

Advisory Circular

INITIAL QUALIFICATION REQUIREMENTS FOR CERTIFYING STAFF

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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 to provide guidance and information on the initial qualification requirements for certifying staff that are responsible for issuing authorised release certificates for engines and components in a Category B, C, D and MD rated organisation.
- 3. APPLICABILITY.** This AC applies to all organisations holding a SAR-145 approval except those organisations holding only Category A (aircraft) class ratings.
- 4. CANCELLATION.** This AC supersedes AC 145-2(2) dated 1 April 2004.
- 5. EFFECTIVE DATE.** This AC is effective on 2 September 2013.
- 6. REFERENCES.** SAR-145.30, 145.35, 145.50, 145.230, 145.250, IC 6/2013.
- 7. INTRODUCTION.** SAR-145.30(f)(5) requires a SAR-145 approved maintenance organisation (AMO) maintaining aircraft components to have certifying staff qualified in accordance with SAR-145.35 and any other requirements as notified by CAAS.

SAR-145.35(a) requires certifying staff to receive human factors training and have an adequate understanding¹ of the aircraft components that are maintained, together with the associated organisation procedures before the issue of the certification authorisation.

SAR 145.35(e) requires all staff whom the organisation intends to appoint as certifying staff be

¹ The certifying staff has to understand how the aircraft component functions and the common defects and their associated consequences.

to assessed by the SAR-145 AMO for their competence, qualification and capability to carry out their intended certifying duties in accordance with a procedure acceptable to CAAS before the issue of the certifying staff's certification authorisation.

SAR 145.230(d) requires the certifying staff of SAR-145 Sub-Part D approved distributor organisation to meet the qualifications as specified by CAAS.

This AC is intended to provide guidance for SAR-145 AMO and SAR-145 Sub-Part D distributors on the initial qualification requirements and the procedure to issue authorisation certification for its certifying staff.

8. APPLICATION PROCEDURE.

- 8.1 AMO and Sub-Part D distributors should use the form 'CAAS (AW)102' when applying for CAAS' acceptance on its certifying staff. The applicant has to be nominated by the Quality Manager or Accountable Manager of the organisation.
- 8.2 The application should include the applicant's resume using the form 'CAAS (AW)22' together with copies of relevant certificates, documents, and a copy of the applicant's interview report.
- 8.3 The Quality Manager should ensure that the applicant meets the requirements prescribed in SAR-145.35 and SAR-145.230. The submission should be made to its Principal Maintenance Inspector. The applicant has to satisfy the requirements specified in Paragraphs 9 – 12.
- 8.4 Upon acceptance by CAAS, the organisation may issue the new certifying staff with a SAR-145 certification authorisation.
- 8.5 The authorisation is restricted to the rating(s) that is accepted by CAAS. CAAS' acceptance is required for any variations to the rating(s).

9. REQUIREMENTS FOR CERTIFYING STAFF IN A CATEGORY B AND/OR C RATED MAINTENANCE ORGANISATION.

- 9.1 This section is applicable to all SAR-145 AMO holding Category B and/or C class ratings.
- 9.2 Pursuant to SAR145.30(f)(5), to qualify as certifying staff, the SAR-145 AMO should ensure that the applicant:
 - (a) Has at least two years of related aviation maintenance experience if intended to certify a complete engine or APU; or have at least one year of related aviation maintenance experience if intended to certify components other than a complete engine or APU;
 - (b) Is assessed by the organisation to have met the requirements specified in SAR-145.35 and is competent to be a certifying staff;
 - (c) Is a full-time employee of the organisation and is able to meet the requirements specified in SAR-145.50;
 - (d) Has passed the CAAS Air Legislation examination paper M10, L11 or L12 and those examinations prescribed in Appendix 1; and

(An applicant with a relevant engineering degree, diploma or technical training may be exempted from examination paper B11 and F11. An applicant with a relevant electrical engineering degree, diploma or technical training may also be exempted from examination paper F12.)
 - (e) Has demonstrated his or her ability to be a certifying staff through an interview (See paragraph 12).

10. REQUIREMENTS FOR CERTIFYING STAFF IN A CATEGORY D RATED MAINTENANCE ORGANISATION.

10.1 This section is applicable to all SAR-145 AMO holding Category D class ratings.

10.2 Pursuant to SAR145.30(f)(5), To qualify as a certifying staff, the SAR-145 AMO should ensure that the applicant:

- (a) Has at least six months' of related aviation maintenance experience;
- (b) Is assessed by the organisation to meet the requirements specified in SAR-145.35 and is competent to be a certifying staff;
- (c) Is a full time employee in the organisation and is be able to meet the requirements specified in SAR-145.50;
- (d) Has passed the CAAS Air Legislation examination paper M10, L11 or L12; and
- (e) Has demonstrated his or her ability to be a certifying staff through an interview (See Paragraph 12).

11. REQUIREMENTS FOR CERTIFYING STAFF IN A MD RATED DISTRIBUTOR ORGANISATION.

11.1 This section is applicable to SAR-145 Sub-Part D approved distributor organisations holding Category MD class ratings.

11.2 Pursuant to SAR145.230(d), to qualify as certifying staff, the SAR-145 Sub-Part D approved distributor organisation should ensure that the applicant:

- (a) Has at least six months' of supervisory or experience in an aviation distributor organisation;
- (b) Has passed the CAAS Air Legislation examination M10, L11 or L12;
- (c) Is assessed by the organisation to be familiar with Sub-Part D of the SAR-145, aviation materials and part control system and acceptable certificate system; and
- (d) Has demonstrated his or her ability to be a certifying staff through an interview (See paragraph 12).

12. INTERVIEWING CERTIFYING STAFF APPLICANTS.

12.1 Quality managers are to interview the applicants formally and to keep a record/report of the interview. The interview should assess the knowledge of the applicant covering the following:

- (a) Singapore Airworthiness Requirements which include documentation procedures, maintenance procedures, airworthiness data and quality systems;
- (b) Qualification and experience requirements as stipulated in this AC;
- (c) Maintenance Organisation Exposition and organisational procedures;
- (d) Responsibilities of being a certifying staff;
- (e) Understanding of products and services that the applicant will be authorised to certify; and
- (f) Human factors.

13. SAR-145 AMO LOCATED OUTSIDE SINGAPORE.

- 13.1 SAR-145 AMO located outside Singapore should ensure that its certifying staff meet the requirements of SAR-145.30 and 145.35.
- 13.2 Certifying staff of SAR-145 AMO located outside Singapore are not required to take any CAAS examination. However, the Quality Manager should ensure that such certifying staff are familiar with the SAR-145.

APPENDIX 1 : EXAMINATION REQUIREMENTS FOR CERTIFYING STAFF

Organisation Rating	Category	Required CAAS Papers	
		Mechanical	Avionics
B1 & B3	Complete turbine engines / APU	B11, B13, C14 & C15	N/A
B2	Complete piston engines	B11, B13, C11 & C12	N/A
C1	Air conditioning & pressurisation	B11 & A16	F11 & F13
C2	Auto flight	N/A	F11 & I13 or I14
C3	Communications & navigation	N/A	F11 & R11
C4	Doors – hatches	B11 & A12	F11 & F12
C5	Electrical Power & Lights	N/A	F11 & F12
C6	Equipment	B11	F11
C7	Engine / APU	B11 plus C11 or C14	F11 & F13
C8	Flight Controls	B11& B12	F11 & F13
C9	Fuel	B11	F13
C10	Helicopter – rotors	B11 & A15	N/A
C11	Helicopter – transmission	B11 & A15	N/A
C12	Hydraulic Power	B11 & A14	F11 & F13
C13	Indicating / Recording Systems	N/A	F11 & I11
C14	Landing Gear	B11 & A14	F11 & F13
C15	Oxygen	B11	B11
C16	Propellers	B11 & C13	N/A
C17	Pneumatic & Vacuum	B11 & A14	F11 & F13
C18	Protection ice/rain/fire	B11	F11
C19	Windows	B11	N/A
C20	Structural	B11 & A12	N/A