

Section 22

Seat Belts, Cabin Comfort and Pitot Tube

Procedures covered in this section:

Install seat belts; fabricate and install radiator collector; connect cabin comfort hoses; install cabin comfort cables and fuel shut-off cable; fabricate and install seat back brace tube; install pitot tube.

Cards used in this section:

E25 CARD 2T	E32 CARD 2T	E36 CARD 2T
E32 CARD 1T	E32 CARD 3T	E54 CARD 1T

Prints used in this section:

E32-2000

Templates used in this section:

E30-1

Tools required for this section:

Air or electric drill	Hammer	Pop rivet gun	Tape measure
Band saw or hacksaw	Mallet	Scissors	Vise
Grinder	Metal cutting snips	Screwdrivers	

Drill bits of the following sizes: 1/8", 1/4", 3/8", 9/16", #40, #19, Uni-bit or step drill

Ratchet with sockets of the following sizes: 5/16", 3/8", 7/16", 1/2"

Wrenches of the following sizes: 5/16", 3/8", 7/16", 1/2", 9/16", 7/8"

Notes:

1. PUSH/PULL CABLES: The cabin comfort and fuel valve push/pull cables can be shortened if desired for better routing. To do this, pull the inner cable into the housing and trim off the excess housing. Then extend the cable, determine the correct length, and trim the cable. **IMPORTANT: THIS APPLIES ONLY TO THE CABIN COMFORT AND FUEL VALVE CABLES. DO NOT SHORTEN ANY OTHER CABLES.**

SEAT BELTS

Photo #1

Parts as received from RotorWay for the seat belts.



Photo #2

Locate and cut the slots in the fiberglass for the lap belts, then feed the belts through.

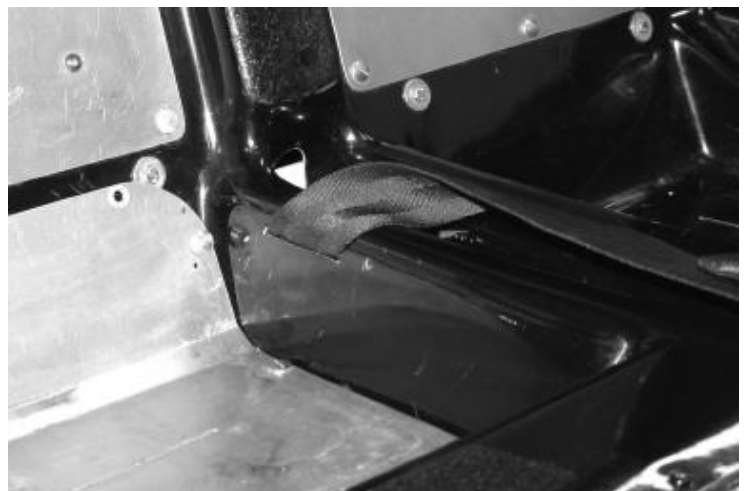


Photo #3

Drill a 1/4" bolt hole in approximately the area shown, and bolt the outboard lap belt to the airframe on the passenger side. Use 1/4 x 2-1/4 bolts, part number E00-2413, found on E32 CARD 3.



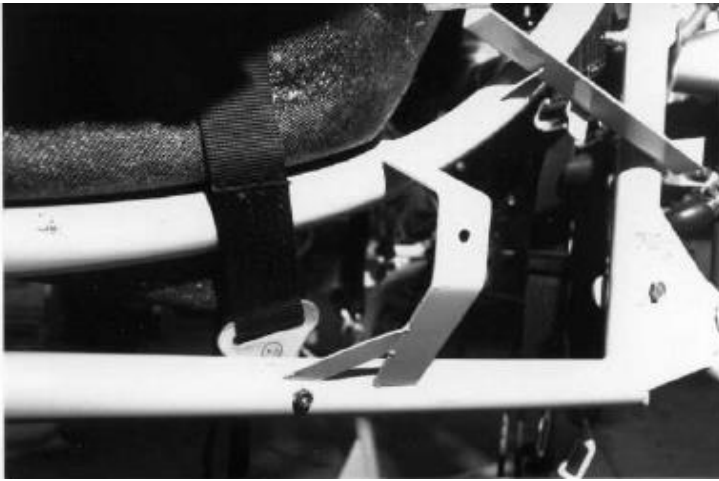


Photo #4

On the pilot's side, drill a 1/4" hole in approximately the same location. Bolt the belt to the airframe as shown.



Photo #5

Bolt the pilot and passenger inboard lap belts to the airframe cross tube, using the same bolts that hold the back of the seat in place (3/16 x 1-5/8, part number E00-2308, found on E32 CARD 3).

IMPORTANT: Make sure there is no interference between the buckles and the collective handle when raised.

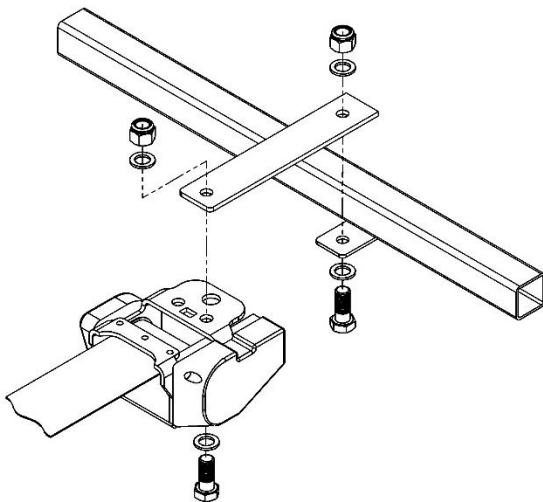


Photo #6

For the shoulder belts, bolt the extensions to the seat belt brackets on the square tube of the airframe, and bolt the shoulder belt reels to the extensions. This will allow for best positioning of the belt and avoid interference with the clutch actuator.

Note: If helicopter is supplied with turbocharger, install the extension on the pilot's side only. On the passenger's side, bolt the reel directly to the airframe bracket.

Photo #7

Cut slots in the back and bottom of the seat bulkhead where each of the seat belts come through. The slots in the back should be 2-3/4 inch x 1/2 inch, just large enough for the buckles to come through. Locate them between the top of the seat and the head rest.



Photo #8

The seat belt guides will prevent the seat belts from retracting all the way back to the reel.

Pull the belt out of the reel and hold this position while installing the guides (see next photo). Use 1/8" x 1/4" countersunk rivets. E32- CARD 3T.

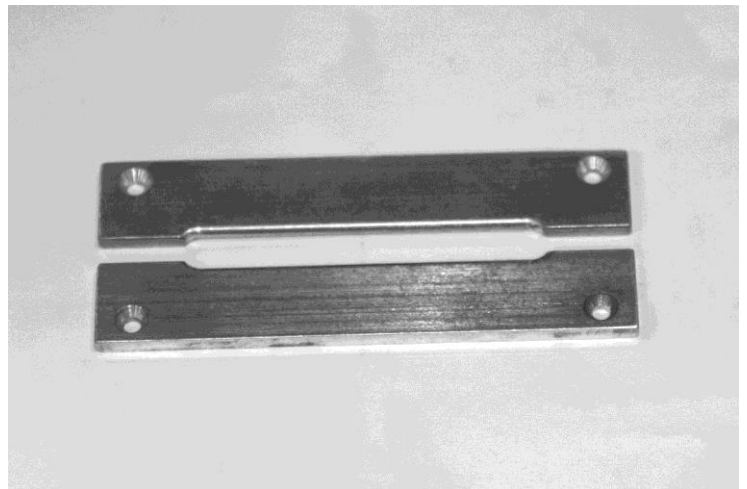
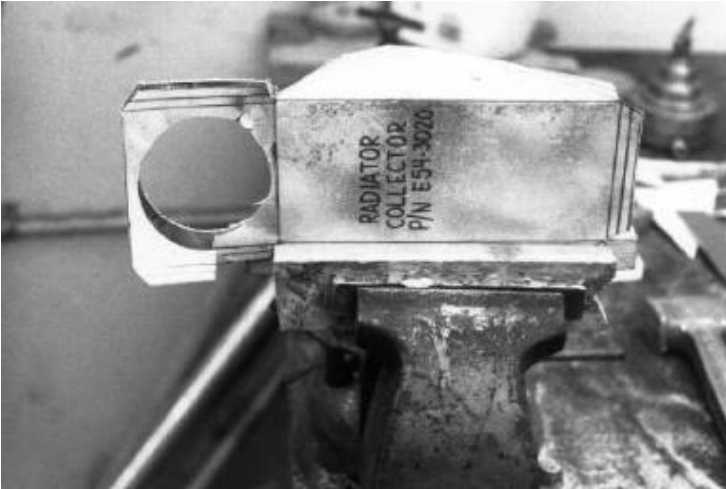


Photo #9

With the belt relaxed, the area where the belts are stitched together will not retract past the guides.





CABIN COMFORT

Photo #10

Using template E30-2, cut out the radiator collector. If you do not have a sheet metal brake, you can use a vise and wood as shown to bend the part.



Photo #11

Another view of bending the collector in a vise.

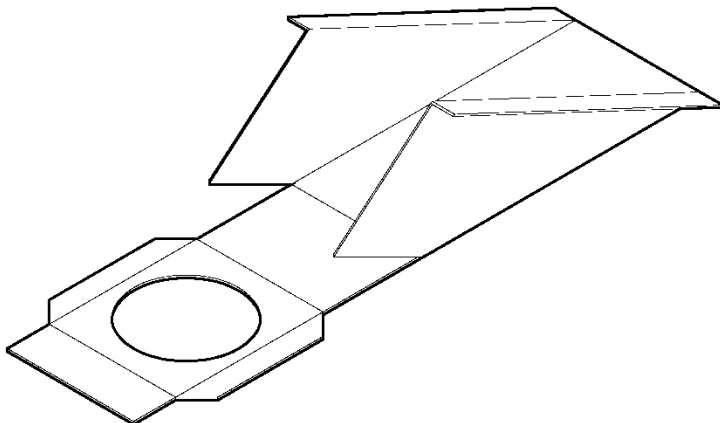


Photo #12

Bend the sides of the radiator collector first.

Photo #13

Shape and bend the end.

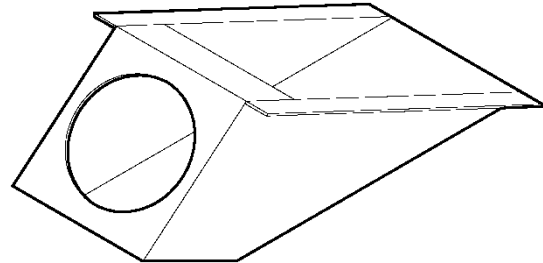


Photo #14

Drill and install the pop rivets to hold the collector's shape. Install four 8-32 nut plates (one in each corner) as shown to fasten the collector to the fiberglass fan shroud.

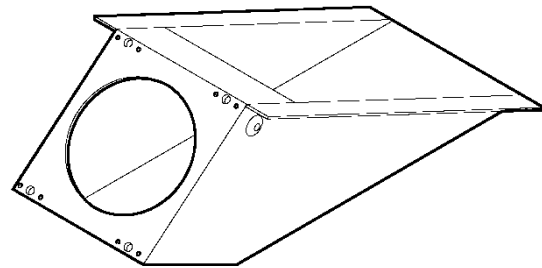
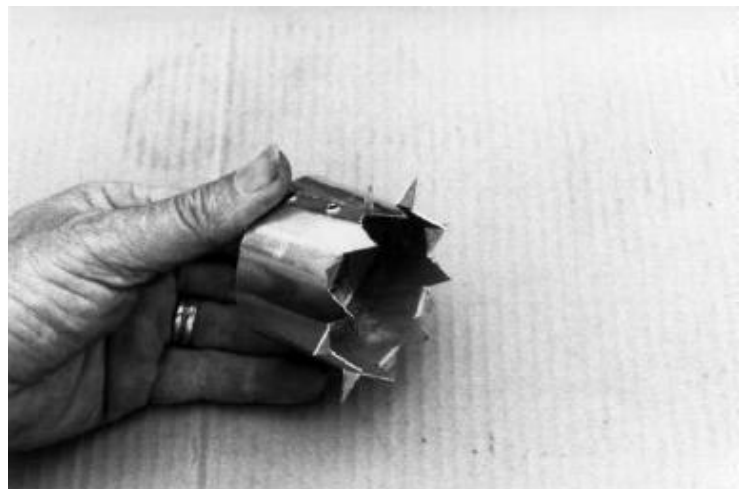


Photo #15

Use the template to cut out and shape the collector collar, bending every other ear at a 90 degree angle as shown.



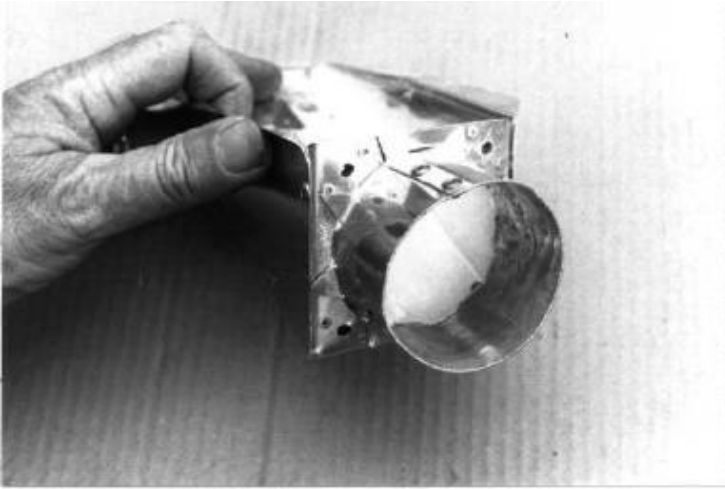


Photo #16

Insert the collar in the hole of the radiator collector and bend the other ears 90 degrees on the inside of the collector. Trim any points of the ears that extend beyond the edges.

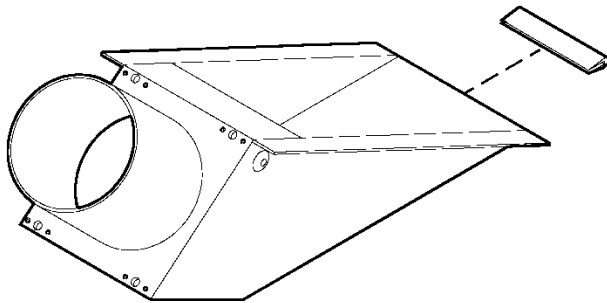


Photo #17

Glue a 2" long strip of 1/4" channel rubber molding to the edge of the collector as shown. Also glue foam weather stripping to the edges of the collector where it will contact the radiator.

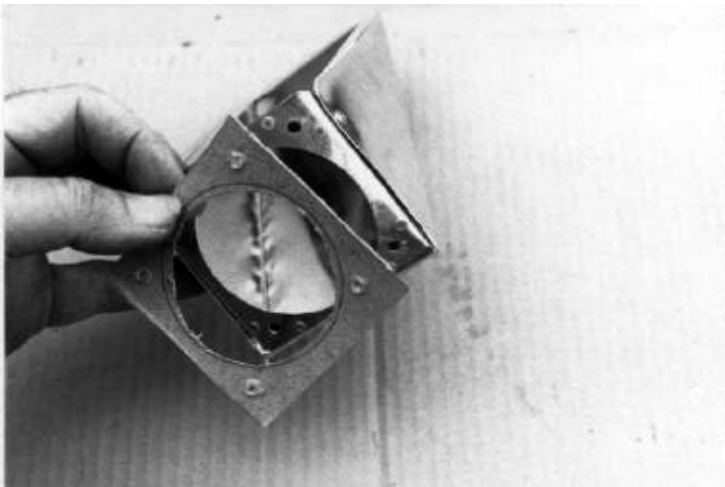


Photo #18

Make a cardboard template of the end of the collector.

Photo #19

Use the cardboard template to lay out and drill the holes on the outside of the shroud. Mount the collector on the inside of the shroud on the passenger's side, approximately 1-1/2 inches behind the front of the shroud.

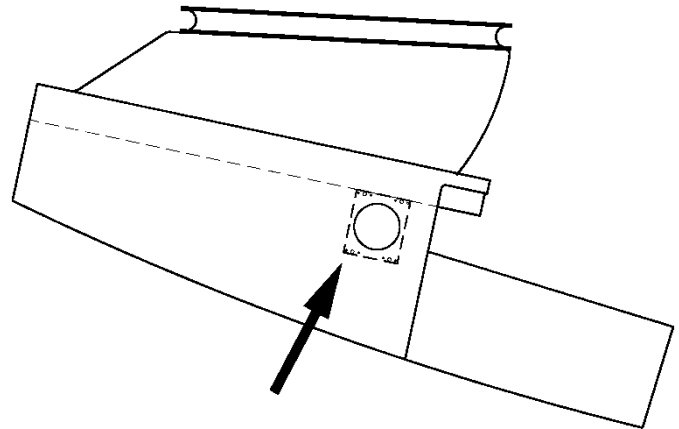


Photo #20

The collector shown mounted to the shroud and secured with four 8-32 screws.

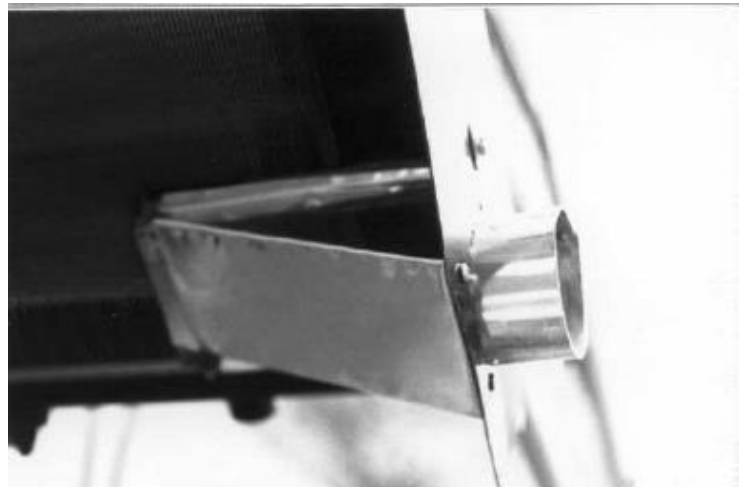


Photo #21

Mount the cabin comfort cables and fuel shut off cable on the console as shown. Locate holes so that the cables do not contact the landing gear tube underneath. Route the cables so that they do not interfere with any moving parts. Attach the other end of the fuel shut off cable to the fuel valve/filter assembly as shown in Section 20, Photo 25.



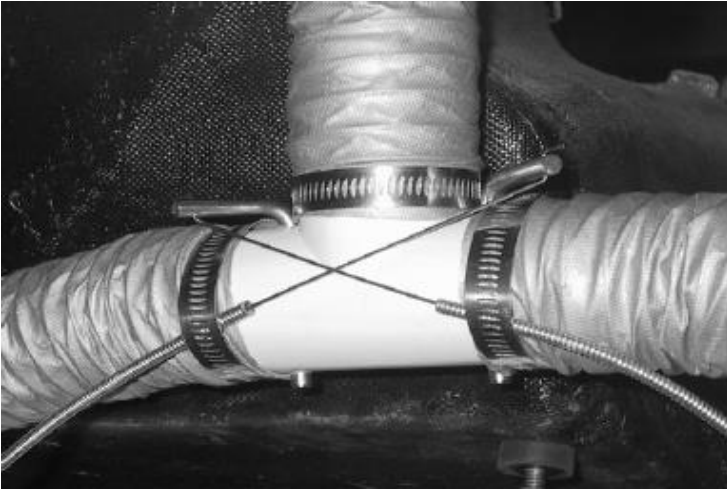


Photo #22

Connect the hoses and control cables to the three way collector. The hose at left is from the radiator collector. The hose at right is from the fresh air scoop. The top hose is the outlet to the cabin comfort plenum on the underside of the instrument pod. Use care not to damage the collector by over-tightening the clamps.



SEAT BACK BRACE TUBE

Photo #23

The seat back upper brace tube serves as a stiffener and also helps retain the cyclic control push/pull cables away from moving parts. Locate the brace to span across the channel in the back of the seat bulkhead where it will most effectively retain the cables. Cut the tube length, flatten the ends, and rivet two 8-32 nut plates to the flats. Part E32-1380, E32 CARD 2T.



Photo #24

Mount the seat back lower brace tube to the back of the seat bulkhead with two 8-32 screws.

PITOT TUBE

Photo #25

Drill a 1/4" hole in the tub at a point approximately 5" below the windscreen and 5" to the pilot's side of the front inspection panel. (The exact location is not critical.)

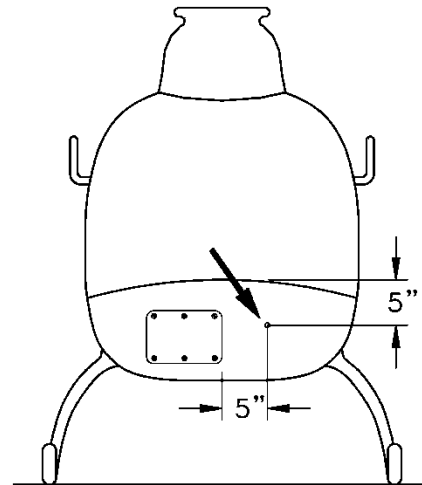


Photo #26

Sand the pitot tube and mount where they will be joined together, and clean both parts with acetone. Using blade glue, bond the tube in the mount. The tube should extend forward 6". After the glue is set, insert the pitot tube through the hole in the tub from the inside. Fasten the mount of the inside of the tub using three 6-32 screws, nuts and washers. Pitot hook up to instruments found in Section 21. E36 CARD 2T.

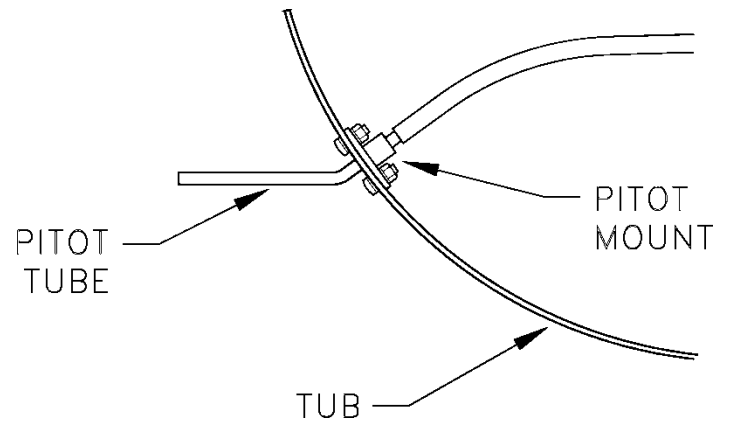


Photo #27

Bend the tube so that it faces straight forward. Route the plastic tubing from the pitot tube to the airspeed indicator.

