Explanatory Statement

Civil Aviation Regulations 1988

Civil Aviation Safety Regulations 1998

Instructions — RNAV (RNP-AR) approaches and departures

Legislation

Section 98 of the *Civil Aviation Act 1988* (the ***Act***) provides that the Governor-General may make regulations for the Act and the safety of air navigation.

Under subregulation 178 (1) of the *Civil Aviation Regulations 1988* (***CAR 1988***), the pilot in command of an aircraft must not fly along a route segment at a height lower than the published lowest safe altitude (***LSALT***) for that segment. Under subregulation 178 (2), if there is no LSALT, the pilot must not fly lower than the LSALT calculated by a method determined by CASA.

However, paragraph 178 (4) (c) of CAR 1988 provides an exception to these requirements if the flight is during an authorised instrument approach procedure (***authorised IAP***) or an authorised instrument departure procedure (***authorised IDP***). Definitions of those 2 terms are contained in subregulation 178 (7). Under subregulation 179A (1), CASA may issue instructions in relation to Instrument Flight Rules (***I.F.R.***) flights specifying the method by which an aircraft is to be navigated when in such flight.

The purpose of the instrument is to enable a controlled, Australia-wide, trial by Jetconnect Limited of Auckland, New Zealand (***Jetconnect***) of certain Area Navigation (Required Navigation Performance-Authorisation Required) instrument approach and departure procedures (***RNAV (RNP-AR) IAP*** and ***IDP***) designed by Naverus Inc (***Naverus***), a United States-based RNP-AR procedure specialist. These are sophisticated, computer-assisted area navigation operations with particular performance requirements for which a CASA authorisation is required.

Use of RNAV (RNP-AR) can enable accurate navigation and obstacle avoidance in instrument meteorological conditions (***I.M.C.***) under I.F.R. This can significantly reduce the likelihood of accidents involving controlled flight into terrain (***CFIT***). CFIT can be more likely in complex, non-precision approaches (***NPA***) which lack vertical guidance and which impose a high mental work load on the flight crew.

Trial of RNAV (RNP-AR)

Under subregulation 173.055 (1) of the *Civil Aviation Safety Regulations 1998*, Naverus is a certified designer of instrument approach and departure procedures using a specialised form of RNAV (RNP-AR).

RNAV (RNP-AR) procedures of the type to be used in the trial have been developed and are in use in the United States and Canada. However, there are, as yet, no internationally agreed design standards for such procedures.

The design standards to be used in the trial have been subject to the scrutiny of the Federal Aviation Administration of the United States of America and Transport Canada. CASA conducted its own assessment of the procedure design standards used by Naverus before granting it a certificate as a certified designer. CASA is, therefore, satisfied that the proposed IAP and IDP meet, or exceed, acceptable standards of safety for instrument approach and departure operations.

This instrument enables a trial to take place in controlled circumstances by issuing instructions on how Jetconnect Boeing 737-800 aircraft are to be navigated in I.F.R. flight when using RNAV (RNP-AR).

Instructions
The instrument applies to all RNAV (RNP-AR) approaches and departures in I.M.C. under the I.F.R. in Australia. It instructs the pilot in command of an aircraft to use only an authorised RNAV (RNP-AR) IAP or IDP if making an RNAV (RNP-AR) approach or departure. It further instructs that a pilot in command may only use an authorised RNAV (RNP-AR) IAP or IDP for, and in accordance with, the trial. This mechanism is designed for safety purposes to ensure that the Naverus procedures may only be used in the controlled trial by an approved operator. The trial is defined as that described in the Jetconnect proposal, accepted by CASA and conducted in accordance with certain conditions.

Conditions
The conditions of the trial include the requirement that only approved and specially trained pilots may be used in specifically capable aircraft. Operations must be in accordance with the Jetconnect proposal. Approaches may not be conducted below certain defined heights. Departures must use a defined RNP type in accordance with the aircraft flight manual. CASA must be permitted to attend and observe certain flights and training. Jetconnect must immediately report any safety-related incidents to CASA.

Approval
Subregulation 5 (1) of CAR 1988 provides that where CASA is authorised to issue directions, it may do so in the form of Civil Aviation Orders (***CAOs***). Subregulation 235 (2) of CAR 1988 authorises CASA to issue directions setting out the manner of determining a maximum weight for an aircraft that its gross weight must not exceed at take-off or landing. For aircraft of a maximum take-off weight exceeding 5 700 kg, CASA has issued such directions in the form of Civil Aviation Order 20.7.1B (***CAO 20.7.1B***).

Subsections 12 and 12A of CAO 20.7.1B provide for methods of meeting take-off obstacle clearance requirements in relation to take-off weight limitations by reference to the definition of the take-off area. Under subparagraph 12.1.1 (b) and paragraph 12A.5, the limitation of the take-off area is redefined for approved RNP operations, in RNP-capable aeroplanes that are approved for area navigation (RNAV) using specified RNP containment values.

Therefore, to enable departures during the RNAV (RNP-AR) trial to take advantage of these RNP-AR related obstacle clearance provisions, the instrument also contains:

(a) an approval of Boeing 737-800 aeroplanes for area navigation (RNAV); and

(b) an approval of the trial as an approved RNP operation; and

(c) specification of the RNP containment appropriate for the RNP type selected in the operations.

Legislative Instruments Act
Subregulation 179A (3A) of CAR 1988 declares that an instruction not in the form of a CAO is a disallowable instrument. Under subparagraph 6 (d) (i) of the *Legislative Instruments Act 2003* (the ***LIA***), an instrument is a legislative instrument for section 5 of the LIA if it is declared to be a disallowable instrument in legislation in force before the commencement of the LIA. The instructions are, therefore, a legislative instrument and are subject to tabling and disallowance in the Parliament under sections 38 and 42 of the LIA.

Consultation
Jetconnect has requested this instrument. No further consultation under section 17 of the LIA has been undertaken in this case. The instrument is similar to instruments for other operators conducting similar trials.

Human Rights Compatibility
This legislative instrument does not engage any of the applicable rights or freedoms. It is compatible with human rights as it does not raise any human rights issues.

Commencement and making
The instrument commences on the day after it is registered and stops having effect at the end of February 2015.

The instrument has been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the Act.

[Instrument number CASA 104/12]