

PARAVION TECHNOLOGY, INC.  
2001 AIRWAY AVENUE  
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**REPORT NO. PR-407PDO-120M**  
**PNEUMATIC DOOR OPENER SYSTEM**  
**BELL MODEL 407**

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

COVER  
PR-407PDO-120M  
Rev. 1, 12/12/05

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**RECORD OF REVISIONS**

REVISION NO.	ISSUE DATE	DATE INSERTED	BY
ORIGINAL			
1	01/09/06		

**REVISION CONTROL PROCEDURE**

Revisions to this document are mailed to owner of record. Before inserting a change, ensure this manual is correct. Check the existing List of Effective Pages in this manual to ensure that all prior revisions are inserted. **Do not insert this revision if prior revisions are not inserted**

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**LIST OF EFFECTIVE PAGES**

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These Instructions for Continued Airworthiness (ICA) except for the Airworthiness Limitations Section, have been reviewed and found to comply with the applicable requirements of Appendix A to the Federal Aviation Regulations Part 27.

FAA Acceptance Edwin Richard Thomas Date 01-15-98  
 Fort Worth Aircraft Evaluation Group

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**AIRWORTHINESS LIMITATIONS**

The Airworthiness Limitations Section is FAA approved and specifies inspections and other maintenance required under §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

**No airworthiness limitations associated with this type design change.**

**This system has no life-limited components.**

REVISION	DATE	APPROVED
0	01/20/98	Greg Schreck
1	01/03/06	David Grossman

**1.0 GENERAL INFORMATION**

The Pneumatic Door Opener installation uses a pneumatic cylinder to open the door on which it is installed. The system is comprised of a cylinder with brackets attached to the door and door frame. A safety clip is installed on each of the pneumatic cylinder rod ends.

The Pneumatic Door Opener System (PDO) may be installed on various door locations and/or the baggage compartment door. Specific components are required at different door locations. The applicable components can be determined from the Parts List (page 3).

**2.0 MAINTENANCE PROCEDURES**

**TABLE 1  
 ANNUAL/300 HOUR INSPECTION**

ITEM/SYSTEM	PROCEDURE
SAFETY CLIPS (ES39202-1)	VERIFY INSTALLATION NOTE: ALTERNATE TO ES39202-1 IS AN381-1-14
DOOR MOUNT BRACKETS INSTALLATION	CHECK FASTENERS SECURITY, BRACKET CONDITION. REPLACE AS NECESSARY*
FUSELAGE MOUNT BRACKETS INSTALLATION	CHECK FASTENERS SECURITY, BRACKET CONDITION. REPLACE AS NECESSARY*
PNEUMATIC CYLINDER	CHECK OPERATION.

\* Refer to aircraft manufacturer's data for airframe repair, if required.

**TABLE 2  
 TROUBLE-SHOOTING PROCEDURES**

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
PNEUMATIC CYLINDER DOES NOT OPEN DOOR	WORN CYLINDER	REPLACE
BALL STUD LOOSE	COMPONENTS WORN	REPLACE AFFECTED COMPONENT(S)
	BALL STUD MOVES IN BRACKET	RETORQUE STUD FASTENER

**TABLE 3  
 WEIGHT AND BALANCE DATA**

DOOR	WT. (LB.)	F.S. (IN.)	B.L. (IN.)
FWD LEFT INST'N.	1.25	51.5	- 26
FWD RIGHT INST'N.	1.25	51.5	+26
AFT LEFT INST'N.	1.25	109.0	- 29
AFT RIGHT INST'N.	1.25	109.0	+29
BAGGAGE INST'N.	1.25	161.0	- 25

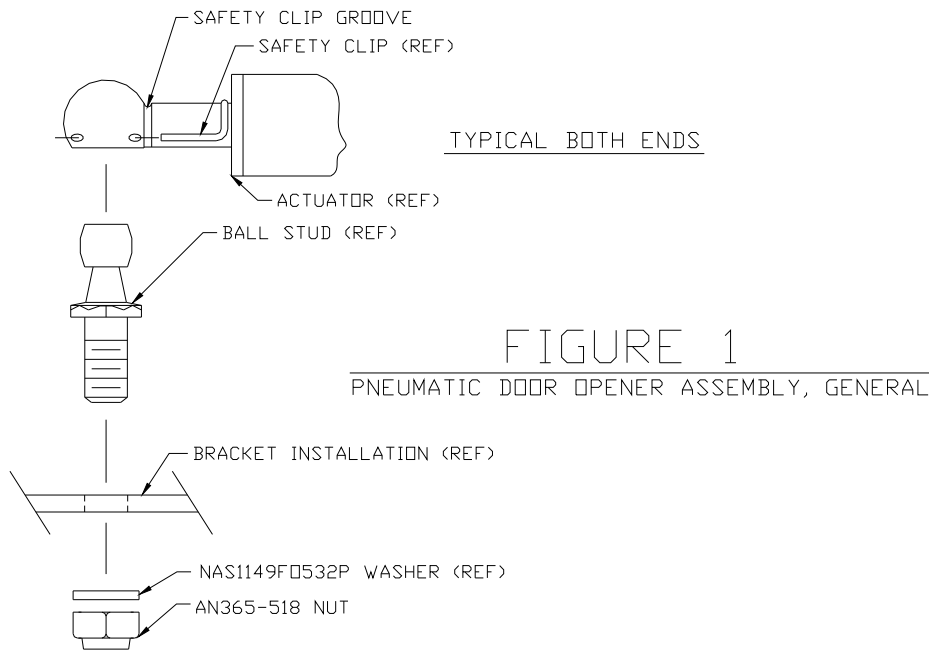
**NOTE:** Each actuator cylinder weighs 0.5 pounds. Adjust aircraft weight and balance records when cylinders are removed or installed.



3.0 **PARTS LISTING**

ITEM	NAME	LOCATION	NO. REQUIRED
ES39200-2	ACTUATOR (3)	FWD DOOR INSTALLATION	1 EA. SIDE
ES39200-9	ACTUATOR (3)	AFT DOOR INSTALLATION	1 EA. SIDE
ES39200-3	ACTUATOR (3)	BAGGAGE DOOR INSTALLATION	1
ES39202-1	SAFETY CLIP	EA. END ACTUATOR	2 EA. ACTUATOR
407PDO-2000-1	DOOR FRAME BRKT.(2)	FWD DOOR; LEFT	1
407PDO-2000-2	DOOR FRAME BRKT.(2)	FWD DOOR; RIGHT	1
407PDO-2010-1	SPACER	FWD DOOR INSTALLATION	1 EA. SIDE
206DC-2330-1	DOOR PANEL BRKT.(2)	FWD DOOR PANEL	1 EA. SIDE
407PDO-2100-1	DOOR FRAME BRKT.(2)	AMBULANCE DOOR PANEL	1
407PDO-2100-2	DOOR FRAME BRKT.(2)	AFT DOOR; RIGHT	1
407PDO-2110-1	CHANNEL (STIFFENER)	AMBULANCE DOOR PANEL	1
407PDO-2200-1	DOOR PANEL BRKT.(2)	AFT DOOR PANEL	1 EA. DOOR
407PDO-2500-1	DOOR FRAME BRKT.(2)	BAGGAGE DOOR FRAME	1
407PDO-2510-1	DOOR PANEL BRKT.(2)	BAGGAGE DOOR PANEL	1
407PDO-2515-1	SPACER (4)	BAGGAGE DOOR FRAME	1
CR-3553-4-3	RIVET (1)	FWD DOOR PANEL	12 EA. DOOR
		AFT DOOR; PANEL	8 EA. DOOR
		AFT DOOR FRAME; RIGHT	6
CR3553-4-5	RIVET (1)	AFT DOOR FRAME RIGHT	4
CR3553-4-6	RIVET (1)	FWD DOOR FRAME	9 EA. SIDE
1624-0411	RIVET	BAGGAGE DOOR PANEL	18
AN526C8R8	SCREW	AMBULANCE DOOR PANEL	4
NAS1149FO363P	WASHER	BAGGAGE DOOR FRAME	2
NAS6603-6	BOLT	BAGGAGE DOOR FRAME	2
NAS1149CN816 R	WASHER	AMBULANCE DOOR PANEL	8
AN364-832	NUT	AMBULANCE DOOR PANEL	4
SEALANT	MIL-S-8802F, CL B2 OR PROSEAL 890	SEAL UNDER BRACKETS	AS REQUIRED

1. Rivet length may vary for proper fit.
2. Includes a replaceable Ball Stud P/N ES39201-1, NAS1149F0532P washers as required and AN365-518 nut.
3. Includes two (2) replaceable rod ends (P/N ES39203-1).
4. The 407PDO-2515-1 Spacer is not required if auxiliary fuel tank kit is installed.



### PDO CYLINDER REMOVAL, ORDER

1. Remove Safety Clips
2. Remove Cylinder from Ball Studs

### PDO CYLINDER INSTALLATION

1. Press cylinder rod ends over ball studs.
2. Insert safety clips through cylinder rod ends and snap into groves.

NOTE: Install the actuator with the cylinder rod attached to the door.

### BRACKET REPLACEMENT

1. Remove interior panels as required for access.
2. Remove the existing rivets and/or screws attaching the bracket.
3. Remove the bracket.
4. Clean the surface area where the bracket makes contact on the aircraft.
5. Match drill the new bracket to the existing holes in the aircraft.
6. Determine the exact size and length of the rivet if applicable for each hole. **Note: Oversized rivets may be required.**
7. Apply a thin coat of Pro-Seal to the contact surface of the bracket.
8. Attach the bracket using the required rivets and or screws.
9. Replace any interior panels that may have been removed.