

# Airworthiness Directive Schedule

## Helicopters

### Hiller UH-12C and UH-12E

22 October 2015

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- Notes**
1. This AD schedule is applicable to Hiller Aviation UH-12C manufactured under FAA Type Certificate Numbers 6H2 and Hiller Aviation UH-12E helicopters manufactured under FAA Type Certificate Numbers 4H11.
  2. The Federal Aviation Administration (FAA) is the National Airworthiness Authority (NAA) responsible for the issue of State of Design Airworthiness Directives (ADs) for UH-12C and UH-12E helicopters. State of Design ADs applicable to these aircraft can be obtained directly from the FAA web site. The link to the FAA web site is available on the CAA web site at [http://www.caa.govt.nz/Airworthiness\\_Directives/states\\_of\\_design.html](http://www.caa.govt.nz/Airworthiness_Directives/states_of_design.html)
  3. The date above indicates the amendment date of this schedule.
  4. New or amended ADs are shown with an asterisk \*

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<p>From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) web site. The link to the NAA web site is available on the CAA web site at <a href="http://www.caa.govt.nz/Airworthiness_Directives/states_of_design.html">http://www.caa.govt.nz/Airworthiness_Directives/states_of_design.html</a> 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/HIL/112 Cold Weather Engine Lubrication - Inspection**

**Applicability:** All model UH-12E  
**Requirement:** Hiller SIL 3027 and 3028  
**Compliance:** As detailed  
**Effective Date:** 31 August 1969

**DCA/HIL/113 Torsion Coupling and Separated Transmission Oil System - Modification**

**Applicability:** Model UH-12E S/N 942, 954 and 2001 through 2198  
**Requirement:** Hiller SB 2027A  
**Compliance:** As detailed  
**Effective Date:** 31 August 1969

**DCA/HIL/131 Cancelled - Purpose fulfilled****DCA/HIL/132B Main Rotor Blade Fork - Inspection**

**Applicability:** Model UH-12D, UH-12E, and UH-12E4 series, equipped with main rotor blade fork P/N 52110-3.

**Requirement:** To detect cracks and prevent failures which have occurred in the main rotor blade fork P/N 52110-3 at the outboard tension-torsion bar retention bolt hole, accomplish the following:-

1. Verify that each installed P/N 52110-3 fork has a S/N permanently displayed on its outer surface. Remove from service forks found not to be serialized and replace with serialized parts.
2. Perform a daily visual check of P/N 52110-3 forks for cracks in the area of the outboard tension-torsion bar retention bolt hole. Washers and nuts need not be removed for this inspection.
3. Perform a dye penetrant inspection, of the bolt hole and adjacent milled surfaces. For this inspection, remove the nut, washer, and pin. Replace any cracked rotor forks with like serviceable parts prior to further flight.  
(FAA AD 86-17-02 refers)

**Compliance:**

1. Within the next 50 hours' TIS unless already accomplished.
2. Before the first flight of each day.  
Note: This inspection may be accomplished by the pilot in accordance with CAR Part 43, Appendix A. The pilot must be trained and authorised (Part 43, Subpart B refers) and certification must be provided (Part 43, Subpart C refers).
3. At 250 hours TTIS, and thereafter at intervals not to exceed 100 hours TIS.

**Effective Date:** DCA/HIL/132A – 26 October 1979  
DCA/HIL/132B – 27 April 2000

**DCA/HIL/133 Main Rotor Blades - Inspection**

**Applicability:** All model UH-12E with P/N 2253-1101-03 blades fitted  
**Requirement:** Hiller SIL 3037C  
**Compliance:** As detailed  
**Effective Date:** 31 August 1969

**DCA/HIL/134 Fuel Pressure Indicator Venting System Installation - Modification**

**Applicability:** Model UH-12E S/N 2001 through 2348  
**Requirement:** Hiller SB 2042  
**Compliance:** Within the next 300 hours TIS  
**Effective Date:** 31 August 1969

**DCA/HIL/135 Transmission Gears - Inspection**

**Applicability:** All model UH-12E  
**Requirement:** Hiller SIL 3036C  
**Compliance:** As detailed  
**Effective Date:** 31 August 1969

**DCA/HIL/140 Collective Ballast Assembly Flyweight Lever Pivot Bolt P/N AN 173-30 - Replacement**

**Applicability:** All model UH-12E  
**Requirement:** Hiller SIL 3047  
**Compliance:** By 30 November 1965

**DCA/HIL/141 Fuel Vent Ram - Modification**

**Applicability:** Model UH-12E S/N 942, 954 and 2001 through 2348  
**Requirement:** Hiller SB 2046  
**Compliance:** By 30 November 1965

**DCA/HIL/142 Spring Pin (MS 9047-240) - Replacement**

**Applicability:** All model UH-12E equipped with P/N 91000 cargo hooks delivered prior to January 1966  
**Requirement:** Hiller SIL 3051  
**Compliance:** By 31 October 1966

**DCA/HIL/143 Mercury Clutch Sideplates - Inspection**

**Applicability:** All model UH-12E equipped with Mercury clutch (4578) S/N 8584 through 9317 or Mercury clutch (4692) S/N 8584 through 9317  
**Requirement:** Hiller SIL 3052  
**Compliance:** Within the next 100 hours TIS  
**Effective Date:** 31 August 1969

**DCA/HIL/144 Main Transmission Lubrication - Modification**

**Applicability:** Model UH-12E S/N 942, 945 and 2001 through 2198  
**Requirement:** Hiller SB 2026 and Supplement No. 1  
**Compliance:** Within the next 100 hours TIS, or within the next 25 hours TIS if helicopter operated in cold weather using incorrect engine oils  
**Effective Date:** 31 August 1969

**DCA/HIL/146 Cyclic Brackets Inserts - Replacement**

**Applicability:** All model UH-12E  
**Requirement:** Hiller SIL 3054A  
**Compliance:** Within the next 100 hours TIS  
**Effective Date:** 31 August 1969

**DCA/HIL/147 Fail-Safe Type Second Stage Planet Gear Assembly - Modification**

**Applicability:** All model UH-12E fitted with fail-safe second stage planet gear assembly (23673-1)  
**Requirement:** Hiller SB 2047  
**Compliance:** At next overhaul  
**Effective Date:** 31 August 1969

**DCA/HIL/152A Main Transmission Housing – Inspection**

**Applicability:** All model UH-12E aircraft.  
**Requirement:** The main transmission case and accessory housing is to be inspected for cracks, evidence of overheating, corrosion, oil leaks, and security of attachment, per item 8 of power plant No. 3 check in Hiller Aircraft Corporation Instructions for Continued Airworthiness (formerly 'Inspection Guide').  
When checking for cracks pay particular attention to areas on mounting flanges around bolt holes.  
Accomplish remedial action before further flight.  
(Hiller Aircraft Corporation Instructions for Continued Airworthiness No. 3 Check, Power Plant item 8 refers)  
**Compliance:** At intervals not to exceed 100 hours TIS.  
**Effective Date:** DCA/HIL/152 - 31 August 1969  
DCA/HIL/152A - 30 November 2006

**DCA/HIL/154 Collective Yoke Support Bracket Inserts - Replacement**

**Applicability:** All model UH-12E  
**Requirement:** Hiller SB 23-1 Rev. 1  
**Compliance:** Within the next 100 hours TIS  
**Effective Date:** 31 August 1969

**DCA/HIL/155D Control Rotor Blade Assemblies - Inspection, Rework and Replacement**

**Applicability:** Model UH-12, UH-12A, UH-12B, UH-12C, UH-12D, UH-12E, CH-112, H-23A, H-23B, H-23C, H-23D, H-23F, HTE-1, HTE-2, and OH-23G helicopters, and UH-12D and UH-12E helicopters converted to turbine engine per STC SH177WE and SH178WE, having a control rotor blade spar tube (blade spar tube), P/N 36003, 36006, 36129, 36129-25, 36203, 36203-15, 36203-21, or 36209-3, or cuff, P/N 36101-1, 36101-4, 36108, 36115-1, 36115-4, 36115-6, 36115-8, or 36124, installed.

**Requirement:** To prevent separation of the control rotor blade assembly and subsequent loss of control of the helicopter, accomplish the following:-

1. Inspect the blade spar tube and cuff for corrosion or cracks, or elongation, corrosion, burrs, pitting or fretting of the bolt holes, and repair, as necessary, per the Accomplishment Instructions of Hiller Aviation SB 36-1, Revision 3.

After any reaming procedure is accomplished per SB 36-1, Revision 3, the blade spar tube (faired and unfaired) and cuff must be retired at or before accumulating an additional 2,500 hours TIS after repair or when the current approved total service life (total service life before repair plus service life after repair) is reached, whichever comes first.

Fabric covered, metal covered, faired and unfaired control rotor blades are not interchangeable and must not be intermixed.

2. For P/N 36124 cuffs without a complete prior service history:-Perform a dye penetrant inspection of the cuff per paragraph G of the Accomplishment Instructions of SB 36-1, Revision 3. If a crack is discovered, remove the cracked cuff from service prior to further flight. A cuff for which the prior service history cannot be documented cannot be used as a replacement part and must be removed from service prior to the accumulation of 225 hours total TIS since April 7, 1977.  
(FAA AD 97-10-16 refers)

**Compliance:**

1. Within the next 100 hours TIS, unless previously accomplished within the last 100 hours TIS, and thereafter at intervals not to exceed 100 hours TIS, or at the next annual inspection, whichever occurs first.
2. Within the next 25 hours TIS, unless already accomplished within the last 25 hours TIS, and at intervals not to exceed 50 hours TIS.

**Effective Date:** DCA/HIL/155C - 1 August 1980  
DCA/HIL/155D - 4 July 1997

**DCA/HIL/156 Inboard Edge of Threaded Stud Holes - Inspection and Replacement**

**Applicability:** As detailed

**Requirement:** Hiller SB 51-1

**Compliance:** By 31 July 1970

**DCA/HIL/157B Main Gearbox (Bolts Attaching Bevel Ring Gear) – Replacement**

**Applicability:** All model UH-12E helicopters

**Note 1:** This AD revised to include first stage planet gear cage assembly P/N 23632 in the AD requirement. This AD revision is prompted after the CAA received a report of a main transmission overhaul where all six bolts P/N NAS144DH20 on the first stage planet gear cage assembly P/N 23632 were found loose, with one bolt sheared.

- Requirement:** To prevent failure of the main gearbox, accomplish the following:  
Remove and replace the six bolts P/N NAS144DH20 which attach the bevel ring gear P/N 23633 to the first stage planet gear cage assembly P/N 23507-9 (aluminum) or P/N 23632 (steel) with new bolts.
- Note 2:** Destroy removed bolts to prevent further use.  
(NZ Occurrence 04/3157 refers)
- Compliance:** At every overhaul of the main transmission assembly.
- Effective Date:** DCA/HIL/157A - 31 December 1970  
DCA/HIL/157B - 25 March 2010

#### **DCA/HIL/158A Main Drive Mercury Clutch Warning Placard - Modification**

- Applicability:** All model UH-12E
- Requirement:** 1. Remove the existing placard decal P/N 81426-3.  
2. Install Hiller placard decal P/N 81426-7 on the instrument panel at the right edge of the tachometer extending between the cylinder head temperature and manifold pressure gauge. If this placard is not available fabricate a placard using 1/8 inch minimum size type and reading:  
"NO FURTHER FLIGHT IF CLUTCH ENGAGEMENT TIME EXCEEDS 20 SECONDS".  
(Hiller SL 21-4 and FAA AD 75-10-01 also refer)
- Compliance:** Within the next 50 hours TIS
- Effective Date:** 8 May 1975  
*Note: Requirement notified to registered owners on effective date*

#### **DCA/HIL/159A Main Rotor Hub – Inspection and Replacement**

- Applicability:** All model UH-12, UH-12A, UH-12B, UH-12C, UH-12D and UH-12E aircraft.
- Requirement:** To detect cracks in main rotor hub P/Ns 51437, 51437-6, 51437-7, 51437-8, 51437-9, 51437-11, 51437-901 and 51437-11-911, accomplish a dye penetrant inspection inside the main rotor hubs in the area opposite the control rotor trunnion attachments.  
If cracks are found, replace the main rotor hub, before further flight.  
(FAA AD 73-20-03 refers)
- Compliance:** Within the next 5 hours TIS, unless already accomplished, and thereafter at intervals not to exceed 50 hours TIS.
- Effective Date:** DCA/HIL/159 - 30 November 1973  
DCA/HIL/159A - 27 July 2006

#### **DCA/HIL/160 Main Rotor Drag Strut - Inspection**

- Applicability:** All model UH-12E
- Requirement:** Hiller SB 51-2
- Compliance:** Within the next 50 hours TIS
- Effective Date:** 31 March 1974

**DCA/HIL/161 Flight Controls Hardware - Modification**

**Applicability:** All model UH-12E  
**Requirement:** Hiller SL UH-12E-30-1  
**Compliance:** Within the next 100 hours TIS  
**Effective Date:** 1 May 1975

**DCA/HIL/162 Engine Control Cables - Modification**

**Applicability:** All model UH-12E modified per Soloy Conversions Ltd. STC's No. SH177WE and SH178WE  
**Requirement:** To prevent freezing of moisture in engine control cables, accomplish the following:  
1. Install following placard in view of pilot:  
"Flight in outside air temperature of 32 degrees F or lower is prohibited".  
2. Modify per Soloy Conversions Ltd SB 01/560.  
Restrictions prescribed in 1. above removed when modification per 2 above accomplished.  
**Compliance:** 1. Placard - within next 15 days TIS  
2. Modification - within next 60 days TIS  
**Effective Date:** 13 September 1976

*Note: Requirement notified to registered owners on effective date*

**DCA/HIL/163 Operating Restriction - Placard**

(FAA AD 77-10-13 refers)

**Applicability:** All model UH-12E modified per Soloy Conversions Ltd, STC No. SH178WE, having Allison 250-C20 series engine fitted with third stage turbine wheel P/N 6887113 or 6888633  
**Requirement:** Unless already accomplished, on instrument panel adjacent to dual tachometer, affix a placard which reads:  
"AVOID CONTINUOUS OPERATION 90 TO 98% N2".  
**Compliance:** By 31 August 1977  
**Effective Date:** 17 August 1977

*Note: Restriction removed when DCA/AL250/22 has been complied with*

**DCA/HIL/164A Fuel Valve - Modification**

**Applicability:** Model UH-12C, UH-12D, UH-12E, UH-12L, UH-12E-L, and UH-12L4 aircraft, S/Ns all through 5024 fitted with control levers P/Ns 72229 or 72210.  
**Note 1:** Aircraft with S/Ns 5025 onward, will have had the guard installed at the time of manufacture.

**Requirement:** To prevent the possibility of engine power loss due to the inadvertent shutting of the fuel control valve, install a guard on the fuel shutoff valve handle, per the instructions in paragraph 2B of Hiller Service Bulletin No. 72-1 dated 17 June 1977, or later approved revision.

(FAA AD 77-24-03 refers)

**Note 2:** An equivalent method of fabrication and installation of a guard for the fuel shutoff valve handle may be used when approved by the CAA of NZ.

**Compliance:** Within the next 100 hours TIS, unless already accomplished.

**Effective Date:** DCA/HIL/164 - 31 January 1978  
DCA/HIL/164A - 27 July 2006

#### **DCA/HIL/165 Exhaust System - Inspection**

**Applicability:** All model UH-12E

**Requirement:** To prevent induction air duct damage and engine power loss, or cabin carbon monoxide contamination due to exhaust manifold leakage, accomplish the following:

Remove left and right shroud assemblies and visually inspect exhaust manifolds for cracks and/or deterioration which could allow leakage. Defective manifolds to be repaired or renewed before further flight.

**Compliance:** Within the next 50 hours TIS unless already accomplished, and thereafter at intervals not exceeding 100 hours TIS

**Effective Date:** 12 May 1978

#### **DCA/HIL/166C Main Rotor Outboard Tension-Torsion Pin - Inspection**

**Applicability:** Models UH-12A, UH-12B, UH-12C, UH-12D and UH-12E.

**Requirement:** To prevent cracks in the head area of the main rotor outboard tension-torsion (T-T) bar pin, accomplish the following:-

1. Inspect the alignment of the outboard T-T bar pin, P/N 51452, and adjust the alignment if necessary per Hiller SL 51-2.
2. Remove drag strut to T-T pin attachment bolt (AN177-16A) and accomplish dye penetrant inspection per Hiller SL 51-2 or magnetic particle inspection paying particular attention to interior surface of bolt hole where crack initiates.
3. Install shims between the inboard end of the drag strut and the outboard T-T bar pin per Hiller SB 51-9.

(FAA AD 97-20-15 refers)

**Compliance:** 1. Within the next 25 hours TIS and thereafter at intervals not to exceed 100 hours TIS.

2. At intervals not exceeding 100 hours TIS.

3. Within next 100 hours TIS.

**Effective Date:** DCA/HIL/166B - 4 August 1995  
DCA/HIL/166C - 24 October 1997

**DCA/HIL/167 Main Rotor Blades - Inspection**

**Applicability:** All model UH-12E with blades P/N 2253-1101-03 and -04

**Requirement:** Remove antinode bar assembly, inspect and renew as necessary per Hiller SB 51-4 (FAA Emergency AD dated 22 September 1978 refers)

**Compliance:** Before further flight, unless already accomplished

**Effective Date:** 6 October 1978

*Note: Requirement notified to registered owners on effective date*

**DCA/HIL/168 Transmission Drive - Inspection**

**Applicability:** All model UH-12E modified per Soloy Conversions Ltd STCs No. SH177WE or SH178WE

**Requirement:** Inspect and modify or renew as necessary, all drive coupling shafts P/N 560-2408 per Soloy Conversions Ltd SB 05-560. (FAA AD 77-18-03 refers)

**Compliance:** Within the next 600 hours TIS or six months, whichever is the sooner

**Effective Date:** 27 October 1978

**DCA/HIL/169A Control Rotor Cuff - Inspection**

**Applicability:** All model UH-12E

**Requirement:** Until investigations into cause of cracking have been satisfactorily concluded and remedy introduced, inspect control rotor cuffs P/N 36124-3 for cracks in area of the four control rotor spar attach holes, using an established eddy current and/or ultra sonic technique. Any cuff found cracked must be replaced with a serviceable part

**Compliance:** At intervals not exceeding 300 hours TIS

**Effective Date:** DCA/HIL/169 - 22 December 1978  
DCA/HIL/169A - 15 June 1979

**DCA/HIL/170 Engine Controls - Modification**

**Applicability:** All model UH-12E modified per Soloy Conversions Ltd STCs No. SH177WE or SH178WE

**Requirement:** Embody modifications detailed in Soloy Conversions Ltd SB 06. (FAA AD 78-22-08 refers)

**Compliance:** By 28 February 1979

**Effective Date:** 26 January 1979

**DCA/HIL/171 Main Rotor Tachometer Generator - Modification**

**Applicability:** All model UH-12E modified per Soloy Conversions Ltd STCs No. SH177WE or SH178WE

**Requirement:** Install main rotor tachometer generator, Globe Industries P/N 22A623, per Soloy Conversions Ltd SB 06-560.  
(FAA AD 79-03-07 refers)

**Compliance:** Within the next 200 hours TIS, or one month, whichever is the sooner

**Effective Date:** 23 March 1979

**DCA/HIL/172A Outer Gimbal Forward Attach Fitting - Inspection**

**Applicability:** All model UH-12E converted to turbine power under STC SH177WE or SH178WE

**Requirement:** To prevent failure of outer gimbal forward attach fitting, accomplish the following:  
Remove paint from outer gimbal forward attach fittings of Hiller engine mount P/N 63181-5 and dye penetrant or magnetic particle inspect gusset front and rear weld beads for cracks. If cracks found, remove engine mount from service before further flight.  
(FAA AD 84-19-08 refers)

**Compliance:** Within the next 20 hours TIS and thereafter at intervals not exceeding 600 hours TIS. Also prior to installation or reinstallation of any P/N 63181-5 engine mount

**Effective Date:** DCA/HIL/172 - 29 June 1979  
DCA/HIL/172A - 26 October 1984

*Note: Requirement notified to registered owners on effective date*

**DCA/HIL/173B Main Rotor Blades - Inspection**

**Applicability:** All model UH-12E with blades P/N 53200-03 S/N 038 through 286

**Requirement:** Inspect per Hiller SL 51-3A Rev. 1 parts A and B, and Hiller SB 51-7 Rev. 1. Remove from service any blade found defective and mark 'UNAIRWORTHY' using letters at least 2 inches high. Also, using metal stamp impress 'UNAIRWORTHY' on data plate.  
(FAA AD 83-25-02 refers)

**Compliance:** Inspection per Hiller SL 51-3A Rev. 1  
Part A - Daily  
Part B - At intervals not exceeding 50 hours TIS.  
Inspection per Hiller SB 51-7 Rev. 1 at intervals not exceeding 100 hours TIS

**Effective Date:** DCA/HIL/173A - 10 October 1980  
DCA/HIL/173B - 2 March 1984

*Note: May be accomplished by pilot subject to:*  
(a) Adequate instruction by LAME responsible for aircraft.  
(b) Maintenance Release endorsed to refer to inspection requirement.  
(c) Copy of requirement document(s) attached to Maintenance Release.

**DCA/HIL/174 Main Rotor Blades - Inspection**

- Applicability:** All model UH-12E with blades P/N 2253-1101-04
- Requirement:** Inspect anti-node bars per Hiller SB UH12-51-5 and remove from service any which do not have rolled threads
- Compliance:** Within the next 10 hours TIS for blades with 2500 hours or more TIS
- Effective Date:** 3 March 1980

*Note: Requirement notified to registered owners on effective date*

**DCA/HIL/175B Main Rotor Blades - Inspection and Overhaul**

- Applicability:** All model UH-12E with blades P/N 2253-1101-03 and 2253-1101-04
- Requirement:**
1. Inspect for cracks and bond separation/voids per Hiller SB UH-12-51-6 dated 19 December 1985, paragraphs 11A, 11B and 11C.
  2. Perform internal blade inspection per the "2500 Hour Inspection" listed in the Hiller Inspection Guide. If no corrosion is found and the internal finish is acceptable, the blade may be returned to service. If corrosion is found the blade must be repaired per the Manufacturer's Instructions.  
(FAA AD 86-22-04 refers)
- Compliance:**
1. Inspection per paragraph 11A - prior to first flight of each day helicopter is to be operated.  
Inspection per paragraph 11B - at intervals not exceeding 25 hours TIS until next internal inspection per Part 2 of this AD, and then repeat at intervals not exceeding 100 hours TIS.  
Inspection per paragraph 11C - at intervals not exceeding 100 hours TIS.
  2. Internal inspection to be performed at 1000 hours time since last internal blade inspection or within next 100 hours TIS, whichever is the later. Thereafter at intervals not exceeding 1000 hours TIS.
- Effective Date:** DCA/HIL/175A - 13 February 1987  
DCA/HIL/175B - 13 March 1998

**DCA/HIL/176A Torsional Couplings - Inspection**

- Applicability:** All model UH-12E with torsional couplings P/N 21047-9 and -11 and coupling S/N 497 through 766
- Requirement:** Inspect couplings for condition and clamping per Hiller SB UH-12-21-1 Rev. 2. Renew defective components before further flight.  
(FAA AD 82-13-04 refers)
- Compliance:** Within the next 50 hours TIS, or within 300 hours TIS since 21 November 1980, whichever is the sooner, and thereafter at intervals not exceeding 300 hours TIS
- Effective Date:** DCA/HIL/176 - 21 November 1980  
DCA/HIL/176A - 30 July 1982

**DCA/HIL/177 Lower Gearcase Oil Jets - Inspection**

- Applicability:** All model UH-12E converted to turbine power under Soloy Conversions Ltd STC's SH177WE and SH178WE
- Requirement:** To prevent failure of Soloy transmission oil lubrication jets and hence complete transmission failure, inspect per Soloy Conversions Ltd SB 14-560. Renew defective jets before further.  
(FAA AD 80-23-02 refers)
- Compliance:** Within the next 25 hours TIS or by 18 January 1981 whichever is the sooner
- Effective Date:** 18 December 1980  
*Note: Requirement notified to registered owners on effective date*

**DCA/HIL/178 Transmission Drive - Modification**

- Applicability:** All model UH-12E converted to turbine power under Soloy Conversions Ltd STC's SH177WE and SH178WE
- Requirement:** To prevent engine, transmission or driveline failure and resultant loss of power, embody engine output coupling shaft Soloy P/N 660-2408-3 per Soloy Conversions Ltd SB 12-560.  
(FAA AD 80-19-02 refers)
- Compliance:** Within the next 300 hours TIS or by 30 April 1981 whichever is the sooner
- Effective Date:** 23 January 1981

**DCA/HIL/179 Rudder Control Cables - Inspection**

- Applicability:** All model UH-12E (with main transmission) prior to S/N 5138
- Requirement:** Inspect cables per Hiller SB UH12-32-2 and before further flight remove from service all 7 x 7 cables
- Compliance:** Within the next 50 hours TIS
- Effective Date:** 6 March 1981

**DCA/HIL/180 Main Rotor Blades - Inspection and Rework**

- Applicability:** All model UH-12E with blades P/N 53200-03
- Requirement:** Inspect and rework per Hiller SB UH12-51-8. Remove from service any blade found defective
- Compliance:** Within the next 50 hours TIS and thereafter whenever blade tip cap is removed for any reason
- Effective Date:** 26 June 1981

**DCA/HIL/181A Main Transmission - Inspection and Spacer Replacement**

**Applicability:** All model UH-12 series aircraft fitted with main transmission P/Ns 23500-3, 23700-3, 23700-5, 23700-7 or 23700-9 and aircraft with Solyo Conversions STCs SH177WE and SH178WE embodied.

**Requirement:** To prevent failure of the main transmission, accomplish the following:

1. Inspect the main transmission oil filter and chip detector per paragraph 2 of Hiller Service Notice No. 23-2.

If magnetic chips or a quantity of gold colored flecks are present in the filter bowl, open the transmission and inspect the planetary system. Replace worn parts, per the Hiller Overhaul Manual, before further flight.

If no chips are present on the magnetic chip detector, and only a trace of gold flecks are found in the filter bowl, clean the filter and bowl, and re-install. Make a detailed log book entry of the condition.

2. Replace P/N 23586-3 spacers with serviceable parts.

(FAA AD 81-17-03 refers)

**Compliance:** 1. Within the next 25 hours TIS, unless already accomplished and thereafter at intervals not to exceed 25 hours TIS for turboshaft powered aircraft, and 50 hours TIS for reciprocating engine powered aircraft.

2. Within 1200 hours TTIS or within the next 100 hours TIS, whichever is the later.

**Effective Date:** DCA/HIL/181 - 10 September 1981  
DCA/HIL/181A - 27 July 2006

**DCA/HIL/182A Tail Rotor Blades – Inspection and Replacement**

**Applicability:** All model UH-12 series aircraft including military models H-23F and OH-23G.

**Requirement:** To prevent tail rotor skin cracks, accomplish the following:

1. Visually inspect the tail rotor blades for skin cracks or loose rivets.

If cracks or loose rivets are found, replace the tail rotor blades, prior to further flight.

Inspect the four vent holes in the tail rotor blades for obstructions as indicated in part 2 of Hiller Aviation Service Bulletin UH-12-55-1.

If either of the vent holes at the root end of the tail rotor blade are found to be obstructed, replace the blades, before further flight.

If the root vent holes of the tail rotor blades are found to be unobstructed, inspect the tip vent holes and clear any obstruction, before further flight.

2. Visually inspect the tail rotor blades to determine that the four vent holes are clear of obstruction.

If obstructions are found, perform the appropriate corrective actions per requirement 1, before further flight.

(FAA AD 81-18-02 refers)

**Note:** The visual inspections per requirement 2 may be accomplished by the pilot in accordance with CAR Part 43, Appendix A. The pilot must be trained and authorised (Part 43, Subpart B refers) and certification must be provided (Part 43, Subpart C refers).

- Compliance:**
1. Before further flight, unless already accomplished.
  2. Before every flight.

**Effective Date:** DCA/HIL/182 - 2 October 1981  
DCA/HIL/182A - 27 July 2006

**DCA/HIL/183 Fuel Quantity Indicator - Modification and Placard**

**Applicability:** All model UH-12E

- Requirement:**
1. Install yellow caution marking and paint slippage mark per Hiller SB UH-12-72-3.
  2. Adjacent to fuel gauge and in clear view of pilot, affix placard which reads:  
"Indicated fuel quantity within caution arc available for level flight only"

**Compliance:** Within next 100 hours TIS

**Effective Date:** 16 October 1981

**DCA/HIL/184 Torsional Coupling/Mercury Clutch Assembly - Rework**

**Applicability:** All model UH-12E not converted to turbine power under Soloy Conversions Ltd STC's SH177WE and SH178WE

- Requirement:** To preclude possible power loss to main and tail rotors accomplish the following:  
Remove the four P/N 21041 bolts and four AN960 - 716L washers attaching mercury clutch to torsional coupling and replace with new P/N 21041 bolts and P/N 21074-3 washers. The four bolts removed must be considered no longer airworthy and marked accordingly.  
(FAA AD 82-10-96 refers)

**Compliance:** Within the next 50 hours TIS

**Effective Date:** 25 June 1982

**DCA/HIL/185 Torsional Coupling Assembly - Inspection**

**Applicability:** All model UH-12E with engine drive torsional coupling assemblies P/N 21047-9 or -11 having S/N 704 through 766 and P/N 21047-15, all S/Ns

- Requirement:** To detect possible cracks and prevent failure of engine drive torsional coupling assembly, accomplish the following:
1. Remove affected coupling assemblies which have a rubber cure date stamp of December 1980 or later.
  2. Clean and inspect lower housing P/N 21046 in the eight window areas adjacent to engine attachment flange using a fluorescent penetrant method.
  3. Renew cracked housings before further flight.
- (FAA AD 82-16-07 refers)

**Compliance:** Within the next 10 hours TIS and thereafter at intervals not exceeding 50 hours TIS

**Effective Date:** 11 August 1982

*Note: Requirement notified to registered owners on effective date.*

**DCA/HIL/186 Tail Rotor Blades - Removal**

**Applicability:** All model UH-12E with tail rotor blade assembly P/N 55073

**Requirement:** To prevent failure of tail rotor blade assembly determine the serial numbers of the tail rotor blades installed on the aircraft. The serial number is located on a raised rectangular boss on the barrel section of the blade root fitting. Remove from service before further flight any tail rotor blades with the following serial numbers:

3028	3089	9506	9584
9607	10245	10516	10917
13278	14715	14898	15073
15285	15978	16114	20918

(FAA AD 90-15-01 refers)

**Compliance:** Within the next 5 hours TIS

**Effective Date:** 16 July 1990

*Note: Requirement notified to registered owners on effective date*

**DCA/HIL/187 Tail Rotor Control Cable - Inspection**

**Applicability:** All model UH-12E

**Requirement:** To prevent failure of tail rotor control cables and loss of control of the helicopter, accomplish the following:-

Inspect tail rotor control cables, paying close attention to areas where cables change direction around pulleys underneath the engine. Inspect cables for cleanliness, wear, broken strands, bends, and fraying. Replace damaged cables before further flight.

Inspect cables for proper tension. If necessary adjust tension before further flight.

**Compliance:** Within next 100 hours TIS and thereafter at intervals not to exceed 100 hours TIS.

**Effective Date:** 1 September 1995

**DCA/HIL/188 Control System Pivoting Joints - Modification**

**Applicability:** Model UH-12, UH-12A, UH-12B, UH-12C, UH-12D, UH-12E, UH-12E-L, UH-12L, and UH-12L4.

**Requirement:** To prevent separation of the control system attachments at pivoting points and subsequent loss of control of the helicopter, accomplish the following:-

Replace all un-drilled shank bolts at pivoting joints in the control system linkage with drilled-shank bolts, and install castellated nuts and cotter pins per Hiller SB 10-4, Revision 2.

(FAA AD 2000-24-21 refers)

**Compliance:** By 31 December 2001

**Effective Date:** 21 December 2000

**DCA/HIL/189 Main Rotor Blades – Removal from Service****Applicability:** All model UH-12E**Requirement:** To prevent failure of accident damaged main rotor blades that have undergone suspect repairs, accomplish the following:-

1. Determine the P/N and S/Ns of main rotor blades fitted. If main rotor blades P/N 2253-1101-04, S/N 4333 or 7106 is found fitted, remove from service and notify the CAA.
2. Do not fit main rotor blades P/N 2253-1101-04, S/N 4333 or 7106 to any helicopter.

**Compliance:**

1. Before further flight.
2. From the effective date of this AD.

**Effective Date:** 1 March 2001**DCA/HIL/190 Tail Rotor Tension-Torsion Bars – Inspection and Replacement****Applicability:** All model UH-12 series aircraft.**Requirement:** To prevent Tension-Torsion Bar (T-T bar) failures due to the possibility of excessive stresses in the T-T bars which may result from adverse accumulation of machining and assembly tolerances and unfavorable orientation of the T-T bar within the blade assembly which could cause loss of tail rotor directional control, accomplish the following:

1. Disassemble the tail rotor blade sufficiently to determine the diametrical clearance between the outside diameter of the tail rotor yoke and the inside diameter of the oilite bushings within the blade root fitting.

If the differences in diameters exceed 0.005 inches, replace the bushings as necessary, to obtain clearances between 0.001 inch and 0.003 inch, before further flight.

Determine the run-out of the T-T bar at the Rosan insert in the yoke and at the end block in the blade root fitting, per the run-out measuring method in Hiller Service Bulletin No. 53.

Determine the orientation of the axes of the T-T bar as originally assembled. The major axis of the T-T bar elliptical section must be 90 degrees plus or minus 15 degrees to the blade chord.

If the major axis of the T-T bar elliptical section is found to be within 15 degrees of the blade chord perpendicular, and if the run-out is not greater than tolerances specified in SB No. 53, the T-T bar may remain in service.

If one or both of the above conditions are not satisfactory, the T-T bar must be replaced, before further flight.

2. Replace all T-T bars regardless of condition, per Hiller Service Bulletin No. 53. (FAA AD 56-09-01 refers)

**Note:** T-T bars which have been removed from service are to be destroyed and not to be fitted to any aircraft.**Compliance:**

1. Before further flight, unless already accomplished, and thereafter inspect the diametral clearance between the outside diameter of the tail rotor yoke and the inside diameter of the oilite bushings within the blade root fitting, at intervals not to exceed 150 hours TIS.
2. Within 600 hours TTIS.

**Effective Date:** 27 July 2006

**DCA/HIL/191 Carburettor Mixture Control - Modification**

- Applicability:** All model UH-12 series aircraft fitted with Marvel- Schebler Automatic Altitude Compensating Carburettor Model MA-4-5AA (Aircooled P/N 19588).
- Requirement:** To prevent inadvertent engine stoppage in flight, due to the possibility of the cockpit carburettor mixture control being set to "ALT.COMP" before takeoff, remove the cockpit carburettor mixture control from the cockpit and secure the mixture setting at the carburettor in the "ALT.COMP" position.  
(FAA AD 58-02-03 refers)
- Note:** A Hiller service bulletin covering this subject and a FAA approved Helicopter Flight Manual revision will be published.
- Compliance:** By 27 August 2006, unless already accomplished.
- Effective Date:** 27 July 2006

**DCA/HIL/192 Cyclic Control Scissor Castings – Inspection and Replacement**

- Applicability:** All model UH-12 series aircraft fitted with cyclic control scissors castings P/N 34141.  
All model UH-12, UH-12A and UH-12B aircraft with Hiller Service Bulletin Numbers 50 or 50A embodied.  
Model UH-12C series aircraft, S/Ns 934 onward.  
All model UH-12D aircraft.
- Requirement:** To prevent failure of the cyclic control scissor castings due to improper casting techniques, accomplish the following:
1. Inspect the cyclic control scissor castings P/N 34141 for cracks. If cracked replace, before further flight.
  2. Replace cyclic control scissor castings P/N 34141 (including basic number and all dash numbers).  
(FAA AD 59-05-05 refers)
- Note:** The installation of a new forging P/N 34158, is a terminating action to the requirements of this AD. This forging has unlimited service life.
- Compliance:**
1. Before every flight if the part has accumulated more than 275 hours TIS.
  2. At 300 hours TTIS or within 25 hours TIS, whichever is the later, unless already accomplished.
- Effective Date:** 27 July 2006

**DCA/HIL/193 Wobble Plate Screws – Inspection and Replacement**

- Applicability:** All model UH-12 and UH-12A aircraft fitted with wobble plate shield P/N 34126 and forged lower cyclic scissors P/N 34158.  
All model UH-12B and UH-12C aircraft fitted with forged lower cyclic scissors P/N 34158.  
All model UH-12D aircraft.  
Model UH-12E aircraft, S/Ns 942, 954 and 2001 through 2018.

**Requirement:** To prevent contact between the lower cyclic scissors and the filister head screws attaching the wobble plate shield, which could result in damage to the lower scissors and subsequent loss of cyclic control, accomplish the following:

1. Inspect the lower cyclic scissors for screw head contact damage. Damaged scissors must be replaced, before further flight.
2. Replace the filister head screws attaching the wobble plate shield with AN 509-8R4 flush head screws, per the procedures in Hiller Service Bulletins No. 87 or No. 2004.

(FAA AD 59-25-03 refers)

**Note:** The accomplishment of requirement 2 is a terminating action to the inspection requirement of this AD.

**Compliance:**

1. Before the first flight of the day.
2. By 27 August 2006, unless already accomplished.

**Effective Date:** 27 July 2006

#### **DCA/HIL/194 Tail Rotor Blades – Inspection and Replacement**

**Applicability:** All model UH-12, UH-12A, UH-12B and UH-12C aircraft, fitted with tail rotor blades P/Ns 55008 or 55012.

**Requirement:** To prevent prevent failures tail rotor blades, accomplish the following:

1. Inspect the outer surface of the skin on both sides of the tail rotor blades for cracks in the area of the outer tension torsion bar retention bolt and the adjacent rivet pattern through the outer end of the root fitting. Paint must be removed from the areas to facilitate inspection.

Any blades found cracked must be removed and replaced with P/N 55064 blades, before further flight.

2. Replace all tail rotor blades P/Ns 55008 and 55012 with tail rotor blades P/N 55064, per Hiller Service Bulletin No. 80.

On all helicopters fitted with the large diameter (1.375 inch) spar stabilizer P/N 37003, install a stabilizer strut, per Hiller Service Bulletin No. 75B.

On all aircraft fitted with the small diameter (1 inch) spar stabilizer P/N 37001, install a stabilizer strut, per Hiller Service Bulletin No. 83.

(FAA AD 63-04-02 refers)

**Compliance:**

1. Before every flight.
2. Within the next 50 hours TIS.

**Effective Date:** 27 July 2006

#### **DCA/HIL/195 Main Rotor Blades – Inspection and Replacement**

**Applicability:** All model UH-12 aircraft.

**Requirement:** Inspect main rotor blade P/N 53100 for cracks, using dye penetrant. Replace cracked blades, before further flight.

(FAA AD 71-25-08 refers)

**Compliance:** Within 10 hours TIS, unless already accomplished.

**Effective Date:** 27 July 2006

From 1 October 2012 the Civil Aviation Authority of New Zealand (CAA) will no longer rewrite the text of State of Design ADs. Applicable State of Design ADs will be listed below and can be obtained directly from the National Airworthiness Authority (NAA) web site. The link to the NAA web site is available on the CAA web site at

[http://www.caa.govt.nz/Airworthiness\\_Directives/states\\_of\\_design.html](http://www.caa.govt.nz/Airworthiness_Directives/states_of_design.html)

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.

\* [2015-20-51](#) Main Rotor Blade Fork – Inspection

Effective Date: 25 September 2015