

CHAPTER 11

✓ FAIRING, WINDSHIELD, & PANEL, FASTBACK AND CABIN ASSEMBLY

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✓ Chapter 11

SECTION 1

ATTACHING THE FORWARD FAIRING

The New Flightstar-IISL and SC fairings are already trimmed and pilot drilled when you receive them, they are very easy to install using the directions below. The fairings are finished in epoxy primer that can be polished with wax and used as they are, or cleaned with solvent, roughed up with 400 grit sand paper and painted.

The fairings are attached to the cage in 4 places each side. The rear three attachments are into rivnut (Cad plated, threaded, rivet-like inserts pre-located on the side of the cage rail @ 8-7/8", 22" and 29-3/8" measured from the rear edge of the rear rail of the cage. The front attachment is bolted onto the rectangular welded tabs on the cage.

** Please perform step number 1 prior to attaching the main gear in Chapter 3.

1. a) PRE-POSITIONING THE REAR FLOOR PAN. Position the rear floor pan (1) and Temporarily hold it in place with shipping tape to the cage rail.
2. INSTALL THE MAIN GEAR PER THE DIRECTIONS FOUND IN CHAPTER 3, SECTION 1. If installing the OPTIONAL FASTBACK refer to Section 9 of this chapter for installation of the LOWER FASTBACK MOUNT TUBE. The Fastback tube attaches to the main gear pivot and requires a longer bolt.
3. FIG. FF-1 INSTALL THE LOWER FRONT FAIRING.
 - a) Begin by attaching the Lower front fairing (2) to the cage through the predrilled hole in the side of the fairing approximately 7-13/16" from the rear edge of the fairing. After locating the pilot hole, drill this out to 3/16". This hole lines up with the front riv-nut location on the cage side rail. Note: This bolt locates the entire fairing /windshield assembly.
 - b) Attach the lower front fairing (2) Using bolt (3) with fender washer (4) on the outside and thin plastic saddle (5) between the fairing and the cage/rivnut. Repeat this for the other side. Secure this with removable Loctite @ final assembly.

The front of the fairing is bolted to the front of the cage with the molded "attachment cups" located on the inside front of the lower fairing. This attaches to the welded rectangular tabs on the front corners of the cage. Install the nose wheel (6" W/13" tire) and use a 1" block as a spacer between the inflated nose wheel/tire and the bottom of the fairing. With the fairing blocked up the top edge of fairing should be parallel to the cage. Mark the holes with a marker and lift the front of the fairing up to drill the holes in the attachment cups.

- c) Drill the tab mount holes with a 3/16" drill through the attachment cups making certain the fairing is level with the cage (see above). Attach using bolts (6) with fender washers (4) and locknut (7). If necessary carefully bend the tabs to align them with the attachment cups and/or use washers as spacers between the tab and the fairing to keep from pulling in or warping the shape. This is important to make the upper and lower fairing parts match during final assembly.

Chapter 11 SECTION 1 Attaching the Forward Fairing

4. ATTACH THE REAR FLOOR PAN TO THE CAGE.

At the rear and center Riv-nuts. The rear riv-nut location is 4-1/2" from the rear edge of the fairing and 7/8" from the top edge. This pilot hole is pre-drilled to 1/8", after confirming the position, drill this out to 3/16".

- a) Attach the pan (1) with bolt (3) fender washer (4) space the pan from the cage with thin plastic saddle (5). After final assembly of the fairing, secure the bolt with removable Loctite or equivalent. Repeat this for the other side.

The new location for the center rivnut (22-1/16" from the rear rail) the center rivnut bolt catches both the front lower fairing and rear floor pan.

5. ATTACH THE REAR FLOOR PAN TO THE LOWER FORWARD FAIRING.

- a) Use 6 pan head Phillips screws (8) with washers (9) and locknuts (10) to secure the forward lower edge of the floor pan to the front fairing. Measure 5" down from the bottom edge of the door recess and mark the fairing approximately 1/2" in from the edge of the front fairing, mark and measure 5" and make another mark. Do this on both sides and then drill 3/16" holes and bolt together. Start bolting at the middle and work outward on each side.

6. FIGURE FF-1 INSTALL THE UPPER FRONT FAIRING.

- a) Drill the pre-drilled 1/8" upper and lower mating holes (running down the join of the two parts) out to 3/16". Attach using pan head Phillips screws (8) washers (9) and locknuts (10). Start at the front and work rearwards. Note that the front Riv-nut bolt also goes through the top part of the upper forward fairing (11).
- b) Install the large rubber grommets (20) in the pre-cut hole in the upper fairing. Slide the uprights through the grommets, attach the uprights per the directions found in Chapter 2 Section 4. Before attaching Windshield, attach the Boom Per the directions found in Chapter 8 Section 5.

7. FIGURE FF-1 ATTACHING THE FLOOR BRACE/TRIM QUADRANT PLATE

Attach floor brace/trim quadrant plate REFER TO CHAPTER 16 SECTION 1 for the details of the upper attachment. After completing the work in that Section;

- a) Drill and attach the lower part of the brace plate to the front lower fairing (11) using bolts (21) washers (16) fender washers (4) and locknuts (7). Tighten the Locknuts securely.

8. ATTACHING THE WINDSHIELD VISOR

The Flightstar-IISL and SC windshield (12) is already formed and trimmed to a final shape when it is shipped. Begin attachment by marking the centerline (shown as CL in the drawing) on the windshield visor (15). Measure and find the centerline of the windshield (12) and mark it with a thin felt marker to align it to the visor for attachment.

Chapter 11 SECTION 1 Attaching the Forward Fairing

9. a) Line up the visor (15) to the windshield (12). **NOTE THAT THE VISOR FITS ON THE OUTSIDE OF THE WINDSHIELD.** The joggle is to the rear. Line up the visor so that the overlap is 3/4" from the edge of the windshield, and is even on both sides before drilling. Drill out the 3/16" holes as shown as shown in Figure WV-1. The spacing from the edge of the visor to the hole is 3/8".

Note: the hole spacing horizontally on the visor is 4", starting 2" each side of the center line of the windshield. Start at the center and work outwards. The spacing on the last hole in the joggle of the visor is 3/8" from the edge and 3/8" from the bottom. **IF YOU ARE BUILDING A IISC DO NOT DRILL OUT THE OUTER HOLE YET.** They will be drilled later for the Door jams. Attach with bolts (8) washers (9) and locknuts (10) as shown in WV-1.

FIGURE WS-1 MOUNTING THE WINDSHIELD

- a) Use padded "C" clamps to position the windshield (12) evenly on the front Fairing. The top of the windshield is held in place by the Windshield tang (13). The rearmost hole of the tang is located in the front hole pre-drilled for the Flap Quadrant plate on the bottom of the boom. Using Pop rivets (14). Then drill Through the boom and rivet in place. If you are building a plane with flaps, mount the tang to the rivet hole in the quadrant plate. Space the front of the mount tang with an AN3 sized washer and rivet.
- b) Mark the lower edge of the windshield approximately 1" up from the bottom edge for drilling the 3/16" holes spaced approximately 4" apart (the first holes on each side are started 2" out from the centerline from the rear edge). Start at the center of the Windshield and work outward to the edges. Drill, then temporarily bolt each hole before drilling the next hole. After drilling is completed, remove and drill out holes to 15/64" to allow for expansion.
- c) Drill out the 3/16" hole for the upper attachment for the windshield. It is drilled through the windshield visor (15) as shown in Figure WV-1. Attach the windshield tang with bolt (3) washer (16) and on the bottom with fender washer (4) locknut (7), Tighten the locknut.

10 ATTACHING THE WINDSHIELD TRIM *IISL* ONLY

After mounting the windshield is completed, attach windshield trim (22) to the outer edges of the windshield as shown. The trim is used to provide a softer edge on the windshield for safety.

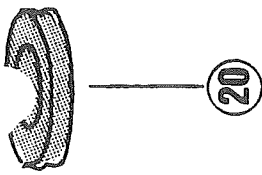
- a) Measure and cut the trim to length. Remove the inner strip of paper that seals the adhesive and pressing the trim against the edge of the windshield. The IISC uses a Door post on the windshield that eliminates the need for the trim.

11 FIGURE IP-1 MOUNTING THE INSTRUMENT PANEL

- a) Mount the instrument panel (17) with four panel mounts (18). Attach the bottom Mount 1" up from the lower edge of the panel, and 3/4" from the side/top edge. Measure up 12" from each and mount the two top mounts. Mark and drill the Panel with a 3/16" Attach the panel as shown using mounts (18), washers (16) And jam nuts (19). Tighten the nut securely. After mounting, remove the panel And follow the direction in Section 2 to finish the panel.

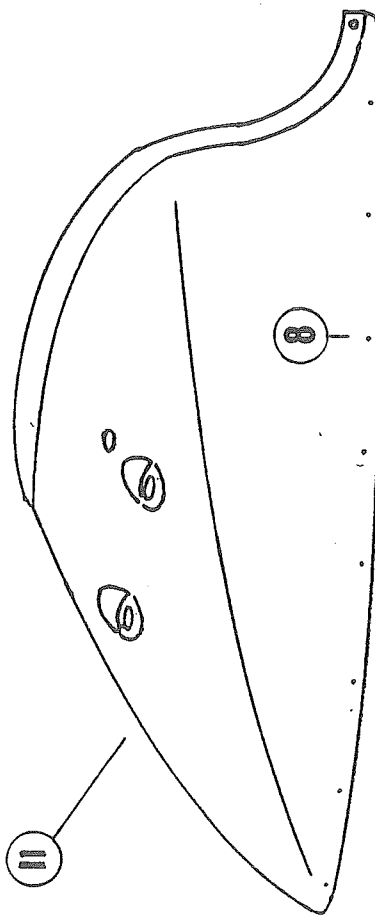
Section 1
Front Fairing & Windshield Parts List
Figure FF-1, WS-1, WV-1

INDEX #	PART #	QTY	DESCRIPTION
1.	F-257-5A	1	REAR PAN
2.	F-257-3A	1	LOWER FORWARD FAIRING
3.	AN3-5A	7	3/16" BOLT
4.	AN970-3	12	3/16" FENDER WASHER
5.	SO144	6 (5)	PLASTIC SADDLE
6.	AN3-4A (5A OPT)	2	3/16" BOLT (USE A 5A IF SPACING NEEDED)
7.	AN365-1032	7	3/16" LOCKNUT
8.	AN526-832R6	44	8-32 BOLT
9.	AN960-8	44	8-32 WASHER
10.	MS21083NO8	44	8-32 LOCKNUT
11.	F-257-1A	1	UPPER FRONT FAIRING
12.	F-399	1	MOLDED WINDSHIELD IISL, IISC
13.	F-328	1	WINDSHIELD TANG IISL, IISC <i>N/A</i>
14.	SS64	2	3/16" STAINLESS POP RIVET
15.	F-257-8	1	WINDSHIELD VISOR IISL, IISC
16.	AN960-10	14	3/16" WASHER
17.	IP-263	1	INSTRUMENT PANEL IISL, IISC
18.	IP-119	4	PANEL ISOLATOR MOUNT
19.	AN340-8	8	8/32 JAM NUT
20.	F-257-9	2	LARGE AN GROMMET
21.	AN3-7A	4	3/16" BOLT
22.	F-257-22	1	WINDSHIELD TRIM <i>N/A</i>

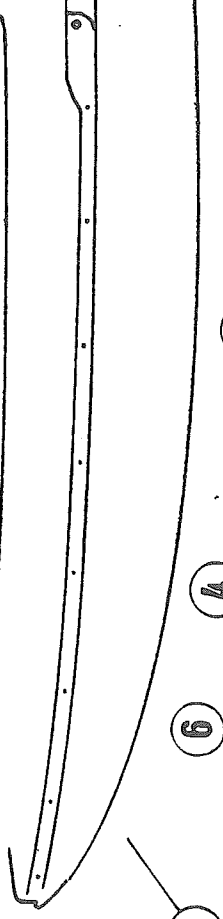


Upright grommet detail

11



8



2

6

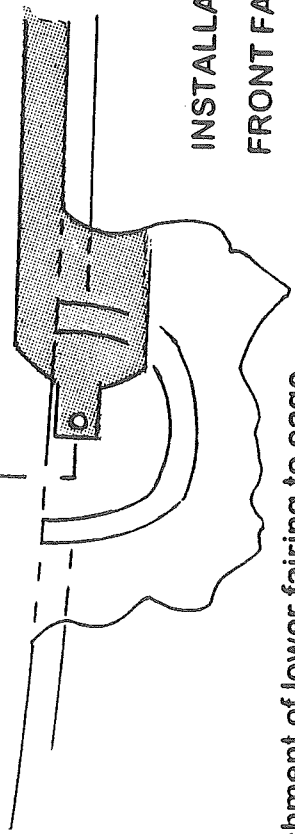
4

16

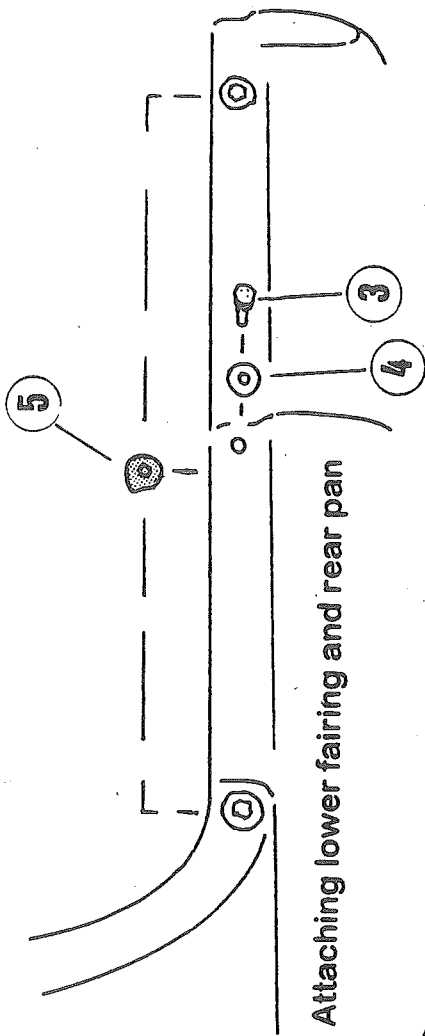
7



Attachment of lower fairing to cage

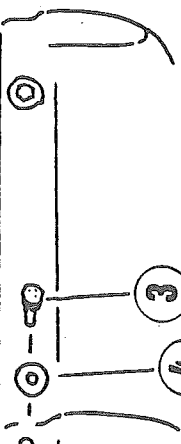


INSTALLATION OF THE FRONT FAIRING



Attaching lower fairing and rear pan

5



3

4

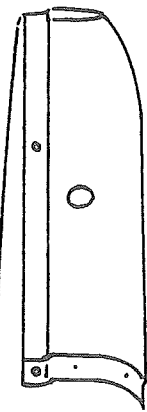
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9

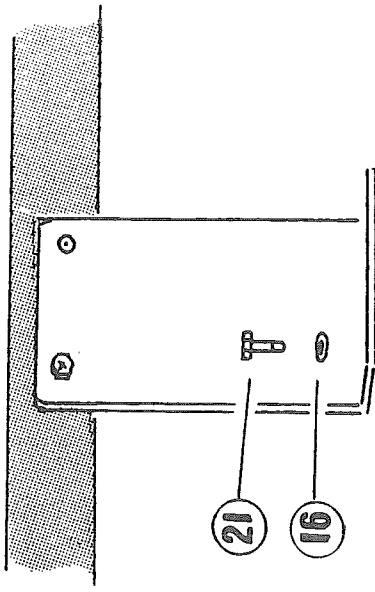
10

Detail of #8 screws for joining fairing parts

1



8



21

16

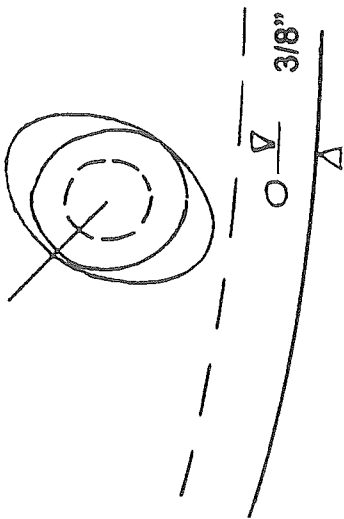
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7

Floor Brace/Trim plate

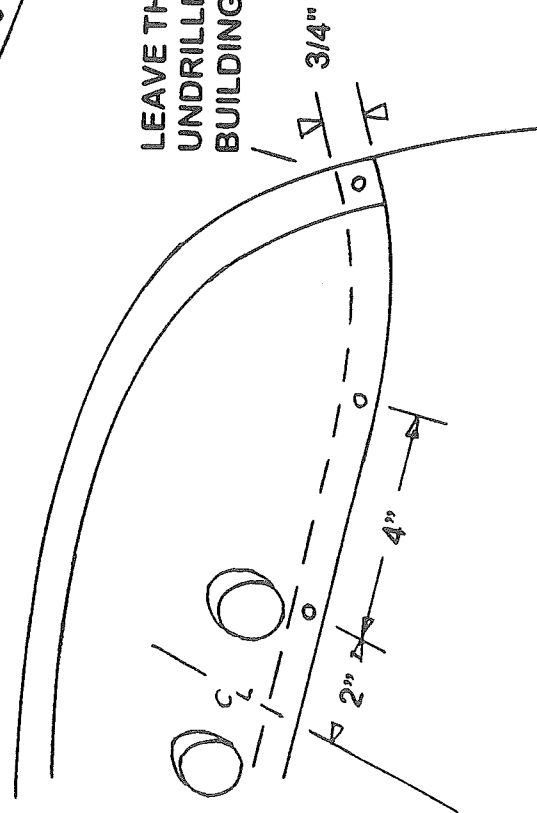
FF-1

DRILL ONE ATTACHMENT HOLE FOR THE PRIMER (3/4") OR CHOKE LEVER (7/8")



SPACING ON VISOR ATTACH BOLTS

joggle on visor goes to the rear

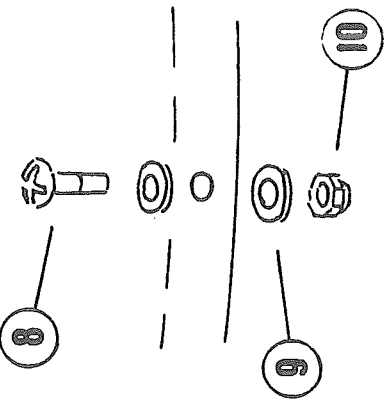


LEAVE THIS LAST HOLE UNDRILLED IF YOU ARE BUILDING A II-SC

3/4"

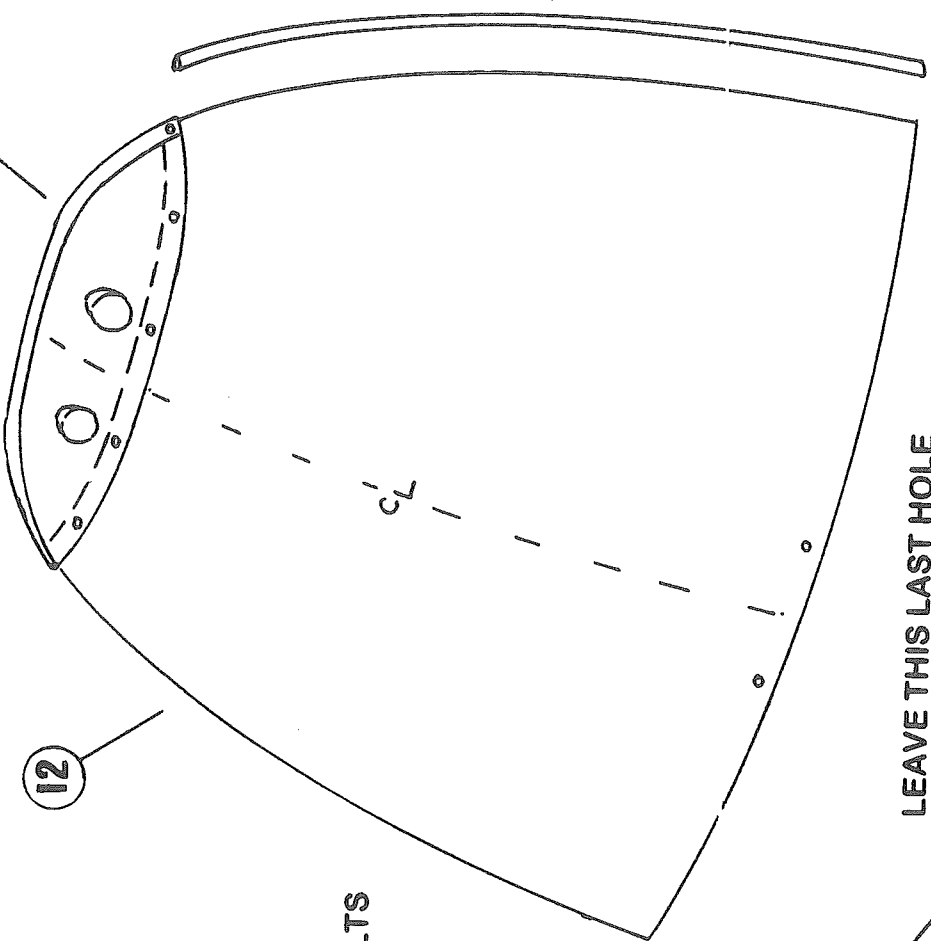
4"

2"



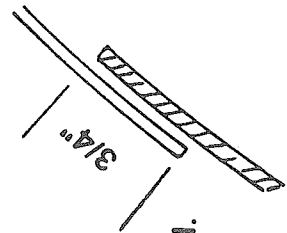
15

12



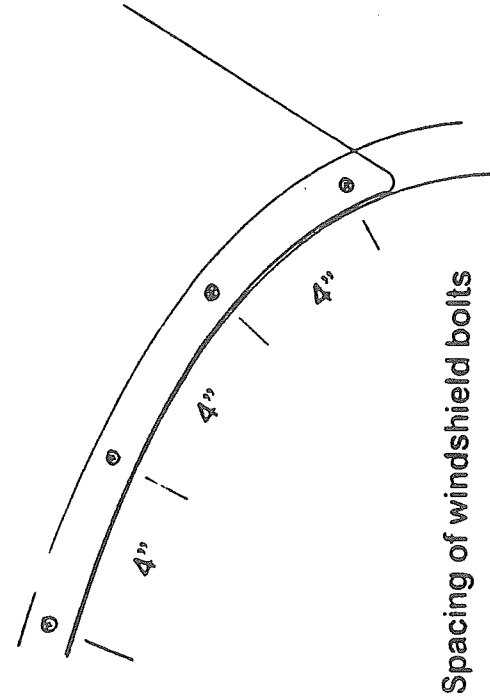
22

22, EDGE TRIM, NOT USED FOR IISC

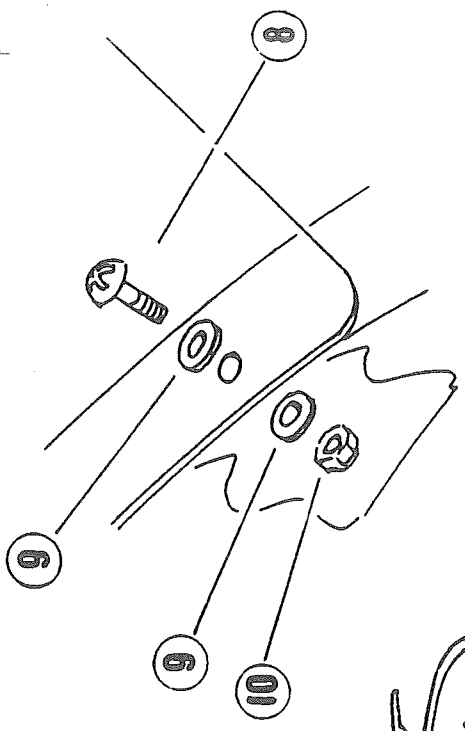


Visor goes on top of windshield. Overlap is 3/4"

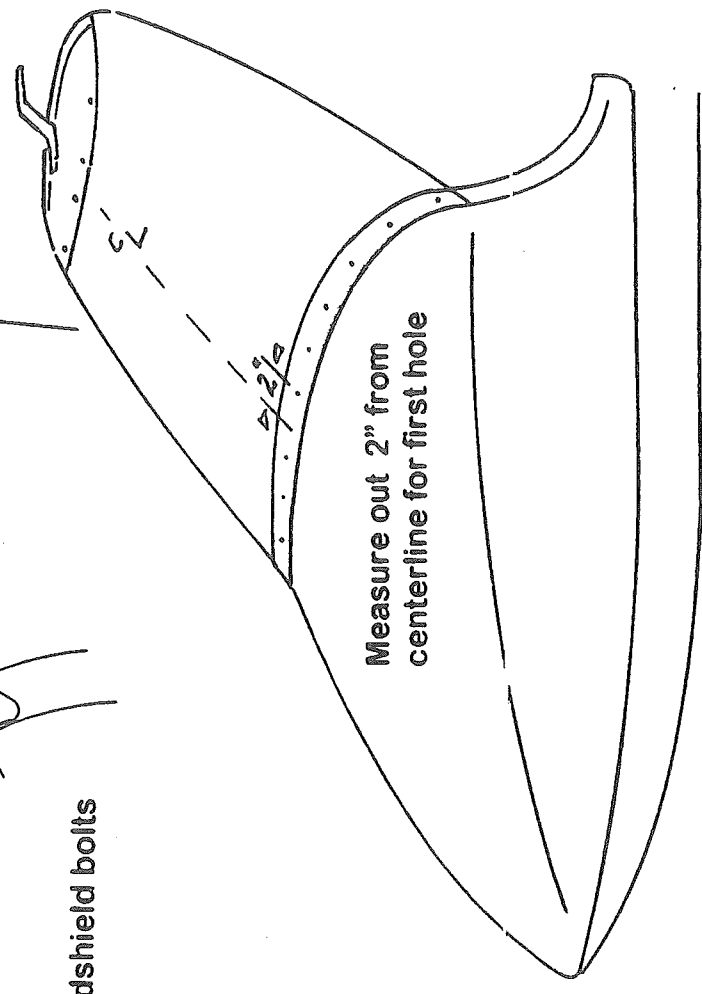
ATTACH TO THE WINDSHIELD VISOR WV-1



Spacing of windshield bolts



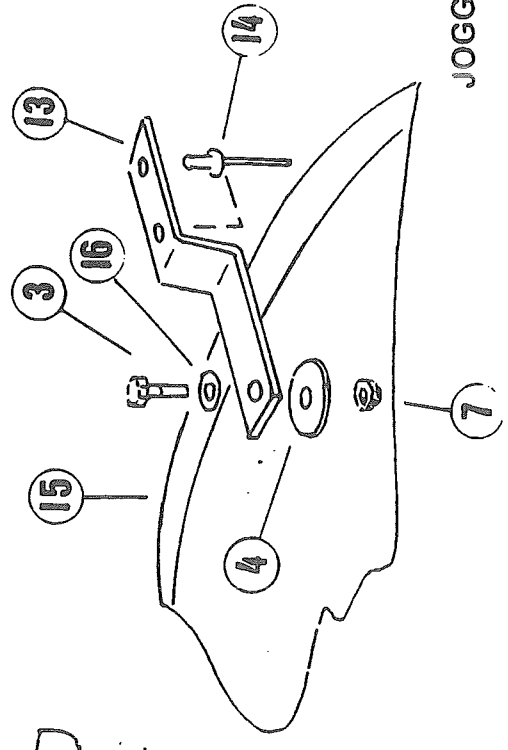
Detail of windshield bolts



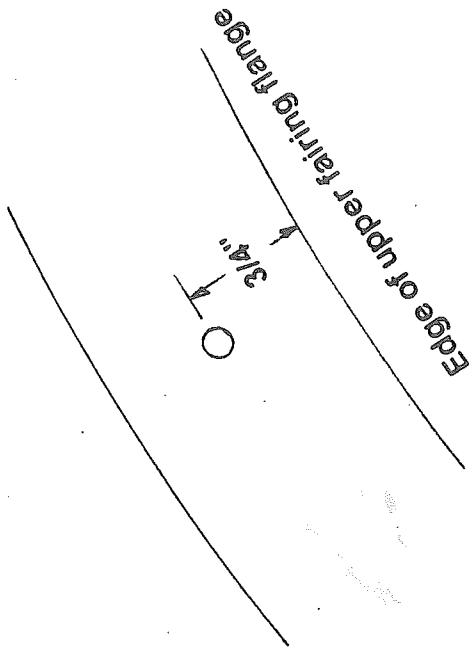
Measure out 2" from centerline for first hole

WINDSHIELD MOUNT TANG ASSEMBLY NOT USED FOR IISC

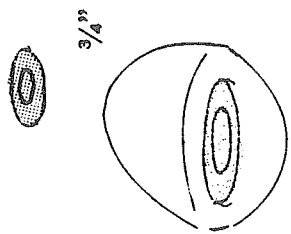
Upper windshield attachment



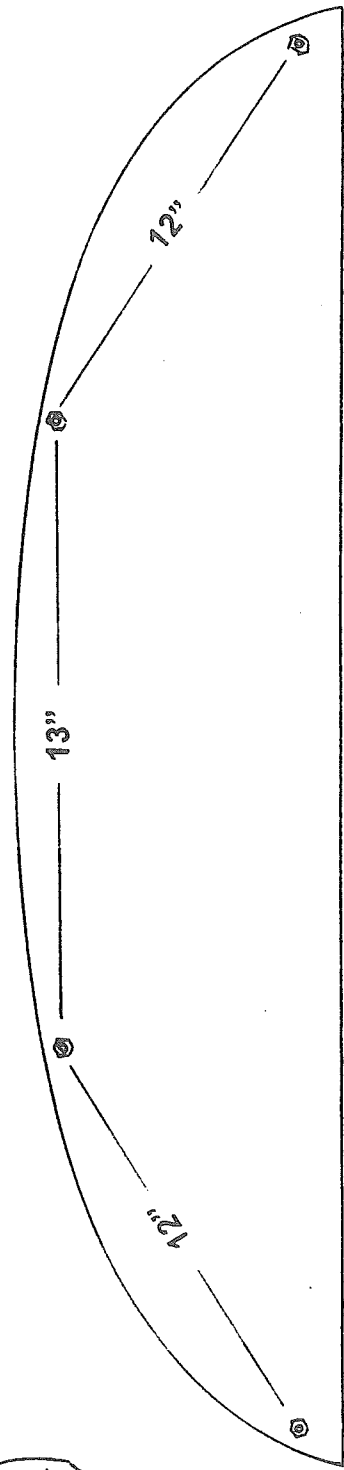
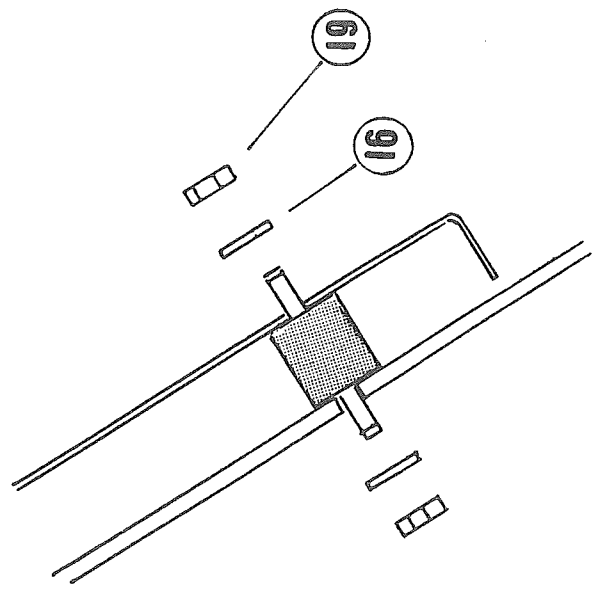
JOGGLE



Upright grommet detail



Detail of isolators



✓ Chapter 11

Section 2

Installing The Gauges And Optional Wiring Harness

Figures IP-1, IP-2, IP-3, IP-4

Figure IP-1 OVERVIEW OF AN INSTRUMENT PANEL LAYOUT

This figure shows the suggested layout for the FULL INSTRUMENT PACKAGE offered by **FLIGHTSTAR**. The type of instruments, and their layout, is a very personal decision. For example an FS II built for training might relocate the starter and magneto switches to the middle of the panel. This allows the instructor to reach the controls from the right seat. Before beginning, determine which instruments are being installed and their preferred placement.

Figure IP-3 MARKING AND CUTTING TEMPLATE HOLES

- c) Use template in Figure IP-3 to mark and drill out holes for preferred instruments, on the instrument panel. The most common sizes are 2", 2-1/4", and 3-1/8". **BE CAREFUL TO CUT THE CORRECT SIZE HOLES!** Once the correct size holes have been cut, drill the mounting holes for the instrument screws.
- d) After cutting and drilling, de-burr the instrument panel. Clean with an acetone type solvent. Finish with paint as desired. Matching the color of the fairing is recommended.

Not pictured INSTALLING MAGNETO TOGGLE SWITCHES AND KEY SWITCH FOR OPTIONAL ELECTRIC START

Install the optional magneto toggle switches (2) and the key switch(3) using the hardware and instructions that are supplied with the switches. Use Figure IP-1 overview as a location guide.

Not pictured INSTALLING AIRSPEED INDICATOR, TACHOMETER, ALTIMETER, EXHAUST GAS TEMP. GAUGE, CYLINDER HEAD TEMPERATURE GAUGE, VOLT METER, & HOBBS HOUR METER OPTIONAL HKS/DATCON OIL TEMP & PRESSURE GUAGES.

Figure IP-1 may be used for a layout guide. Install the airspeed indicator (4), tachometer (5), altimeter (6), exhaust gas temperature gauge (7), cylinder head temperature gauge (8), volt meter (9) - *on optional electric start system only*, & Hobbs hour meter (10) using both hardware and directions that are included in the instrument package. If you are using the HKS engine, please refer to Fig IP-3 for reference on wiring the 12V. gauges. Please note that the Gauges requires 12V. to the terminal marked "I". ground to "G" and the sender attaches to the terminal marked 'S'.

Not pictured ATTACHING PLASTIC FITTING TO AIRSPEED INDICATOR

Attach 1/4" x 1/8" NPT. Fitting to the back of the airspeed indicator (4). Attach the plastic airspeed indicator pitot tubing to the fitting. The tubing will be routed through the left hand front strut to the pitot probe, later.

✓ Chapter 11 Section

INSTALLING THE GAUGES AND OPTIONAL WIRING HARNESS

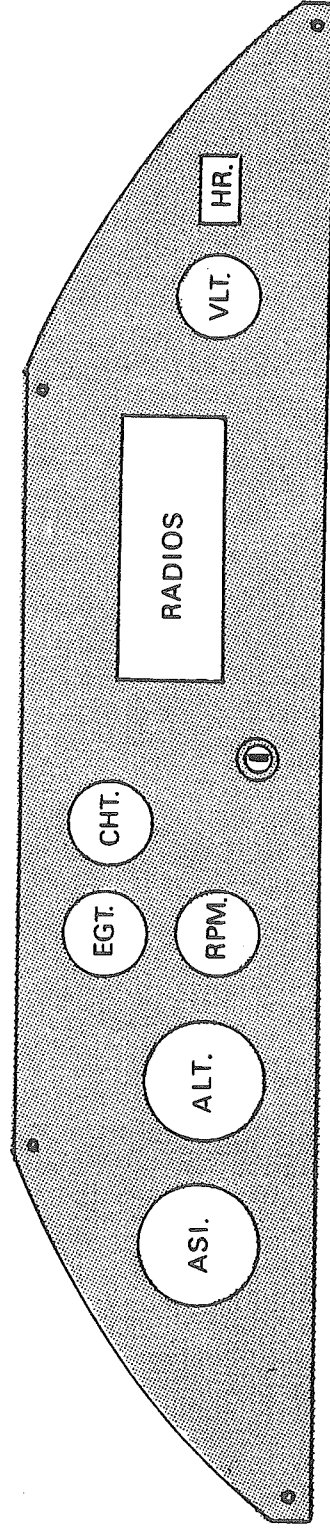
Figure IP-4 OPTIONAL ELECTRIC START SYSTEM INSTALLATION

- b) Using the schematic wiring diagram in the figure, attach the wiring harness electric start (11) to the instruments and switches. Attach the various instrument cables and the wiring harness electric harness start using solderless wire connectors or by soldering. **SOLDERING THE CONNECTIONS IS A PROCEDURE THAT SHOULD BE DONE WITH THE ASSISTANCE OF A QUALIFIED PERSON or a FLIGHTSTAR DEALER.**
- c) The harness provides an adequate number of wires (twelve) to handle the recommended gauges. If additional gauges are desired, extra wires will need to be run.
- d) Route the electrical harness (11) through grommet (13) just behind the left forward upright.
- e) Secure the wiring harness (11) with ty-wraps to the left front upright. Follow the correct installation diagram for the engine package purchased. More specific installation instructions for Rotax and HKS engines are found in Chapter 17.

Section 7

Gauges And Optional Wiring Harness Parts List Figures IP-1, IP-1A, IP-2, IP-3

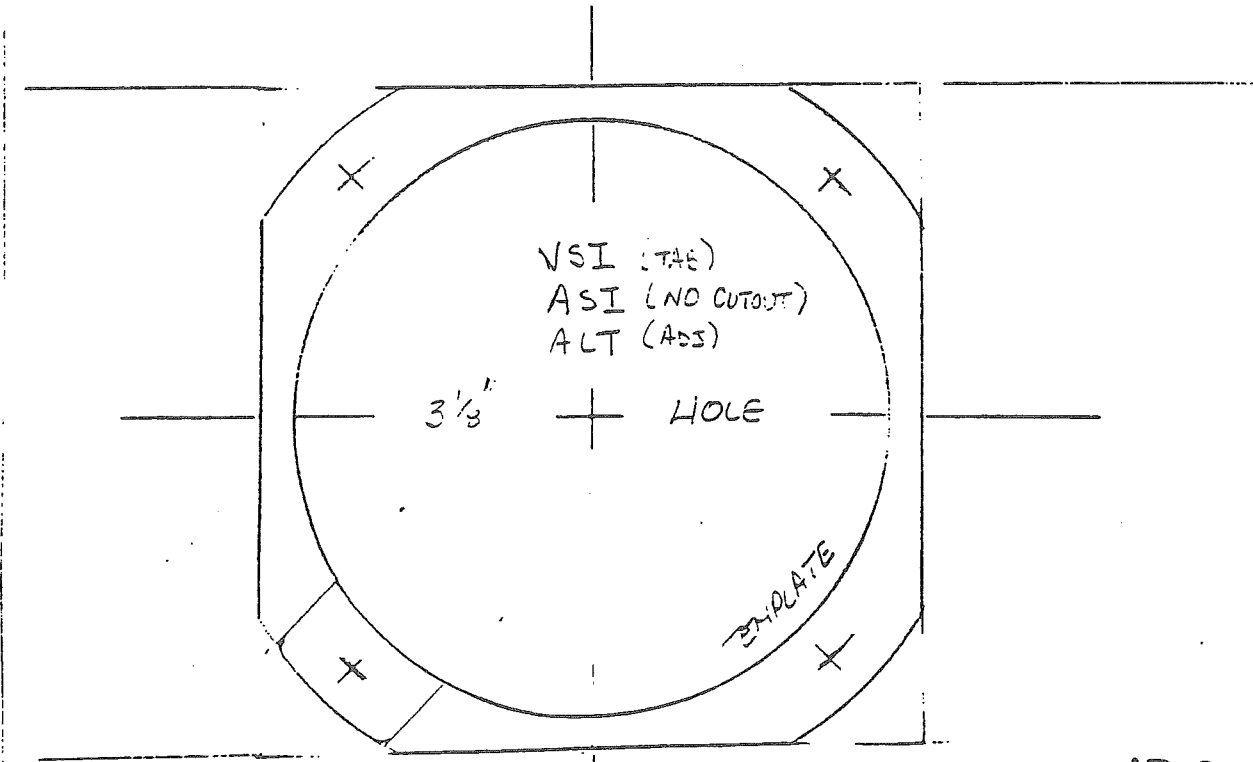
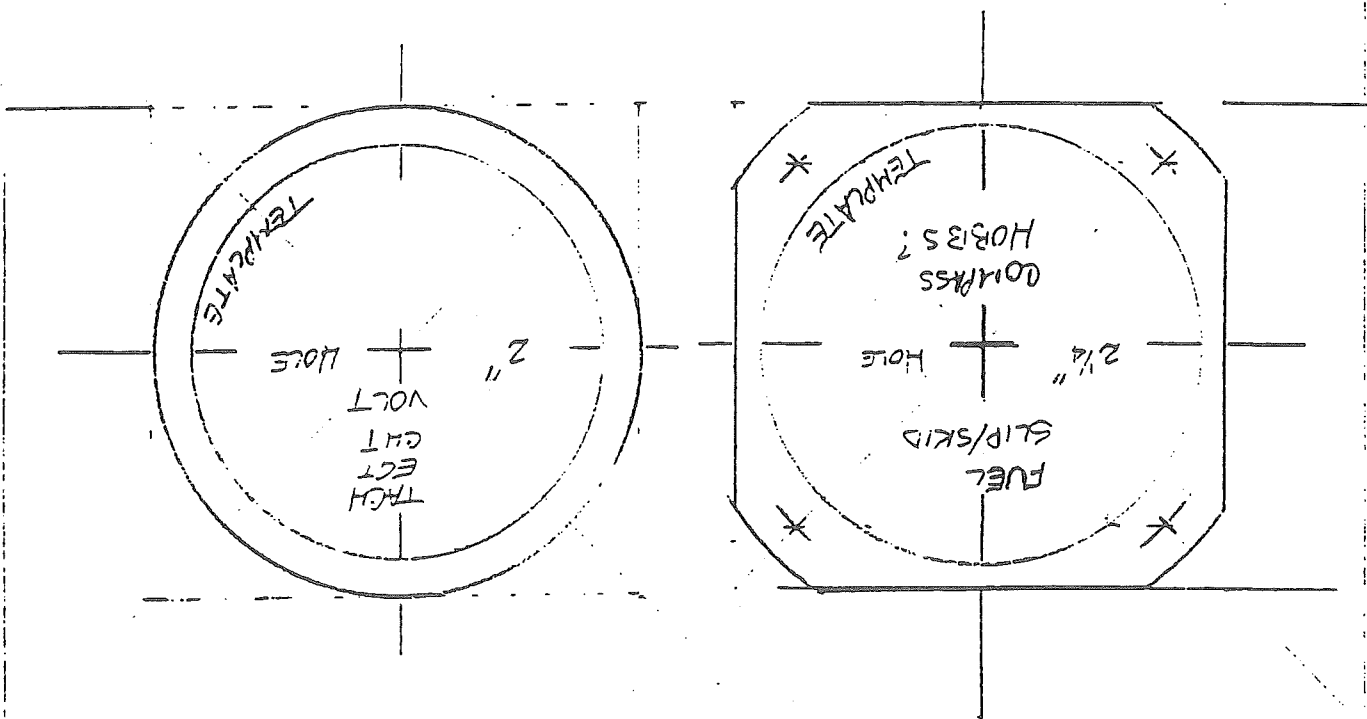
INDEX#	PART #	QTY	DESCRIPTION
1.	IP-263	1	INSTRUMENT PANEL
2.	ES-185	2	MAGNETO TOGGLE SWITCH
3.	ES-186	1	KEY SWITCH
4.	AS021	1	AIRSPEED INDICATOR
5.	TA020	1	TACHOMETER
6.	AL030	1	ALTIMETER
7.	EG001	1	EXHAUST GAS TEMP GAUGE
8.	CH001	1	CYLINDER HEAD TEMP GAUGE
9.	VM030	1	VOLT METER (ELECTRICAL SYSTEM ONLY)
10.	HO003	1	HOBBS HOUR METER
11.	ES-193	1	WIRING HARNESS ELECTRIC START
12.	ASI FITTING	1	1/4" X 1/8" NPT. FITTING
13.	F353	1	AN GROMMET MEDIUM



SUGGESTED LAYOUT OF THE INSTRUMENT PANEL

FLIGHTSTAR

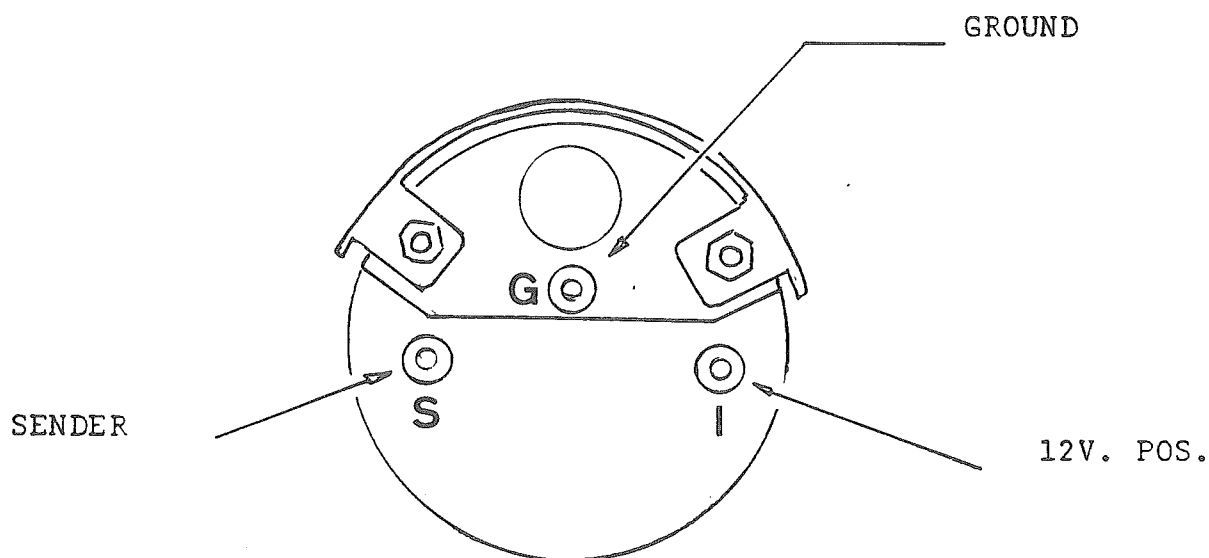
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IP-3

TEMPLATE FOR INSTRUMENT CUTOUTS

FLIGHTSTAR SPORTPLANES



Please note that the Datcon oil temp and oil pressure gauges require 12V. positive, a ground and the wire from the sender. Three connections in all. The oil tank needs to be grounded to the airframe as well for the proper oil temperature to register. It's shown on the Datcon directions for the gauge but it's not very clear.

FIGURE IP-4

Chapter 11

Section 3

Installing The Fastback 2K fairing

Figures FB-1, 2

1. The Fastback rear fairing can be installed after the rudder, elevator and trim cables. The fuel tank and the complete fuel line system should also be installed. This procedure is best done before the wings are attached.
 - a) Trim the lower fuel tank tube so that it will not create a bump in the Fastback after trimming the lower tank tube, pad the tube ends to prevent wear on the inside of the fastback. See Fig. FB-2.

2. **FIGURE FB-1 ATTACHING THE BATTENS TO THE COVER**
 - a) Disconnect the Velcro join seam at the top and lay the Fastback cover (1) out. Insert the batten ends (2) into both ends of the $\frac{1}{2}$ " .035 battens (3). Peen the ends with a peen and hammer to secure the batten tips in place. Note that the "duck bill" shaped batten ends (2) are placed parallel.
 - b) Install the battens (3) into the Fastback by sliding them in all the way into the back of the batten pockets until they stop at the end.
 - c) Push the batten into pocket and mark the batten tip through the grommet for drilling. Drill a $\frac{1}{4}$ " hole where you marked (outer end only) Repeat on second batten.
 - d) Secure the batten in the pocket with a tie-wrap (4) as shown.

3. **FIGURE FB-2 REPLACING THE PIVOT BOLTS**
 - a) Remove and replace the pivot bolt from the main landing gear (if not already done) using bolts (5). The pivot bolt is inserted from the rear forwards, Slide on washer (14) then attach the Fastback lower tube (7) and standoff (6), keeping the lower part of the bent "vee" to the bottom

4. **FIGURE FB2K-2 ASSEMBLING THE FASTBACK FRAME**
 - a) Insert the TC-1 insert (8) into the TC-1(9), aligning the hole in the insert with the TC1, so that the saddle shaped cut out in the TC-1 is parallel with the Base tube (after the part is inserted into the Fastback keel).
 - a) Insert the TC-1 assembly into the Fastback keel (10). Attach this with Aluminum brad (11), Lightly peen the end of the Brad.

5. **FIGURE FB2K-2 ATTACHING THE UPPER FASTBACK FRAME**
 - a) Loosen the $\frac{1}{4}$ " bolt through the band clamp. Insert a thick screwdriver into the space between the rear uprights. Insert the three hole plate (12) into the space between the rear uprights at the location of the $\frac{3}{16}$ " bolt. Note that the plate is not symmetrical, the side with two closely spaced holes goes to the bottom.

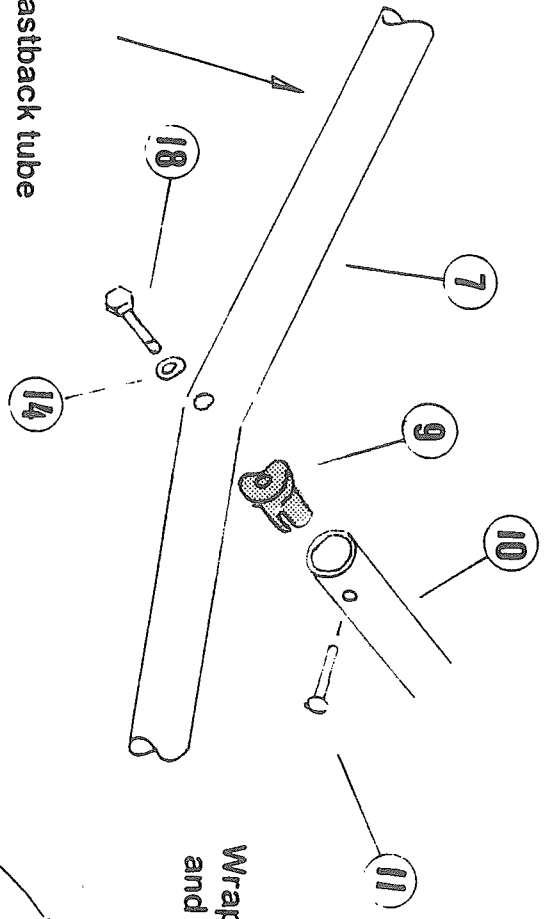
Chapter 11 Section 3 Installing The Fastback 2K fairing Figures FB-1, 2

- b) Insert bolt (13) through washer (14) Aluminum Spacer (15) the uprights (and plate) Aluminum Spacer (15) washer (14) and finally Locknut (16). Tighten both of the Bolts, Band clamp and plate.
6.
 - a) Insert the three hole plate (12) into the Keel tube (10), attach with Bolts (17) washers (14) and locknuts (16). Tighten the nuts securely. Position the front end of the keel tube (12) at the center of the base tube. Mark the base tube for drilling the attachment hole with a $\frac{1}{4}$ " drill. Note that the hole is not perpendicular.
 - b) Attach the front of the Keel tube (10) assembly to the Base Tube (7) inserting bolt (18) through washer (14) the front of the lower tube, in the middle (at the bottom of the vee). Tighten securely.
7.
 - a) Place the Fastback cover (1) over the boom tube and secure the Velcro attachment by overlapping the hook with the pile, pat the Velcro to assure good contact. Hook the pre-sewn webbing loops over the $\frac{3}{16}$ " bolt (with spacers) (11).
8.
 - a) Use ty-wraps (4) to tension the bottom grommets to the lower tube (6). Start at the center and work your way outward. Do not clip off the ends yet, as there is a change in the localized tension while you tighten other parts of the cover.
9.
 - a) Attach the grommets on the leading edge of the Fastback, reaching around the uprights behind the seats. Attach the upper grommet to the upper part of the center upright. If your plane is flap equipped, Use two ty-wraps hooked together to tension the grommets at a rectangular patch just behind the aileron mixer plate. Thread the ty-wraps through to both sides. Just tension this lightly, this keeps the fairing away from the flaps when they are down.
- 10 Go back and tighten all the ty-wraps and make certain the Fastback is in proper position. Insert End Caps (18) into the end of the lower tube (6).
- 11 Run the fuel drain out of the access whole cut in the bottom front of the cover . Mark the $\frac{1}{2}$ and $\frac{1}{4}$ full position on your fuel tank with an indelible ink marker at the center for reference in flight. To fill the tank use a vinyl fuel hose and access the filler through the top of the Fastback, inserting the hose through the top opening of the fastback

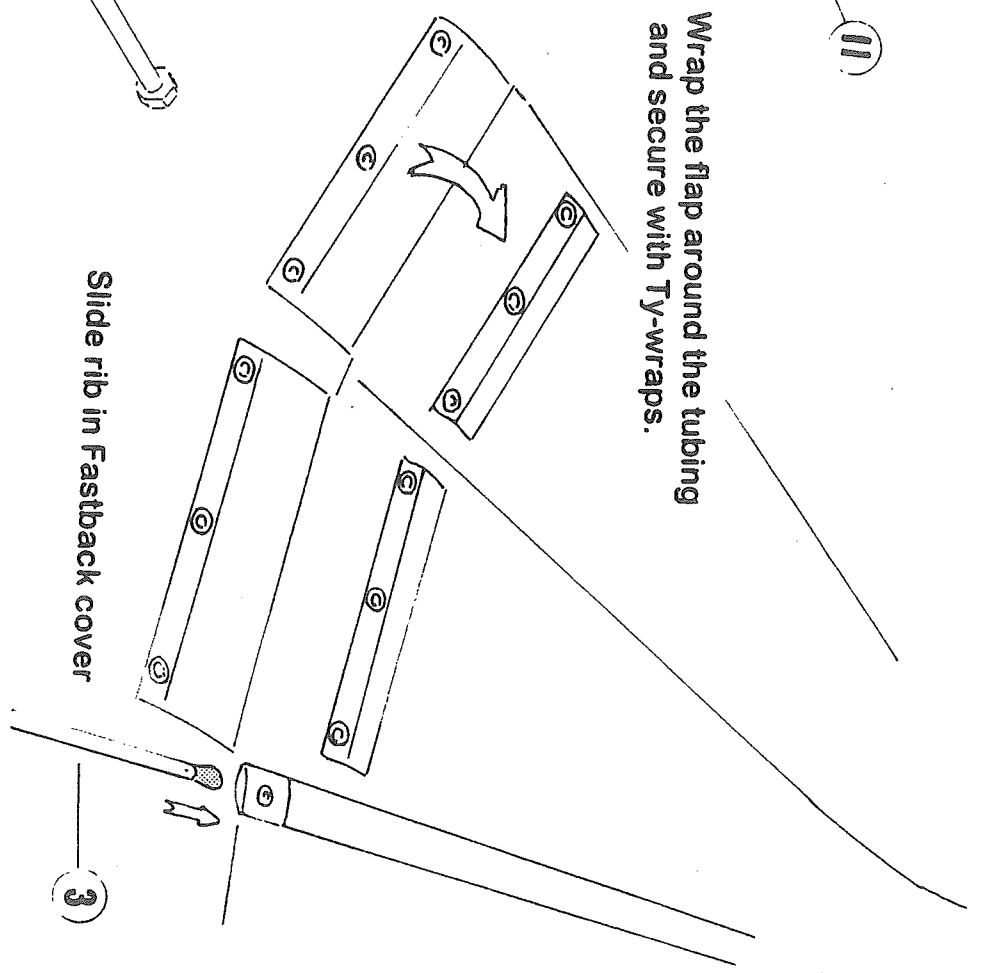
Chapter 11 Section 3
Installing The Fastback 2K fairing
Index for
Figures FB-1, 2

INDEX #	PART #	QTY	DESCRIPTION
1.	F-398-5	1	FASTBACK 2K COVER.
2.	PT-1	4	BATTEN TIP.
3.	F-398-3	2	FASTBACK BATTEN.
4.	TRP-12"20	20	TY-WRAP 12" LONG.
5.	AN4-32A	2	1/4" BOLT.
6.	S04-94	2	STANDOFF.
7.	F-398-1	1	FASTBACK LOWER TUBE.
8.	TI-1	1	TC-1 THREADED INSERT.
9.	TC-1	1	TUBE CONNECTOR 1" .
10.	F-398	1	KEEL TUBE.
11.	A187R1250A	1	ALUMINUM BRAD.
12.	W-173	1	FASTBACK KEEL PLATE
13.	AN3-31A	1	3/16" BOLT.
14.	AN960-416L	8	1/4"WASHER, THIN.
15.	C-235-3	2	ALUMINUM SPACER.
16.	AN365-1032	2	3/16"LOCKNUT.
17.	AN3-13A	2	3/16" BOLT.
18.	AN4-14A	1	1/4" BOLT
19.	EC-1	2	1" ENDCAP
20.	960-10L	4	3/16" WASHER, THIN

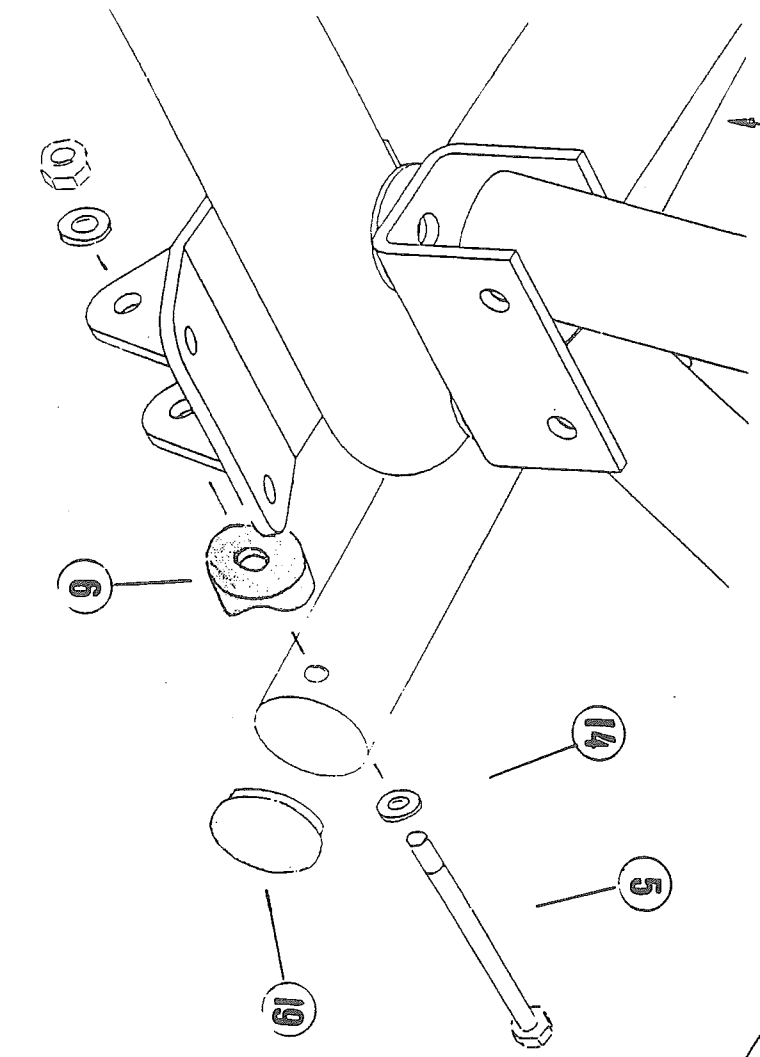
Lower Fastback tube



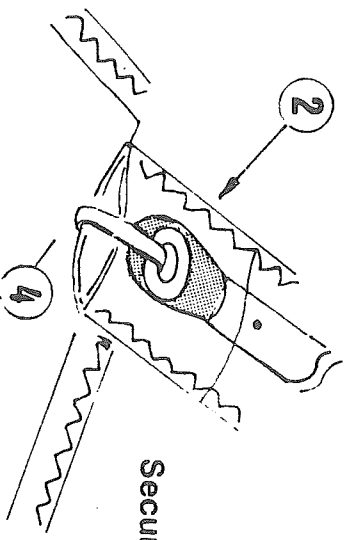
Wrap the flap around the tubing and secure with Ty-wraps.



Slide rib in Fastback cover



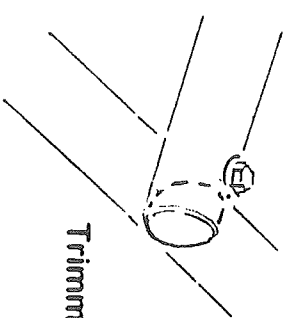
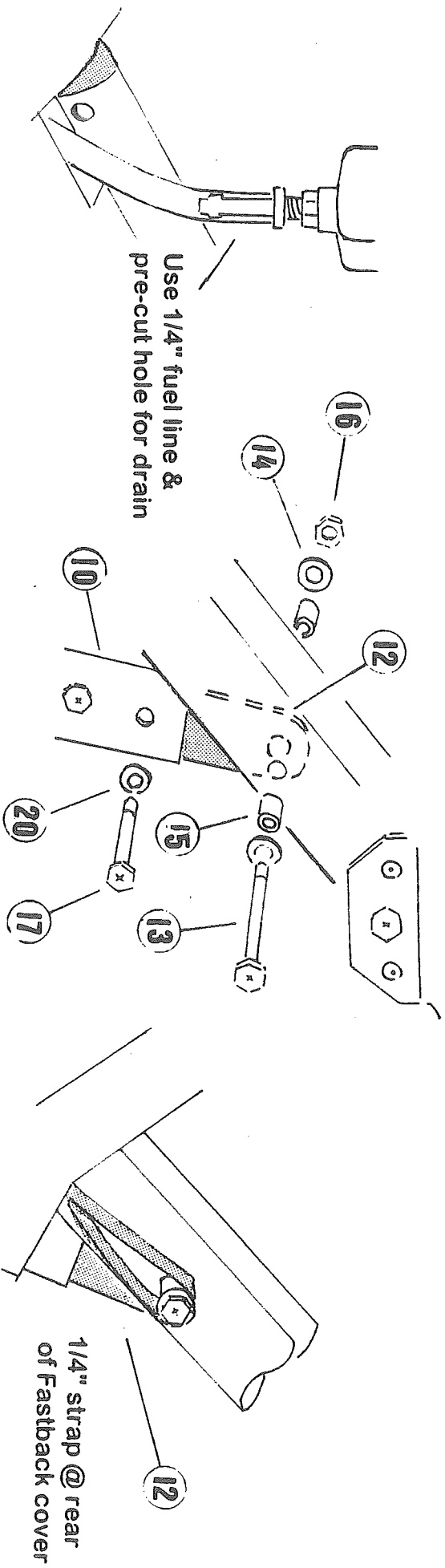
Secure with Ty-wrap



ATTACHING TI

STBACK

FB-1

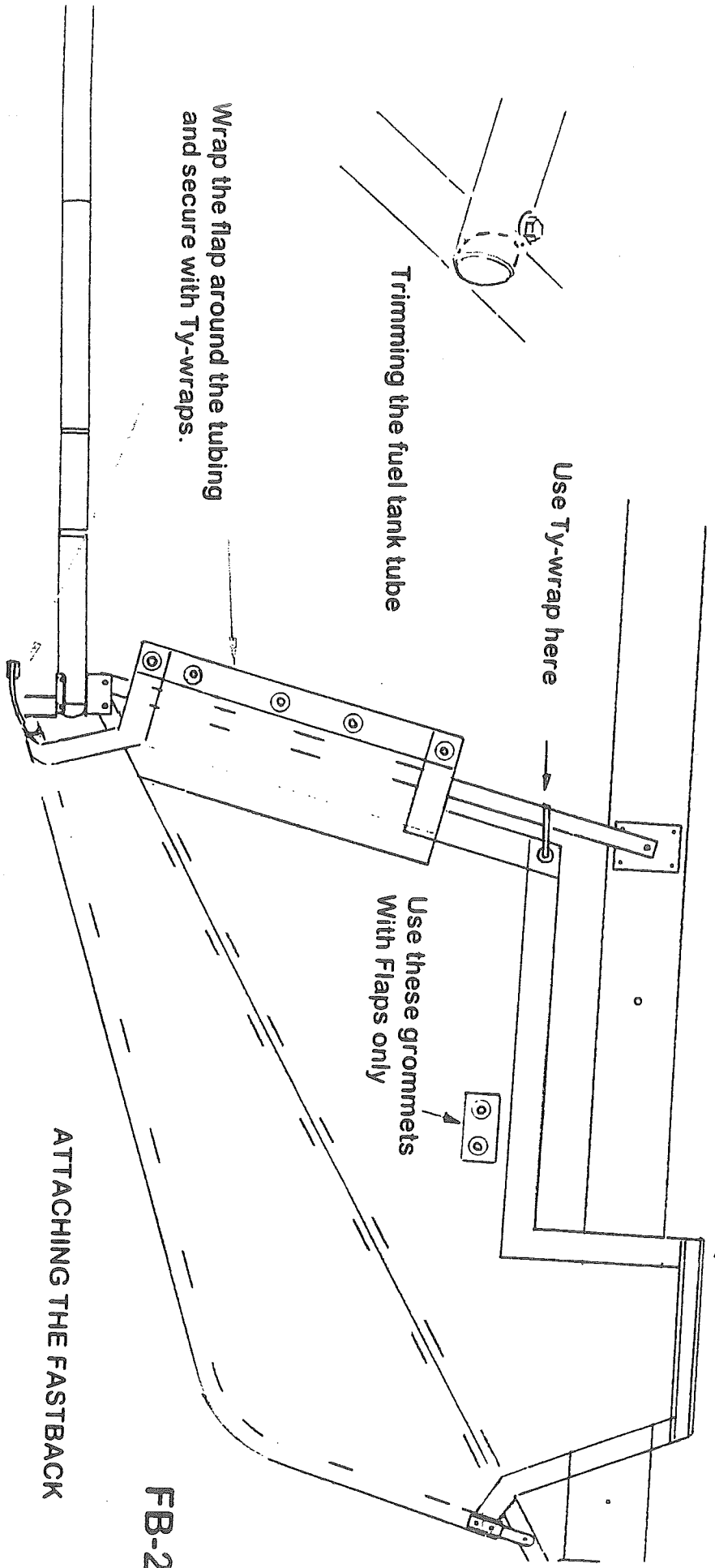


Use Ty-wrap here

Use these grommets with Flaps only

Velcro around boom

Wrap the flap around the tubing and secure with Ty-wraps.



ATTACHING THE FASTBACK

FB-2

✓ Chapter 11

SECTION 4

ATTACHING THE CABIN FAIRINGS

ATTACHING THE CABIN FAIRING DOORS

The fairing doors (1)(2) are provided to allow storage of light items inside during flight. The door panel fits flush with the Cabin fairings (8)(9) and are secured with plastic push buttons (6) and a Lexan sheet "step" (3). The attachment is simple, but must be carefully done to assure proper alignment.

The front of the door is held in place with the Lexan step (3) that inserts under the forward edge of the door opening in the cabin fairing. Referring to drawing CF-1, Measure 2-1/4" down from the edge of the door and 1" in from the forward edge and mark for pilot hole drilling. Place the step (3) so that 3/16" of the Lexan step is sticking out from the front edge of the door. Mark and pilot drill the step using the door as a guide. Drill out the holes with a 3/16" drill. Attach the step (3) to the cabin fairing doors using bolts (4) and locknuts (5).

Note that the rear is held with a snap-type plastic push button (6). Carefully mark the rear attachment holes, measure 2-1/4" down from the edge of the door and 3/8" in from the rear edge (1/2 the width of the door flange on the cabin fairing) mark for drilling a pilot hole. After drilling the pilot hole in the door, mark the corresponding spot on the fairing for drilling.

Drill out the rear attachment of the door and cabin fairing using a 19/64" drill. After drilling the attachment hole, assemble the door snap by inserting the plunger through the expander-collar on the bottom. Slide on plastic washer (7) and insert the snap into the door and finally the cabin fairing. The 19/64" holes will need to be carefully cleaned out with a file for the push button to fit properly.

ATTACHING THE CABIN FAIRINGS

The II-SC cabin fairings (8)(9) are already formed and trimmed to a final shape when they are shipped. The fairings fit over the airframe at the center uprights and Bulkhead gusset plate in the front and the rear uprights on the bottom of the fairing. The fairings are attached only at the upper bolt in the Bulkhead gusset plate, the upper seat support tube and ty-wrapped to the rear upright. Note that the Fastback should be previously attached as well.

The lower molded edge and the rear edge of the cabin fairings (8)(9) need to be padded with 1" wide foam (10) used for weather-stripping. This keeps the fairing from chafing the Fastback where it touches.

- a) Mark and drill a 3/16" hole at the rear bottom corner of the cabin fairings where shown on the drawing. Elongate the hole with a file or dremel to about a 1/4" wide slot. This is where the fairing will be ty-wrapped to the rear upright.
- b) Line up the left cabin fairing (7) to the center upright so that the indentation on the front lines up with the upper seat support tube. The forward edge of the fairing fits in front of the center upright. The rear-lower edge fits over the bottom of the rear upright, thereby jiggling itself into position.

The cabin fairing is bolted to the airframe frame using the pre-drilled hole in the upper seat support tube and the upper 1/4" bolt in the bulkhead gusset plate. Remove the upper 1/4" bolt from the bulkhead gusset plate and remove the 1/4" washer.

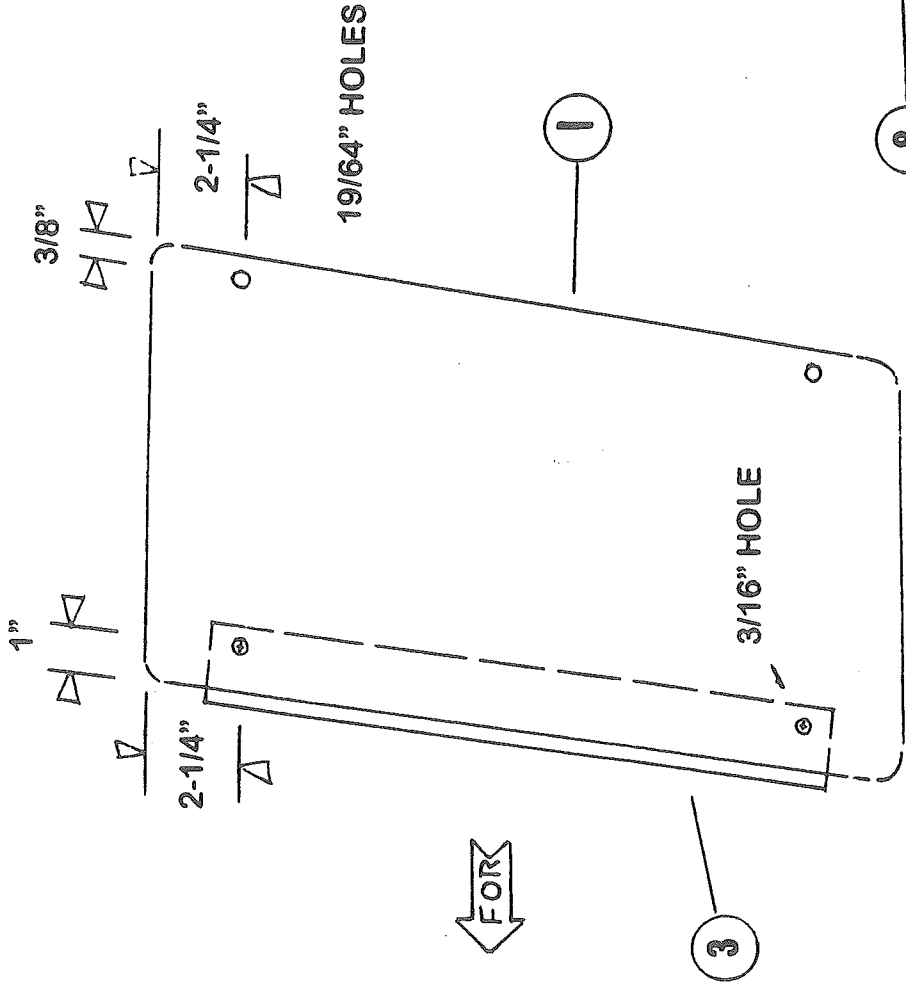
Slide the Cabin fairing into place lining up the pre-drilled 3/16" hole in the indentation with the corresponding 3/16" outer hole in the upper seat support tube. Trial fit the cabin fairing by removing (previously installed in chapter 9) bolt (11) fender washer (12) on the front. Fender washer (12) and locknut (13) on the rear leave the locknut loose.

- c) Mark the spot at the 3/16" slot in the lower rear corner of the fairing and mark the fastback for carefully cutting an upper and lower slot with a hot knife as shown in the drawing.

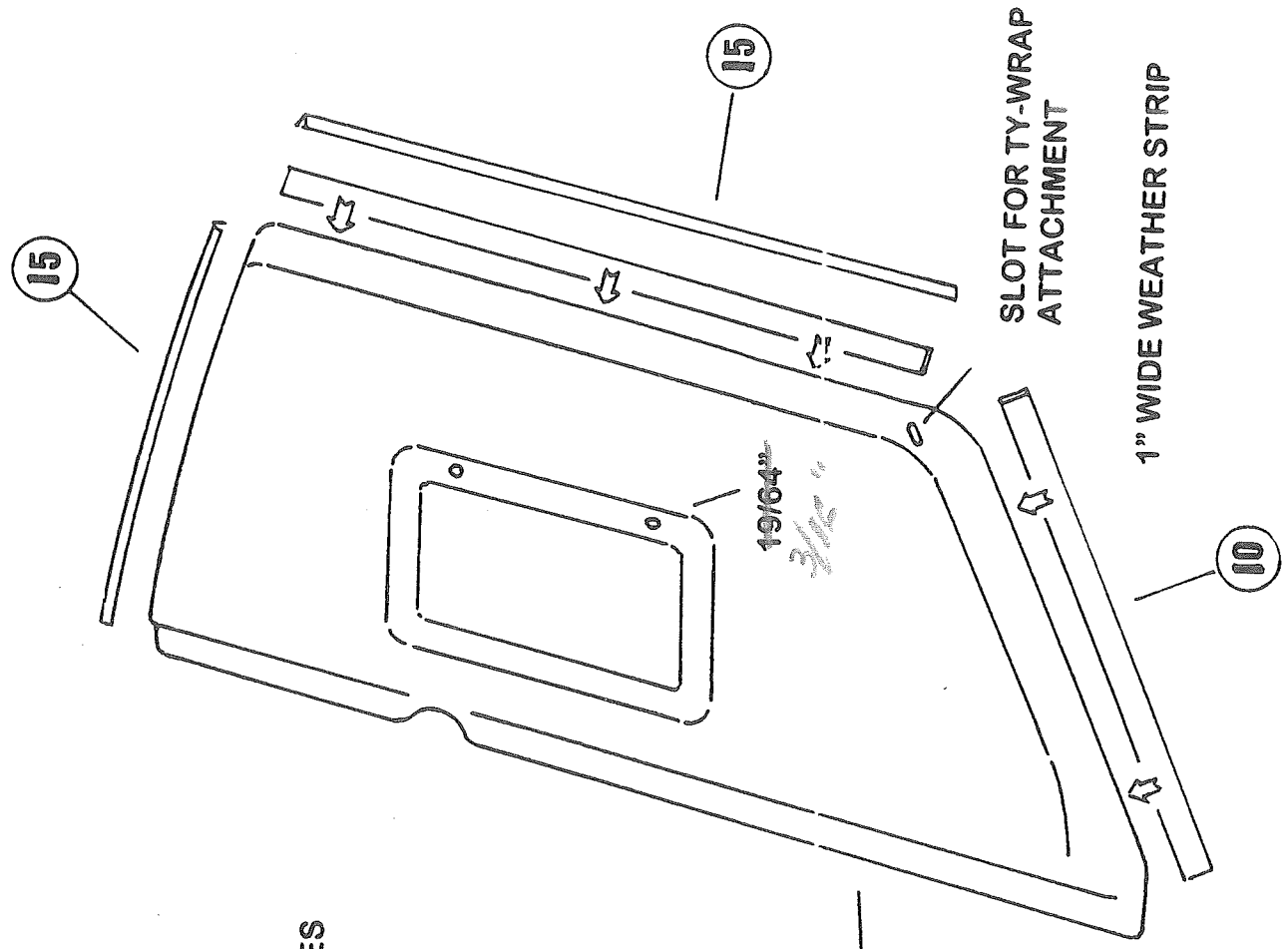
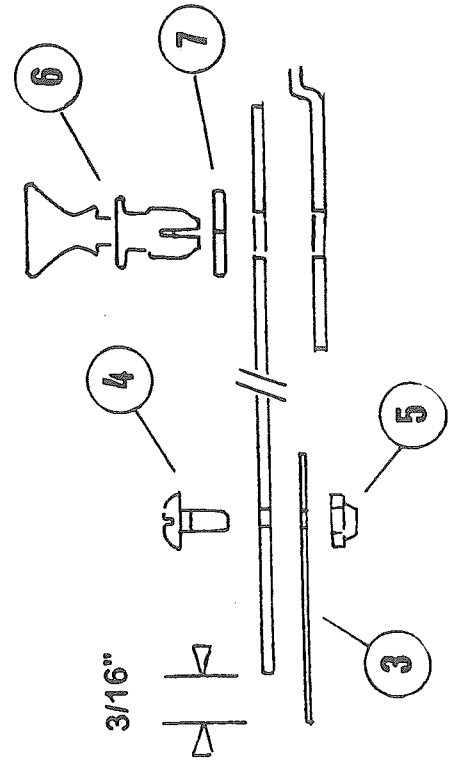
Go back and carefully tighten the mounting bolts. Secure the rear of the cabin fairing with a ty-wrap (14). Finish off the edges of the fairings with molded plastic edge trim (15) as shown.

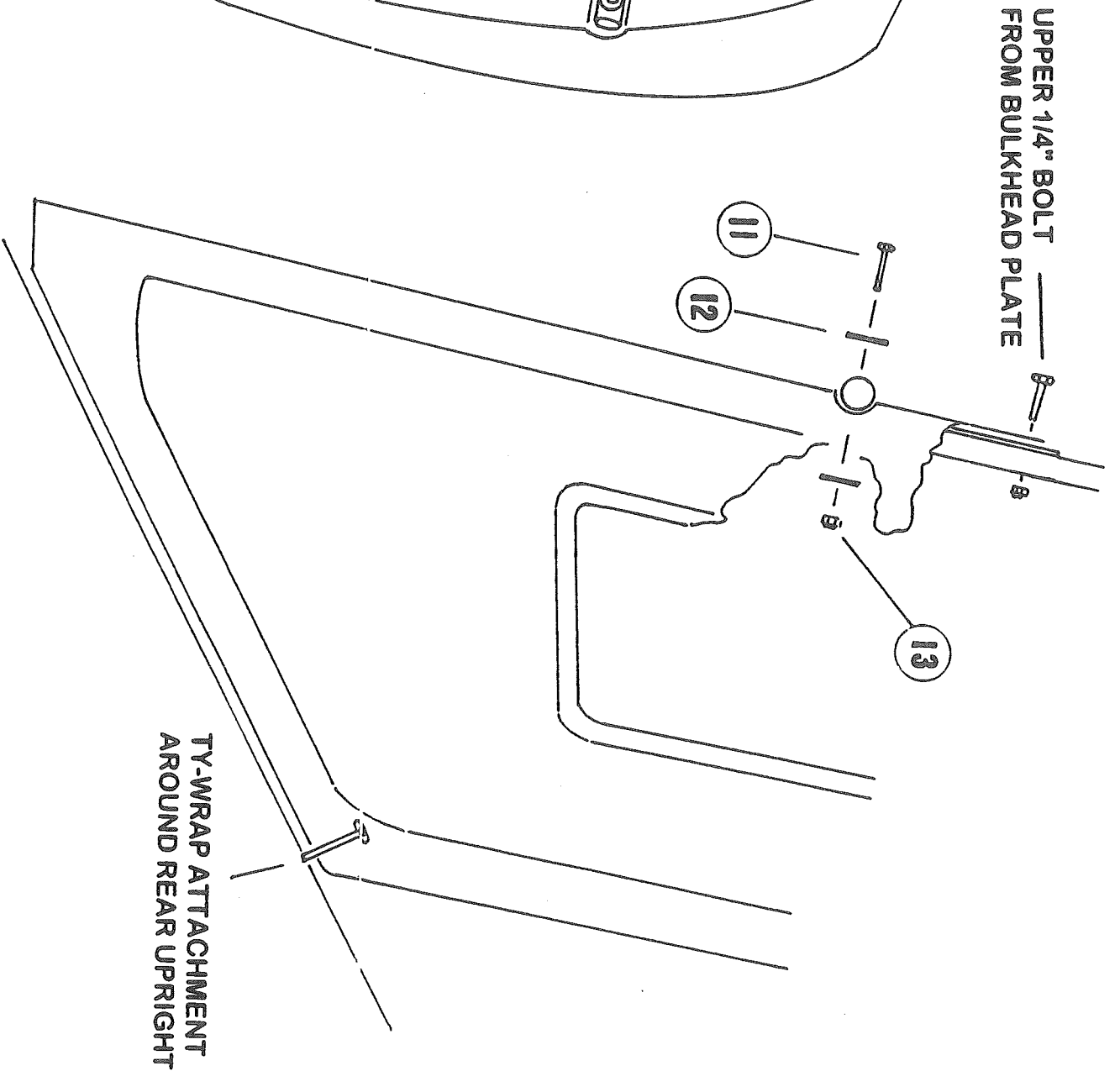
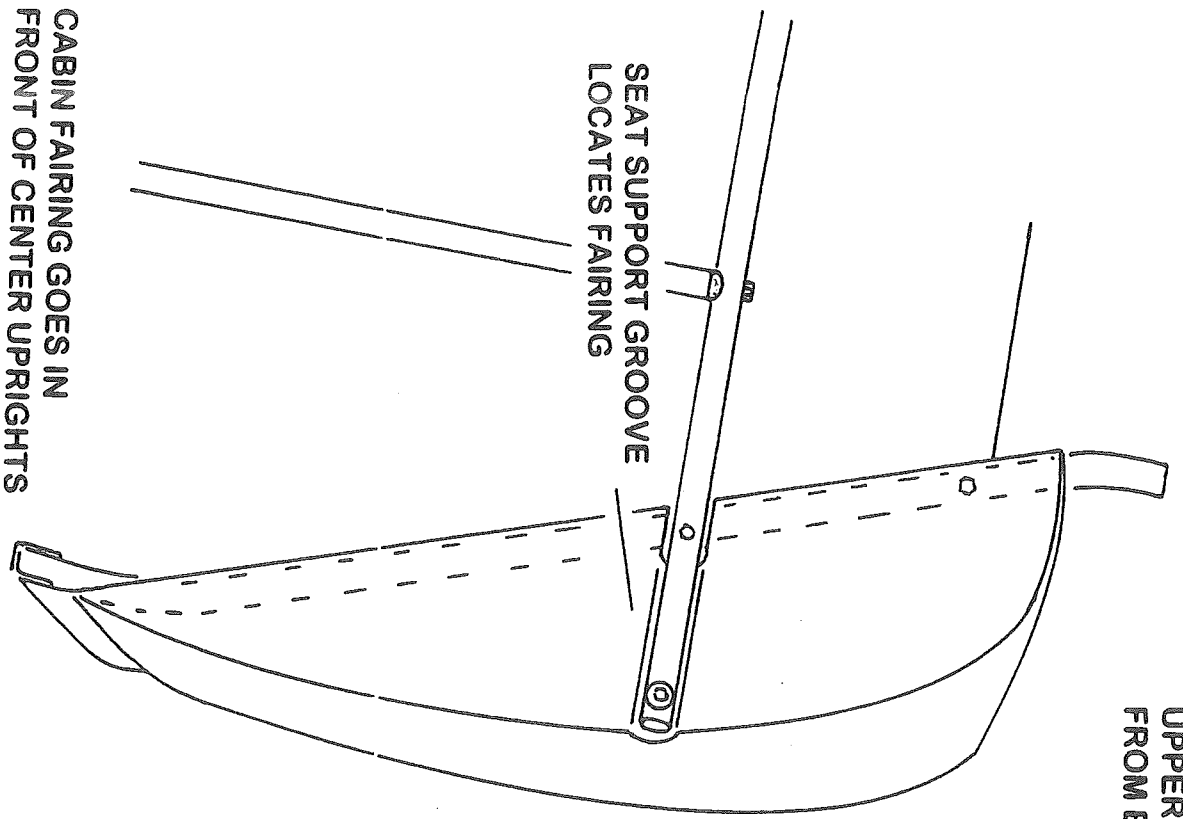
Section 4 Cabin Fairing Parts List Figures CF-1, CF-2

INDEX#	PART #	QTY	DESCRIPTION
1.	F-257-14	1	CABIN FAIRING DOOR, LEFT
2.	F-257-15	1	CABIN FAIRING DOOR, RIGHT
3.	F-257-11	2	LEXAN SHEET STEP
4.	AN526-832R6	4	8-32 BOLT
5.	MS21083NO8	4	8-32 LOCKNUT
6.	F-257-12	4	PLASTIC SNAP-LOC
7.	F-257-13	2	PLASTIC WASHER
8.	F-257-6	1	CABIN FAIRING, LEFT
9.	F-257-7	1	CABIN FAIRING, RIGHT
10.			1" WIDE WEATHER STRIP (not included)
11.	AN3-15A	2	3/16" BOLT.
12.	AN970-4	4	1/4" FENDER WASHER
13.	AN365-1032	2	3/16" LOCKNUT
14.	TY-WRAP	2	12" TY-WRAP
15.	F-257-12	1	PLASTIC EDGE TRIM



SPACING ON DOOR ATTACHMENT





✓ Chapter 11

SECTION 5

ATTACHING THE CABIN ROOF

ATTACHING THE CABIN ROOF

If you are converting an SL into an SC, remove the windshield mount tang from the top of the windshield and remove from the boom. The full cabin is very stiff structurally and does not need the mount. The rigidity of cabin will eventually tear out the mount from the boom if it is not removed.

The IISC Cabin roof (1) is already trimmed to a final shape when it is shipped. Begin attachment by marking the centerline of the windshield visor (2) at the rear on the joggle. Measure and find the centerline of the Cabin roof (1) and mark it with a thin felt marker to align it to the windshield visor for attachment.

- a) Line up the roof with the previously attached visor on the front and the joggle that runs across the tops of the rear fairing halves. Note: The roof fits on the top of the visor and gets centered at the rear with the slots cut out for the center uprights. Line up the roof so that it is centered on the visor and the fairing halves and is even on both sides before drilling 3/16" holes and attaching with bolts (3) washers (4) and locknuts (5).

Note that at the location shown as 7-1/2" on the rear edge of the roof there is a gap between the bolts shown as X. This is where the top-rear snap for the Sport Door pop rivets into place with an aluminum pop rivet.

Section 5

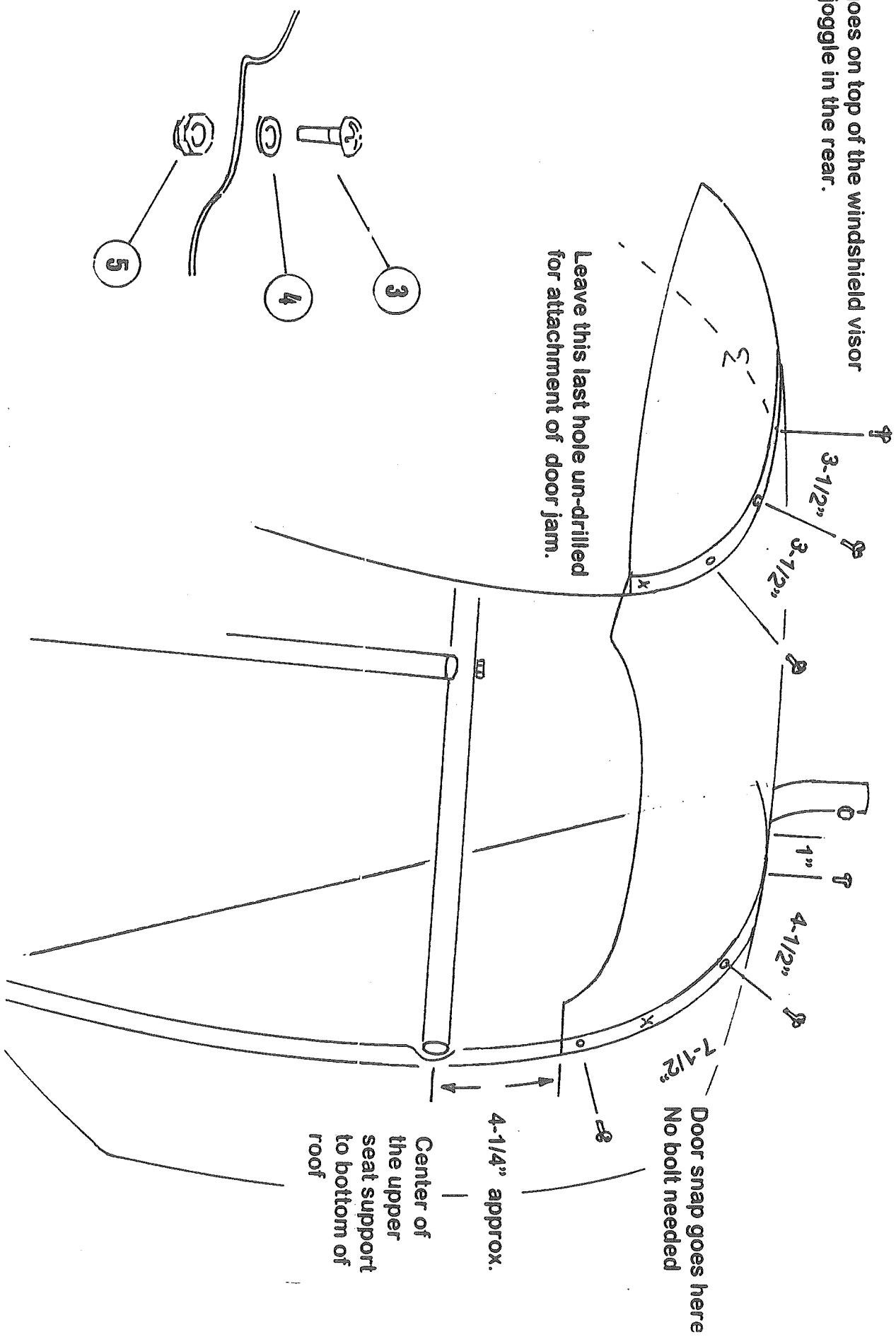
Cabin Roof Parts List

Figures CR-1

INDEX#	PART #	QTY	DESCRIPTION
1.	F-257-9	1	CABIN ROOF
2.	F-257-8	1	WINDSHIELD VISOR IISL AND IISC
3.	AN526-832R6	6	8-32 BOLT
4.	AN960-8	6	8-32 WASHER
5.	MS21083NO8	6	8-32 LOCKNUT

Windshield mount tang assembly not used for IISC

Roof goes on top of the windshield visor in the joggle in the rear.



ATTACHING THE CABIN ROOF CR-1

✓ Chapter 11

SECTION 6

ATTACHING THE DOOR POSTS

ATTACHING THE WINDSHIELD POSTS

The Flightstar-IISL and SC Door posts (1)(2) are already formed and trimmed to a final shape when they are shipped.

- a) Line up the post (1)(2) to the windshield (3). Note that the Door post fits on the outside of the windshield. Line up the Door post along the rear edge of the windshield so that the overlap is roughly 1" from the edge at the bottom, tapering at the top.
- b) The bottom of the Door post fits into the joggle of the front fairing as shown. The small angled section at the bottom fits over the edge of the windshield, the top overlaps the roof and the rear edge of the visor. Clamp, using the same system you used for attaching the windshield to the fairing. Note the location of the holes at the top of the Door post, place the rearmost hole close to the front hole, leaving a space for the Sport Door snap marked X on the drawing.
- c) Drill the attachment holes with a 3/16" diameter drill. Attach the Door posts with bolts (4) washers (5) and locknuts (6).

Section 6 Door Post Parts List Figure DP-1.

INDEX#	PART #	QTY	DESCRIPTION
1.	F-257-4	1	DOOR JAM, LEFT
2.	F-257-5	1	DOOR JAM, RIGHT
3.	F-399	1	WINDSHIELD FS-IISL, SC
4.	AN526-832R6	20	8-32 BOLT
5.	AN960-8	20	8-32 WASHER
6.	MS21083NO8	20	8-32 LOCKNUT

✓ Chapter 11

SECTION 7

ATTACHING THE SPORT DOORS

ATTACHING THE SPORT DOORS

The IISC Sport Doors (1)(2) are ready to attach when received. Leave the protective plastic on the windows in place until the assembly is completed. The windows are quite susceptible to scratching so be careful. The Doors are held on with Velcro (2) and snaps (3). They are quite easy to attach, but take your time to fit them properly. The Sport doors fit basically to the outer edge of the "joggle" that runs around the door opening. Clean the surface of the joggle, using Isopropyl Alcohol, to help the adhesive backed Velcro to stick to the fiberglass.

- a) Begin by holding the door up to the cabin to mark the position of the Velcro with a thin felt tip marker. Cut the Velcro to length and stick it to the joggle. Use long pieces of Velcro for each major section of the door, I.E. the top, the straight part of the leading edge. At the bottom of the door, skip the Velcro where the fiberglass parts bolt to the cage.
- b) Stick the doors up to the cabin using the Velcro only, to confirm the position and the "taught-ness" of the position. The doors should be tightly stretched across the cabin.
- c) Mark the position of the snaps on the Velcro by marking directly under the head of the snap. Drill at the mark with an 1/8" drill and pop rivet the male portion of the snaps (3) using pop rivet (4) as shown. Note that the snap replaces a bolt at the roof and attaches through the Door jam and the roof at the front. Note also that the roof wants to be pulled down slightly by the door. This helps keep tension on the door in the vertical axis.
- d) Cut the Sport door battens (5) to length and insert them into the batten pocket on the Door part of the Sport door as shown.

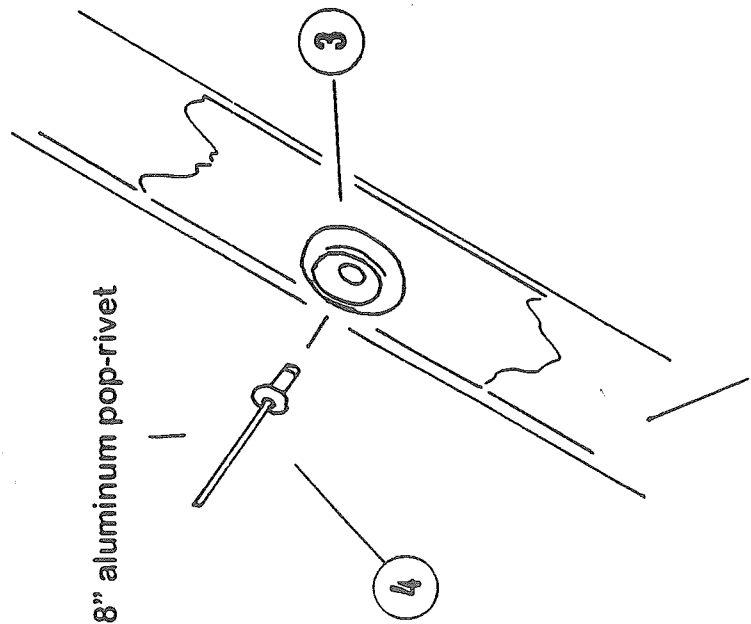
Section 7

Sport Doors Parts List

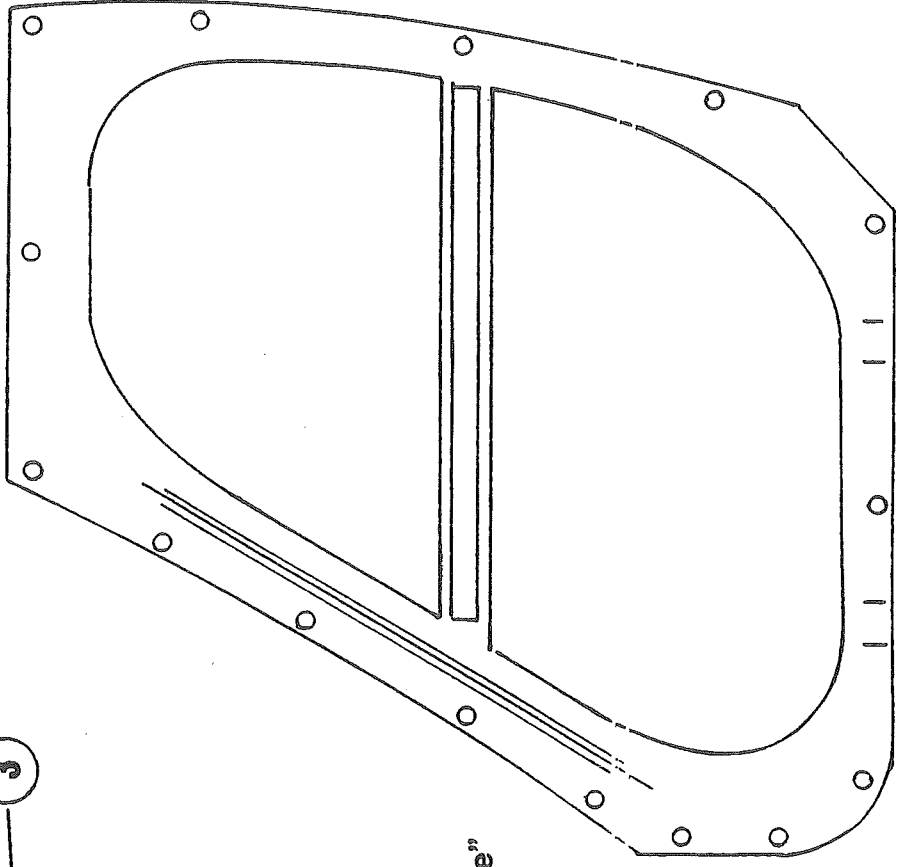
Figures SD-1

INDEX#	PART #	QTY	DESCRIPTION
1.	F-257-16,17	2	SPORT DOOR, LEFT, RIGHT
2.		1	ADHESIVE BACKED VELCRO
3.		30 20	DOOR SNAP, MALE
4.	AA44	30 34	1/8" POP-RIVET, ALUMINUM
5.	F-257-18	2	1/2" .035 ALUMINUM BATTEN

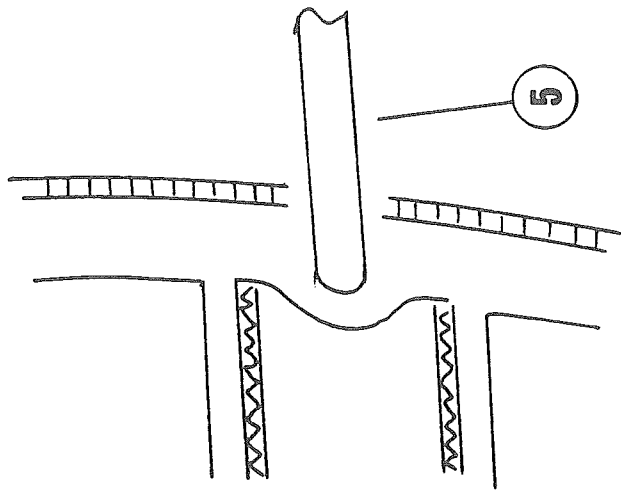
1/8" aluminum pop-rivet



The Velcro goes on the "joggle"



Delete the Velcro here



Insert the batten into the pocket

