



सत्यमेव जयते

## Directorate General of Civil Aviation

### AIRWORTHINESS DIRECTIVE

**AD No. 004**

**Issued/Date:** 01-07-2008

No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with DGCA or the state of registry, as applicable.

**Type Approval Holder's Name**

Rotary Wing Research & Design Centre, Hindustan Aeronautics Limited, Bangalore.

**Type/Model designation(s)**

All Civil variant DHRUV helicopters

**TCDS No.:** 5-8/96-RD

**Foreign AD Number:** Not Applicable

**Supersedure:** None

**ATA 76 - 10**

Engine Controls – Power Control – One time inspection of collective pitch anticipator (CPA) connector, CPA cable routing and CPA installation on the helicopter.

**Manufacturer(s):**

Helicopter Division, Hindustan Aeronautics Limited, Bangalore

**Applicability:**

Model No.s    Serial No.s  
Dhruv (C)    PTC2  
Dhruv(CFW) DW-28,DW-77, DW-78  
Dhruv (S)    DS-35, DS-51

**Reason:**

1. On one of the DHRUV helicopter, there was an in flight warning for collective pitch anticipator (CPA) redundancy failure for engine-2. During check CPA connector was found to be loose. As a result of this, loss of CPA input to the FADEC has resulted and caused failure of CPA redundancy for engine-2.
2. On another DHRUV helicopter, there was a warning for CPA failure on both the FADEC when collective pitch was lowered after touch down. On investigation, it was observed that the CPA input to both FADEC was out of range. Further it was found that CPA moving end check nut was loose and tab washer used for locking the check nut was bent incorrectly. These factors had contributed to the CPA rigging

	<p>disturbance and were the cause for the snag.</p> <p>3. There was an in-flight power loss warning followed with large split in NG, TGT and torque parameters of the two engines. Investigations with diagnostic PC revealed that FADEC2 had logged CPA failure. On checking CPA circuit, one wire on the flying lead of CPA was found cut at about 4 inches from the connector due to sharp fold in the CPA flying lead.</p> <p>Since unsafe conditions have been identified that are likely to exist or develop on other aircraft of the same type design, this Airworthiness Directive is being issued for inspection and submission of the compliance certificate to Certification and Airworthiness Group of RWR&amp;DC, HAL, Bangalore.</p>
<b>Effective Date:</b>	Within 21 days after final AD issue date.
<b>Compliance:</b>	<p>Carry out checks to verify the use of correct CPA installation, correct connector installation and as well as correct routing &amp; securing of CPA cable inside the centre post as per Alert Service Bulletin No. 201 761 284, Rev A, dated 23.11.2007.</p> <p>If the checks specified in the alert SB has already been carried out and compliance certificate have been submitted to Certification &amp; Airworthiness Group of RWR&amp;RC, HAL, Bangalore, then this check is not required to be performed again.</p>
<b>Ref. Publications:</b>	RWR&DC-HAL Alert Service Bulletin No. 201 761 284, Rev A, dated 23.11.2007.
<b>Remarks:</b>	<ol style="list-style-type: none"> <li>1. If requested and appropriately substantiated, Director (AED), New Delhi may accept Alternative Methods of Compliance for this AD.</li> <li>2. Enquiries regarding this AD should be addressed to Director (AED), Office of the Director General of Civil Aviation, Civil aviation Department, Opposite Safdarjung Airport, New Delhi – 110003. E-mail: <a href="mailto:design@dgca.nic.in">design@dgca.nic.in</a>.</li> <li>3. For any questions concerning the technical content of the requirements in this SB/AD, please contact: Customer Services Department, (ALH) civil, Helicopter Division, Hindustan Aeronautics Limited, Vimanapura post, Bangalore – 560017. INDIA. Telephone No. +91-080-2522 4088, FAX: +91-080-25223713, Email: csdalh@yahoo.com</li> </ol>

This AD, which prescribes/mandates action to be performed on to helicopters as stated above to restore an acceptable level of safety, is hereby issued pursuant to CAR 21.3B.TC Holder/Operators are required to comply with the stated AD within the stipulated time.

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(CHARAN DASS)

Deputy Director General of Civil Aviation  
for Director General of Civil Aviation