AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/SMA/2 and issues the following AD under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

SMA Piston Engines

AD/SMA/2 Amdt 1 — Engine Electronic Control Unit — 4/2007 DM

Applicability: All aircraft with a Société de Motorisations Aéronautiques (SMA) SR305-230 or SR305-230-1 engine equipped with an electronic control unit (ECU) having a part number (P/N) listed below:

SF01160009-0	SF01160011-0	SP01160013
SP01160051-0	SP01160051-1	SP01160051-2
SP01160051-3	SP01160051-4	SP01160051-5
SP01160089-0	SP01160089-1	SP01160089-2

Note 1: These engines are known to be installed on, but not limited to, Cessna 182 and Reims F182 series aeroplanes.

Requirement:

1. If the ECU was not replaced in accordance with the original issue of the Directive, determine the P/N and the serial number (S/N) of the ECU installed on the aircraft.

2. If the ECU is determined to have a P/N listed in the 'Applicability' section of this Amendment and a S/N 131 or below, with the exception S/Ns 70, 71, 83 and 88.

   a. Do not operate the engine unless in accordance with restriction noted below.

   b. Remove and replace the ECU with an ECU P/N SP01160089-3, in accordance with the SMA Service Bulletin SB-01-76-005, dated 15 December 2006, or later EASA approved revision.

One ferry flight to a location capable of completing the ECU replacement is allowed. The pilot should be ready to react appropriately to a sudden power increase.

3. Replace all remaining affected P/N ECU with an ECU P/N SP01160089-3 in accordance with the SMA SB-01-76-005 or later EASA approved revision.

4. Spare ECUs having a part number listed in the 'Applicability' section of this Amendment may not be installed on any SMA SR305-230 or SR305-230-1 engine as a replacement part.

Note 2: EASA Emergency AD 2007-0033 refers.

SMA Piston Engines

AD/SMA/2 Amdt 1 (continued)

Compliance: For Requirement 1 - Before further flight after 7 March 2007.

For Requirement 2 - Immediately after the Requirement 1 determination.

For Requirement 3 - Not later than 31 March 2007.

For Requirement 4 - After 31 March 2007.

This Amendment becomes effective on 7 March 2007.

Background: The European Aviation Safety Agency (EASA) has been advised by the engine manufacturer that over a period of time, the alteration of one ECU electronic component can cause a rapid uncontrolled power increase. Several occurrences have already been reported during engine start or during engine warm-up. This could result in loss of control of the aircraft.

This original issue of this Directive required the aircraft to be inspected to determine the ECU S/N and, if necessary, the replacement of the ECU. The Directive also allows a one time flight to a location capable of effecting replacement of the ECU. EASA has now advised that this was a temporary corrective action.

This Amendment clarifies the applicability by including a part number range and advises that the affected engine may also be installed on Reims F182 aeroplanes. At the same time, the Amendment identifies a replacement ECU part number and requires the replacement of all affected ECUs, irrespective of their serial number. Additionally, the Amendment prohibits the fitment of an affected ECU as a spare after 31 March 2007.

The original issue of this Directive became effective on 17 October 2006.

David Punshon
Delegate of the Civil Aviation Safety Authority

27 February 2007