

Revision	Change	Approved	Date
1	Initial Release	JTS	06/10/23



SERVICE BULLETIN

APL-SB22

Date of Issue: 06 Oct 2023

Applicability: Propeller Models: Various models incorporating a revision 1 or 2 Faulhaber pitch change motor (A0457-196)

Serial Numbers: Enclosed

Compliance: Initial: Next service
Subsequent: None

SUBJECT: FAULHABER PITCH CHANGE MOTOR REVISION 5 BRUSH-HEAD UPGRADE

Reason

1. The commutator brushes and springs contained within Revision 1 or 2 Faulhaber pitch change motors (A0457-196) have exhibited the following characteristics in some situations:
 - a. The braided copper leads to the brushes may fail in service after a period of time on some engine types due to the high vibration environment. This leads to a failure of the pitch change motor, as indicated by all three LEDs flashing red (1Hz) on the AC200 controller (open circuit alarm) and a loss of pitch control.

Affected Hub Serial Numbers with Rev 1 Faulhaber PC Motor:									
970	1402	1843	2013	2016	2056	2061	2083	2084	2090
2099	2101	2130	2131	2133	2134	2135	2136	2139	2140
2143	2146	2148	2149	2150	2152	2155	2156	2159	2160
2163	2164	2167	2169	2174	2177	2190	2192	2194	2196
2197	2198								
Affected Hub Serial Numbers with Rev 2 Faulhaber PC Motor:									
1981	1984	2011	2017	2132	2138	2141	2202	2254	2257
2258	2285	2286	2287	2288	2289	2290	2291	2292	2293
2294	2295	2296	2297	2298	2299	2300	2301	2302	2303
2304	2305	2306	2308	2309	2310	2311	2312	2313	2314
2315	2316	2317	2318	2319	2321	2326	2329	2331	2334
2336	2337	2338	2339	2340	2341	2342	2343	2344	2345
2347	2348	2349	2350	2352	2353	2357	2360	2361	2363

2365	2367	2373	2374	2384	2387	2390	2391		
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2. A modified brush-head assembly has been developed for Faulhaber pitch change motors. This upgrade improves the security of the brush leads and incorporates higher tension springs. The upgraded brush head may be retrofitted to existing Faulhaber pitch change motors.

3. Affected pitch change motors must be returned to Airmaster Propellers for this upgrade as it can't be completed in the field. This upgrade elevates the pitch change motor to a revision 5. The upgraded brush head assembly is implemented in all manufactured Faulhaber pitch change assemblies from revision 5 up.

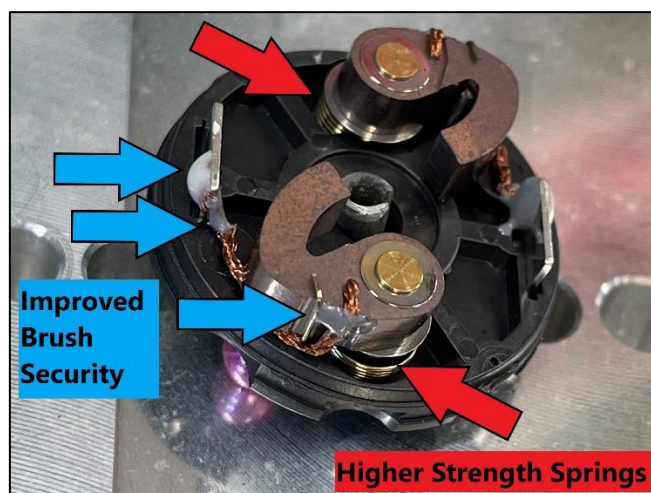


Figure 1. Modifications to upgraded Faulhaber brush-head revision 5.

4. The customer is unable to inspect the condition of the commutator brushes within the Faulhaber pitch change motor as these components are not easily accessed without specialised tooling. It is the customer's responsibility to contact Airmaster and instigate this upgrade before a fault arises.

Compliance

Owners of affected assets should check the revision of their Faulhaber Pitch change motor (A0457-196). This is listed in the propeller's hub assembly drawing (AH-xxx) which can be found in the assembly drawings booklet supplied with the propeller.

To instigate the Faulhaber brush-head upgrade:

- Complete the APL-SB22 inspection record attached to this document and return this to Airmaster Propellers Ltd.
- Remove the affected pitch change motor from the propeller hub. Contact Airmaster for further instruction.
- Return the affected pitch change motor to Airmaster Propellers Ltd (New Zealand) for brush-head upgrade (shipping charges apply). This upgrade is covered under warranty. Allow 2 weeks (plus transit time) for Airmaster to complete the upgrade.

Subsequent Action

- The upgraded pitch change motor shall be returned to the customer and reassembled to the propeller hub. Instruction for this is available upon request.
- Record “Pitch change motor upgraded to revision 5 (brush head modification) in accordance with APL-SB22” in propeller logbook. Sign and date.
- Amend the Faulhaber pitch change motor (A0457-196) revision number to “5” within the propeller’s hub assembly drawing. Sign and date.
- No re-programming of the AC200 controller is required in this case.

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APL-SB22 INSPECTION RECORD

INSPECTION

Propeller Serial Number: _____

Propeller Model Number: AP_____

Current Operating Hours: _____

Inspection Performed by: _____

Signature: _____

Inspection Date: _____

Faulhaber PC Motor Revision: 1 / 2
(A0457-196)

CUSTOMER INFORMATION

Customer Name: _____

Customer Address: _____

Customer Ph: _____

Customer E-mail: _____