

**PARAVION TECHNOLOGY, INC.  
2001 AIRWAY AVENUE  
FT. COLLINS, COLORADO 80524**

REPORT NO. PR-407PX-900M

INSTALLATION INSTRUCTIONS

FOR

407PX-100 PEDAL EXTENSION INSTALLATION

**REVISIONS**

<u>REV.</u>	<u>DATE</u>	<u>DESCRIPTION</u>	<u>BY</u>
N/C	09/17/97	Original	REB
A	03/05/98	Re-written to identify drawing by item numbers	REB
B	07/14/98	Added Foam Pad Note	REB
C	05/24/99	Added Appendix A and Technical Bulletin 407PX-99-1, corrected Column headings in Table 1	PR
D	10/11/00	Corrected Table I, Weight and Balance Data	MK
E	11/01/02	Paragraph 1.11 was AD99-06-15 superceded by AD2000-14-16. Added references 4, 5 & 6.	JB
F	01/28/08	Added <b>Note</b> reference bolt torque procedure, paragraph 1.5	REB

**LIST OF REFERENCES**

1. 407PX-100 Installation Drawing
2. BHT-407-MM-8
3. BHT-ALL-SPM
4. AD 2000-14-16 dated 08/29/2000
5. TB 407PX-99-1, TB 407PX-00-1
6. BHTC ASB# 407-99-33



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## 1.0 INSTALLATION INSTRUCTIONS

- 1.1 Disconnect P/N 206-001-096 control tube assembly from bell crank in accordance with applicable bell repair and overhaul manual.
- 1.2 Remove pedal support and pedals from aircraft. Disassemble P/N 206-010-748 pedals and P/N 206-001-701 links. Disassemble the pedals from the P/N 206-001-713 support.
- 1.3 Remove existing foam pad from between support assembly mounting ears. Drill 0.250 dia. Holes through outer arms of P/N 206-001-713 support in accordance with drawing 407PX-100.
- 1.4 Using existing hardware, and Item 13 or Item 14 washers as required to fill gap, assemble Item 1 arm assemblies to modified support in place of P/N 206-001-748 pedals. Position raised face on link arm assembly away from center of support assembly so that bell crank linkage can be secured at this location. This allows clearance between attachment hardware and pedal support.

**Note:** Using washers to fill gap, center link arm in opening to assure bolt clearance from support assembly.

- 1.5 Assemble item 2 channels to Item 1 arm assemblies with washers inside the channel to fill gap. Insert Item 5 bolts with item 6 washers on each side of channel. Use Item 11 nuts and Item 8 cotter pins to complete assembly.

**NOTE:** Torque bolt/nut to 50 in-lb. Test for smooth bearings operation and assure that bolt does not turn in channel. Reduce torque if necessary to achieve smooth bearing operation. Torque must be sufficient to ensure bolt does not rotate in channel during pedal operation.

- 1.6 Assemble Item 4 rod assemblies to modified support and to Item 2 channels using washers on each side of the bearings, secure using Item 10/18 bolts, Item 9/6 washers inside the channel, and Item 7/11 nuts. Lock nuts to bolts with item 8 cotter pins. Using contact cement or equivalent reinstall foam pad, it may be necessary to trim pad to fit properly.

**Note:** Adjust rod assemblies to position channels parallel with floor, tighten jam nuts.

- 1.7 Install P/N 206-001-701 links to Item 1 arm assemblies using Item 12 bolts, 6 washers, existing washers, and castellated nut. Lock bolt assembly with item 8 cotter pin.
- 1.8 Remove P/N 206-070-589 heel rests. Trim heel rests and support for pedal assembly. Clearance (Ref. View B-B). Match drill heel flanges Items 16, 17 as applicable  $\varnothing$  0.201 for installation under heel rest. Reinstall heel rests with heel flanges using existing hardware.

- 1.9 Reinstall pedal support and control tube assembly in accordance with BHT-407-MM-8, BHT-ALL-SPM.

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Rev. E, 10/11/00

- 1.10 Relocate the manufacturers name plate to assure that the inboard pedal assembly cannot bind (-2/-4 installation only) as applicable.
- 1.11 Adjust the pedals according to the rigging instructions in AD 2000-14-16, BHT ASB#407-99-33 and Paravion technical bulletins 407PX-00-1 or latest revision.

**Note:** When installation has been completed, install Item 3 pedal assemblies into their channels at the most extreme locations. Verify that full pedal travel is not restricted. Also verify that previously installed equipment cannot interfere with the pilot's feet in any control position.

- 1.12 After completing the above steps, the pedal assemblies should be moved to the location most comfortable to the pilot operating the controls. Note that the roll pin protruding from the pedal assembly must face forward. Item 15 pin must be inserted in the pedal shaft. The lock ring in the pin must be snapped over the pedal shaft Ref. drawing 407PX-100.
- 1.13 Amend aircraft's weight and balance data and the equipment list in the flight manual supplement.

**TABLE I**

<b><u>WEIGHT AND BALANCE DATA; 407PX-100 INSTALLATION</u></b>					
Weight and Center-of-Gravity is as follows:					
ITEM	WT. (lb)	F.S. (in)	LONGITUDINAL MOMENT (in.-lb.)	B.L. (in.)	LATERAL MOMENT (in.-lb.)
407PX-100-1 (LEFT)	3.5	34.8	121.8	11.25 (LBL) (-11.25)	-39.4
407PX-100-2 (RIGHT)	3.5	34.8	121.8	14.0 (RBL) (+14.0)	+49
407PX-100-3 (LEFT)	3.4	34.8	118.3	11.25 (LBL) (-11.25)	-38.3
407PX-100-4 (RIGHT)	3.4	34.8	118.3	14.0 (RBL) (+14.0)	+47.6

**APPENDIX A**  
**TECHNICAL BULLETIN**



## Technical Bulletin

407PX-00-1

02/18/00

**TO:**

Owners/Operators of Bell Model 407 Helicopters, Serial # 53000 and subsequent.

**SUBJECT:**

Proper rigging procedures for Bell Helicopter Textron Alert Service Bulletin # 407-99-33 with Paravion Technology, Inc. (PTI) Pedal Extension Kit P/N 407PX-100-(X) installed.

**REFERENCES:**

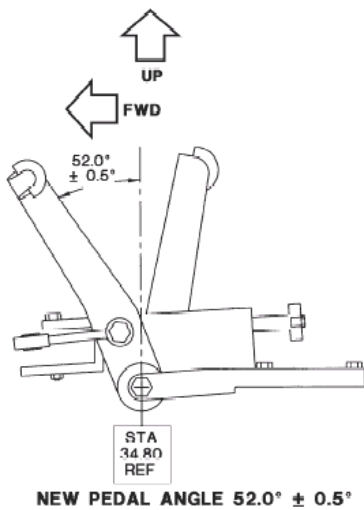
1. Bell Helicopter Textron Alert Service Bulletin ASB# 407-99-33 dated 12/17/99 or later FAA/Transport Canada approved revision.

**INTRODUCTION:**

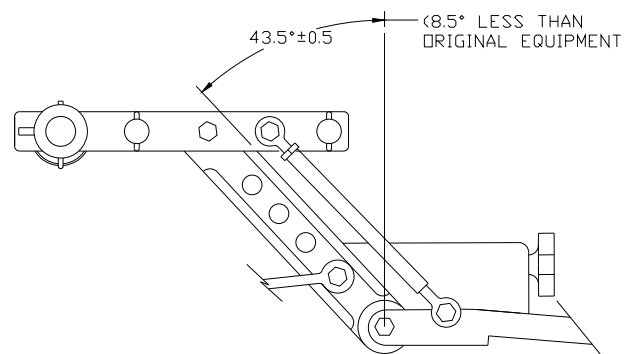
The information contained in this Bulletin lists the differences in measured pedal angle between the standard Bell tail rotor pedal and PTI's Tail Rotor Pedal Extension Kit.

**RIGGING INSTRUCTIONS:**

You must have complied with applicable revision of BHT ASB# 407-99-33 except as follows: Indicated pedal angle for Paravion Pedal Extension Kit is  $8.5^\circ$  less than the Bell standard pedal installation, when measured from the vertical plane (Reference: Figure 1).



Bell Configuration



Paravion Configuration

Figure 1

**Technical Bulletin**  
**407PX-99-1**  
**05/03/99**

**TO:** Owners/Operators of Bell Model 407 Helicopters, Serial # 53000 and subsequent.

**SUBJECT:** Proper rigging procedures for Bell Helicopter Textron Alert Service Bulletin # 407-99-33 with Paravion Technology, Inc. (PTI) Pedal Extension Kit P/N 407PX-100-X.

- REFERENCES:**
2. AD 2000-14-16 issued 08/29/2000 or later revision.
  3. Bell Helicopter Textron Technical Bulletin # 407-98-13 dated 12/12/98 or later revision.

**INTRODUCTION:**

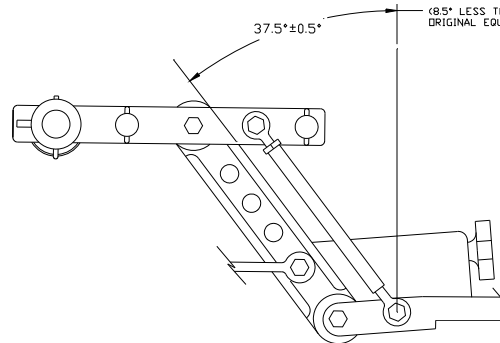
The information contained in this Bulletin lists the differences in measured pedal angle between the standard Bell tail rotor pedal and PTI's Pedal Extension.

**RIGGING INSTRUCTIONS:**

Comply with applicable revision of AD2000-14-16 except as follows:  
Indicated pedal angle for Paravion Pedal Extension Kit is 8.5° less than the Bell standard pedal installation, when measured from the vertical plane (Reference: Figure 1).

**APPROVAL:**

The Manager of the Rotorcraft Certification Office has approved (see accompanying FAA letter) this technical bulletin as an acceptable Alternate Method of Compliance (AMOC) to AD 99-06-15 issued 03/09/99.(Revised by AD 2000-14-16)



Bell Configuration

**Figure 1**

Paravion Configuration