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SMK-15 9-cu-ft Baggage Compartment

We now have available the new Skyport SMK-15 9-cu-ft baggage compartment kit. The major difference between this kit and the old one, 110 of which were shipped from April 1971 thru December 1978, and which required local approval for installation, is the addition of a cargo net. Our STC's make this kit eligible for installation in all Ercoupe and Forneys.

Our SMK-15 kit comes complete with Photo Illustrated Instructions and drawings, all hardware, aluminum forward, aft and side panels and cargo net.

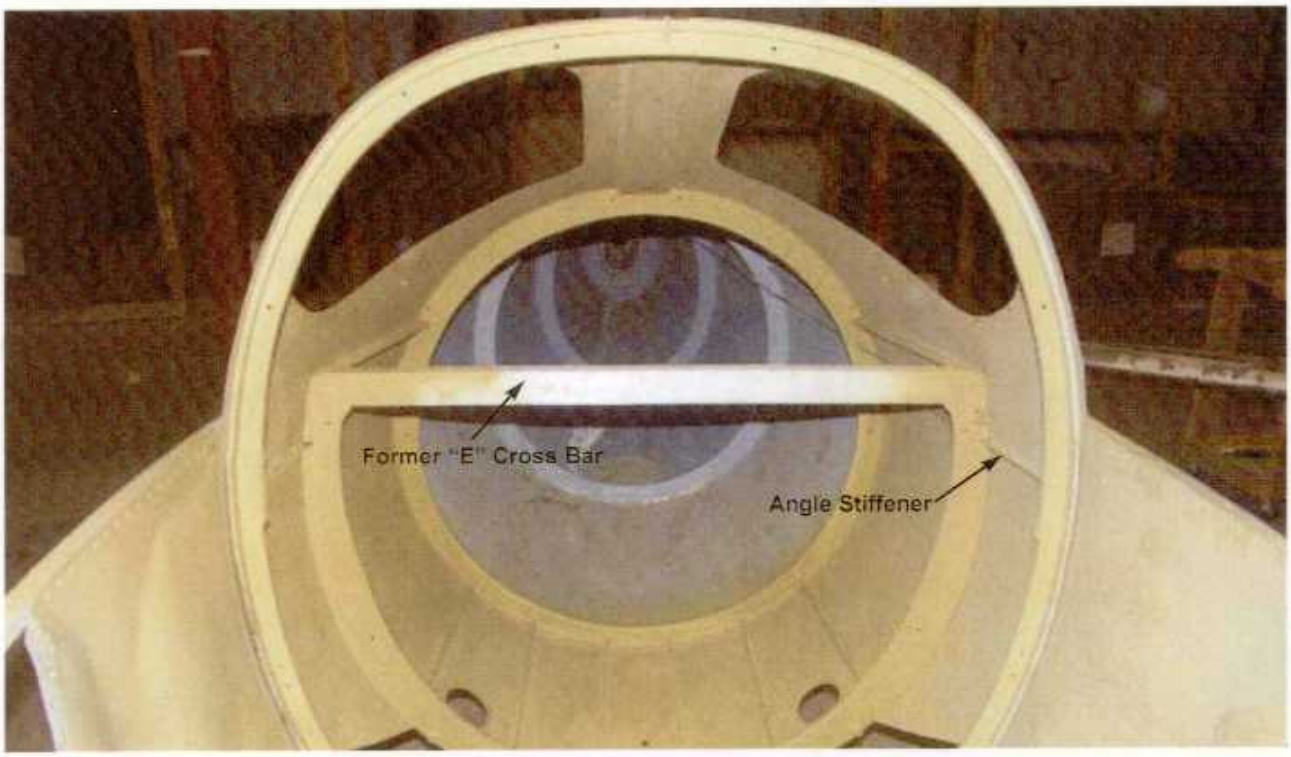
The cargo net is supplied in two 29" halves, zippered together with the ends secured to the floor boards front and rear.

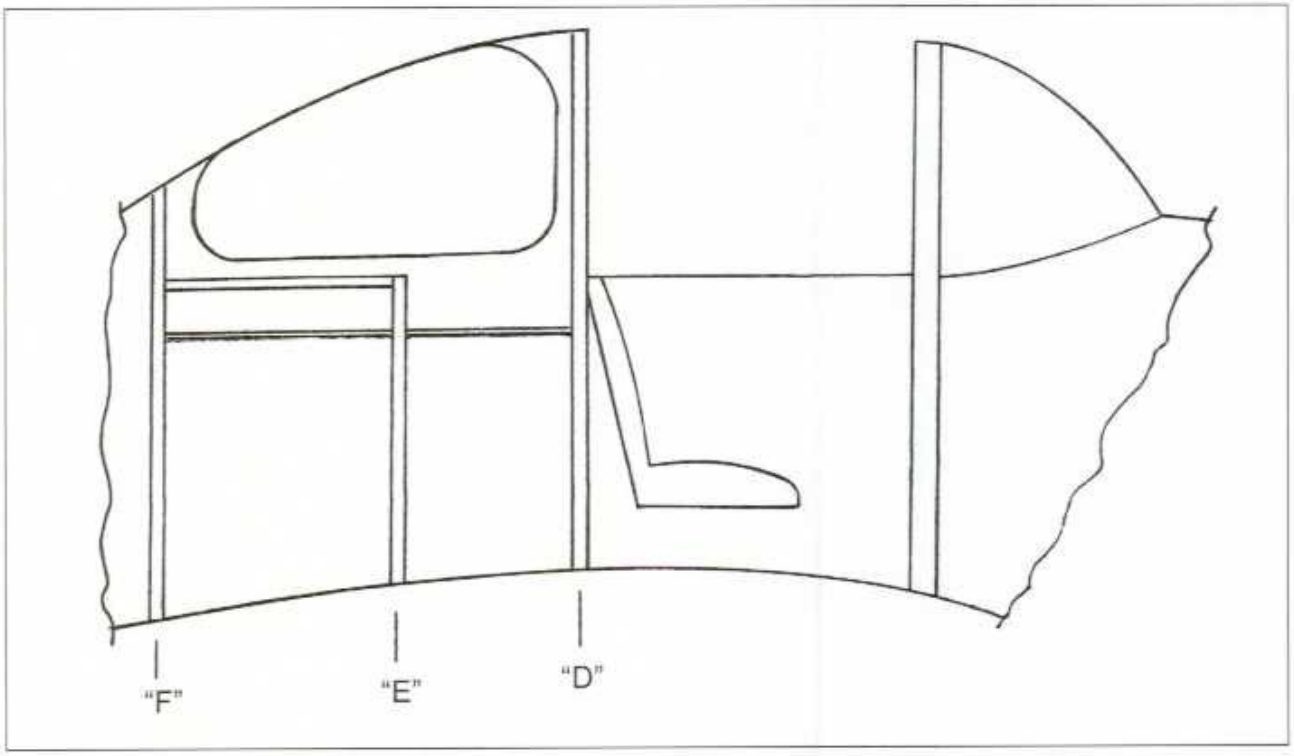
The cargo net's main function is to insure that under negative G loading its contents will be retained behind the seat and not be free to fly forward and strike the pilot or passenger in the head or neck.

Installation time is from 9 to 10 hours. Weight added is a net 5 to 7 lbs., depending on items removed. SMK-15A carpet and wall panel upholstery for the floor board adds another 7 lbs.

SMK-15 9-cu-ft Baggage Compartment

Installation Instructions



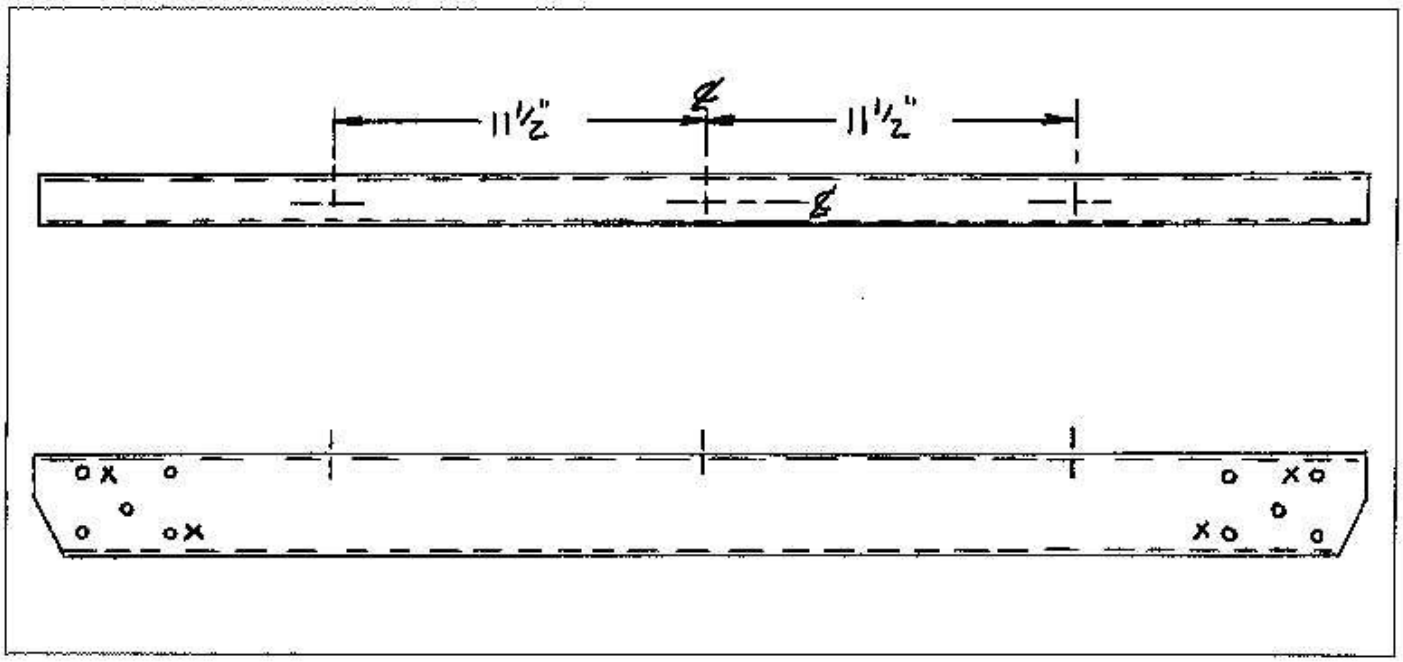


It is extremely important that you read these instructions and follow the drawings in order to familiarize yourself with the parts and their respective location. All parts have been made using a standard airframe for sizing, fit and matching ability. You may have some minor sheet metal trimming to do if any of your airframe members are slightly distorted. Work carefully, do not try to rush the job. Normal time is 9 to 10 hours. Plan ahead, step by step; the end result is worth your time and effort.

1. Disconnect battery ground cable.

2. Remove seat, old baggage compartment and slanting or flat hat shelf. **DO NOT** disconnect wires from master switch when removing from hat shelf.

3. Remove frame E cross bar that held rear of baggage compartment by drilling out 5 rivets on each end. **DO NOT DISCARD BAR**, modify cross bar as per drawing.



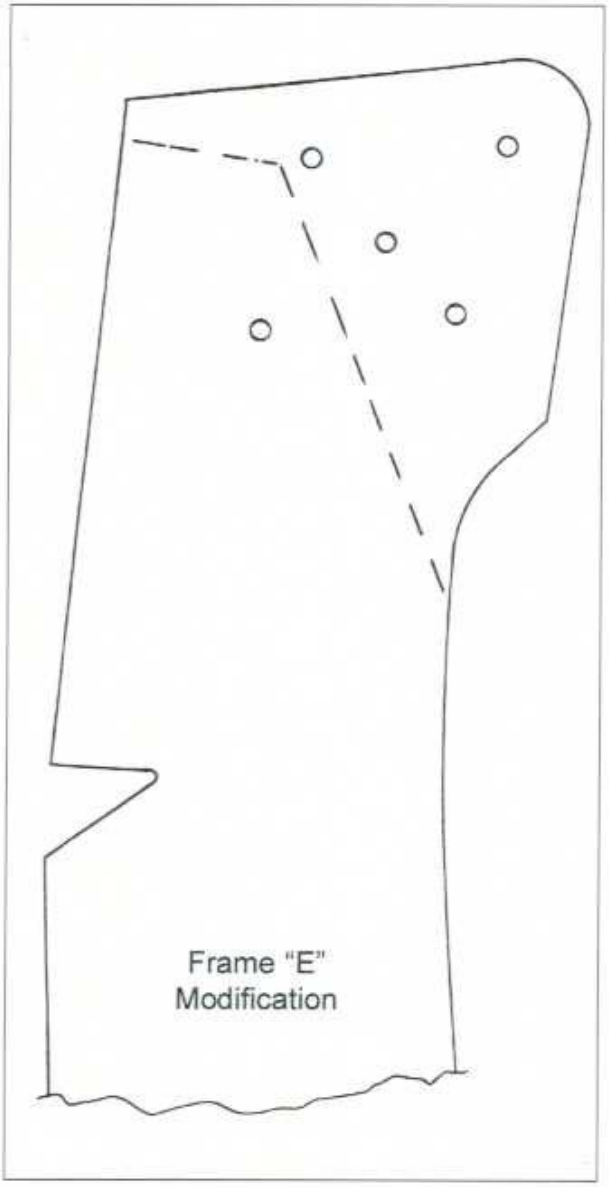
Frame "E" Cross Bar Modification

1. Drill out 4 holes marked with "X" on the face of cross bar to 3/16" dia.

2. Layout locations for 3 plate nuts on top of cross bar and drill 3/16" dia.

3. Insert a AN-3 bolt from the inside of the cross bar through one of the holes. Screw the plate nut (MS 21078-3) on the bolt, press down flat on the cross bar and drill the two 3/32 dia. rivet holes. Remove the plate nut and drill the 3/16 dia. hole out to 1/4" dia. Dimple or countersink the cross bar and plate nut and rivet the plate nut inside the cross bar using AN426AD3-3 rivets.

4. Mount all 3 plate nuts and set the cross bar aside for now.



Frame "F"

1. Measure down from the top of the angle stiffener (Ercoupe p/n 415-31115 L/R) 8-3/4" and mark frame "F" on both sides.

Photo shows Top of Frame "E"

Frame "E" Modification

1. Cut out the full size template and cut the top of frame "E" as shown by the dashed line.

2. Cut both Right and Left side.

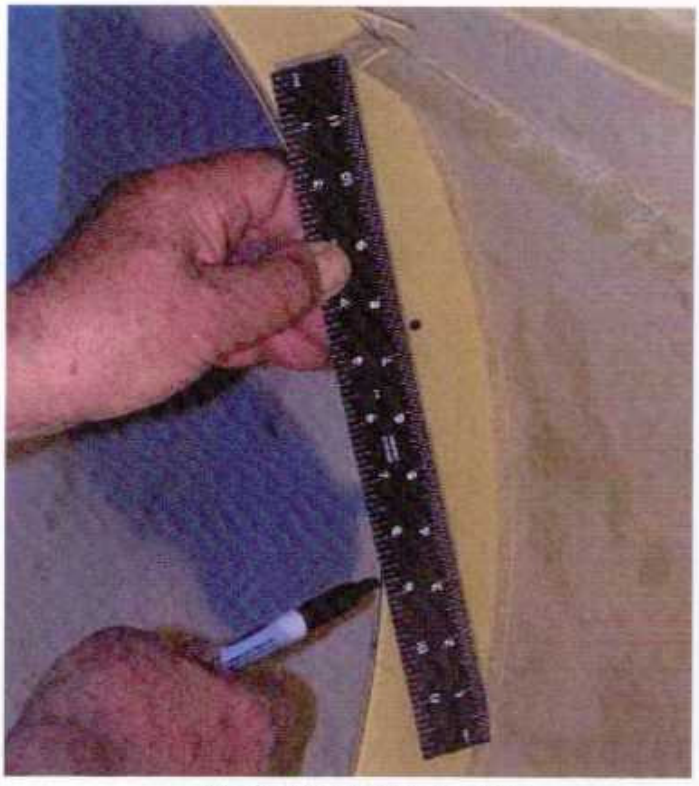


Photo shows Frame "F"

2. Locate wood filler p/n 102-1. Trim or sand to fit in top of Frame "F".

3. Center and clamp part 102-1 in place and drill through former "F" at the center hole and the two counter sunk holes.

4. Bolt part 102-1 in place with two #6-32 x 1 flat head screws and stop nuts.

5. Bolt the vertical brace part 102-3 in place, in the cutout at the center of 102-1 with the leg of the angle pointing aft. Again, use a #6-32 x 1 flat head screw and stop nut.

6. Clamp the aft floor support, p/n 102-4A in place with the lower leg of the angle pointing forward, with the top of the vertical leg on your marks and the undrilled 1-1/2" sq. wood spacers p/n 102-2 between the angle and the frame.

7. Be sure the angle is centered side to side and drill through the holes in the angle, the wood spacer and the frame with a #19 drill.

8. Bolt the angle to the frame using a #8-32 x 1 truss head screw and stop nut.

9. Center the vertical support angle on the center hole of the floor angle, drill through the vertical angle with a #19 drill and bolt with a #8-32 x 1/2 truss head screw and stop nut.

Photo shows Frame "D"

Photo shows Frame "F"

10. Locate the two 1-1/2" sq wood spacers with the hole in the center, and position as shown just above the heavy bulb angle stiffener.

11. Drill through frame "F" with a #28 drill and bolt in place with a #6-32 x 1 flat head bolt and stop nut on both sides.

Photo Shows Frame "D"

Frame "D"

1. Measure down from the top of the angle stiff ener 9-13/16" and mark the frame on each side.

2. Locate the angle brackets p/n 102-8R and 102-8L and clamp in place as shown with the top at your mark and the flange inward (the left side is shown in the photo).

3. Use a straight edge across the top of the bracket to the aft floor angle to be sure the bracket is not cocked up or down.

4. Drill the three holes on each side with a #28 drill and bolt the brackets in place using #6-32 x 1/2 truss head screws and stop nuts.

Photo shows Frame "E"

Frame "E"

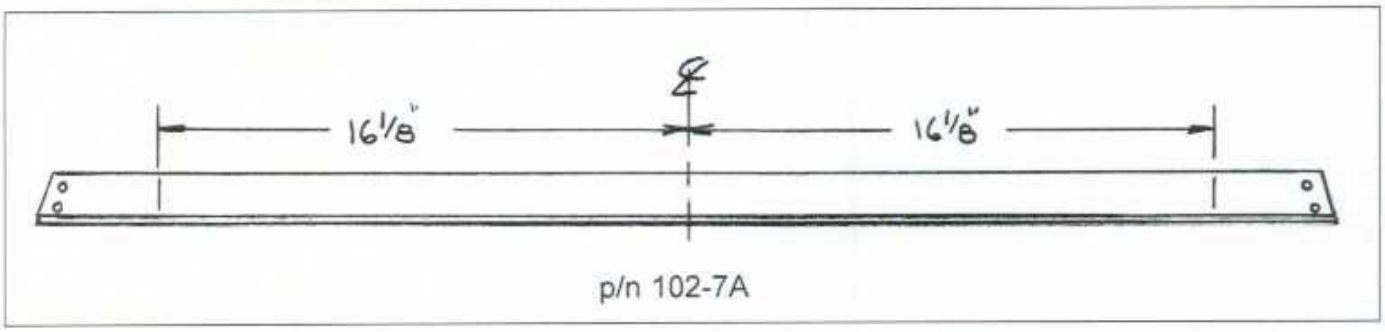
1. Locate the two wood stiffeners p/n 102-5. Trim and sand to fit into the aft side of frame "E".

2. Clamp the wood spacers in place and drill through frame "E" and the wood spacers, center the holes on the frame, drill the top hole about 2" down from the top of the spacer and the lower hole about 5" up from the bottom.

3. Bolt the spacers in place with #AN3-7A bolts and #10-32 stop nuts with a washer against the wood stiffener.

Forward Floor Support

1. Locate the forward floor support p/n 102-7A and mark as shown on drawing 16-1/8" to each side of the centerline.



p/n 102-7A

2. Mark the aft floor support p/n 102-4A in a similar manner, except 13-3/8" to each side of the center bolt.

Photo shows Forward Floor Support and Frame "E" Cross Bar

3. Locate the 1/4 x 1-1/2 x 29-13/16 long plywood. Position on edge as shown for proper spacing between the aft and forward floor support.

4. Clamp the forward floor support to the angle brackets, drill through the angle brackets with a #28 drill.

5. Bolt the forward floor support in place using four #6-32 x 1/2 screws and stop nuts.

6. Clamp the cross bar to the aft side of frame "E" using the plywood strip to obtain the proper height at both ends.

7. Drill through the wood stiffener and frame "E" using the four holes you drilled out in the cross bar in "Frame "E", step 1". Use a #19 drill.

8. Bolt the cross bar in place using #8-32 x 1 truss head screws and stop nuts.

Side Panels

1. Trial fit the side panels. The lower flange should line up on your marks on the forward and aft floor supports. You should have a 1/16 to 3/32 gap at the aft end, top and bottom for clearance of the aft panels. You will need the same clearance at the forward lower end for the forward panels.

Note: The holes in the side and back panels are fixture holes and are not used.

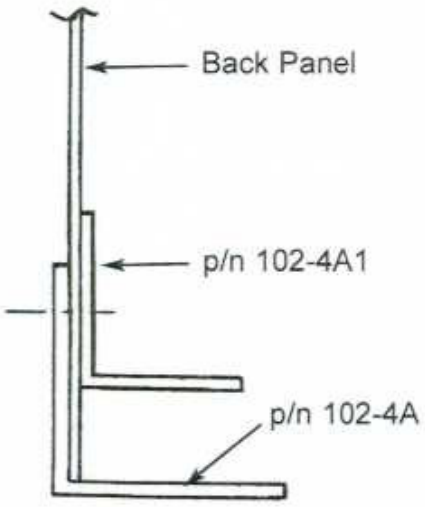
Note: The side panels are purposely cut slightly oversize to allow for any variations in your particular Coupe. It is easier to trim the back edge than the front. The upper flange may have to be bent slightly more or less to allow it to lay flat against the heavy bulb angle stiffener without deforming the panel. This is easily done over the sharp edge of a table or work bench with a couple of 2' long 2 x 4's.

2. Drill through the side panel lower flange at aft forward and center support with a #28 drill for #6-32 x 1/2 truss head bolts and stop nuts, be sure to keep the lower flange lined up on your marks.

3. Use a #6 x 3/8 sheet metal screw and flat washer through the top flange and the heavy bulb angle about 3" aft of frame "E".

Back Panels

1. Trim and fit the back panels. At the overlap in the center use four #6 x 3/8 sheet metal screws and flat washers equally spaced through both panels into the vertical support. One screw and washer is used on each side into the wood block just above the upper back corner of the side panel.



Cargo Net

1. The rear floor support p/n 102-4A has two holes about 6" in from each end in the vertical flange. Reach under and behind and mark the back panels through these holes. Remove the back panels and drill these hoes with a #28 drill.

2. Install the back panels and locate p/n 102-4A1. The two end holes will match up with the two holes you just drilled. Bolt p/n 102-4A1 in place using two #6-32 x 1/2 truss head screws (use the plain hex nuts for ease of assembly - final assembly requires stop nuts). Drill the remaining 6 holes (#28) using the existing holes as a guide.

3. Install the side panels (again use plain hex nuts) and note how the forward panels fit. The 1/2" flange fits outside the side panels and the top edge will be screwed to the seat back. Clamp the forward panels in place.

4. The cargo net forward angle p/n 102-7A1 is installed in the same manner as the aft except it has seven holes.

5. Clamp the forward panels in place to the forward floor support and drill the cargo net angle as you did the aft angle.

6. While it is easy to get at, install the covering upholstery on the aft panels. Install permanently with the short side of the cargo net between the angle (102-4A1) and the back panel.

7. Reinstall your seat.

8. Drill mounting holes for your Master Switch on the right side panel upper flange abut 4" aft of the front edge.

9. Install the covering on your side panels and install with your Master Switch and the Master Switch Guard.

Floor Boards

1. Trim and fit the aft floor board. The front edge should be centered on the cross bar. When it fits properly, mark the location of the three bolt locations and using a round file cut a half round notch at all three locations for the bolt clearance.

2. Locate part 102-9, center the formed end in line with the center plate nut in the cross bar, mark and drill the cross bar using a #28 drill. This part runs under the forward floor support at a slight angle and bolts to the center seat support. Use #6-32 x 1/2 truss head screws and stop nuts.

3. Install your covering on the front panels and temporarily bolt in place. Trim and fit the front floor board. Again, file the notches for the bolts.

4. Trim and fit the forward floor boards. The center joint should be on the center of the fore and aft angle p/n 102-9 you installed in step 2. File the half round notches for the mounting bolts.

5. The floor boards are secured in place with three AN526-10-9 screws with AN970-3 7/8" OD washers.

6. Bolt the front panels in place with the lower end of the cargo net between the angle p/n 102-7A1 and the front panel.

7. Secure the top of the front panels to the seat top cross bar with eight equally spaced #6 x 3/8 sheet metal screws and flat washers.

8. Secure the forward edge of the side panels to the flange of the front panels on each side with three #6 x 3/8 sheet metal screws and flat washers.

General Notes

A safety pin is supplied to prevent the cargo net zipper from opening.

Upholster as desired but do not install a non-removable carpet, as it is necessary to remove the right front floor board for battery check and all of the floor boards for annual inspections.

Affix applicable baggage compartment maximum load decal **"MAXIMUM PERMISSIBLE BAGGAGE 65 LB (29.4 KG [or 75 LB (34.0 KG)] AT +62 IN. (+157.5 CM)."** Suggested location for decal is on inner skin near lower front corner of RH rear window.

Weight and Balance Computations: Note that baggage compartment permissible maximum load remains at 65 lb for Ercoupe models C, CD, D and E; 75 lb for Ercoupe models G and Forney models F-1 and F-1A. Note also that the moment arm, previously +57 in., becomes +62 in. with installation of this kit. Use the following data to adjust the empty weight and moment figures.

Added: SMK-15 9-cu ft baggage compartment	+11.6 lb @ 63 in.
*(Floorboard carpet)	(+3.0 lb @ +62 in.)
Removed: Canvas baggage compartment, its trim and channels, and cover	-2.0 lb @ + 57 in.
Slanting hat shelf - only	-1.5 lb @ +69 in.
**(Slanting hat shelf cover with its leatherette cover - add'l)	(-2.2 lb @ +69 in.)

Skyport SMK-15 Carpet (Nylon cut pile, foam backed - 6.3 sq yd @ .48 lb/sq yd. Use actual weight. Many Coupes have a card board backed, insulated cover atop the slanting hat shelf. Its weight can be greater than that of of the shelf itself. Figure of 2.2 lb given here is for one included in the Model G upholstery kit.