



PR-003-Definition of PCC for Firefighting Aircraft



Standard

November 2012

1 Background

In order to streamline procurement processes it is useful to have a common approach to estimating the number of passengers that a firefighting aircraft should reasonably be capable of carrying. This approach is aimed at ensuring rigorous and fair evaluation processes and common interpretation of requirements amongst NAFC, its Members, Contractors, suppliers and others.

This approach is for procurement purposes only and will not prescribe the number of passengers that an aircraft must carry on actual operations.

2 Standard

- 2.1 Within the procurement process each aircraft capable of carrying passengers that is put forward to provide aerial firefighting services will be assigned a Passenger Carrying Capability number (PCC). This number assists with the comparison and evaluation of individual aircraft.
- 2.2 The PCC number is determined by the aircraft operator.
- 2.3 The PCC number will not be used restrictively, and will not dictate the number of passengers that an aircraft can carry on actual operations.
- 2.4 The PCC number may be communicated to users and their relevant aircraft management units to use as a guide in mission planning.
- 2.5 Aircraft that do not meet the requirements of the Civil Aviation legislation and regulations for passenger carrying Charter* operations under the Visual Flight Rules (VFR) in Australia will be assigned a PCC number of zero.
- 2.6 Aircraft that do not hold a Standard Category Certificate of Airworthiness, or equivalent issued by a country recognised by CASA, will also be assigned a PCC number of zero.
- 2.7 The PCC number is the maximum number of passengers, excluding crew, that the aircraft is capable of carrying.
- 2.8 The PCC number is calculated using the following assumptions:
 - a. All operations are carried out as Charter* under day VFR.
 - b. A standard weight of 86kg per person is used for passengers and crew.
 - c. Take-off and landing is carried out at Mean Sea Level.
 - d. All operations are carried out under International Standard Atmosphere (ISA) plus 25°C conditions.
 - e. Normal economic power/cruise speed settings are used.
 - f. All passengers and crew have a seat available.
 - g. All seats are equipped with restraints, which include upper body restraint, approved under the relevant legislation and regulations.
 - h. In the case of fixed wing aircraft the aircraft takes off with sufficient fuel necessary for take-off, climb to cruise at 3000 feet Above Mean Sea Level and landing, with a total endurance, including reserves, of 180 minutes.



- i. In the case of rotary wing aircraft the aircraft lifts off with sufficient fuel necessary for take-off, climb to cruise at 1500 feet Above Mean Sea Level and landing, with a total endurance, including reserves, of 90 minutes.
- j. Landing area, runway specifications and surface conditions do not limit passenger numbers.
- k. Conditions do not limit enroute operations.
- l. The aircraft carries:
 - i. installed communication and navigation equipment normally required for Visual Flight Rules Charter* and fire operations (e.g. including fire agency radios, GPS etc.); and
 - ii. headset, helmets or hearing protectors required by contract specifications for passenger operations; and
 - iii. any installed equipment or fixtures necessary to undertake special operations or missions required by contract or purchasing specifications, such as firebombing, winching, rappelling, aerial photography or infrared operations. Where firebombing is specified, this will include any external firebombing tank attached to the airframe or internal firebombing tank, including door or gate systems, as well as on-board installed equipment to operate any firebombing equipment (e.g. cargo hook, controller/power supply, foam reservoir); and
 - iv. 30kg of additional equipment (to provide for survival equipment, fuel pump etc.).
- m. For the purposes of this calculation the aircraft is not required to carry:
 - i. mixed suppressant or retardant, suppressant concentrate, or other additives; or
 - ii. sling load equipment, including cables, long-lines, firebombing bucket.
- n. The aircraft carries the greater of any crew complement that may be required for passenger carrying Charter* operations by:
 - i. regulatory requirements; or
 - ii. the aircraft Operator's Operations Manual; or
 - iii. Member contract specification.

Crew includes pilots, flight engineers, flight attendants, loadmasters and other crew. Each required crew person is regarded as occupying a seat. The PCC number counts seats designated for crew as occupied even when NOT utilised by the crew.

- 2.9 Where installation of special mission equipment, including firebombing equipment, affects type certification, airworthiness certification or otherwise precludes Charter* operations, but reversion is possible by removal of that equipment, then a qualified PCC number may be calculated provided the equipment can be removed, or stowed, "in-field". For example, if passenger carriage legally requires the removal or stowing of a firebombing tank or



accessory, but with the tank or accessory removed the PCC number is 10, then this is expressed as PCC =10Q. The Operator would be expected to fully document any such qualification.

* Note: For the purposes of this Standard, “Charter” requires application of the civil aviation legislation, regulations and rules that are in place from time to time for the carriage of passengers for hire and reward in non-scheduled air transport operations (in small or large aircraft, as applicable).

