

Airworthiness Procedure

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澳門特別行政區
REGIÃO ADMINISTRATIVA ESPECIAL DE MACAU



民航局

AUTORIDADE DE AVIAÇÃO CIVIL
CIVIL AVIATION AUTHORITY

No. : AP10

Issue : 1

Date : 15 Apr 08

SUBJECT: MAR-147 Maintenance Training Organisation Approval

1. Introduction

- 1.1 Pursuant to Paragraph 11(7) of the Air Navigation Regulation of Macao (ANRM), this document prescribes the implementation policy for MAR-147 approved maintenance training organisation and specifies the procedures to be followed to issue, vary or renew the MAR-147 maintenance training organisation approval to support the MAR-66 qualification process.
- 1.2 The MAR-147 maintenance training organisation may be approved to conduct either MAR-66 approved maintenance basic training course, MAR-66 approved aircraft type training course or both. In addition, the MAR-147 approved maintenance training organisation may conduct the examinations associated with the particular training course(s) and may examine persons who have not undertaken a training course with the organisation.

2. Effective Date

01 July 2008

3. Implementation Policy for MAR-147 approved Maintenance Training

- 3.1 MAR-147 is a requirement that addresses the approval of maintenance training organisations, the approval of the maintenance basic training course specified in MAR-66 and the approval of aircraft maintenance type training also specified in MAR-66. It is important to understand the difference between MAR-147 and MAR-66 which is that MAR-147 provides the basis for training to achieve the standard specified in MAR-66.
- 3.2 At this point in time, MAR-147 is only mandatory for the conduct of basic maintenance training where the student wishes to claim the maximum reduction in total experience specified in MAR-66.30 as permitted by AMC-66.30 (a). Notwithstanding the fact that MAR-66 caters for the basic category/sub-category self study candidate, it is the policy of the AACM to actively promote the use of maintenance training to qualify persons engaged in any aspect of maintenance and that such training be conducted by appropriately approved MAR-147 training organisations.

MAR-147 does however also permit a training organisation to be approved to carry out aircraft maintenance type training. Consequently, the training organisation may be approved in accordance with MAR-147 to conduct basic training or aircraft type training or both.

- 3.3 Any training organisation approved to MAR-147 will be listed in Appendix 4 of this AP.

A training organisation may also take the form of a training department in a MAR-145 approved maintenance organisation but it will need to hold a MAR-147 approval to be recognised.

- 3.4 The approved MAR-147 training organisation may also be recognised by the AACM within the scope of approval to conduct examinations to the standard of MAR-66 Section 2 Appendix 1 and using the criteria of MAR-1 Airworthiness Procedure No. AP9.

A MAR-147 approved maintenance training organisation may also be approved or required by the AACM to conduct the examination of a candidate who did not undergo training at the organisation. Only the AACM may request such examination of a candidate for the purposes of qualification.

4. Approved Procedure in respect of MAR-147 applicability to organisations.

- 4.1 Except where stated otherwise in sub-paras 4.2 to 4.4, the organisation must apply on AACM Form Twelve, shown as in Appendix No.1, to the AACM. An organisation may have more than one training facility and may operate as either one MAR-147 organisation with one accountable manager or as separate MAR-147 approvals using separate accountable managers. The AACM recommends a single MAR-147 approval under one accountable manager particularly where a single corporate policy is invoked by the organisation.
- 4.2 Where the organisation has training facilities both inside and outside Macao to function under one Accountable Manager whose MAR-147.35 (a) principal management is located in Macao then application on AACM Form Twelve must be made to the AACM, and one MAR-147 approval will be issued by the AACM.
- 4.3 Where the organisation is located outside Macao, the organisation must make application on AACM Form Twelve to the AACM and demonstrate need by providing evidence from Macao based approved MAR-145 maintenance organisation or from Macao based aviation organisation of the wish to use such organisation located outside Macao. Once need has been established, the AACM will investigate and issue MAR-147 approval.
- 4.4 Where the organisation has training facilities both inside and outside Macao to function under one Accountable Manager whose MAR-147.35 (a) principal management is located outside Macao, then paragraph 4.3 will apply unless those training facilities located within Macao can be treated as separate MAR-147 organisations when paragraph 4.1 or 4.2 as appropriate may apply.

5. Grant of MAR-147 approval

5.1 Application

- (a) Application for the MAR-147 Approval shall be made on AACM Form Twelve and submitted together with one copy of the proposed Maintenance Training Organisation Exposition (MTOE) and AACM Form Four, shown as in Appendix No. 3, for each management personnel and examiner concerned to:

The President
Civil Aviation Authority
Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macau, CHINA

- (b) The fees payable for this purpose will be equal to the cost of making the investigations. A quotation estimating the total cost will be provided to the applicant prior to the investigation process. The actual charge may vary depending on the time and expenses of the investigation process regardless of the result of applications.

5.2 Procedure

- (a) The MAR-147 certification process consists of five phases:

- Pre-application Phase;
- Formal Application Phase;
- Document Compliance Phase;
- Demonstration and Inspection Phase; and
- Certification Phase.

i. Pre-application Phase

The organisation seeking a MAR-147 approval should contact AACM for a pre-application meeting. During the pre-application meeting the following will be discussed:

- The intended scope of work;
- Aviation-related experience;
- Proposed organizational structure;
- Potential customers;
- Regulations and requirement applicable to the proposed maintenance training operation; and
- An overview of the whole certification process.

Besides, the applicant will be provided with the following material:

- AACM Form Twelve;
- AACM Form Four for each person nominated to hold a position required by MAR-147.35(a) and for each examiner nominated in accordance with MAR-147.35(d);
- Air Navigation Regulation of Macao;
- MAR-147 Approved Maintenance Training Organisations; and

The organisation should conduct a thorough review of the material for guidance of personnel, facility, equipment, and documentation requirements.

ii. Formal Application Phase

To begin the Formal Application Phase, the applicant should submit the application package including the following material to the AACM:

- A completed AACM Form Twelve;
- AACM Form Four for each person nominated to hold a position required by MAR-147.35(a) and for each examiner nominated in accordance with MAR-147.35(d);
- One copy of the proposed Maintenance Training Organisation Exposition; and
- Any applicable contracts/agreements/letter of intend.

Additional document may be required upon the request of AACM. If necessary, AACM will meet the applicant after receiving the formal application package. All questions about the proposed scope of work, the formal application or any additional supporting documents should be resolved at this time.

iii. Document Compliance Phase

In this phase, the MTOE and related supporting documents are reviewed in order to ensure compliance to the MAR-147 and safe operating practices. Apart from needing to ensure that the exposition addresses the subject headings listed in MAR-147 Section 2, Appendix 2, the organisation should be encouraged to write the exposition to reflect the actual procedures of the organisation and not to please the AACM.

If the exposition fails to comply with MAR-147 or deficiencies are found in any document, the exposition will be returned to the applicant with a letter outlining the deficient areas. Note that the certification process will not be continued until all the non-compliance areas are resolved.

iv. Demonstration and Inspection Phase

In this phase, the AACM surveyor team may conduct an audit to the applicant's facilities to ensure that the applicant's procedures are in practice and all MAR-147 requirements are complied with. The examination standards must be audited to ensure compliance with MAR-66 Section 2 Appendix 1 and using the criteria of MAR-1 Airworthiness Procedure No. AP9. If there is any finding about non-compliance with MAR-147, Corrective Action Reports (CAR) stating all the non-compliance areas will be issued to the organisation within one week after the audit visit. Upon receipt of the CAR forms, the organisation should review the non-compliance thoroughly and take appropriate actions. Note that the certification process will not be continued until all the non-compliance areas are resolved.

v. Certification Phase

Once the applicant meets the requirements of MAR-147, the AACM will issue the MAR-147 Approval Certificate (AACM Form Eleven), shown as in Appendix No. 2, in associated with the Approval Schedule indicating the approved ratings to the organisation.

An invoice for certification charges will be sent to the applicant for settlement.

6. Renewal of MAR-147 approval

6.1 Application

- (a) Renewal of MAR-147 approval should take place every 2 years.
- (b) MAR-147 Approved Maintenance Training Organisation should apply for renewal of the approval at least two months prior to the expiry date specified on the Approval Certificate.
- (c) Application for renewal of MAR-147 approval shall be made on AACM Form Twelve and submitted to:

The President
Civil Aviation Authority
Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macau, CHINA

- (d) The fees payable for this purpose will be equal to the cost of making the investigations. A quotation estimating the total cost will be provided to the applicant prior to the investigation process. The actual charge may vary depending on the time and expenses of the investigation process regardless of the result of applications.

6.2 Procedure

- (a) After receiving the application for renewal from the organisation, the AACM surveyor team may conduct an audit to the applicant's facilities to ensure that the applicant's procedures are in practice and all MAR-147 requirements are complied with.
- (b) If there is no finding about non-compliance with MAR-147, the AACM will issue the MAR-147 Approval Certificate (AACM Form Eleven) in associated with the Approval Schedule indicating the approved ratings to the organisation.
- (c) If there is any finding about non-compliance with MAR-147, Corrective Action Reports (CAR) stating all the non-compliance areas will be issued to the organisation within one week after the audit visit. Upon reception of the CAR forms, the organisation should review the non-compliance thoroughly and propose corrective action plan to the AACM within two weeks. The corrective action plan will be reviewed by the AACM surveyors. When all findings are taken necessary actions by the organisation to the satisfactory of the AACM and there is no outstanding level 1 finding, the AACM will issue the MAR-147 Approval Certificate (AACM Form Eleven) in associated with the Approval Schedule indicating the approved ratings to the organisation.
- (d) An invoice for certification charges will be sent to the applicant for settlement.
- (e) If corrective action plan is unacceptable, AACM will reissue CAR forms or consider terminating the MAR-147 Approval of the applicant depending on the severity of the situation.

7. Variation of MAR-147 approval

7.1 Application

- (a) Application for variation of MAR-147 approval shall be made on AACM Form Twelve and submitted to:

The President
Civil Aviation Authority
Alameda Dr. Carlos D'Assumpção, 336-342
Centro Comercial Cheng Feng, 18º andar
Macau, CHINA

- (b) The fees payable for this purpose will be equal to the cost of making the investigations. A quotation estimating the total cost will be provided to the applicant prior to the investigation process. The actual charge may vary depending on the time and expenses of the investigation process regardless of the result of applications.

7.2 Procedure

- (a) Variation of the MAR-147 approval means either the need to amend the schedule of approved training courses or the need to approve or accept MAR-147.75 changes. The following paragraphs address the different scenarios involving variation.
- (b) A change of name of the MAR-147 approved maintenance training organisation requires the organisation to submit a new AACM Form Twelve application as a matter of urgency stating that only the name of the organisation has changed including a copy of the organisation exposition with the new name. A name change alone does not require the AACM to audit the organisation, unless there is evidence that other aspects of the MAR-147 approved maintenance training organisation have changed.
- (c) A change of Accountable Manager requires the MAR-147 approved maintenance training organisation to submit such fact to the AACM as a matter of urgency. The AACM Form Four may be used for this purpose but is not mandatory. It is essential that the new Accountable Manager signs the statement of commitment to compliance with MAR-147 as a matter of urgency. It should be noted that the approval is technically invalidated by a change of Accountable Manager until the new Accountable Manager has been accepted by the AACM.
- (d) A change of any of the senior personnel specified in MAR-147.35(a) or the examination staff in MAR-147.35(d) other than the Accountable Manager requires the MAR-147 approved maintenance training organisation to submit an AACM Form Four in respect of the particular person to the AACM.
- (e) Any change of location of the MAR-147 approved maintenance training organisation requires the organisation to make a new application on AACM Form Twelve to the AACM together with the submission of an amended exposition.
- (f) Any additional basic or aircraft type training courses requires the MAR-147 approved maintenance training organisation to make a new application on AACM

Form Twelve to the AACM together with the submission of an amended exposition. The AACM will follow the procedure of Grant of MAR-147 approval (paragraph 5.2) in so far as the change affects such procedures.

8. MAR-147 Findings


- 8.1 Findings are categorised into 3 groups as follows of which level 1 represents major non compliance, level 2 represents minor non compliance and level 3 represents in-compliance background information observations rather than findings.
- 8.2 A level 1 finding includes one or more of the following; any non-compliance with the examination process which would probably invalidate the examination(s), failure to gain access to the MAR-147 approved maintenance training organisation during normal operating hours after two written requests, the lack of an accountable manager and a significant non-compliance with the training process.
- 8.3 In the case of a level 1 finding, the AACM will give notice in accordance with MAR-147.120 to revoke or vary the MAR-147 approval in whole or in part depending upon the extent of the level 1 finding unless timely rectification action has been taken to the satisfaction of the AACM. Failure to complete the rectification of any level 1 finding within 3 days of written notification means the AACM will need to proceed with revocation of the MAR-147 approval in whole or in part. MAR-1 Airworthiness Procedure AP12 specifies the procedure associated with MAR-147.120.
- 8.4 A level 2 finding includes any non-compliance with the training process which would probably lower the training standard and if not rectified in the longer term could lower maintenance standards.
- 8.5 In the case of a level 2 finding, the AACM may give up to 6 months notice of the need for rectification. When the AACM chooses to allow 6 months, the initial notification should be of 3 months duration to the MAR-147 quality manager followed by the final 3 months notice to the accountable manager.

Dependant upon the seriousness of the level 2 finding(s) the AACM may choose a notice period less than 6 months, but in no case less than 2 months, because even the level 1 finding is permitted 28 days notice by MAR-147.120. Failure to complete the rectification of a level 2 finding within the time period set by the AACM will lead to revocation of the MAR-147 approval in whole or in part depending upon the extent of the level 2 finding(s) in accordance with MAR-147.120 using the procedure specified in MAR-1 Airworthiness Procedure AP12.

- 8.6 A level 3 finding means an observation intended to give background information. Level 3 must not include information suggesting non-compliance with MAR-147. No action is required to be taken in the case of a level 3.

- END -

AACM Form Twelve

<p>澳門特別行政區 REGIÃO ADMINISTRATIVA ESPECIAL DE MACAU</p>	<table border="1"><tr><td><i>For Official Use Only</i></td></tr><tr><td>Ref : _____</td></tr></table>	<i>For Official Use Only</i>	Ref : _____
<i>For Official Use Only</i>			
Ref : _____			
<p> 民航局 AUTORIDADE DE AVIAÇÃO CIVIL CIVIL AVIATION AUTHORITY</p>			
Application for the GRANT / RENEWAL / VARIATION of MAR-147 Maintenance Training Organisation Approval			
1. Registered name of the applicant : _____			
2. Trading name (if different) : _____			
3. Addresses requiring approval : _____ _____ _____			
4. Tel. : _____ Fax : _____			
5. Grant <input type="checkbox"/> Renewal <input type="checkbox"/> Variation <input type="checkbox"/>			
6. Scope of Approval relevant to this application: (see page 2 for training course designators to be used)			
Basic Training:			
Type Training:			
7. Position and name of the Accountable Manager : _____ _____			
<i>kindly request the approval of the Civil Aviation Authority for the aforesaid maintenance training organisation in accordance with the pertinent legislation of Macao and the applicable directives issued by the Civil Aviation Authority.</i>			
<i>For your consideration,</i>			
<i>Signature of the Accountable Manager</i>	<i>Date of Application:</i>		
_____	_____		

<u>MAR-147 SCOPE OF APPROVAL</u>			
CLASS	RATING		LIMITATIONS
BASIC	TECHNICIAN – MECHANICAL	TB1.1	TURBINE AEROPLANES
		TB1.2	PISTON AEROPLANES
		TB1.3	TURBINE HELICOPTERS
		TB1.4	PISTON HELICOPTERS
	TECHNICIAN – AVIONIC	TB2	AVIONICS
	MECHANIC	TA1.1	TURBINE AEROPLANES
TA1.2		PISTON AEROPLANES	
TA1.3		TURBINE HELICOPTERS	
TA1.4		PISTON HELICOPTERS	
TYPE	B1	T1	QUOTE AIRCRAFT TYPE
	B2	T2	QUOTE AIRCRAFT TYPE
	A	T3	QUOTE AIRCRAFT TYPE
	C	T4	QUOTE AIRCRAFT TYPE
<p>FOR BASIC TRAINING PLEASE QUOTE DESIGNATORS TB1.1 TO TA1.4 AS APPROPRIATE TO THE APPLICATION:</p>			
<p>FOR TYPE TRAINING PLEASE QUOTE T1 TO T4 AS APPROPRIATE TO THE APPLICATION PLUS THE AIRCRAFT TYPE(S):</p>			

AACM Form Eleven



MAR-147 MAINTENANCE TRAINING ORGANISATION APPROVAL CERTIFICATE

REFERENCE : _____

Pursuant to the Air Navigation Regulation of Macao and all pertinent legislation, directives and requirements in force in Macao, and subject to the conditions specified below, the Civil Aviation Authority hereby certifies

NAME OF ORGANISATION

ADDRESS OF ORGANISATION

as a MAR-147 maintenance training organisation approved to provide training and conduct examinations listed in the attached approval schedule and issue related certificates of recognition to students.

CONDITIONS:

- 1. This approval is limited to that specified in the scope of approval section of the MAR-147 approved maintenance training organisation exposition, and*
- 2. This approval requires compliance with the procedures specified in the MAR-147 approved maintenance training organisation exposition, and*
- 3. This approval is valid whilst the MAR-147 approved maintenance training organization remains in compliance with MAR-147.*
- 4. Subject to compliance with the foregoing conditions, this approval shall remain valid until any specified date of expiry unless the approval has previously been surrendered, superseded, suspended or revoked by the Civil Aviation Authority.*

Macao, _____ **(Date of Issue)**

Date of Expiry _____

CHAN Weng Hong
President



**MAR-147 MAINTENANCE TRAINING ORGANISATION
APPROVAL SCHEDULE**

ORGANISATION NAME : _____

REFERENCE : _____


CLASS	RATING		LIMITATIONS
BASIC	TECHNICIAN – MECHANICAL	TB1.1	TURBINE AEROPLANES
		TB1.2	PISTON AEROPLANES
		TB1.3	TURBINE HELICOPTERS
		TB1.4	PISTON HELICOPTERS
	TECHNICIAN – AVIONIC	TB2	AVIONICS
	MECHANIC	TA1.1	TURBINE AEROPLANES
		TA1.2	PISTON AEROPLANES
		TA1.3	TURBINE HELICOPTERS
		TA1.4	PISTON HELICOPTERS
	TYPE/TASKS	B1	T1
B2		T2	QUOTE AIRCRAFT TYPE
A		T3	QUOTE AIRCRAFT TYPE
C		T4	QUOTE AIRCRAFT TYPE

This training / examination approval schedule is valid when working in accordance with MAR-147 approved maintenance training organisation exposition Ref: _____

Macao, _____ *(Date of Issue)*

CHAN Weng Hong
President

AACM Form Four

<p>澳門特別行政區 REGIÃO ADMINISTRATIVA ESPECIAL DE MACAU</p> <p> 民航局 AUTORIDADE DE AVIAÇÃO CIVIL CIVIL AVIATION AUTHORITY</p>	<p style="text-align: center;"><i>For Official Use Only</i></p> <p>Ref : _____</p>
<p>Details of Management Personnel as Specified in MAR-145 or MAR-147</p> <hr/> <hr/>	
<p>1. Organisation : _____</p> <p>2. Approval Number relevant to the item (1) : _____</p> <p>3. Name : _____</p> <p>4. Position : _____</p> <p>5. Qualifications relevant to the item (4) Position : _____</p> <p>6. Work experience relevant to the item (4) Position : _____</p>	
<p>Signature _____ Date _____</p> <p><i>On Completion, please send this form under confidential cover to the Civil Aviation Authority.</i></p> <hr/> <hr/>	
<p><u>AACM use only</u></p> <p>Name and signature of authorised AACM staff member accepting this person :</p> <p>Signature _____ Date _____</p> <p>Name and Position _____</p>	

List of Approved Maintenance Training Organisation

LIST OF APPROVED MAR-147 TRAINING ORGANISATIONS
Company Name Approval Number Address Tel: Fax: Email:
Company Name Approval Number Address Tel: Fax: Email:
Company Name Approval Number Address Tel: Fax: Email:
Company Name Approval Number Address Tel: Fax: Email:
Company Name Approval Number Address Tel: Fax: Email:
Company Name Approval Number Address Tel: Fax: Email:

SAMPLE