

LIBERTY AEROSPACE, INC. SERVICE DOCUMENT Contains Useful Information Pertaining to Your Airplane	Category: 3 SERVICE BULLETIN (SB)
	SB-09-003 Technical Portions FAA Approved
Subject Rear Tapered Door Pins & AFM Revisions	

REASON FOR ACTION	The introduction of a new tapered rear door pin(s) and revisions to the Airplane Flight Manual ("AFM").
PURPOSE	To provide a new rear tapered pin for each door and to publish AFM revisions regarding door pin check and engagement prior to takeoff.
COMPLIANCE	Recommended at next service interval.
MODELS AFFECTED	Liberty XL-2 Aircraft SN0007, SN0009 through SN0127.

Description

This Service Bulletin introduces new tapered rear door pin(s) and revisions to the Airplane Flight Manuals as listed in the table below.

To ensure that the aircraft's doors are properly closed, latched and locked, the forward and aft pins must both be seated in their respective receptacles. If a pin is not properly seated in its receptacle, the door is not secure and could open in flight resulting in possible door and aircraft damage.

It is the responsibility of the pilot-in-command to ensure proper door closure prior to engine run-up and takeoff. If a door is opened or opens in flight, the Airplane Flight Manual, Section 3-12, should be followed.

Airplane Flight Manual ("AFM") and Airplane Flight Manual Supplement ("AFMS") Revisions

The BEFORE TAKEOFF and ENGINE RUN UP check lists have been revised to include the individual check of each door pin to ensure each door pin is seated in its receptacle and each door is fully closed. Additionally, Notes and/or Warnings have been added to Section 4 and Section 7 to emphasize the importance of full door closure prior to takeoff.

The AFM and AFMS revisions can be downloaded from Liberty's website, SUPPORT tab, XL2 Owner login: click "Technical Publications", then click "Airplane Flight Manual" and download the appropriate full sections or the full Airplane Flight Manual applicable to your aircraft Serial Number.

Insert the appropriate AFM or AFMS page revisions into your AFM or AFMS respectively.

Initial Public Release			Revised On			 100 Aerospace Drive Melbourne FL, 32901 (321) 752 - 0332	Page Number	Number of Pages	Revision Level
Month	Day	Year	Month	Day	Year				
12	15	09				1	6	A	

LIBERTY AEROSPACE, INC. SERVICE DOCUMENT Contains Useful Information Pertaining to Your Airplane		Category: 3 SERVICE BULLETIN (SB)
		SB-09-003 Technical Portions FAA Approved
Subject	Rear Tapered Door Pins & AFM Revisions	

AFM / AFMS Part Number	Revision	Section	Page
135A-970-005	R	4	14
		4	16
		7	13
135A-970-200	B	4	14
		4	15
		7	11
135A-970-500	C	4	14
		4	16
		7	13

Rear Tapered Pins

The new tapered rear door pins have an offset taper at the end to assist the capture of the fuselage receptacle by the door pin.

Door Pin Removal and Installation

Components Required

- QTY 1 135A-10-981 Taper pin (Starboard)
- QTY 1 135A-10-982 Taper pin (Port)
- QTY 4 MS 17826-3 Nut castellated self locking
- QTY 4 MS 24665-134 Split pin 1/16in by 3/4 in

Tools Required

- Phillips screwdriver.
- Standard screwdriver.
- Side cutters.
- Pointed alignment tool - make the pointed alignment tool from an ice pick. Put a bend 1-inch from the end of the ice pick. The bend should be approximately 45°.
- 3/8-inch socket or wrench.
- 2 pieces of 18 - 22 gauge wire (.032 Max.) 30 inches long.

Initial Public Release			Revised On			 100 Aerospace Drive Melbourne FL, 32901 (321) 752 - 0332	Page Number	Number of Pages	Revision Level
Month	Day	Year	Month	Day	Year		2	6	A
12	15	09							

LIBERTY AEROSPACE, INC.
SERVICE DOCUMENT

Contains Useful Information Pertaining to Your Airplane

Category: 3

SERVICE BULLETIN (SB)

SB-09-003

Technical Portions FAA Approved

Subject

Rear Tapered Door Pins & AFM Revisions

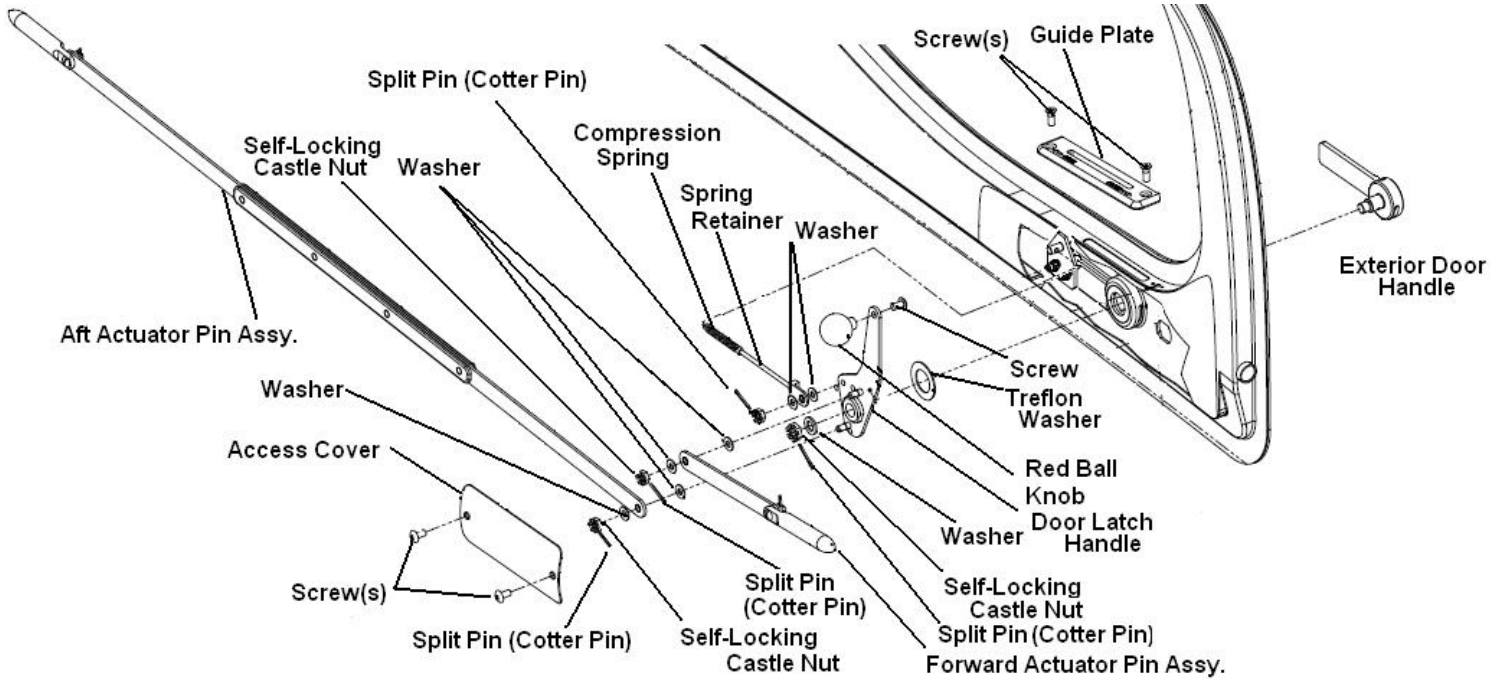


Figure 1. Door Latch and Pin Assembly (Port Side). Exploded view of the parts available for field replacement.

NOTES

To protect the surface of the door screen (window), place paper back tape, locally on the inside by the handle.

1. Open door to gain access to the mechanism.
2. Remove the two screws securing the access cover and remove the access cover.
3. Thread a safety wire through the hole in the actuator pin.
4. Remove the split pins from the castellated nut for the aft actuator pin assemblies; rotate the handle as necessary to gain access to the nut.

Initial Public Release			Revised On			 100 Aerospace Drive Melbourne FL, 32901 (321) 752 - 0332	Page Number	Number of Pages	Revision Level
Month	Day	Year	Month	Day	Year				
12	15	09				3	6	A	

LIBERTY AEROSPACE, INC. SERVICE DOCUMENT Contains Useful Information Pertaining to Your Airplane	Category: 3 SERVICE BULLETIN (SB)
	SB-09-003 Technical Portions FAA Approved
Subject	Rear Tapered Door Pins & AFM Revisions

- Use a 3/8-inch socket to remove the castellated nut. Remove the first washer. Remove the aft actuator pin & bar assembly from the lower stud on the handle.
- Lift the aft actuator pin & bar assembly from the stud on the door latch handle. Carefully remove the second washer from the door latch handle, using the safety wire to assist in guiding the actuator pin through the interior of the door. Leave the wire in place (threaded through the door).
- Dismantle old pin from pin & bar assembly.
- Rebuild the pin & bar assembly using the following: Taper pin 135A-10-981 must be added to the starboard bar, 135A-10-982 must be added to the port bar. New castellated nuts and split pins must be used throughout. **Prepare the actuator bars as shown in Figure 2 below ensuring that 135A-10-982 is on the left hand side (Port) and aligned with head of the bolt inboard and the point of pin is downward prior to installing it within the door unit. Repeat for the right hand side (starboard) door, taking care to install the assembly with the head of bolt inboard and the point of pin downward.**

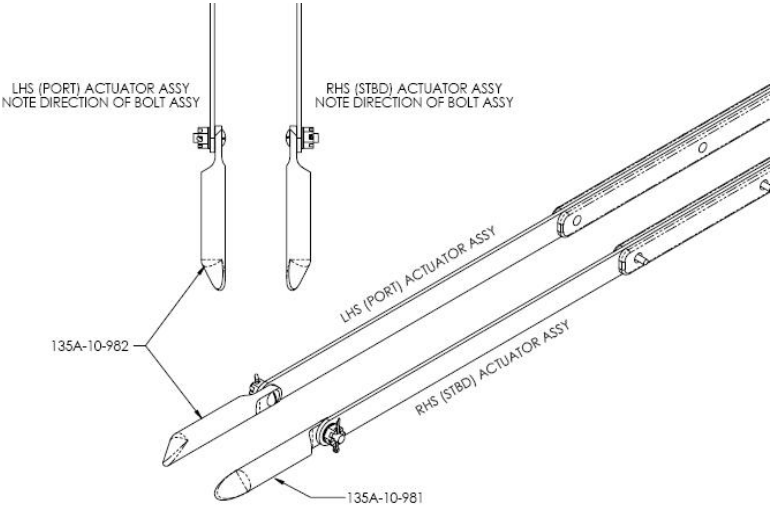


Figure 2. Door Pin and Bar Assembly.

- Tape or epoxy bond (allow to cure) safety wire to the sloping face of both pins to assist in feeding the reconfigured aft actuator pin & bar assembly through the door guide. Note: care should be taken at all times to ensure that the wire remains attached to the pin during the guiding process and that the cylindrical portion of the pin is clean, otherwise the pin will not pass thru the pin guide in the rear face of the door.
- Install the aft actuator pin and bar assemblies using the guide wire from steps 6.

Initial Public Release			Revised On			 100 Aerospace Drive Melbourne FL, 32901 (321) 752 - 0332	Page Number	Number of Pages	Revision Level
Month	Day	Year	Month	Day	Year		4	6	A
12	15	09							

LIBERTY AEROSPACE, INC. SERVICE DOCUMENT Contains Useful Information Pertaining to Your Airplane	Category: 3 SERVICE BULLETIN (SB)
	SB-09-003 Technical Portions FAA Approved
Subject	Rear Tapered Door Pins & AFM Revisions

11. Install a washer on to the lower stud of the door latch handle.
12. Install the aft actuator pin assembly on to the lower stud.
13. Install the second washer on top of the aft actuator pin assembly.
14. Using new castellated nuts, thread on the 10/32-inch UNF castellated nut until snug. Back the nut off enough to align the castle nut with the hole in the stud. The castle nut is on with the correct torque if the forward or aft actuator pin assemblies can easily move on the stud, but is not overly loose.
15. Install the split pin. Use a new 1/16-inch diameter split pin.
16. Remove the alignment wire and all traces of glue/tape used in step 9 of the procedure.
17. Install the access cover and secure the access cover with two screws.
18. On completion of installation, perform a ground functional evaluation by opening and closing each door from both the inside and outside, ensuring proper fit and function.

Any observed restriction in motion, galling of material, or hinderance to normal latching of locking operation should be resolved and reported to Liberty Aerospace Customer Support.

Please contact Liberty Aerospace to request the shipment of Components Required (listed above). The cost of the Components Required and shipping is covered by Liberty Aerospace.

The labor cost of performing the installation of the tapered pins identified within this Service Bulletin is not covered under Warranty or by Liberty Aerospace. Please enter this procedure in your aircraft log book and return it to Liberty Aerospace Customer Support by regular mail, fax, or scanned and attached to an email indicating that **SB-09-003** has been received and performed.

Email: CustomerSupport@libertyaircraft.com

Fax: (321) 600 - 2123

Regular Mail: ATTN: Customer Support
 Liberty Aerospace, Inc.
 100 Aerospace Drive, Unit 6
 Melbourne, FL 32901

Initial Public Release			Revised On			 100 Aerospace Drive Melbourne FL, 32901 (321) 752 - 0332	Page Number	Number of Pages	Revision Level
Month	Day	Year	Month	Day	Year				
12	15	09				5	6	A	

LIBERTY AEROSPACE, INC. SERVICE DOCUMENT Contains Useful Information Pertaining to Your Airplane	Category: 3 SERVICE BULLETIN (SB)	
	SB-09-003 Technical Portions FAA Approved	
Subject	Rear Tapered Door Pins & AFM Revisions	

LIBERTY XL-2 AIRCRAFT SERIAL NUMBER		
AIRCRAFT TACH HOURS AT TIME OF INSPECTION		
DID YOU REPLACE YOUR REAR DOOR PINS?	YES	NO
INSPECTION AND / OR REWORK COMPLETION DATE		
Owner / Operator's Name		
Owner / Operator's Address		
Owner / Operator's Telephone Number		
Owner / Operator's Signature		

Initial Public Release			Revised On			 100 Aerospace Drive Melbourne FL, 32901 (321) 752 - 0332	Page Number	Number of Pages	Revision Level
Month	Day	Year	Month	Day	Year				
12	15	09				6	6	A	