

## **Appendix B**

### **Draft unit – Multi-engine aeroplane class rating instructor training endorsement - FIR-TE15**

## **FIR-TE15 Multi-engine class rating instructor training endorsement**

### **1 Unit description**

This unit describes the skills and knowledge required to effectively plan, conduct and administer flight training authorised by the multi-engine aeroplane class rating instructor training endorsement.

### **2 Note: In this unit the following terminology is used:**

Applicant – the person who is undertaking training to obtain a multi-engine class rating instructor training endorsement

Instructor – the person delivering the training to the applicant

Trainee instructor – the person the applicant would be training

### **3 Elements and performance criteria**

#### **3.1 FIR-TE15.1 – Describe the conduct of multi-engine aeroplane class rating instructor training**

- (a) describe the structure, content and context of the Part 61 MOS class rating (multi-engine aeroplane) and endorsement standards for the class rating (multi-engine aeroplane) training endorsement;
- (b) describe the content of the flight test standards for the class rating (multi-engine aeroplane) training endorsement;
- (c) discuss the requirements for recurrent flight instructor proficiency checks.

#### **3.2 FIR-TE15.2 - Demonstrate understanding of principles and methods of instruction**

- (a) apply extensive knowledge and application of element 3, principles and methods of instruction, described in unit FIRC (instructor rating - common) in schedule 3 of part 61 MOS;
- (b) apply comprehensive use of applicable performance criteria from unit FIR4 when conducting flight instructor rating training.

#### **3.3 FIR-TE15.3 – Conduct aeronautical knowledge training**

- (a) plan and conduct aeronautical knowledge training including all the elements identified in unit FIRC (instructor rating – common);
- (b) identify underpinning knowledge for the units and elements for a flight instructor rating included in unit FIR4 and confirm trainee flight instructor has the appropriate knowledge;
- (c) identify underpinning knowledge for the units and elements for class rating (multi-engine aeroplane) training endorsement and confirm trainee instructor has the appropriate knowledge.

#### **3.4 FIR-TE15.4 – Demonstrate competencies required of a holder of a class rating (multi-engine aeroplane) training endorsement**

- (a) demonstrate all performance criteria described in FIR-TE6 for the issue of a class rating (multi-engine aeroplane) training endorsement demonstrating:

- (i) comprehensive aeronautical knowledge prescribed section 4 of unit AME (operate multi-engine aeroplane) and in-depth knowledge of the aircraft systems for the aircraft in which the training is being conducted;
- (ii) expert aircraft handling without significant error in all flight phases and demonstrations;
- (iii) identify trainee instructor weaknesses and provided targeted demonstration to remedy the deficiency;
- (iv) maintain situational awareness continuously and train the trainee instructor in the techniques for managing and rectifying undesired aircraft states which may arise.

**3.5 FIR-TE15.5 – Develop briefings and plan flight training for a class rating (multi-engine aeroplane) instructor training endorsement**

- (a) prepare a training plan that identifies each ground briefing and flight exercise required to achieve the standards for the issue of a multi-engine class rating instructor training endorsement incorporating all relevant elements identified in unit FIR-TE6 (class rating training endorsement);
- (b) identify potential threats and errors, including those associated with simulation of abnormal or emergency procedures or aircraft mishandling by the trainee instructor, and apply suitable mitigators.

**3.6 FIR-TE15.6 – Conduct pre-flight briefing for training flights**

- (a) perform effective pre-flight briefings for each flight exercise in the training plan, including application of standard operating procedures, demonstrating relevant performance criteria described in elements FIR4.1 and FIR4.3 of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (b) describe the considerations for assessing and debriefing the pre-flight brief conducted by a trainee instructor.

**3.7 FIR-TE15.7 – Conduct airborne training for a multi-engine class rating training endorsement**

- (a) conduct flight training in accordance with the training plan demonstrating all skills and behaviours described in element FIR4.4 of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (b) demonstrate the aim of 'demonstrate the task' in element FIR4.4(c) of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (c) state the performance required by the applicant in the conduct of trainee instructor demonstrate the task elements;
- (d) demonstrate the aim of 'directs the task' in element FIR4.4(d) of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (e) state the performance required by the applicant in the conduct of trainee flight instructor direct the task elements;
- (f) demonstrate the aim of 'monitors the task' (unassisted practice) in element FIR4.4(e) of unit FIR4 (conduct aeronautical knowledge training and flight training);

- (g) state the performance required by the applicant in the conduct of trainee flight instructor monitors the task elements;
- (h) demonstrate the performance required by the applicant in the conduct of give and give back training flights;
- (i) perform role play of a trainee pilot under instruction;
- (j) identify the scope of skill level, and the need for consistency, in role playing a trainee pilot;
- (k) assess and debrief trainee instructor performance during airborne instruction;
- (l) demonstrate common faults/errors and how to simulate them;
- (m) apply the appropriate reaction to trainee instructor direction;
- (n) apply the appropriate reaction to trainee instructor intervention.
- (o) maintain situational awareness through all phases of flight demonstrating the performance criteria specified in unit NTS1;
- (p) manage threats and errors during all phases of the flight demonstrating the performance criteria specified in unit NTS2.

### **3.8 FIR-TE15.8 – Conduct post-flight briefing**

- (a) conduct post-flight briefing demonstrating all performance criteria described in element FIR4.5 of unit FIR4 (Conduct aeronautical knowledge training and flight training).

### **3.9 FIR-TE15.9 – Complete post-training administration**

- (a) complete post-training administration demonstrating performance criteria in element FIR4.6 of unit FIR 4 (conduct aeronautical knowledge training and flight training).

## **4 Range of variables**

- (a) activities are performed in accordance with published procedures;
- (b) flight training for the training endorsement includes training for the issue of the endorsement using a suitable training aircraft or approved flight simulation training device;
- (c) aeronautical knowledge training, including pre- and post-flight briefings, is provided to support the flight training units and elements;
- (d) flight training and aircraft operation is conducted in accordance with regulatory requirements and safe operational practices and includes administrative procedures associated with authorising and recording flight training and maintaining training records;
- (e) flight training for the training endorsement is conducted under a Part 141 or Part 142 operator certificate with the relevant training specification in accordance with holder's operations manual.

## **5 Underpinning knowledge of the following:**

- (a) relevant sections of Civil Aviation legislation;
- (b) underpinning knowledge included in the applicable units prescribed for a class rating (multi-engine aeroplane) and class rating training endorsement

- (c) performing and learning complex skills, including cognitive and developmental issues and observational learning;
- (d) cognitive basis of airmanship, situational awareness, captancy, prioritisation, load shedding and decision making;
- (e) rate of learning, enforced automaticity and the foundations of expertise;
- (f) instructor professionalism, including interpersonal skills, implications of being a role-model, self-reflection and self-managed professional development;
- (g) effective use of a course of training, curricula and syllabus and lesson plans;
- (h) training and assessment standards;
- (i) debriefing and feedback techniques;
- (j) transfer of control (handover and takeover or follow-through) drills and procedures;
- (k) principles of flight;
- (l) crew resource management (CRM) principles;
- (m) techniques for introducing tasks in manageable segments to avoid overloading a trainee and principles for integrating task segments;
- (n) appropriate use of scenario-based training in flight instruction;
- (o) application of risk management principles to emergency procedure simulations in flight;
- (p) checklists for single-pilot or multi-crew operations as applicable;
- (q) common student errors and suggested suitable remedial instruction;
- (r) operational concept of threat and error management in relation to flight training in terms of:
  - (i) managing threats;
  - (ii) managing errors;
  - (iii) managing undesired aircraft state;
- (s) procedures and strategies for developing trainee threat and error management skills;
- (t) task prioritisation system to assist the development of trainee task management skills in terms of:
  - (i) aircraft control;
  - (ii) navigation;
  - (iii) communication;
- (u) suitable procedures for making decisions in-flight and for developing trainee decision-making skills;
- (v) goal fixation effects on good decision making;
- (w) 3 types of stress likely to affect trainee performance and methods of assisting trainees to cope with stress:
  - (i) physical;
  - (ii) physiological;

- (iii) psychological;
- (x) requirements for completing relevant documentation;
- (y) principles, purpose and location of controls, monitoring devices, and systems;
- (z) procedures to be followed in the event of an emergency.