



## Directorate General of Civil Aviation

### AIRWORTHINESS DIRECTIVE

**AD No. 012**

**Issued/Date:** 02.03.2009

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 variants of DHRUV helicopter

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

**Foreign AD Number:** Not Applicable

**Supersedure:** None

**ATA 63 – 20**

Rotor Drive (s) – Gearbox(es) – One time check for presence of water in MGB lubricating oil of Dhruv helicopter IDS assembly.

**Manufacturer(s):**

Helicopter Division, Hindustan Aeronautics Limited, Bangalore

**Applicability:**

<u>Model No.s</u>	<u>Serial No.s</u>
Dhruv (C)	PTC2, DCWR-01 onwards
Dhruv(CFW)	DW-28,DW-77, DW-78, DW-63, DCWF- 01 onwards
Dhruv (CS)	DS-35, DS-51, DCS – 01 onwards

<p><b>Reason:</b></p>	<ol style="list-style-type: none"> <li>1. A case of water ingress into IDS assembly on one of Dhruv helicopter was noticed in 2006. Detailed investigation revealed that water ingress into Main Gear Box was through top cover (p/n: 201P 620H 0000 207) of IDS. It was also observed that non-standard “O” ring was used, which resulted in improper sealing against water.</li> <li>2. Usage of correct size “O” ring as per drawing was emphasised and as an improvement sealing of top cover using sealant was introduced as additional feature against water ingress.</li> <li>3. A recent case of water ingress has come to notice on one of Dhruv helicopters. Preliminary investigation revealed existence of a connector on IDS inspection cover (p/n: 201P 636H 0006 201). This inspection cover, with connector on it, is not a standard part as per SOP. Further, the “O” ring of the top cover was found damaged. It is possible that IDS with such inspection cover and damaged “O” ring installed on top cover might have led to seepage of water into MGB of IDS.</li> <li>4. The water presence in lube oil of IDS has very serious effects like corrosion.</li> </ol> <p>Since an unsafe condition has been identified that is likely to exist on other aircraft of the same type design, this Airworthiness Directive is being issued for carrying out the one time check and subsequently water ingress into IDS check at every 100 hours and submit the compliance certificate to Airworthiness Group of RWR&amp;DC, HAL, Bangalore.</p>
<p><b>Effective Date:</b></p>	<p>Within 21 days after final AD issue date.</p>
<p><b>Compliance:</b></p>	<p>Carry out the check/modifications as per alert Service Bulletin No. 201 620 0224, Rev B, dated 20.06.2008 immediately after receipt of this Airworthiness Directive for delivered helicopters.</p>
<p><b>Ref. Publications:</b></p>	<p>RWR&amp;DC-HAL alert Service Bulletin No. 201 620 0224, Rev B, dated 20.06.2008.</p>

<b>Remarks:</b>	<ol style="list-style-type: none"><li>1. If requested and appropriately substantiated, Director (R&amp;D), New Delhi may accept Alternative Methods of Compliance for this AD.</li><li>2. Enquiries regarding this AD should be addressed to Director(R&amp;D), 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 AD/above referred Alert SB, 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>
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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 shall comply with the above stated AD within the stipulated time.

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(CHARAN DASS)  
Deputy Director General of Civil Aviation  
for Director General of Civil Aviation