

Instructions for Continued Airworthiness
McFarlane Aviation Inc. FAA-PMA Part Number MC88409-002 Baggage Door Lock Kit.
FAA PMA Number: PQ3732CE

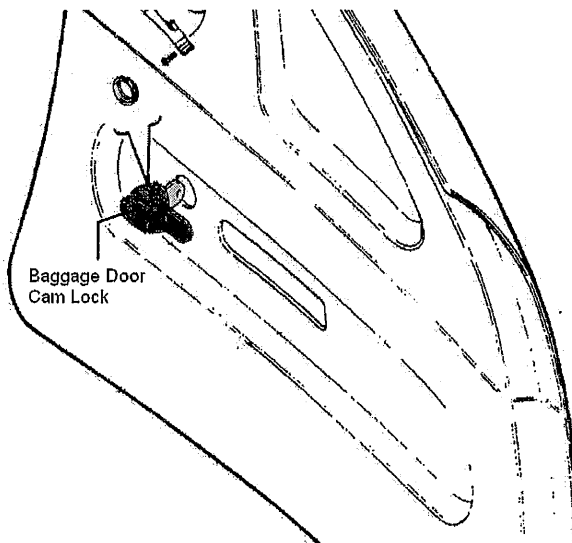
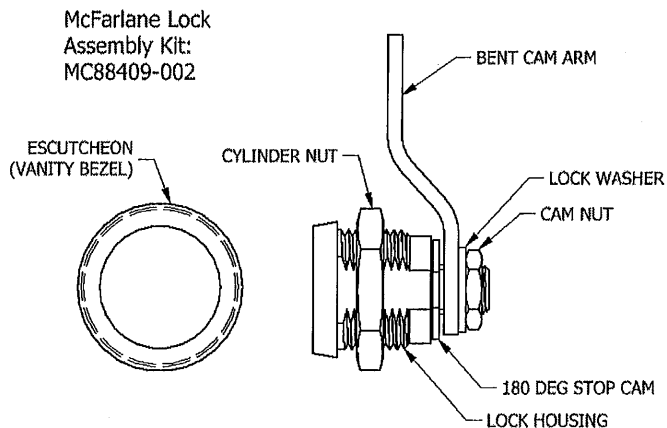
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INTRODUCTION

This document is intended to provide for the continued airworthiness of McFarlane Aviation, Inc. PMA Baggage Lock Assembly Kit eligible for installation on various Piper model aircraft. The kit part number is MC88409-02 and is comprised of the parts required to replace the baggage door lock located in the nose of the aircraft. This document specifically concerns the installation of the McFarlane Aviation lock assembly kit. For all items not related to the installation of the McFarlane Aviation, Inc. kit, refer to the basic airplane model service, parts manuals, and Piper SB1194. The McFarlane kit is a direct replacement for the Piper kit 88409-02.

SYSTEM DESCRIPTION

The affected Piper models employ a cam lock that locks the baggage door handle in place during operation. Due to wear and corrosion concerns, Piper SB1194 and FAA Airworthiness Directive 2009-13-06 R1 detail service and inspection requirements.



The McFarlane Aviation, Inc. pre-assembles the lock component of the kit as indicated. All parts are used. Note: For the Piper kit, Piper ships the components loose and includes several components that are discarded before installation.

SPECIAL OPERATING INFORMATION

The control and operation of the baggage door lock does not change with the installation of the door lock; see applicable Piper Model Service Manual for the operational control of this system.

PART REMOVAL, REPLACEMENT, AND SERVICE INFORMATION

Refer to the applicable Piper Model Service Manual and Service Bulletin SB1194 for installation/maintenance instructions and the applicable Piper Illustrated Parts Catalog for component part numbers.

The following instructions are provided for additional clarity:

1. Remove the existing door lock and discard.
2. Internal components (tumblers) are held in place **ONLY** by the key when the lock mechanism is removed from the lock housing. **Do NOT remove the key until lock has been fully installed.**
3. Remove the cylinder nut, bent cam arm, lock washer, and cam nut. These components are installed 'finger tight' for shipment from McFarlane.
4. Remove the lock mechanism from the lock housing.
5. Install the lock housing and escutcheon (vanity bezel) into the door. Note: The escutcheon is packed as a loose component.
6. Install the 3/4" nut. **Maximum torque: 115 in*lb. Exceeding the torque limit will damage the threads.** Note: Hold the lock with a wrench while tightening. Relying on the aircraft skin to hold the lock while tightening may cause damage.
7. Insert the lock from the front with the key horizontal.
8. Install the cam such that it is against the stop ('locked' position). Key must be able to rotate counter clockwise.
9. Install the lock washer and 5/16" cam nut. **Maximum torque: 20 in*lb. Exceeding the torque limit will damage the threads.**
10. Verify the following:
 - a. Lock operates freely.
 - b. Cam arm is fully engaged by the door latch and against the stop when the key is in the locked position (horizontal).
 - c. Cam arm is fully disengaged from the door latch when the key has been fully turned (approximately 90 degrees).

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			Title: Instructions for Continued Airworthiness for Piper Baggage Compartment Lock Installation		Drawing No: 6602	
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TROUBLESHOOTING

Refer to the applicable Piper Model Service Manual for troubleshooting instructions and the applicable Piper Illustrated Parts Catalog for component part numbers. The following troubleshooting instructions, specific to the McFarlane parts, apply:

Problem Description	Possible Cause	Solution
Lock will not turn	Stop cam preventing rotation	The stop cam should come against a fixed stop when the key is horizontal and free to rotate counter clockwise to raise the cam arm. Ensure the cam arm and stop cam are located to allow counter clockwise rotation from the locked position. Reinstall the lock according to the instructions.
Excessive play in lock mechanism	Cylinder nut loose	Inspect threads for damage. The lock must be replaced if the threads have been damaged.
		Tighten cylinder nut per step 6 of the installation instructions provided in section 'Part Removal, Replacement, and Service Information'.
	Cam nut loose	Inspect threads for damage. The lock must be replaced if the threads have been damaged.
		Tighten cam nut per step 9 of the installation instructions provided in section 'Part Removal, Replacement, and Service Information'.
Lock will rotate without key in lock and/or key may be removed when not in locked position.	The lock has been damaged internally.	Lock must be replaced.
Cam arm will not engage door latch	Escutcheon installed improperly	The escutcheon (vanity bezel) acts as a spacer. Ensure the lock has been installed with the escutcheon on the outside of the door.
	Door latch not positioned correctly	Ensure the door latch is pressed flush with the outside of the door when attempting to lock the door. Inspect the latch and repair if necessary according to Piper SB1194 and Piper service manuals.

Contact McFarlane Engineering if problems are not resolved.

PLACARDS

A placard for proper door lock operation (McFarlane P/N MC684-776B or MC684-776W) must be installed according to the instructions provided in MC88451 to be compliant with AD 2009-13-06 R1. Two choices of color scheme are provided, black or white text on clear vinyl. Select the color scheme that allows for greatest visibility of text.

DATA

All information to support the continued airworthiness of this replacement part is as defined herein and contained in:

- Relevant Piper Model Service Manuals.
- Relevant Piper Model Illustrated Parts Catalog.

INSPECTION

Ensure the lock has the required range of motion and the key can only be removed in the locked position. See Piper **SB1194** and applicable Service Manuals for further inspection criteria.

RECOMMENDED OVERHAUL PERIODS

No additional overhaul time limitations exist with the use of these parts.

AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Sec. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved. No additional airworthiness limitations exist.

ASSISTANCE & REVISIONS

ICA revisions shall be made available on the McFarlane website, www.mcfarlaneaviation.com/ICA. For questions or assistance regarding these Instructions for Continued Airworthiness (ICA), contact McFarlane Aviation, Inc via email or phone. Email: engineering@mcfarlaneaviation.com Phone: 1-800-544-8594 (within the US) or 1-785-594-2741.

			
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