

1. Crew Member Competency Requirements

Subpart J - Crew Member Competency Requirements

121.601. Purpose

This Subpart prescribes the rules governing the competency assessment of flight crew members and flight attendants who are trained under Subpart I.

121.603. General

(a) A holder of an air operator certificate must establish a crew member competency assessment program under this Subpart to ensure that each person who is assigned to perform the function of a crew member on an aeroplane conducting an air operation is competent to perform the assigned crew member function.

(b) The crew member competency assessment program must be-

- (1) acceptable to the Director; and
- (2) controlled by the certificate holder; and
- (3) specific to each aeroplane type or variant; and
- (4) completed in a flight simulator when completing flight crew competency assessments required by rules 121.607(2), (3) and (5).

(c) The holder of an air operator certificate may-

- (1) implement the crew member competency assessment program required by paragraph (a) under the authority of the certificate; or
- (2) contract with the holder of an aviation training organisation certificate issued under the Act and Part 141, to conduct the competency assessments in accordance with the crew member competency assessment program required by paragraph (a), if the aviation training organisation certificate authorises the holder to conduct the competency assessments; or
- (3) for a competency assessment conducted outside Mongolia, contract with an organisation that meets an equivalent standard specified in Part 141 to conduct the assessment in accordance with the applicable requirements specified in the crew member competency assessment program required by paragraph (a).

(d) The holder of an air operator certificate must ensure that the person responsible for the flight crew member competency assessment program holds a current flight examiner rating.

(e) Despite paragraph (b)(4), if a flight simulator is not available for the aeroplane type, the holder of an air operator certificate may apply to the Director to amend the competency assessment program for the aeroplane type to conduct the competency assessment without the use of a flight simulator.

(f) The holder of an air operator certificate must ensure that a competency assessment referred to in paragraph (e) is completed in accordance with the safe flight practice guide that is acceptable to the Director.

(g) The holder of an air operator certificate must ensure that each flight simulator or flight training device used for the competency assessment referred to in paragraph (b)(4)-

- (1) maintains the performance, functional, and other characteristics that are required for approval; and
- (2) is modified to conform with any modification to the aeroplane being simulated that results in changes to performance, functional, or other characteristics required for approval; and
- (3) is given a functional pre-flight check before being used, and any discrepancy detected during use is logged by the appropriate pilot instructor or flight examiner at the end of each training or flight assessment.

121.607. Flight crew competency assessments

A holder of an air operator certificate must ensure that-

- (1) each pilot acting as pilot-in-command of an aeroplane conducting an air operation under the authority of the certificate has, within the immediately preceding 12 months, passed a route check conducted in an aeroplane including an aerodrome proficiency check that is administered by a flight examiner and that-
 - (i) consists of at least 1 flight over 1 route segment and 1 or more landings at aerodromes representative of the operations to be flown; and
 - (ii) establishes that the pilot can satisfactorily perform the duties and responsibilities of a pilot-in-command of an aeroplane performing an air operation appropriate to the type of air operations authorised by the certificate holder's operations specifications; and
- (2) each pilot acting as a flight crew member of an aeroplane conducting an air operation under VFR has, within the immediately preceding 12 months, successfully completed a competency assessment administered by a flight examiner that covers-
 - (i) procedures, including emergency procedures; and
 - (ii) the pilot's flying skills in an aeroplane type normally used by the pilot in an air operation; and
 - (iii) human factors and crew resource management; and
- (3) each pilot acting as a flight crew member of an aeroplane conducting an air operation under IFR has, within the immediately preceding 6 months, successfully completed a competency assessment administered by a flight examiner that-
 - (i) covers procedures, including emergency procedures, appropriate to the equipment fitted to the aeroplane and to the type of operations to which the pilot is assigned by the certificate holder; and
 - (ii) includes human factors and crew resource management; and
- (4) each pilot acting as a flight crew member of an aeroplane conducting an air operation has, within the immediately preceding 12 months, successfully completed a written or oral test of the pilot's knowledge of the following:
 - (i) the relevant Civil Aviation Rules;
 - (ii) the certificate holder's operations specifications and exposition;
 - (iii) the aeroplane systems, performance, operating procedures, and the content of the flight manual for each aeroplane type normally flown by the pilot;
 - (iv) navigation, ATS, and meteorology;
 - (v) special flight operations as appropriate to the type of operation normally conducted by the pilot;
 - (vi) new equipment, procedures, and techniques;
 - (vii) location and operation of emergency equipment fitted to an aeroplane of the type normally flown by the pilot; and

121.609. Pilot instructor, Line supervisory pilot, Simulator instructor and Flight examiner competency assessments

A holder of an air operator certificate must ensure that the pilot instructor, line supervisory pilot, simulator instructor, or flight examiner in the training or competency assessment programs receives instruction and maintains proficiency as appropriate in-

- (1) the methods of imparting instruction on how to operate, and how to ensure the safe operation of a particular aeroplane type, or variant; and
- (2) the methods for evaluating and assessing flight crew competency in the technical and non-technical aspects of aeroplane operation including human factors and crew resource management; and
- (3) the methods of recovery from mishandled, non-normal, and emergency manoeuvres; and
- (4) the operation of the aeroplane used or flight simulator approved by the Director, and its equipment, including operational flight, procedures and manoeuvres under normal, non-normal, and emergency conditions.

Biennial flight review must be performed by Category A or B flight instructor.

61.39. Biennial flight review

- (a) Except as provided in paragraph (b), the holder of a pilot licence issued by the Director under the Act and this Part must not exercise the privileges of the pilot licence for longer than 24 months from the date of the issue flight test for the pilot licence unless the holder-
- (1) has successfully completed a biennial flight review under paragraph (c) within the previous 24 months; or
 - (2) for a glider pilot licence, has successfully completed a biennial flight review conducted by a gliding organisation within the previous 24 months.
- (b) The holder of a pilot licence issued by the Director under the Act and this Part is **not required to complete a biennial flight review** required by paragraph (a) if the holder-
- (1) meets the flight crew **competency check requirements** prescribed in Part 115, or **Parts 119 and 121**, 125 or 135 that are applicable to the holder's pilot licence; or
 - (2) meets the agricultural currency requirements prescribed in rule 61.707; or
 - (3) holds a current Category A, B, or C flight instructor rating.**
- (c) A biennial flight review must-
- (1) be conducted by an appropriately qualified flight instructor; and
 - (2) consist of flight instruction to review those manoeuvres and procedures applicable to the pilot licence privileges the holder wishes to exercise; and
 - (3) be in accordance with standards acceptable to the Director.
- (d) A flight instructor conducting a biennial flight review must-
- (1) enter an appropriate record in the pilot's logbook immediately after the flight review has been satisfactorily completed and include the following information:
 - (i) the pilot licence type to which the flight review relates;
 - (ii) the date on which the flight review was completed;
 - (iii) the date on which the flight review ceases to be effective;
 - (iv) the name, flight instructor category, and CAA client number of the person conducting the flight review; and
 - (2) complete the appropriate CAA Biennial Flight Review Form and submit a copy of the completed form to the Director and to the pilot.
- (e) A pilot who successfully completes the biennial flight review required by paragraph (a) within 60 days before the date on which it is required is deemed to have completed the biennial flight review on the required date.

61.257. Currency requirements

A holder of an **airline transport pilot licence** is required to comply with the requirements of rules 61.35 (Medical Requirements), 61.37 (Recent Flight Experience) and 61.39 (Biennial Flight Review) before exercising the privileges of the holder's airline transport pilot licence.

61.207. Currency requirements

A holder of a **commercial pilot licence** is required to comply with the requirements of rules 61.35 (Medical requirements), 61.37 (Recent flight experience) and 61.39 (Biennial flight review) before exercising the privileges of the holder's commercial pilot licence.

2. Crew member training program

121.553. Crew member training program

- (a) A holder of an air operator certificate must establish a crew member training program under this Subpart to ensure that each flight crew member and each flight attendant assigned to act as a crew member on an aeroplane conducting an air operation, and who is not participating in an advanced qualification program specified in Subpart M, is trained to perform their assigned functions.
- (b) The holder of an air operator certificate must ensure that the training program required by paragraph (a) is conducted safely, in a structured manner, and without unacceptable risk to the equipment and personnel, or third parties.
- (c) The holder of an air operator certificate must ensure that the training program required by paragraph (a) contains the following segments-
- (1) introduction training;
 - (2) transition training;
 - (3) upgrade training;
 - (4) recurrent training.
- (d) The holder of an air operator certificate must ensure that the training program required by paragraph (a) includes human factors as an integral component in every training segment referred to in paragraph (c).
- (e) The holder of an air operator certificate must ensure that a pilot who completes an introduction training segment, a transition training segment, or an upgrade training segment also completes the pilot line training requirements specified in rule 121.567, and the pilot consolidation requirements specified in rule 121.569.
- (f) The holder of an air operator certificate must ensure that the person responsible for its flight crew training program holds a current flight examiner rating.
- (g) The holder of an air operator certificate must ensure that the person responsible for its flight attendant training program is qualified as specified in rule 121.525, or rule 121.527, or has appropriate qualifications and experience that are acceptable to the Director.
- (h) The holder of an air operator certificate is responsible for controlling the training program required by paragraph (a).
- (i) The holder of an air operator certificate may-
- (1) conduct the training in accordance with the training program required by paragraph (a); or
 - (2) contract with the holder of an aviation training organisation certificate issued under Part 141, to conduct the training in accordance with the training program required by paragraph (a) if the Part 141 certificate authorises the holder to conduct that type of training; or
 - (3) for a training conducted outside Mongolia, contract with an organisation that meets a standard equivalent to that specified in Part 141 to conduct the training in accordance with the training program required by paragraph (a) for flight crew members.
- (j) The holder of an air operator certificate must ensure that when a crew member completes a training segment of the training program-
- (1) the training record for that crew member is updated with the details of the qualification acquired; and
 - (2) the training record and details of the qualification referred to in paragraph (1) are kept in accordance with the procedures referred to in rule 119.67; and
 - (3) the crew member is informed of the qualification.

121.557. Introduction training

(a) Subject to paragraphs (b) and (c), a holder of an air operator certificate must ensure that a pilot or flight attendant who is not qualified and currently serving as a crew member in an air operation under the authority of the certificate, completes the introduction segment of the training program required by rule 121.553, and in accordance with the syllabus required by rule 121.555.

(b) The holder of an air operator certificate may, with prior acceptance of the Director, vary the syllabus of the introduction segment of the training program in the holder's exposition for a crew member if details of the variation and the reasons for the variation are recorded and certified in the crew member's record of training.

(c) The holder of an air operator certificate must ensure that the introduction segment of the training program includes training on human factors, and crew resource management.

(d) A pilot may not commence an introduction segment of the training program under paragraph (a) unless the pilot-

- (1) has acquired at least 500 hours of flight time experience as pilot; or
- (2) completes the certificate holder's airline transport pilot training program acceptable to the Director; and
- (3) holds a current instrument rating; and
- (4) has acquired at least 25 hours of night flight time experience as pilot.

121.559. Transition training

(a) Subject to paragraph (b), a holder of an air operator certificate must ensure that a pilot or flight attendant who is qualified and currently acting as a crew member on an air operation completes the transition segment of the training program required by rule 121.553 if-

- (1) the crew member is changing from one aeroplane type or variant to another type or variant; or
- (2) there is a change to the nature of the operation, or new equipment is introduced, which affects the operation of the aeroplane type or variant.

(b) The transition segment of the training program referred to in paragraph (a) must address at least the following-

- (1) the use of all safety and emergency equipment and procedures applicable to the aeroplane type or variant; and
- (2) new procedures or equipment introduced on the existing aeroplane type or variant; and
- (3) any required human factors and crew resource management training brought about by the different aeroplane, equipment, or procedures.

121.561. Upgrade training

(a) Subject to paragraph (b), a holder of an air operator certificate must ensure that a pilot or flight attendant who is qualified and currently acting as a crew member on an air operation conducted under the authority of the certificate completes the upgrade segment of the training program required by rule 121.553 on the same aeroplane type if-

- (1) the pilot is changing from one crew member position to a more responsible crew member position on the same aeroplane type; or
- (2) the flight attendant is upgrading to a role of increased responsibility.

(b) The upgrade training must address the use of all safety and emergency equipment and procedures applicable to the new flight crew position for pilots, or the more responsible role for flight attendants on the aeroplane for which the upgrade is sought and must-

- (1) include training on human factors and crew resource management, with particular emphasis on the changes brought about by the different flight crew position and new responsibilities; and
- (2) include training in supervisory skills.

121.563. Recurrent training

(a) A holder of an air operator certificate must ensure that a pilot or flight attendant of an aeroplane operating under the authority of the certificate completes the recurrent segment of the training program required by rule 121.553 in order for the crew member to be current, and proficient on the aeroplane type, crew member position, and type of operation in which the crew member serves.

(b) The holder of an air operator certificate must ensure that the recurrent segment includes flight training for flight crew members-

- (1) every 6 months for an air operation conducted under IFR; and
- (2) every 12 months for an air operation conducted under VFR.

(c) The holder of an air operator certificate must ensure that a pilot, completes a recurrent segment of the training program using the training equipment specified in **rule 121.565**.

(d) The holder of an air operator certificate must ensure that the recurrent segment of the training program addresses training on human factors and crew resource management.

121.565. Flight crew training equipment

- (a) A holder of an air operator certificate must ensure that the crew member training program required by rule 121.553 for flight crew members includes ground and flight instruction using-
- (1) flight training devices; and
 - (2) a flight simulator for the aeroplane type being used.
- (b) The holder of an air operator certificate must ensure that each flight simulator and each flight training device that is used in its training program is-
- (1) approved for use by the certificate holder; and
 - (2) approved for the aeroplane type, and if applicable, the particular variant within that type, for which the training or check is being conducted; and
 - (3) approved for the particular manoeuvre, procedure, or crew member function involved; and
 - (4) specified in the exposition required by rule 119.81.
- (c) The holder of an air operator certificate must ensure that each flight simulator or flight training device used for flight training in the training program,-
- (1) maintains the performance, functional, and other characteristics that are required for approval; and
 - (2) is modified to conform with any modification to the aeroplane being simulated that results in changes to performance, functional, or other characteristics required for approval; and
 - (3) is given a functional pre-flight check before being used, and any discrepancy detected during use is logged by the appropriate pilot instructor or flight examiner at the end of each training or flight assessment.
- (d) When flight crew training is conducted using equipment or resources that are not used solely for training, the holder of an air operator certificate must ensure that sufficient access is available to the equipment or resource to enable the training to be completed-
- (1) without unplanned interruption; and
 - (2) in an environment that is conducive to the objective and safety outcome of the training task.
- (e) The holder of an air operator certificate must ensure that for each aeroplane type operated under the authority of the certificate, a flight simulator for that aeroplane type is used for the flight crew training components of the training program.
- (f) Despite paragraph (e), if a flight simulator for a particular aeroplane type is not available, the holder of an air operator certificate may apply to the Director to amend the training program to conduct training in an aeroplane.
- (g) The holder of an air operator certificate must ensure that training conducted in an aeroplane referred to in paragraph (f) is carried out in accordance with a safe flight practice guide that is acceptable to the Director.

121.567. Pilot line training

(a) A holder of an air operator certificate must ensure that a pilot, other than a cruise relief pilot, who under rule 121.557 completes the introduction segment, or under rule 121.559 completes the transition segment, or under rule 121.561 completes the upgrade segment of the training program required by rule 121.553-

- (1) completes a competency assessment under Subpart J before commencing the pilot line training specified in paragraph (b); and
- (2) completes the pilot line training specified in paragraph (b).

(b) The pilot line training required by paragraph (a)(2) must comprise of-

- (1) following introduction training segment-
 - (i) for multi-engine turboprop powered aeroplanes - 20 hours including 10 take-offs and landings of which at least 6 take-offs and landings must be as pilot flying; and
 - (ii) for turbojet and turbofan powered aeroplanes - 25 hours including 10 take-offs and landings of which at least 6 take-offs and landings must be as pilot flying; and
 - (iii) for all aeroplanes, including those referred to in paragraphs (i) and (ii) - 4 operating cycles of which at least 2 must be as pilot flying:
- (2) following transition or upgrade training segment-
 - (i) for multi-engine turboprop powered aeroplanes - 12 hours including 10 take-offs and landings of which at least 6 take-offs and landings must be as pilot flying; and
 - (ii) for turbojet and turbofan powered aeroplanes - 20 hours including 10 take-offs and landings for the pilot-in-command of which 6 take-offs and landings must be as pilot flying; or 10 hours including 10 take-offs and landings for co-pilot of which 6 take-offs and landings must be as pilot flying; and
 - (iii) for all aeroplanes, including those referred to in paragraphs (i) and (ii) - 4 operating cycles of which at least 2 must be as pilot flying.

(c) The pilot line training required by paragraph (b) must be-

- (1) acquired in an aeroplane conducting an air operation; and
- (2) conducted under the supervision of an instructor who-
 - (i) meets the requirements referred to in rule 121.519; or
 - (ii) is approved by the Director to conduct specific training for the introduction of a new aeroplane type.

121.569. Pilot consolidation

(a) A holder of an air operator certificate must ensure that a pilot, other than a cruise relief pilot, who completes an introduction segment required by rule 121.557 and a transition segment required by rule 121.559, or an upgrade segment required by rule 121.561 of the training program required by rule 121.553-

- (1) completes the applicable pilot line training required by rule 121.567, and a route check under Subpart J for the transition and upgrade segments, before commencing the consolidation specified in paragraph (b); and
- (2) completes at least 100 hours of flight time experience or 75 operating cycles in the applicable crew position under paragraphs (b) and (c) for consolidation of a pilot's knowledge and skills; and
- (3) completes a route check under Subpart J following consolidation for an introduction segment.

(b) A pilot undergoing consolidation of knowledge and skills required by paragraph (a)-

- (1) must complete the 100 hours of flight time or 75 operating cycles within 120 days from the completion of the introduction or transition segment of the training; and
- (2) must operate exclusively during the consolidation period on the one aeroplane type that the training relates to; and
- (3) may count the flight time or operating cycles accumulated for the pilot line training required by rule 121.567 towards meeting the requirement under paragraph (a); and
- (4) if the pilot is undertaking the consolidation following the completion of an introduction segment of the training program, the flight experience required by paragraph (a) must be conducted under the supervision of-
 - (i) a line supervisory pilot who meets the requirements referred to in rule 121.517; or
 - (ii) a pilot instructor who meets the requirements referred to in rule 121.519; or
- (5) if the pilot is undertaking the consolidation following the completion of a transition or an upgrade segment of the training program, the flight experience required by paragraph (a) must be conducted with-
 - (i) a flight crew member who meets the requirements referred to in rule 121.531(a); or

(d) For the purpose of paragraph (c)(1), the pilot instructor required by paragraph (c)(2)-

- (1) must act as pilot-in-command at all times; and
- (2) must occupy a pilot station when supervising a pilot undergoing line training for a co-pilot position; and
- (3) must occupy a pilot station when supervising a pilot undergoing line training for a pilot-in-command position, until the pilot acquiring the experience has-
 - (i) performed at least 2 take-offs and landings as pilot flying in the aeroplane type for which the pilot-in-command qualification is required; and
 - (ii) demonstrated to the pilot instructor the ability to perform the duties of a pilot-in-command for that aeroplane type; and
- (4) may occupy the observer's seat if the requirements of paragraph (3) are met.

(e) A holder of an air operator certificate must ensure that a cruise relief pilot, completes the introduction segment referred to in rule 121.557, or completes the transition segment referred to in rule 121.559-

- (1) completes a competency assessment under Subpart J before commencing the pilot line training specified in paragraph (b); and
- (2) completes at least 6 operating sectors as a cruise relief pilot occupying either pilot station; and
- (3) completes a route check under Subpart J following the pilot line training specified in paragraph (2).

(f) The pilot line training required by paragraph (e)(2) for a cruise relief pilot must be conducted-

- (1) under the supervision of a pilot instructor who meets the requirements referred to in rule 121.519; and
- (2) on air operations in the particular aeroplane type that the training relates to.

(ii) a line supervisory pilot who meets the requirements referred to in rule 121.517; or

(iii) a pilot instructor who meets the requirements referred to in rule 121.519.

(c) If the consolidation of the pilot's knowledge and skills cannot be completed within the 120 days as required by paragraph (b)(1), the period for completing the consolidation may be extended by up to 30 days if the pilot-

- (1) continues to meet all other requirements of the training program; and
- (2) satisfactorily completes a refresher course acceptable to the Director or a line-operating flight supervised by-
 - (i) a line supervisory pilot who meets the requirements referred to in rule 121.517; or
 - (ii) a pilot instructor who meets the requirements referred to in rule 121.519; or
 - (iii) a flight examiner who meets the requirements referred to in rule 121.521.

AC121-4 The Training and Assessment of Human Factors and Crew Resource Management

1. Crew member training program: Introduction segment

Ref: CAR 121.557

A holder of an air operator certificate must ensure that a pilot or flight attendant who is not qualified and currently serving as a crew member in an air operation completes the introductory segment of the training program. The introductory segment can be based on the following:

Ground training:

a) Objectives:

- to enhance crew member and operator management awareness of human factors which could cause or exacerbate incidents which affect the safe conduct of air operations
- crew member demonstrates detailed knowledge of the theoretical and practical aspects of HF/CRM
- crew member recognises HF/CRM as an integral component of performance which if employed correctly can prevent the onset of incidents or accidents
- crew member can describe the benefits of co-ordinated team behaviour over individual endeavour
- crew member is able to identify and develop strategies to manage threats
- crew member is able to develop strategies to prevent and manage crew error

b) Competency requirements:

- instructor uses formative assessment techniques to confirm crew member understanding of the course material
- crew member demonstrates correct behaviours and skills during simulator and line assessment. This should utilise a behavioural marker system

c) Elements of training program:

All HF/CRM core elements and sub elements covered in depth. Refer to Appendix 1

d) Acceptable training methodologies:

- classroom – including power point and video presentation
- instructor facilitation
- student participation exercise
- emergency procedures training (EPT)
- computer based training
- (CBT), hand-outs, and self-study (**Note:** *May be used only as a pre-requisite to classroom instruction/facilitation*)

An introductory HF/CRM course generally is conducted in a classroom for 2 or 3 days. An example of the material used in the course is a guide to non-technical skills¹.

¹ 'Safety at the Sharp End' – Flin, O'Connor, Crichton.

Simulator training and assessment (where applicable)

a) Objectives:

- the holder of an air operator certificate provides a training environment which recognises the importance of HF/CRM is conducive to learning and promotes a positive safety culture
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to effectively conduct and manage the operation
- crew member utilises all available resources to achieve optimal performance
- crew member applies appropriate strategies to manage threats
- crew member implements strategies to prevent and manage crew error

b) Crew member competency requirements:

- pass competency assessment, which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system.

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Refer to Appendix 3 example. Skills that must be trained include:

- threat and error management²
- situational awareness strategies
- workload management
- decision making
- leadership
- positive team behaviours
- communication
- automation management
- effective monitoring

d) Acceptable training methodologies:

- instruction in flight training device, flight simulator, cabin trainer
- LOFT briefing prior to exercise
- practice and feedback
- debriefing after exercise
- assessment and constructive analysis
- Self-analysis
- CBT, hand-outs, and self-study (**Note:** *May be used only as a pre-requisite to simulator instruction*)

² Guidance on threat and error management (TEM) training can be found in the ICAO Human Factors Training Manual (Doc 9683).

Line training and assessment

a) Objectives:

- the operator provides a training environment which recognises the importance of HF/CRM, is conducive to learning and promotes a positive safety culture
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to safely conduct and manage the operation
- crew member utilises all available resources to achieve optimal performance
- crew member applies appropriate strategies to manage threats
- crew member implements strategies to prevent and manage crew error b)

b) Crew member competency requirements:

- pass route check assessment which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system.

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Skills that must be trained include:

- threat and error management
- situational awareness strategies
- workload management
- decision making
- leadership
- positive team behaviours
- communication
- automation management
- effective monitoring

d) Acceptable training methodologies:

- instruction during line training or line operations
- briefing prior to flight
- practice and feedback
- debriefing after flight
- assessment and constructive analysis
- self-analysis
- training workbooks, hand-outs, and self-study (**Note:** *May be used to support line training, but not in lieu of flight training requirements*)

2. Crew member training program: Transition segment

Ref: CAR 121.559

A holder of an air operator certificate must ensure that a pilot or flight attendant who is qualified and currently acting as a crew member on an air operation completes the transition segment of the training program. The transition segment can be based on the following:

Ground Training

a) Objectives:

- crew member demonstrates detailed knowledge of HF/CRM principles and strategies applicable to new aircraft type/variant when transition involves change to aircraft with markedly different size, flight characteristics, procedures, philosophy or operating environment.

b) Competency requirements:

- instructor uses formative assessment techniques to confirm crew member understanding of the course material
- crew member demonstrates correct behaviours and skills during simulator and line assessment. This should utilise a behavioural marker system

c) Elements of training program:

- elements and sub elements appropriate to transitional differences (refer to objective)

d) Acceptable training methodologies:

- classroom – including power point and video presentation
- instructor facilitation
- student participation exercise
- EPT (type specific)
- use of case studies
- CBT, hand-outs, and self-study(Note: May be used only as a pre-requisite to simulator to classroom instruction/facilitation)

Simulator training and assessment (where applicable)

a) Objectives:

- the operator provides a training environment which recognises the importance of HF/CRM, is conducive to learning and promotes a positive safety culture
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to effectively conduct and manage the operation of the new type/variant

b) Crew member competency requirements:

- pass competency assessment, which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system.

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Refer Appendix3 example. Skills that must be trained include:

- threat & error management
- situational awareness strategies

- workload management
- decision making
- leadership
- positive team behaviours
- communication
- automation management

- Effective monitoring

d) Acceptable training methodologies:

- instruction in flight training device, flight simulator, cabin trainer
- LOFT
- briefing prior to exercise
- practice and feedback
- debriefing after exercise
- assessment and constructive analysis
- self-analysis
- CBT, handouts, and self-study (**Note:** *May be used only as a pre-requisite to similar instruction*)

Line training and assessment

a) Objectives:

- the operator provides a training environment which recognises the importance of HF/CRM, is conducive to learning and promotes a positive safety culture
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to safely conduct and manage the operation of the new type/variant

b) Crew member competency requirements:

- pass route check/line assessment which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system.

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Skills that must be trained include:

- threat & error management
- situational awareness strategies
- workload management
- decision making
- leadership
- positive team behaviours

- communication
 - automation management
 - effective monitoring
- d) Acceptable training methodologies:
- instruction during line training or line operations
 - briefing prior to flight
 - practice and feedback
 - debriefing after flight
 - assessment and constructive analysis
 - self-analysis
 - training workbooks, hand-outs, and self-study (**Note:** *May be used to support line training but not in lieu of line training requirements*)

3. Crew member training program: Upgrade segment

Ref: CAR 121.561

A holder of an air operator certificate must ensure that a pilot or flight attendant who is qualified and currently acting as a crew member on an air operation completes the upgrade segment of the training program. The upgrade segment can be based on the following:

Ground training:

a) Objectives:

- crew member demonstrates comprehensive knowledge of HF/CRM principles and strategies applicable to the different crew position and new responsibilities
- crew member can describe the importance of skilled leadership and decision making considerate of risk in achieving a safe operation

b) Competency requirements:

- instructor uses formative assessment techniques to confirm crew member understanding of the course material
- crew member demonstrates correct behaviours and skills during simulator and line assessment. This should utilise a behavioural marker system

c) Elements of training program:

Elements and sub elements appropriate to upgrade. Skills that must be trained include:

- decision making
- leadership
- positive team behaviours

- communication
 - workload management
- d) Acceptable training methodologies:
- classroom
 - instructor facilitation
 - student participation exercise
 - use of case studies
 - CBT, hand-outs, and self-study (**Note:** *May be used only as a pre-requisite to similar instruction*)

Simulator training and assessment (where applicable)

a) Objectives:

- the operator provides a training environment which recognises the importance of HF/CRM, is conducive to learning and promotes a positive safety culture
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to effectively conduct and manage the operation
- crew member demonstrates good leadership and decision making skills
- crew member utilises all available resources to achieve optimal performance

b) Crew member competency requirements:

- pass competency assessment, which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system. Refer Appendix 2. The focus should be on crew member's performance in areas applicable to new responsibilities (e.g. leadership, decision making etc.)

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Training scenarios should provide for the exercise of leadership and decision making skills. Refer Appendix 3 example. Skills that must be trained include:

- threat & error management
- situational awareness strategies
- workload management
- decision making
- leadership
- positive team behaviours
- communication
- automation management
- effective monitoring

d) Acceptable training methodologies:

- instruction in flight training device, flight simulator, cabin trainer
- LOFT
- briefing prior to exercise
- practice and feedback
- debriefing after exercise
- assessment and constructive analysis
- self-analysis
- CBT, hand-outs, and self-study (**Note:** *May be used only as a pre-requisite to similar instruction*)

Line training and assessment

a) Objectives:

- the operator provides a training environment which recognises the importance of HF/CRM, is conducive to learning and promotes a positive safety culture.
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to safely conduct and manage the operation in the new role

b) Crew member competency requirements:

- pass route check/line assessment which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Focus should be on crew member's performance in areas applicable to new responsibilities. Skills that must be trained include:

- threat & error management
- situational awareness strategies
- workload management
- decision making
- leadership
- positive team behaviours
- communication
- automation management
- effective monitoring

d) Acceptable training methodologies:

- instruction during line training or line operations

- briefing prior to flight
- practice and feedback
- debriefing after flight
- assessment and constructive analysis
- self-analysis
- training workbooks, hand-outs, and self-study (**Note:** *May be used to support line training, but not in lieu of line training requirements*)

4. Crew member training program: Recurrent segment

Ref: CAR 121.563

A holder of an air operator certificate must ensure that a pilot or flight attendant of an aeroplane completes the recurrent segment of the training program in order for the crew member to be current and proficient on the aeroplane type, crew member position, and type of operation in which the crew member serves. The recurrent segment can be based on the following:

Ground training

a) Objectives:

- through training the core elements of HF/CRM over a 36 month³ period/cycle the crew members demonstrate a detailed knowledge of HF/CRM principles and strategies applicable to the aircraft that they operate
- the operator delivers a training and assessment program incorporating HF/CRM to effectively address any changes to operating environment or company procedures

b) Competency requirements:

- instructor uses formative assessment techniques to confirm crew member understanding of the course material
- crew member demonstrates correct behaviours and skills during next simulator and line assessment which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system. The focus should be on crew member's performance in areas applicable to the crew member's responsibilities (e.g. leadership, etc.). Refer Appendix 2

c) Elements of training program:

- annual ground training program includes training modules on HF/CRM. All core elements and applicable⁴ sub elements must be trained over a 36 month¹ period/cycle. The ground training program should include an interactive training session involving flight crew and cabin crew members

d) Acceptable training methodologies:

- classroom
- instructor facilitation
- student participation exercise
- EPT (type specific)
- use of case studies

- CBT, hand-outs, and self-study (**Note:** *May be used only as a pre-requisite to classroom instruction/facilitation*)

³ Operator may apply to the Director to conduct recurrent training over a period/cycle of different duration.

⁴ Operator may select sub elements based on their operating environment, risk assessment, or safety data.

Simulator training and assessment (where applicable)

a) Objectives:

- the operator provides a training environment which recognises the importance of HF/CRM, is conducive to learning and promotes a positive safety culture
- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to effectively conduct and manage the operation
- the operator delivers a training and assessment program incorporating HF/CRM to effectively address any changes to operating environment or company procedures

b) Crew Member competency requirements:

- pass competency assessment, which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system. The focus should be on crew member's performance in areas applicable to new responsibilities (e.g. leadership, decision making etc.). Refer Appendix 2

c) Elements of training program:

HF and CRM are taught as an integral part of the operator's training program. Refer Appendix3 example.

d) Acceptable training methodologies:

- instruction in flight training device, flight simulator, cabin trainer
- LOFT
- briefing prior to exercise
- practice and feedback
- debriefing after exercise
- assessment and constructive analysis
- self-analysis
- CBT, hand-outs, and self-study (**Note:** *May be used only as a pre-requisite to simulator instruction*)

Line assessment

a) Objectives:

- crew member incorporates HF/CRM knowledge, skills and behaviours and fully integrates these techniques to safely conduct and manage the operation

b) Crew member competency requirements:

- pass route check/line assessment which includes assessment of both technical and HF/CRM components for each task. This should utilise a behavioural marker system. The focus should be on crew members performance in areas applicable to new responsibilities (e.g. leadership, decision making etc.) Refer to Appendix 2

c) Elements of assessment:

- HF and CRM must be assessed as an integral part of all aspects of the operation

d) Acceptable Methodologies:

- assessment during line operations⁵
- observations and questioning⁶
- briefing prior to flight
- practice and feedback
- debriefing after flight
- constructive analysis
- self-analysis

⁵ The crew member is already qualified so the focus is on assessment; however, a debrief should be considered an opportunity for training and the student should use this information as a basis for further self- study.

⁶ Safety of the operation is first priority. Questioning should be confined to non-0dynamic and low workload situations.