

# Advisory Circular

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## IMPLEMENTATION PROCEDURES FOR THE TECHNICAL ARRANGEMENT ON AVIATION MAINTENANCE BETWEEN CAAS AND CASA

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- 1. GENERAL.** Pursuant to paragraph 88B of the Air Navigation Order, the Director-General of the Civil Aviation Authority of Singapore (DGCA) may, from time to time, issue advisory circulars (ACs) on any aspect of safety in civil aviation. This AC contains information about standards, practices and procedures acceptable to CAAS. The revision number of the AC is indicated in parenthesis in the suffix of the AC number.
- 2. PURPOSE.** This AC is issued to provide information and guidance relating to the Technical Arrangement on Aviation Maintenance (“the TA-M”) between the CAAS and the Civil Aviation Safety Authority (CASA). This document provides procedures for the acceptance of maintenance organisations to be recognised under the terms of the TA-M.
- 3. APPLICABILITY.** This AC applies to a SAR-145 organisation located in Singapore intending to perform work under the TA-M.
- 4. CANCELLATION.** This is the first AC issued on this subject.
- 5. EFFECTIVE DATE.** This AC is effective on 5 July 2013.
- 6. REFERENCES.** SAR-145; CASR-145; Technical Arrangement on Aviation Maintenance between CAAS and CASA.
- 7. INTRODUCTION**
  - 7.1** The TA-M between CAAS and CASA took effect on 21 May 2013. The TA-M is limited to maintenance of regular public transport<sup>1</sup> aircraft and for all other aeronautical products<sup>2</sup>.

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<sup>1</sup> Regular public transport means the purpose of transporting persons generally, or transporting cargo for persons generally, for hire or reward in accordance with fixed schedules to and from fixed terminals over specific routes with or without intermediate stopping places between terminals.

<sup>2</sup> Aeronautical product means any civil aircraft, and any aircraft engine, propeller, sub assembly, appliance, material, part or component to be installed thereon.

- 7.2 The TA-M allows a maintenance organisation recognised under the provisions of the TA-M to perform maintenance on Australian or Singapore registered aircraft for regular public transport and, other aeronautical products in accordance with the maintenance regulations of the country where the organisation performing the work is located.

## **8. PARTICIPATION IN THE TECHNICAL ARRANGEMENT**

- 8.1 SAR-145 maintenance organisations located in Singapore should notify CAAS of their intention to seek recognition under the terms of the TA-M in order to be able to perform maintenance on Australian aircraft and other aeronautical products.
- 8.2 CASR-Part 145 maintenance organisations located in Australia should notify CASA of their intention to seek recognition under the terms of the TA-M in order to be able to perform maintenance on Singapore aircraft and other aeronautical products.

## **9. PROCEDURES FOR THE ACCEPTANCE OF SAR-145 APPROVED MAINTENANCE ORGANISATIONS**

- 9.1 This section provides guidelines for obtaining recognition under the provisions of the TA-M, of SAR-145 approved maintenance organisations located in Singapore.

### CASA's Regulatory Requirements

- 9.2 The Civil Aviation Safety Regulations Part 42 (CASR-42) requires Australian aircraft and aeronautical products to be maintained by a maintenance organisation appropriately approved in accordance with CASR-145. CASR-42 also contains a provision to allow the acceptance of a maintenance organisation located outside Australia.
- 9.3 By signing the TA-M, CASA acknowledges that a maintenance organisation approved in accordance with SAR-145 and that is recognised under the terms of the TA-M will be treated as a CASA maintenance organisation approved under CASR-145.

### Recognition of SAR-145 Approved Maintenance Organisations

- 9.4 SAR-145 approved maintenance organisations located in Singapore intending to participate in the TA-M should follow the procedures detailed below:
- 1) All applications for recognition under the TA-M should be sent to the CAAS officer responsible for the oversight of the organisation (the principal maintenance inspector), who will determine whether the documents relating to the application are acceptable under the provisions of the TA-M;
  - 2) The applicant must provide CAAS with a letter of intent from only the following organisations: an Australian air operator, a CASR-Part 145 maintenance organisation located in Australia, or another SAR-145 maintenance organisation that is participating in the TA-M. The letter of intent issued by the Australian air operator, CASR-Part 145 maintenance organisation or SAR-145 maintenance organisation must state its intention to engage the maintenance services of the applicant;
  - 3) The applicant should include in its application a copy of the supplement to its SAR-145 Maintenance Organisation Exposition (MOE), which should clearly demonstrate how the applicant intends to meet any special provisions of the TA-M. Appendix 1 of this document provides the guidance on how to compile such a supplement;
  - 4) The applicant should facilitate any on-site audit to be carried out by CAAS.

- 9.5 CAAS' recognition of the organisation will be signified by approving the MOE supplement for recognition under the TA-M and the scope of work that may be performed.
- 9.6 CAAS will inform the CASA designated office mentioned in paragraph 16 of the TA-M of the acceptance of the maintenance organisation under the TA-M.

SAR-145 Approved Maintenance Organisations Performing Work on Australian Aeronautical Product under the TA-M

- 9.7 SAR-145 maintenance organisations that are recognised under the TA-M to perform work on Australian aeronautical products, shall do so in accordance with the following provisions:
- 1) Maintenance shall be released in accordance with CAAS requirements. A SAR 145.50 certificate of release shall be used for complete aircraft and a Singapore Authorised Release Certificate CAAS Form (AW) 95 shall be used for aeronautical products other than a complete aircraft. The release certificate shall clearly state that the maintenance performed is released in accordance with the TA-M;
  - 2) All maintenance of Australian aeronautical products shall be performed in accordance with the conditions specified by the owner or operator of the aeronautical products maintained;
  - 3) CASA regulations on Airworthiness Directives, related to the work undertaken, must be complied with;
  - 4) The design of major repairs and major modifications shall be in accordance with CASA approved data;
  - 5) CASA criteria shall be used to determine whether a repair or modification is major or minor;
  - 6) Technical records shall be completed in accordance with CASA requirements;
  - 7) Any part installed pursuant to the TA-M shall be manufactured and maintained by organisations that are approved by or acceptable to CASA;
  - 8) Only responsible maintenance personnel who are familiar with the TA-M, its implementation procedures or this Advisory Circular, and customer's special conditions are allowed to perform inspections and issuance of the certificate of release for aeronautical products under the TA-M; and
  - 9) In the case of a certificate of release issued after the maintenance of an Australian-registered aircraft, conditions as specified in Appendix 2 must be met.

Contracted and Subcontracted Work

- 9.8 SAR-145 approved maintenance organisations performing work on Australian aeronautical products under the TA-M may contract work to other participating organisations or CASR-145 approved maintenance organisations located in Singapore.
- 9.9 Where work is contracted to organisations outside of Singapore, the organisation shall be approved by CASA or be otherwise acceptable to CASA under the terms of an existing TA-M or bilateral maintenance agreement with the competent authority of the country in which the organisation is located.
- 9.10 The organisation may subcontract work to any other organisation provided it extends its quality system to that organisation and that the work is within the scope of the ratings and limitations of the approved maintenance organisation.
- 9.11 It is the organisation's responsibility to ensure that the customer is informed when the subcontracting of work is required.

### Revocation of Recognition Pursuant to the TA-M

- 9.12 Notwithstanding any of the foregoing, CASA or CAAS may revoke the recognition of an organisation pursuant to the TA-M, where CASA or CAAS finds that an organisation is not maintaining the applicable standards or is otherwise not achieving the intent of the TA-M.

### Safety Oversight

- 9.13 Safety oversight of maintenance organisations located in Singapore recognised under the TA-M shall be conducted by CAAS.
- 9.14 CASA may, subject to reasonable prior notification, inspect the approved maintenance organisation, to investigate safety issues. CASA may also participate in CAAS audits and inspections of approved maintenance organisations.

## **10. LIST OF PARTICIPATING ORGANISATIONS UNDER THE TECHNICAL ARRANGEMENT**

- 10.1 The list of organisations that have received recognition under the TA-M will be published on the CAAS website at [www.caas.gov.sg](http://www.caas.gov.sg).

**APPENDIX 1 : SUPPLEMENT TO THE MAINTENANCE ORGANISATION EXPOSITION**

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**Purpose**

This appendix provides guidance for SAR-145 organisations based in Singapore on the development of a supplement to the SAR-145 MOE required under the TA-M between CAAS-CASA. Where the material required by this supplement is already incorporated into the manual/exposition, the supplement need only contain a reference to where in the manual/exposition the requirement is located.

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**COVER PAGE**

**CASA SUPPLEMENT TO SAR-145 AMO  
MAINTENANCE ORGANISATION EXPOSITION**

**REF** \_\_\_\_\_

**Company Name and Facility Address**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**CAAS SAR-145 APPROVAL NO.** \_\_\_\_\_

**DATE OF SUPPLEMENT** \_\_\_\_\_

This Supplement, together with the CAAS SAR-145 MOE, form the basis of acceptance by the CASA for maintenance carried out by this organisation on aircraft and/or engine and/or aircraft components under the regulatory control of CASA.

Maintenance carried out and certified in accordance with the referenced MOE and this supplement is accepted as meeting the requirements of CASR-145.

## 1. INTRODUCTION

This paragraph should address why the manual/exposition amendment or supplement is necessary.

“The Civil Aviation Authority of Singapore and the Civil Aviation Safety Authority signed a Technical Arrangement (TA-M) on 22 April 2013 that allows for the reciprocal acceptance of maintenance organisations qualifying under the provisions of the arrangement.

This amendment/supplement is therefore intended to inform the staff of the AMO of additional considerations that need to be taken into account when working in accordance with the TA-M.”

## 2. ACCOUNTABLE MANAGER'S COMMITMENT STATEMENT

This paragraph represents the agreement by the Accountable Manager that the AMO will comply with the conditions specified in the manual/exposition/supplement. The accountable manager is usually the AMO's Chief Executive Officer (CEO) but can be the person holding another responsible position as long as he/she has full financial authority.

An acceptable statement might be as follows:

“This Supplement defines in conjunction with the CAAS Approved Maintenance Organisation Exposition Ref ..... the organisation and procedures upon which CASA acceptance is based.

These procedures are approved by the undersigned and must be adhered to when maintenance work is being performed for any customer that operates under the jurisdiction of the CASA and the TA-M.

It is recognised that the organisation's procedures do not override the necessity of complying with any additional requirements formally published by CASA and notified to this organisation from time to time.

It is further understood that CASA reserves the right to withdraw acceptance (suspend or cancel any privileges granted pursuant to the TA-M) if it is considered that procedures are not followed or that the standards are not maintained.

Signed by the Accountable Manager

For and on behalf of [the AMO].

\_\_\_\_\_ (name) \_\_\_\_\_ (signature) \_\_\_\_\_ (date)”

*Note: When the Accountable Manager is replaced, the new Accountable Executive/Manager must, within 30 days, sign the statement so as not to invalidate the acceptance.*

## 3. BASIS OF RECOGNITION AND LIMITATION

CASA's recognition is based upon full compliance with SAR-145 and the CAAS Maintenance Organisation Exposition.

This recognition is limited to the scope of work permitted under the current approval granted by CAAS to the AMO in accordance with SAR-145 and to the Singapore locations specified therein.

#### **4. INTERNAL QUALITY ASSURANCE SYSTEM**

This paragraph should reference the location in the AMO's MOE or Quality Assurance Manual of the internal quality assurance system description and procedures.

#### **5. ACCESS BY CAAS AND CASA**

This paragraph should specify that CAAS and CASA staff must be allowed access to the AMO for the purpose of assuring compliance with procedures and standards and to investigate specific problems.

There must also be an indication that in the case of a serious non-compliance with regulations or established standards the organisation must accept that it may be subject to CASA enforcement action in order to maintain status with CASA.

#### **6. WORK ORDERS / CONTRACTS**

This paragraph addresses the subject of work orders/contracts. The AMO must ensure that the maintenance contract is understood and agreed to by both parties. The customer must ensure that the work orders/contracts are detailed and clear, and the AMO must ensure it receives work orders that it understands.

The work order should specify the inspections, repairs, alterations, overhauls to be carried out, the Airworthiness Directives to be complied with and parts to be replaced.

Replacement parts must be manufactured and maintained by organisation acceptable to CASA and shall have been certified in accordance with CASR-145.

#### **7. CONTRACTING AND SUBCONTRACTING**

This paragraph should address the procedures for contracting and subcontracting.

#### **8. AIRWORTHINESS DIRECTIVES/AIRWORTHINESS LIMITATIONS**

This paragraph must address the compliance with Airworthiness Directives and any airworthiness limitations. The applicable CASA regulations on Airworthiness Directives must be complied with.

Airworthiness Directives, Airworthiness Limitations, and other requirements declared mandatory by the State of Registry must be available to maintenance personnel.

The customer must provide a copy of all ADs that must be complied with to the AMO and identify any airworthiness limitations to the AMO. The customer remains responsible for specifying any AD compliance required during maintenance and any airworthiness limitations through the work order.

#### **9. REPAIRS AND MODIFICATIONS**

This paragraph should specify that the customer will obtain or establish the process to obtain necessary CASA approvals prior to the incorporation of major repairs and major modifications. The AMO will ensure that major repairs and major modifications are incorporated only when in receipt of the appropriate approvals.

The CASA criteria must be used to determine whether repairs and modifications are major.

## **10. MAINTENANCE RELEASE OF AIRCRAFT AND COMPONENTS**

Release to service for aircraft under the TA-M should be carried out in accordance with SAR-145 and a Certificate of Release to Service (CRS) should be issued under conditions as specified in Appendix 2 of this AC.

Release to service of components up to and including complete engines under the TA-M should be carried out in accordance with SAR-145. The Authorised Release Certificate Form CAAS(AW)95 should be issued.

The following statement should be reflected in the CRS or Block 13 of the Authorised Release Certificate:

“Released under the terms of the CAAS and CASA TA-M”

When maintenance cannot be performed in accordance with the work order/contract, this fact must be made known to the customer.

## **11. RECORD KEEPING**

This paragraph should describe how the AMO intends to meet the requirements of the TA-M on the retention of technical records.

## **12. PERSONNEL RESPONSIBLE FOR RELEASE TO SERVICE**

Describe the procedures the organisation will use to ensure that only responsible maintenance personnel who are familiar with the TA-M, any advisory material issued by CAAS in relation to this TA-M, this supplement and any applicable customer's special conditions in relation to the performance of maintenance are allowed to perform maintenance on aeronautical products or issue release documentation for aeronautical products under the TA-M. Relevant personnel should also be informed of any updates of the laws, regulations, standards, practices, procedures and systems relevant to the TA-M.

## **13. MANDATORY REPORTING REQUIREMENTS**

Describe the procedures the organisation will use to ensure all mandatory reportable conditions found in aeronautical products are reported to the owner or operator of the aeronautical product and the CAAS.



**APPENDIX 2 : CONDITIONS TO BE MET BY A SAR-145 APPROVED MAINTENANCE ORGANISATION, TO WHICH THIS TECHNICAL ARRANGEMENT APPLIES, FOR THE ISSUE OF A CERTIFICATE OF RELEASE TO SERVICE FOR THE MAINTENANCE OF AN AUSTRALIAN REGISTERED AIRCRAFT**

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- 1 A certificate of release to service (CRS) must be issued when all of the maintenance required to be carried out on an aircraft at a particular time has been completed and certified.
- 2 The CRS must be issued in the flight technical log for the aircraft and include the following:
  - (a) information identifying the certification as the CRS;
  - (b) the signature of the person issuing the CRS;
  - (c) either the licence number or any other unique number that identifies the person and relates to his or her entitlement to issue the CRS;
  - (d) the date and time of the issue of the CRS.
- 3 Before a person issues the CRS, he or she must ensure:
  - (a) certification of completion of maintenance has been issued by an individual who is permitted under Singaporean legislation to certify for the maintenance
  - (b) that any defect in the aircraft that the person is aware of has been rectified; or
  - (c) that the rectification of defect has been deferred in accordance with clauses 4 and 5; or
  - (d) if the defect could not be rectified or deferred — that the details of the defect have been entered in the flight technical log for the aircraft.
- 4 The rectification of a defect may only be deferred if:
  - (a) the defect does not adversely affect the airworthiness of the aircraft; or
  - (b) the operation of the aircraft for a flight with the defect is permitted by any of the following:
    - (i) the instructions for continuing airworthiness for the aircraft;
    - (ii) the minimum equipment list for the aircraft;
    - (iii) the configuration deviation list for the aircraft;
    - (iv) an airworthiness directive; or
  - (c) the defect consists of, or is caused by, damage to the aircraft that is approved as a permissible unserviceability under regulation 21.007 of the CASR; or
  - (d) the defect is in an item of operational or emergency equipment that:
    - (i) is fitted to the aircraft; and
    - (ii) is not required by the certification basis for the aircraft; and
    - (iii) is not required by or under the *Civil Aviation Regulations 1988* or the CASR for the operation of the aircraft for a flight.
- 5 If the rectification of a defect is deferred, it must be deferred by a person who is permitted under Singaporean legislation to certify for completion of whatever maintenance would be required for the rectification of the defect.
- 6 If the rectification of a defect is deferred, a record of the deferral must be made in the flight technical log for the aircraft by the person who defers the rectification of the defect and the record must include the following information:
  - (a) a description of the defect;
  - (b) the justification for the person's decision to defer the rectification of the defect taking into account the requirements and conditions of clauses 4 and 5;
  - (c) any limitations or conditions specified in a document mentioned in clause 4 in relation to the deferral of the rectification of the defect and the operation of the aircraft;
  - (d) the signature of the person;

- (e) the licence number, or any other unique number, that identifies the person and relates to his or her privilege to certify for the completion of whatever maintenance would be required for rectification of the defect in accordance with paragraph 4 (a) or (b).
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### **Conditions relating to critical control system maintenance**

If any critical control system maintenance has been carried out on an aircraft, the SAR-145 approved maintenance organisation must ensure that a **qualified individual** has verified for the proper assembly, configuration and function of the affected aircraft control system in accordance with Division 42.D.5 of the CASR. A record of such verification must be made in accordance with the Division 42.D.5. The verification must be carried out and recorded before the issue of a CRS for the aircraft.

An individual will be considered qualified if he or she is allowed to carry out such verification under the Singaporean legislation.

**Critical control system maintenance** and **aircraft control system** have the meaning given in regulation 42.015 of the CASR.

### **Conditions in relation to maintenance records**

A SAR-145 approved maintenance organisation performing maintenance on an Australian registered aircraft under this Technical Arrangement, must ensure details of any maintenance carried out on an aircraft are recorded in writing in accordance with the requirements of CASR Part 42.395.

### **Conditions relating to the fitting of non-standard parts**

If a part is fitted to the aircraft that is not a standard part, the Singapore approved maintenance organisation must ensure that the requirements of CASR Part 42.420 are met in relation to the part.

The supply of the non-standard part must be covered by an Authorised Release Certificate issued under the law of one of the following foreign countries:

- Brazil,
- Canada
- European Aviation Safety Agency (EASA) member states
- New Zealand
- Singapore
- United States of America

The Part 42 Manual of Standards (MOS) Chapter 12 issued by CASA includes a list of the specific documents from these countries which are recognised as Authorised Release Certificates.