Section 23
Final Body Installation and Skid Pants

Procedures covered in this section:
Final install body panels; install engine belly pan; mount fuel drain cock bracket to tub; cut holes for fuel tank filler caps; fit and install skid pants; install seat upholstery.

Cards used in this section:

HARDWARE CARD	E32 CARD 1F	E45 CARD 1F
E25 CARD 1F	E32 CARD 2F	

Prints used in this section:
E32-2000

Templates used in this section:
None

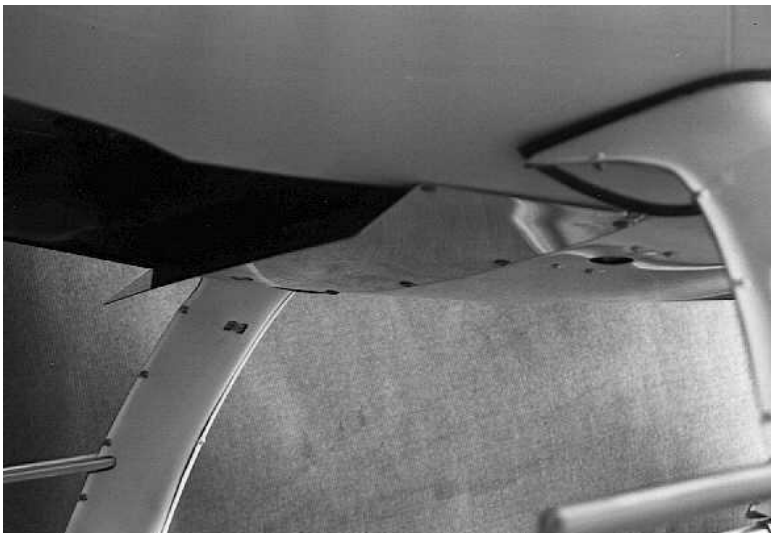
Tools required for this section:

Air or electric drill	Cleco pliers	Scissors
Band saw or hacksaw	Grinder	Screwdrivers
Cleco	Pop rivet gun	Tape measure

Drill bits of the following sizes: 1/8", 3/16", 1/2", 7/8", #40, #19, Uni-bit or step drill
Ratchet with sockets of the following sizes: 5/16", 3/8", 7/16"
Wrenches of the following sizes: 5/16", 3/8", 7/16", 1/2"

Notes:
1. SKID PANTS: Fit the skid pants to the front gear first to become familiar with the process. The rear skid pants will be more complicated to fit because of the bushings for the ground handling wheels.

   Allow 1/4" clearance between the top of the pants and the body to enable the landing gear to flex.



ENGINE BELLY PAN

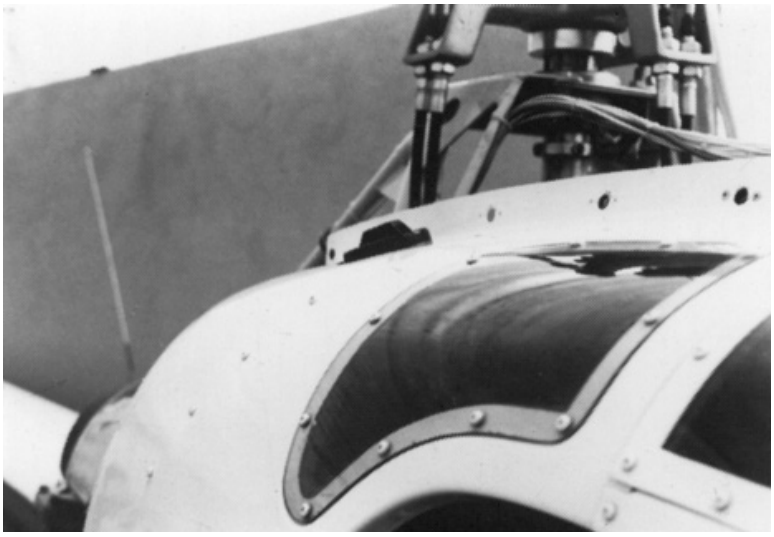
Photo #1

Final installation of all body and interior panels should be completed at this time.

Trim and fit the engine belly pan and mount it to the bottom of the tub with Dzus fasteners. The short 45 degree bend faces down and to the rear.

Photo #2

Cut a hole in the bottom of the tub (just in front of the belly pan) to access the fuel drain. Attach the drain cock mounting bracket to the tub with four screws and nut plates.



FUEL TANK FILLER HOLES

Photo #3

Do not cut the hole for the fuel filler caps in the body panels until the fuel tanks are final installed and bolted in place on the airframe. The hole should be about 3/4" larger in diameter than the fuel cap. The top of the fuel cap should extend approximately 1/4" above the surface. (Flush with the surface is also acceptable.)

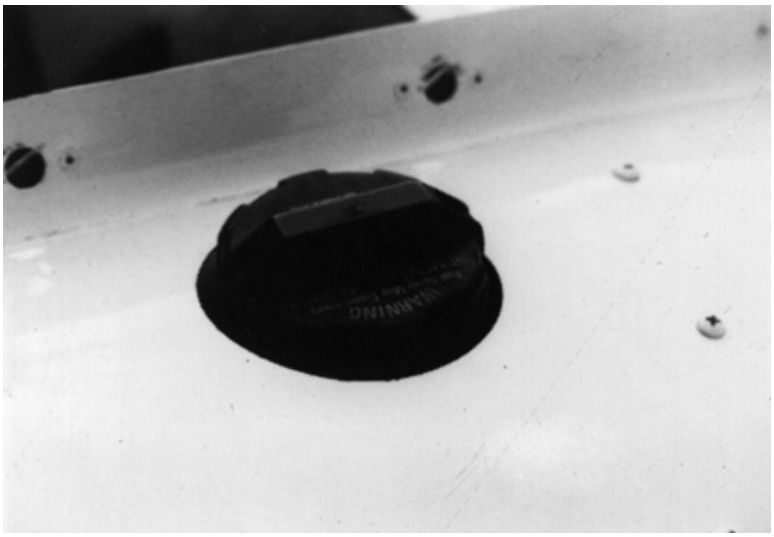
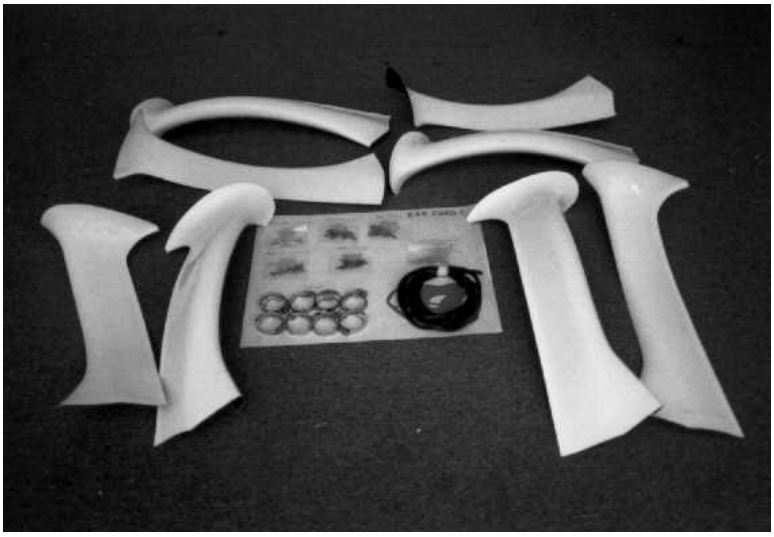


Photo #4

Remove the cap from the fuel tank and cover the hole with tape to prevent any debris from falling in. Tape off the approximate area to be cut out to prevent damage to the paint. In the location of the fuel tank hole, drill a 1/2" hole through the fuselage. Enlarge this hole until the fuel tank cap can be installed in the tank.



SKID PANTS

Photo #5

Parts as received from RotorWay International for the skid pants.

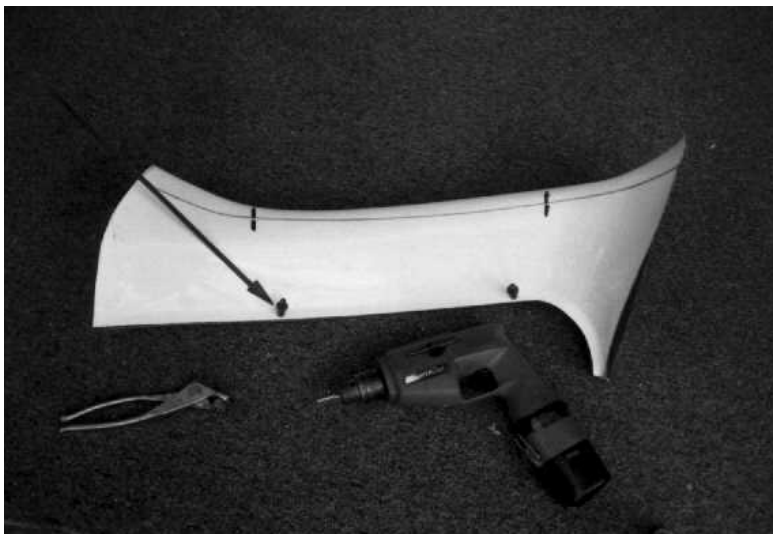


Photo #6

Fit each set (1 inside and 1 outside) together. Cleco two places on rear and mark the front where they fit the best. This will help when fitting them to the landing gear.
Note: It is recommended to fit the skid pants to the front gear first to become familiar with the process. Fitting the rear skid pants is slightly more complicated because of the bushings for the ground handling wheels. These photos show the rear skid pants.

Photo #7

Hold the outside pant in position on the landing gear.

Photo #8

Mark on the body where the top of the pant touches.

Photo #9

Place the end of the tape on the mark and hold the two inch mark on the tape where it contacts the gear. Find the distance to the center of the ground handling wheel bushing.

Photo #10

Transfer this measurement to the outside pant as shown.

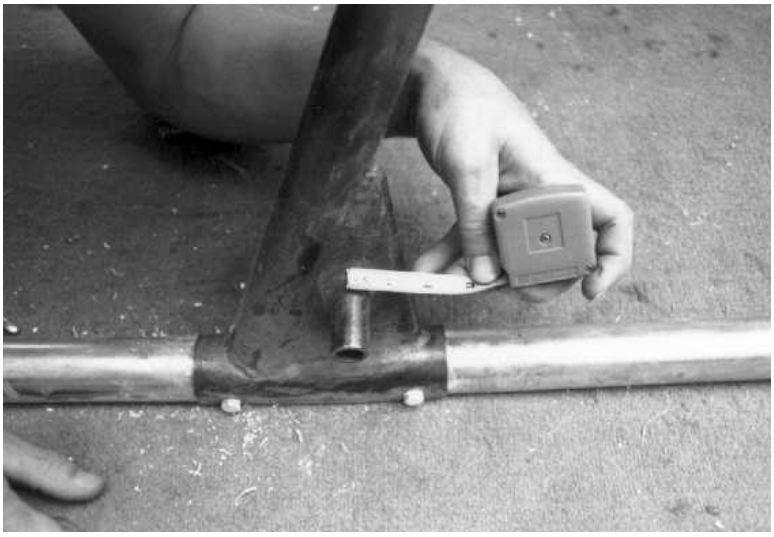


Photo #11

Measure from the front of the gusset to the center of the bushing and add 5/8" to the measurement for nut plate clearance.

Photo #12

Transfer the measurement in previous photo to the pants.

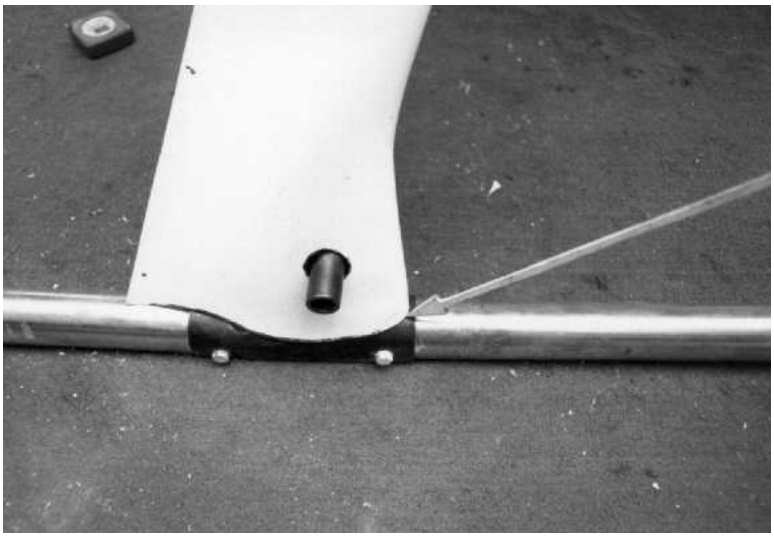


Photo #13

Drill a 7/8" hole and fit the pants on the landing gear. After the top is positioned correctly, cut off the bottom of the pants to fit the shoe, as shown by the arrow.

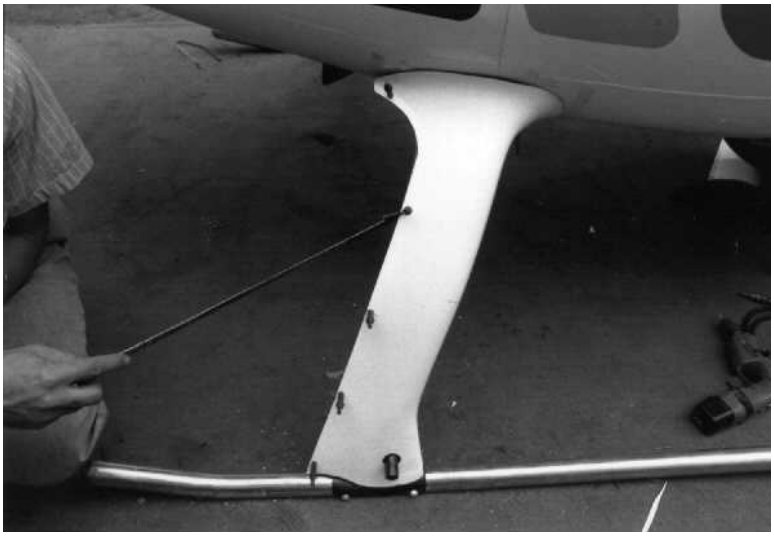


Photo #14

Repeat the previous steps for the inside pant. Then drill and install cleco to check the fit of both assembled halves.

Photo #15

After the desired fit is achieved, mark the edges on the body.

Photo #16

Remove the outside pants and hold the inside pants in position. Mark where the slots are to be cut for the hose clamps.

Photo #17

Cut two slots 1/2" to 3/4" apart centered on the leg of the landing gear. Install the hose clamp and check fit. Cut and install another clamp near the lower end of pants.

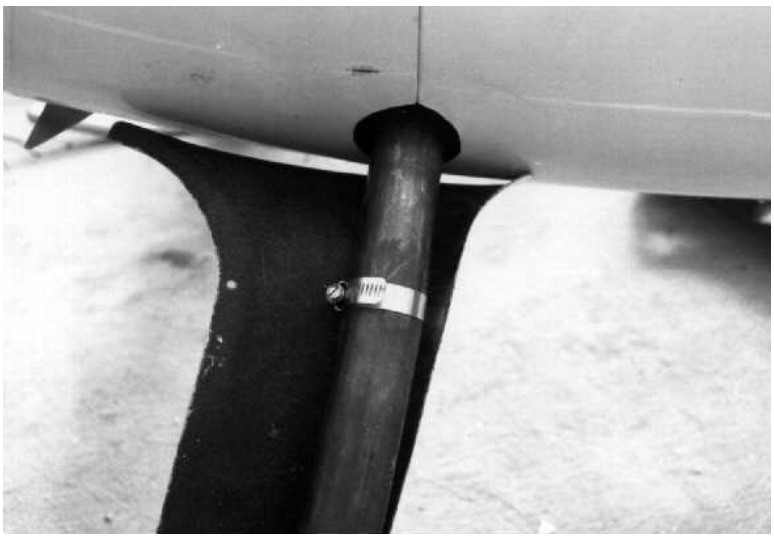


Photo #18

Check the fit of the inside pant to body with the hose clamp holding it. Note the clearance between pant and body.

Photo #19

Re-install the outside pant. Drill and cleco the front overlap for nut plates and screws. Mark and cut the top edge of flare for clearance if necessary. 1/4" clearance is required between pants and body to allow landing gear to flex.

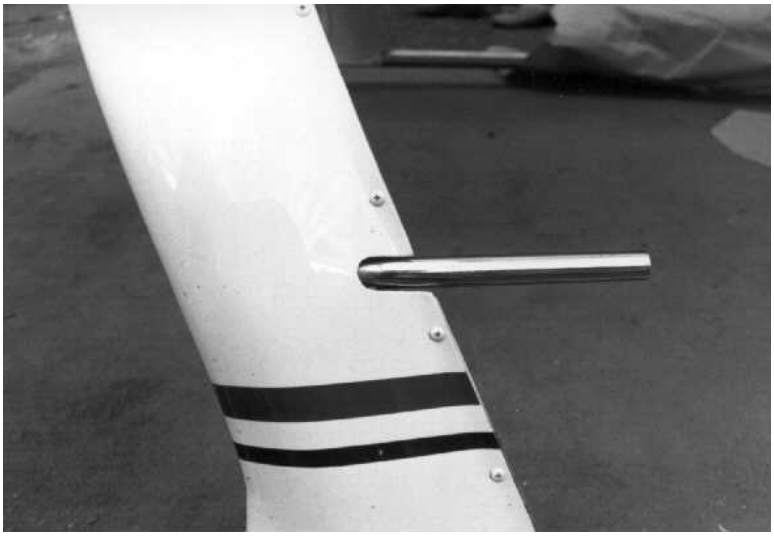


Photo #20

Fit the pants around the step.

Photo #21

After the pants have been final fitted and painted, glue the rubber molding around the top of the pants using weatherstrip adhesive supplied.

SEAT UPHOLSTERY

Photo #22

The seat cushion attachment strips are to prevent the bottom of the cushions from sliding forward, which could limit movement of the cyclic control. When installed, the cushions must not extend in front of the seam where the fiberglass seat bottom meets the cyclic inspection covers.
Place the strip on the seat cushion as shown. Mark the strip and cut it to length.

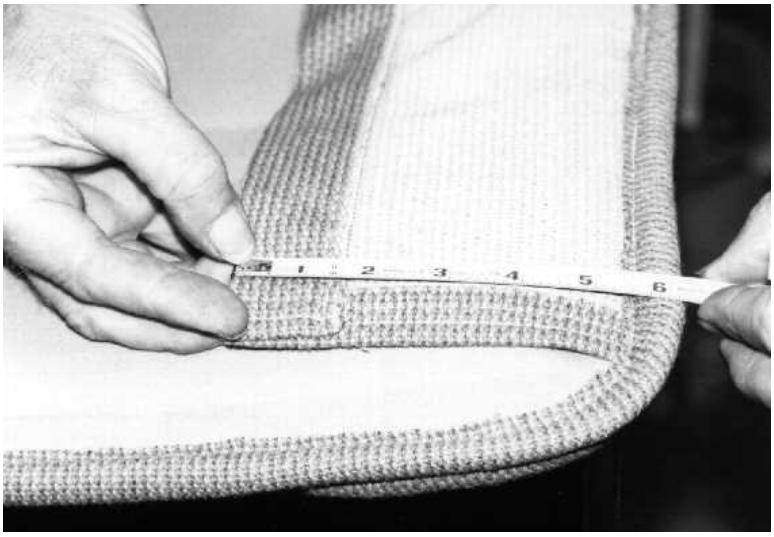


Photo #23

Measure the length of the flap on the bottom of the seat cushion.

Photo #24

Transfer the measurement to the seat bottom, beginning at the front edge of the fiberglass.

Photo #25

Drill a 3/16" hole, 2 inches from each end of the strip. Hold the strip in place and transfer drill the holes into the fiberglass. Install an 8-32 nut plate in each hole, on the underside of the fiberglass.

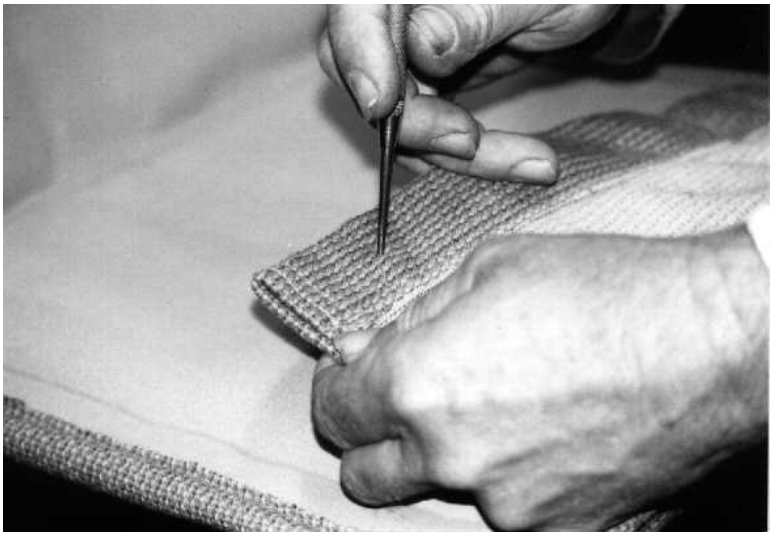


Photo #26

Insert the strip into the flap on the seat cushion. Using an awl or other sharp tool, find the holes in the strip. Enlarge the holes enough to fit the screws through.
Note: Do not use an electric drill to make the holes in the cloth. The drill might catch a thread and unravel the cloth.

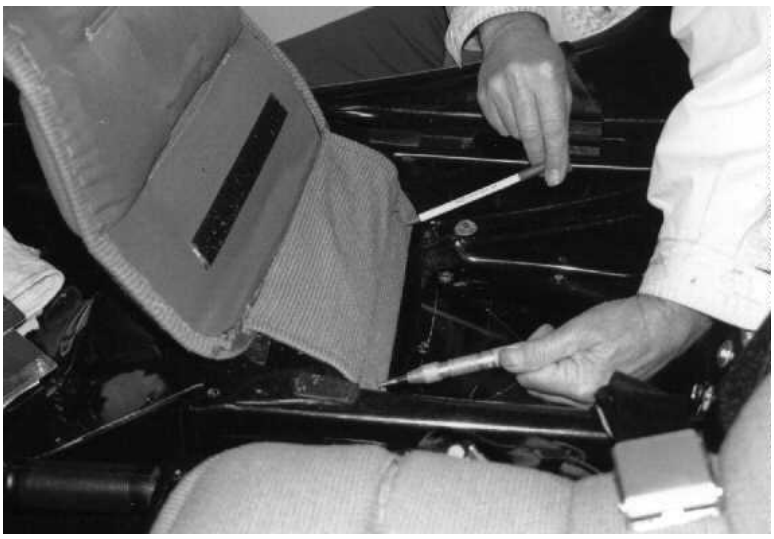


Photo #27

Place the cushion in the cabin and install the screws. If desired, the back of the cushion may be attached to the fiberglass seat bulkhead or to the aluminum access panel with Velcro “hooks”. Exact location of the strips is not critical, because the entire back of the cushion is covered with material that will stick to the Velcro.