

---

## 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 39.001(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.

---

### Robinson R22 Series Helicopters

**AD/R22/52**

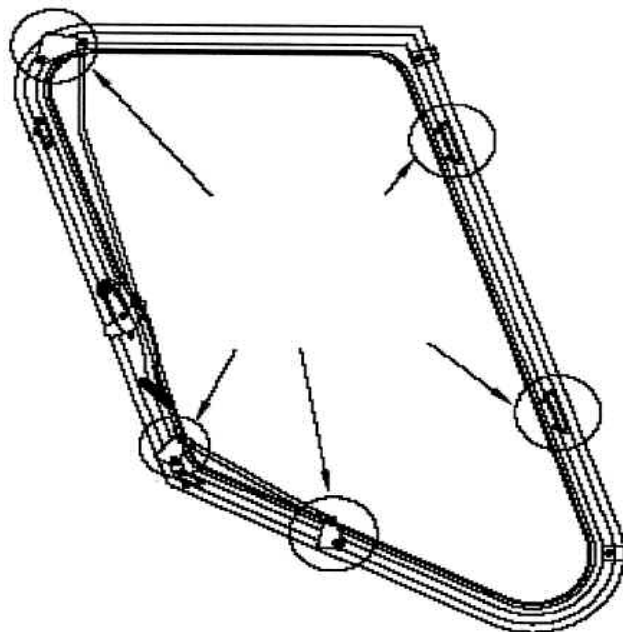
**Door and Window Assembly**

**11/2005  
DM**

**Applicability:** Model R22 series helicopters, modified with a door assembly manufactured by Tech-Tool Plastics, Inc., in accordance with STC No. SR09189RC.

**Requirement:** 1. Inspect the left-hand and right-hand door assemblies as follows:

Visually inspect each pilot and co-pilot door assembly integral frame for a crack in the locations depicted in Figure 1 of this Directive. If a crack is found, before further flight, replace the cracked door assembly, part number (P/N) R-22-101-51 or P/N R-22-101-53 (left-hand door assembly), or P/N R-22-101-52 or P/N R-22-101-54 (right-hand door assembly), with a serviceable door assembly. If the above part number door assemblies are used as the replacement, then accomplish the replacement in accordance with Tech-Tool Plastics, Inc., Installation Instructions TTP-1R, Revision A, dated 21 November 1997, and with the sections titled "Door Weather Seal Installation" and "Cotter Pin Installation" in Tech-Tool Plastics, Inc., Service Bulletin (SB) No. TTP2005-01 Revision A, dated 1 February 2005.



Door Assembly (left-hand shown) View Looking Outboard

Figure 1

## Robinson R22 Series Helicopters

AD/R22/52 (continued)

2. If no crack is found in any door assembly integral frame, accomplish the following:
  - a. Visually inspect the weather seal set in each door assembly to determine if it is serviceable and correctly installed. If the seal is unserviceable, before further flight, replace it with either the weather seal set, P/N 74418X14L and P/N 74814X12BL, supplied by Tech-Tool Plastics, Inc., in accordance with, the "Door Weather Seal Installation" section of SB No. TTP2005-01 Revision A, or replace it with any other serviceable door weather seal set in accordance with the applicable FAA-approved installation instructions. If a serviceable weather seal set, P/N 74418X14L and P/N 74814X12BL, is not installed correctly, before further flight, re-install it in accordance with SB No. TTP2005-01 Revision A. If the incorrectly installed weather seal set is not the weather seal set supplied by Tech-Tool Plastics Inc., before further flight, re-install it in accordance with the applicable FAA-approved installation instructions.
  - b. Visually inspect each door hinge on each door assembly to determine if the cotter pins, P/N MS24665-136, are installed in accordance with the "Cotter Pin Installation" section of SB No. TTP2005-01 Revision A. If a cotter pin is not installed in accordance with the "Cotter Pin Installation" section of the service bulletin, before further flight, install the cotter pins in accordance with the "Cotter Pin Installation" section of the service bulletin.

*Note 1: The installation of nylon adjustment screws and the trimming of door assembly edges are important maintenance actions that may reduce the strength of the door assembly if not done correctly.*

*Note 2: FAA AD 2005-16-05 Amdt 39-14210 refers.*

Compliance: Within 30 days after 26 August 2005. Thereafter, inspect in accordance with Requirement 1, at intervals not to exceed 100 hours time in service.

This Airworthiness Directive becomes effective on 26 August 2005.

Background: Reports of a fatal accident and an incident prompted the FAA to require the actions specified in this Directive. The actions specified in this Directive are intended to prevent separation of a door window or door assembly from the helicopter, which could damage the tail rotor during flight and result in loss of the helicopter.



David Punshon  
Delegate of the Civil Aviation Safety Authority

24 August 2005