

Airworthiness Directive Schedule

Aeroplanes

De Havilland DH82 Series (Tiger Moth)

26 April 2018

- Notes:**
1. This AD schedule is applicable to De Havilland DH82 (Tiger Moth) series aircraft.
 2. The UK CAA is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) and Mandatory Permit Directives (MPDs) for these aircraft.

State of Design ADs are listed in UK CAA CAP 476 and CAP 747, which can be obtained from the UK CAA website at <http://www.caa.co.uk/Commercial-Industry/Aircraft/Airworthiness/Continuing-airworthiness/Airworthiness-Directives/>

Prior to July 2003, UK ADs for UK products were a number only linked to a CAA declared Mandatory Service Bulletin issued by the Type Certificate Holder. If you have the SB you have the AD. These AD and SB numbers are listed in CAP 476, which is current at final issue (September 2004) and no longer amended. Those Service Bulletins remain mandatory, unless cancelled and/or superseded by a new AD. Mandatory Requirements issued by the UK CAA are available for download from the UK CAA website until they are published in UK CAA publication CAP 747.
 3. State of Design MPDs are listed in CAP 661 and can be obtained from the UK CAA website at <http://www.caa.co.uk/Commercial-Industry/Aircraft/Airworthiness/Continuing-airworthiness/Mandatory-Permit-Directives/>

UK CAA CAP 661 contains all issued MPDs up until 31 January 2012, when the publication ceased to be amended. The MPDs in CAP 661 remain valid and are not 'withdrawn', unless stated on the UK CAA website at <http://www.caa.co.uk/Commercial-Industry/Aircraft/Airworthiness/Continuing-airworthiness/Mandatory-Permit-Directives/>, where the entry will state that it has been cancelled/superseded.
 4. The date above indicates the amendment date of this schedule.
 5. New or amended ADs are shown with an asterisk *
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<p>The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at http://www.caa.govt.nz/airworthiness-directives/states-of-design/ If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below.</p>		
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DCA/DH82/101 Control Column - Modification

Applicability: All model DH 82

Requirement: To prevent flange at base of hand grip fouling and withdrawing safety harness release pin during aerobatic manoeuvres, all control column hand grip flanges must be completely removed leaving only a rounded collar approximately 1/8 inch

Compliance: By 1 July 1955

DCA/DH82/102 Mainplane Leading Edges - Modification

Applicability: All model DH 82

Requirement:

1. To prevent collapse of the top and bottom mainplane leading edges, caused by failure of the glued joints the following is required:
 - (a) Replace gimp pins attaching riblets to leading edge with No. 3 brass countersunk x ½ inch or No. 3 x 3/8 inch wood screws.
 - (b) On top riblet mark off longitudinal centre line, and on this drill a hole (No. 36 Morse) approximately ¼ inch from nose end of riblet.
 - (c) Countersink hole on top and attach nose riblet to leading edge using casein glue and wood screws.
 - (d) Pre-work lower nose riblet similarly except that the hole shall be drilled 0.3 inch from nose end of riblet.

Compliance: By 1 July 1955

DCA/DH82/103 Safety harness - Modification

Applicability: All model DH 82

Requirement:

1. Safety Harness, from cockpit group, P/N U2572, and rear cockpit group, P/N U2573, shall be modified to prevent release pin, P/N AD9426/2, from turning, to ensure definite positioning of safety pin, P/N 9745/1, and to provide easier accessibility for pilot when inserting or withdrawing safety pin.
2. The release pin, is to be reworked to incorporate a mild steel, 18 gauge, strap riveted to the pin head.
3. No. 1 strap, P/N H26303A, is to be reworked to incorporate a 13-3/8 inch long webbing strip attached to its under side and assembled through the reworked head of the release pin.

Compliance: By 1 July 1955

DCA/DH82/104A Fuselage, Joint E - Modification

Applicability: All model DH 82

Requirement: To prevent the threaded portion of bolt in the joint plates from becoming worn, the left hand side bolt AGS. 749/4/1 must be replaced by bolt No. 2A15/12G, and the right hand side bolt by datum bolt P/N H37880

Compliance: Within next 50 hours TIS.

Effective Date: DCA/DH82/104 - 1 July 1955
DCA/DH82/104A - 16 January 1998

DCA/DH82/105 Undercarriage Steel Fork Ends - Modification

- Applicability:** All agricultural aircraft operated with overload
- Requirement:** The fitting of steel fork ends, P/N 63063 is required for agricultural aircraft operated with overload and is recommended as an alternative to the standard dural fittings on other aircraft of the type.
- Compliance:** By 1 July 1955

DCA/DH82/106 Undercarriage - Modification

- Applicability:** All model DH 82
- Requirement:** To prevent the moving portion of the landing gear from becoming disengaged from the fixed portion in the event of failure, install a check cable in accordance with Drawing No. AWD/1/69.
- Compliance:** By 1 July 1955

DCA/DH82/107 Control box - Inspection

- Applicability:** All model DH 82
- Requirement:**
1. Remove the rear seat and examine the rearward extremities of the two longitudinal spruce members of the control box for cracks at the attachment of the quadrant which supports the elevator controls.
 2. Cracked members must be renewed before further flight.
- Compliance:** At intervals not exceeding 12 months
- Effective Date:** 30 September 1954

DCA/DH82/108 Cancelled: Once only inspection, purpose fulfilled**DCA/DH82/109 Altitude Control - Inspection**

- Applicability:** All model DH 82
- Requirement:** Check that the Altitude Control Lever is locked to prevent the control being opened when operating the throttle lever. Should it be necessary to fly at a high altitude a light gauge wire which can be broken is to be used
- Compliance:** Every periodic inspection
- Effective Date:** 30 September 1954

DCA/DH82/110 Fuel Cock Slide - Inspection

- Applicability:** All model DH 82
- Requirement:**
1. Examine the fuel cock to ensure that with the control disconnected, a force of not less than 6 lb is required to move the slide.
 2. Should this requirement not be met, it may be corrected by adjustment of shim thickness between the body and the removable bottom portion or by replacement of the cork washer.
- Compliance:** At intervals not exceeding 12 months
- Effective Date:** 30 September 1954

DCA/DH82/111 Tailplane Support Bracket - Inspection

Applicability: All model DH 82

Requirement:

1. Inspect the tailplane support bracket P/N H36619 for cracks, especially at the radius of the bend, particular attention being paid to the under surface.
2. All defective brackets must be replaced before further flight.

Compliance: Every periodic inspection

Effective Date: 30 September 1954

DCA/DH82/112A Fuel Tank Balance Pipe - Inspection and Annealing

Applicability: All model DH 82

Requirement:

1. The fuel tank balance pipe, P/N H34886A is to be inspected for fracture, attention being paid to the point where the nipple is brazed to the pipe. Special care must be given to alignment of the pipe on replacement.
2. Subject pipe is to be annealed.

Compliance: 1. Every periodic inspection.

2. At intervals not exceeding 300 hours TIS or whenever the fuel tank is removed.

Effective Date: DCA/DH82/112 - 30 September 1954
DCA/DH82/112A - 16 January 1998

DCA/DH82/113 Fuselage Side Brace Struts - Inspection

Applicability: All model DH 82

Requirement: The struts are to be inspected for cracks originating from the $\frac{3}{16}$ inch hole in the fuselage port side bracing strut, joint C to E lower half. Ensure that the hole is uptaped

Compliance: Every periodic inspection

Effective Date: 30 April 1955

DCA/DH82/114 Mainplane Attachment Fittings - Inspection

Applicability: All model DH 82

Requirement: Check that high tensile pins, P/N 37867, are used for the bottom mainplane front attachment fittings

Compliance: Before C of A issue

Effective Date: 30 April 1955

DCA/DH82/115 Elevator Control Bracket - Inspection

Applicability: All model DH 82

Requirement: Defect reports have disclosed serious cracks in the corners of the rear control shaft support bracket. This bracket must be closely inspected for cracks by viewing through the rear control column opening in the top of the control box

Compliance: Every 50 hours TIS until mod. DH.114 is embodied and thereafter at intervals of 150 hours TIS

Effective Date: 30 April 1955

DCA/DH82/116 Cancelled: Once only inspection, purpose fulfilled**DCA/DH82/117 Rudder Bar Pivot Pin - Inspection**

Applicability: All model DH 82

Requirement: Pivot pins in both the front and the rear rudder bar assemblies are to be inspected as follows:

1. Remove felt wick from bore of pin.
2. Measure the depth of the bore which shall not exceed $1\frac{1}{16}$ inch. If the depth of the bore exceeds this dimension, replace with a pin having the correct bore depth.

Compliance: Next periodic inspection and whenever pins are replaced

Effective Date: 30 September 1954

DCA/DH82/118 Fin Spar - Inspection

Applicability: All model DH 82

- Requirement:**
1. Inspect fin post for crushing on each side face at the top longeron attachment.
 2. If crushing does not exceed $\frac{1}{32}$ inch in depth on either face, the fin post may continue in service. If crushing is between $\frac{1}{32}$ inch and $\frac{1}{16}$ inch in depth, the fin post may be repaired in accordance with the drawing RA 30.
 3. If crushing exceeds $\frac{1}{16}$ inch on either face the fin post must be renewed.

Compliance: At intervals not exceeding 12 months

Effective Date: 30 April 1955

DCA/DH82/119 Elevator Rock Shaft - Inspection

Applicability: All model DH 82

Requirement: Inspect elevator rock shaft for end play. If measurement exceeds $\frac{1}{8}$ inch, rework in accordance with drawing EP 109

Compliance: At intervals not exceeding 12 months

Effective Date: 30 September 1954

DCA/DH82/120A Front Fuselage Angle Fittings – Inspection and Replacement

- Applicability:** Model DH 82 and DH 82A Tiger Moth aircraft, all S/N
- Note:** This AD revised to introduce De Havilland Support Limited Technical News Sheet TNS CT(MOTH) No 17 issue 2, dated 1 December 2003.
- Requirement:** To prevent failure of the front fuselage angle fittings accomplish the instructions in TNS CT(MOTH) No 17 issue 2 or later approved revisions.
- Compliance:** At intervals not to exceed 50 hours TIS and after any reported heavy landing.
- Effective Date:** DCA/DH82/120 - 30 April 1955
DCA/DH82/120A - 29 March 2012

DCA/DH82/121 Cancelled: Once only inspection, purpose fulfilled**DCA/DH82/122A Cancelled: Once only inspection, purpose fulfilled****DCA/DH82/123 Elevator Rock Shaft Lever - Inspection**

- Applicability:** All model DH 82
- Requirement:** The rear seat is to be inspected to confirm that a minimum clearance of 3/8 inch exists between the elevator rock shaft lever and the top edge of hole in back of the seat throughout the full range of movement of the elevator control
- Compliance:** Every periodic inspection
- Effective Date:** 30 April 1955

DCA/DH82/124A Flight Controls - Modifications

- Applicability:** All model DH 82
- Requirement:** Accomplish the following modifications per British Aerospace TNS 5 Issue 1:-
Mod No. 125 - Introduction of aileron sprocket chain guides and reduction of floor stop slot length.
Mod No. 134 - To seal the aileron gear box and improve inspection facilities
Mod No. 138 - To prevent splitting of aileron control box side members.
(UK CAA ADs 2731, 2732 and 2733 refer)
- Compliance:** At next wing removal or within 5 years, whichever is the sooner.
- Effective Date:** DCA/DH82/124 - 16 January 1998
DCA/DH82/124A - 13 February 1998

DCA/DH82/125A Datum Bolts - Inspection

- Applicability:** All model DH 82
- Requirement:** Inspect datum bolts per British Aerospace TNS 28 Issue 2. Rectify if necessary per TNS 28 Issue 2 before further flight.
(UK CAA AD 002-10-97 refers)
- Compliance:** Within next 50 hours TIS or 3 months, whichever is the sooner.
- Effective Date:** DCA/DH82/125 - 16 January 1998
DCA/DH82/125A - 18 December 1998

DCA/DH82/126B Cancelled – De Havilland Support TNS No. 32 Issue 3 now refers

(Cancelled UK CAA AD 002-03-98 refers)

Note: AD 002-03-98 has been cancelled by the UK CAA. This is shown in UK CAA CAP 747 (Refer Appendix 6 in <http://www.caa.co.uk/docs/33/CAP747.PDF>)

De Havilland Support Limited (DHSL) TNS 32 issue 3 makes various refinements with respect to actions taken in particular circumstances, so it becomes more onerous in the circumstances of a heavy landing, but less so for an aircraft just operating normally. It also includes good pictorial advice. In the NZ CAA and the UK CAA view the TNS should be assessed and actioned for normal maintenance anyway. The UK CAA have re-issued some of their Airworthiness Approval Notes covering Type Approval of these types. This is the same as SB information becoming part of normal maintenance manual with consequent withdrawal of the SB.

DHSL have stated (and the fact that the UK CAA cancelled AD 002-03-98) that certifying personnel should adopt TNS 32 issue 3 recommendations to the extent indicated by their assessment of the individual condition and circumstances of each aircraft. The revised TNS may not be classified 'Mandatory', however DHSL (who provide Type Design Organisation advice) have stated that the TNS is to be treated as an extension of the relevant aircraft maintenance manual. In other words the revised TNS is now part of the manufacturer aircraft maintenance schedule and NZ CAA Rule 91.605(a)(3) addresses mandatory compliance with the manufacturer maintenance schedule. The CAA would expect an operator to comply with the new TNS which is now part of the manufacturer maintenance schedule.

Effective Date: 26 March 2009

DCA/DH82/127C Fuselage Lateral Tie Rods – Inspection and Life Limitation

Applicability: All model DH 82 series aircraft.

Note 1: Revision C of this AD revised to clarify the requirement.

Requirement: To prevent failure of the fuselage lateral tie rods, the port and starboard lower fuselage longerons, and the spar joint fittings, accomplish the following:

Inspect the fuselage structure and the spar joint fittings, and repair/replace any defects found per the instructions in paragraph 2.A. of British Aerospace TNS 29 issue 3 or later UK CAA approved revisions.

Replace the aft and forward lateral fuselage tie rods per paragraph 2.A. of TNS 29 before further flight.

(UK CAA AD 006-10-97 refers)

Compliance: Within the next 50 hours TIS or by 17 January 2010 whichever occurs sooner, unless previously accomplished within the last 2000 hours TIS or 18 years, and thereafter at intervals not to exceed 2000 hours TIS or 18 years whichever occurs sooner.

Note 2: The 2000 hour/18 year life limitation applicable to the fuselage lateral tie rods is classified mandatory by the UK CAA.

Effective Date: DCA/DH82/127A - 21 December 2000
DCA/DH82/127B - 29 October 2009
DCA/DH82/127C - 17 December 2009

DCA/DH82/128 Cancelled – DH82 Maintenance Documentation refers

Effective Date: 30 April 2009

The State of Design ADs listed below are available directly from the National Airworthiness Authority (NAA) websites. Links to NAA websites are available on the CAA website at <http://www.caa.govt.nz/airworthiness-directives/states-of-design/>
If additional NZ ADs need to be issued when an unsafe condition is found to exist in an aircraft or aeronautical product in NZ, they will be added to the list below.

UK CAA AD G-2014-0001-E Lower Fuselage Tie Rods – Inspection and Replacement

Effective Date: 21 March 2014

UK CAA AD 007-03-99 Cockpit Safety Harness Installation – Inspection and Life Limitation

Applicability: De Havilland DH60 series, DH82 series, DH83 series and DH94 series aircraft fitted with Sutton harnesses.

Requirement: To prevent harness failure, inspect each Sutton harness per the instructions in British Aerospace Mandatory Technical News Sheet (TNS) No. 33, issue 2, dated 21 March 2002, or later revision.

Inspect for evidence of broken stitches, cuts and tears, chafing, signs of contamination due to acid, oil, grease or water, and deterioration due to sunlight.

Where any signs of degradation are found the harness is to be replaced before further flight.

(UK CAA MPD 2001-012R2 also refers)

Note: British Aerospace Mandatory TNS No. 33 (UK CAA AD No. 007–03–99 refers) is applicable to De Havilland DH60, DH60G, DH60M, DH60X, DH82, DH82A, Queen Bee, DH83, and DH94 aircraft.

UK CAA AD 002-12-2001 revision 2, is applicable for other aircraft types fitted with Sutton harnesses not covered by TNS No. 33.

Compliance: Initial compliance required before the issue of a New Zealand Certificate of Airworthiness, or at the next Review of Airworthiness (RA), whichever is the sooner, unless previously accomplished.
Thereafter, compliance required with the repetitive requirements specified in TNS No. 33.

Effective Date: 31 August 2017

*** DCA/DH82/129B Croydon Manufactured Wing and Aileron Spars – Flight Limitation**

Applicability: De Havilland DH82 Tiger Moth series aircraft fitted with replacement wing or aileron spars manufactured by Croydon Aircraft Company Limited prior to 31 May 2008.

The affected DH82 Tiger Moth series wing spar part numbers are as follows:

Wing spar position:	LH P/N:	RH P/N:
Top front	H34737 /C	H34738 /C
Top rear	H34356 /C	H34357 /C
Bottom front	H35096 /C	H35097 /C
Bottom rear	H36830 /C	H36831 /C

The affected DH82 Tiger Moth series aileron (rear) spar part numbers are as follows:

Spar:	LH P/N:	RH P/N:
Aileron spar	H37581A /C	H37582A /C

Mainplane spars may have been supplied under STC 0/21E/5 issued 20 March 2003, and aileron spars may have been supplied under STC number 0/21E/4 issued 22 January 2003, and.

Note 1: DCA/DH82/129B revised to introduce a one-time inspection of the wing spars. If the spar section properties conform to the original de Havilland design shown in Figure 1, or if the wing spar section properties (minimum radius and dimensions) are no less than that shown in Figure 2, then no further action is required, and the previous flight limitations can be removed.

Requirement: Review the aircraft records and determine if wing or aileron spars manufactured by Croydon Aircraft Company Limited (CACL) prior to 31 May 2008 are fitted to the aircraft.

1. If an affected wing or aileron spar is found installed, then aerobatics or other flights involving high load factors, including flight in turbulent conditions are prohibited until requirement 2 of this AD has been accomplished.
2. If an affected wing or aileron spar is found installed, accomplish the following:
 - 2.1. If an affected aileron spar part number is found fitted, then conform the spar to the approved type design per the original de Havilland design, or replace the affected aileron spar, before further flight.
 - 2.2. If an affected mainplane/wing spar is found fitted, then inspect the forward and the aft faces of the affected spars in four places, and determine if the spar section properties (i.e. area, shape) conform to the approved type design per the original de Havilland design shown in Figure 1.

If the wing spar section properties conforms to the original de Havilland design shown in Figure1, then no further action is required, and the previous flight limitations can be removed.

If the wing spar section properties do not conform to the original de Havilland design shown in Figure1, then accomplish requirement 3 of this AD, before further flight.
3. Inspect the affected wing spar and compare the spar section properties with the Croydon spar profile shown in Figure 2.

If the wing spar section properties (minimum spar web radius and dimensions) are found not less than that shown in Figure 2, (i.e. the inside radii of the spar cut-

outs are found not less than 0.25 inches as shown in Figure 2), then no further action is required, and the previous flight limitations can be removed.

If the wing spar section properties (minimum spar web radius and dimensions) are found less than that shown in Figure 2, (i.e. the inside radii of the spar cut-outs are found less than 0.25 inches as shown in Figure 2), then remove the affected spar from service, and replace with a serviceable part, before further flight.

Note 2: Report any machined spars with section properties less than that shown in Fig.2 to the CAA by completing a CA005 Defect Report form. Please provide the spar part and serial numbers, and a copy of the release documentation. The form can be obtained from CA005@caa.govt.nz. The completed form can be emailed to the CAA at http://www.caa.govt.nz/Forms/CA005D_Form.pdf

Figure 1 - De Havilland Design:

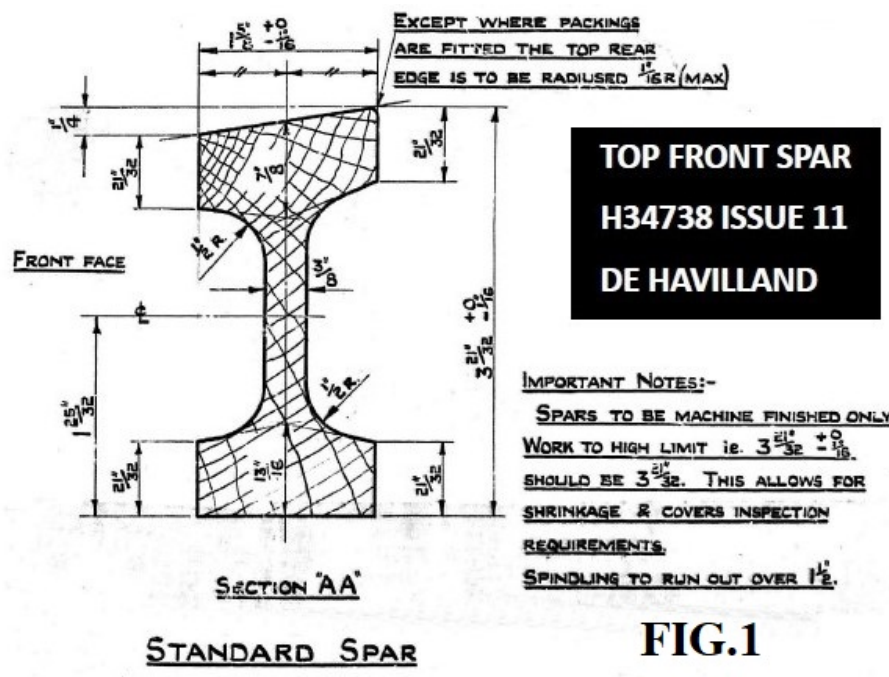
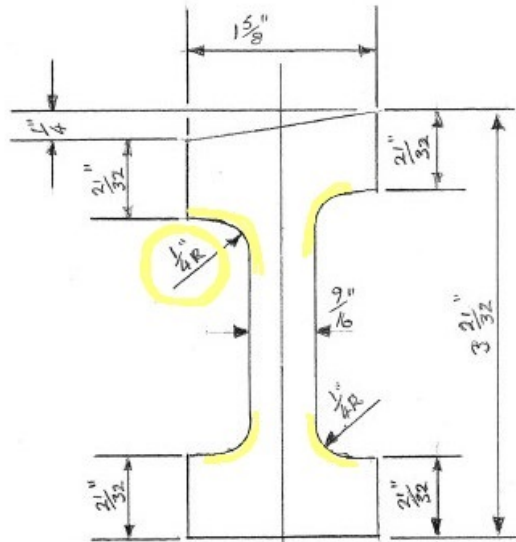


Figure 2 – Croydon Spar Profile:

**TOP FRONT SPAR
H34738 C
CROYDON**

FIG.2



- Compliance:**
1. From 4 August 2017 (the effective date of DCA/DH82/129).
 2. At the next periodic inspection when the spar is accessible, or at the next 100 hour inspection, or at the next annual inspection, whichever is the sooner.
 3. If the wing spar section properties do not conform to the original de Havilland design shown in Figure1, then accomplish requirement 3 of this AD, before further flight.

Effective Date: DCA/DH82/129 – 4 August 2017
 DCA/DH82/129A – 10 August 2017
 DCA/DH82/129B – 28 February 2018