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FT. COLLINS, COLORADO 80524**

**INSTRUCTIONS FOR CONTINUED AIRWORTHINESS**

**206LS-100 INSTALLATION  
(Left Seat Pilot-in-Command)**

**BELL MODEL 206A/B AND 206L SERIES HELICOPTERS**

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**RECORD OF REVISIONS**

<b>REVISION NO.</b>	<b>ISSUE DATE</b>	<b>DATE INSERTED</b>	<b>BY</b>
ORIGINAL			

**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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B (BLANK)	0	03/14/03
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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

*Manuel Perez*  
Fort Worth Aircraft Evaluation Group

Date *4/8/03*

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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 limitation associated with this type design change.**

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

REVISION	DATE	APPROVED
ORIGINAL	06/20/03	Roger Caldwell

## 1.0 SYSTEM DESCRIPTION

The 206LS-100 Installation for left seat pilot-in-command operation is comprised of the following:

- a. 206LS-200-1 Compass/Placard Installation (Bell 206B and L series, S/N 914 and Subs.)
- b. 206LS-200-1 Compass/Placard Installation (Bell 206A/B, S/N 154 thru 913)

The 206LS-200 Compass/Placard Installation is located inside the aircraft on the center instrument console. This installation is provided as part of the left seat pilot certification of the Bell Model 206 aircraft, which allows single pilot operation of the aircraft from the left crew seat.

System Weight: 0.6 lbs.

## 2.0 INSPECTION AND MAINTENANCE

2.1 It is the objective of this inspection and maintenance procedure to ensure that component installations are secure and that the electrical system is airworthy. All loose and/or replaced fasteners should be torqued 3 to 6 in/lbs. In the event of a damaged or malfunctioning compass, the compass must be returned to the manufacture (or approved instrument repair station) for repair or replacement.

### 2.2 206LS-200-1/-2 Compass Installation

- 2.2.1 Inspect compass wiring for insulation damage and chafing. Replace compass wire or compass as necessary.
- 2.2.2 Inspect compass and compass mount for stress, corrosion, and cracking. Any components with cracks should be removed and sent to Paravion Technology, Inc.
- 2.2.3 Inspect all screwed connections. Replace all worn screws and/or fittings. Torque MS35214-27 and -32 screws to approximately 3 to 6 in-lbs, torque MS35214-43 screws to approximately 7 to 9 in-lbs.
- 2.2.4 Inspect and replace all worn self-locking nuts. Torque MS20365D632 nuts to approximately 3 to 6 in/lbs.

### 2.3 Compass Compensation Information

- 2.3.1 Each aircraft has its own inherent magnetic pattern and no two are alike, even off the same assembly line. The inherent magnetic pattern of an aircraft is a product of magnetic influences, physical presence in ferrous metal used in structure or components, induced, by electrical circuits of varying strength and location, and the earth's magnetic field.



- 2.3.2 From the above, one realizes that it is highly desirable to have the aircraft as close to flying configuration as possible, or flying, as the compensation procedure is followed. Known magnetic headings may be obtained for ground compensation by the use of a compass rose, master compass, or transit-pylorus. For taking each reading, the engine rpm should be at normal cruise and electrical and radio equipment should be in the flying norm. A directional gyro is a convenient azimuth reference with frequent rechecks of the original known magnetic heading to check possible drift. It is a good policy to confirm all ground compensations in flight.
- 2.3.3 On a smooth air day the compensation procedure may be followed in flight using the directional gyro azimuth with frequent rechecks of the original known magnetic heading to check possible drift. A known magnetic heading may be from a runway, section lines (with magnetic variation figured), or a railroad.
- 2.3.4 **IMPORTANT:** *The compensator is in neutral when the dots on the adjusting screws are aligned with the dots on the compensator face – NINE O’CLOCK. MAXIMUM compensator correction is attained when the adjusting screw is rotated – clockwise or counter-clockwise - 180°, or to THREE O’CLOCK. DAMAGE to the compensator mechanism will occur if the adjusting screws are forced beyond 180° in either direction.*

#### 2.4 Compass Compensation Procedure

- 2.4.1 The poly-plane compensator used on the ES59153 Magnetic Compass has a deviation correction range of approximately plus or minus twenty degrees on the cardinal headings. The readings in quadrants between cardinal headings are products of the adjacent cardinal headings corrective adjustments.
- 2.4.2 Use a non-magnetic screwdriver for making adjustments.
- 2.4.2.1 Starting with the aircraft on a known magnetic heading of North, use the N-S adjusting screw to remove all deviation so the compass indicates North. The N-S adjusting screw is the LH screw on the compensator.
- 2.4.2.2 Rotate the aircraft to a known magnetic heading of East, use the E-W adjusting screw to remove all deviation so the compass indicates East. The E-W adjusting screw is the RH screw on the compensator.
- 2.4.2.3 Rotate the aircraft to a known magnetic heading of South. Note the degrees of deviation. Using the N-S adjusting screw, remove one half of the deviation.
- 2.4.2.4 Rotate the aircraft to a known magnetic heading of West. Note the degrees of deviation. Using the E-W adjusting screw, remove one half of the deviation.
- 2.4.2.5 Return the aircraft to the known magnetic heading of North to confirm its relation to South. The deviation should be the same. In some aircraft “fine tuning” adjustments and rechecks are necessary.

2.4.2.6 Return the aircraft to the known magnetic heading of East to confirm its relation to West. The deviation should be the same. In some aircraft “fine tuning” adjustments and rechecks are necessary.

2.4.2.7 On completion of the preceding procedure, the aircraft is rotated to each 30 degree known magnetic heading thru 360 degrees and the deviation is recorded on the compass correction card.

2.4.2.8 The compass correction card should be installed close to the compass and convenient for the pilot to read.

### 3.0 COMPONENT REMOVAL AND REPLACEMENT

#### 3.1 206LS-200-1/-2 Compass Removal

3.1.1 Insure that the power is off to the Instrument Panel Breaker.

3.1.2 Disconnect compass wires from the terminal block and ground lug, reference figure 3.

3.1.3 Loosen and remove the fastening screws attaching the compass bracket to the center console.

#### 3.2 206LS-200-1/-2 Compass Replacement

3.2.1 Insure that the power is off to the Instrument Panel Breaker.

3.2.2 Connect the compass wires to the terminal block and available ground lug, reference figure 3.

3.2.3 Install compass assembly on the instrument panel shroud with the fastening hardware as shown in figures 1 and 2.

3.2.4 Torque MS35214-27 and -32 screws to approximately 3 to 6 in-lbs, torque MS35214-43 screws to approximately 7 to 9 in-lbs. Torque MS20365D632 nuts to approximately 3 to 6 in/lbs

## **FIGURES**

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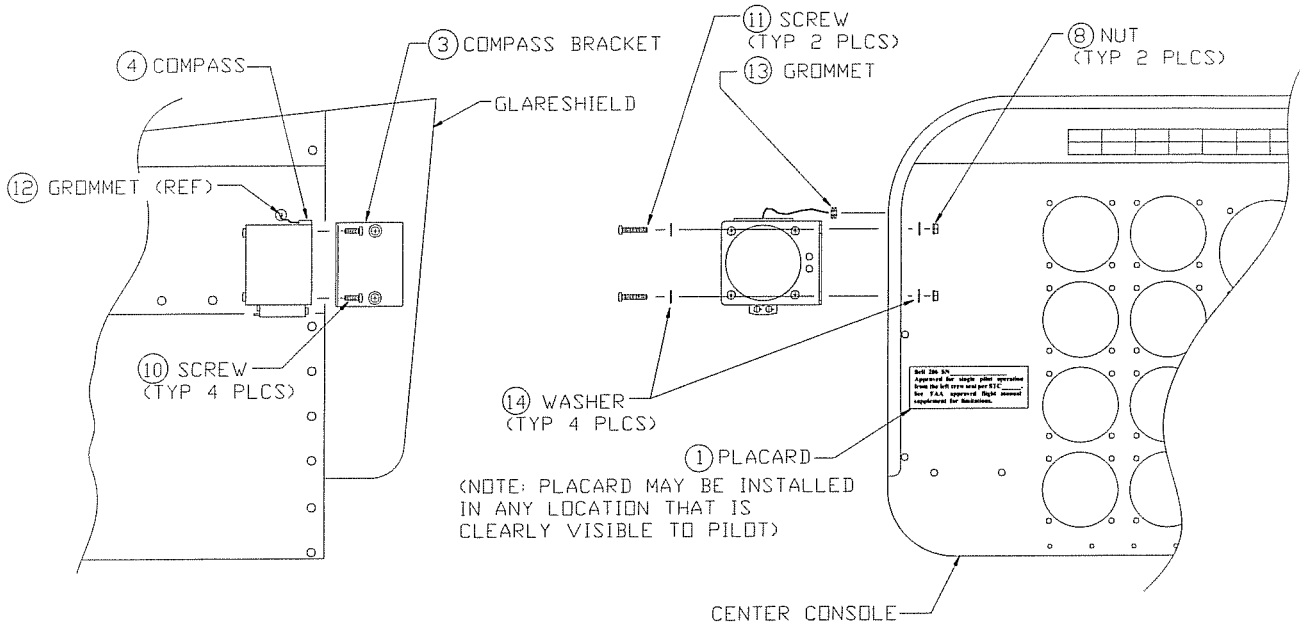


Figure 1. 206LS-200-1 Installation  
 (Bell 206, S/N 914 and Subsequent)

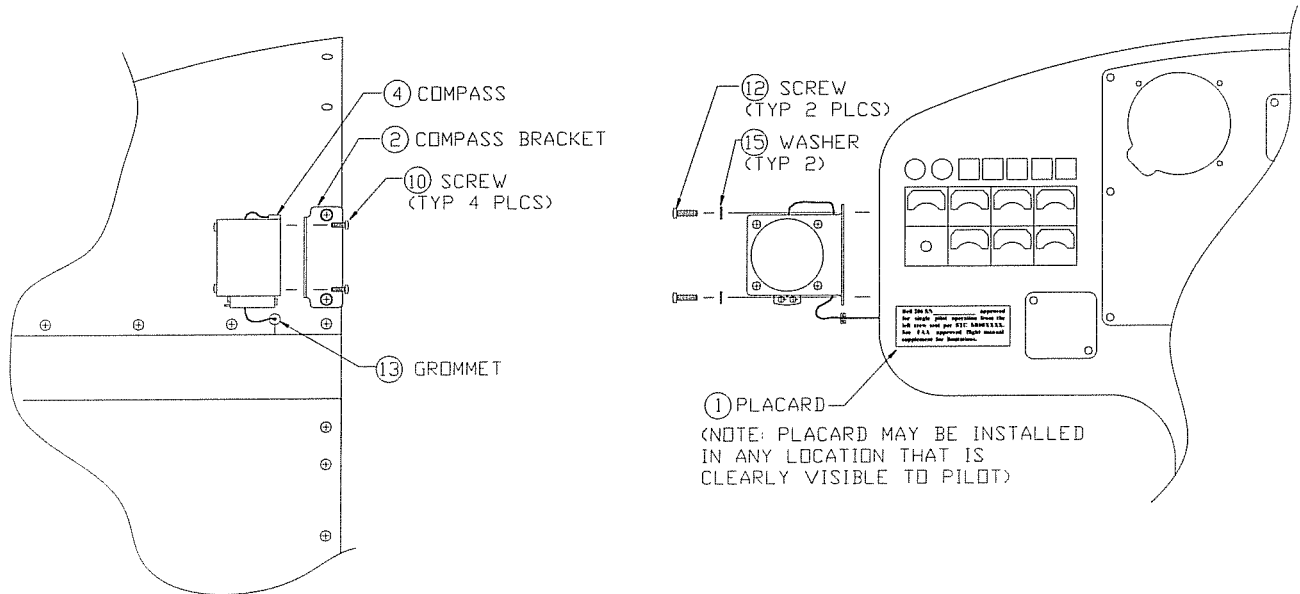


Figure 2. 206LS-200-2 Installation  
 (Bell 206, S/N 154 thru 913)

NOTES:

- ① MODEL 206A/B AIRCRAFT CONNECT TO AVAILABLE 28VDC TERMINAL ON TERMINAL BLOCK TB6  
MODEL 206L SERIES AIRCRAFT CONNECT TO AVAILABLE 28VDC TERMINAL ON TERMINAL BLOCK 8TB1
- ② CONNECT TO AVAILABLE GROUND LOCATION.

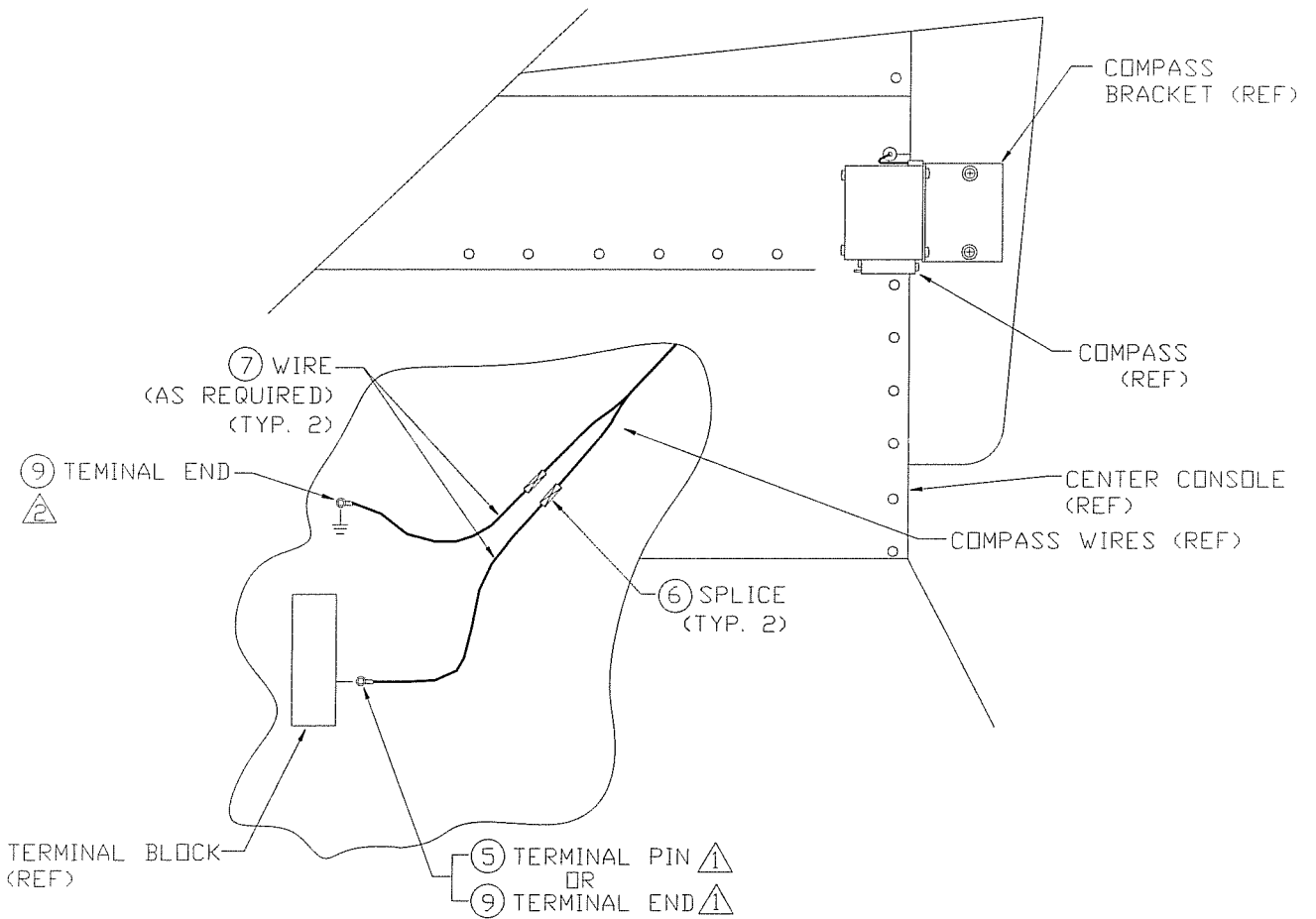


Figure 3. 206LS-200-1/-2 Installations  
(Bell 206, S/N 154 and Subsequent)

**Parts List  
For  
206LS-200-1/-2 Installations**

<b>ITEM #</b>	<b>P/N</b>	<b>DESCRIPTION</b>	<b>QTY</b>	<b>TYP</b>
1	206LS-2000-1	PLACARD	1	EA
2	206LS-2010-1	COMPASS BRACKET	1	EA
3	ES59152-1	COMPASS BRACKET	1	EA
4	ES59153-1	COMPASS	1	EA
5	M39029/22-191	TERMINAL PIN	1	EA
6	M7928/5-2	SPLICE	2	EA
7	MIL-22759/16-22	WIRE	5	FT
8	MS20365D632	NUT	2	EA
9	MS25036-103	TERMINAL END	2	EA
10	MS35214-27	SCREW	4	EA
11	MS35214-32	SCREW	2	EA
12	MS35214-43	SCREW	2	EA
13	MS35489-1	GROMMET	1	EA
14	NAS1149BN632H	WASHER	4	EA
15	NAS1149BN832H	WASHER	2	EA

**APPENDIX A**  
**INSPECTION CHECKLIST**



Appendix A

**INSPECTION CHECKLIST**

**Annual/100 Hour Inspection Checklist**

INSPECTION		COMMENTS	INITIALS
1.	Inspect compass and compass bracket for stress, cracks, and corrosion. Replace if necessary.		
2.	Inspect aircraft structure at attachment points		
3.	Inspect all screwed connections. Replace all worn screws and/or fittings.		
4.	Inspect compass wiring for insulation damage and chafing. Replace compass wire or compass as necessary.		