

## **Appendix B**

### **Draft unit – Type rating training endorsement - FIR- TE5**

## **FIR-TE5 Type rating training endorsement**

### **1 Unit description**

This unit describes the skills and knowledge required to effectively plan, conduct and administer training authorised by the type rating training endorsement.

### **2 Elements and performance criteria**

#### **2.1 FIR-TE5.1 – Demonstrate knowledge of competency based training as applied to training for an aircraft type rating and conduct of a flight review.**

- (a) describe the structure, content and context of the Part 61 MOS aircraft rating and endorsement standards for the type rating (category specific);
- (b) describe the content of the flight test standards for an aircraft type rating (category specific);
- (c) describe the requirements for the aircraft type rating flight review, applicable to the particular type;
- (d) state the competencies required by crew to operate effectively in a multi-crew operation (multi-crew aircraft type rating only)

#### **2.2 FIR-TE5.2 – Demonstrate understanding of principles and methods of instruction**

- (a) apply knowledge and application of element 3, principles and methods of instruction, described in FIRC (instructor rating-common) in schedule 3 of Part 61 MOS.

#### **2.3 FIR-TE5.3 – Conduct aeronautical knowledge training**

- (a) conduct aeronautical knowledge training demonstrating applicable performance criteria described in elements FIR4.1 and FIR4.2 of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (b) demonstrate extensive understanding of the aeronautical knowledge prescribed in the applicable unit for the particular aircraft type;
- (c) establish trainee understanding of underpinning knowledge specified in the applicable units for the type rating;
- (d) establish applicants understanding of the underpinning knowledge specified in section 4 of the applicable units for the rating under review, in accordance with the flight review requirements described in schedule 7 of the Part 61 MOS;
- (e) establish trainee understanding of upset prevention and recovery training techniques and strategies relevant to the aircraft type and operating environment including:
  - (i) aerodynamics;
  - (ii) causes and contributing factors to upsets;
  - (iii) upset mitigation techniques;
  - (iv) energy and flight path management;
  - (v) system malfunctions;
  - (vi) recognition of upset conditions;
  - (vii) TEM, CRM and human factors.

## 2.4 FIR-TE5.4 – Plan flight training

- (a) prepare a training session to achieve training objectives in accordance with a training plan that identifies each ground briefing and practical exercise required to achieve the specified standard; The following units and elements are to be addressed:  
Elements in units NTS1 and NTS2 to be addressed in relevant briefings and flight/flight simulator exercises as applicable; and
  - for aeroplanes
    - (A) single-engine aeroplanes – TR-SEA;
    - (B) multi engine aeroplanes – TR-MEA;
    - (C) cruise relief aeroplane – TR-CR.
  - for helicopters
    - (A) single-engine helicopters – TR-SEH;
    - (B) multi-engine helicopters – TR-MEH.
- (b) prepare a training plan for the conduct of a flight review for the applicable type rating;
- (c) identify potential threats and errors normally associated with type rating training and develop suitable mitigating actions for each training exercise;
- (d) develop training scenarios to demonstrate upset prevention and recovery techniques , including intervention strategies that mitigate risk of negative learning;
- (e) plan training within the limitations and characteristics of the aircraft or flight simulation training device that adhere to validated procedures.

## 2.5 FIR-TE5.5 – Conduct pre-flight briefing

- (a) conduct effective pre-flight briefings for each training exercise in the training plan, including application of standard operating procedures, demonstrating applicable performance criteria described in element FIR4.1 and FIR4.3 of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (b) demonstrate applicable performance criteria described in element FIR 7.1 (conduct flight review).

## 2.6 FIR-TE5.6 – Conduct practical training

- (a) conduct flight training in accordance with the training plan demonstrating skills and behaviours described in element FIR 4.4 of unit FIR4 (conduct aeronautical knowledge training and flight training);
- (b) perform flying techniques and procedures to the competency standards specified for the issue of a type rating in that aircraft whilst occupying the instructor seat;
- (c) maintain situational awareness during all phases of the training exercise demonstrating the performance criteria specified in unit NTS1;
- (d) manage threats and errors during all phases of the flight demonstrating the performance criteria specified in unit NTS2;
- (e) demonstrate applicable performance criteria described in elements FIR 7.2 (conduct flight review);
- (f) deliver training in upset prevention and recovery in accordance with developed scenarios applicable to the aircraft category and type;
- (g) identify and mitigate negative learning events and manage occurrences;

- (h) recognise trainee errors and maintain aircraft within certified flight envelope or recognise excursion outside the valid training envelope when a FSTD is used to conduct flight training.

### 2.7 FIR-TE5.7 – 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);
- (b) discuss identified negative training events to mitigate risks to learning;
- (c) identify and address any underpinning knowledge deficiencies;
- (d) demonstrate applicable performance criteria described in element FIR 7.3 (conduct flight review).

### 2.8 FIR-TE5.8 – Complete post-training administration

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

## 3 Range of variables

- (a) activities are performed in accordance with published procedures;
- (b) aeronautical knowledge training includes all units and elements of competency relevant to the type rating;
- (c) flight training includes all units and elements of competency relevant to a type rating and is supported by relevant pre and post flight briefings;
- (d) aircraft of the type which the rating applies and may include:
  - (i) fixed wing (single-engine or multi-engine);
  - (ii) helicopter (single-engine or multi-engine);
  - (iii) aircraft fitted with analogue or digital flight instruments.
- (e) approved flight simulation training device;
- (f) aerodromes or HLS;
- (g) simulated abnormal and emergency situations;
- (h) simulated hazardous weather;
- (i) for aeroplanes, upset conditions include:
  - (i) pitch attitude more than 25 degrees nose up;
  - (ii) pitch attitude more than 10 degrees nose down;
  - (iii) bank angle more than 45 degrees;
  - (iv) flying at airspeeds inappropriate for the conditions.
- (j) for helicopters, upset conditions may include:
  - (i) vortex ring state;
  - (ii) ground resonance;
  - (iii) loss of tail rotor effectiveness;
  - (iv) low 'g' manoeuvre;
  - (v) overpitching;
  - (vi) mast bumping;
  - (vii) low RRPM – rotor stall;

- (viii) retreating blade stall;
- (ix) recirculation event;
- (x) dynamic rollover.
- (k) environmental conditions may include:
  - (i) variable weather;
  - (ii) day or night operations;
  - (iii) CTA and OCTA airspace;
  - (iv) turbulence;
  - (v) terrain;
  - (vi) hazards and threats;
  - (vii) sealed, gravel or grassed surface.

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

- (a) principles of instruction (see FIR1, FIR2 and FIR3);
- (b) FIR4;
- (c) the underpinning knowledge included in applicable units prescribed for the type rating;
- (d) underpinning knowledge included for applicable ratings that require a flight review;
- (e) relevant sections of Civil Aviation legislation;
- (f) common risks that exist when conducting VFR and/or IFR operations (as applicable);
- (g) common problems that may occur when conducting flight reviews and appropriate action that should be taken in each case;
- (h) assessment and workplace training competency standards;
- (i) principles of adult teaching and learning;
- (j) human performance and limitations factors relevant to the training tasks;
- (k) psychological factors affecting satisfaction of human needs, defence mechanisms and stress management;
- (l) relevant workplace policies and procedures;
- (m) appropriate methods of analysis and training planning;
- (n) lesson planning and development;
- (o) preparation of training resources;
- (p) principles of assessment;
- (q) assessment of behaviour;
- (r) self-assessment and evaluation;
- (s) questioning techniques;
- (t) requirements for completing training documentation.
- (u) FSTD limitations and operating procedures