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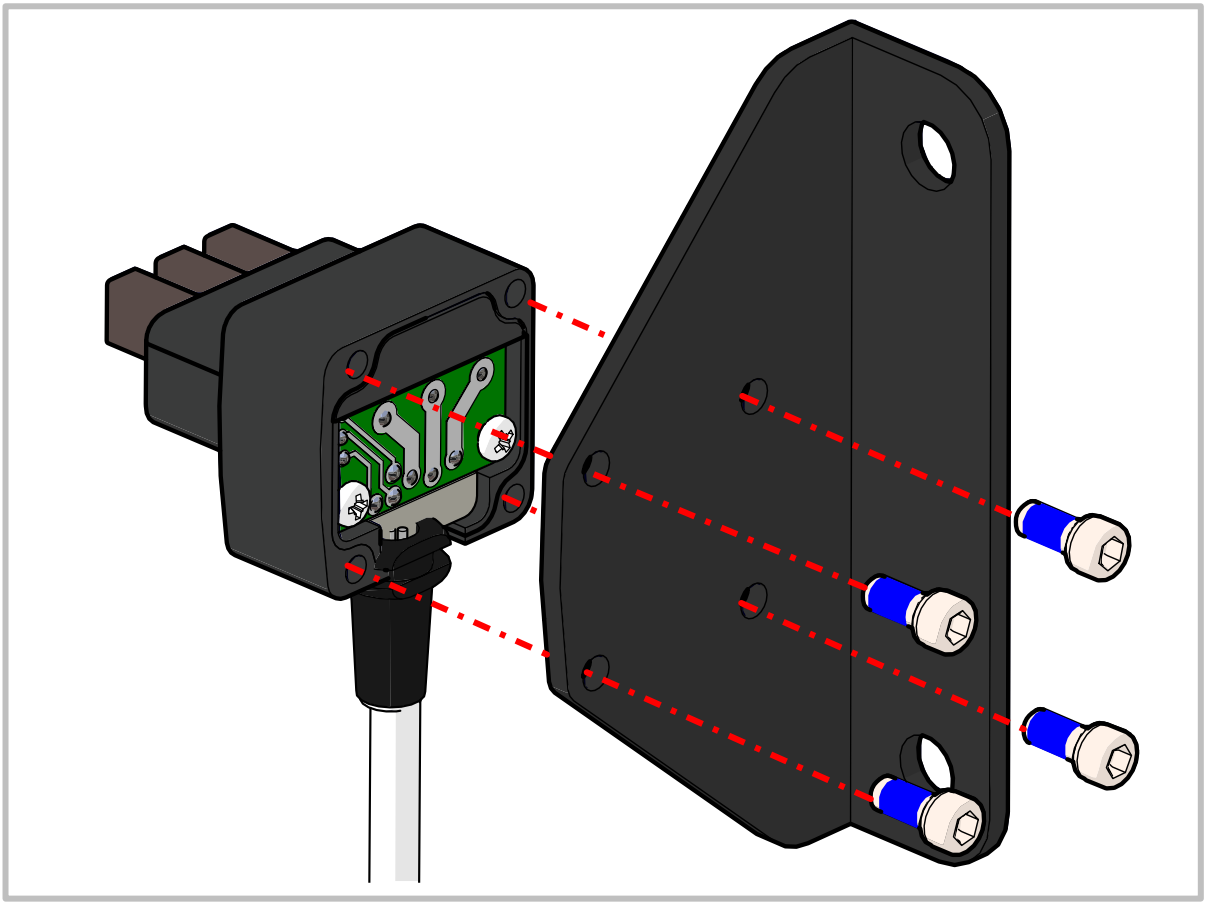
ASI-4-8-1

FITTING SENSOR-BRUSH BLOCK TO MOUNTING BRACKET

PROCEDURE



SUBJECT:	
Sensor-Brush Installation	
ASSEMBLY NO:	**APPLICABILITY:**
A0120 or A0122 | AR-xxx	All propeller models

1. TOPIC

1.1 Introduction

This document covers the procedure for fitting an Airmaster sensor-brush block to its dedicated mounting bracket (in some slipring assemblies, this bracket may be referred to as a brush block plate or a brush block extension). Generally, this task has already been completed for new propellers, but in some cases must be performed by the installer.

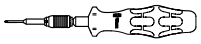
Various mounting bracket solutions are available to accommodate different engine and slipring configurations. The procedure for mounting the sensor-brush block to the engine (after fitting it to the bracket) and subsequent adjustment of the brush block position is covered separately.

2. MATERIAL REQUIREMENTS

2.1 Parts

ITEM	QTY	PART NO.	DESCRIPTION	IMAGE
1.	1	A0120 or A0122	Airmaster Sensor-Brush Assembly	
2.	4	P0863	8-32 UNC x 3/8” Cap Screw	
3.	1	As applicable (see AR-xxx)	Sensor-Brush Block Mounting Bracket	-

2.2 Tooling

ITEM	QTY	DESCRIPTION	IMAGE
1.	1	9/64” Hex Key	
2.	1	Torque Screwdriver (9/64” Hex) [2Nm]	

2.3 Consumables

ITEM	QTY	DESCRIPTION	IMAGE
1.	As required	Cleaning Agent (Non-Corrosive) *(e.g. Loctite® SF 7063, Methylated Spirits)*	
2.	As required	Paper Towels, Clean Cloth (or similar)	
3.	As required	Loctite 243	
4.	As required	Torque-Seal	

2.4 Paperwork

ITEM	QTY	CODE	DESCRIPTION
1.	1	AR-*xxx*	Airmaster Slipring Assembly Drawing & BoM

3. PROCEDURE

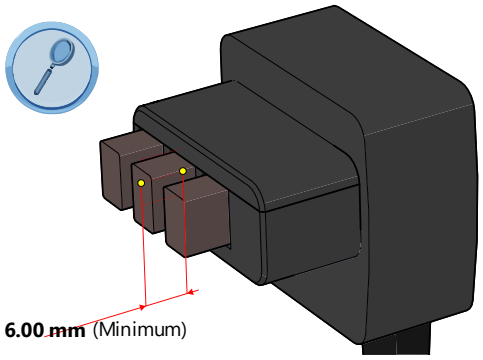
3.1 Preparation

PROCEDURE

Step 1 Inspect Brushes

- Inspect brushes for damage (e.g. cracking) under good illumination.
- Inspect brushes for wear, ensuring they protrude at least 6mm from the front of the brush holder.

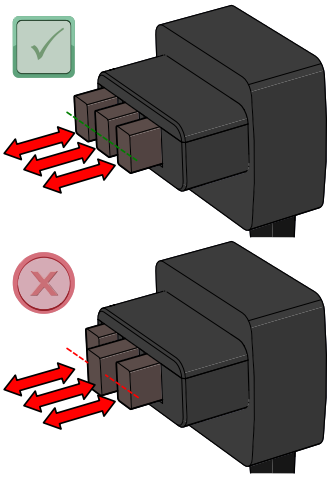
Note
*For more information on replacing worn brushes, refer to procedure **ASI-7-1-2**.*



Step 2 Check Brush Travel

- Carefully compress and release the brushes in unison to check they travel smoothly and evenly through the brush holder (without sticking).

Caution
The carbon brushes are delicate and should be handled with care. Avoid applying side load.

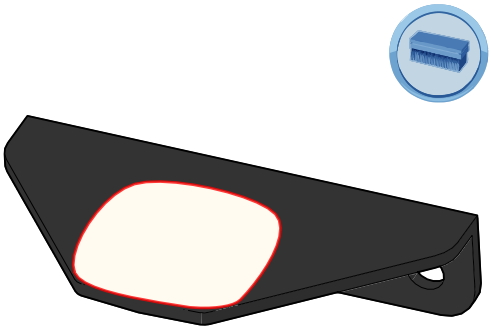


Step 3 Inspect Brush Mounting Bracket

- Clean mounting face of brush bracket to remove any oils, grease, or debris.

Note
Rotax standard mounting bracket (P0259) is shown.

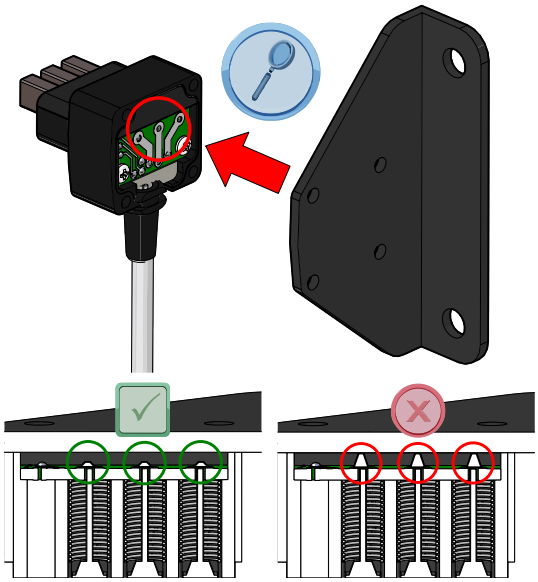
Attention *Methylated spirits, Paper towels*



Step 4 Check Solder Joint Height

- Dry-fit sensor-brush block against bracket.
- Check solder joints located on rear circuit board do not contact the bracket (this may create an electrical short).
- Trim solder joints as necessary to prevent contact.

Attention *Wire Cutter (as required)*



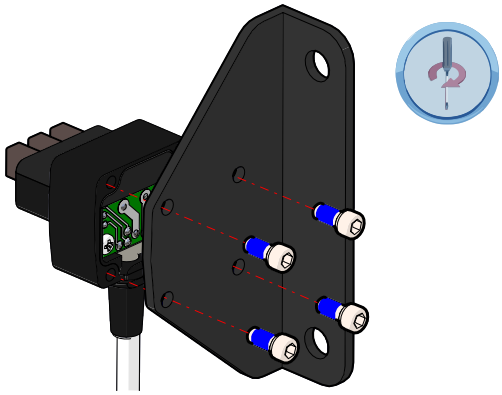
3.2 Attach Sensor-Brush Block to Bracket

PROCEDURE

Step 1 Fit Sensor-Brush Block to Bracket

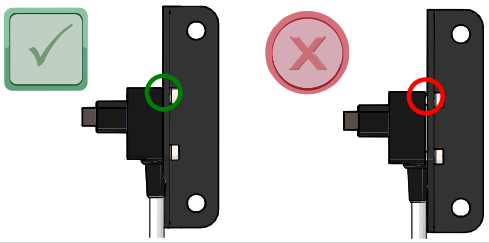
- Apply a thin stripe of Loctite 243 to the threads of (4) 8-32 UNC cap screws (*P0863*).
- Align curved edge of sensor-brush block with curved edge of bracket.
- Attach both parts with screws (refer to slipring assembly drawing for correct orientation).
- Torque cap screws to **2Nm (1.5ft-lbs)**.
- Indicate with torque-seal.

Attention
Loctite 243, Torque screwdriver (9/64” hex bit), Torque-seal



Step 2 Check Assembly

- Check there is no gap between the sensor-brush block and the mounting bracket.



3.3 Subsequent Action

Perform the following tasks once this procedure is complete:

- Mount sensor-brush block to engine in accordance with the applicable installation procedure.