

HARTZELL PROPELLER INC.
SERVICE BULLETIN
HC-SB-61-305

Propeller - Propeller Mounting Bolt Replacement and Torque Inspection

1. Planning Information

A. Effectivity

- (1) Hartzell HC-E4N-3(G,N) lightweight turbine propellers installed by Hawker Beechcraft Company in 2007 or 2008 on new King Air C90GT or B200GT aircraft with aircraft serial number and propeller serial number listed in Table 1 of this Service Bulletin are affected by this Service Bulletin.
- (2) Hartzell HC-B4MP-3C steel hub propellers installed by Hawker Beechcraft Company in 2007 or 2008 on new King Air B300 or B300C aircraft with aircraft serial number and propeller serial number listed in Table 1 of this Service Bulletin are affected by this Service Bulletin.

NOTE: Table 1 lists the affected aircraft model and serial number and the propeller serial number. This table is sorted by the aircraft model and serial number.

B. Reason

WARNING: BOLT FAILURE MAY RESULT IN SEPARATION OF THE PROPELLER FROM THE AIRCRAFT. FAILURE MAY RESULT IN DEATH, SERIOUS BODILY INJURY, AND/OR SUBSTANTIAL PROPERTY DAMAGE. UNUSUAL OR ABNORMAL VIBRATION DEMANDS IMMEDIATE INSPECTION FOR POSSIBLE BOLT FAILURE. PROPELLER SEPARATION MAY OR MAY NOT BE PROCEEDED BY VIBRATION.

- (1) The Hawker Beechcraft Company informed Hartzell Propeller Inc. that the propellers were installed on the affected aircraft at the factory using a torque wrench that later failed a calibration test. Refer to Table 1.
- (2) The torque wrench used during installation of the propellers on the aircraft exceeded the specified mounting torque of 100 to 105 ft. lbs. for the mounting bolts.
- (3) A check of the torque on the mounting bolts is required to verify the safety of the propeller installation and condition of the mounting bolts.
- (4) When installed with the incorrect torque, the mounting bolts will experience stresses that can damage the mounting bolt and require bolt replacement before propeller overhaul.

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- (5) Replacement of the mounting bolts and installation of the propeller with new mounting bolts at the correct torque will correct this problem.
- (6) Regulatory action is not expected for the propeller assemblies.

C. Description

- (1) This Service Bulletin provides instructions for an on-wing torque inspection of all mounting bolts on the affected propellers.
- (2) The Service Bulletin provides instruction for replacement of the mounting bolts on the affected propellers

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D. Compliance

	Propeller	Compliance	Action
(1)	For a propeller with less than 200 hours TSN	Before propeller TSN is 200 hours or within 100 flight hours from the date of this Service Bulletin, whichever is greater	Perform torque check and torque adjustment in accordance with Paragraph 3.A. or bolt replacement in accordance with Paragraph 3.C. in the Accomplishment Instructions section of this Service Bulletin.
(2)	After initial torque check and torque adjustment in accordance with Paragraph 3.A. in the Accomplishment Instructions section of this Service Bulletin	Repetitively perform torque check every 200 flight hours until bolt replacement	Perform torque check in accordance with Paragraph 3.B. in the Accomplishment Instructions section of this Service Bulletin.
(3)	For a propeller with less than 600 hours TSN	Before propeller TSN is 600 hours	Replace the mounting bolts with new bolts in accordance with Paragraph 3.C. in the Accomplishment Instructions section of this Service Bulletin.
(4)	For a propeller with greater than 600 hours TSN	Before further flight	Replace the mounting bolts with new bolts in accordance with Paragraph 3.C. in the Accomplishment Instructions section of this Service Bulletin.
(5)	At next annual inspection or at any propeller removal from aircraft		Replace the mounting bolts with new bolts in accordance with Paragraph 3.C. in the Accomplishment Instructions section of this Service Bulletin.

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E. Approval

- (1) FAA approval has been obtained on technical data in this publication that affects type design.

F. Manpower

- (1) Approximately 2.0 man-hour per propeller assembly is required to perform the torque inspection.
- (2) Approximately 3.0 man-hours per propeller assembly is required to perform the propeller mounting bolt replacement.

G. Weight and Balance

- (1) No change

H. Electrical Load Data

- (1) No change

I. References

- (1) Hartzell Propeller Owner's Manual 139 (61-00-39)
- (2) Hartzell Propeller Owner's Manual 149 (61-00-49)

J. Other Publications Affected

- (1) None

2. Material Information

A. Material required

<u>Part Number</u>	<u>Key Word</u>	<u>Qty.</u>
B-3339	Bolt	8
B-3339-1	Bolt	8

NOTE 1: Refer to Table 1 for propeller models.

NOTE 2: Contact Hawker Beechcraft Corporation for replacement bolts.

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3. Accomplishment Instructions

A. Mounting Bolt Breakaway Torque Inspection and Retorque:

- (1) Cut and remove the safety wire that secures each propeller mounting bolt.

CAUTION: THE NORMAL INSTALLATION TORQUE IS 100 TO 105 FT-LBS. (136 TO 142 N•M) (LUBRICATED). THIS BULLETIN REQUIRES CHECKING TO ONLY 90 FT-LBS. (122 N•M) (IN ORDER TO AVOID POSSIBLE REPETITIVE OVER TORQUING). THE PURPOSE OF THE 90 FT-LB. (122 N•m) CHECK IS TO VALIDATE THAT THE BOLT HAS NOT BEEN OVERTORQUED, DAMAGED, OR CRACKED.

- (2) Using a calibrated torque wrench and appropriate adapter, verify that the breakaway torque on each of the eight mounting bolts is equal to or greater than 90 ft-lbs. (122 N•m) torque by loosening each bolt and noting the breakaway torque.
- (3) If the breakaway torque of any one bolt is found to be less than 90 ft-lbs. (122 N•m) or any one bolt is found missing or broken, contact Hartzell Propeller Product Support before further flight.

CAUTION: LOOSEN ALL PROPELLER MOUNTING BOLTS TO MAKE SURE OF PROPER PRELOADING OF THE MOUNTING BOLTS WHEN THEY ARE RETORQUED.

- (4) If the breakaway torque on all eight mounting bolts passes the breakaway torque inspection in Paragraph 3.A.(2), loosen each mounting bolt completely.
- (5) Re-torque all of the propeller mounting bolts in correct sequence, in accordance with the Installation and Removal chapter of the applicable Hartzell Propeller Owner's Manual. The installation torque is 100 to 105 ft. lbs. lubricated.
- (6) Safety all mounting bolts with 0.032 inch (0.81 mm) minimum diameter stainless steel wire (two bolts per safety).
- (7) Make a logbook entry indicating compliance with the Mounting Bolt Breakaway Torque Inspection and Retorque section of this Service Bulletin.

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B. Mounting Bolt Torque Inspection:

- (1) Cut and remove the safety wire that secures each propeller mounting bolt.

CAUTION: THE NORMAL INSTALLATION TORQUE IS 100 TO 105 FT-LBS. (136 TO 142 N•M) (LUBRICATED). THIS BULLETIN REQUIRES CHECKING TO ONLY 90 FT-LBS. (122 N•M) (IN ORDER TO AVOID POSSIBLE REPETITIVE OVER TORQUING). THE PURPOSE OF THE 90 FT-LB. CHECK IS TO VALIDATE THAT THE BOLT HAS NOT BEEN DAMAGED OR CRACKED.

- (2) Using a calibrated torque wrench and appropriate adapter, attempt to tighten each of the eight mounting bolts to 90 ft-lbs. (122 N•m) torque.
- (3) If the torque of any one bolt is found to be less than 90 ft-lbs. (122 N•m) or any one bolt is found missing or broken, contact Hartzell Propeller Product Support before further flight.
- (4) If torque on all eight mounting bolts passes the torque inspection, make a logbook entry noting compliance with the Mounting Bolt Torque Inspection section of this Service Bulletin.
- (5) Safety all mounting bolts with 0.032 inch (0.81 mm) minimum diameter stainless steel wire (two bolts per safety).
- (6) Make a logbook entry noting compliance with the Mounting Bolt Torque Inspection section of this Service Bulletin.

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C. On-Wing Bolt Replacement

- (1) Cut and remove the safety wire that secures each propeller mounting bolt.

CAUTION: LOOSEN ALL PROPELLER MOUNTING BOLTS TO MAKE SURE OF PROPER PRELOADING OF THE MOUNTING BOLTS WHEN THEY ARE RETORQUED.

- (2) Loosen each mounting bolt.
- (3) If any one bolt is found missing or broken, contact Hartzell Propeller Product Support before further flight.

WARNING: DO NOT REMOVE ALL PROPELLER MOUNTING BOLTS AT THE SAME TIME WITHOUT PROPERLY SUPPORTING THE PROPELLER. SERIOUS INJURY OR DAMAGE TO THE PROPELLER COULD RESULT.

CAUTION: REMOVE ONE MOUNTING BOLT AT A TIME.

- (4) Remove one mounting bolt at a time and replace with a new mounting bolt.
- (5) Re-torque all of the propeller mounting bolts in proper sequence, in accordance with the Installation and Removal chapter of the applicable Hartzell Propeller Owner's Manual. The installation torque is 100 to 105 ft. lbs. (136 TO 142 N•m) lubricated.
- (6) Safety the mounting bolts with 0.032 inch (0.81 mm) minimum diameter stainless steel wire (two bolts per safety).
- (7) Complete the Report Form on page 8 and return the report form to Hartzell Propeller Inc.
- (8) Indicate compliance with the bolt replacement requirement for this Service Bulletin in the propeller logbook.
- (9) Replacement of the mounting bolts is terminating action for this Service Bulletin.

D. Hartzell Contact Information

Hartzell Propeller Inc.
Attn.: Product Support
One Propeller Place
Piqua, Ohio 45356-2634 USA
Phone: 937.778.4379 (Intl. 001.937.778.4379)
Fax: 937.778.4391 (Intl. 001.937.778.4391)
E-mail: techsupport@hartzellprop.com

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B300C	FM19	HC-B4MP-3C	FWA4514	FWA4522	B-3339
B300C	FM20	HC-B4MP-3C	FWA4542	FWA4520	B-3339
B300C	FM21	HC-B4MP-3C	FWA4540	FWA4535	B-3339
B300C	FM22	HC-B4MP-3C	FWA4547	FWA4546	B-3339
B300C	FM23	HC-B4MP-3C	FWA4556	FWA4557	B-3339
B300	FL522	HC-B4MP-3C	FWA4387	FWA4393	B-3339
B300	FL523	HC-B4MP-3C	FWA4395	FWA4396	B-3339
B300	FL530	HC-B4MP-3C	FWA4413	FWA4414	B-3339
B300	FL531	HC-B4MP-3C	FWA4415	FWA4380	B-3339
B300	FL533	HC-B4MP-3C	FWA4404	FWA4411	B-3339
B300	FL570	HC-B4MP-3C	FWA4501	FWA4508	B-3339
B300	FL571	HC-B4MP-3C	FWA4523	FWA4518	B-3339
B300	FL572	HC-B4MP-3C	FWA4513	FWA4516	B-3339
B300	FL573	HC-B4MP-3C	FWA4532	FWA4528	B-3339
B300	FL574	HC-B4MP-3C	FWA4531	FWA4439	B-3339
B300	FL575	HC-B4MP-3C	FWA4533	FWA4534	B-3339
B300	FL576	HC-B4MP-3C	FWA4543	FWA4541	B-3339
B300	FL577	HC-B4MP-3C	FWA4539	FWA4537	B-3339
B300	FL578	HC-B4MP-3C	FWA4536	FWA4538	B-3339
B300	FL579	HC-B4MP-3C	FWA4493	FWA4519	B-3339
B300	FL580	HC-B4MP-3C	FWA4526	FWA4525	B-3339
B300	FL581	HC-B4MP-3C	FWA4551	FWA4545	B-3339
B300	FL582	HC-B4MP-3C	FWA4527	FWA4548	B-3339
B300	FL583	HC-B4MP-3C	FWA4565	FWA4554	B-3339
B300	FL584	HC-B4MP-3C	FWA4562	FWA4563	B-3339

**Affected Aircraft and Propeller Serial Number
Sorted by Aircraft Model and Serial Number
Table 1**

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Aircraft Model Number	Aircraft Serial Number	Propeller Model	Right Side Propeller Serial Number	Left Side Propeller Serial Number	Part Number of Bolts
B300	FL585	HC-B4MP-3C	FWA4559	FWA4558	B-3339
B300	FL586	HC-B4MP-3C	FWA4559	FWA4573	B-3339
B300	FL587	HC-B4MP-3C	FWA4550	FWA4553	B-3339
B300	FL588	HC-B4MP-3C	FWA4564	FWA4552	B-3339
B300	FL589	HC-B4MP-3C	FWA4549	FWA4560	B-3339
B200	BB1999	HC-E4N-3G	HH2916	HH2917	B-3339-1
B200	BB2000	HC-E4N-3G	HH3029	HH3125	B-3339-1
B200GT	BY20	HC-E4N-3G	HH3126	HH3127	B-3339-1
B200GT	BY21	HC-E4N-3G	HH3114	HH3116	B-3339-1
B200GT	BY22	HC-E4N-3G	HH3122	HH3061	B-3339-1
B200GT	BY23	HC-E4N-3G	HH3150	HH3148	B-3339-1
B200GT	BY24	HC-E4N-3G	HH3146	HH3151	B-3339-1
B200GT	BY25	HC-E4N-3G	HH3158	HH3160	B-3339-1
B200GT	BY26	HC-E4N-3G	HH3165	HH3166	B-3339-1
B200GT	BY27	HC-E4N-3G	HH3172	HH3173	B-3339-1
B200GT	BY28	HC-E4N-3G	HH3179	HH3176	B-3339-1
B200GT	BY29	HC-E4N-3G	HH3016	HH3171	B-3339-1
B200GT	BY30	HC-E4N-3G	HH3193	HH3195	B-3339-1
B200GT	BY31	HC-E4N-3G	HH3204	HH3207	B-3339-1
B200GT	BY32	HC-E4N-3G	HH3229	HH3216	B-3339-1
B200GT	BY33	HC-E4N-3G	HH3187	HH3129	B-3339-1
B200GT	BY34	HC-E4N-3G	HH3185	HH3184	B-3339-1
B200GT	BY35	HC-E4N-3G	HH3270	HH3267	B-3339-1
B200GT	BY36	HC-E4N-3G	HH3274	HH3268	B-3339-1

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Table 1 (Continued)**

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B200GT	BY37	HC-E4N-3G	HH3273	HH3271	B-3339-1
B200GT	BY38	HC-E4N-3G	HH3292	HH3294	B-3339-1
B200GT	BY39	HC-E4N-3G	HH3293	HH3300	B-3339-1
B200GT	BY40	HC-E4N-3G	HH3310	HH3307	B-3339-1
B200GT	BY41	HC-E4N-3G	HH3275	HH3263	B-3339-1
B200GT	BY42	HC-E4N-3G	HH3335	HH3332	B-3339-1
B200GT	BY43	HC-E4N-3G	HH3286	HH3289	B-3339-1
B200GT	BY44	HC-E4N-3G	HH3315	HH3318	B-3339-1
B200GT	BY45	HC-E4N-3G	HH3357	HH3354	B-3339-1
B200GT	BY46	HC-E4N-3G	HH3327	HH3341	B-3339-1
C90GT	LJ1859	HC-E4N-3N	HH3121	HH3157	B-3339-1
C90GT	LJ1860	HC-E4N-3N	HH3087	HH3090	B-3339-1
C90GT	LJ1861	HC-E4N-3N	HH3152	HH3138	B-3339-1
C90GT	LJ1862	HC-E4N-3N	HH3094	HH3118	B-3339-1
C90GT	LJ1863	HC-E4N-3N	HH3161	HH3130	B-3339-1
C90GT	LJ1864	HC-E4N-3N	HH3135	HH3030	B-3339-1
C90GT	LJ1865	HC-E4N-3N	HH3167	HH3168	B-3339-1
C90GT	LJ1866	HC-E4N-3N	HH3144	HH3142	B-3339-1
C90GT	LJ1867	HC-E4N-3N	HH3154	HH3164	B-3339-1
C90GT	LJ1868	HC-E4N-3N	HH3181	HH3180	B-3339-1
C90GT	LJ1869	HC-E4N-3N	HH3132	HH3169	B-3339-1
C90GT	LJ1870	HC-E4N-3N	HH3194	HH3189	B-3339-1
C90GT	LJ1871	HC-E4N-3N	HH3201	HH3203	B-3339-1
C90GT	LJ1872	HC-E4N-3N	HH3186	HH3232	B-3339-1
C90GT	LJ1873	HC-E4N-3N	HH3215	HH3218	B-3339-1

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Table 1 (Continued)**

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C90GT	LJ1874	HC-E4N-3N	HH3230	HH3231	B-3339-1
C90GT	LJ1875	HC-E4N-3N	HH3234	HH3228	B-3339-1
C90GT	LJ1876	HC-E4N-3N	HH3222	HH3223	B-3339-1
C90GT	LJ1877	HC-E4N-3N	HH3224	HH3219	B-3339-1
C90GT	LJ1878	HC-E4N-3N	HH3202	HH3206	B-3339-1
C90GT	LJ1879	HC-E4N-3N	HH3244	HH3241	B-3339-1
C90GT	LJ1880	HC-E4N-3N	HH3254	HH3249	B-3339-1
C90GT	LJ1881	HC-E4N-3N	HH3221	HH3227	B-3339-1
C90GT	LJ1882	HC-E4N-3N	HH3259	HH3243	B-3339-1
C90GT	LJ1883	HC-E4N-3N	HH3276	HH3252	B-3339-1
C90GT	LJ1884	HC-E4N-3N	HH3262	HH3277	B-3339-1
C90GT	LJ1885	HC-E4N-3N	HH3301	HH3308	B-3339-1
C90GT	LJ1886	HC-E4N-3N	HH3312	HH3297	B-3339-1
C90GT	LJ1887	HC-E4N-3N	HH3304	HH3322	B-3339-1
C90GT	LJ1888	HC-E4N-3N	HH3255	HH3256	B-3339-1
C90GT	LJ1889	HC-E4N-3N	HH3302	HH3305	B-3339-1
C90GT	LJ1890	HC-E4N-3N	HH3269	HH3264	B-3339-1
C90GT	LJ1891	HC-E4N-3N	HH3280	HH3272	B-3339-1
C90GT	LJ1892	HC-E4N-3N	HH3214	HH3287	B-3339-1
C90GT	LJ1893	HC-E4N-3N	HH3253	HH3250	B-3339-1

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Propeller - Propeller Mounting Bolt Replacement and Torque Inspection REPORT FORM

Propeller Model: _____

Propeller Serial Numbers: #1 _____ #2 _____

Aircraft Serial Number: _____

Reporting Facility: _____

Contact Person: _____

Phone: _____

E-mail: _____

Aircraft Owner: _____

Contact: _____

Phone: _____

Number of mounting bolts replaced: _____

Number of mounting bolts found broken, cracked, or missing: _____

Upon mounting bolt replacement, return this Report Form to Hartzell Propeller Inc.,
attention Product Support at fax number 937-778-4391.