NATO STANDARD

AQAP-2021

NATO GUIDANCE FOR AVOIDANCE OF COUNTERFEIT MATERIEL IN THE SUPPLY CHAIN

Edition A, Version 1

JUNE 2023

NORTH ATLANTIC TREATY ORGANIZATION

ALLIED QUALITY ASSURANCE PUBLICATION

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NORTH ATLANTIC TREATY ORGANIZATION (NATO)

NATO STANDARDIZATION OFFICE (NSO)

NATO LETTER OF PROMULGATION

19 June 2023

1. The enclosed Allied Quality Assurance Publication AQAP-2021, Edition A, Version 1, NATO GUIDANCE FOR AVOIDANCED OF COUNTERFEIT MATERIEL IN THE SUPPLY CHAIN, which has been approved by the nations in the LIFE CYCLE MANAGEMENT GROUP (AC/327), is promulgated herewith. The recommendation of nations to use this publication is recorded in STANREC 4791.

2. AQAP-2021, Edition A, Version 1, is effective upon receipt.

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4. This publication shall be handled in accordance with C-M(2002)60.

Dimitrios SIGOULAKIS
Lieutenant General, GRC (A)
Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
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CHAPTER 1 OVERVIEW

1.1 Introduction

1. There is a risk of counterfeit materiel entering defence supply chains. Counterfeit materiel is undesirable in defence equipment as it may have unpredictable performance and failure modes which could compromise capability and equipment safety.

2. Counterfeit materiel is by its nature nonconforming (i.e. there is a characteristic that does not fully comply with the specification or history of the materiel). This could include but not limited to raw material, manufacturing methods, lifetime of parts or false certification.

Fig 1 illustrates the most common counterfeiting modes and their representation.

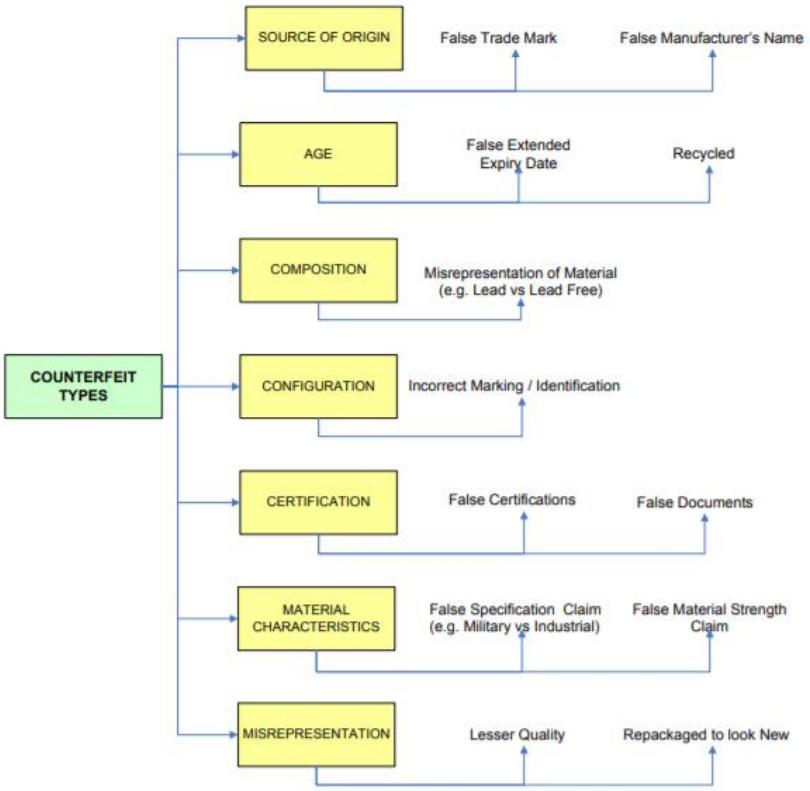

Fig 1. Diagram showing the counterfeiting modes

3. There is an increased probability of counterfeit materiel where:

   a. The components or raw materials are of a type that are known to be vulnerable to counterfeiting such as Electrical, Electronic and Electro-mechanical (EEE) parts.
   b. The design requires the sourcing of parts that are obsolescent or are foreseen to become obsolescent during the life of the equipment.
   c. There are multiple tiers in the supply chain,
   d. Traceability of the materiel is not otherwise mandated,
   e. Where fraudulent test results enable the product to be accepted by an organisation.
   f. Where counterfeiting of certificates enables an organisation to benefit from that certification without achieving the required standard or output.

1.2 Purpose

This publication provides guidance for the avoidance of counterfeit materiel in the supply chain.

1.3 Applicability

This publication is applicable to NATO nations and agencies involved in the acquisition and assurance of defence materiel.

1.4 Limitations

This publication is not intended for use as a contractual document however it does contain an example of counterfeit avoidance contractual requirements that can be used by NATO nations and agencies. These will provide the acquirer with confidence that the supplier has in place appropriate arrangements for avoidance of counterfeit materiel and appropriate controls if it is detected.

1.5 Normative References

1. EN IEC 62402:2019 Obsolescence Management

1.6 Terms and Definitions

Unless otherwise defined, the terms and definitions in ISO 9000:2015 and AQAP 2110 shall apply.

1.6.1 Acquirer

stakeholder that acquires or procures a product or service from a supplier

Note 1 to entry: Other terms commonly used for an acquirer are buyer, customer, owner, purchaser or internal/organizational sponsor.

[SOURCE: ISO 15288:2015]

1.6.2 Counterfeit Materiel

Materiel whose origin, age, composition, configuration, certification status or other characteristic (including whether or not the materiel has been used previously) has been falsely represented by:

a) misleading marking of the materiel, labelling or packaging.
b) misleading documentation; or
c) any other means, including failing to disclose information.

except where it has been demonstrated that the misrepresentation was not the result of dishonesty by a supplier or external provider within the supply chain.

1.6.3 Customer

Organisation or person that receives materiel (as defined under counterfeit materiel).

1.6.4 Materiel

Materiel refers to all equipment, parts, components, products, raw material, or software associated with the deliverable product or service.

1.6.5 Supplier

Organisation or person that provides materiel (as defined under counterfeit materiel).

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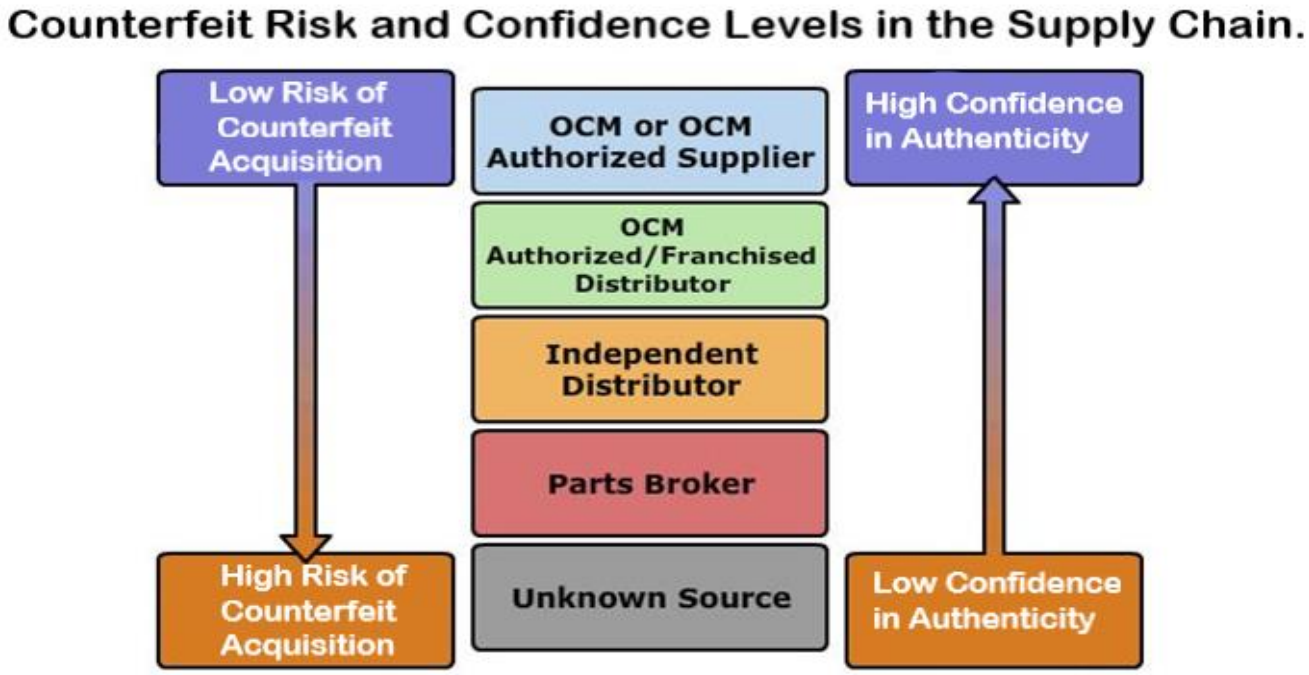
CHAPTER 2 KEY CONCEPTS OF COUNTERFEIT AVOIDANCE

2.1 The Risk

The risk of receiving counterfeit materiel from the supply chain is influenced by many factors such as technology and the availability of materiel. This risk applies to the acquisition of new equipment and materiel which increases as components become obsolescent and cannot be obtained from original manufacturers or approved sources. This risk can be addressed through proactive acquisition practices and obsolescence management.

2.2 Mitigating the Risk in Context of Acquisition

1. Materiel and components can be acquired from many sources and this has a significant bearing on the exposure of risk to counterfeit materiel, see Figure 1 below.



2. In the context of defence, those conducting acquisition have to be aware of the risk of counterfeiting and arrangements that can be put in place to control the risk. These arrangements will enable the Acquirer and Supplier to reduce the risks associated with counterfeit materiel such as:

a. Premature failure and expensive repairs and investigation,
b. Loss of confidence in the system or product,
c. Rework and loss of capability,
d. Legal action and loss of reputation.

2.3 Role of the Acquirer

1. Acquirers should ensure that they have adequate and appropriate arrangements in place for the avoidance of counterfeit materiel. These arrangements should reflect the activities that are being carried out by the organisation which could include on-receipt inspection of material and oversight of manufacturing activities as well as the acquisition of material.

2. Where NATO nations and bodies are acquiring capability from industry and have identified risk of counterfeit materiel entering the supply chain they should include contractual requirements for their supplier to manage the avoidance of counterfeit materiel.

3. Suggested contract requirements for the avoidance of counterfeit materiel are included at Annex A. These conditions require the supplier to understand the potential risk of counterfeit materiel in the supply chain and to develop appropriate policies and controls. Alternative requirements can be found in SAE AS 5553, IECS/TS 62239, SAE AS 6174, UK Def Stan 05-135 as recommended by STANREC 4791.

2.4 Government Quality Assurance Oversight

1. Where contractual requirements for counterfeit avoidance have been used, NATO nations and bodies should consider the use of Government Quality Assurance Surveillance (GQAS) to provide confidence that supplier arrangements are appropriate and effective.

2. To promote a consistent approach to GQAS Annex B presents an auditor questionnaire that is linked to the contractual conditions presented at Annex A.

2.5 Related Standards and Specifications

There are several counterfeit avoidance standards and specifications that may be referred to by suppliers and an assessment of these is included at Annex C for information.

ANNEX A CONTRACT REQUIREMENTS FOR COUNTERFEIT AVOIDANCE

Supplier Requirements

1. Policy

1.1 The organisation shall have a defined and documented policy for the avoidance of counterfeit materiel.

1.2 The policy and Anti Counterfeit Management Plan (ACFMP) shall be made available to customers upon request.

1.3 The organisation shall have arrangements in place to manage the risk of counterfeit materiel in their supply chain.

2. Organisational Roles and Responsibilities

2.1 Top Management

The organisation's top management shall ensure the policy for the avoidance of counterfeit materiel is available, communicated, understood and implemented by relevant staff at all levels within the organisation.

2.2 Management Representative

The organisation shall appoint a management representative who, irrespective of other responsibilities, has responsibility and authority within the organisation to:

1. ensure that the arrangements required to manage the risk of counterfeit materiel in both the supplier organisation and supply chain are implemented and maintained.
2. report to top management any concerns regarding counterfeit materiel within the organisation and supply chain.
3. promote awareness of the risk of counterfeit materiel in the organisation and the supply chain.

3. Competence, Training and Awareness

3.1 The supplier shall determine the awareness level requirements appropriate to each functional role, the competence level required by each employee and how the training needs will be met.

3.2 Records of training, skills and competence shall be maintained.

4. Purchasing

4.1 The organisation shall assess and record the risk of procuring counterfeit materiel. This should take account of the criticality of the materiel in relation to performance and safety.

4.2 Where risk has been identified, the organisation should flow an appropriate industry Sector Scheme or Standard down the supply chain and share information regarding the criticality of the materiel.

4.3 As part of the selection and evaluation of sub-suppliers, where final product integrity is considered important due to the critical nature of performance and safety, the organisation should be able to trace the source of supply of the materiel through the supply chain to the manufacturer to reduce the risk of counterfeit materiel in the supply chain.

4.4 Where the organisation does not procure materiel directly from or cannot trace the source of supply of the materiel through the supply chain to the manufacturer, this should constitute an additional risk that the organisation should manage. As a minimum the organisation should demonstrate that the materiel will fulfil the acquirers specified requirements. The materiel characteristics and level of information should not degrade the safety and performance of the deliverable materiel.

5. Test and Verification

5.1 The supplier should determine the rigor of inspection and test requirements for the acceptance of materiel. This shall be commensurate with the risk of the materiel being counterfeit and the criticality of the materiel in relation to safety and performance.

5.2 If materiel is suspected of being counterfeit at any point in production or service provision, then additional testing should be considered to confirm if it is counterfeit materiel.

6. Control of Non-Conforming Products

The organisation shall establish arrangements to:

1. control suspected counterfeit materiel to prevent its unintended use or re-entry into the supply chain.
2. ensure suspected counterfeit materiel is not returned to the sub-supplier unless under controlled circumstances for validation or testing.
3. ensure that materiel confirmed as being counterfeit does not re-enter the supply chain and is not returned to the sub-supplier.

7. Reporting of Counterfeit Materiel

The organisation shall establish arrangements to ensure that occurrences of counterfeit materiel are reported to:

1. the customer,
2. the supplier of the material
3. the owner of the Intellectual Property Rights of the genuine materiel
4. appropriate information / data gathering organisations
5. National Law Enforcement Authorities.

8. Additional Requirements for all Suppliers and Manufacturers

All suppliers and manufacturers should consider positive action to prevent corruption within their organisation, distribution and supply chains, including measures to avoid the misrepresentation of their materiel. Such measures may include:

1. the use of indelible, encrypted or covert marks on materiel, documentation and packaging.
2. the secure destruction of substandard materiel, documentation, product specific moulds, jigs, fixtures and packaging.
3. design of material and logistic support to minimise the impact of obsolescence through life.
4. the recording of registered trademarks and designs on customs and law enforcement databases.
5. the active enforcement of trademark and design rights against manufacturers and suppliers of counterfeit materiel.
6. the publication of warnings when counterfeiting is discovered, including publicising distinguishing features of original or counterfeit materiel where these are not covert.
7. the reporting instances of counterfeit materiel to customs databases.
8. publishing a list of franchised distributors or providing an alternative means of verifying the authenticity of a prospective franchised distributor.
9. obligations to source Materiel only from the manufacturer or manufacturer franchised distributors.
10. the control of production processes to prevent the misappropriation of materiel or unauthorised production overruns.
11. the controlled disposal of used packaging and anti-counterfeiting measures such as holograms to ensure they are prevented from being re-used.

9. Obsolescence

The organisation should ensure that measures exist within the organisation and supply chain to prevent counterfeit products entering the supply chain when managing obsolescence risks and issues. All organisations should actively implement and manage a robust Obsolescence Management Plan (OMP). This OMP should align with the requirements of EN IEC 62402:2019 Obsolescence Management.

ANNEX B AQAP-2021– GQA AUDITOR QUESTIONS

Topic Area	Considerations	Comments/Notes	Actions/Findings
General			
Counterfeit Policy	a Does the supplier have a counterfeit policy? Or Policy Statement? b. Does the supplier have documented parts procedures/Plans for counterfeit avoidance?	a. Yes/No. If yes, where is it held and is it accessible to all including customers? b. Is it a formal or informal process and has it been updated, reviewed and audited?	
Counterfeit Management	a. Is management policy/intent available to customers? b. Does the supplier perceive counterfeit materiel as a risk? c. Has the supplier developed prevention processes and control plans? d. Is the topic of Counterfeit, discussed, managed and recorded?	a. How is the policy communicated? b. Yes/No. Is there any evidence to support the risk? assessment? c. Yes/No. Are they available as documented information? d. If so, where? Is it subject to review/continual improvement?	
Management Representation	a. Is the Management Board aware of the potential problems of counterfeit materiel entering the supply chain? b. Is the counterfeit message communicated?	a. Is it defined and where is that risk managed and reviewed? b. Yes/No. Is it timely and is there evidence it is documented and understood? Is the information pulled or pushed to customers?	

	c. Is there a management representative responsible for counterfeit? d. What are their responsibilities and authority and are they defined? e. Are they part of a larger team and if so what are their responsibilities? f. Is there a process for employees to raise concerns to senior management?	c. Who is the representative? Is it a member of senior management? d. This is considered self-explanatory. e. This is considered self-explanatory. f. How is it communicated, promoted, and documented?	
Obsolescence Management	a. How does the supplier address the risk of obsolescence management and the risk of counterfeit materiel entering the organization due to non-availability of obsolescence material and parts? b. Does the supplier maintain an obsolescence management plan? c. Is the obsolescence planning using predictive tools to identify upcoming electrical/mechanical part obsolescence? d. Is there provision to notify customers when obsolescence will impact on their program? e. Does the contractor take steps to avoid obsolescence?	a. Is there an obsolescence plan in in place and does it link to the increased risk of counterfeiting due to the limited sourcing opportunities of such parts? b. If yes, is it maintained reviewed and updated? c. What is the process and is it documented? Does it access component life cycle and consider alternative parts? How does it react to being informed of “last time buy” and does the organisation make use of external third-party specialists to monitor obsolescence? d. How is it communicated and what is the trigger? e. Does the supplier qualify multiple suppliers for electronic/mechanical	

		components whenever possible or is it even a consideration?	
	f. What is the suppliers long term plan for the potential obsolescence of parts?	f. This is considered self-explanatory.	
	g. Is the supplier designing with obsolescence in mind?	g. This is considered self-explanatory.	
Counterfeit Avoidance	a. Does the supplier manage counterfeit materiel to a recognized standard? See Annex C. Auditing standards analysis.	a. Is this recorded and what training knowledge is shared.	
	b. Does the supplier have any other contracts with counterfeit avoidance conditions?	b. Yes/No. How are they managed, is there flow down of conditions to suppliers and their sub suppliers?	
	c. Is the supplier aware of the contractual conditions in place within this NATO contract?	c. Verify outcome of supplier's contract review activity.	
	d. Are counterfeit avoidance techniques used part of contractual requirements.	d. Is there evidence of traceability to the Original Equipment Manufacturer (OEM), Original Component Manufacturer (OCM) or an approved supplier, this should be demonstrated both in the contractual documentation, goods inward and supplier assessment.	
	e. If counterfeit avoidance techniques mandated by the supplier(self-imposed) are they considered best/good practice?	e. How are they reviewed and improved? Are they Incorporated in best practice? Is it considered as part of their forward thinking and continual improvement?	

	f. What are the suppliers long term plans (CA Planning) for counterfeit avoidance?	f. This is considered self-explanatory.	
Supplier Selection.			
Topic Area	**Considerations**	**Comments/Notes**	**Actions/Findings**
Supply Chain	a. What controls are in place to manage the risk of counterfeit materiel in the supply chain? b. Does the supplier have a counterfeit management plan in place and is it documented? c. Does the plan include the risk of procurement of counterfeit product?	a. Does the supplier have any form of assessment, does the policy reflect intent of mitigating the risk of counterfeit and is their clear active management of the risk? Is the whole of the supply chain documented & involved in counterfeit avoidance? b. his is considered self-explanatory. c. The plan should be reviewed for version date and applicability to the contract or work being undertaken by the supplier?	
Supplier Assessment	a. Does the supplier have processes in place to assess and reduce the risk of procuring counterfeit materiel? b. Does increased criticality (performance /safety) of a part correspond with increased specifications and supplier review before purchase? c. How are suppliers approved and managed with respect to counterfeit avoidance. d. Does the company have preferred sub-suppliers? How are they assessed and approved?	a. What processes are they and are they in use can it be demonstrated? b. How can this be demonstrated and is it part of the review process and assessment criteria? c. Is it part of the supplier selection criteria? d. This may be part of their vendor rating criteria	

	e. Does the Anti Counterfeit Management Plan (ACFMP) detail how the supplier will minimize the risk of procuring such materiel. f. Does the supplier have a policy to procure from Original Equipment Manufacturers (OEMs), Original Component Manufacturer (OCM) or OEM Authorised Suppliers with full traceability of the materiel? g. How does the supplier manage the risk of avoiding the procurement of counterfeit materiel?	e. This may include details of supplier approval, goods inwards and in process testing; control and disposal of suspect material and responsibility of individuals? f. This is considered self-explanatory. g. Is this risk actively managed by the supplier?	
Source/Supplier Selection	a. Does the supplier maintain an Approved Supplier List (ASL)? b. How do you rate suppliers? c. What criteria do the suppliers use? Is this inclusive of anti-counterfeit criteria (Counterfeit Avoidance)?	a. This is considered self-explanatory. b. This will include but not be limited to: Their approvals and certification. Questionnaires. See Annex C Auditing standards. Consideration of goods inwards inspection requirements and linkage to supply chain risk. Is anticounterfeiting a part of this rating? c. Are approved suppliers required (contracted) to report confirmed counterfeit parts being found and is there any metrics on the counterfeit materiel detection.	

	d. Does procurement prioritize the use of the ASL in selection of suppliers?	d. What is the evidence and how is it presented and what is the weighting on their ability to avoid counterfeit materiel?	
	e. What is the process for approving, restricting and removing suppliers from the ASL? How often are ASL updated based on supplier performance?	e. This is considered self-explanatory.	
	f. Do the suppliers procurement department check counterfeit listings (part numbers/suppliers which is known to the organization to of concern for the counterfeit risk) before placing a contract?	f. Does the supplier monitor the notification of intelligence on counterfeit supplies, around the industrial sector such as Government Industry Data Exchange program(GIDEP)?	
	g. What documentation relating to counterfeit materiel is required prior to the purchase of a product?	g. Are the request for quotes, proposals or information include a requirement to mitigate against the risk counterfeit materiel? Flow down of Anti-Counterfeit terms and conditions?	
	h. Does the purchasing process require the supplier to provide the customer with justification, traceability, test plans/results when unauthorized suppliers are used?	h. This is considered self-explanatory.	
	i. Are there predefined contractual clauses which define supplier liability if counterfeit parts are encountered?	i. The standardisation of key contract conditions may include the liability of counterfeit parts being encountered in the supply chain and within the delivered product.	

	j. Are sources of supply monitored to plan for diminishing manufacturing sources and material shortages? k. Are lifetime buys proactively supported or considered? l. Does the supplier's purchasing department consider the avoidance of single sources, product availability drive for common part usage and aftermarket supply?	j. This may be defined any sustainability requirements or plans defined by the supplier. k. There may be a Manufacture Resource Planning (MRP) tool which reacts to any supplier identifying that the product is being obsolescent and is a "last time buy l. Single Sources for purchases; limiting supply sourcing options. Product Availability; the supply chain management. Common Part Usage; to strengthen supply options and minimizing the sourcing options (OEM/OCMs) for components and parts. After Market Supply, unable to prove the provenance of supply and the increased risk of counterfeit materiel entering the supply chain.	
Purchasing.			
Topic Area	**Considerations**	**Comments/Notes**	**Actions/Findings**
Make/Buy Strategy	a. Does the supplier target multiple sources of supply? (internal & External) b. Is a review of internal manufacturing capability, risk and core competences compared to external supplier capability and assessed performance.?	a. The use of this strategy if they are approved sources will limit supply chain shortages using single suppliers. b. Establishing a sustainably solution may limit externally procured items.	

	c. Does the supplier have documented criteria and compliance assessment schedule for all suppliers of mission/safety critical hardware?	c. The safety critical hardware is critical to delivering capability and the high risk to safety. The understanding of how these products are assured against counterfeit would require the highest degree of assurance (inspection/test etc.)	
Flow Down of Terms and Conditions in contract	a. How are counterfeit terms and conditions flowed down through the supply chain? b. Do the terms and conditions mandate the flow to sub-tier suppliers? c. Is this being monitored? d. Are the suppliers mandated to have a minimum auditing standard?	a. This will include purchasing, detection, containment, reporting and training. What are various "procurement avenues" and are they mapped for vulnerability and risk? b. Without flow down of terms and conditions through the supply chain, the risk of counterfeit is increased, and the supplier's intent cannot be managed through the sub tiers. Is it part of the supplier's terms and conditions? c. Is there an audit of contracts programmed or are their regular metrics or contract assurance gates contract reviews and are there any Lessons From Experience (LFE) planned post contract closure? d. What are the standard contracting conditions, is there a requirement for certificates, questionnaires? See Annex C auditing standards analysis	

	e. What are the minimum delivery documentation requirements? f. What are the document retention requirements;	e. Is there a requirement for Certificates of Conforminty (CoC)s, a requirement for the traceability to OEM/OCM, test certificates, etc? Where are they stored are they sent or held in the supply chain? f. Are these retained for the length of the contract or an agreed amount of time? Is that time acceptable, is it to the end of the guarantee or any other liability the supplier may have?	
Higher Risk Purchases.	a. How does the supplier manage the risk of material not purchased from an OEM, OCM or authorized suppliers? b. Does the supplier procure material from unauthorized sources, E-Auctions or Grey Markets? c. Where traceability of a materiel cannot be established how is compliance to requirements demonstrated?	a. Does the supplier manage the risk and look at the special processes, CoCs, traceability of supply and what is the level of assurance or confidence factor they put against the supply? This will include proactive measures to avoid purchasing products that are misrepresented. b. How does the supplier manage the risk and what records are in place? Are the components or products tested for compatibility and is this information disclosed to the customer or authority? c. Increased but appropriate testing established to mitigate the risk. Is there a risk-based inspection/test regime defined and implemented to further mitigate risk?	
Mechanical Parts and Materials	a. Does the supplier's purchasing process include assessing mechanical part supply and material suppliers for counterfeit risk?	a. There is risk that the supplier focuses on the electrical components rather than	

		considering mechanical components also can be counterfeited.	
	b. Are mechanical parts and materials traced back to the manufacturer through documentation?	b. CoC, material test certificates or test certificates should be requested, examined, stored and maintained.	
	c. Are there particular inspections/tests defined for the authentication of mechanical parts and materials?	c. Clear unambiguous pass criteria of all inspection/tests results may be required for traceability.	
	d. Do the supplier's containment and reporting requirements also apply to mechanical parts and materials?	d. This is considered self-explanatory.	
Training & Competence			
Topic Area	**Considerations**	**Comments/Notes**	**Actions/Findings**
Counterfeit Training	a. Has the supplier introduced training or raised awareness of counterfeit avoidance?	a. Through induction training, part of functional training competency-based assessment, leaflets, advertisements on webpages etc. Is the training the same for all employees or is there a general training and specific functional/roll training especially those involved in the purchasing of goods and at the receipt of the products from the supply chain "goods inward"?	
	b. Has the training or awareness been flowed down the supply chain?	b. Some suppliers have training video available on their websites for prospective and existing suppliers to use for their workforce.	

	c. If not how does the supplier ensure that specific requirements of counterfeit avoidance are promoted to the supply chain?	c. Are there internal/external suppliers who are participants are they encouraged to attend and is it used as part of their mitigation counterfeit awareness strategy?	
	d. Does the supplier have counterfeit avoidance events?	d. Is the training for all employees or is it specifically targeted to individuals, management, purchasing, inspection, quality control etc? How and where is it recorded and is it mandated?	
	e. Are there examples, photos, descriptions provided for comparison against authentic materiel?	e. Is this information shared with the supplier's sub suppliers or wider groups in industry?	
	f. Has the supplier determined the need for counterfeit awareness training?	f. This is considered self-explanatory.	
	g. Is the training assessed?	g. How is it assessed and when is it updated and refreshed in line with current practices? How often is the training taken and is it used as part competence assessment and is that competence maintained?	
	h. Where are specific training needs defined?	h. Are there training plans and records?	
	i. Are employees within the supply chain encouraged to report counterfeit parts? If so how?	i. How is it encouraged if there is a no blame culture within the organization?	
	j. Do employees in the supply chain recognize the need for Electrostatic Discharge Program (ESD) to	j. Is this flowed down as a requirement, training material or established through audit and assurance. Do they have	

	address purchasing, storage, handling, assembly, packaging and shipping of sensitive parts? k. Are inspectors trained in performing Counterfeit Avoidance inspections? l. How many trained inspectors are performing inspections?	Suitably Qualified and Experienced Personnel (SQEP)? k. What processes, test equipment, intelligence (pictures test specifications etc.) are in place to detect them. l. Is this enough to resource the requirement, are they certified or fully competent to determine that counterfeit parts have been detected, what processes are in place for containment, evaluation and establishing authenticity.	
Inspection & Detection.			
Topic Area	**Considerations**	**Comments/Notes**	**Actions/Findings**
Test & Verification	a. How does the supplier determine the level of inspection and test requirements for the acceptance of material? b. What traceability or authenticity records are required with incoming shipments? c. What goods inwards tests are used?	a. Is there specialist testing and inspection techniques, processes, methodology and competent resource? Is there evidence/ examples? b. Is this ever waived when receipting shipments i.e. due to resource and delivery pressures? Are there CoCs, validated test results, raw material certificates, traceability of the supply from raw material to finished component or history cards. c. Does the supplier use visual inspections, standards, verification by comparison, checklist, verification by example or Pass/Fail criteria and is this defined by component criticality?	

	d. Evidence of mitigation action; are increased test/inspection regimes used for high criticality/safety related products?	d. How and to what are these criticalities determined and reviewed?	
	e. Evidence of mitigation action or what type of in-house testing or inspection does the supplier have?	e. What are the supplier's standard practices and are they documented?	
	f. What if any testing or inspection methods do the supplier outsource?	f. Are they to approved test/inspection houses, to what standard and are they accredited?	
	g. Evidence of mitigation action; Are the handling and storage area compliant.	g. Such as Electrostatic Sensitive Devices(ESD), temperature and humidity controlled, and to what levels is their controls such as locks, alarms, warning signage etc.	
	h. Evidence of mitigation action; Does the supplier have a robust process for inspection and test?	h. Will the supplier's tests/inspections be able to detect counterfeit items?	
	i. Evidence of mitigation action; Does the supplier have specialist equipment for enhancing his ability to identify Counterfeit items.	i. Such as magnification and digital photography capability, when is it called up to be used?	
	j. Evidence of mitigation action; Are the components key characteristics physically measured by comparison, calibrated measuring devices (i.e. calipers, micrometers verniers and other measuring machines)	j. Are measurements recorded and retained where is the evidence of recorded (permanent or temporary)?	

	k. Evidence of mitigation action: Does the inspection process differ for parts from authorised and unauthorised sources?	k. If so, how is it determined?	
	l. Evidence of mitigation action: Is marking permanency testing performed? Marking such as Mineral Spirits and alcohol on all parts?	l. This is considered self-explanatory.	
	m. Evidence of mitigation action; Are any other chemical checks used to confirm markings or surface finish?	m. This is considered self-explanatory.	
	n. Evidence of mitigation action: are OEM/OCM data sheets being reviewed?	n. This is considered self-explanatory.	
	o. Evidence of mitigation action Have you ever been notified by a customer that you have provided counterfeit product?	o. If so, what is the protocol for this?	
	p. Evidence of mitigation action Are separate batches/supply of products segregated?	p. This is considered self-explanatory.	
	q. Evidence of mitigation action: Are in process inspection used to identify failures? Where are failures identified are results analysed to establish whether it is down to counterfeit materiel or product failure?	q. This is considered self-explanatory.	
	r. Evidence of mitigation action What type of inspection and test records do you maintain? Are they available to customers?	r. This is considered self-explanatory.	

Document Control & Record Retention.	a. Does the document control system require management review and approval? b. Are the latest revisions of test and inspection documentation available at point of use? c. What retention period is required for quality, purchasing, test, traceability and authenticity records?	a. This is considered self-explanatory. b. This is considered self-explanatory. c. Where is this periodicity defined?	
Non-Conforming Material.	a. How is suspected or confirmed counterfeit materiel handled? • Process controlled? • Use precluded? • Quarantined? • Segregate? • Disposition? • Managed? • Disposed of? • b. Does the supplier have a Counterfeit parts control plan and has it been flowed down to the supply chain? c. Is counterfeit materiel returned to supplier for a refund? d. Does the supplier notify the customer when counterfeit parts are detected?	a. How is the material precluded(segregated) is this done under special condition, is it part of the batch that is only returned? To Note: item may be too large to be quarantined or may not be able to be segregated due to its nature, i.e. explosive or may need to finish a process before it can be formally segregated and quarantined. b. This is considered self-explanatory. c. How is the material prevented from re-entering the supply chain? Is this done under special condition? Part of batch returned only. d. How is the customer notified and where is the instruction, process or is it a	

		contractual requirement? Does the supplier notify anyone else or are there alerts, product recalls if delivered?	
	e. What is the process for handling product returns to suppliers?	e. This is considered self-explanatory.	
	f. Has the supplier found any counterfeit electronic parts?	f. The criticality and the level of investigation will be greater when they are found in mission/safety critical systems?	
Containment.	a. Does the supplier have policies/procedures in place to prohibit the return of counterfeit parts to the supplier?	a. Should be held as parts could make their way back into the supply chain/Evidence? Sample may be returned for analysis under controlled conditions.	
	b. Are counterfeit parts contained in limited access area? Separate from good parts?	b. This is to prevent cross-contamination and preclude their usage.	
	c. Do processes call for containment of all counterfeit product?	c. This is considered self-explanatory.	
	d. Do the processes preclude the scrap and disposal of counterfeit parts without customer approval?	d. Evidence to support that all counterfeit parts have been captured and not in the product or capability. Defined scrapping process to inform customer and prevent potential reuse?	
Communicating & Reporting.			
Topic Area	**Considerations**	**Comments/Notes**	**Actions/Findings**
Counterfeit Part Reporting	a. How are employees guided to report occurrences of counterfeit materiel?	a. Do processes/procedures require reporting of counterfeit materiel and define who is responsible?	

	b. How does the supplier ensure that all customers are notified?	b. Does the process require that both internal and external customers are notified of occurrences of counterfeit.	
	c. Does the supplier have a process to notify customers of changes in the reporting process including sub-tier suppliers?	c. Is this flowed down to suppliers and the supply chain?	
	d. Does the supplier report counterfeit items to government or trade bodies? Other interested parties?	d. Depending on the nation counterfeit items may be reported to various government bodies such as the national police agencies depending on whether it is defined as fraud or intellectual property rights?	
	e. Are counterfeit parts reported to investigatory agencies?	e. If yes, how is the information reported to these agencies? What information is gathered?	
	f. Are any additional steps taken to notify peers organizations, supply chain, customers of counterfeit parts. Are there processes for Counterfeit materiel alerts? (Allowing similar organizations to be aware of the counterfeit threat).	f. This is considered self-explanatory.	
	g. How does the supplier deal with customer complaints regarding counterfeit product?	g. This is considered self-explanatory.	
	h. Suppliers who are manufacturers. How do you ensure that your manufactured parts are not misrepresented by others?	h. Trademarks, holograms packaging detail etc. are used to combat counterfeiters.	

	i. Are there design features to protect the product from the risk of counterfeit, encrypted or covert product markings?	i. This is considered self-explanatory.	
Disposal			
Topic Area	**Considerations**	**Comments/Notes**	**Actions/Findings**
Disposal	a. Does the supplier ensure that all unused parts, Packaging and marking media, scrap, over-run parts, documentation are disposed of to preclude their future exploitation? b. Are the tooling such as molds, jigs and fixtures disposed of to preclude their future exploitation? c. Are all waste disposal companies used certified to dispose of material? Ensure all parts are disposed of properly and certificates of destruction received. d. Do not over order to reduce waste. e. If items are sold on or retained for any reason confirm traceability of item is retained for future reference. f. Cyber security, ensure all trademarks, holograms, run numbers, designs are secure.	a. Original packaging material is used by Counterfeiters as it provides a good source of material to prove the legitimacy of the product. b. The counterfeiters are not concerned with the tolerances of old moulds, jigs, and fixtures. The Supplier should dispose of these responsibly and have processes to prevent unauthorized reuse. c. This is considered self-explanatory. d. This is considered self-explanatory. e. This is considered self-explanatory. f. There is a potential for trojan to be hidden within the electrical components and electrical assemblies which could cause malicious damage to the software and capability.	

ANNEX C TO AQAP-2021– SYNOPSIS OF RELATED STANDARDS AND SPECIFICATIONS

STANDARD	DESCRIPTION	CONSIDERATION
ISO 22380 Security and resilience	Authenticity, integrity and trust for products and documents – Guidelines for the selection and performance evaluation of authentication solutions for material goods	This document gives guidelines for performance criteria and an evaluation methodology for authentication solutions that aim to unambiguously establish material good authenticity and integrity throughout an entire material good's life cycle:
EN 62402 Obsolescence management		This document is relevant to any business that depends on items supplied by someone else and that is vulnerable to those items becoming no longer available, this can lead to an increase in the risk of counterfeit items being made available in the supply chain. The Standard supplies a cost-effective way for organisations to manage the processes and activities of obsolescence management throughout all the phases of an item's life cycle.
IEC/TS 62668-1 Process management for avionics - Counterfeit Prevention - Part 1	Avoiding the use of counterfeit, fraudulent and recycled electronic components	This document defines requirements for avoiding the use of counterfeit, recycled and fraudulent components used in the aerospace, defence and high-performance industries (ADHP).
IEC/TS 62668-2 Process management for avionics - Counterfeit Prevention - Part 2	Managing electronic components from non-franchised sources	This document defines requirements for avoiding the use of counterfeit, recycled and fraudulent components when these components are not purchased from the original component manufacturer OCM or are purchased from outside of franchised distributor networks.
IEC TS/62239-1 Process management for avionics – Management Plan – Part 1:	Preparation and maintenance of an electronic components' management plan	This document defines the requirements for developing an electronic components management plan (ECMP) to guarantee to customers that all of the electronic components in the equipment of the plan owner are selected and applied in controlled processes compatible with the end application and that the technical requirements are accomplished.

UK Ministry of Defence (MOD) - Defence Standard 05-135 – Avoidance of Counterfeit Materiel.		This document defines the arrangements that a supplier is required to establish to demonstrate that they are actively planning and managing the risk of counterfeit materiel in their organisation and supply chain to prevent delivery of such materiel to the MOD.
DI-Misc-81832 Counterfeit Prevention Plan.		The Counterfeit Prevention Plan produced by the supplier will be used by the procurement activity to determine and evaluate the effectiveness of the supplier's counterfeit protection plan
SAE ARP6178 Aerospace Recommended Practice. Fraudulent/Counterfeit Electronic Parts	Tool for Risk Assessment of Distributors.	This document is applicable for all organisations that procure electronic components from sources other than the OCM manufacturer of the component
SAE AS 6081 Aerospace Standard. Fraudulent/Counterfeit Electronic Parts	Avoidance, Detection, Mitigation, and Disposition – Distributors	This document standardises practices to; Identify reliable sources to procure parts. Assess and mitigate risk of distributing fraudulent/counterfeit parts. Control suspect or confirmed fraudulent/counterfeit parts and report suspect and confirmed fraudulent/counterfeit parts to other potential users and Authority having Jurisdiction
SAE AS5553 Counterfeit Electrical, Electronic and Electromechanical (EEE) Parts	Avoidance, Detection, Mitigation, and Disposition	This document is for use by organisations that procure and/or integrate and /or repair EEE parts and/or assemblies containing such items, including maintenance, repair and overhaul (MRO). The requirements of this standard are generic and intended to be flowed down, as applicable, through the supply chain
SAE ARP6328 Aerospace Recommended Practice. Guideline for Development of Counterfeit Electronic Parts	Avoidance, Detection, Mitigation, and Disposition Systems	This document provides a significant amount of additional information that the organisation should consider in conjunction implementing all elements of AS5553 in the organisations counterfeit EEE part risk mitigation plan/process
SAE AS6462 (R) AS5553, Counterfeit Electrical, Electronic, and Electromechanical (EEE) Parts	Avoidance, Detection, Mitigation, and Disposition Verification Criteria	This document is intended for use during audits to the requirement of AS5553. It may be used by all contracting organisations that procure EEE parts, whether such parts are procured directly or integrated into

		electronic assemblies or equipment as guidance for evaluating compliance to AS5553.
SAE AS6171 Test Methods Standard	General Requirements Suspect/Counterfeit, Electrical, Electronic, Electromechanical Parts	This document standardises inspection and test procedures, workmanship criteria, and minimum training requirements and certification to detect Suspect/Counterfeit (SC) EEE parts.
SAE AS6174 Counterfeit Materiel	Assuring Acquisition of Authentic and Conforming Materiel	This document standardises practices to: maximise availability of authentic materiel. Procure materiel from reliable sources. Assure authenticity and conformance of procured materiel, including methods such as certification, traceability, testing and inspection appropriate to the commodity/item in question and report suspect or confirmed fraudulent/counterfeit materiel to other potential users and Authority having jurisdiction.

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