Australian Government

Civil Aviation Safety Authority

Instrument number CASA 390/11

I, GERARD JOHN CAMPBELL, Acting Executive Manager, Operations Division, a delegate of CASA, make this instrument under regulation 179A of the *Civil Aviation Regulations 1988* (***CAR 1988***).

[Signed G.J. Campbell]
Gerard J. Campbell
Acting Executive Manager
Operations Division

09 September 2011

Instructions — RNP APCH LNAV and RNP APCH LNAV/VNAV on Qantas B767-300 aircraft

1 Duration

This instrument:

(a) commences on the day after registration; and

(b) stops having effect at the end of 31 August 2014.

2 Application

This instrument applies to the conduct of RNP APCH LNAV and RNP APCH LNAV/VNAV by Qantas Airways Limited, Aviation Reference Number 216147 (***Qantas***), on B767-300 type aircraft with an RNP-capable RNAV system (the ***aircraft***).

3 Instructions

I issue the instructions in Schedule 1.

4 Definitions

In this instrument:

AFM means aircraft flight manual.

approved navigation database means a navigation database on a medium approved by the manufacturer of the aircraft as suitable for use with the aircraft.

approved pilot means a pilot employed by Qantas who has been trained by the approved Qantas CAR 217 training and checking organisation to conduct RNP APCH LNAV or RNP APCH LNAV/VNAV procedures in accordance with the Qantas Flight Crew Operating Manual.

APV means approach with vertical guidance.

Baro-VNAV means barometric vertical navigation.

Federal Register of Legislative Instruments F2011L01910

cross-track error/deviation means the perpendicular distance between the planned flight path of an aircraft and the computed aircraft position as displayed by the aircraft's navigation instruments.

FAF means final approach fix.

FMS means flight management system.

GNSS means Global Navigation Satellite System.

GPS means Global Positioning System.

LNAV means lateral navigation.

LSALT means lowest safe altitude.

method of control means autopilot or flight director.

MSA means minimum safe altitude.

operator means Qantas Airways Limited.

RNAV (GNSS) approach means area navigation instrument approach procedure providing lateral navigation.

RNP means required navigation performance as displayed by the FMS.

RNP APCH LNAV means an area navigation instrument approach procedure providing lateral navigation to a minimum descent altitude (***MDA***).

RNP APCH LNAV/VNAV means an area navigation instrument approach procedure providing lateral and vertical navigation to a decision altitude.

RNP-capable RNAV system means an area navigation system fitted to an aircraft for which the AFM states that it is capable of meeting RNP 0.3 requirements.

V/DEV means vertical deviation.

VNAV means vertical navigation.

XTK error has the same meaning as cross-track error/deviation.

Schedule 1 Instructions

1 RNP APCH LNAV (RNAV (GNSS) Approach)

The approved pilot of an aircraft operating under the I.F.R. may use an RNP-capable RNAV system in accordance with these instructions as a non-precision I.F.R. navigation aid for a published RNAV (GNSS) approach procedure (RNP APCH LNAV), including the related missed approach procedure.

2 RNP APCH LNAV/VNAV (RNAV (GNSS) Approach)

The approved pilot of an aircraft operating under the I.F.R. may use an RNP-capable RNAV system in accordance with these instructions as an APV Baro-VNAV I.F.R. navigational aid for a published RNAV (GNSS) approach procedure (RNP APCH LNAV/VNAV), including the related missed approach procedure.

3 Requirements

(1) The AFM must contain a statement that the aircraft is capable of meeting the requirements for RNP 0.3.

(2) The aircraft must be operated in accordance with the manufacturer's instructions.

(3) RNAV must not be used as a navigation reference for flight below the LSALT/MSA, except in accordance with the published RNAV (GNSS) procedure.

4 Procedures

(1) Before commencing an RNP APCH LNAV or RNP APCH LNAV/VNAV approach procedure, the flight crew must ensure that:

(a) at least 1 of the aircraft's GPS receivers is operational; and

(b) the RNAV (GNSS) procedure is loaded from the current approved navigation database; and

(c) RNP 0.3 is displayed in the FMS.

(2) At all times during an RNP APCH LNAV or RNP APCH LNAV/VNAV approach procedure, the pilot in command of the aircraft must ensure that:

(a) the approach is flown using a method of control that is in accordance with the AFM and that permits RNP 0.3 operations to be conducted; and

(b) the approach is flown in accordance with the current company approved navigation database setting out that approach; and

(c) at least 1 pilot monitors the XTK error; and

(d) the approach must be flown while engaged in LNAV; and

(e) subject to subparagraph 5 (1), VNAV path must be selected no later than the FAF.

(3) The pilot in command of the aircraft must ensure that the RNAV (GNSS) procedure is discontinued if:

(a) the navigation of the aircraft exceeds the manufacturer's stated limits for the RNP 0.3 capability; or

(b) an alert is displayed indicating that the navigation system cannot meet the manufacturer's stated limits for the RNP 0.3 capability; or

(c) the monitored XTK error is 1 RNP or more.

(4) For an RNP APCH LNAV/VNAV approach procedure, the selected vertical flight path must be engaged before the aircraft reaches the FAF.

5 VNAV path assessment

(1) For a planned approach, the pilot in command may use a VNAV path that is derived from the FMS (VNAV path) only if the operator has assessed the VNAV as suitable for the approach.

(2) The VNAV path is suitable for the approach if its path is at, or above, the path shown in the published chart for the approach.

(3) Despite the assessment of the VNAV path as suitable, the pilot in command must observe vertical limitations in the published chart.

6 VNAV path assessment RNP APCH LNAV/VNAV (APV BARO-VNAV)

(1) In addition to the requirements contained within clause 5 above, the V/DEV must be monitored during the approach via PROGRESS PAGE 2/2.

(2) A missed approach must be initiated if a tolerance of +/- 75 ft is exceeded with respect to the VNAV PTH.