Australian Government

Civil Aviation Safety Authority

Instrument number CASA 431/11

I, PETER WILLIAM BOYD, Executive Manager, Standards Division, make this instrument under subregulations 42ZC (6) and 215 (3) of the *Civil Aviation Regulations 1988* (***CAR 1988***).

Peter Boyd
Executive Manager
Standards Division

9 November 2011

Authorisation — of pilot for oxygen system replenishment for EMS flights

1 Definitions

In this instrument:

appropriate aircraft engineer licence means an aircraft engineer licence, under Part 66 of the *Civil Aviation Safety Regulations 1998,* endorsed with any relevant aircraft type and at least 1 of the following categories for the aircraft type:

(a) B1;

(b) B2 endorsed for oxygen systems.

EMS flight means an emergency medical services flight to facilitate emergency or medical assistance by an aircraft carrying 1 or more of the following:

(a) medical personnel;

(b) medical supplies (including equipment, blood, organs or drugs);

(c) an ill or injured person.

hand tool means a tool:

(a) that is used by hand without any other source of power; and

(b) whose use:

(i) by a pilot is recommended in the manufacturer's instructions; or

(ii) if there is no recommendation — is appropriate, proportionate and safe for the task.

manufacturer's instructions means the instructions, if any, of the manufacturer of the EMS oxygen system concerning its use and replenishment.

removable oxygen container means an oxygen bottle, cylinder or similar container:

(a) that is designed to be removed from, and replaced in, an aircraft for oxygen replenishment; and

(b) that:

(i) is not part of an aircraft's airframe; and

(ii) is not fixed or fitted to the airframe in a way that requires a specialist tool for it to be removed; and

(iii) is secured in a device that is part of an aircraft's airframe or fixed or fitted to the airframe; and

(iv) is only properly removed from, and installed in, the device without the use of a specialist tool.

specialist tool means a tool other than a hand tool.

2 Application

This instrument applies to the pilot of an aircraft that is:

(a) operated by an AOC holder whose AOC authorises ambulance functions in the form of EMS flights; and

(b) installed with an oxygen system for the exclusive use of ill or injured persons on an EMS flight (***EMS oxygen system***).

3 Authorisation

For paragraphs 42ZC (3) (d) and 42ZC (4) (e), I authorise a pilot to whom section 2 applies to carry out maintenance in the form of replenishing the EMS oxygen system installed on the aircraft (***the maintenance***).

4 Conditions

The authorisation in section 3 is subject to the conditions mentioned in Schedule 1.

Schedule 1 Conditions

1 The pilot must be required by the AOC holder to carry out the maintenance on the aircraft as part of his or her duties for the AOC holder.

2 The maintenance may involve the removal and replacement of a removable oxygen container.

3 The maintenance must not involve the removal, replacement, or installation of anything other than a removable oxygen container.

4 Clause 3 does not prevent the removal of:

(a) any protective cap, safety copper lock-wire or similar device from an oxygen bottle, cylinder or container to allow oxygen to replenish the EMS oxygen system; or

(b) any quick-release or similar mechanism for the sole purpose of releasing a removable oxygen container from the device securing it in the aircraft;

provided that, in accordance with the manufacturer's instructions, specialist tools are not required.

5 The pilot must hold a pilot endorsement, other than a student pilot endorsement, for the aircraft type.

6 The pilot must have completed, in accordance with Schedule 2, relevant initial training given by a person (the ***aircraft engineer***) who holds an appropriate aircraft engineer licence applicable for the aircraft type.

7 At intervals of not more than 2 years after the initial training, the pilot must complete recurrent training given by an aircraft engineer in accordance with Schedule 2.

8 Management of the pilot's initial and recurrent training in compliance with this instrument must be in accordance with particular information, procedures and instructions in the operator's operations manual, including information, procedures and instructions for recording the training.

9 The maintenance must be carried out in accordance with:

(a) the relevant approved maintenance data for the aircraft (if any); and

(b) the instructions of the manufacturer of the EMS oxygen system.

10 The pilot must ensure that the maintenance is certified in accordance with subregulation 42ZE (1) of CAR 1988.

Schedule 2 Initial and recurrent training

1 Initial and recurrent training must include the following:

Approved maintenance data etc

(a) a review of:

(i) all approved maintenance data for the aircraft that is relevant to the maintenance; and

(ii) the manufacturer's instructions;

Safety precautions

(b) training and instruction in the following:

(i) the nature and characteristics of medical grade oxygen;

(ii) the hazards of EMS oxygen systems, including hydrocarbon contamination;

(iii) the safety precautions that must be taken when carrying out the maintenance;

(iv) the preservation of a clean environment in and around the area where oxygen replenishment is occurring;

(v) the safety precautions that must be taken when using oxygen replenishment equipment, including to ensure the cleanliness of the pilot's hands and gloves (if used) and the equipment;

(vi) the safety precautions that must be taken when using any tools required to carry out the maintenance, including to ensure the cleanliness of each such tool;

(vii) electrical bonding procedures and methods of minimising static electricity build-up;

Tool use and control

(c) training and instruction in the following:

(i) the risks in using any tool for the maintenance;

(ii) the use of any tool that is required for the maintenance;

Note Specialist tools must not be used — see the prohibition in clause 4 of Schedule 1; and see the definition of ***removable oxygen container*** in section 2.

(iii) the way in which tool control is maintained during and after maintenance;

Practical maintenance

(d) training and instruction in the practical process of carrying out the maintenance, including the following:

(i) checking on the expiry date of any removable oxygen container and installing it only if it is within the expiry date;

(ii) the removal of any protective cap, safety copper lock-wire or similar device (***caps, lock-wire and devices***) from an oxygen bottle, cylinder or container to allow oxygen to replenish the EMS oxygen system;

(iii) the replacement or reinstallation of any cap, lock-wire or device that was removed;

(iv) the removal and installation of any removable oxygen container;

(v) the inspection of fittings and the avoidance of cross-threading;

Certification

(e) training and instruction in the correct way to certify and record completion of the maintenance.