

# Airworthiness Directive Schedule

## Engines

### General Electric T-58 Series

25 March 2004

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The date above indicates the amendment date of this schedule.

New or amended ADs are shown with an asterisk \*

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**DCA/T-58/1A                      Airworthiness Directive Compliance at Initial Airworthiness Certificate Issue****Applicability:** All T-58 series engines**Requirement:** Compliance with the following FAA Airworthiness Directives (as applicable) is required:-

- 64-26-02 - Starter drive shaft bearing
- 67-01-02 - First stage compressor rotor
- 69-17-03 - Turbine rotor discs
- 69-23-02 - Cancelled DCA/T-58/4 now refers

**Note:** Each part of this AD (each individual FAA AD) shall be certified in the aircraft log book separately.**Compliance:** Before issue of New Zealand Certificate of Airworthiness. Repetitive inspections to be accomplished at intervals not exceeding the times specified in the FAA Airworthiness Directives.**Effective Date:** DCA/T-58/1 - 19 December 1997  
DCA/T-58/1A - 25 October 2001**DCA/T-58/2                      Rotating Components - Inspection and Replacement****Applicability:** Models CT58-100-2, -110-1/-2, -140-1/-2, T58-GE-3, -5, -10, and -100 engines.**Requirement:** To prevent fatigue cracking on specific critical rotating parts, which could result in failure of the part, causing an uncontained engine failure and damage to the aircraft, accomplish the following:-

(a) Determine hours TIS and cycles in service (CIS) per the improved methodology described in GE Aircraft Engines SB (CT58) A72-162, CEB-258, Revision 8.

(b) For engines that have engaged in repeated heavy lift (RHL) operations, as defined in paragraph (e) of this AD, accomplish the following:-

(1) For compressor rear shafts, P/N 4000T29P01/P03, 5016T95P01/P04, and 5013T86P03, accomplish the following:

(i) For compressor rear shafts, with either 2,975 or more hours TIS, or 9,550 or more CIS, on the effective date of this AD, remove compressor rear shafts and replace with a serviceable compressor rear shaft at the next light overhaul or next exposure of compressor rear shafts after the effective date of this AD, whichever occurs first.

(ii) For all other compressor rear shafts, remove compressor rear shafts and replace with a serviceable compressor rear shaft, prior to accumulating 3,000 hours TIS, or 9,600 CIS, whichever occurs first.

(iii) For all compressor rear shafts, remove from service and replace with a serviceable, redesigned compressor rear shaft, P/N 5016T95P06, not later than December 31, 1997.

(2) Initially inspect the ten rotating parts specified in paragraph (d) of this AD for cracks at the times specified in sub-paragraphs (i) and (ii) of this paragraph, and, thereafter, inspect at each light overhaul or major overhaul until the parts are retired from service. Perform the inspections per GE Aircraft Engines SB (CT58) 72-181, CEB-284, Revision 2. Prior to further flight, replace parts found cracked during these inspections with serviceable parts.

(i) For parts with greater than the baseline TIS on the effective date of this AD, inspect at the earliest occurrence of the following after the effective date of this AD: the next light overhaul, the next major overhaul, or the next exposure of the affected parts.

(ii) For parts with less than or equal to the baseline TIS on the effective date of this AD, inspect within 1,000 hours TIS from the listed baseline TIS.

(c) For engines that have never engaged in RHL operations, accomplish the following:-

(1) For compressor rear shafts, P/N 4000T29P01/P03, 5016T95P01/P04, and 5013T86P03, remove compressor rear shafts and replace with a serviceable compressor rear shaft, prior to accumulating 9,600 CIS, or 9,000 hours TIS, whichever occurs first. Prior to December 31, 1999, replace compressor rear shafts with a serviceable, redesigned compressor rear shaft, P/N 5016T95P06.

(2) Initially inspect the ten rotating parts specified in paragraph (d) of this AD for cracks at the times specified in sub-paragraphs (i) and (ii) of this paragraph, and, thereafter, at each light overhaul or major overhaul until the parts are retired from service. Perform the inspections in accordance with the procedures described in GE Aircraft Engines SB (CT58) 72-181, CEB-284, Revision 2. Prior to further flight, replace parts found cracked during these inspections with serviceable parts.

(i) For parts with greater than the baseline TIS on the effective date of this AD, inspect at the earliest occurrence of the following after the effective date of this AD: the next light overhaul, the next major overhaul, or the next exposure.

(ii) For parts with less than or equal to the baseline TIS on the effective date of this AD, inspect within 2,000 hours TIS from the listed baseline hours.

(d) For the purpose of performing the inspections required by paragraphs (b)(2) and (c)(2) of this AD, the following baseline TIS are established:-

(1) For compressor rotor spool assemblies, P/N 6010T57G04 and 6010T57G08, whether or not used in RHL operations, baseline is 2,000 hours TIS.

(2) For turbine front shafts, P/N 5003T35P01 and 573D358P002, whether or not utilised in RHL operation, baseline is 1,000 hours TIS.

(3) For turbine coupling shafts, P/N 4001T26P01 and 278D987P002, if utilised in RHL operation, baseline is 1,000 hours TIS; if never utilised in RHL operations, baseline is 2,000 hours TIS.

(4) For turbine rear shafts, P/N 4005T29P01 and 37D400244P101, whether or not utilised in RHL operation, baseline is 2,000 hours TIS.

(5) For Stage 1 front cooling plates, P/N 37C300055P101, whether or not utilised in RHL operation, baseline is 1,000 hours TIS.

(6) For Stage 1 aft cooling plates, P/N 3002T25P01 and 645C334P002, whether or not utilised in RHL operation, baseline is 1,000 hours TIS.

(7) For Stage 2 front cooling plates, P/N 3000T88P02 and 645C332P002, whether or not utilised in RHL operation, baseline is 1,000 hours TIS.

(8) For Stage 2 aft cooling plates, P/N 3002T27P01 and 645C336P002, whether or not utilised in RHL operation, baseline is 1,000 hours TIS.

(9) For Stage 1 turbine wheels, P/N 4002T17P02 TF3, listed by S/N in paragraph 1.A. (3) of GE Aircraft Engines SB (CT58) 72-181, CEB-284, Revision 2, if utilised in RHL operation, baseline is 1,000 hours TIS; if never utilised in RHL operation, baseline is 2,000 hours TIS.

(10) For Stage 2 turbine wheels, P/N 4002T96P02 TF3, listed by S/N in paragraph 1.A. (3) of GE Aircraft Engines SB (CT58) 72-181, CEB-284, Revision 2, if utilised in RHL operation, baseline is 1,000 hours TIS; if never utilised in RHL operation, baseline is 2,000 hours TIS.

(e) For the purpose of this AD, the following definitions apply:

(1) RHL operation is defined as performing more than 10 lift-carry-drop cycles per hour TIS without landing, or more than 10 takeoffs and landings per hour TIS.

(2) Light overhaul is defined as scheduled engine maintenance that allows the engine to continue in service until scheduled major overhaul time is reached.

(3) Major overhaul is defined as scheduled engine maintenance including complete engine inspections and tests with repair or replacement of parts or components as necessary.

(FAA AD 97-19-17 refers)

**Compliance:** Required as indicated within the AD

**Effective Date:** 19 December 1997

#### **DCA/T-58/3 Cooling Plates - Replacement**

**Applicability:** Models CT58-110-1, -110-2, -140-1, -140-2, T58-GE-3, -5, -8F, -10, and -100 series engines, with stage 1 forward cooling plate, P/N 37C300055P101, stage 2 forward cooling plate, P/N 3000T88P02, and stage 2 aft cooling plate, P/N 3002T27P01, installed.

**Requirement:** To prevent cooling plate fracture, which could result in a contained engine failure and an in-flight engine shutdown, accomplish the following:-

Remove from service affected cooling plates, listed by S/N in GE Aircraft Engines CT58 SB 72-188 (CEB-293), Revision 1, and replace with serviceable parts,

For the purpose of this AD, the following definitions apply:-

Repetitive Heavy Lift (RHL) operation is defined as performing more than 10 lift-carry-drop cycles per hour TIS without landing, or more than 10 takeoffs and landings per hour TIS.

Light overhaul is defined as scheduled engine maintenance that allows the engine to continue in service until scheduled major overhaul time is reached.

(FAA AD 97-21-08 refers)

**Compliance:** At the next part exposure, or next light overhaul, whichever occurs first, but not to exceed 1,000 hours TIS for engines installed on aircraft that have engaged in RHL operations, or 2,000 hours TIS for engines installed on aircraft that have never engaged in RHL operations.

**Effective Date:** 19 December 1997

#### **DCA/T-58/4 Rotating Parts – Retirement Lives**

**Applicability:** Model T58 and CT58 series engines installed on, but not limited to Bell UH-1F series, Sikorsky CH/HH-3 series, S-61 A/H-3/CH124/CH-3/HH-3L/N/R series, and S-62 series helicopters.

**Requirement:** To prevent low-cycle fatigue failure of rotating parts that could result in uncontained engine failure and damage to the helicopter, accomplish the following:-

Calculate the new cycles-since-new for life-limited rotating parts per paragraphs 2.A through 2.G of GEAE SB (CT58) 72-162 CEB-258, revision 9. Remove any part from service that exceeds the new calculated life limit and replace it with a serviceable part.

(FAA AD 2001-18-06 refers)

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

**Effective Date:** 25 October 2001

**\* DCA/T-58/5 Fuel Flow Divider - Replacement**

**Applicability:** CT58-100-2, CT58-140-1, -140-2, and T58-GE-1, -3, -5, -8E, -8F, -10, -100, and -402 turboshaft engines, with fuel flow divider assemblies P/N 4050T82G02 or 4067T04G02, having temperature control assemblies, P/N 5040T77G02 or 5040T87G02, with S/N listed in 1.A.(3) of GE ASB No CT58 S/B 73-A0081, Rev 2.

**Requirement:** To prevent fuel leakage from cracked flow divider end caps which could cause an inflight engine fire, locate the temperature control assembly, which is mounted on the fuel flow divider assembly and accomplish the following:

1. Read the S/N of the temperature control assembly, located on the end cap of the temperature control assembly. The end cap has a one-inch hex flange and is threaded into the fuel flow divider body. If the S/N is listed in 1.A.(3) of GE ASB No. CT58 S/B 73- A0081, Revision 2, dated August 7, 2003, or if the SN cannot be determined, remove the fuel flow divider assembly from service.
2. Do not install any fuel flow divider assembly P/N 4050T82G02 or 4067T04G02, that has a temperature control assembly with a S/N listed in the above GE ASB. (FAA 2004-04-06 refers)

**Compliance:**

1. Within 120 hours TIS.
2. From 25 March 2004

**Effective Date:** 25 March 2004