Airworthiness Directive Schedule

Engines
De Havilland Gipsy Series
28 August 2008

The date above indicates the amendment date of this schedule.

New or amended ADs are shown with an asterisk *

Contents

DCA/GIPSY/101   **Pre Mod. 424 Crankshaft - Replacement**

  Applicability: Gipsy Major 1 (all series) and Gipsy Major 10 Mk 1

  Requirement: De Havilland TNS G No. 8, GM 10 No. 11 and DH Mod. 2690

  Compliance: By 1 September 1960

  Effective Date: 30 November 1959

DCA/GIPSY/102   **Cancelled – Purpose Fulfilled**

* DCA/GIPSY/103C   **Crankshaft – Inspection**

  Applicability: Gipsy Major 1 (all series) and Gipsy Major 10 Mk1 engines fitted with a crankshaft with a tapered front end.

  Note: The Magnetic Particle Testing Standard MIL-STD-1949 has been superseded by ASTM E1444. Requirement 2 of this AD revised accordingly.

  Requirement: To prevent failure of the tapered ended crankshaft which could result in loss of the propeller, accomplish the following:

    1.   Inspect per De Havilland TNS G No. 8 and GM 10 No.11, until magnetic particle inspection (MPI) is performed per requirement 2 of this AD.

    2.   Remove the De Havilland Mod G2495 thrust bearing location nut sleeve if fitted. Perform a magnetic particle inspection (MPI) of the crankshaft paying particular attention to the area forward of the thrust bearing flange. The MPI required is to utilise the fluorescent wet continuous technique and by both circular and longitudinal methods in accordance with American Society for Testing and Materials ASTM E1444 - Standard Practice for Magnetic Particle Testing.

  Compliance: 1. Within the next 100 hours TIS, unless already accomplished, and thereafter at intervals not to exceed 100 hours TIS until requirement 2 is accomplished.

    2. At every engine overhaul, and before further flight following a propeller strike, which results in the destruction of the propeller.

  Effective Date: DCA/GIPSY/103A   -   24 December 1993

    DCA/GIPSY/103B   -   31 July 2008

    DCA/GIPSY/103C   -   28 August 2008

DCA/GIPSY/104   **Valve and Valve Gear - Modification**

  Applicability: Gipsy Major 1 (all series) and Gipsy Major 10 Mk 1

  Requirement: De Havilland Mod. G1448, G1500 and G1536

  Compliance: Next overhaul

  Effective Date: 30 November 1968

DCA/GIPSY/105   **Connecting Rod Failure - Inspection**

  Applicability: Gipsy Major 10 Mk 2

  Requirement: De Havilland TNS GM 10 No. 45

  Compliance: As detailed

  Effective Date: 30 November 1968

DCA/GIPSY/106	**Propeller Bolts - Modification**
Applicability:	Gipsy Major 1 series not incorporating Hub P/N 1900-34 with spline driven front plate.
Background:	There is a possibility of failure of the existing propeller boss bolts P/N DH 1300-28/3 due to fracture of the bolt close to the head. A modified boss bolt P/N NZB 4657 has been introduced, which has an increased diameter on the neck of the bolt passing through the hub boss and hub sleeve modified as described below.
Requirement:	1. Boss bolts P/N NZB 4657 must always be fitted in complete sets.
	2. Propeller hub bosses and sleeves shall be modified in accordance with CAB drawings EP 108 and EP 107 respectively. It is unnecessary for propeller hub bosses and sleeves modified in accordance with drawings NZB 4792 and 4793 (GA Notice 2/1944) to be further reworked.
	3. The boss and sleeve must be assembled to ensure alignment of holes reamed to dimensions in drawings EP 107 and 108. The hole in the existing packing washer P/N 1900-15 must be opened out to suit the modified bolts.
	4. When fitting the propeller bolts to the boss it is essential to ensure that the head of the bolt is not bearing on the radius around the holes in the boss and that, in tightening the propeller bolt nuts, the pressure applied is equivalent to 120 in/lb or 10 ft/lb using a tension wrench. The modified boss bolt is shown on CAB drawing EP 106, available from the Civil Aviation Authority.
	5. Spare propeller hub bosses and sleeves held in store must be modified as above before fitment to engines.
Compliance:	Before installation
Effective Date:	31 July 1953
	Note: Originally issued without a Log Book number, AD Code now allocated

DCA/GIPSY/107	**Crankcase Front Cover - Locking of Studs - Modification**
Applicability:	All Gipsy engines
Background:	It has been found that there is a possibility of the front studs for the attachment of the crankcase front cover working loose in the crankcase.
Requirement:	The present split-pin locking shall be replaced by 18g soft locking wire, preferably tinned or galvanised. After the nuts have been tightened the wire shall be passed through the nut castellations and existing split-pin holes and securely locked. The two top studs and the three bottom studs shall be independently locked as described above. In the case of engines under overhaul the modified type locking must be embodied, the overhaul inspection record endorsed accordingly and an entry made in the Engine Log Book.
Compliance:	By 31 August 1953 and thereafter whenever the nuts have been disturbed
Effective Date:	31 July 1953
	Note: Originally issued without a Log Book number, AD Code now allocated

DCA/GIPSY/108   **Pressure Testing of Induction Manifold Heater Box - Inspection**

  Applicability: All Gipsy Major engines

  Requirement: Rolls Royce Gipsy TNS G No. 77 TNS GM 10 No. 47

  Compliance: By 15 October 1974 and thereafter annually

  Effective Date: 15 August 1974

                    Note: Copy of the Reference Document may be obtained from the Director

DCA/GIPSY/109   **Fuel Control Unit - Modification**

  Applicability: All Gipsy Queen series 70 engines

  Requirement: Embody Hants and Sussex Gipsy Modification 3014 Issue 2

  Compliance: By 30 June 1984

  Effective Date: 2 March 1984