

Lazair

Jury Strut Kit

Installation Manual

AND WING STRUT STABILIZER
FITTINGS

PARTS LIST

JURY STRUT RETROFIT KIT

| <u>Qty.</u> | <u>Part No.</u> | <u>Description</u> | <u>Size</u> |
|-------------|-----------------|-------------------------------|-------------------------|
| 1 | F241L | Stabilizer, Strut Fitting, LH | 1½" X 1½" X 7" .125 |
| 1 | F241R | Stabilizer, Strut Fitting, RH | Same as above. |
| 4 | F245 | Bracket, forward Jury Strut | 1" X 1" X 1" angle .065 |
| 2 | F246 | Bracket, rear Jury Strut | 3½ L 1"H ½"W .040 |
| 4 | F349 | Clamp, Jury Strut | 5/8"W 6"L .090 |
| 2 | G314 | Doubler, Capstrip | 7"L 5/8W ¼"H .025 |
| 2 | G235 | Gusset Tape | |
| 2 | T243 | Jury Strut, Forward | ½".058 22½L |
| 2 | T244 | Jury Strut, Rear | ½".058 31"L |
| 8 | 37 | Bolt | AN3-7A |
| 8 | N3 | Nut | AN365-1032 |
| 50 | | Rivet, Stainless Steel | 1/8" X 1/4" |
| 1 | | Tedlar Tape | 2.6" X 48" |

Note: ALL Aluminum MUST be 6061-T6 or 6063-T832

1.0 INTRODUCTION

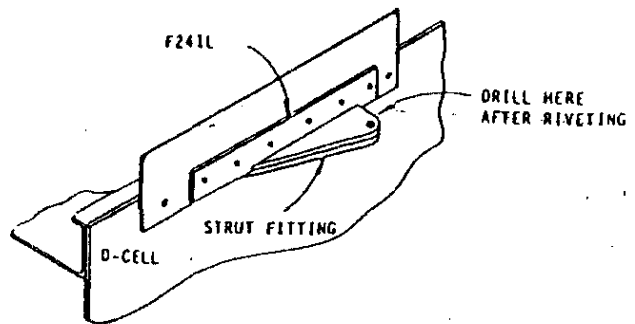
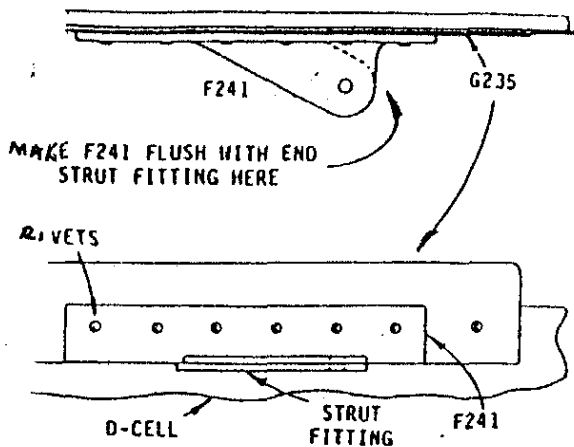
1.1 This jury strut kit has been designed for use on Series I, II or III Lazairs to increase the negative limit load factor. On a Series III, the limit load factor can be increased from -1.3g to -2.1g at a gross weight of 420 pounds. On a Series II, the limit load factor can be increased from -1.4g to -2.2g at 395 pounds gross weight. On a Series I Lazair with .020 inch D-cell skin, the limit load factor can be increased from -1.5g to -2.4g at 370 pounds gross weight. The use of this kit on a Series I Lazair with .016 inch D-cells is not recommended.

1.2 In addition to the jury struts and attach fittings, the kit also includes two F241 strut stabilizer fittings to distribute the horizontal component of the lift strut force. To fit the P17 upper strut plug over this fitting, the slot in P17 must be widened to 1/4 of an inch as described in paragraph 2.2. Should this plug be damaged during modification or be rendered unserviceable for any reason, order part number P210 as a replacement (P210 is machined with a 1/4 inch slot).

1.3 For disassembly, remove the bolts from the upper end of all jury struts. Loosen the bolts at the lift strut and fold the jury struts flat against the lift strut.

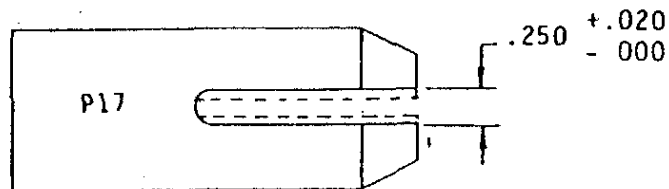
2.0 STRUT AND FITTING MODIFICATION

2.1 Remove the wings from the aircraft. Drill out rivets as necessary to remove the 1" x 7" x .040 aluminum strap adjacent to the outboard strut fitting on the wing. Slit the covering only as necessary to remove the strap. Round the corners on a G235 tape gusset and fit it in place of the strap. Fit an F241 strut fitting stabilizer into position and rivet it in place with 6 stainless steel rivets as shown. Tape the wing covering securely to G235 with the 2.6" wide Tedlar tape provided.



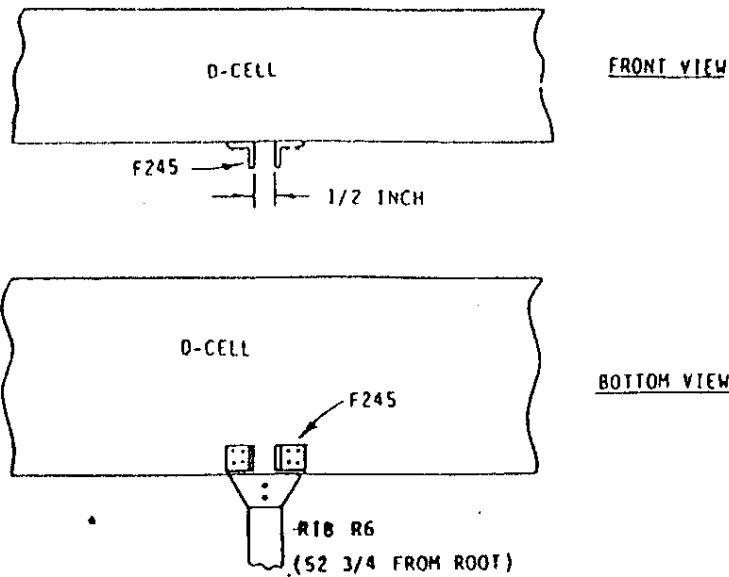
NOTE THAT ON THE SERIES I OR SERIES II LAZAIR, IT WILL BE NECESSARY TO BEND THE OUTBOARD STRUT FITTING SLIGHTLY AS DESCRIBED IN YOUR ASSEMBLY MANUAL (PAGE 5-1 PARA. 7 IN THE SERIES I MANUAL OR PARA. 7.1.7. IN THE SERIES II MANUAL).

- 2 Widen the slot in the P17 plug on each strut as shown. Drill a 1/4 inch hole at the bottom of the slot first, then use a hacksaw or bandsaw to remove the two sides. File the sides of the slot as necessary to remove the saw marks.

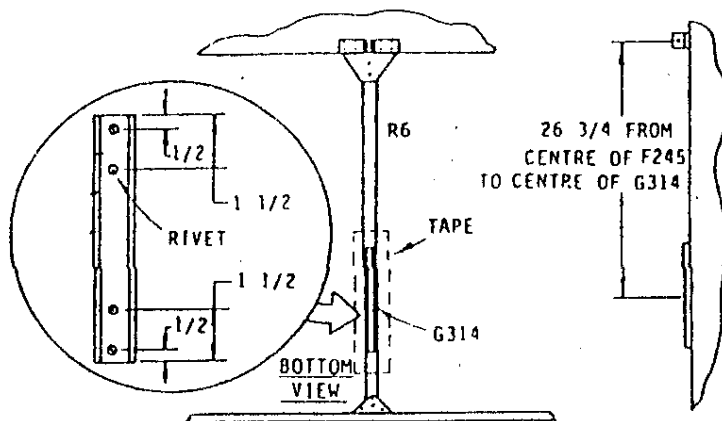


3.0 JURY STRUT FITTINGS INSTALLATION

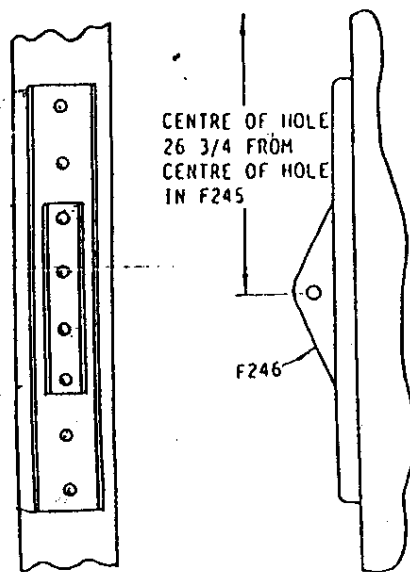
- 3.1 Rivet the F245 forward jury strut brackets to the under side of the spar cap on each wing as shown, using four stainless steel rivets in each bracket. Drill out and remove any previously installed rivets which would prevent the F245's from fitting tightly against the spar cap.



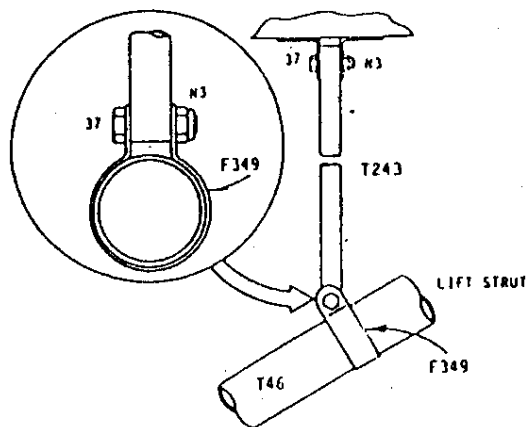
- 3.2 Apply an 8 inch long piece of Tedlar tape to act as a skin doubler, then rivet a capstrip doubler onto the bottom of each R6 rib with 4 stainless steel rivets as shown.



- 3.3 Rivet an F246 rear jury strut bracket onto each R6 as shown, with 4 stainless steel rivets.



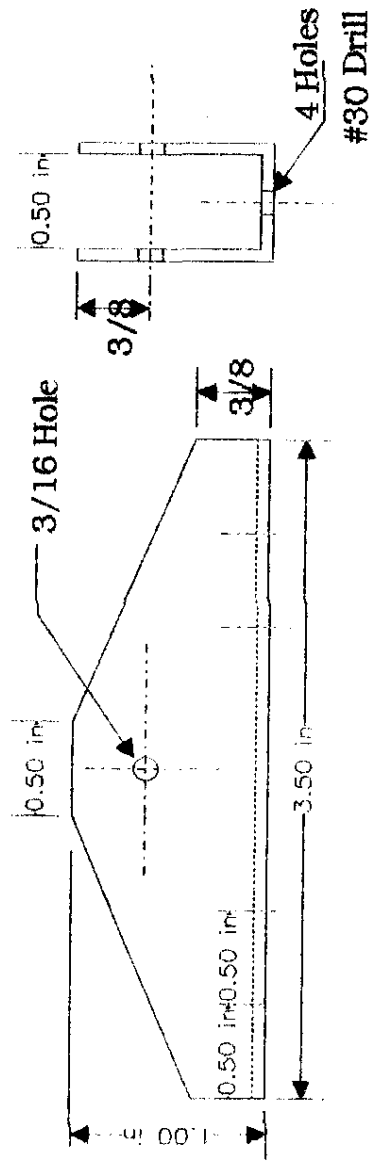
- 3.4 Reassemble the wings and struts onto the fuselage. Cut each T243 forward jury strut to fit between the F245's and the lift strut as shown. Drill a 3/16 inch hole in each end of T243 as required and bolt it in place. *Make sure T243 is the proper length to keep the lift strut straight.* Note that T243 should be vertical (perpendicular to the axle) not perpendicular to the wing.



- 3.5 Similarly cut, fit and bolt the rear jury strut T244 in place between F246 and the lift strut. Note that the F349 clamp which secures T244 to the lift struts fits on the inboard side of the previously installed F349.

2 Required Part# F246 Bracket Rear Jury Strut.

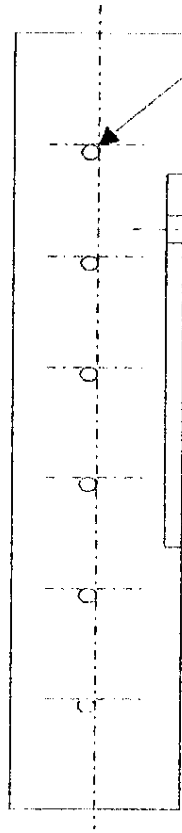
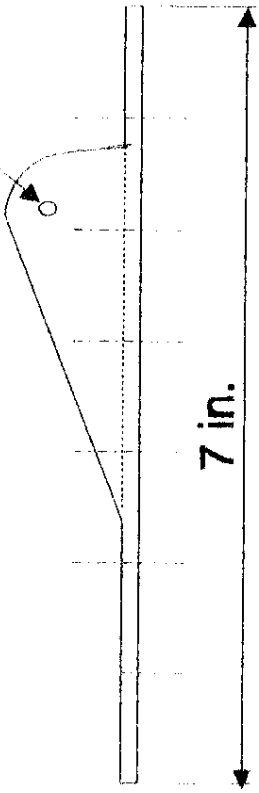
.040 Sheet 6061-T6



Part No. F241L & R Stabilizer, Strut Fitting.

1 1/4" x 1 1/4" Angle .125 6061-T6 or 7075

Drill 1/4" hole

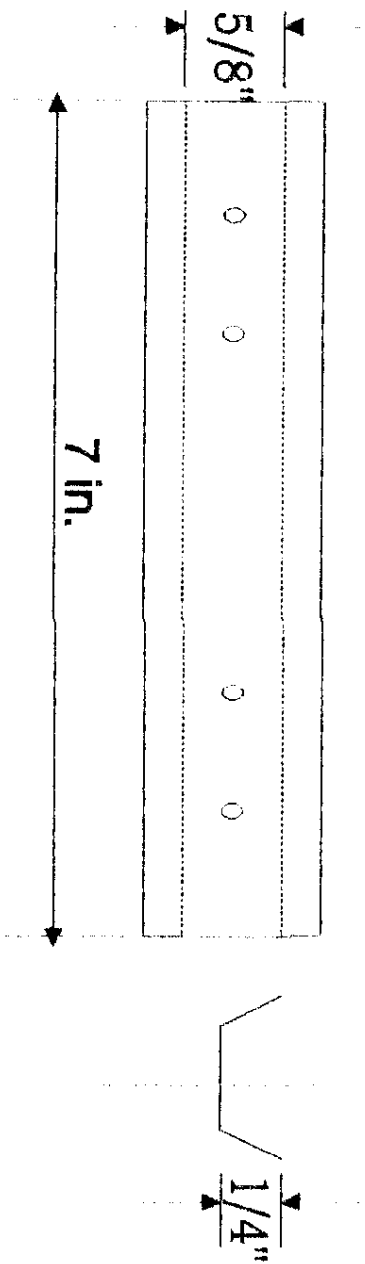


Drill 6 Holes

30 Drill

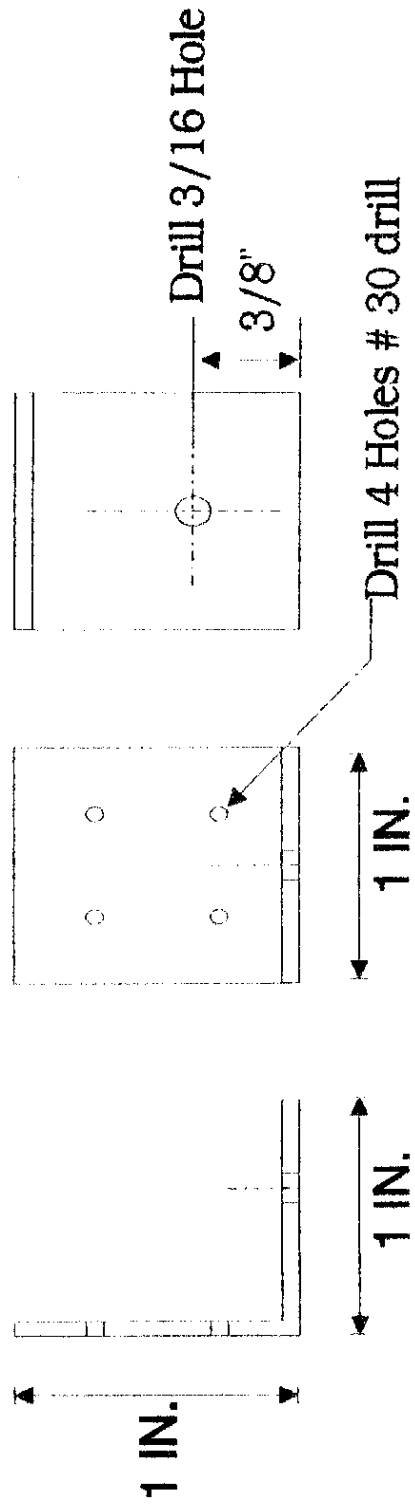
Part No. G314 Doubler, Capstrip

.025 2024-T3



4 Required Part # F245 Bracket, forward Jury Strut.

1" Angle .065 6061-T6



**4 REQUIRED PART # F349 CLAMP , JURY STRUT.
.090 6061-T6**

