Merc Aerospace Supplier Quality Requirements

Terms and Conditions of Purchase

Lower Clough Mill, Pendle Street Barrowford Lancashire BB9 8PH United Kingdom

Warning

Printed copies of this document are uncontrolled - if in doubt ask

1.0 Scope

- 1.1 This document details the requirements to be satisfied by the suppliers to Merc Aerospace Limited (hereinafter referred to as MAP). MAP requires that each supplier (your business) must comply with the quality requirements set forth within this document and to maintain a Quality Management System that ensure materials, goods and services comply with all our specified requirements.
- 1.2 These contract requirements are additional to the details on our Purchase Order (which focus on product quantity, logistics, part descriptions, special references, etc. with reference to the product required).

2.0 Purpose

2.1 To establish and confirm a supplier's Quality Assurance requirement for MAP for organisations supplying materials, goods and services that have a direct impact on the specification and or performance of an MAP product.

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4.0 Approval Requirements - General

4.1 Suppliers shall as the terms so require, produce, service, release and deliver all products in

accordance with the Purchase Order and all requirements identified therein against the specification provided.

MAP requires its aerospace / defence suppliers to be certified against AS 9100 and or AS 9120 (current versions) when contracted for the supply of aerospace and or defence work / projects; this requirement will apply unless otherwise agreed in writing from MAP.

For commercial contracts, e.g. non-defence and or aerospace work, then the supplier may be certified against ISO 9001 (as a minimum requirement) for product and or services supplied. The final decision for certification will be with MAP and or MAP customer contract.

If the supplier is a test and or calibration laboratory, the supplier must be ISO 17025 as accredited by UKAS (or other EA and or ILAC recognised national accreditation body). Testing of materials as a part of confirming materials specification – this must be completed by an ISO 17025 testing laboratory – with resulting reports provided on request – with the objective of ensuring the removal of counterfeit materials and or associated reporting from the supply chain.

Supplier's that do not comply with the above may be used by MAP, provided the supplier's Quality Management System complies with the following requirements as defined within this document and has been formally approved by MAP management. All certification claims as awarded must be accredited by UKAS (or similar notified body) under the mutual recognition agreement (MRA) for international accreditation – refer to EA – EC notified bodies – refer to the EC Nando for more information – http://ec.europa.eu/growth/tools-databases/nando/ with reference to product and associated testing and inspection legislation.

Engineering and other professional services (including individuals) providing services to MAP shall be professionally and technically competent and shall indemnify MAP for the technical advice provided. Signed copy certificates confirming qualification shall be provided to MAP on request.

All products shall be produced strictly in accordance with the purchase order (and technical specification

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provided). The delivery of incomplete product / shortages is not permissible unless specified on the purchase order or by written authority of MAP.

- 4.3 When the supplier is producing a product on behalf of MAP, the supplier may only use Special Process Suppliers who are MAP approved. A complete list of MAP approved Special Process Suppliers can be supplied on request.
- 4.4 Material stockists / distributors shall hold as a minimum AS 9120 (aerospace and or defence) or ISO 9001 (commercials) certification (as appropriate scope for Stockist Scheme Certification). As a minimum, items shall only be procured directly from the original manufacturer or approved distributor / franchised distributor.

Note: Documentation and data supplied with the purchased item shall ensure that full traceability of the purchased item is maintained, confirming that the purchased item conforms to specification and was produced by the designated manufacturer (objectively).

4.5 In the event that a supplier has its accredited certification suspended or removed, the supplier must immediately inform MAP in writing stating reason for withdrawal of same.

5.0 Compliance Overview

- 5.1 Enquiries concerning the content of this document and other referenced documents, or requests for additional copies should be referred to the purchasing representative responsible for the Purchase Order within MAP.
- 5.2 The requirements of this document is with reference to the policy of MAP and Selection of Supplier questionnaires may be used to provide both existing and potential suppliers with visibility of the current Quality & Standard requirements and expectations of MAP contracts.
- 5.3 It is the policy of MAP to manufacture and supply complying products and services to the customer contract specification that will achieve, or contribute to, safe conditions for its customers and the endusers of said products and services procured. The aforementioned to include but, not restricted to, a formal commitment to business process improvement with particular reference to ethical behaviour, prevention of counterfeit parts and associated legislative compliance as part of its procurement and employee terms and conditions. In furtherance of this MAP policy; all Suppliers to MAP shall implement a policy requirement at all levels of

their business to replicate and establish the necessary controlled procedures that ensure the achievement of the MAP policy objective is achieved through the provision of documented evidence.

- 5.4 Suppliers are required to comply in full with the contents of this document. If a supplier cannot comply with any portion of this document, then the supplier must advise MAP in writing. MAP will review the supplier request and advise the supplier of the results in writing. The supplier is responsible for keeping all related documentation on file at their facility. No deviation from this document is acceptable in advance of formal agreement to do so in writing from MAP. Such formal agreement must be retained by the supplier.
- 5.5 Verbal agreements are <u>un-acceptable</u>.
- 5.6 Suppliers shall maintain MAP specifications and other Standards at the latest issue and shall review the issue status of specifications on receipt of a Purchase Order and or at least once within a six month period (particularly for repeat contracts).

6.0 Business Quality Improvement Objectives

- 6.1 All suppliers are expected to have policy statements and plans to achieve Business (Quality) improvements as part of their continuous improvement programme.
- 6.2 MAP is dedicated to continuous improvement in the Quality and integrity of its services and to the satisfaction of its customer requirements and expectations. Supplier's contribution to this approach through the quality and reliability of their products and services is a prerequisite.
- 6.3 Each supplier shall demonstrate continuous improvement based on pro-active loss-prevention, root cause analysis and effective tiMAPy corrective action.
- 6.4 All suppliers are required to have policy statements demonstrating a formal commitment to business improvement with particular reference to ethical behaviour, product safety and prevention of counterfeit parts and associated legislative trade compliance as part of their procurement and employee terms and conditions at all levels of their organisation.

7.0 Organisation

Any change to the management representative responsible for Quality Management System and / or

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Inspection within the suppliers organisation (or group ownership) shall be communicated to MAP. Changes to premises shall be notified sufficiently in advance to MAP.

8.0 Purchase Order / Documentation Issue Control

- 8.1 Purchase Order amendments shall be subject to review by MAP prior to acceptance. The review shall ensure that copies of all processes and specifications quoted within a Purchase Orders are available, and that, where a supplier is unable to carry out any operations, approved sub-contractors may be identified.
- 8.2 Where a supplier has more than one site, every site used to produce product for shipment direct to MAP must have MAP approval.
- 8.3 MAP shall be afforded the right of entry to verify at source and / or upon receipt that purchased product conforms in all respects to specified requirements. This action shall not absolve the supplier of the responsibility for the quality of the delivered product nor preclude its subsequent rejection should other quality issues arise at a later date / time.
- 8.4 Where the use of a sub-contractor is permitted, the identification and selection shall form a part of the initial contract review. Suppliers may consider / use a sub-contractor suitable given the following circumstances: *The sub-contractor is currently approved by MAP*.
- 8.5 Suppliers are responsible for ensuring the flow down of applicable sections of MAP Ref No and related specifications to second tier suppliers.
- 8.6 Suppliers must reference MAP Ref No on all Purchase Orders issued in support of activity for MAP (referring their suppliers to the MAP web-site for latest version documentation).

9.0 Procurement of Components

- 9.1 Failure of components can have major effects on airworthiness, safety, reliability, operational integrity – with related cost impact. All parts are therefore termed "controlled" and should be treated as such (bonding requirements may be appropriate and / or necessary).
- 9.2 Any component, which is sourced, and has the manufacturer identified on the Bill of Material (BOM) may only be purchased from that supplier or their approved agent. Suppliers must not source parts

from non-approved sources (<u>original producing</u> suppliers only).

9.3 Where a Supplier wishes to change the source of a component, the Supplier shall request permission to make the change from MAP.

NOTE: Identification of a supplier on a controlled BOM does not automatically approve them for use. It is the supplier's responsibility to check that any sub-contractor is correctly approved prior to use (objective evidence for audit purposes is required).

10.0 Control of Non-Conforming Material

10.1 The supplier shall have no discretionary power to deviate from the specification requirements as detailed with Purchase Order (and supporting documentation). Concessions will only be accepted on receipt from the Supplier of a full "root cause analysis" report detailing the issues and evidence of preventative action. Parts subject to concession must not be delivered to MAP until MAP approves a concession.

Note: Concessions are normally only issued to Suppliers when a product is non-conforming, and the non-conformance does not effecting fit, form or functionality.

- 10.2 No rework shall be permitted on identified nonconforming product without written approval from MAP. Manufacturing records shall clearly record the operation and the results achieved, should reworking under a concession be approved.
- 10.3 Where the supplier has any reason to suspect nonconformance of any delivered product, then the supplier must immediately notify MAP.
- 10.4 Scrapped (or non-conforming) components must be physically damaged beyond repair prior to actual disposal (to prevent mixing with conforming product of the same / similar type / model). The MAP management representatives (or their customer) may require a report from the Supplier and / or witness by inspection and of process of damage and / or disposal.

11.0 Rejections after Delivery

- 11.1 The Supplier shall be notified of non-conforming supplies found after delivery. MAP will contact the supplier and issue an NCR against the parts prior to return
- 11.2 Following receipt of an NRC notification the Supplier shall take immediate containment action. The action

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shall include 100% inspection of all supplier stock or work in progress. This containment action shall be taken within 48 hours of notification from MAP. The supplier shall provide within 14 days an investigation into the root cause of the problem and provide corrective action to prevent recurrence. The findings, corrective action and effective date shall be reported to MAP.

12.0 Supplier Monitoring

All Suppliers shall monitor the quality and delivery performance of product delivered to MAP. In addition each supplier's quality and delivery performance is continually monitored by MAP. Suppliers whose performance does not achieve and maintain an acceptable level shall be formally notified of their supplier status and may be required to implement improvement actions accordingly. Failure to improve or respond positively to an MAP NCR will result in the withdrawal of supplier approval by MAP.

13.0 Records & Archives

- 13.1 All (Quality Management System) records held by Suppliers shall be legible and identifiable to the product involved. Records shall be stored and maintained in such a way that they are readily retrievable in facilities that provide a suitable environment to minimise deterioration or damage and to prevent loss. Records shall be available for evaluation by MAP staff until such time as MAP authorise disposal in writing.
- 13.2 Documentation and records applicable to MAP shall not be amended with correction fluid. A single linked line shall delete any revisions and/or correction of errors and will be accompanied by an initial and date
- 13.3 Should a supplier cease trading with MAP, quality records shall still be maintained until disposal is authorised by MAP. If the supplier ceases trading completely, or is unable to maintain the records, MAP must be informed so that alternate arrangements can be made to store the records.
- 13.4 All records shall be retained by the Supplier for a period of 25 years unless otherwise agreed with MAP and customer.

14.0 Certificate of Conformance / Counterfeit Matters

A Certificate of Conformity (C of C), which shall include sufficient information to enable it to be correlated to the supplies / materials and must accompany supplies submitted / provided to MAP.

Certificates and supporting documentation will be identified by Purchase Order / Contract number and shall include the following information:

The Certificate shall include a statement of conformity individually signed by an authorised signatory of the Supplier and shall be as stated below or similar, subject to agreement by MAP; with the primary objective of removing Counterfeit Parts / Materials from the supply chain (refer to approved testing – see section 5.0 above).

We (name of the supplier) hereby confirm that the whole of the supplies detailed hereon have been produced, inspected and tested and conform in all technical and integrity respects with the requirements of the contract order / specification.

(signed by: authorised ** person from the Supplier)

Note: ** The Supplier shall be able to demonstrate to the satisfaction of MAP that the nominated authorized signatory has authority and competence (with the technical competence demonstrated by qualification and experience supported by validated CV claims).

Where the Supplier utilises an automated system for generation and / or authorisation of certificates / records, then those systems shall be subject to robust management and security controls approved by MAP to protect the integrity of the certification process.

The Supplier shall ensure completion of all requirements of the purchase order prior to delivery including all processes. Deliveries of goods and or services that do not fulfil the purchase order requirements will not be accepted.

The Supplier is responsible for providing a C of C that confirms that the products, processes, and/or services furnished meet the requirements for the lot and or batch of each shipment, with reference to the MAP Purchase Order.

The C of C must have at a minimum the following:

- a) Consignees name and address
- b) Consignors name and address
 - Reference number and date of the certificate
- d) Description and quantity of supplies
- e) Related specification or drawing numbers and issue (as appropriate)
- f) Identification marks and serial numbers (as appropriate)
- g) Manufacturing lot no. or traceability reference (works order / batch number)

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- h) Any limitations/Shelf Life Expiry dates (as appropriate)
- i) Signature(s) of ** approval (for inspection / release)

When the purchase order and / or applicable documents does not specify a method of packaging and preservation, it is the supplier's responsibility to assure that product is preserved and packed using methods and materials that will assure that it arrives damage free to MAP.

Note: to structural engineering services – unsigned documentation and or reports issued will not be legally accepted or binding by MAP. Where such documentation is issued unsigned, MAP will refer to the unsigned documentation in good faith in support of the customer contract specification with the understanding that the full liability (in the case of claim and or failure) placed on the supplier providing unsigned documentation.

Preservation: All critical / sensitive materials, components or devices must be preserved by the supplier using appropriate packaging materials and stored under conditions recommend by the manufacturer.

14.2 Packaging: The method of packaging must:

- Prevent damage or deterioration in transit
- Permit safe handling
- Assure that all necessary warnings are completely visible
- Assure the shipping address, supplier name, qty, and part number are visible.
- Assure that the packing list, quality documents, and other important information is enclosed, or securely fastened.

14.3 First Article Inspection Report (FAIR)

When a FAIR is required with the goods to demonstrate compliance with all the procurement specifications detailed in the design package the following must apply: First Article Inspection Reports shall be in accordance with AS 9102 and or MAP procedure MAP 05 (as instructed).

A copy of the FAIR shall be supplied with the product unless otherwise stated. The supplier shall retain the FAIR as a quality record and they shall not be disposed of without the written permission of MAP. This shall not absolve the supplier of the responsibility for the quality of the delivered product nor preclude its subsequent rejection should other quality issues arise.

Any person authorised by MAP, including the Customer or Regulatory Authority, shall not be unreasonably refused permission by the supplier to enter any works, warehouse or other premises under the supplier's control for the purpose of surveillance or inspection of any tools or materials procured or used for the manufacture of the goods or process of manufacture on the completed goods themselves before dispatched to MAP or their customer.

14.5 Business continuity planning

MAP advises each supplier to have a written business continuity plan to cover disaster recovery and the responsibilities and actions to be taken in the event of an emergency that may affect deliveries to MAP that will bring the supplier on line in the shortest possible time.

14.6 Change Control

Uncontrolled change within the supply chain is the major cause of deficiency escapes into MAP. It is crucial therefore that all change, no matter how trivial it may appear, is assessed for potential risk and then subject to mitigating actions and control.

Changes can occur in three ways:

- 1) Change to the producing location, either within a supplier or between suppliers.
- 2) Changes to Components.
- 3) Changes within the company's stores department, Storage and dispatch method, including machines, people etc.

The control mechanism for these is as follows.

- 1) Changes to the producing location shall be notified to MAP.
- 2) Changes in components shall be raised with the buyer responsible for the purchase order. The buyer shall take the appropriate action within MAP and inform the Customer. The supplier must not progress with any changes to the component without written agreement from MAP.
- 3) Changes within the Company's stores department shall be controlled as follows

14.4 Our right of access

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- All changes to components storage location shall be subject to a documented risk review prior to being carried out.
- Staff changes within the company's stores department must be fully trained and supervised until level of competence is assessed and approved as competent.
- Changes to the Stock control computer system, must be documented, risk assessed, audited and checked after changes for example, New operational software is introduced or updated.

All documentation relating to point 3 must be kept indefinitely and made available to MAP on request in writing with reasonable notice following an NCR with relation to supply quality problems.

14.7 Traceability

All parts and or materials shall be clearly traceable back to the original manufacturer of the parts. Where the supplier has purchased a component or assembly, they shall have a copy of the original producers certificate of conformance.

All components and assemblies shall be traceable to the original material identification.

The traceability system must facilitate the rapid identification of any part delivered and suspected of being defective. Containment action must be implemented immediately to protect the customer on any defects found that affect quality of the product.

All records in relation to MAP must be kept indefinitely and shall be made available to MAP upon request

14.8 Special process requirements (Ref. section 19.0 of this document for requirements)

Any special process supplier must be AS 9100 or ISO 9001 approved or meet the requirements outlined in section 19 of this document. The supplier performing the special process must certify that all applicable requirements have been met.

14.9 Manufacturing & Process Control

Adequate, clean well-maintained facilities shall be provided to enable products to be consistently

produced in accordance with the requirements of the MAP order.

Suppliers shall establish a procedure detailing the general workmanship practices for the prevention of Foreign Object Damage.

Suppliers must not omit any part of any specification except when defined on the purchase order or covered by a non-conforming report authorised by MAP

Suppliers providing Shelf life items shall ensure they are correctly labelled with shelf life expiry and suitably packaged. No shelf life items within 6 months of expiry.

Suppliers are expected to establish procedures for identifying adequate statistical techniques for determining process capability of key characteristics, especially when these are identified on the documentation. Such techniques shall demonstrate management ownership and responsibility and be based on recognised industry models.

Where the supplier uses a sample inspection plan as a means of product acceptance, the plan shall be predicated on industry recognised models, statistically valid and shall preclude the acceptance of known non-conforming product. Documented procedures and records to demonstrate this shall be available.

All parts supplied to MAP shall be identified in accordance with the requirements of MAP. Suppliers shall maintain records to identify the materials used and the producing and processing history of each batch of parts supplied to MAP. A lot number that enables all associated records to be retrieved shall identify each batch.

14.10 Inspection Reports

The supplier is required to maintain and provide upon request all inspection records. The records must be at a minimum based on an established/recognized sampling plan.

15.0 Source Inspection

15.1 Source Inspection will be used by MAP to help develop a new supplier, or a supplier that is having quality issues. Source inspection at a supplier's site will be imposed by a letter issued from MAP to the supplier. In the event MAP imposes source inspection, only MAP can remove or waive source inspection.

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MAP will also use source inspectors to perform in process checks at a supplier, process audits at a supplier, or corrective action development, or follow up. MAP will select a UKAS and / or other approved inspector.

16.0 Concessions / Permits

16.1 If a supplier's quality system discovers a nonconformance to the MAP Purchase Order, the supplier can submit a request for a concession to MAP.

The supplier can use the table below to determine when a concession is needed.

Option	MAP Required	Approval/Concession
*Rework the non-conformance prior to shipment		No
Scrap and re-place		No
Request to use the product as is		*Yes
Request to repair the non- conformance		*Yes

Requests to use as is, or repair a non-conformance, must be processed using the suppliers own concession request form and signed by MAP.

*Rework must return the part to full compliance and specification.

Note: The supplier is not authorised to dispatch items requiring concession until he has been informed of the applicable Concession Number and the supplier has a copy of the approved concession. This Concession Number must appear on his Certificate of Conformity, each time a delivery is made from the batch that has been approved under Concession.

17.0 Corrective Actions

17.1 If MAP performs a supplier audit and finds a nonconformance a request for corrective action will be issued to the supplier. Corrective actions reports (CAR's) for issues found during an audit will be documented. Before an audit will be closed out all open audit CAR's must be answered by the supplier and accepted by MAP.

18.0 Special Process Suppliers

18.1 MAP uses ISO 9001 and or AS 9100 and or Nadcap approved special process suppliers. In addition to ISO 9001 approval the special process supplier must demonstrate the ability to satisfy all applicable requirements. Failure to satisfy any requirement will

prevent MAP from using that supplier. Coded welder status is required when requested.

- 18.2 MAP considers the following to be special processes:
 - Adhesive and gluing processes
 - Epoxy resin adhesion
 - Electrical dry-wire crimping
 - Wet assemblies using defined torque arrangements
 - Painting / power-coating / similar
 - Non-destructive testing (NDT / NPI)
 - Anodizing / plating
 - Galvanising / plating / other coatings
 - Welding / soldering / brazing (all types of fusion)
 - Conformal coating
 - Materials testing / counterfeit parts mitigation
- **19. Distribution** (appropriate access of this document)

Internal

- MAP (purchasing)

External

- All MAP suppliers
- Trading Standards (officers)
- MAP Customers (on request)
- Auditors from Certification and Notified Bodies (on request)

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