IEC Quality Assessment System, IECQ

IECQ Counterfeit Avoidance Programme assessment, evidence of compliance, summary and assessment reporting form – Anti-counterfeit traceability audit for any industry segment
IECQ OPERATIONAL DOCUMENT

IEC Quality Assessment System, IECQ

IECQ Counterfeit Avoidance Programme assessment, evidence of compliance, summary and assessment reporting form – Anti-counterfeit traceability audit for any industry segment
INTRODUCTION ........................................................................................................................................... 3

1 Scope and application ......................................................................................................................... 4
2 Technical requirements (objectives) – Principals .............................................................................. 4
3 Instructions for use by IECQ CBs ..................................................................................................... 5
   3.1 General ........................................................................................................................................... 5
   3.2 Traceability audit process ............................................................................................................ 5
      3.2.1 ISO 9001 organizations ........................................................................................................ 5
      3.2.2 AS/EN/JISQ 9100 organizations ......................................................................................... 6
      3.2.3 Table 2 and 3 audit checklist columns ............................................................................. 6
4 Acronyms ............................................................................................................................................ 6

Annex A Trade association and external anti-counterfeit inspection standards ................................ 25
Annex B Optional preparatory activities ............................................................................................ 27

Figure 1 – Overview of traceability audit ............................................................................................ 7
Figure 2 – Traceability audit suggested uses in the supply chain ....................................................... 9
Figure 3 – ISO 9001 traceability audit .............................................................................................. 10

Table 1 – Summary of traceability audit ............................................................................................. 8
Table 2 – ISO 9001 traceability audit checklist see Figure 3 ............................................................... 11
Table 3 – AS/EN/JISQ9100 Traceability vertical audit checklist, see Figure 4 ............................. 19
Table A.1 – Trade association anti-counterfeit inspection standards and International Standards .......................................................... 25
Table B.1 – Optional preparatory activity ......................................................................................... 28
IEC QUALITY ASSESSMENT SYSTEM, IECQ

IECQ Operational Document 3702 –

IECQ Counterfeit Avoidance Programme assessment, evidence of compliance, summary and assessment reporting form – Anti-counterfeit traceability audit for any industry segment

INTRODUCTION

This Operational Document OD 3702 defines an IECQ Counterfeit Avoidance Programme traceability audit worksheet and reporting form.

The following worksheet supports the preparation reporting of the assessment. It is recommended that links to process documentation and compliance data be established by the applicant organization for presentation during the IECQ Counterfeit Avoidance Programme assessment. This worksheet shall be used to record and report the results of the assessment.

For the purposes of illustration, reference is made to ISO 9001:2015, AS/EN/JISQ 9100:2016 and NIGP 111.00.

The right column, “Record of compliance” of Table 2 and Table 3 is for the use of the assessment team to record their finding(s) for each of the IECQ Counterfeit Avoidance Programme requirements during the assessment. The column will also be a permanent record of any “judgement” decisions made by the assessment team during the assessment, and should be achieved by the original equipment manufacturer (OEM) and IECQ Certification Body (CB).

Document History

<table>
<thead>
<tr>
<th>Date</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 2023</td>
<td>Updated IECQ title</td>
</tr>
<tr>
<td>Nov 2017</td>
<td>Original issue</td>
</tr>
</tbody>
</table>

IECQ Secretariat c/o IEC Sydney Office
Angel Place, Office 1721, Level 17
123 Pitt Street, Sydney, NSW 2000 Australia
Email: info@iecq.org | Tel: +61 2 4628 4690 | https://www.iecq.org
1 Scope and application

This traceability audit mitigates the risk of buying counterfeit and fraudulent components (mechanical or electrical) and materials and can be applied to any organization, for example tier 1 customer, original equipment manufacturer (OEM), OEM subcontractor, distributor, sales outlet, etc. in any industry, see Figure 2.

2 Technical requirements (objectives) – Principals

This set of criteria is to be utilized by accredited Certification Bodies (CBs) to establish compliance and grant certification for an anti-counterfeit traceability audit for organizations in any industry segment for any component type (mechanical, electrical or material) see Figure 1 to the requirements of Table 1 which assist with complying with the applicant organization's:

- Response to ISO 9001 clause 6 “Actions to address risks and opportunities” where the receipt and use of counterfeit components of all types represents a risk.
- AS/EN/JISQ 9100D anti-counterfeit mitigation requirements, clause 8.1.4, where all counterfeit and fraudulent components and material are to be mitigated.
- AS/EN/JISQ 9110C anti-counterfeit mitigation where all counterfeit and fraudulent components and materials are to be mitigated.

This audit scheme can be used to mitigate against the counterfeit and fraudulent component risk in the following situations, see Figure 2:

- Components and material received into the airline repair centre from the tier 1 avionics customer or tier 1 OEM
- Components and material received into the OEM from the tier 1 avionics customer or supplied from the OEM to the tier 1 customer or from the airline repair centre
- Components and material received into the OEM for assembly from all sources
- Components and material sent to or bought back from the OEM’s subcontractor to the OEM
- Components or material received into the OEM’s subcontractor per the OEM’s original bill of material (BoM) from the OEM
- Components and material received into the OEM’s subcontractor from all sources
- Finished products received and sold by distributors
- Sales outlet products obtained from franchised sources or other sources and sold to customers

Table 1 summarizes this audit scheme, which is composed of:

1) Traceability audit:
2) A traceability audit, verifying and tracing the part number required to the part number on the purchase order (PO) to the part number and optionally the bar code and/or special tracking numbers received for any combination of materials, mechanical and or electrical/electronic components and assemblies for any market based on:
a) Figure 3 and Table 2 for ISO 9001 certified manufacturers, where goods inwards anti-counterfeit mitigation inspection can be based on industry specific trade association standards or relevant International Standards, see Annex A.

b) Figure 4 and Table 3 for AS/EN/JISQ 9100 certified manufacturers for the avionics industry, where goods inwards anti-counterfeit mitigation inspection can be based on relevant International Standards, see Annex A.

3) A review of the organization’s anti-counterfeit procedures to complete Table 1

4) Preparatory activities:
   a) It is recommended that the organization being audited conduct a review of their anti-counterfeit procedures and training records using the checklists herein and Annex B. The score achieved using Annex B is not part of this audit and is purely for the benefit of the applicant organization.
   b) The organization should arrange to have immediate access to the following during the audit:
      i) The product BoM or repair manual which invoke each part number to assist with determining all approved second sources and approved alternatives which could be accepted.
      ii) The manufacturer datasheets for each manufacturer or repair manual information to assist with identification of the correct logo, part numbers, moisture sensitive level (MSL) rating (if applicable), lead-free status and identification of the franchised distributors.
      iii) The PO for details of the part number ordered and shipping format e.g. tape and reel, supplied on a tray, tube, etc. with optionally bar code or shipping tracking numbers.
      iv) Suppliers traceability data.
      v) Visual inspection aids, for example x10 to x30 binocular inspection microscope to facilitate inspection of component markings, etc.

3 Instructions for use by IECQ CBs

3.1 General

Review the applicant organization’s existing quality system certificates. Check the certificates authenticity wherever possible, for example:

1) IQNET online database, see IQNET Members offering ISO 9001 (iqnet-certification.com) for ISO 9001 certificates

2) Oasis, see www.sae.org/?PORTAL_CODE=IAQG for AS/EN/JISQ 9100 and 9120 certificates

3) IECQ certificates on the IECQ website: www.iecq.org

3.2 Traceability audit process

Review the applicant organization's anti-counterfeit procedures per Table 1 in addition to the following:

3.2.1 ISO 9001 organizations

Select a component from an organization’s product BoM or catalogue and conduct the traceability audit by completing Table 2 checklist based on Figure 3.

Repeat for as many components as possible during the audit, typically 6 to 8 components.
3.2.2 AS/EN/JISQ 9100 organizations

Select a component from an organization’s product BoM or repair manual and conduct the traceability audit by completing Table 3 checklist based on Figure 4.

Repeat for as many components as possible during the audit, typically 6 to 8 components.

3.2.3 Table 2 and 3 audit checklist columns

**Audit question**: Questions for the specific flowchart item number being evaluated.

**Details of part number selected, PO number, etc.**: Enter the detail of the part number data, which is selected for the audit.

**Record of compliance**: Acceptable evidence that the criterion is being implemented and appropriate records being kept to demonstrate compliance. This column is for the IECQ Counterfeit Avoidance assessment team to record their findings and should include references to audit records, e.g. procedure references and revision, quality plan references, programme schedule references, management meeting minutes, reference numbers, training procedures and records, etc.

**Complies with clause**: Column for the IECQ Counterfeit Avoidance assessment team to record their finding of satisfactory compliance or not.

**NOTE** It is recommended that a copy of Table 2 and/or Table 3 is completed for each part number being audited.

4 Acronyms

a) BoM bill of material  
b) CB Certification Body  
c) CoC Certificate of Conformity  
d) ESD electrostatic sensitive device  
e) IECQ the International Electrotechnical Commission Quality Assessment System for Electronic Components  
f) IQNet the International Certification Network  
g) MBB moisture barrier bag  
h) MSL moisture sensitivity level  
i) MIL military  
j) OASIS Online Aerospace Supplier Information System  
k) OCM original component manufacturer  
l) OEM original equipment manufacturer  
m) OK all correct  
n) PO purchase order  
o) RoHS Restriction of Hazardous Substances (Directive)
Risk mitigations: e.g. sample verification tests for non-franchised buys

Industry segment recommended test methods e.g. from trade bodies or external standards bodies, see Annex A

Ordering priority for either OCM or franchised sources

Anti-counterfeit training

Verification of traceability paperwork, back to the original manufacturer

PO anti-counterfeit flow-down

Annex B optional capability activities

The traceability audit defined in the blue circles is a 3-way check with minimum organization anti-counterfeit procedures to ensure:

1. the manufacturer's part number of the component required is the same as part number received.
2. the manufacturer's part number ordered and is the same as the part number ordered.
3. the manufacturer's part number received with supply chain traceability back to the original manufacturer and adequate mitigations if purchased from a non-franchised distributor.

Annex B optional activities are rated on a score of 2 to 12 to indicate the robustness of the organization to mitigate against the use and supply of counterfeit or recycled components.
**Table 1 – Summary of traceability audit**

<table>
<thead>
<tr>
<th>Activity reference number</th>
<th>Activity</th>
<th>Notes to CB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Successful completion of the traceability anti-counterfeit audit</td>
<td>Audit per Table 3 or Table 4</td>
</tr>
<tr>
<td>2</td>
<td>Implementation of anti-counterfeit/recycling awareness training for all relevant personnel</td>
<td>Document evidence of an awareness training package being taught within the business</td>
</tr>
<tr>
<td>3</td>
<td>Prioritization of purchases to be from franchised or authorized suppliers instead of non-franchised distributors</td>
<td>Document evidence that the organization has stated a purchasing priority for franchised or authorized distributors (including franchised aftermarket distributors) with mitigations if purchased from non-franchised or non-authorized distributors</td>
</tr>
<tr>
<td>4</td>
<td>Implementation of standard PO requirements banning the receipt of counterfeit or recycled components into the business</td>
<td>Document evidence that every order placed by the organization has requirements to ban the receipt of counterfeit or recycled components</td>
</tr>
</tbody>
</table>
Figure 2 – Traceability audit suggested uses in the supply chain

- Traceability audit for any industry
- OEM’s assembly subcontractor
- Franchised or authorized distributor
- Sales outlet
- End consumer
- Encourage them to use authorized sales outlets
- OEM
- Tier 1 customer
- Airline repair centre
- ISO 9001 Clause 6.1 actions to address risk assessment
- AS/EN/JISQ 9100 and 9110 anti-counterfeit clause
- AS/EN/JISQ 9120 or SAE AS6496 anti-counterfeit
- Optional anti-counterfeit capability assessment per Annex B
- Traceability from OEM to the end customer shall be registered
Figure 3 – ISO 9001 traceability audit

NOTE 1 The part number and optionally the bar code and/or delivery tracking number can be verified in this traceability audit.
### Table 2 – ISO 9001 traceability audit checklist see Figure 3

Verification criteria of a selected part from a BoM - Complete this table for each part number selected during the audit

<table>
<thead>
<tr>
<th>Flow chart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Start</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Select a part number from a product BoM</td>
<td>Review the BoM of a product and select a part number (which is typically a company part number.)</td>
<td></td>
<td></td>
<td>Yes, No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NOTE Some businesses may not organize a system allocating their own part numbers to components and instead may use the OCM part numbers on the BoM. In this case the business must also identify the OCM for that component as many OCMs have identical part numbers, e.g. Fairchild 1N4148A and Vishay 1N4148A high speed diode where 2 different manufacturers use identical part numbers. The OCM for each component shall be identified. The audit cannot proceed if this is not clear. This is important for determining if the supplier used for ordering purposes is the franchised or authorized distributor.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2, 3</td>
<td>Are there alternative part numbers?</td>
<td>Identify any alternative part numbers. Are these alternatives approved and documented correctly?</td>
<td></td>
<td></td>
<td>Yes, No</td>
</tr>
<tr>
<td>4, 6</td>
<td>Review part number and supplier details</td>
<td>Where the business uses their company part numbers on the BoM, identify the OCM and their part number for that company part number. Identify the supplier. Does the company know which type of supplier they have selected for the PO and the associated risks?</td>
<td></td>
<td></td>
<td>Yes, No</td>
</tr>
<tr>
<td>5</td>
<td>Is supplier franchised or the OCM?</td>
<td>Identify if the supplier is franchised or the OCM.</td>
<td></td>
<td></td>
<td>Yes, No</td>
</tr>
<tr>
<td>7</td>
<td>Attach any special mitigation requirements or drawings</td>
<td>Identify any special anti-counterfeit mitigation requirements or drawings. This should be required when buying from non-franchised suppliers.</td>
<td></td>
<td></td>
<td>Yes, No</td>
</tr>
<tr>
<td>Flow chart item #</td>
<td>Vertical audit</td>
<td>Audit question</td>
<td>Details of part number selected, purchase order, etc.</td>
<td>Record of compliance where applicable</td>
<td>Complies with clause</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>------------------------------------------------------</td>
<td>---------------------------------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| 8                | Any risk mitigations needed? | How does the company check their suppliers?  
e.g. do they audit them or check their ISO 9001 certification or check if there been any reports of suspicious counterfeit or fraudulent activity concerning this part number or the supplier chosen?  
Are additional mitigations put in place for:  
− Orders from non-franchised or non-authorized distributors?  
− Orders from non-franchised distributors with no supply chain traceability?  
e.g. do they use IDEA-STD-1010 visual inspection, or SAE AS6081 minimum or enhanced testing or SAE AS6171 testing or IEC TS 62668-2 recommendations for testing, etc. or commodity specific testing for their industry? | Record of compliance where applicable | Yes | No |
| 9                | Flow-down PO terms and conditions to supplier | Identify what the anti-counterfeit flow-down terms and conditions are to the supplier.  
Write none if none are found. | Record of compliance where applicable | Yes | No |
| 10               | Request quotes | Review the quotations received.  
Do they clearly state when untraceable components are offered? | Record of compliance where applicable | Yes | No |
| 11               | Prepare POs | Find the PO for the part number selected in 1 | Record of compliance where applicable | Yes | No |
| 12               | Does the PO part number match the BoM part number? | Do the PO part number details match the BoM part number details exactly?  
This is a major audit finding if the answer is no as the company has lost configuration control on its purchasing process.  
NOTE Check if alternatives are allowed, for example USA MIL parts have allowable alternatives specified in the military slash sheets, some companies allow “better than” alternative controlled by the component database or controlling standard or specification, etc. Check if a concession has been approved allowing the purchase of an alternative. | Record of compliance where applicable | Yes | No |
<table>
<thead>
<tr>
<th>Flow chart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Stop the PO</td>
<td>If the part numbers did not match, ask why the PO was not stopped.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ask what measures as in place to control the PO process.</td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>14</td>
<td>Place the PO</td>
<td>Obtain a copy of the PO.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>15</td>
<td>Receive parts in goods inwards</td>
<td>Inspect the goods inwards area for ESD, MSL handling procedures and temperature control, good storage facilities, etc.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>16</td>
<td>Parts and correct paperwork received together?</td>
<td>On receipt, is the receiving paperwork attached or adequately linked to the components to avoid confusion and mix ups?</td>
<td>Do any special bar codes or delivery tracking numbers match?</td>
<td>If there is confusion, where has this happened, at the supplier or at the receiver?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Is the goods inwards department in control?</td>
<td>No</td>
</tr>
<tr>
<td>17</td>
<td>General quarantine</td>
<td>Review the general quarantine area. Is it adequately segregated from the main stores with appropriate labelling?</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Flow chart item #</td>
<td>Vertical audit</td>
<td>Audit question</td>
<td>Details of part number selected, purchase order, etc.</td>
<td>Record of compliance where applicable</td>
<td>Complies with clause</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>---------------------</td>
</tr>
</tbody>
</table>
| 18               | Inspect the parts  | Does inspection occur at the organization’s facilities or is it subcontracted out to the supplier?  
Is the package format and pin out correct?  
Are the terminations and general condition of the parts free of damage?  
Check the physical marking on the part. Use a magnifier if needed and/or digital camera to take photographs.  
What is the physical part marking, trademark or logo?  
**Does this match the CoC or packing slip and PO part number and OCM identification requirements?**  
Do any bar codes and delivery tracking numbers match?  
**NOTE** Part marking is typically abbreviated to physically fit onto the top of the part. Refer to the manufacturer datasheet, webpage or drawing for more information, particularly for checking the logo and/or trademark. Very small parts may not have any physical marking at all.  
Is there a CoC or a packing slip with each shipment received referring to the PO or does the packing slip match ECIA NIGP 111.00 requirements or contain the same information, see **NOTE 1** below? | | Yes | No |
<p>|                  |                     |                                                                                                                                                                                                            |                                                       |           | ☐ ☐          |</p>
<table>
<thead>
<tr>
<th>Flow chart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>19</td>
<td>Inspection OK?</td>
<td>Are there any special anti-counterfeit risk mitigation testing required on the PO or are there any standard anti-counterfeit inspection tests carried out routinely? E.g. for components and material from non-franchised distributors?</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are the results of this testing available and did everything pass? E.g. inspection to IDEA-STD-1010, or testing by the supplier to SAE AS 6081 or SAE AS 6171 or to an OEM test spec based on IEC TS 62668-2 or to an industry generated PAS or trade body visual inspection standard and/or a trade body sample test inspection, see Annex A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the component correctly packaged? E.g. is this a MSL sensitive component (i.e. plastic encapsulated surface mount component)? Is the part packaged in a MBB and what is the MSL rating on the label? Does this agree with the datasheet or manufacturer webpage information? Is this a lead-free part number and is the packaging correctly labelled with the RoHS compliant symbol? If requested in tape and reel delivery format, is this correct?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Supplier or OCM franchised?</td>
<td>Identify if the supplier is the OCM or franchised supplier and who the manufacturer is. Is this the same supplier as on the PO? If not ask if there are special shipping arrangements agreed for this PO.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>Flow chart item #</td>
<td>Vertical audit</td>
<td>Audit question</td>
<td>Details of part number selected, purchase order, etc.</td>
<td>Record of compliance where applicable</td>
<td>Complies with clause</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-----------------------------------------------------</td>
<td>--------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>22</td>
<td>Is there full traceability to the OCM?</td>
<td>Look at the documentation with the parts and is there traceability back to the original manufacturer? For example, does the bar code label and tracking shipping number match? <strong>NOTE</strong> The Supplier being used by this organization may have an arrangement for the traceability paperwork from the suppliers beneath them to be submitted on request rather than supplying this paperwork with the parts. Request this data to verify traceability.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>21</td>
<td>Does the part number received match the PO?</td>
<td>Identify if the part number and optionally the bar code and/or delivery tracking number received matches the PO part number.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>23</td>
<td>Accept the parts to stock</td>
<td>Witness how parts are accepted or rejected into stock.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>24</td>
<td>Are parts considered suspect counterfeit?</td>
<td>What are the criteria for “suspect” or “reject” stock and is it sent to the quarantine stock for further action? Is additional testing carried out to confirm?</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>25</td>
<td>Normal non-conformance procedure</td>
<td>Identify the normal non-conformance procedure.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>26</td>
<td>Special suspect counterfeit quarantine</td>
<td>Is there a special suspect counterfeit quarantine procedure?</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>27</td>
<td>Inform legal department and carry out reporting</td>
<td>Does the organization consult their legal counsel when a counterfeit component is identified? Do they know they cannot return counterfeit stock back into the supply chain for a refund as this would be committing fraud? Do they inform local law enforcement officers?</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>28</td>
<td>Scrap parts</td>
<td>Identify the organization’s scrap procedure.</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>29</td>
<td>Render unusable</td>
<td>If the disposition is to scrap the parts, are they rendered un-useable? If a third party scraps the parts is there a scrap certificate confirming this activity has been completed?</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Flow chart item #</td>
<td>Vertical audit</td>
<td>Audit question</td>
<td>Details of part number selected, purchase order, etc.</td>
<td>Record of compliance where applicable</td>
<td>Complies with clause</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
<td>---------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>30</td>
<td>Follow legal disposition</td>
<td>Does the organization follow legal advice for disposition?</td>
<td></td>
<td></td>
<td>Yes/No</td>
</tr>
<tr>
<td>31</td>
<td>End</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE 1 A copy of NIGP 111.00 is freely available to download from webpage [www.ecianow.org/assets/docs/GIPC/NIGP-111-20Guidelines%20for%20the%20Format%20of%20Packing%20Slips.pdf](http://www.ecianow.org/assets/docs/GIPC/NIGP-111-20Guidelines%20for%20the%20Format%20of%20Packing%20Slips.pdf)
Figure 4 – AS/EN/JISQ 9100 traceability audit

1. Conduct anti-counterfeit awareness training
2. Manage product’s obsolescence
3. Create product BOM defining part numbers and place under configuration control
4. Itemise all manufacturer part numbers and manufacturers
5. Are these complete orderable part numbers?
   - Yes
   - No
6. Revise part numbers and add to BOM via change process
7. Are these alternative part numbers?
   - Yes
   - No
8. Are these approved?
   - Yes
   - No
9. Select supplier
10. Review supplier data
11. Approve supplier
12. Is supplier franchised or the OCM?
13. Is it OK to proceed with this supplier?
14. Any risk mitigations necessary?
15. Attach any special requirements of drawings
16. Flow down PO terms and conditions to supplier
17. Request quotes
18. Prepare POs
19. Does PO part number match BOM?
20. Is there an approval for the difference?
21. Stop PO
22. Place the PO
23. Receive parts in goods inwards
24. Parts and correct paperwork received together?
25. General quarantine
26. Inspect parts for logo, part marking, MSL, lead-free status and damage
27. Visual inspection OK including package labels?
28. Does OCM packing slip data match the parts back through supply chain to OCM?
29. Are parts from the approved supplier?
30. Supplier OCM or franchised?
31. Is special testing OK?
32. Does parts data received match the PO?
33. Accept to stock
34. Are parts considered suspect counterfeit?
35. Normal non-conformance process
36. Special suspect counterfeit quarantine
37. Inform legal department and carry out reporting
38. Scrap parts?
39. Render useless
40. Follow legal disposition
41. End
Table 3 – AS/EN/JISQ9100 Traceability vertical audit checklist, see Figure 4

Verification criteria of a selected part from a BoM - Complete this table for each part number selected during the audit

<table>
<thead>
<tr>
<th>Flowchart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Start</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Conduct anti-counterfeit awareness training</td>
<td>Look for evidence of anti-counterfeit awareness training, per Table 1, activity 1.</td>
<td>Yes No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Manage product obsolescence</td>
<td>Look for evidence of product obsolescence management. This is optional, see Annex B, but highly recommended.</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Product BoM</td>
<td>Review the BoM of a product or repair manual and select a part number(s). Note this is typically a company part number.</td>
<td>Yes No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Component database</td>
<td>For the selected company part number, itemise all approved manufacturer part numbers and manufacturers for the company part number. NOTE Some businesses may not organize a system allocating their own part numbers to components and instead may use the OCM part numbers on the BoM. In this case the business must also identify the OCM for that component as many OCMs have identical part numbers, e.g. Fairchild 1N4148A and Vishay 1N4148A high speed diode where 2 different manufacturers use identical part numbers. The OCM for each component shall be identified. This is important for determining if the supplier used for ordering purposes is the franchised or authorized distributor. NOTE Many airline repair manuals only show the OEM’s part numbers and in this case the components can only be purchased from that OEM. The audit cannot proceed if this is not clear</td>
<td>Yes No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowchart item #</td>
<td>Vertical audit</td>
<td>Audit question</td>
<td>Details of part number selected, purchase order, etc.</td>
<td>Record of compliance where applicable</td>
<td>Complies with clause</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>------------------------------------------------------</td>
<td>--------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>5</td>
<td>Company part number</td>
<td>Are these complete part numbers per the manufacturer datasheet or webpage? Is the suffix for the shipping packaging format required complete? If the answer is no, ask the business how they control the different shipping packaging options which are typically signified by different suffixes. NOTE It is difficult to conduct a traceability audit on an incomplete part number.</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>7</td>
<td>Alternatives to company part number</td>
<td>Are there any alternatives in use by the sourcing department under the same company part number? Are these alternatives approved and documented correctly?</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>10, 12</td>
<td>Review supplier data</td>
<td>Is the supplier used a franchised, or a franchised aftermarket distributor or the OCM? Does the company know which type of supplier they have selected for the PO and the associated risks?</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>11</td>
<td>Supplier approval</td>
<td>If the supplier is not pre-approved how was the supplier approved for this PO? Is counterfeit avoidance part of the selection criteria?</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>14</td>
<td>Risk assessment of part and supplier on PO</td>
<td>Does the company check if there been any reports of suspicious counterfeit or fraudulent activity concerning this part number or the supplier chosen? If the supplier is not authorized or franchised are any additional anti-counterfeit mitigations in place?</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>15</td>
<td>Special PO requirement?</td>
<td>Are there any special PO requirements or drawings? Are these under configuration control? E.g. by ISO 9001 or AS/EN/JISQ 9100 or 9110 change management procedures? NOTE It is impossible to conduct a traceability audit on a PO which has incorrect drawing revisions or control.</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>18</td>
<td>Company PO</td>
<td>Review the PO. What is the PO company part number, and the company approved manufacturer part numbers and manufacturer for this part number? Who is the supplier on the PO?</td>
<td></td>
<td></td>
<td>Yes No</td>
</tr>
<tr>
<td>Flowchart item #</td>
<td>Vertical audit</td>
<td>Audit question</td>
<td>Details of part number selected, purchase order, etc.</td>
<td>Record of compliance where applicable</td>
<td>Complies with clause</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-----------------------------------------------------</td>
<td>--------------------------------------</td>
<td>-------------------------</td>
</tr>
</tbody>
</table>
| 19, 20, 21, 22   | Company PO     | Do the PO part number details match the BoM part number or repair manual details exactly? | This is a major audit finding if the answer is no as the company has lost configuration control on its purchasing process.  
NOTE  Check if alternatives are allowed, for example USA MIL parts have allowable alternatives specified in the military slash sheet. Also, some companies allow "better than" alternatives, which are controlled by the component database or controlling standard or specification or a specially authorized alternative list. Has a non-conformance approving an equivalent part been authorized? | | Yes  No |
| 23, 24           | Supplier paperwork accompanying the parts on delivery | Is paperwork attached or adequately linked to the components to avoid confusion and mix ups?  
Is there a CoC or a packing slip with each shipment received referring back to the PO or does the packing slip match ECIA NIGP 111.00 requirements or contain the same information, see NOTE 1 below?  
Do any special bar codes or delivery tracking numbers match?  
If there are discrepancies, have these been pre-approved by the OEM buyer and documented in the ordering systems and approved for the product?  
If not, are the components in quarantine until further dispositioning? If not, why not?  
NOTE  Discrepancies which have not been authorized are major audit findings. | | Yes  No |
<p>| 25               | General quarantine | Review the general quarantine area. Is it adequately segregated from the main stores with appropriate labelling? | | Yes  No |</p>
<table>
<thead>
<tr>
<th>Flowchart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
</table>
| 26              | Physical part inspection at good inwards | **Look at the parts.**  
Is the package format and pin out correct?  
Are the terminations and general condition of the parts free of damage?  
Is the part manufacturer logo correct?  
Check the physical marking on the part. Use a magnifier if needed and/or digital camera to take photographs.  
What is the physical part marking, trademark or logo?  
**NOTE** Part marking is typically abbreviated to physically fit onto the top of the part. Refer to the manufacturer datasheet, webpage or drawing for more information, particularly for checking the logo and/or trademark. Very small parts may not have any physical marking at all  
Check against the PO and manufacturer information, e.g. datasheet or webpages.  
**E.g. if this a MSL sensitive component (only plastic encapsulated surface mount components have MSL ratings) is the part packaged in a MBB and what is the MSL rating on the label?**  
**Does this agree with the datasheet or manufacturer webpage information?**  
**Is this a lead-free part number and is the packaging correctly labelled with the RoHS compliant symbol?** | | Yes No |
| 27              | Is visual inspection acceptable including package labels? | **Is the component correctly packaged?**  
Do the external packaging labels match the receiving paperwork and the parts?  
**Do any bar codes and delivery tracking numbers match?**  
Are there any suspicious markings?  
If requested in tape and reel delivery format is this correct? | | Yes No |
<table>
<thead>
<tr>
<th>Flowchart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>Does CoC or packing slip data match the parts data? Is this consistent back through the supply chain to the OCM?</td>
<td>Review the paperwork sent with the parts. Is there traceability back through the supply chain to the original manufacturer? E.g. does the bar code label and tracking shipping number match? NOTE The supplier being used by this organization may have an arrangement for the traceability paperwork from the suppliers beneath them to be submitted on request rather than supplying this paperwork with the parts. Request this data to verify traceability. NOTE Airline repair centres ordering spares from the OEM using the OEM’s part numbers would consider the OEM to be the OCM.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Are parts from the approved supplier as stated on the PO?</td>
<td>Is the supplier as stated on the PO? If not ask if there are special shipping arrangements agreed for this PO.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Is the supplier the OCM or the franchised or authorized supplier? If not, has any special anti-counterfeit mitigation testing been carried out? E.g. inspection to IDEA-STD-1010, or testing by the supplier to SAE AS6081 or SAE AS6171 or to an OEM test spec based on IEC TS 62668-2, see Annex A?</td>
<td></td>
<td>Yes No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Is any special testing OK?</td>
<td>Review any special testing to see if the test results are acceptable.</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Does part data received match the PO?</td>
<td>Review all data. Does the received part number match the PO part number and optionally the bar code and/or delivery tracking number and is the manufacturer and supplier the same or has an equivalent been approved and is all receiving paperwork correct?</td>
<td></td>
<td>Yes No</td>
<td></td>
</tr>
</tbody>
</table>
### Flowchart

<table>
<thead>
<tr>
<th>Flowchart item #</th>
<th>Vertical audit</th>
<th>Audit question</th>
<th>Details of part number selected, purchase order, etc.</th>
<th>Record of compliance where applicable</th>
<th>Complies with clause</th>
</tr>
</thead>
</table>
| 34, 35, 36       | Are parts considered “suspect” counterfeit? | Are the parts to be rejected?  
What is the rejection procedure?  
What is the reason?  
Is it because they are suspect counterfeit or recycled parts?  
Is there a special separate controlled access counterfeit quarantine to normal quarantine?  
Are parts corrected labelled and recorded?  
**NOTE** Suspect counterfeit or recycled parts are not to be returned to the supplier for a refund as this is considered fraudulent activity in most legal jurisdictions. All suspect components should be quarantined for legal advice first and customers informed if any of this stock has been shipped to customers. | | | Yes No □ □ |
| 37               | Inform legal department and carry out reporting | If the part is suspect counterfeit has this been reported to the relevant internal department and external authorities if appropriate? | | | Yes No □ □ |
| 38, 39, 40       | Who takes the decision to scrap the parts and is the company’s legal department involved or contacted?  
If the disposition is to scrap the parts, are they rendered un-useable?  
If a third party scraps the parts is there a scrap certificate confirming this activity has been completed? | | | | Yes No □ □ |
| 41               | End | | | | |

**NOTE 1** A copy of NIGP 111.00 is freely available to download from webpage [www.ecianow.org/assets/docs/GIPC/NIGP-111%20Guidelines%20for%20the%20Format%20of%20Packing%20Slips.pdf](http://www.ecianow.org/assets/docs/GIPC/NIGP-111%20Guidelines%20for%20the%20Format%20of%20Packing%20Slips.pdf)
### Annexe A

**Trade association and external anti-counterfeit inspection standards**

#### Table A.1 – Trade association anti-counterfeit inspection standards and International Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Title</th>
<th>Appropriate for</th>
<th>Targeted at industry segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC TS 62239-1</td>
<td>Process management for avionics – Management plan – Part 1: Preparation and maintenance of an electronic components management plan</td>
<td>Suitable for avionics OEMs and their subcontractors operating to AS/EN/JISQ 9100</td>
<td>Avionics and high reliability industry</td>
</tr>
<tr>
<td>IEC TS 62668-2</td>
<td>Process management for avionics – Counterfeit prevention – Part 2: Managing electronic components from non-franchised sources</td>
<td>Suitable for avionics OEMs and their subcontractors operating to AS/EN/JISQ 9100 when managing electronic components received from non-franchised distributors</td>
<td>Avionics industry and high reliability industry</td>
</tr>
<tr>
<td>IDEA-STD-1010</td>
<td>Acceptability of electronic components distributed in the open market</td>
<td>Visual inspection of electronic components, in particular microcircuits, diodes and transistors</td>
<td>Any</td>
</tr>
<tr>
<td>IDEA-ICE-3000</td>
<td>Professional Inspector Certification Exam</td>
<td>Training of personnel to inspect to IDEA-STD-1010, in particular microcircuits, diodes and transistors</td>
<td>Any</td>
</tr>
<tr>
<td>SAE ARP6178¹</td>
<td>Fraudulent/Counterfeit Electronic Parts; Tool for Risk Assessment of Distributors</td>
<td>Useful excel spreadsheet with an embedded macro for remotely assessing non-franchised distributors capability to mitigate against shipping counterfeit components to their customers</td>
<td>Any</td>
</tr>
<tr>
<td>SAE AS5553²</td>
<td>Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts; Avoidance, Detection, Mitigation, and Disposition</td>
<td>OEMs and subcontractors who assemble electronic assemblies, whereby they create an anti-counterfeit plan with mandatory requirements stating how they mitigate receiving counterfeit electrical components into their organization</td>
<td>Suitable for medium to high reliability industries</td>
</tr>
</tbody>
</table>

¹ Reprinted with permission from the published version of SAE document ARP6178 © 2011 SAE International.
² Reprinted with permission from the published version of SAE document AS5553 © 2016 SAE international.
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Purpose</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAE AS6081³</td>
<td>Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Distributors Counterfeit Electronic parts; Avoidance Protocol, Distributors</td>
<td>Non-franchised distributors who sell electronic components. The minimum testing is visual inspection, X-ray, DPA, marking inspection. This can be supplemented with electrical testing, etc. as required depending on risk. SAE AS6081 offered components may be fully traceable or untraceable back to the original manufacturer</td>
<td>Any</td>
</tr>
<tr>
<td>SAE AS6171⁴</td>
<td>Suspect/Counterfeit Test Evaluation Method</td>
<td>Exhaustive list of rigorous anti-counterfeit test methods for high reliability industries</td>
<td>High reliability industry although any industry could select one or more of these 13 test methods to work to. Note that additional test methods are being prepared for publication</td>
</tr>
<tr>
<td>SAE AS6174⁵</td>
<td>Counterfeit Materiel: Assuring Acquisition of Authentic and Conforming Materiel</td>
<td>For OEMs and subcontractors who assemble mechanical components and materials, whereby they create an anti-counterfeit plan with mandatory requirements stating how they mitigate receiving counterfeit mechanical components and materials into their organization</td>
<td>Any</td>
</tr>
<tr>
<td>SAE AS6496⁶</td>
<td>Fraudulent/Counterfeit Electronic Parts: Avoidance, Detection, Mitigation, and Disposition – Authorized/Franchised Distribution</td>
<td>Suitable for franchised distributors offering electronics components or assemblies</td>
<td>Any</td>
</tr>
<tr>
<td>JESD243</td>
<td>Counterfeit Electronic Parts: Non-Proliferation for Manufacturers</td>
<td>Suitable for OCMs, authorized aftermarket manufacturers, hybrid microcircuits and discrete semiconductor products</td>
<td>Any</td>
</tr>
</tbody>
</table>

³ Reprinted with permission from the published version of SAE document AS6081 © 2012 SAE International.
⁴ Reprinted with permission from the published version of SAE document AS6171 © 2016 SAE International.
⁵ Reprinted with permission from the published version of SAE document AS6174 © 2014 SAE International.
⁶ Reprinted with permission from the published version of SAE document AS6496 © 2014 SAE International.
Annexe B

Optional preparatory activities

The organization is advised that a review should be conducted per Table B.1 before the traceability audit to determine their organization’s preparedness for the traceability audit. Organizations are to review their procedures per Table A.1 requirements and rate their activities per the instructions. The score achieved will not be reported externally and is for the organization’s use only.

Table B.1 activities have assigned points with a potential maximum score of 12 points. The score out of 12 will provide guidance to organizations as to how capable their organization is at avoiding the use of counterfeit or recycled materials, mechanical and or electrical/electronic components and assemblies.

A maximum score of 12 points indicates a robust anti-counterfeit traceability audit process.

A minimum score of 2 indicates the minimum acceptable anti-counterfeit process, which may be adequate for many commercial or consumer industries.
<table>
<thead>
<tr>
<th>Audit</th>
<th>Activity</th>
<th>Number of points</th>
<th>Notes to CB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Successful completion of the traceability anti-counterfeit audit</td>
<td>2 for passing third party audit</td>
<td>Audit per Table 3</td>
</tr>
</tbody>
</table>
| 2     | Implementation of anti-counterfeit/recycling awareness training for all relevant personnel | 0 for no training  
1 for anti-counterfeit awareness training | Document evidence of an awareness training package being taught within the last 2 years of the audit |
| 3     | Prioritization of purchases to be from franchised or authorized suppliers instead of non-franchised distributors | 0 where franchised suppliers are not used  
2 where franchised suppliers are used to the maximum extent possible | Document evidence that the organization has stated a purchasing priority for franchised or authorized distributors |
| 4     | Implementation of standard PO requirements banning the receipt of counterfeit or recycled components into the business | 0 for no purchase order requirements  
1 for anti-counterfeit PO requirements | Document evidence that every order placed by the organization has requirements to ban the receipt of counterfeit or recycled components |
| 5     | Implementation of risk assessing non-franchised purchases with additional appropriate inspections or analysis or use of special tracking delivery schemes | 0 for no risk assessment  
1 for risk assessment using a trade association spec  
2 for using an external risk assessment anti-counterfeit standard, for example a trade body PAS spec or trade body specification, SAE AS6171 or SAE AS6081 or IEC TS 62668-2, etc.  
3 for use of special delivery tracking schemes | Document evidence that there is a risk assessment process when the organization purchases from non-franchised sources |
| 6     | Implementation of an anti-counterfeit/recycling policy which is publicly available | 0 for no policy  
1 for a publicly available policy | Document evidence that there is a publicly available anti-counterfeit policy |
| 7     | Implementation of an anti-counterfeit/recycling management plan          | 0 for no plan  
1 for your own internal plan  
2 for a plan to SAE or IEC specs, see Annex A | Document evidence that there is an anti-counterfeit management plan |
| 8     | Implementation of an obsolescence roadmap for organization’s products    | 0 for no roadmap  
1 for a roadmap | Document evidence of an obsolescence roadmap for their products |

**Minimum score**  
**Maximum score**  

2 points  
13 points  

**NOTE 1**: Successful completion of the traceability audit is the minimum requirement for approval.