
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.1 (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.

Piper PA-46 (Malibu) Series Aeroplanes

AD/PA-46/31

Electronic Control Modules

5/2004

Applicability: Model PA-46-500TP aeroplanes, serial numbers 4697001 through 4697140 and 4697142 through 4697153 inclusive.

Requirement: 1. Remove the following parts and return them to the manufacturer for modification in accordance with the instructions in Piper Service Bulletin (SB) No 1132, dated 4 June 2003:

Assembly	Part Number
Pilot's circuit breaker panel	102228-002
Co-pilot's circuit breaker panel	102228-006
Dimmer lighting module	102226-002
Stall vane heat module	102227-002
Propeller heat module	102227-006

2. Visually inspect all remaining exposed wires and equipment for evidence of heat damage and repair any damage found in accordance with the instructions in Piper SB 1132.
3. Following the instructions in Piper SB 1132, install the modified circuit breaker panel assemblies and the remote modules received from the manufacturer.
4. The following assemblies may not be installed on any aeroplane as a replacement part unless modified in accordance with piper SB 1132:

Assembly	Part Number
Pilot's circuit breaker panel	102228-002
Co-pilot's circuit breaker panel	102228-006
Dimmer lighting module	102226-002
Stall vane heat module	102227-002
Propeller heat module	102227-006

Note: FAA AD 2004-03-32 Amdt 39-13476 refers.

Compliance: For Requirement 1 - Within the next 100 hours time-in-service (TIS) after the effective date of this Directive.

Piper PA-46 (Malibu) Series Aeroplanes

AD/PA-46/31 (continued)

For Requirements 2 and 3 - Prior to further flight after completing the Requirement 1 actions.

For Requirement 4 - As of the effective date of this Directive.

This Airworthiness Directive becomes effective on 13 May 2004.

Background: The United States Federal Aviation Administration (FAA) has received several reports of smoke in the cockpit and loss of electrical systems function. FAA analysis indicates that there is inadequate clearance and inadequate electrical isolation between the load terminal and metal case of some electronic control modules. The modules load terminal is cutting through the rubber insulating grommet and contacting the module's metal case. This causes the electrical short circuit and electrical arcing.

The following electrical system components are potentially affected by this condition: engine start; strobe light; left/right taxi light; liquid crystal display (LCD) dimming; dual flasher (recognition light); left/right pitot heat; avionics dimming (Bezel buttons for radios); prop heat; left/right fuel pump; position light landing light; instrument panel light dimming; ice light; vent defog (vent blower); hi/low blower; stall heat and dimmer switch lighting (overhead switch panel switches).

If not corrected, short circuit failure and electrical arcing of the electronic control modules could result in loss of the electrical systems components or burning of wiring insulation and cause smoke in the cockpit. This condition could lead to the inability to properly control the aeroplane.



James Coyne
Delegate of the Civil Aviation Safety Authority

1 April 2004