

INSTRUCTIONS FOR CONTINUED AIRWORTHINESS

FOR

Helifab Litter Support Modification

STC No: SR09361RC

On

Bell Helicopter Model 206L-1, 206L-3, 206L-4 and 407

REPORT NUMBER:

HF-CA-7-9



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THIS MANUAL IS PREPARED TO PROVIDE INFORMATION, INSTRUCTIONS FOR CONTINUED AIRWORTHINESS FOR EQUIPMENT MANUFACTURED BY HELIFAB THAT MAY BE INSTALLED. ENSURE THAT THIS MANUAL IS USED FOR ONLY HELIFAB EQUIPMENT.

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Log of Revisions

| REV No. | DESCRIPTION OF CHANGE | DATE ISSUED | DRAFTED BY |
|----------------|------------------------------|--------------------|-------------------|
| IR | Initial Release | 07/23/2016 | KDS |
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List of Effective Pages

| PAGE | REVISION No. | DATE |
|------------------|---------------------|-------------------|
| 1 thru 11 | IR | 07/23/2016 |
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1. INTRODUCTION

The purpose of these Instructions for Continued Airworthiness (ICA), is to provide required procedures for maintaining continued airworthiness for Helifab's litter support modification installation.

1.1. Revisions and Distribution

These instructions are provided with each installation kit. Any airworthiness or flight safety revisions will be sent to all who purchased the affected kits. A log of revisions is included in these instructions. Changes to this ICA are to be incorporated and are identified as follows:

Revised or extended text and inserted pages with new text contents or new figures are identified with black marginal bars or referenced symbols. When text is relocated resulting in a renumbering of pages or task, or in case of printing error corrections, no markings are provided.

1.2. Scope of ICA

The purpose of this ICA is to provide necessary information to maintain, inspect, repair, or replace the equipment. Maintenance personnel should be thoroughly familiar with standard abbreviations contained herein. Specific abbreviations or acronyms can be found in the document text with the full meaning. Requests for replacement ICA should be made to:

Address:
Helifab
1318 Smede Hwy.
Broussard, La 70518
Telephone: (337)364-4357

Website: www.ArrowAviationCo.com

1.3. Precautions

The following precautions may be used throughout this manual and are defined as follows:

WARNING IS USED WHEN UNQUALIFIED PERFORMANCE OR NEGLECT OF INSTRUCTIONS MAY LEAD TO INJURIES OR DEADLY ACCIDENTS.

CAUTION IS USED WHEN UNQUALIFIED PERFORMANCE OR NEGLECT OF INSTRUCTIONS MAY LEAD TO EQUIPMENT DAMAGE

NOTE IS USED WHEN A PARTICULAR ITEM NEEDS TO BE EMPHASIZED

1.4. Abbreviations

The following Abbreviations may be used throughout this manual and are defined as follows:

| | |
|-------|--|
| EMM | Equipment Maintenance Manual |
| ICA | Instructions for Continued Airworthiness |
| HF | Helifab |
| MIL | US Military Specification |
| N/C | No Change |
| Mo. | Months |
| Y | Years |
| PN | Part Number |
| IAW | In Accordance With |
| LH | Left Hand |
| RH | Right Hand |
| NA | Not Applicable |
| Cont. | Continued |
| FWD | Forward |
| CG | Center of Gravity |

1.5. Consumable Materials

- A. Explanation
Only Consumable materials noted throughout this manual and on referenced drawings are to be used. Helifab can be contacted to approve alternate or equivalent materials.

2. General Product Information and Description

Helifab litter support modification removes the existing support bar between the vertical control tube tunnel and the co-pilot door post and installs a new support bar approximately 7.5 inches higher. This allows for additional clearance between the seat pane and support bar for subsequent equipment installations.

There are two installations configuration; one for the 206L series models and one for the 407.

3. AIRWORTHINESS LIMITATIONS

There are no overhauls, time limits, or airworthiness limitations associated with this type design change.

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

4. INSPECTIONS / MAINTENANCE

4.1. Special Tools Required

Any special tools required for maintenance, removal, or installation of the litter support modification will be specified in the text of this document where applicable.

4.2. Special Materials Required

Any consumable materials required for maintenance, removal, or installation of the litter support modification will be specified in the text of this document where applicable.

4.3. Conditional Inspections after Operational Incidents

After any operational incident involving hard landings, sudden stoppage of the drive train or water immersion, the system must not be operated until a thorough inspection of the installation has been accomplished IAW section 4.5 of this document.

4.4. Preflight Inspection

Normal pre-flight inspections to be accomplished per Bell Helicopter rotorcraft flight manual.

12 Month / Annual Inspection

This inspection is to be performed by a qualified technician.

All inspections must be recorded in the rotorcraft records IAW 14 CFR Part 43 or other applicable regulations.

| INSPECTION TASK DESCRIPTION | |
|--|--|
| <p>1. Inspect litter support modification for security, general condition, nicks, scratches, corrosion, dents, and cracks. Inspect for loose, missing, or working fasteners.</p> <p>Damage limits are listed in table 1 of this document.</p> <p>If damage is within damage limits listed in table 1, follow the instructions for repair listed below:</p> <p>Corrosion: Blend out corrosion using 320 grit or finer aluminum oxide abrasive paper. A 10:1 width to depth ration of cleanup is to be maintained. Corrosion cleanup must be twice the depth of the corrosion. After repair, prime bare surfaces using primer per MIL-P-23377 and topcoat as required.</p> <p>Scratches or Nicks: Blend out scratches or nicks using 320 grit or finer aluminum oxide abrasive paper. A 10:1 width to depth ration of cleanup is to be maintained. After repair, prime bare surfaces using primer per MIL-P-23377 and topcoat as required.</p> | |
| <p>2. Inspect surrounding structure for condition and cracks around litter support bar installation doublers. For repair to surrounding structure, refer to applicable Manufacturer’s maintenance manual.</p> | |

**Table 1
Damage and Repair Limits**

| Item | Maximum Damage Limits | |
|--|------------------------------|--|
| | Cracks | Dents or Scratches |
| Attachment Doublers and Support Bar | None Allowed | Maximum Depth After Cleanup .020 inches or 10% of material thickness, whichever is less* |

*Depths listed are maximum based on original thickness of part. If the same area is repaired multiple times, the total combined depth of all repairs must not exceed the maximum depth listed.

4.5. Troubleshooting

Replace any parts that do not function properly or that cannot be repaired in accordance with the instructions given in this manual.

4.6. Repairs

No repairs other than those that can be accomplished with FAA accepted methods or that are called out in this document are allowed.

5. REMOVAL AND INSTALLATION INSTRUCTIONS / PARTS BREAKDOWN

5.1. Support Bar

Note

Fastener installation to be in accordance with FAA Advisory Circular AC43-13-1B, Chapter 7.
Use standard torques for all fasteners.

5.1.1. Removal

1. Remove the MS27039 #10 alloy steel screws from attaching the support bar to the installation doublers attached to the vertical control tube tunnel and the copilot door post. There is a total of eight screws used in the 206L model installation and twelve in the 407 installation.
2. Remove support bar.
3. Install screws back into nutplates and tighten to standard torque. This step is optional but will prevent nutplate damage when support bar is not installed.

5.1.2. Installation

1. Install support bar to attachment doublers using MS27039 #10 alloy steel screws. There is a total of eight screws used in the 206L model installation and twelve in the 407 installation.

Warning:

The support bars are structural. The existing Bell Helicopter support bar or the new support bar or both existing and new support bars must be installed during all flight phases. The Bell Helicopter existing support bar must be installed when the co-pilot seat is occupied by the co-pilot.

5.2. Parts Breakdown

Reference figures 1 and 2 for parts breakdown.

Table 1
Parts List

| Item Number | Part Number | Nomenclature | Vendor / Manufacturer | Note |
|-------------|----------------|---------------------------------|-----------------------|------|
| 1 | MS27039 | #10 Alloy Steel Screw | | |
| 2 | NAS1149D0332J | Washer | | (1) |
| 3 | HF-206-2003-3 | Upper Support | Helifab | |
| 4 | HF-D-7-2-3 | Support Bar | Helifab | |
| 5 | HF-206-2003-7 | Lower Support Doubler | Helifab | |
| 6 | MS21069L3 | Nutplate | | |
| 7 | HF-206-2003-8 | Decal | Helifab | |
| 8 | HF-206-2003-9 | Decal | Helifab | |
| 9 | HF-206-2003-10 | Decal | Helifab | |
| 10 | HF-D-7-2-4 | Door Post FWD Doubler | Helifab | |
| 11 | HF-D-7-2-1 | Control Tube FWD Doubler | Helifab | |
| 12 | HF-206-2003-7 | Lower Support | Helifab | |
| 13 | HF-206-2003-5 | Door Post FWD Doubler | Helifab | |
| 14 | HF-206-2003-1 | Control Tube Tunnel FWD Doubler | Helifab | |

Notes:

1. NAS1149D0332K is alternate for item 2

Figure 1
Bell 407 Installation
(View looking aft)

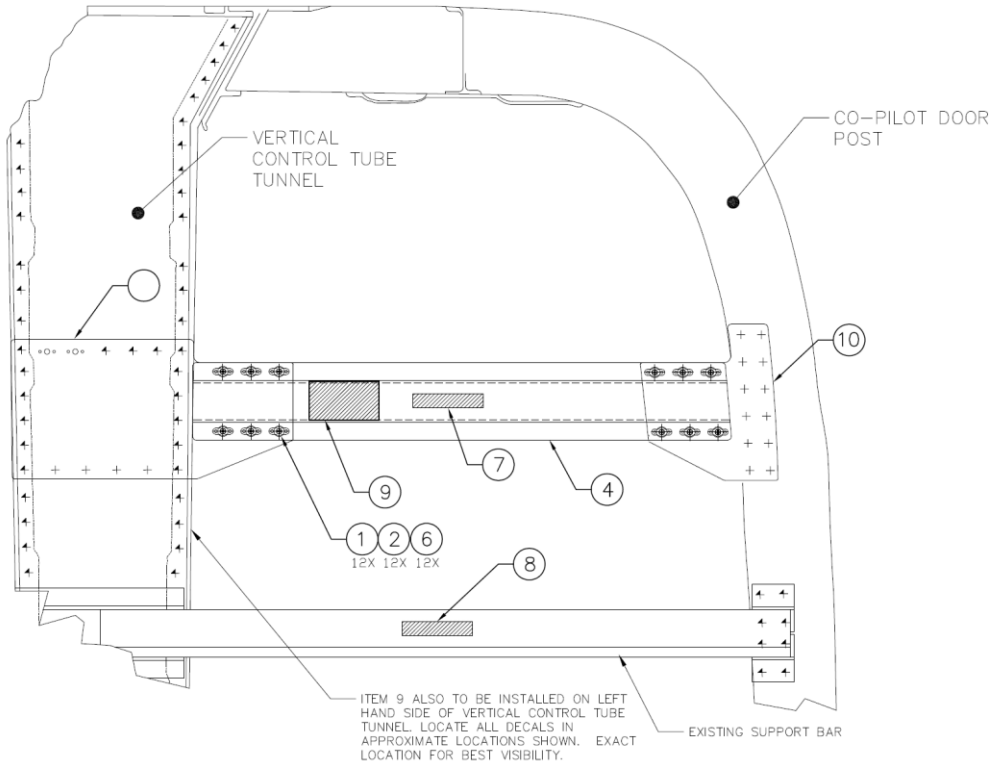
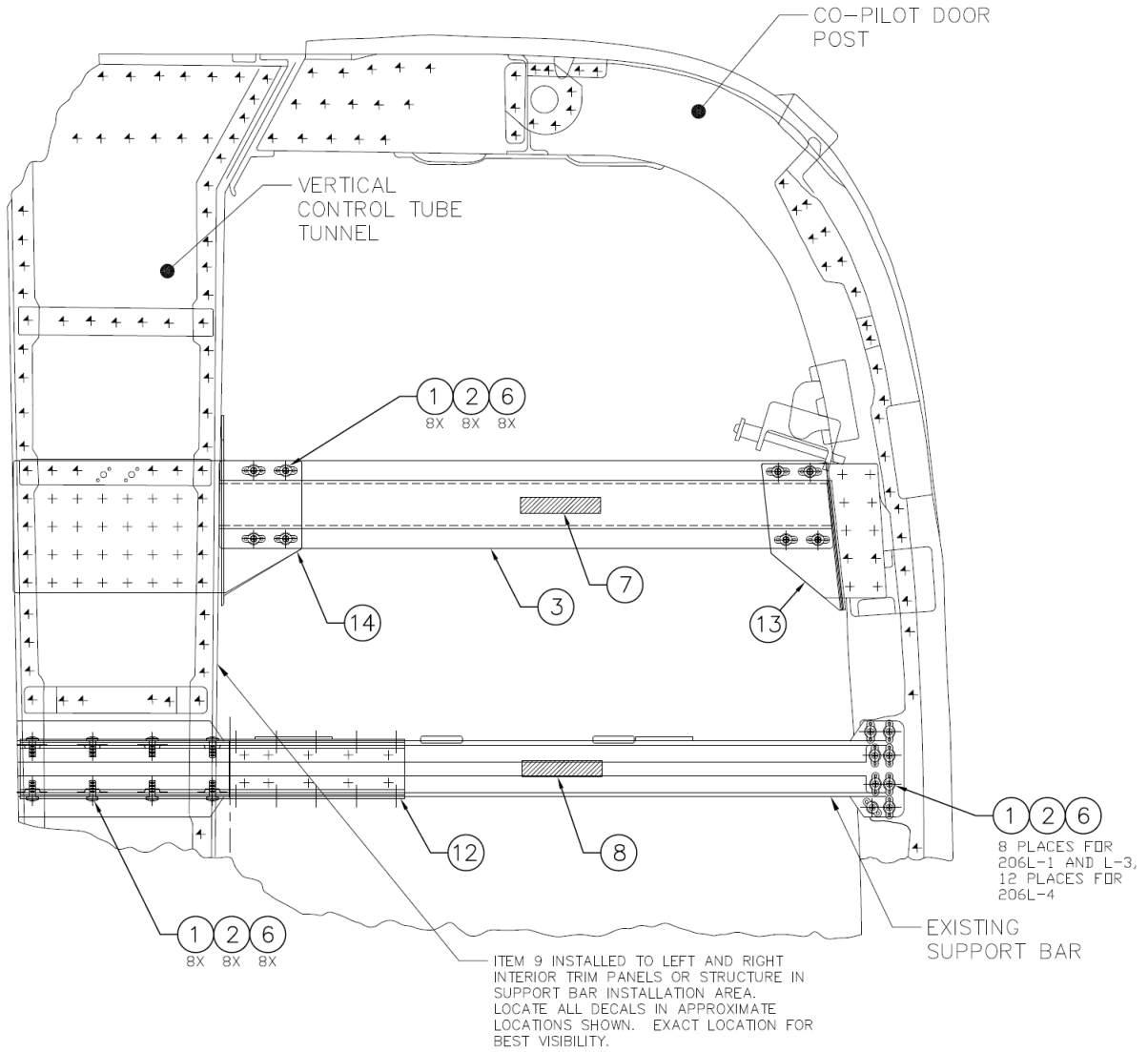


Figure 2
Bell 206L Series Installation
 (View looking aft)



6. PLACARDS

The following placards must be installed and legible when this STC is installed.

Figure 3
Decal P/N HF-206-2003-8
(Installed to Helifab Support Bar)

**THIS SUPPORT MUST BE INSTALLED
WHEN LOWER SUPPORT IS REMOVED**

Figure 4
Decal P/N HF-206-2003-9
(Installed to Existing Bell Helicopter Support Bar)

**UPPER SUPPORT MUST BE INSTALLED
WHEN THIS SUPPORT IS REMOVED**

Figure 5
Decal P/N HF-206-2003-10

▲
**ONE OR BOTH LITTER SUPPORTS
MUST BE IN PLACE DURING FLIGHT
FOR STRUCTURAL INTEGRITY**
▼

7. WEIGHT AND BALANCE

The new empty weight and corresponding C.G. location must be determined and entered in the aircraft permanent records.

Installation of Helifab’s litter support modification has the following effect on weight and balance.

Table 2
Equipment Weights and Locations

| Item | Weight | STA | BL |
|--|---------------|------------|-----------|
| Helifab Litter Support Bar Doublers | 1.0 Lb. | 79.7 | LBL 9.5 |
| Helifab Litter Support Bar | 0.8 Lb. | 135.4 | LBL 11.0 |
| Bell Helicopter Support Bar | 1.9 Lb.* | 78.0 | LBL 12.35 |

* Existing support bar removed should be weighed for exact weight.