Civil Aviation Amendment Order (No. R1) 2004

I, WILLIAM BRUCE BYRON, Director of Aviation Safety, on behalf of CASA, issue the following Civil Aviation Order under subregulation 244 (2) of the *Civil Aviation Regulations 1988*.

[Signed Bruce Byron]

Bruce Byron
Director of Aviation Safety and
Chief Executive Officer

2 December 2004

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1 Name of Order

This Order is the Civil Aviation Amendment Order (No. R1) 2004.

2 Commencement

This Order commences on gazettal.

3 Replacement of section 20.2 of the Civil Aviation Orders

Section 20.2 of the Civil Aviation Orders is omitted and a new section substituted as set out in Schedule 1.

Schedule 1 Substitution of section 20.2 of the Civil Aviation Orders

SECTION 20.2 AIR SERVICE OPERATIONS

SAFETY PRECAUTIONS BEFORE FLIGHT

2 REMOVAL OF LOCKING AND SAFETY DEVICES

2.2 Where external control surface locks, undercarriage pins and locks, or other external locking or restricting devices have been fitted, they must, except where otherwise approved by CASA, be removed prior to commencement of taxiing for the purpose of taking off. They must be removed only by the pilot in command or the co-pilot, or by a person instructed in this function and authorised to perform it by the owner, hirer, operator or pilot in command.

2.3 Where external control surface locks, undercarriage pins and locks, or other external locking or restricting devices are removed by a person other than the pilot in command or co-pilot:

2.3.1 Removal must only be effected as directed by the pilot in command.

2.3.2 The locks, pins and other external devices must be exhibited to the pilot in command or co-pilot from a position which will enable him or her to readily determine that all pins, locks and devices are being displayed.

2.3.3 During the hours of darkness the owner, hirer, operator or pilot in command must ensure that adequate lighting is provided to enable the pilot in command or co-pilot (as the case may be) to see the articles displayed.

2.3.4 When the pilot in command or co-pilot is satisfied that all locking devices have been removed and displayed he or she must give an agreed form of acknowledgement to the person effecting removal.

2.3A If any external control surface lock, undercarriage pin or lock, or other external locking or restricting device, fitted to an aircraft:

(a) has been removed by a person other than the pilot in command of the aircraft; and

(b) has not been exhibited to him or her under subparagraph 2.3.2;

the pilot in command of the aircraft must not start taxiing the aircraft, or allow the aircraft to be taxied, for the purposes of taking-off unless the co-pilot has told him or her that the lock, pin or other device has been removed:

(c) by the co-pilot; or

(d) by a person other than the co-pilot in accordance with paragraph 2.3.

2.4 When an aircraft has been parked, taxied or towed in winds exceeding 35 knots and the control systems and surfaces have not been effectively restrained either by a person in the cockpit or by approved control surface gust locks, the pilot in command or an appropriately licensed maintenance engineer must, before flight, inspect the control systems and control surface attachments for damage.

2.5 Where external control surface locks or restricting devices have been removed as prescribed by paragraphs 2.2 and 2.3 of this section, or where an aircraft is to be flown for the first time following maintenance work involving the aircraft's control surfaces or control surface systems, the pilot in command must, immediately before taxiing for the purpose of taking off, test the flight controls to the full limit of their travel and make such other tests as are necessary to ensure that those controls are functioning correctly.

Note: Paragraph 244 (1) (a) of the *Civil Aviation Regulations 1988* requires that immediately before taking-off on any flight, the pilot in command of an aircraft must test the flight controls on the ground to the full limit of their travel and make such other tests as are necessary to ensure that those controls are functioning correctly.

3 SECURITY OF DOORS AND HATCHES

Immediately before taxiing for the purpose of taking off on any flight, the pilot in command must ensure that all doors, escape hatches and loading hatches are properly secured.

4 PRECAUTIONS BEFORE SOLO FLIGHT IN AIRCRAFT FITTED WITH DUAL CONTROLS

The pilot in command of an aircraft fitted with dual controls, which is to be flown solo, must ensure that safety harness and any other articles or equipment which may foul the controls are safely secured; if the second control column is readily detachable, it must be removed.

5 FUEL SYSTEM INSPECTION

5.1 The operator and pilot in command must ensure that the following inspections and tests for the presence of water in the fuel system of the aircraft are made:

(a) either:

(i) if:

(A) the aircraft manufacturer's data specifies the manner in which inspections and tests for the presence of water in the aircraft's fuel system are to be made; and

(B) the data has been approved under regulation 42M of the *Civil Aviation Regulations 1988* as part of the aircraft's system of maintenance;

an inspection and test in accordance with the approved data; or

(ii) in any other case — before the start of each day's flying, and after each refuelling, with the aircraft standing on a reasonably level surface, drain a small quantity of fuel from each fuel tank into a clear transparent container and check by an approved method for the presence of water;

(b) on such aircraft types which may be specified by CASA, extend the foregoing inspection to fuel system filters and collector boxes. It is recommended that all aircraft fuel system filters and collector boxes be checked for water contamination at frequent intervals.

Note: It is important that checks for water contamination of fuel drainage samples be positive in nature and do not rely solely on sensory perceptions of colour and smell, both of which can be highly deceptive. The following methods are acceptable:

1. Place a small quantity of fuel into the container before taking samples from tank or filter drain points. The presence of water will then be revealed by a visible surface of demarcation between the two fluids in the container.

2. Check the drainage samples by chemical means such as water detecting paper or paste, where a change in colour of the detecting medium will give clear indication of the presence of water.

3. In the case of turbine fuel samples, tests should also include inspection for persistent cloudiness or other evidence of the presence of suspended water droplets, which will not necessarily be detected by methods mentioned in notes 1 and 2. Should any doubt exist of the suitability of the fuel, the checks specified in the aircraft Operators Maintenance Manual should be followed. It is advisable to allow turbine fuel a reasonable period of stagnation before drawing test samples from fuel drain points; this allows settling of suspended water which is a slower process in turbine fuel than in aviation gasoline.

5.1A In relation to a refuelling that is a hot refuelling in accordance with section 20.10 or section 20.10.1, the operator and pilot in command of an aircraft are not required to carry out inspections and tests in accordance with paragraph 5.1. This does not effect the requirement to do so before the start of each day's flying.

5.2 If, at any time, a significant quantity of water is found to be present in an aircraft fuel system, the operator and pilot in command must ensure that all traces of it are removed from the fuel system, including the fuel filters, before further flight.

Note: In eliminating water from an aircraft fuel system, it is important that consideration be given to the possibility of water lying in portions of the tanks or fuel lines where, because of the design of the system or the existing attitude of the aircraft, it is not immediately accessible to a drain point.

5.3 The operator and pilot in command must ensure that, before the commencement of each day's flying, all external fuel tank vents are inspected for freedom from obstruction.

6 FUEL QUANTITY MEASUREMENT

6.1 Aircraft having a maximum take-off weight in excess of 5 700 kg (12 500 lb) must not commence a flight unless the pilot in command has ensured that the fuel quantity on board has been checked by two separate methods.

6.2 The cross-check procedures required by paragraph 6.1 must be specified by the operator, together with the allowable discrepancy which must not exceed 3 per cent of the higher amount.

Note: Acceptable cross-check methods are:

1. Check of stick gauge (dip, drip, sight) readings against electrical gauge (potentiometer, capacitor) readings.
2. Having regard to previous readings, a check of stick or electrical gauge readings against fuel consumed indicator readings.
3. After refuelling and having regard to previous readings, a check of stick or electrical gauge readings against the refuelling tank measurements.
4. When a series of flights is undertaken by the same crew and refuelling is not carried out at intermediate stops, cross-checks, other than the first of the day, may be made by checking the gauge readings against the computed fuel on board.

Note: Where this Civil Aviation Order requires a person or persons to ensure that a certain action has been satisfactorily completed or that a certain condition prevails, compliance with the Order will be deemed to have been achieved where the person or persons have referred to evidence furnished in an approved manner or has personally carried out a physical inspection.