

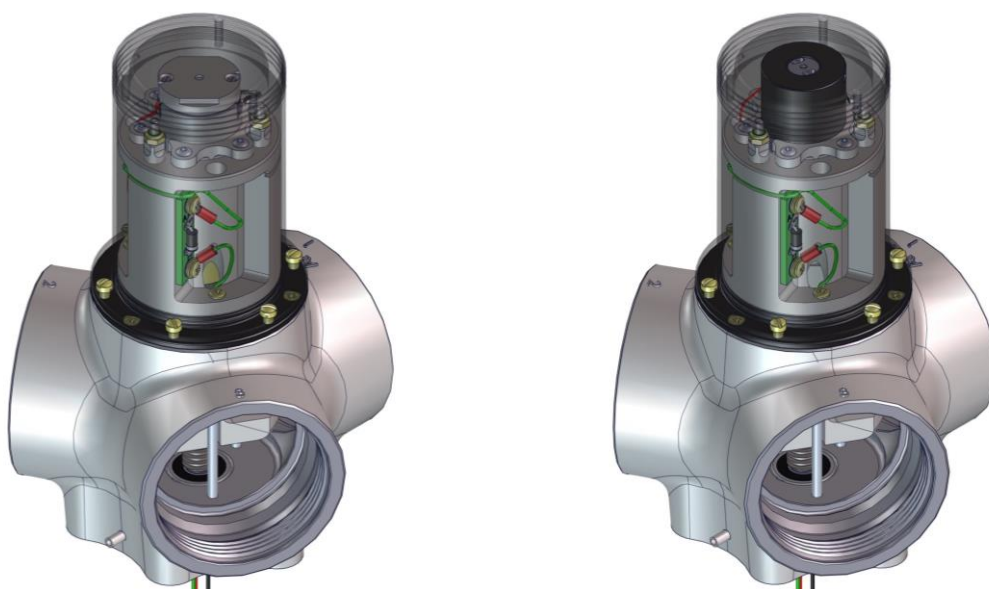
Revision	Change	Approved	Date
1	Initial release	mje	12/06/14
2	Use of Maxon motor	mje	16/02/16

SUPPLEMENTARY INSTRUCTION

SI-001 PC MOTOR REPLACEMENT

MAXON

Part / Assy #		A0455-x
Drawing #		
Applicability		All AH-x hubs currently using Globe PC motor
Compliance		



SUBJECT: REPLACE PC MOTOR IN AP-X HUB ASSEMBLY

1. Introduction

These instructions cover the replacement of the Globe pitch change motor assembly (A0326-180 or A0326-320) with the Maxon pitch change assembly A0455-150 or A0455-231 in all AH-xxx hub assemblies.

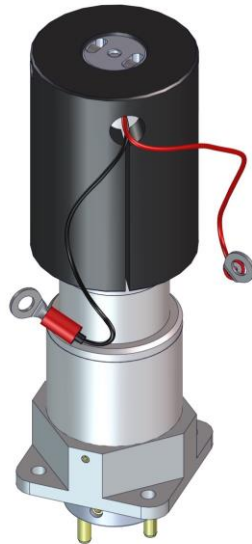
These instructions should be carefully followed during the motor replacement procedure.

Caution: This assembly procedure should only be carried out by persons authorised by Airmaster Propellers Ltd to conduct blade set-up.

2. Material Information

2.1 Parts Required

Item	Assy No.	Description
1	A0455-150	Pitch Change Gearmotor Assy Maxon (High Speed)
2	A0455-231	Pitch Change Gearmotor Assy Maxon (Std Speed)



2.2 Tooling

2.3

Item	Qty	Part Number	Description
1	1		Phillips Screwdriver (PH2)
2	1		Flat Blade Screwdriver (1.2 x 6.5mm)
3	2		Hex Allen Keys (2mm, 7/64")
4	1		Motor Coupling Tool
5			
6			

2.4 Material

Item	Qty	Part Number	Description
1			Loctite 243
2			
3			
4			
5			
6			
7			

3. Procedure

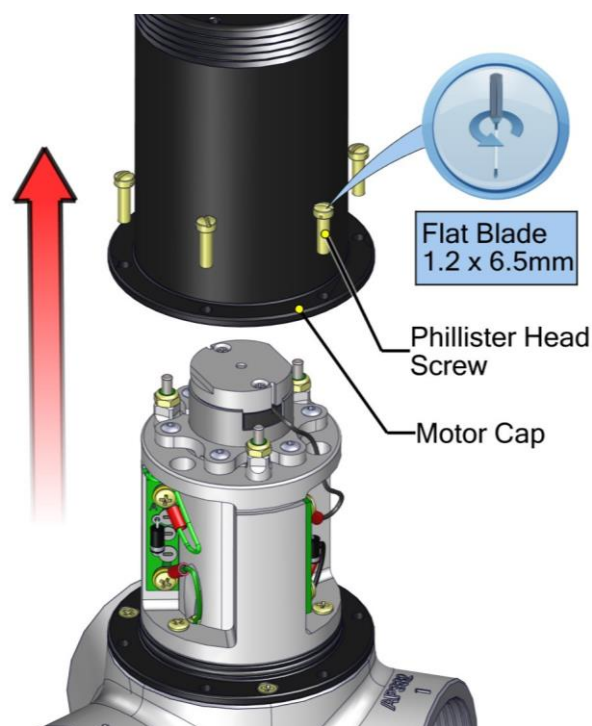
3.1 Preparation

- a. Select a suitable space to perform this maintenance. Space should be clean, dry and well lit.
- b. Suitable containers should be available for separation and identification of parts and fasteners.

Caution: While it is possible to perform this operation while the propeller is mounted on the aircraft, this is not recommended. If it must be done on the aircraft, normal precautions should be taken to ensure the safety of the operator, engineer and propeller system (i.e. disconnect electrical supply).

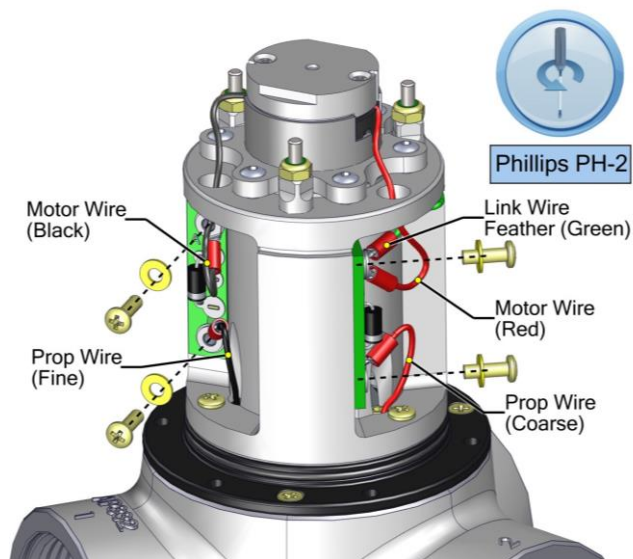
3.2 Disassembly

- a. Undo screws and remove motor cap.



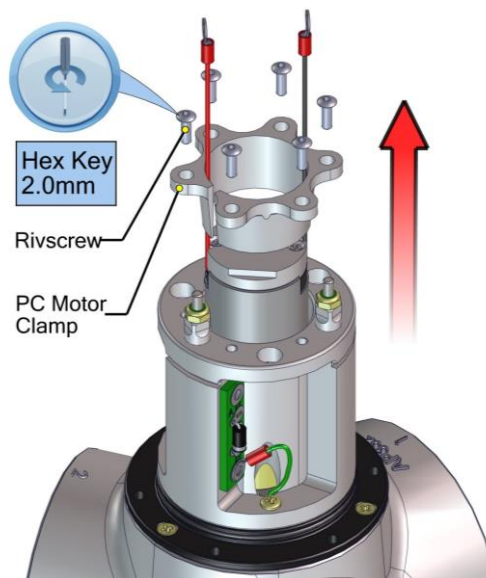
- b. Note electrical connections including:
 - i. Orientation of each of the electrical circuits (black, red, green).
 - ii. Position and orientation of each of the electrical terminals.
 - iii. Exit holes of each of the PC motor electrical wires.

- c. Remove screws to motor wires, prop wires and link wire.

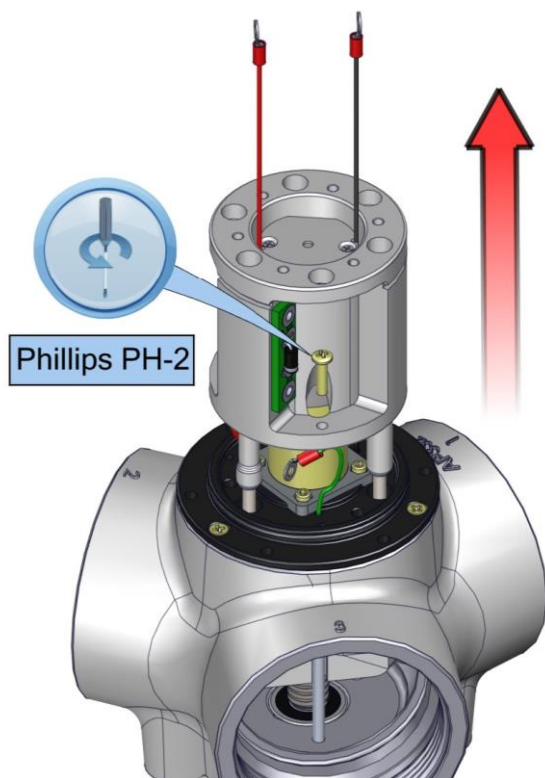


- d. Roll the red and black motor cables into the grooves on top of the pitch change motor cap and secure with thin tape.

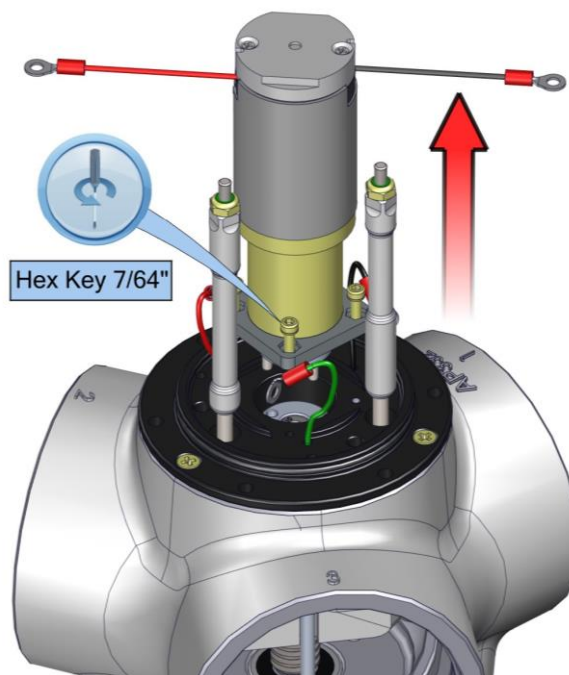
- e. Remove motor clamp.



- f. Remove microswitch mount assembly.

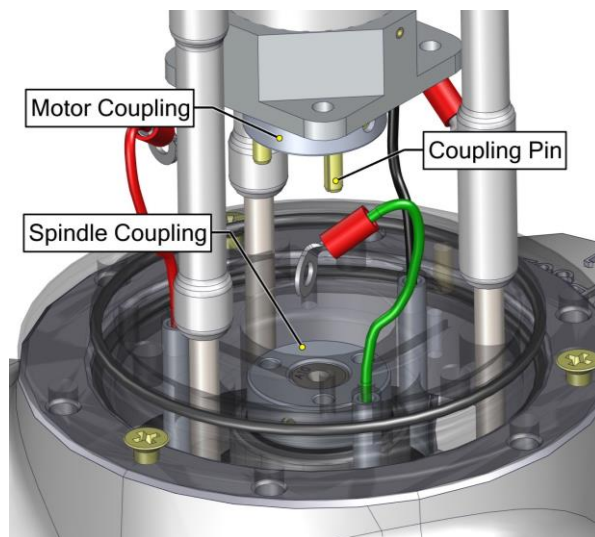
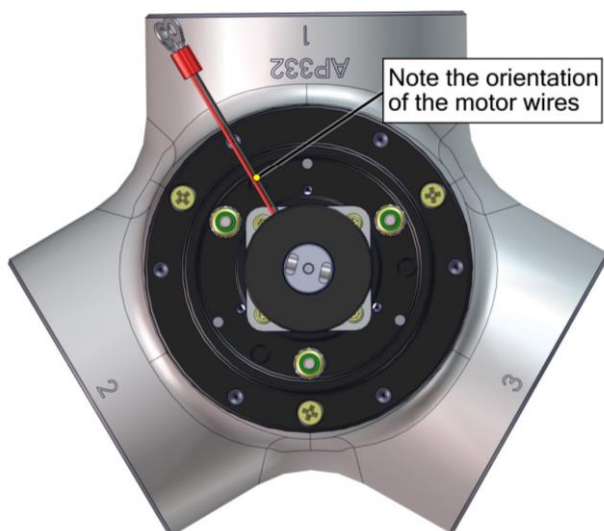


- g. Unscrew capscrews and remove motor.

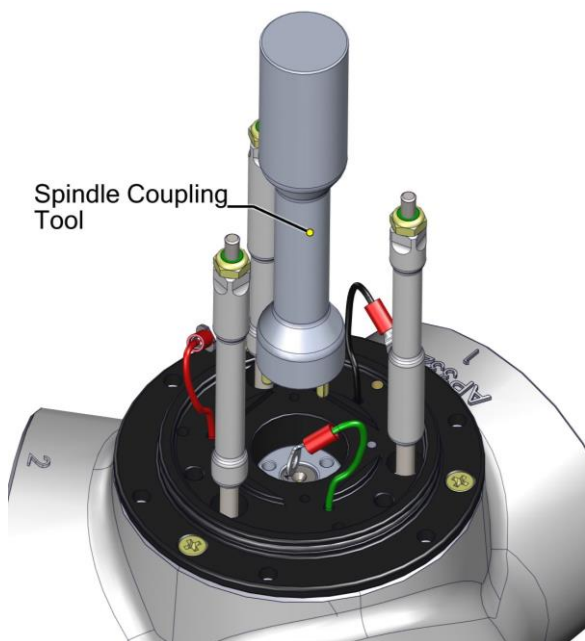


3.3 Assembly

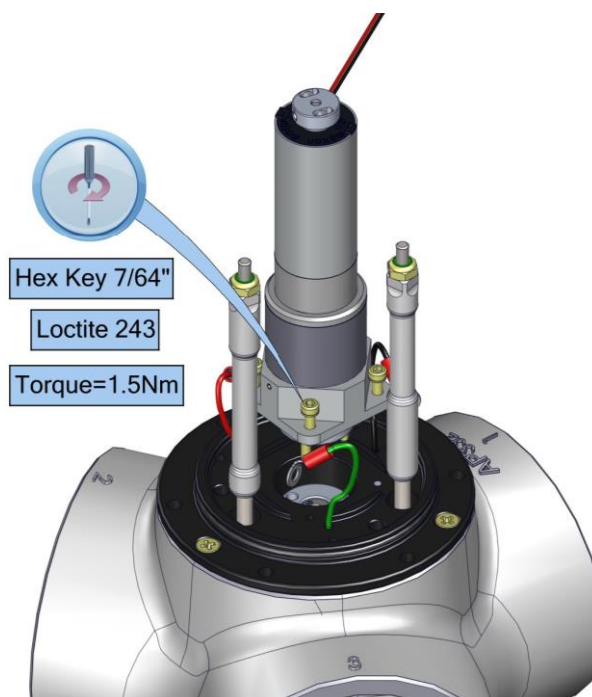
- a. Carefully insert the Maxon pitch change motor into the hub assembly ensuring that the pins in the motor coupling engage properly with the shaft coupling.



- b. If the pins do not align with the spindle coupling use the spindle coupling tool to rotate the spindle.



- c. Attach the pitch change motor. Thread-lock four screws (Loctite 243).

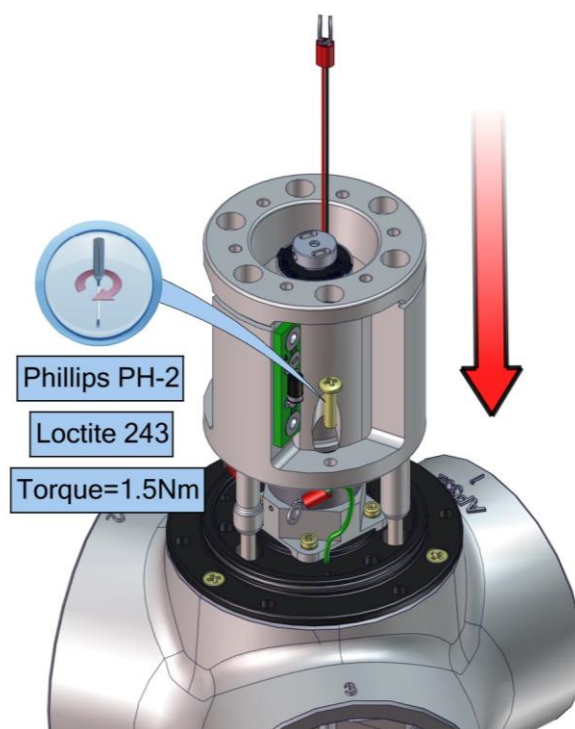


- d. Attach micro-switch mount assembly (note orientation) to motor mount plate.

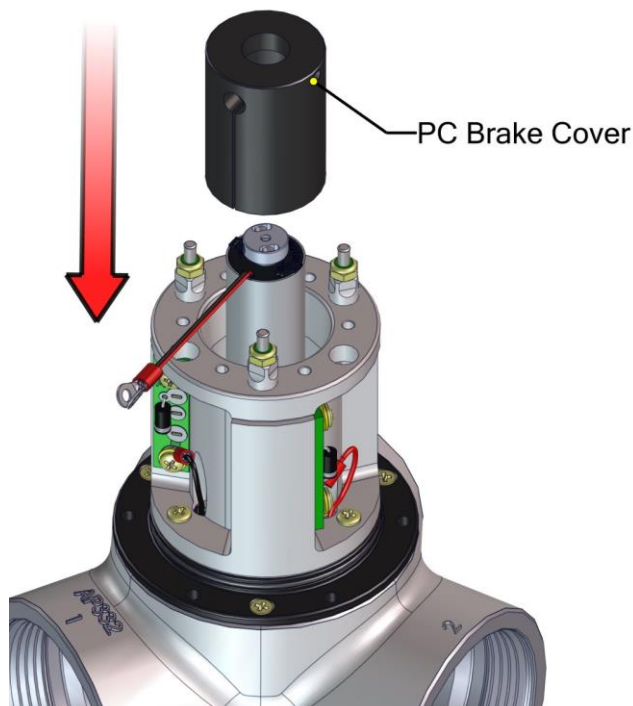
Check that pitch feedback rods are aligned concentrically with the three respective holes in the microswitch mount assembly. Insert the prop wires back into the microswitch mount.

Thread-lock three screws (Loctite 243).

Note: If your propeller has the microswitch mount assembly using the microswitches with wires attached, then it must be upgraded to the style shown using PCB mounted microswitches. Ask Airmaster for guidance.

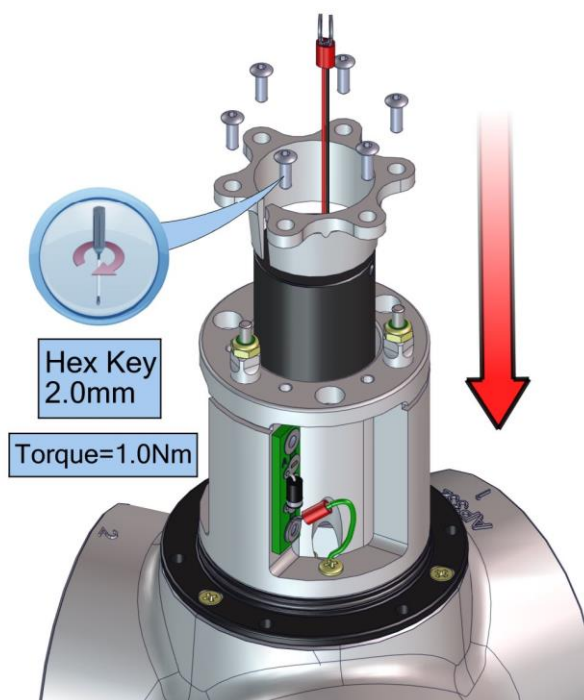


- e. Place the PC Brake Cover onto the motor. Ensure that the wires align with the slot. Push on until the cover seats on top of the motor.

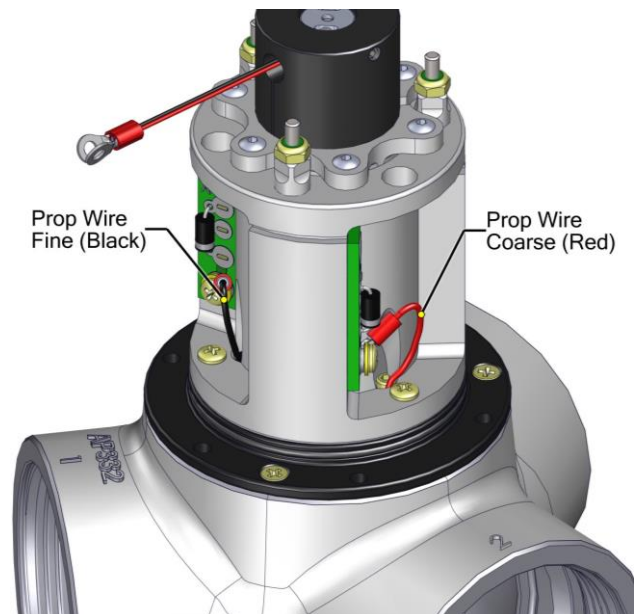
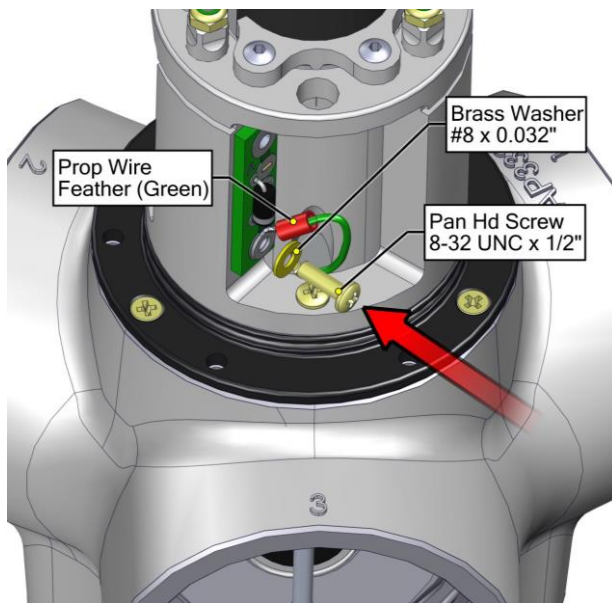


- f. Attach PC Motor Clamp to microswitch mount assembly with rivscrews.

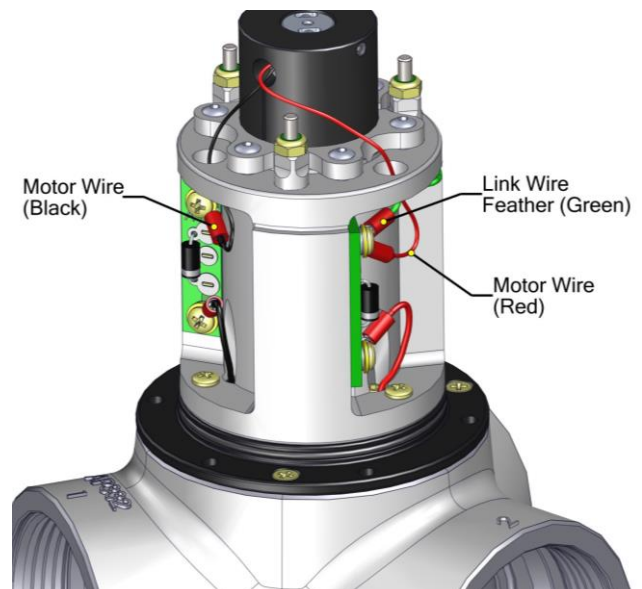
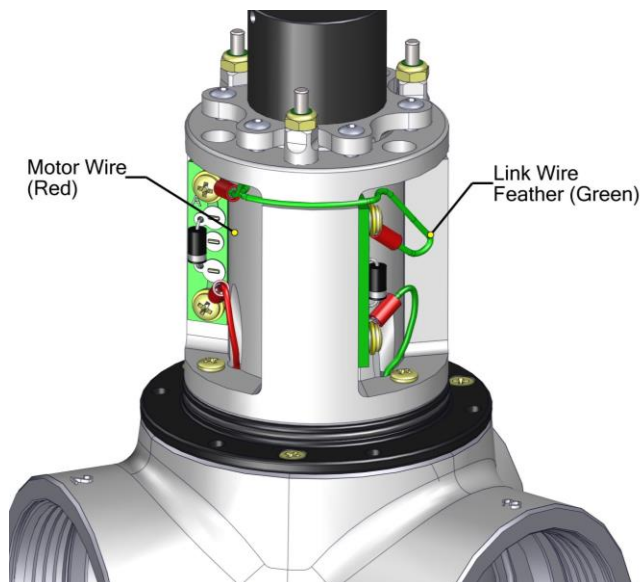
Note: As an alternative use Pan Hd Screws 8-32 UNC x 5/8" (P0237) with primer 7471 and Loctite 277



- g. Connect the three prop power wires (Feather - black, red, green) to microswitch mount assembly.

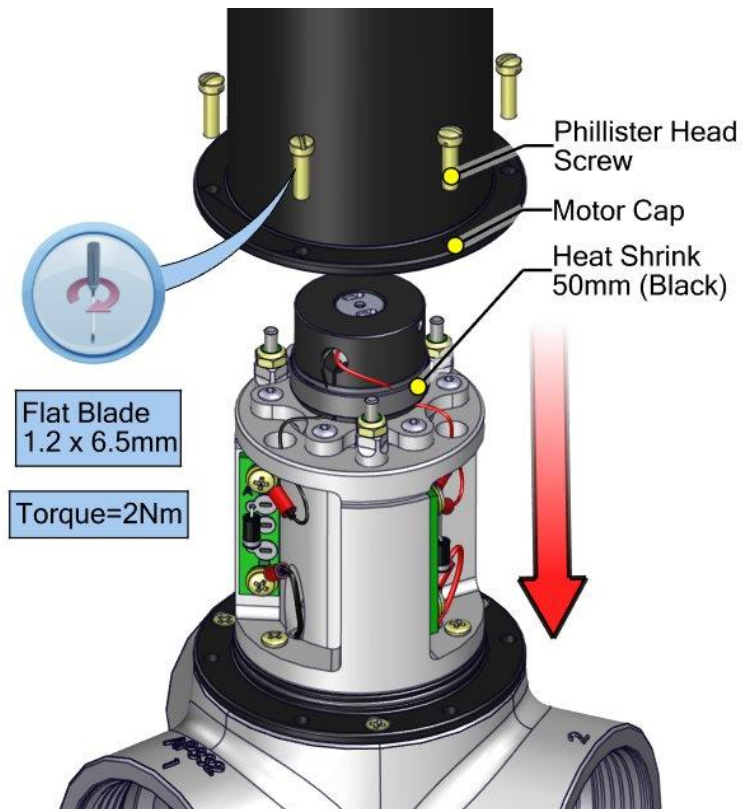


- h. Fit and connect feather link wire to micro-switch mount assembly. Connect motor wires.



- i. Secure PC motor lead wires with heat shrink to keep motor wires clear of pitch change limit rods.

Fit the motor cap



- j. Test hub assembly for correct operation