviation from this will result in rejection and return of the product to the external provider with subsequent charges attached. This is according to the general automotive industry standard. Payment by MAK Controls shall not constitute acceptance. Even after acceptance of a shipment, MAK Controls reserves the right to return any material that proves to be defective for full credit. Defective material shall be returned at the external provider's expense and account debited accordingly. Additional charges for sorting, administrative fees and other related costs (extra transport, end customer charges, etc) will also be added.

2.4. ON-TIME DELIVERY

MAK Controls requires all external providers to provide 100% on-time delivery performance with the correct quantity and pricing agreed upon. Monitoring of performance levels in this area will be ongoing with formal reporting on a monthly basis. To further clarify this, we consider unauthorized early or late deliveries and partial or over shipments to be unacceptable. The quantity shipped per order or release cannot vary from specified quantity without the consent of the planner who is responsible at the receiving plant.

If a production line is shut down due to poor quality, late delivery, or incorrect quantity on any shipment, the external provider will be responsible for all costs incurred including expediting shipments or charges from MAK Controls customers.

2.5 COOPERATIVE MANAGEMENT ATTITUDE

MAK Controls expects our external provider's top management to share our commitment to meet or exceed our customer's quality expectations through continuous improvements. It is also expected that they will give their full support to the relationship that exists between our companies and demonstrate flexibility in assisting MAK Controls in meeting all of our customer's requirements.

The External provider is required to maintain a MAK Controls plant contact, which can be readily available to assist in solving problems relating to quality, delivery and other issues. Focus should be on continuous improvements.

2.6 RIGHTS OF VERIFICATION OF PRODUCTS/PROCESSES

MAK Controls reserves the right to verify the products on the external provider's premises by their representatives and our customer and/or their representative (Nominated inspection agencies). This can be done by different kinds of audits and the external provider will be notified in a timely fashion.

SECTION 3: EXTERNAL PROVIDER SELECTION AND PERFORMANCE

3.1 EXTERNAL PROVIDER ASSESSMENT AND SELECTION

MAK Controls supply base will consist of organizations supportive of our business needs. MAK Controls utilizes controlled methods through which external providers are evaluated, selected, developed and monitored.

A criterion for assessment and selection of external providers for placement on MAK Controls Preferred External providers List is based on the external provider's abilities to meet our specific external provider requirements.

3.2 EXTERNAL PROVIDER MONITORING

All vendor claims on external providers sent from our plants will be reported into the MAK Controls global computer system. On a monthly basis the purchasing department will present internal reports based on this data and follow up the external providers that cannot meet our requirements. On a regular basis MAK Controls will call these external providers for meetings and will expect that the top management is involved and can show us their action plans to solve the problem. New Business Hold status will be raised based on the external provider's performance and their ability to solve the problems.

3.3. EXTERNAL PROVIDER QUALITY RATING (EPQR) – SUPPLY CHAIN MANAGEMENT

Based on data of acceptance / rejection for every supply, Quality rating is calculated using the below formula

Quantity Accepted x Acceptance factor ----------x 100 % Quantity Received	Acceptance Factor:
	Accepted without any deviation as per drawing/specification : 1.0
	Accepted with deviation under concession : 0.8
	Accepted after rework : 0.5
	Rejected : 0.0

Example			Acceptance Factor	Percentage	Remarks
Supplier name	:	ABC (P) Ltd			
Quantity recd in No's	:	4000			
Quantity Accepted without any deviation as per drawing/specification	:	3500	1	88	
Quantity Accepted with deviation under concession	:	400	0.8	8	
Quantity Accepted After Rework	:	85	0.5	1	
Quantity Rejected	:	15	0	0.38	

3.4. EXTERNAL PROVIDER QUALITY RATING (EPQR) - PURCHASE

Based on data of acceptance / rejection for every supply, Quality rating for Class A & B external providers) is calculated using the below formula

Quantity Accepted x Acceptance factor ---------- x 100% Quantity Received	**Acceptance Factor:** (Input received from QA indicated on Inward GRN).
	Accepted without any deviation as per drawing/specification : 1.0
	Accepted with deviation under concession : 0.6
	When Item is Rejected : 0.0

3.5 EXTERNAL PROVIDER DELIVERY RATING (EPDR) – PURCHASE & SUPPLY CHAIN MANAGEMENT

The delivery rating is calculated as per the formula given below

Quantity Received x Delivery factor ---------- x 100% Quantity Ordered	**Delivery Factor:**
	When an item is delivered as per schedule : 1.0
	When an item is delivered within **2 weeks beyond Schedule** : 0.8
	When an item is delivered within **2 to 4 weeks beyond Schedule** : 0.5
	When an item is delivered **More than 4 weeks beyond Schedule** : 0.0

Example			Delivery Factor	Percentage	Remarks
Supplier name	:	ABC (P) Ltd			
Quantity recd in No's	:	4000			
When an item is delivered as per schedule	:	3500	1	88	
When an item is delivered within 2 weeks beyond Schedule	:	400	0.8	8	
When an item is delivered within 2 to 4 weeks beyond Schedule	:	85	0.5	1	
When an item is delivered More than 4 weeks beyond Schedule	:	15	0	0.38	

3.6. CRITERIA FOR EXTERNAL PROVIDER PERFORMANCE RATING / RANKING (SUPPLY CHAIN MANAGEMENT)

External Provider's performance is ranked for every supply based on EPQR and EPDR under four categories as below.

a. Poor (Rating below 0.50)
b. Satisfactory (Rating between 0.50 to 0.74)
c. Good (Rating between 0.75 to 0.90)
d. Very Good (Rating between 0.91 to 1.0)

3.7. CRITERIA FOR EXTERNAL PROVIDER PERFORMANCE RATING / RANKING (PURCHASE)

External Provider's performance rating is evaluated every supply on quality, delivery and ranked under five categories as below.

e. Poor (Rating below 60%)
f. Satisfactory (Rating between 60% to 80%)
g. Good (Rating between 81% to 90%)
h. Very Good (Rating between 91% to 100%)
i. Excellent (Rating 100% consistently for >six months)

The performance rating for individual External Provider whose rating falls below satisfactory category (below 0.6) is summarized once in a month and forwarded to External Providers for their action /continual improvements.

The poor category External Providers (below 0.6) are given opportunity for improvement and if no improvement observed on monthly average rating for three consecutive months, they are removed from the list of approved External Providers.

Communication of Overall performance rating is forwarded to all those External Providers who have supplied at least five supplies over a period of 6 months.

SECTION 4: QUALITY REQUIREMENTS

4.1 QUALITY MANAGEMENT SYSTEM

External providers are encouraged to register to the ISO 9001:2015 Quality Management System (or be able to demonstrate assessment and approval by an OEM or by a system audit made by MAK Controls following the customer specific requirements to use external providers without Quality Management system certification). External provider Quality System shall be formally documented, implemented and maintained to ensure that external provider's products conform to the identified purchase specifications, engineering or material specifications and/or contract requirements. The system should be defined and documented in the external provider's own Quality Manual. This manual should be made available to MAK Controls for review upon request.

4.2 PRODUCT QUALITY

External providers are fully responsible for the quality of their products including their sub-external providers. Both are responsible for providing products that meet all MAK Controls requirements, specifications, and drawings as identified on the purchase order and that the products are free from defects as warranted in MAK Controls General Purchasing Conditions. Zero-defect products are expected from all external providers.

4.3 QUALITY PLANNING

All external providers are required to complete a QAP on all projects (new or changed parts) according to the provided time schedule, and report on the activity as requested. Any change in the time schedule needs to be approved by MAK Controls. This process will be followed up by the responsible External provider Quality Development Engineer.

4.4 SERIAL PRODUCTION RAMP UP INSPECTION

At the Start of Production (SOP) the External provider is required to implement a reinforced inspection for an agreed period of time, produced number of parts or until all requirements regarding capability studies are fulfilled. This reinforced inspection plan must contain all key characteristics defined on the drawing as a minimum requirement and will require submission and approval by the receiving MAK plant before the SOP. It must be submitted during the QAP process and is a part of the FAI submission.

The reinforced inspection plan will be subject to the following rules:

- 100% inspection of all key characteristics based on the MAK Controls requirements and/or non-conforming capability results.
- The production control plan frequency shall be doubled for all other characteristics.

- For appearance items 100% inspection shall be based on the approved Boundary and Master Samples.

4.5 CONTINUOUS IMPROVEMENTS AND STATISTICAL PROCESS CONTROL (SPC)

Continuous improvements in the quality of products and/or processes are important to be a preferred external provider to MAK Controls. The external provider should maintain documented evidence of continuous improvement for review upon request by MAK Controls representative. One portion of any continuous improvement program should be the proper use of statistical methodologies. Statistical data shall be provided as required by the MAK Controls representative, as identified by the respective engineering drawing, applicable specifications or standards, and/or the purchase order.

Critical Characteristics:

Designated critical characteristics shall be subject to continuous ongoing Statistical Process Control. Other characteristics may be called out for initial or continues ongoing SPC control.

Customers generally select special characteristics (dimensions, material,) impacted by safety standards and/or critical to fit or function. Those are identified by symbols.

4.6 PROCESS RECORDS

Process records shall be maintained and be available for MAK Controls upon request. All records shall be retained for a time period of minimum 3 years after production end or for an agreed period of time.

As a minimum, during the production, the external provider shall maintain:

- Process change record
- Ongoing quality control records
- Production record

4.7 INFORMATION FOR EXTERNAL PROVIDERS:

MAK communicates the following to external providers its requirements through Purchase order / email / verbal communication:

a) The processes, products and services are provided including the identification of relevant technical data (e.g., specifications, drawings, process requirements, work instructions);

b) The approval of:
   1. Products and services;
   2. Methods, processes and equipment;

3. The release of products and services;

c) Competence, including any required qualification of persons;
d) The external providers' interactions with MAK;
e) Control and monitoring of the external providers' performance are applied by MAK;
f) Verification or validation activities that MAK, or the customer, intends to perform at the external providers' premises.
g) Design and development control;
h) Special requirements, critical items, or key characteristics through drawings / inspection plans;
i) Test, inspection, and verification (including production process verification);
j) The use of statistical techniques for product acceptance and related instructions for acceptance by MAK;
k) The need to:
   1. Implement a quality management system;
   2. Use customer-designated or approved external providers, including process sources (e.g., special processes);
   3. Notify MAK of nonconforming processes, products, or services and obtain approval for their disposition;
   4. Prevent the use of counterfeit parts (Ref.: Para 5.7);
   5. Notify MAK of changes to processes, products, or services, including changes of their external providers or location of manufacture, and obtain the approval;
   6. Flow down to external providers applicable requirements including customer requirements;
   7. Provide test specimens for design approval, inspection/verification, investigation, or auditing;
   8. Retain documented information, including retention periods and disposition requirements;
l) The right of access by MAK, their customer, and regulatory authorities to the applicable areas of facilities and to applicable documented information, at any level of the supply chain;

II) External provider's must ensure that the persons working are aware of:
   1. Their contribution to product or service conformity;
   2. Their contribution to product safety;
   3. The importance of ethical behavior.
   4. Awareness of Counterfeit parts

4.8 NON-CONFORMING PRODUCT CONTROL

If an external provider's parts are found to be defective the external provider will be notified by MAK Controls personnel to provide immediate containment and support to resolve the problem using the 8D format and Root Cause Analysis tools.

A most serious concern is when an external provider product/process shuts down a MAK Controls production line making delivery to a MAK Controls customer late. Any condition causing line shutdown and late shipment warrants the external provider's immediate action to eliminate the condition. The external provider is responsible to address containment of the problem at their facility, parts in transit, parts in MAK Controls stocks and at MAK Controls end customer(s), including Safety Stocks.

If requested by MAK Controls an external provider or an external provider hired third party company (can be directed by MAK Controls) may send in a team to sort parts in-house at the external provider expense. If MAK Controls must sort external provider parts in order to keep production supplied with defect free components, the External provider will be charged for the sorting cost. This charge may be applied to both components and finished assemblies in which the components are used. If an external provider defect causes MAK Controls finished product to be reworked or scrapped, all charges incurred will be the responsibility of the external provider. All other related costs will be charged to the external provider including eventual costs from MAK Controls customer.

1. If an external provider cannot implement a permanent corrective action to supply zero defects to MAK Controls and problems continue, MAK Controls will implement QIP- level 2 (Quality Improvement Plan). This is a containment process that will be implemented until the external provider has shown their ability to ship defect-free material on a continuous basis.

   A MAK Controls representative will follow up the containment actions. If another defect is discovered within this containment period, QIP-level 3 (New Business on Hold) will be implemented at the External providers' expense. The QIP process is not designed to penalize our external provider, the purpose is to prevent any non conforming part to be delivered to MAK Controls and to assist our external provider's efforts to achieve the 0-defect quality level.

   If an external provider detects non-conforming product prior to shipment to MAK Controls, the external provider must immediately determine the extent of the problem and take action to correct the problem. If suspect material has been shipped, the external provider must notify all user plants and implement all necessary actions to prevent the material being used in MAK Controls production.

   Any rework or repairs to suspect material must be conducted in a controlled manner that assures that the reworked or repaired product meets MAK Controls

specifications. Written instructions should detail the rework or repair, the re-inspection of reworked product and the return of this product to normal production flow.

A formal deviation request from the external provider must be sent to MAK Controls, and an approval must be received from the user plant before any reworked material is shipped to MAK Controls.

A copy of the Customer complaint will be distributed to the external provider when defective material has been found, initial response with initial containment must be completed and returned latest within 24 hours, and long-term actions must be defined and reported within 7 calendar days unless otherwise agreed. The external provider is expected to implement all necessary actions to close the 8D within 30 calendar days unless otherwise agreed. The external provider will be notified if any aspect of the 8D report is not acceptable and will be required to resubmit the updated report in a timely fashion.

An External provider complaint may also be issued for other reasons.

Some examples include, but are not limited to;

1. Repeated early or late delivery, or late delivery without prior notification.
2. Repeated over/under shipments.
3. Incorrect items sent.
4. Inadequate or incorrect containers/packaging received without authorization from MAK Controls.
5. Lack of shipping and/or certification paperwork.
6. Lack of timely response to External provider complaints.

4.8.1 ESCALATION PROCESS

It is an External provider responsibility to monitor timing for the definition and implementation of request for corrective action

Where a External provider does not respond to the request for corrective action in the planned times, and “Escalation process” will be initiated from MAK controls to the External provider top management.

4.8.2 SUSPENSION OF MAK APPROVAL

If surveillance audits corrective action and other actions taken to address risks do not solve a persistent critical situation such as:

- Production process that does not guarantee repetitiveness.
- Manufactured parts not traceable
- Incorrect measurements made
- Increase of defects on MAK Critical parts before delivery to the customer
- Repetitive reports from customers of defects on critical parts / Non critical parts.

MAK may suspend the approval granted to the interested **External providers.**

The **external provider** shall submit a detailed plan of improvement actions and provide evidence of its implementation and effectiveness.

The suspension period is defined by MAK on a case by case basis.

4.9 EXTERNAL PROVIDER REQUEST FOR CHANGE APPROVAL

No change on the product, process (including production location) or sub-external provider is allowed without written MAK Controls approval. The external provider must send a notification specifying the change to MAK Controls. MAK Controls will then investigate the possibility to implement the change and will inform the external provider when a decision has been taken.

Note: MAK shall approve alternative materials/Process prior to starting manufacture.

4.10 PACKAGING AND SHIPPING REQUIREMENTS

Externally Provided Products (BOI):

The external provider shall pack, label and ship products according to the agreed PO packaging instruction and shipping agreement. If not specified, External provider shall follow the best commercial rules.

Externally Provided Process (SCM):

The external provider shall be provided with duly filled Material Identification tag and ship products according to the agreed PO packaging instruction and shipping agreement. . If not specified, External provider shall follow the best commercial rules.

4.11 MATERIAL SAFETY DATA SHEET

A material safety data sheet in accordance with national / international guideline must be sent and approved by the receiving plant before delivery, of any chemicals used in production processes is allowed.

4.12 PRODUCT / RAW MATERIAL TRACEABILITY

All External providers to MAK Controls must have an identification system that distinguishes one lot/batch/part from another when shipping finished product.

Each lot/batch/part of material should be clearly identified on the product (where applicable) according to the part drawing or as agreed if not specified on the drawing, and on the product packaging.

The traceability system must comply with the FIFO (First In – First Out) principles for incoming and outgoing material.

4.13 TOOLS & GAUGES LABELING

All Tools and Gauges, property of MAK Controls, or belonging to MAK Controls on the behalf of MAK Controls Customers, must be properly labelled by the external provider according to MAK Controls requirements.

SECTION 5: REQUIREMENTS FROM EXTERNAL PROVIDER

5.1 EXTERNAL PROVIDER EVALUATION PROCESS

5.1.1. SCOPE

The scope of evaluation of performance aims to recognize, and develop reliable external providers, so that they consistently meet or exceed expectations and requirements.

5.1.2. PURPOSE

To provide for the evaluation and approval/disapproval of external provider quality system who provide services or materials/products to MAK Group.

5.1.3. METHODOLOGY

External Provider is evaluated with their experience / verification of similar supplies to related application / based on Quality system approvals (Like ISO Certified Company.)

For outstation External Providers' External Provider evaluation report obtained through fax / mail.

Customer designated External Providers need to satisfy the requirements of the MAK organization.

External Provider evaluation for Technical parameters is done by SCM Team together with Quality Assurance if required in the below specified format.

MAK Unit-2	**Documented Information of External Provider Evaluation**	MAK/SCM/QR/02 Sheet 1

External provider Name & Address:	Contact person	
	Contact no.	
	e-mail id	
	Website	

Item covered in the scope of evaluation : As indicated in Sheet 2 (No. Of items: _____)

External provider category : Manufacturer ☐ Distributor ☐ Dealer ☐ Other ☐

Evidences recognition by external body : QMS _____ Valid till____/____/

AQMS _____ Valid till____/____/

OTHERS _____ Valid till____/____/

Experience in the Business (Started from) :

Annual turnover (optional & approx.) :

	Evaluation traits.	Weightage	Evaluation Points	Score	**Assessment Criteria**	
1	External provider's facilities, Locations	5			< 50%	Poor
2	Production, Process, Distribution & Delivery capabilities	10			> 50 <70%	Good
3	Engineering / Innovation Skills and Technical Capability	10			> 70 < 90%	V. Good
4	Adherence to Quality Systems for deliverables and its records for traceability	10			> 90% <100%	Excellent
5	**Recommending alternatives for cost reduction / Provide value addition for their existing cost.**	5				
6	Reputation, Financial Strength and Stability	5			**Evaluation Points** Minimimum - 1 Maximum - 10	
7	Willingness, Transparency in cost calculations and business process	5				
8	Service support and their response during our complaints.	10				
9	**Delivery of Products consistently as per our delivery requirements.**	15				
10	**Delivery of Products consistently as per quality requirements**	15			**Approval Criteria** Condition for Eligibility for approval : Overall Rating >50%	
11	Partnership Approach	5				
12	Integrity	5				
		100				
		Overall rating (in %)				

Risk assessment:	**Nil**	**Low**	**High**	**Remarks**
Supply of Counterfeit Parts				
Product Quality				
Delivery				

External provider : Approved ☐ Conditional Approved ☐ Disapproved ☐

Date of Evaluation: ____/____/____ **Next Re-Evaluation Date: ____/____/**

Assessed/Evaluated by:	**Reviewed by :**	**External provider 's concurrence**
Scm Engg. / Asst.	**Scm Manager / Officer**	**Name:**
Name:	**Name:**	**Designation:**
		Signature:
Signature:	**Signature:**	**Seal:**

MAK/SCM/F/02

MAK Unit-2	Documented Information of External Provider Evaluation	MAK/SCM/QR/02 Sheet 2

External provider Name & Address:

Item covered in the scope of evaluation :

S.No.	Product Group	Product Family	Product Evaluation		Reference Document Number to evaluation
			Yes	NO	

Assessed/Evaluated by: Scm Engg. / Asst. **Approved by : Scm Manager / Officer**

MAK/SCM/F/02

5.2 PROCESS AUDIT

5.2.1. SCOPE

To verify the external provider process flow and quality performance during the component/product manufacturing. Process audit is planned at a frequency of once in a year.

5.2.2. PROCEDURE

External Provider process audit is done by Quality Assurance Team with the specified format. The audit check points are given below.

MAK CONTROLS AND SYSTEMS (P) LTD,COIMBATORE - 14.

SUPPLIER QUALITY System Assesment Report

Suplier Name & Address :

Date of audit :

Auditee : (Supplier representative)

Audited by :

Signature :

Signature :

Result of Evaluvation

Area of Evaluvation

Overall Evaluvation Score

Score in %

No of items Graded "0"

Verification of action taken on the previous audit observation :-

Audit guide line for Grading :	**Grade**
Supplier does not have any knowledge about this	0
Supplier has knowledgge but,has not implemented	1
Supplier has knowledge but,has only 50% implemented	2
Supplier meets the requirement	3

SUPPLIER EVALUATION-PART-I

Sl.no	Audit check points	Grading						Remarks
		0	1	2	3	NA		
Document Control								
1	Is there any system for updation of part drawing /process documents etc.?							
2	Does the Supplier preserve drawings and specification provided by us and ensure that latest drawings/specifications are followed?							
3	Are special characteristics symbol, where applicable,shown on process control plans and other pertinent documents reviewed & given special focus?							
Purchase Data								
4	Comparison of drawing status with purchase order							
Customer supplied parts								
5	Does the supplier examine and keep record for supplied materials/toolings and equipment?							
6	Does the supplier have provision for storage,protection and usage of supplied products							
7	Does the supplier have means to identify and report damages or losses of material/Gauges/Tooling/Equipment?							
Incoming material control								
8	Is check list for incoming inspection available?							
9	Status of incoming material i.e properly identified							
10	Is rejected and quarantied material identified and kept separately/properly from deterioration							
11	Is there adequate facilities for inspection/testing available in accordance with the requirements of the operation/Product/Control Plan?							

Calibration										
12	Is there a master list of gauges/inspection fixtures and instruments?									
13	Are they calibrated based on calibration plan									
Finished Product Quality Audit										
14	Are quality plans for finished products available?									
15	Are sampling plans available?Does it meet with requirement & standard									
16	Are Quality record maintained/Preserved?(It could be pre Dispatch Inspection Report)									
17	Is product release authority defined?									
5S										
18	Are methods of in-plant movements and material handling satisfactory?									
19	Are various production shops and inspection points clean,adequately lighted and ventilated?									
20	Are there any plan for preventive maintenance of machines?									

SUPPLIER EVALUATION PART - II

Sl.no	Audit check points	Grading					Remarks
		0	1	2	3	NA	
Traceability and product identification							
21	Is there a system of idendifying the products from the stage to receipt and during all stages of manufacture up to delivery and customer return?						
Handling ,storage,packing,preservation							
22	Is there a system for proper handling and storage of material / products to prevent damage and deterioration?						
23	Are the parts / products adequately protected to avoid damage / rust?						

Process quality control											
24	Does control plans / work instruction exist for every part as per operations?										
25	Does supplier have a detailed process card for all parts.										
26	Does the supplier perform PFMEA and all customer rejections captured as failure mode at a minimum?										
27	Is there a system of first off approval or patrol inspection does it conform to control plan requirements?										
28	Is there a system of in process inspection as per control plan through the production?										
29	Are rejected items identified and kept separately?										
Special process control											
30	Is there a list of special processes?										
31	Are all special processes qualified?										
32	Are persons performing special processes qualified?										
33	Is there re-validation program in place for special processes?										
Personal qulaification											
34	Training plan & training details										
35	Skill matrix available										
Statistical process control											
36	Is the supplier aware of SPC techniques?										
37	Is the supplier following SPC for special characterictics?										
Non conformance											
38	Are records for non -conformances available?										
39	Is corrective action taken on such occurrence?										
40	Is there a effective communication system from supplier on customer complaint?										

41	Is non-conformance reviewed periodically with a plan to prevent recurrences?																
Environmental and safety																	
42	Usage of PPE (Personal protection equipment) at the shop floor																
43	Adherence to statuatory and regulatory norms																
44	Awareness about noise,land,water and air pollutions																
Remarks :-																	
Improvements :-																	

5.3 RAW MATERIAL TRACEABILITY

5.3.1. SCOPE

Easy to identify the product throughout the production and service provision process.

5.3.2. PURPOSE

Traceability requirements include:

a) The identification to be maintained throughout the product life;
b) The ability to trace all products manufactured from the same batch of raw material, or from the same manufacturing batch, to the destination (e.g., delivery, scrap);
c) For an assembly, the ability to trace its components to the assembly and then to the next higher assembly;
d) For a product, a sequential record of its production (manufacture, assembly, inspection/verification) to be retrievable.

5.3.3. PROCEDURE

During the component manufacturing the below steps to be considered for raw material traceability

a) Procurement
b) Certification
c) Identification
d) Storage
e) Distributions
f) Traceability

External provider shall supply the materials to MAK controls with raw material/Product identification details along with component and inspection report/CoC.

MAK QA team will review and provide the below stamp on the manufacturer test reports.

Sample				
External Provider Name	:			
Project name/Project code	:			
Raw material used for	:	Base frame	Canopy	Diesel tank
No of Qty. produced	:	5	2	3
Heat no	:			
Test report verified by with stamp	:			

Note: Metallic material shall be identified in accordance with the requirements of the relevant specification (Heat/Lot/melt number as applicable), with the manufacturers identification permanently marked on the raw material as follows

- **All length of a metal bar are permanently marked**
- **Small diameter metal bar is identified by batch ,using a metal tag or label**
- **Sheet material is marked in lengthwise rows, recurring at intervals not greater than one metre,with one central row and two side rows, spaced equal distance from the centre line to the edge of the sheet**

5.4. INSPECTION REPORT

Inspection report is one of the important documented information in the component manufacturing. The external providers shall submit the inspection report along with the each and every component (except Laser cutting and bending parts)

5.4.1. PROCEDURE

a) Purchase order has to be prepared and sent to the concerned external provider along with Controlled copy drawings.

b) The external provider shall process the components as per the approved drawings.

c) After that the Pre-inspection report was prepared by the external provider based on the MAK Inspection Plan. The Inspection plan / Acceptance Test Procedure / Qualification Test Procedure copy is sent to the external provider thru Purchase / Supply Chain Management.

d) The inspection plan is contained with below said details

- Drawing no. with revision no./Description
- Project
- Dimensional parameters with tolerance
- Instruments used
- Special instructions

e) The format of Inspection plan and Random sampling plan copy is attached below

INSPECTION PLAN SCM

MAK/QA/QP 07

☐ **Prelaunch** ☐ **Prototype** ■ **Production**

Description		Product chief	
Drawing No / Rev No.		**CFT Members**	
Project		Design	
Material		SCM	
Inspection plan no	MAK/QA/IP/XXXX	Quality	
Revision no		Date	

Sl. No	Characteristics	Parameter	Dimension	Inspection method	Checking frequency	
					Inspector	In charge
1	Critical			Vernier Caliper 0-300mm; L.C=0.02mm	100%	Sampling plan
2				Measuring Tape 5m; L.C=1mm		
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Special instructions :

1.Component should be free from burr, sharp edges & physical damages

2.Rust preventive oil must be applied on Plated & grounded parts

Prepared By Name			Approved By Name	
Signature			Signature	
Date			Date	

MAK/QA/QP F 07 c

Page **1** of **1**

RANDOM SAMPLING TABLE

MAK/QA/QP 03

Revision no: 3

INSPECTION LEVEL	LOT QTY	2 – 8	9 — 15	16 — 25	26 — 50	51 — 90	91 – 150	151 – 280	281 – 500	501 – 1200	1201 – 3200	3201 – 10,000	10,001 – 35,000	35,001 – 1,50,000
S1	N	5	5	5	5	5	5	5	5	8	8	8	8	13
	C	0	0	0	0	0	0	0	0	0	0	0	0	0
S4	**N**	**5**	**8**	**8**	**8**	**8**	**13**	**20**	**20**	**20**	**80**	**80**	**80**	**80**
	C	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**1**	**1**

Plan prepared by Name:

Signature:

Date:

Plan Approved by Name:

Signature:

Date:

NOTE:

N = No. of samples. C = Acceptance No.

1 Select the samples randomly from various pieces within the batch/lot
2 In case of multi layer stacking select from different layers
3 where sample size is > or = lot size check 100%
4 Ref.doc.IS 2500 part 1 2000

Decision Rule:

1 Accept the lot if the number of defective found is less than or equal to the corresponding Acceptance number (C)

2 Reject the lot for segregation / Rework if the number of defective found is greater than the corresponding Acceptance Number.

5.5. FIRST ARTICLE INSPECTION

5.5.1. SCOPE

Applicable for inspection / approval of First Article (First sample) for externally provided products, externally provided processes or Assemblies & Sub-Assemblies.

5.5.2. PURPOSE

First Article inspection is carried out on those items which are of

a) New design / Changed design,
b) New external provider,
c) New process / New method of in-house processing, to ascertain
    1. Compatibility for our product design;
    2. Fitness / assembly matching
    3. Functional impact

To review / evaluate the need for determining & implementing appropriate action for effectiveness thus ensuring that non-conformities do not occur throughout production and service provision process.

5.5.3. PROCEDURE

5.5.3.1. INPUT

The critical components / Assembly / Sub-Assembly which need First Article Inspection are identified by Design dept. and communicated to Production, SCM, purchase, and QA departments while releasing Bill of Material. In case of externally provided products where there is no drawing made available, the specifications and test parameters as per catalogue, test procedure etc. are communicated to concerned departments (Purchase, QA) by Design department. Based on this, Inspection plans / Test plans are prepared by QA dept.

5.5.3.2. FAI-EXTERNALLY PROVIDED PRODUCTS / ASSEMBLY / SUB-ASSEMBLY

Purchase dept., while ordering the item / Assembly / Sub-Assembly verifies the bill of material for the requirement of FAI and selects the potential external provider either from approved list or new. The requirement of FAI is communicated to external provider through purchase order to send the item along with their inspection / Test reports. On receipt of the item the requirement of FAI is indicated through DC (Stamped as FAI) / GRN. (Printed as FAI). In case of new external provider, the item / Assembly / Sub-Assembly after verification at inward stage is accepted subjected to final assly & testing. Upon satisfactory results, external provider is brought under approved list for continuous procurement. When the subsequent procurement is interrupted for more than 2 years the action for FAI is initiated even though the item / external provider is same.

5.5.3.3. FAI- EXTERNALLY PROVIDED PROCESSES, IN-HOUSE PROCESSED ITEM/ ASSEMBLY / SUB-ASSEMBLY

Production, SCM identifies the item / Assembly / sub-assembly for the requirement of FAI through Bill of material and selects the potential subcontractors from approved list in case of outsourcing and machinery in case of in-house. The capability of subcontractor / machinery for supplying / manufacturing the pertinent item is verified. In case of new subcontractor, the capability is totally assessed (Ref: MAK/SOP/05). The requirement of FAI is communicated to subcontractor / in-house while placing the order to send the item along with their self-Inspection/ test report. On receipt / completion of the item the requirement of FAI is indicated through DC (Stamped as FAI) / GRN. (Printed as FAI) / Process card (Stamped as FAI)

5.5.3.4. FIRST ARTICLE INSPECTION / VERIFICATION

QA dept. receives the communication of receipt of the item for verification/inspection through DC or GRN (or verbal / through mail in case of immediate production needs). On receipt of communication, QA verifies the requirement of FAI through DC or through GRN. (Or through BOM in case of verbal / mail communication).

In case of externally provided products, the external provider test certificate is verified against supply requirement conditions. The samples (maximum 5 No's if the batch quantity is more than five) are inspected as per test plan / test specification and same is verified against the external provider test reports. Where there are requirements of functional test on externally provided products, the items are accepted subject to final assembly test results. Accordingly, GRN / DC's are closed with remarks as 'Accepted subject to assly / test result'.

In case of externally provided processes, the sample quantity is taken from the batch (maximum 5 No's if the batch quantity is more than five) and inspected as per drawing for all dimensions and recorded. The measurements compared with external provider self-inspection reports and verified. In case of any deviations the differences are sorted out with external provider and appropriate decision is taken. GRN / DC's are closed accordingly.

The accepted items are sent to stores with Identification tag indicating as 'FAI OK' with details of project / product, W.O No., external provider, FAI report No. etc for traceability purpose.

The Non-Conforming Item if any, are kept separately with appropriate remarks and resolved through CFT review (either to accept under concession, or rework, or reject).

FAI documented information is retained by QA (ref: MAK/SOP/13) QA. Copy of the same is forwarded to Design, Purchase. Production depts.

MAK CONTROLS AND SYSTEMS PRIVATE LIMITED.,COIMBATORE - 641 014	MAK/QA/QR 19

FAI FORM - 1

PART NUMBER ACCOUNTABILITY			Report No :	
First level Identification			Page No :	01 of 03
Part/Drawing Number	Part Name/Nomenclature	Drawing Rev	Part number	Serial Number
Order No / Job No :	Project Name		PO Number	
FAI Status				
☐ Assembly ☐ Full	Base Line part No. Including revision level / FAI Report No			
☐ Detail (primary) ☑ Partial	Reason for Partial FAI	-		

Index of part number or sub-assembly number required to make the assembly noted above

S. No	Part Number	Part Name	Serial Number	Order/Job No.	FAI Report No
FAI Complete	☑ FAI Complete		FAI Not Complete	☐ FAI Not Complete	

Reason for not complete :

Signature

Manufacturing		Reviewed by:	Approved by:
Prepared by		Final Acceptance	
Name:		Name :	Name:
Date:		Date:	Date:
Signature:		Signature:	Signature:

Notes :

If the product is a primary part , go to Field Drawing No.

If the product is an assembly, go to the Index section

	MAK CONTROLS AND SYSTEMS PRIVATE LIMITED., COIMBATORE - 641 014	MAK/QA/QR 19
	FAI FORM - 2	Report No :
	Product Accountability	Page : 02 of 03

Raw Material, Specifications and Special Process(es), Functional Testing

Part Name / Nomenclature	Part / Drawing Number	Serial Number	Part number	Project Name	
Material or Process Name	**Specification Number**	**Ref**	**Special Process Supplier Code**	**Customer Approval Verification (Yes/No/NA)**	**Certificate of Conformance number**

Functional Test Procedure Number (ATP)	Acceptance report number (ATR), if applicable

Comments :

Prepared by		Reviewed by		Approved by	
Name:		Name:		Name:	
Date:		Date:		Date:	
Signature:		Signature:		Signature:	

MAK CONTROLS AND SYSTEMS PRIVATE LIMITED.,COIMBATORE - 641 014					MAK/QA/QR 19
FAI FORM - 3				Report No	
Characteristic Accountability, Verification and Compatability Evaluation				Page No	03 of 03
Part/Drawing Number	Part Name/Nomenclature		Serial Number	Part number	Project Name
Characteristic Accountability			Inspection / Test Results		
Char No.	Reference Location	Characteristic Designator	Requirement	Results	Designed Tooling	Non Conformance No
Comments						
Prepared by		Reviewed by		Approved by	
Name:		Name:		Name :	
Date:		Date:		Date :	
Signature:		Signature:		Signature:	

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5.6. SPECIAL PROCESS AUDIT

Audit for special processes are planned at a frequency of once in a year for the following special processes

1. Welding
2. Plating

5.6.1. WELDING

The below types of welding can be checked during the audit

1. GMAW (Gas Metal Arc Welding)
2. SMAW (Shielded Metal Arc Welding)
3. GTAW (Gas tungsten Arc Welding)

5.6.1.1. PURPOSE

The process of qualifying the welder is to ensure that the welder and the welding procedure are compatible. This process inspects the welder under test conditions to weld an item using a specified welding position, with specified consumables and materials, travel speed and amps and volts. The audit of the welder to pass the test may include x-ray; visual or mechanical testing and will prove the capability of the welder to perform in the field in accordance with the required specifications.

5.6.1.2. WELDING INSPECTION

Welding inspection is carried out to ensure the fabrication process has been done in accordance to the specification. This may include checking the welder has been qualified, the welding procedure and parameters are correct for the material being welded, the welding consumable has been prepared correctly, and a range of other checks that need to be carried out to ensure quality control in the process. Welding inspection also requires the traceability and documentation to be completed.

5.6.1.3. PROCEDURE

a) 300x150 mm Sample size is selected for welder qualification.

b) Thickness will be considered based on the supply to the MAK controls by the external provider **(Otherwise generally 6 mm thickness will be used for this test)**

c) MAK QA representative will be visit at external provider place and conduct the test by external provider in front of MAK rep.

d) MAK rep. was checked the below said process parameters during the welding

- Electrode size / Wire diameter
- Input (Amps)

- Current as per std. meter reading
- Error between Input and Std. meter reading

d) After that the welder has to be welding the sample as shape of T Joint

e) After welding spatters and flux to be cleaned

f) The finished sample was checked the below said tests

- Dye Penetrant test will be carried out by NDT Level -II inspector
- Fracture test will be carried out at NABL lab
- Macro test will be carried out at NABL Lab

e) **Acceptance criteria**

For Dye Penetrant test – No recordable indications required (Should not allowed the following defects Like Crack, Blow holes, Porosity Etc.,)

Fracture test – Weld surface shall be free from cracks, incomplete root fusion, Inclusion and porosity etc.,

Macro test – Weld metal and HAZ (Heat Affected Zone) area should show complete fusion and free from cracks and defects.

f) Based on the above test results the external provider was approved/Disapproved by MAK.

g) If the external provider is not supplied the components to MAK continuously up to 6 months the validation process is repeated again and process approval is recd. by MAK for further supplies

h) MAK will issue welding process qualification report as per the below specified format.

PRODUCTION PROCESS	RECORD OF WELDING PROCESS QUALIFICATION FOR EXTERNAL PROVIDER (EQUIPMENT)	Date:

NAME OF THE EXTERNAL PROVIDER:

EQUIPMENT DATA:

M/C NO:
MAKE/ SL.NO:

PROCESS(Type of welding):

OPERATOR:

QUALIFICATION TEST TRIAL :

Specimen Material	Welding Direction (position)	Process parameter				Acceptance criteria	Test specimen result	Remarks
		Electrode Size/ Wire Diameter	M/c Setting (Amps)	Current as per std meter reading	Error			
I. Specimen for Fracture Test								
II. Specimen for Macro Test								

Result:

Conclusion:

Date: **Test conducted by** **Equipment Approved by**

	RECORD OF WELDING PROCESS QUALIFICATION (EXTERNAL PROVIDER)	Date:
PRODUCTION PROCESS		

Name of the External Provider:

Name of the Welder:

Basic Education :

Experience :

Technical Education (if any):

QUALIFICATION TEST :

Type of welding :

Welding test specimen size :

Equipment :

Trait Sl No.	Qualification traits	*Points scored (10 point scale Assessment)	Evaluation criteria
1	Able to understand welding symbols in drawing		Total point Scored : Max. point achievable: % scored:
2	Able to select correct welding electrode		
3	Able to select the appropriate material as per drawing/process/Instructions		Qualification criteria: Total point achieved divided by the total point achievable should be more than or equal to 60 % and individual score on each trait should be min.5
4	Able to set the machine parameters as required for the process		
5	Understands the quality requirements on welded joints for the required application		
6	Understands the safety precautions of welding		
7	Practicing the usage of recommended safety appliances during welding		*Note: Assessment point starts at 1on Lowest skill & progressively increases to 10 at highest skill.

Result: Total points scored:

Result of Test Specimen Welded by concerned person : Satisfactory ☐ Not satisfactory ☐

CONCLUSION:

Date: **Qualification test conducted by** **Approval by**

PRODUCTION PROCESS	RECORD OF WELDING PROCESS QUALIFICATION FOR EXTERNAL PROVIDER Results of Test specimen	Date:

Personnel Details

Name of the External Provider :

Welding carried out by (Name of welder) :

Basic Education :

Technical Education (if any) :

Experience :

Qualified for Welding : Yes ☐ No ☐

Equipment/Machine Details

Welding Equipment / M/c No. :

Equipment Qualified : Yes ☐ No ☐

If yes Record No. / Test certificate No :

Method

Test Specimen:

Process Setting:

Welding position/Direction:

Welding rod used in the process:

Test Results:

Tests carried out	Results Achieved Reference	Acceptance criteria
1. Fracture Test		
2. Macro Test		
3.Visual		
4.DP Test		

Result: Satisfactory ☐ Not satisfactory ☐

CONCLUSION:

Date: Test conducted by Approval by

5.6.2. PLATING

The below types of plating process can be checked during the audit

1. Zinc plating (Blue and yellow Passivation)
2. Hard chrome plating
3. Nickel chrome plating
4. TIN Plating
5. Copper plating
6. Silver plating

5.6.2.1. PURPOSE

Plating is a special process. Because it is used to provide the aesthetic of components and prevent free from corrosion. So we can validate the plating process frequently to avoid the mistakes.

5.6.2.2. PROCEDURE

a) Plating Input's are given in the MAK drawing (Like Type of plating, Plating color, Plating thickness Etc.,)

b) External providers are processed as per the MAK Drawing specifications and plating standards.

C) After that MAK QA rep. will visit the external provider place (Yearly once) and select the samples from the manufacturing lot for Inspection purpose.

d) The selected samples are sent to a NABL Laboratory for salt corrosion test up to 100Hrs as per the Test standard ASTM B117-16 .

e) **The Acceptance criteria are, No sign of corrosion noticed up to 100 Hrs.**

f) Based on the salt corrosion test report the external provider was considered as Approved/ Disapproved.

g) If the external provider is not supplied the components to MAK continuously up to 2 Years the validation process is repeated again and process approval is recd. by MAK for further supplies.

5.7. COUNTERFEIT PARTS

5.7.1. SUSPECT PART:

A part in which there is an indication by visual inspection, testing, or other information, that it may have been misrepresented by the external provider or manufacturer and may meet the definition of counterfeit part.

5.7.2. COUNTERFEIT PART:

A suspect part that is a copy or substitute without legal right or authority to do so or one whose material, performance, or characteristics are knowingly misrepresented by an external provider in the supply chain.

Examples of counterfeit parts include, but are not limited to:

- Parts which do not contain the proper internal construction consistent with the ordered part.
- Parts which have been used, refurbished or reclaimed, but represented as new product.
- Parts which have different package style or surface plating/finish than the ordered parts.
- Parts which have not successfully completed the OCM's full production and test flow but are represented as completed product.
- Parts sold as up screened parts, which have not successfully completed up screening.
- Parts sold with modified labeling or markings intended to misrepresent the part's form, fit, function or grade.
- Parts which have been refinished, up screened, or updated, and have been identified as such, are not considered counterfeit.

MAK purchase order contains following terms and conditions regarding counterfeit parts.

- Supplier (External provider) shall ensure that Goods conform to the requirement of the Purchase order and that counterfeit goods are not delivered to MAK.
- Supplier (External provider) become aware of or suspect that it has acquired counterfeit goods, the external provider shall as soon as practicable notify MAK in writing. The external provider shall provide documentation that authenticates the affected goods and, where applicable, provide traceability of the sourcing route. The external provider shall support MAK in any investigation to support resolution of any suspected or affected counterfeit goods.
- If Goods delivered constitute or include counterfeit goods, the external provider shall, at its expense promptly replace such counterfeit goods, including without limitation MAK costs of removing counterfeit goods, reinserting replacement

Goods and any testing necessitated by the reinstallation of Goods after counterfeit goods have been exchanged.

- It may be noted that any disputes arising out of this order shall fall under the jurisdiction of Coimbatore Judicial Courts.

5.7.3. PURCHASING

The external providers of material or services are evaluated and selected based on (a) their ability to supply product or services that (a) meets requirements and (b) their risk of supplying counterfeit parts. Parts are always purchased directly from OCMs or from manufacturer's authorized external providers for MAK.

MAK's supply chain maintains a listing of approved external providers within its system.

Procurement assurance processes for avoiding counterfeit product begins when the customer requests a quotation for a product. In this way MAK is alerted to a customer's requirement.

MAK investigates through reporting sources such as ERAI (erai.com) for alerts of suspect counterfeiting incidents and include, but not limited to:

- Marking inspection
- Verify engraving or silk-screening type
- Check for component wear
- Component is compared to a photo of the approved component
- If a ball grid array (BGA) component, then inspection with a microscope

External provider's approval and source selection considerations include:

- The external provider is ISO certified.
- The external provider is on the customers list of approved External providers for the specific material - automatic approval.
- Length of time the external provider has been in business- consideration.
- The sources demonstrated adherence to applicable provisions of AS5553- consideration.
- Membership in associations with rigorous business, ethical, and quality standards intended to avoid acquiring and reselling counterfeit goods.

Purchasing may place a trial order. Purchasing orders, the material or item, receiving inspects the material. If the results are not acceptable, the product is controlled according to nonconforming procedures.

Supply chain and quality management evaluates external providers to assure that approved/ongoing sources of supply are maintaining effective processes for mitigating the risks of supplying counterfeit electronic parts and to evaluate overall performance using the following criteria:

Criteria include:

- Meeting specifications
- On time delivery
- Correct quantity
- Quality and condition (including absence of counterfeit evidence)
- Competitive pricing

When a product or service provided does not meet the requirements of the order, purchasing or quality may initiate a external provider corrective action request.

Purchasing documents specify contract/purchase order requirements to minimize the risk of being provided counterfeit parts. These documents may contain, where or when appropriate:

j. Requirements for approval of product, procedures, processes, services, and equipment.
k. MAK quality management system requirements.
l. If applicable, requirements for design, test, examination, inspection and related instructions for acceptance by the company.
m. Requirements for the external provider to notify the company of changes in product or process definition, and to obtain approval where required.
n. Product traceability, when applicable.

Purchasing staff reviews the information to make sure it is complete, and reviews the approved external provider list to make sure the specified external provider has been evaluated and accepted. If not evaluated and accepted, the external provider cannot be used unless the supply chain manager decides to initiate a trial order pursuant to the above section.

5.7.4. VERIFICATION OF PURCHASED PRODUCT

Purchased product is verified before use to assure detection of counterfeit parts prior to formal acceptance. The rigor of the verification process shall be commensurate with product risk. Product risk is determined by the criticality of the part and the assessed likelihood of receiving a counterfeit part. Receiving checks the order against purchasing documents to verify the identification, quantity and condition of the items in the order.

Verification may include:

- Obtaining objective evidence of the quality of the product from external providers through documentation, certificate of conformity, test reports etc.
- Inspection or audit at the external provider's premises.
- Review of required documentation.
- Visual inspection of products upon receipt.
- X-ray, non-destructive evaluation and destructive testing.

Material Control

If material is identified to be counterfeit, MAK will contact the external provider furnishing the material and provide any MAK data supporting the counterfeit nature of the material. MAK will discuss options with the external provider for disposition of the affected material in order to prevent re-entry into the supply chain. This may include:

- Upon mutual agreement, destruction of the material by MAK to render it unusable in any form and documentary evidence provided to the external provider.
- Return material to the external provider and request evidence of disposition to prevent re-entry into the supply chain.
- Reporting the incident to any agencies/bodies about the incident in order that other users at large may become aware of the existence of the material in question and review their own supply chain for any risks as applicable.