
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/HU 369/113 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.

McDonnell Douglas (Hughes) and Kawasaki 369 Series Helicopters

AD/HU 369/113 Amdt 1	Main Rotor Blade Torque Events and Life Limit	1/2006 DM
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Applicability: Models 369D, 369E, 369F, 369FF, 500N, or 600N helicopters with either an MD Helicopter Inc. (MDHI) main rotor blade installed or modified with Helicopter Technology Company, LLC (HTC), Supplemental Type Certificate (STC) No. SR09172RC, SR09074RC, or SR01050LA with an HTC blade installed, as listed below:

Model	MDHI blade part No. (P/N)	HTC blade P/N	HTC STC
369D	369D21100 Basic, -516, -517, -523	500P2100-BSC, -BSC-1	SR09172RC
369E	369D21120-501, -503	500P2100-101, -103	SR09074RC
369F, FF	369D21102 Basic, -503, -517, -523 369D21121-501, -503	500P2300-501, -503	SR01050LA
500N	369D21102-503, -517, -523 369D21121-501, -503	500P2300-501, -503	SR01050LA
600N	369D21102-517, -523 369D21121-501, -503	500P2300-501, -503	SR01050LA

Note: The terms “BSC” and “Basic” are interchangeable when identifying blades produced by MDHI and HTC.

Requirement: 1. Determine and record the number of torque events accumulated on each blade. A torque event (TE) is the transition to a hover from forward flight or any external lift operation. Each transition to a hover from forward flight is recorded as a TE, and any external lift operation is recorded as two TEs. Forward flight is considered to be flight at any airspeed (or direction) after attaining translational lift. If you cannot determine the number of TEs, use 13,720 TEs.

Continue to record the number of TEs accumulated (actual usage) throughout the life of the blades along with hours time in service. On or before accumulating an additional 200 TEs or at the end of each day’s operations, whichever occurs first, record and update the accumulated TEs total.

McDonnell Douglas (Hughes) and Kawasaki 369 Series Helicopters

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2. For each blade that has accumulated 13,720 or more TEs and 750 or more hours time in service, before further flight, unless already accomplished; and thereafter after at intervals not to exceed 200 TEs or 35 hours time in service, whichever occurs first, perform a main rotor blade torque event inspection.

If a crack is found, before further flight, replace the affected blade with a serviceable blade.

Note 1: MD Helicopters Inc. Maintenance Manual CSP-HMI-2, Revision 36, Section 62-10-00, paragraph 8, Main Rotor Blade Torque Event Inspection, pertains to the subject of this Directive.

Note 2: MDHI Maintenance Manual CSP-HMI-2, Section 20-30-00 Main Rotor Blade Painting, pertains to the subject of this Directive. This section of the maintenance manual recommends painting the inboard 24-inches (not to be exceeded) of the blade gloss white to aid in detecting a crack; and if this is done, painting all blades alike and rebalancing them.

Note 3: TEs are used only to establish an additional inspection interval and not to establish an alternate retirement life.

- Compliance:
1. Within 50 hours time in service after 7 December 2005, unless already accomplished.
 2. As specified in Requirement 2.

This Amendment becomes effective on 7 December 2005.

Background: The FAA required certain actions in response to several reports, including a recent report dated 24 July 2003, of blade cracks due to a high number of TEs per hour. The actions specified in this Directive are intended to prevent fatigue cracking of the blade, blade failure, and subsequent loss of control of the helicopter.

McDonnell Douglas (Hughes) and Kawasaki 369 Series Helicopters

AD/HU 369/113 Amdt 1 (continued)

Amendment 1 is issued in response to a new FAA AD, which revises model applicability, adds MDHI part-numbered blades, removes any reference to the life limits of the blades, changes the requirements for inspecting the blades, and revises the STC applicability. The FAA AD also provides that compliance with portions of certain documents constitutes alternative methods of compliance, contains editorial changes for clarification, and makes some corrections. The FAA AD was prompted by additional reports of cracked blades and by comments received in response to FAA AD 2003-24-01.



David Villiers
Delegate of the Civil Aviation Safety Authority

1 December 2005