

ASSEMBLY MANUAL



TRAVEL TRAILERS

*Designed especially for compacts and foreign cars.
A brand new concept in travel trailers - aerodynamic, lightweight
interior components, beautiful interior styling,
all fiberglass body makes trailer towing a real pleasure.
ONLY 950 lbs. fully equipped.*

LEVELAND'S, INC.

Backus, MN. 56435



Scamp Travel Trailers

FACTORY REPRESENTATIVE

G. Bodwell

It is suggested that the entire instruction manual be read before going any further. This will familiarize you with the various operations, and should lead to a good understanding of the whole process involved in finishing of a **SCAMP TRAILER**.



Tools needed are usually found in the average home workshop, but a list follows to insure that the proper tools will be available as you need them.

-
- 1.) assorted screwdrivers with both phillips and standard blades
 - 2.) assorted rasps and files
 - 3.) tin snips
 - 4.) caulking gun
 - 5.) hacksaw
 - 6.) pop rivet gun

Necessary power tools and accessories are as follows:

- 1.) 1/4" or 3/8" drill, preferably variable speed
 - 2.) assorted drill bits
 - 3.) 1 5/8" & 2 3/4" hole saws
 - 4.) sabre saw with fire-tooth hacksaw blade
 - 5.) rotary sander/grinder
-

— Right or left is determined by standing **behind** the trailer facing it. For example, the door would be the right side.

— The bottom half of the door has been pre cut, then fastened back in place with rivets, screws, and tape. Remove tape, back out screws, and drill out the rivets, (using a proper size drill bit) take out panel.

— Make a line the same distance in from the offset (1 3/4") and cut out top half with sabre saw.

— Take out all materials from inside of trailer, including the fiberglass parts temporarily bolted in place.

Now you are ready to begin cutting out the windows and vents. All are prescribed with dots and lines. The easiest way to find these is to make a chalk bag out of powdered chalk (such as used in a chalkline) and a piece of cloth. Rib this bag over the area to be marked. Chalk will settle in the grooves and depressions, distinctly outlining them. Excess may be blown away.

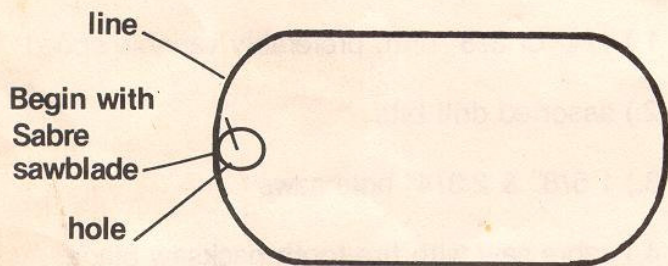
Now take side windows and make patterns on cardboard or tagboard. Patterns will insure a

perfect line to follow when cutting out windows.

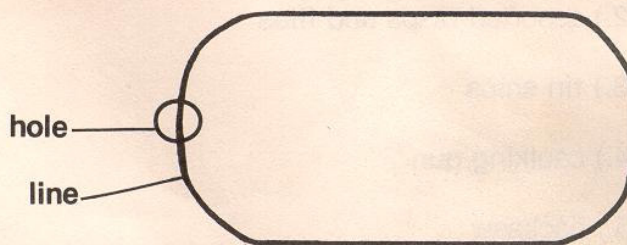
Drill a 1/4" or 3/8" hole at some point **inside** the marked area. This will give a place to begin cutting with the sabre saw. Be sure the hole is completely within the line, or leaks will occur.

Note before cutting that the rear side windows are smaller than the prescribed lines. Use the upper and rearmost lines as guides for your patterns.

CORRECT

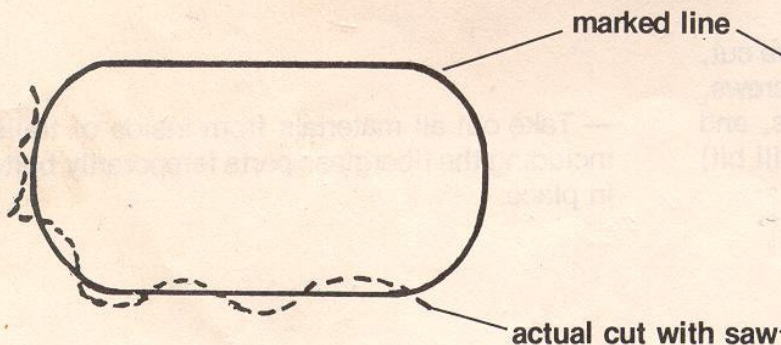


INCORRECT

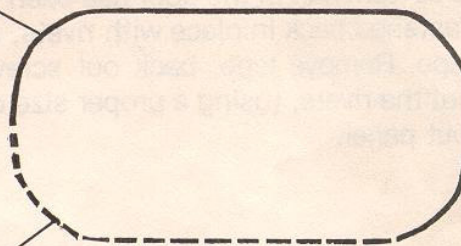


It is important that you cut on the line **exactly**. Weaving back and forth over the line may result in leaky windows. Cut all openings at this time.

IMPROPER



PROPER



After all openings have been made, sand edges lightly. Then clean out the dust, etc. in trailer. Wiring must now be started. Included in your kit are several different sized rivets.

— It will be necessary to know the pop rivet code. These are 3 diameter sizes of pop rivets —

1/8"	5/32"	3/16"
48 - 3/4"	56 - 1 1/2"	68 - 3/4"
46 - 1/2"		6-10 - 7/8"

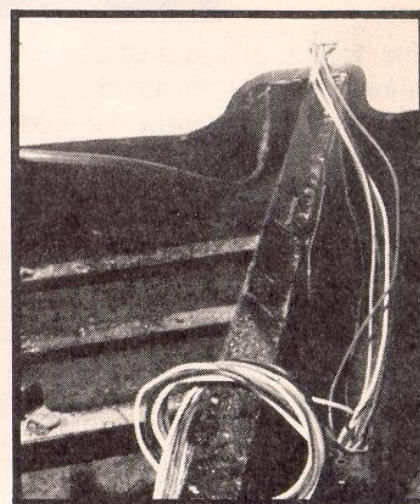
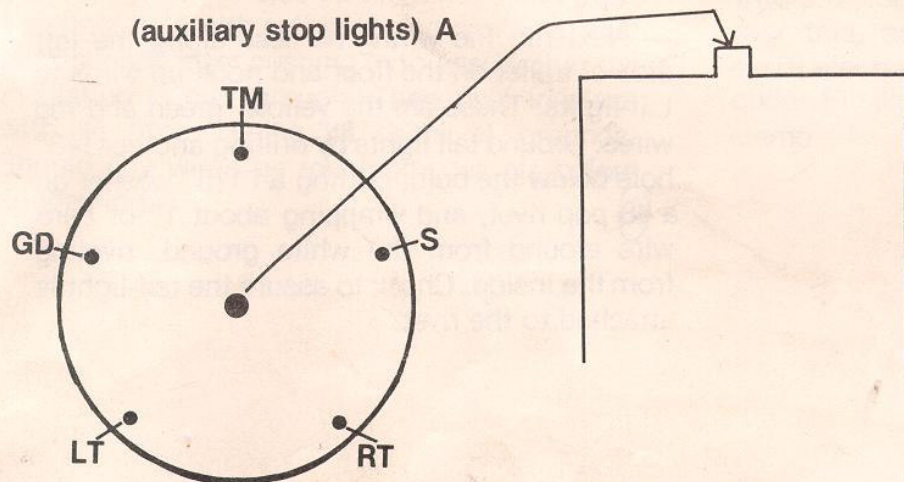
Of these, the 1/8" have long (3/4") and short (1/2") lengths, designated by 48 & 46 as per table. 5/32" has only one size, 56 (or 1 1/2"), and 3/16" has both 68 (3/4") and 6-10 (7/8") rivets. It is imperative the proper rivets be used as designated.

- All lights use 46 rivets
- All grounds use 48 rivets
- Water filler 56 rivets
- Circuit breaker box (inside service) 1/8" washer and 46 rivet 110 V.
- Top vent 46 rivets

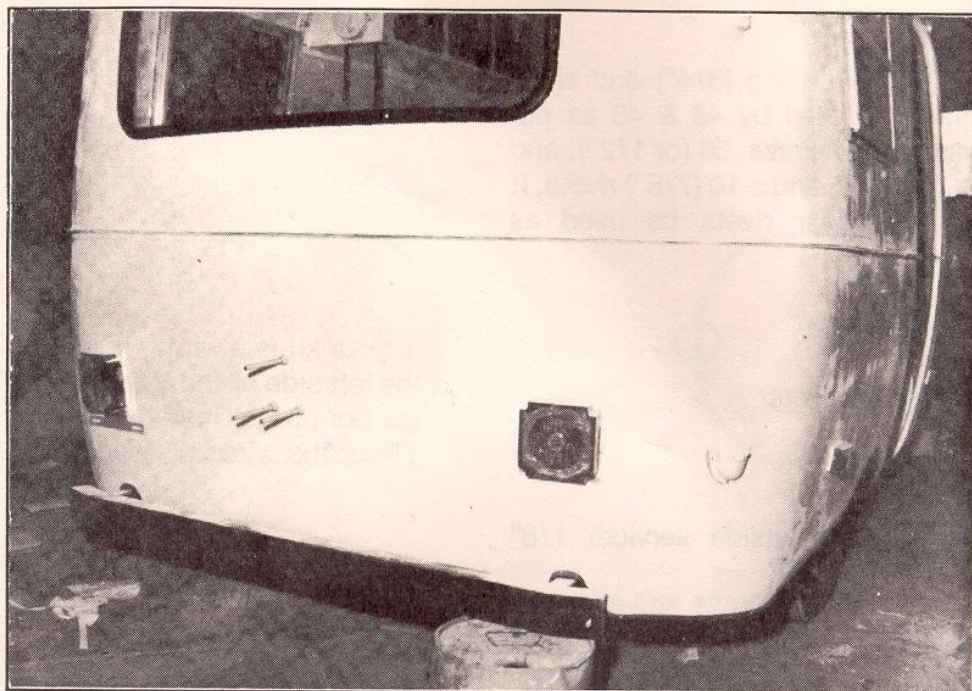
Scamps wiring code with abbreviations is as follows:

- white-ground (GD)
- green-tailight and side markers (TM)
- red-left turn (LT)
- brown-right turn (RT)
- black-inside service (lights, etc.) (S)
- yellow-foreign stop lights. Note: this is **not** used on American vehicles (A)

In your kit is a wiring harness. 2" directly above the left side of the V tongue, drill a 13/16" hole. (as per photo) Install clamp through hole. Run 50" of the wires past outside of clamp.

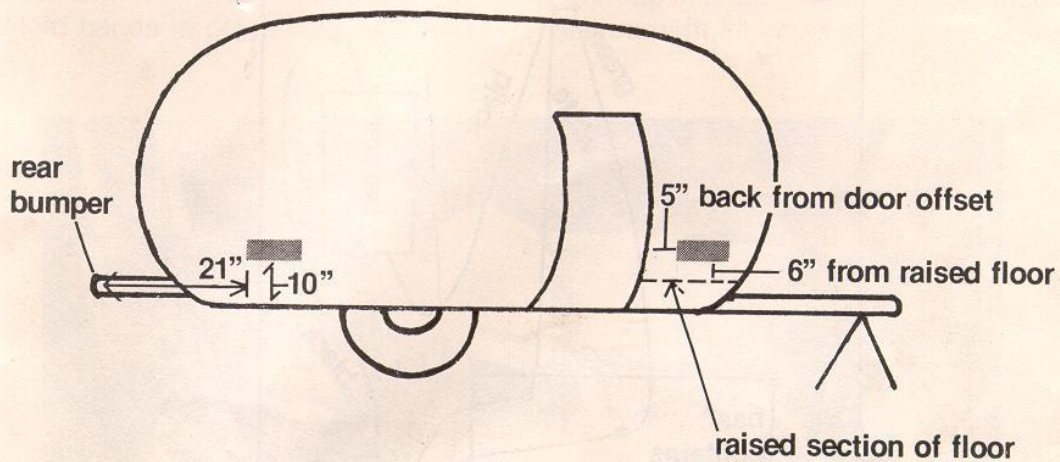


— First install the tail lights, making sure they are with license bracket that goes on the left. Center lights directly above frame with 8" between top of frame and bottom of light. Drill a $\frac{3}{8}$ " hole for the wires. Now hold lights squarely in place and drill an $\frac{1}{8}$ " hole **above** the light bulb, through the center of back plate, and fiberglass shell, and use a 46 pop rivet to hold in place.



— Next run the wiring harness along the left side of trailer on the floor and hook up wires to tail-lights. These are the yellow, green and red wires. Ground tail lights by drilling another $\frac{1}{8}$ " hole **below** the bulb; putting an $\frac{1}{8}$ " washer on a 48 pop rivet, and wrapping about 1" of bare wire around from the white ground, riveting from the inside. Check to assure the tail-light is attached to the rivet.

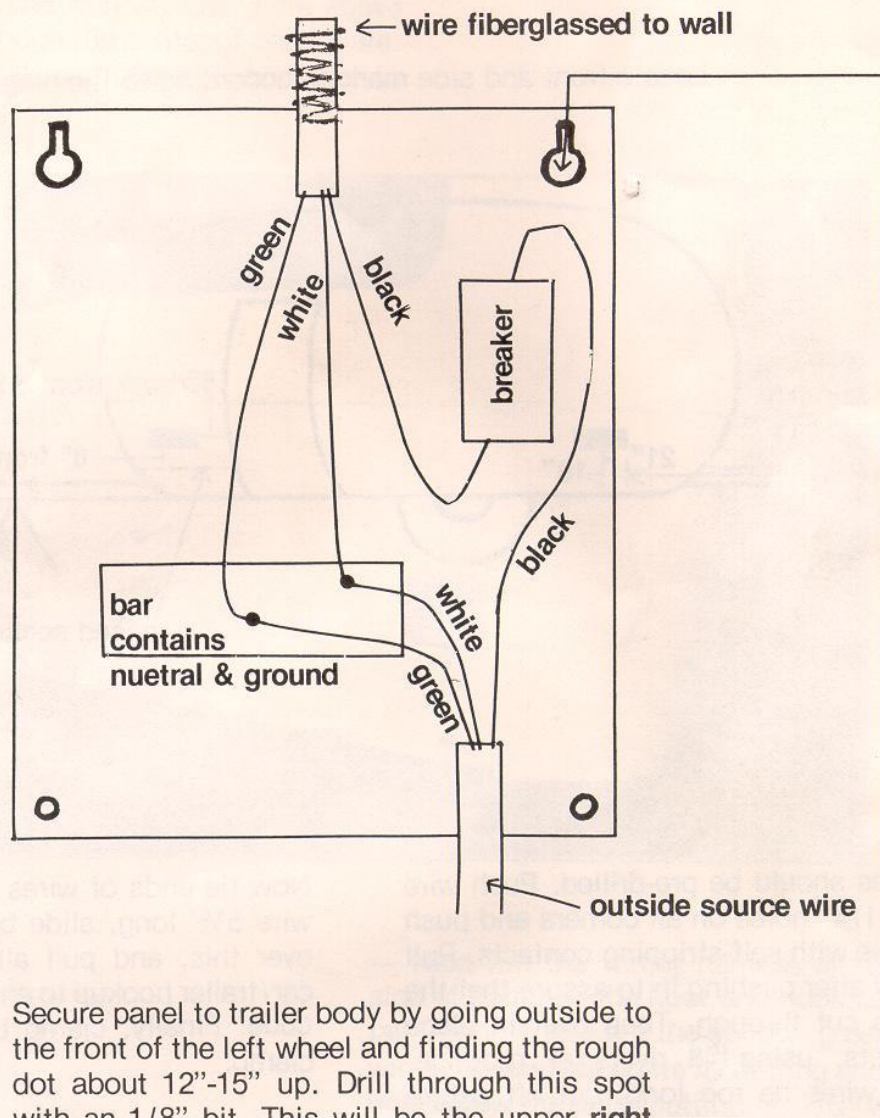
Locate front and side markers according to the diagram.



All side holes should be pre-drilled. Push wire out through 1/4" holes on all corners and push into light hole with self-stripping contacts. Pull back slightly after pushing in to assure that the insulation is cut through. Then rivet in place with (46) rivets, using (48) rivets at grounds. Should any wires be too long, cut off before connecting.

Now tie ends of wires to a stiff piece of steel wire 5 1/2' long, slide black protective covering over this, and pull all wires through. Clamp car/trailer hookup to ends of wires, according to code. Finally, clamp black covering to trailer clamp.

— There are different types of circuit breakers that have been supplied for the inside service, but they are all basically the same.



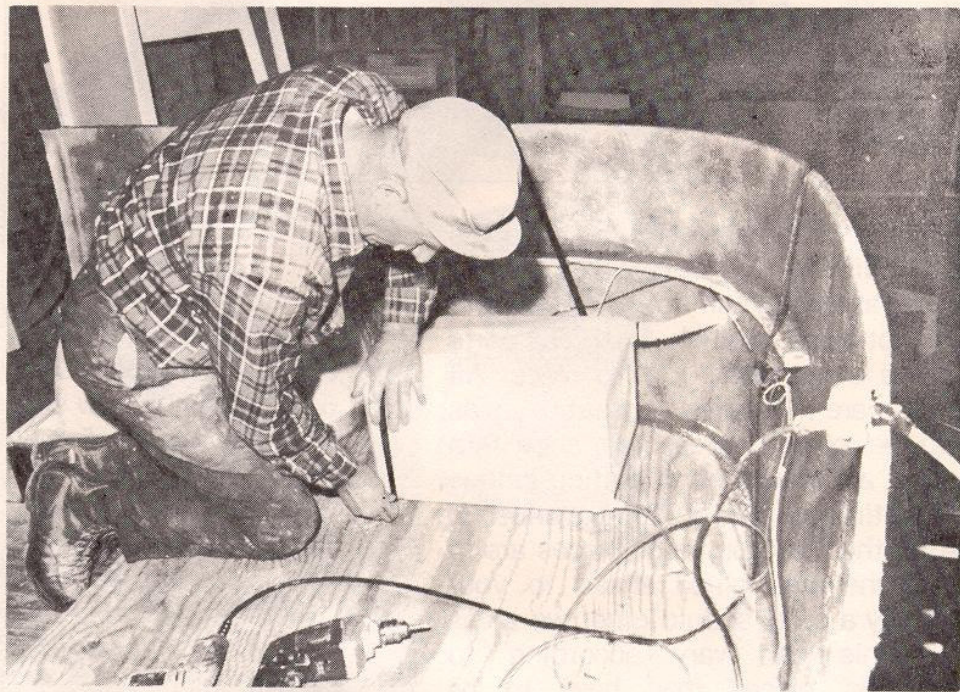
Secure panel to trailer body by going outside to the front of the left wheel and finding the rough dot about 12"-15" up. Drill through this spot with an 1/8" bit. This will be the upper **right corner** of the box (as you face the breaker inside). Hold box in place and drill remaining 3 holes. Upper holes should be all the way to the top of the slots. Use 1/8" washers on #48 rivets and rivet from the outside in.

Installation of water tank.

Drill 1 1/2" hole 9 1/2" from floor and 5" from wall on right side of rear floor section. Apply elastic putty on back side of water filler spout. Insert water filler spout in hole and fasten with 56 pop rivets. Screw on water drain valve to tank, and then connect tank to water filler spout nipple. Place tank on floor about 4 1/2" from side of trailer and 8" behind wheel well. Mark for the water drain hole and band clamps, then swing tank out. Drill 5/8" hole thru floor for water drain. Hold bands in place near wall and

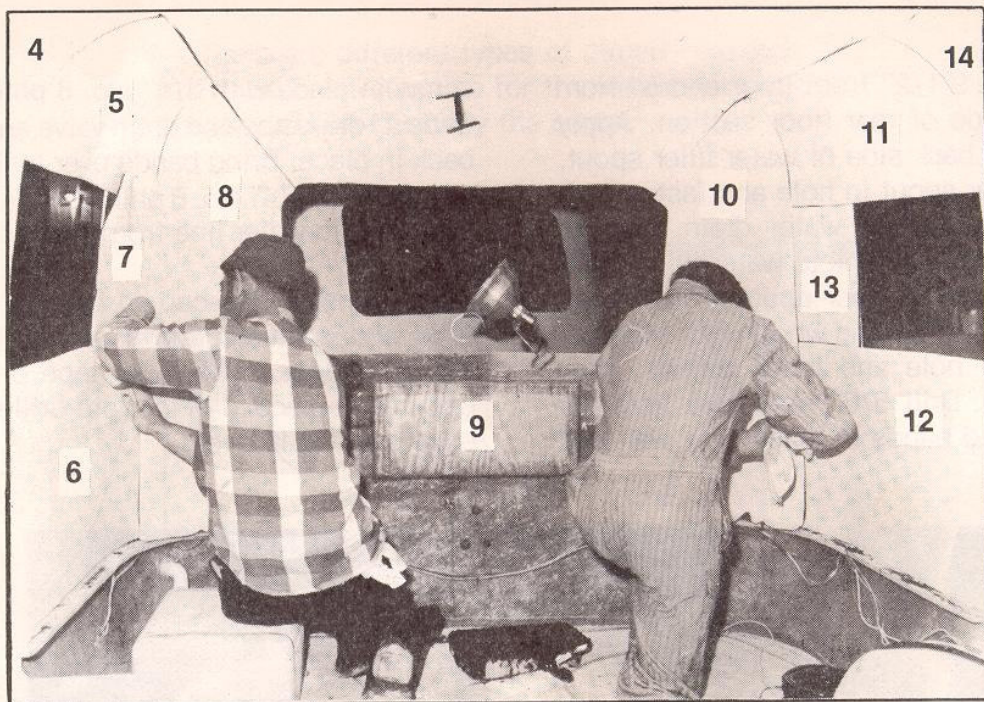
screw in place with 3/4" No. 8 phillips screws. Slide 2" drain hose on drain valve and move tank back in place. Bring bands over tank and fasten in front with 3/4" No. 8 phillips screws. Hook up 3/8" plastic water line from tank to sink area.

— Now install drip-cap so bottom is 1/2" over door and centered above offset. (Allows free swing of door.) Use putty tape on metal, put drip-cap in place, drill thru pre-drilled holes, and secure with #46 rivets.



- Insulation is all pre-cut slightly oversize.
- This process is very critical so be careful.
- Sand any rough spots inside trailer. Then apply glue (with roller) 10" out from ceiling offset and down to top corners of windows. Unroll #1 piece and find end marked front. This **must** be installed as marked. Get two or three other people to help hold, and have one person grab each end.

- Have the third party help the one in front to get started evenly with the top of window opening. When it is straight over window, one person should stay to hold it. The third man should then work back from the front, pushing the insulation up, out and back in even motions. About halfway, he should stop and start from the back window, working up towards the point where he stopped previously.



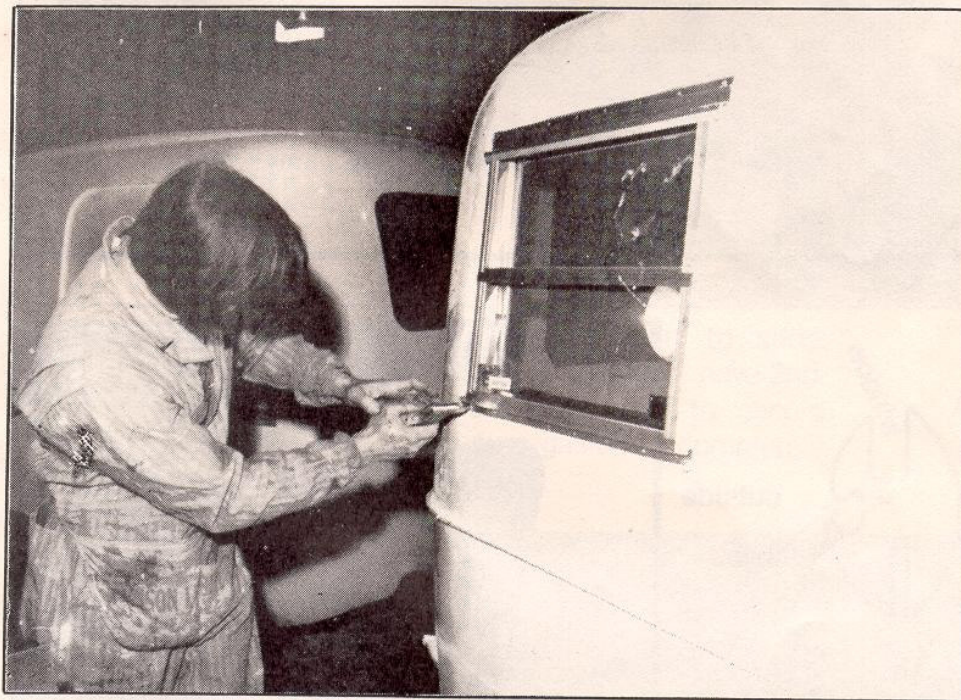
Avoid getting glue on white side of insulation as it is extremely difficult to get off. It is best to stay around for at least a half hour to make sure the top does not come unstuck. Push any parts that may come down back up into place. All insulation parts are numbered consecutively as they should be placed. Most are shown in picture, but all are described in writing below. Normal setting time for glue at 70 • F is under 30 minutes. After the first couple of pieces are in place, adjust the area glued ahead to your speed. Normally a party should glue two areas ahead, but this can vary according to conditions. Most pieces may have to be trimmed to fit properly. Do this only when necessary.

1. Top
2. Top over door & left door side
3. Right front
4. Right side of door
5. Upper left above side window
6. Lower left below side window
7. Insert between 5 & 6
8. Left rear corner
9. Below back window
10. Back right corner
11. Upper right above side window
12. Lower right below side window
13. Insert between 11 & 12
14. Right side
15. Front left corner
16. Below front window
17. Top of ledge front
18. Below window & above ledge
19. Below piece #4

— Next cut and place all the **short** strips of covering for the insulation joints inside the trailer and put in place: Paper back is peeled off and strip put in place. Follow same procedure with long strips, using them to cover all the ends of the short strips.

Side Windows

- Apply elastic putty to inside edge of window frame.
- Caulk across top of window cut-out and about 3" down on sides of trailer shell.
- Insert window, top first while holding bottom out, and push upward.
- Hold window in place, drill two or three holes through pre-drilled holes in aluminum frame thru fiberglass body. Avoid catching the insulation inside.
- Using 56 rivets, fasten window at top to hold in place. Continue from top, working down both sides simultaneously to avoid bubbles in shell. Check to assure top is tightly in place, then rivet bottom of window.
- Go inside and attach window cranks to window, securing them in place with screws.

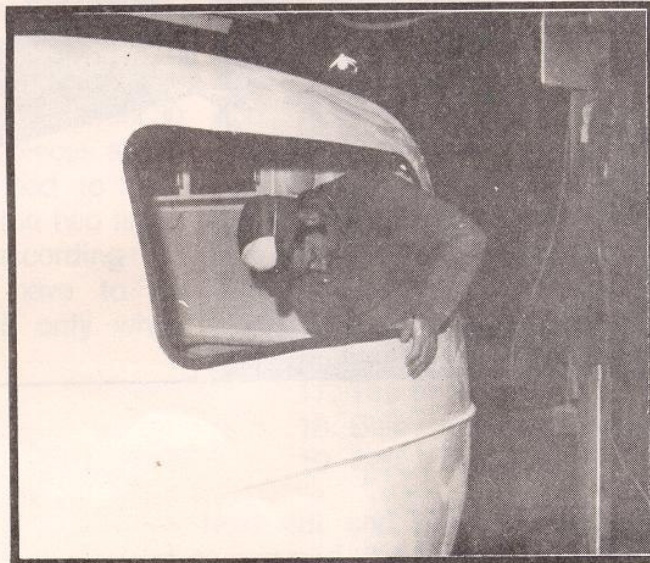
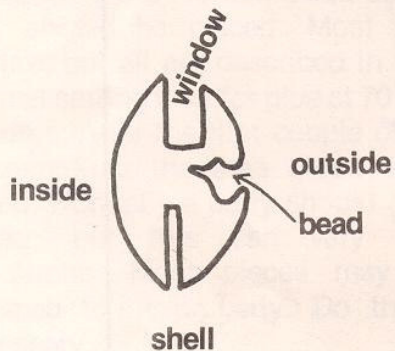
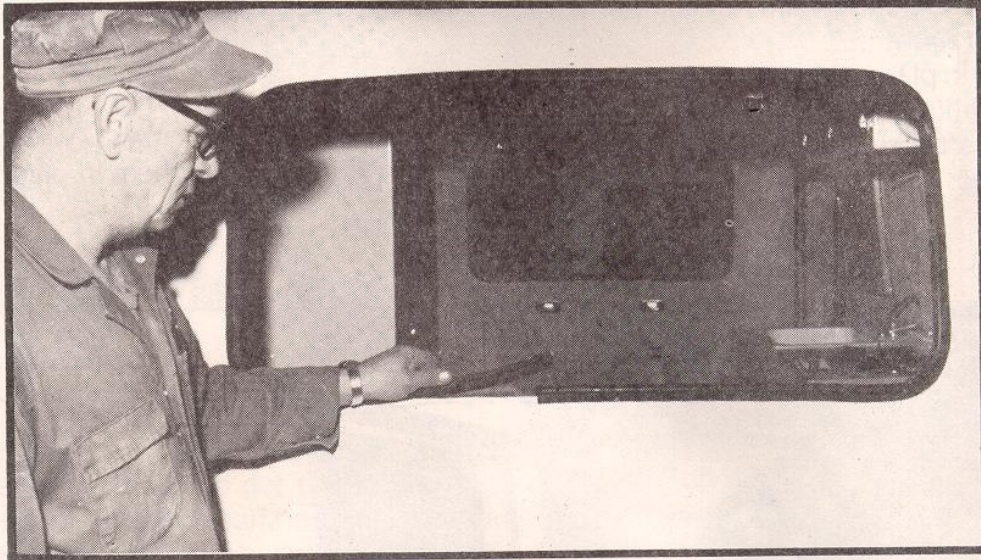


Front and Rear Windows

— Spreading caulk very thin, go around entire window, start placing gasket material in place, beginning in center of bottom, working completely around. Lap $1\frac{1}{2}$ "-2" when roughly in place. Gasket is installed as per diagram below.

— If you have any waterproof glue, glue ends and work gasket left and right until they connect.

— Take putty knife and push insulation under gasket inside, taking care to hold gasket with one hand.



— Warm window and remove paper from face.

— Use some liquid soap (Lux, etc.) in the groove where glass is to fit in gasket.

Start window in center of opening (as per photo) and work to one end, sliding carefully in groove.

Have one person hold end, while second party bows window out until far end will slip in place.

— Take putty knife and work gasket up and around window, until the window is securely and evenly held. Start at corners and bottom first, finishing the top last.

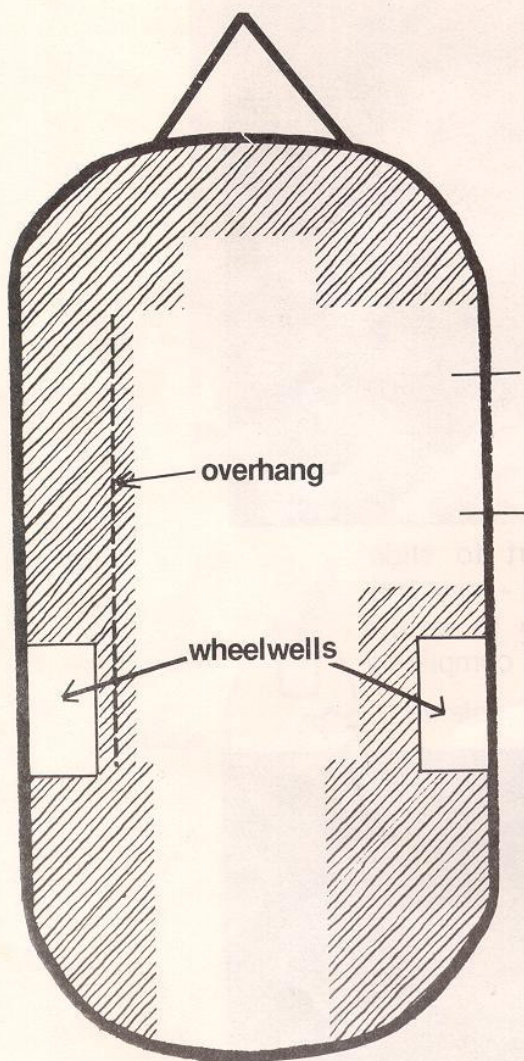
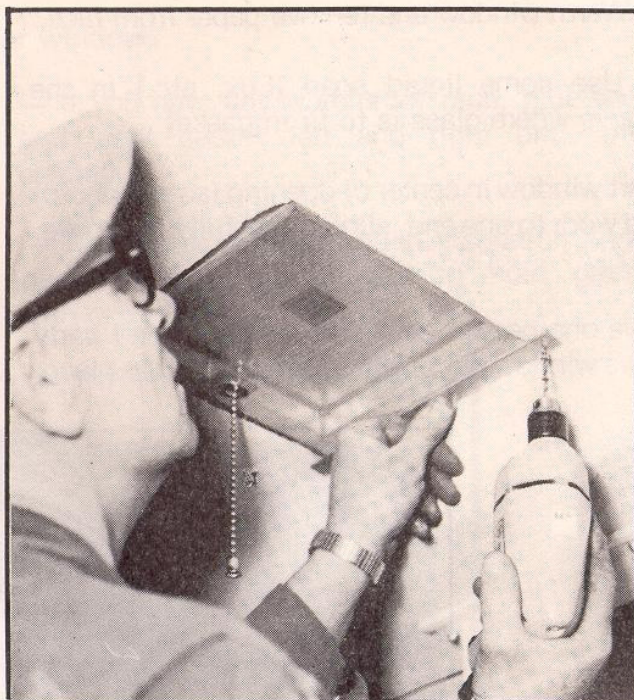
— Begin inserting bead on left or right side in middle of window, applying a little liquid soap ahead of the bead as you gently push bead into groove. Be very careful on corners. If the bead does not go in all the way, use a putty knife to push edge of bead in.



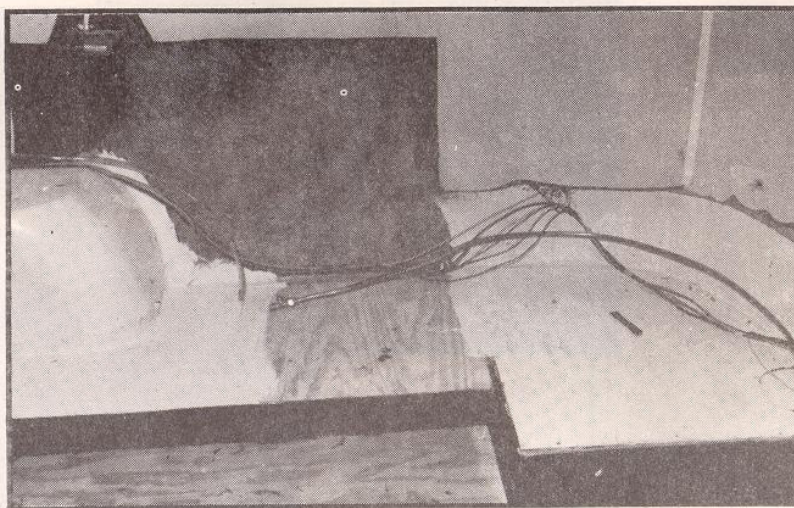
Liquid detergent in gasket - start to slide window in middle & work to one end - have 2nd party bow window out in middle to secure opposite end - make sure gasket is completely secured around window.

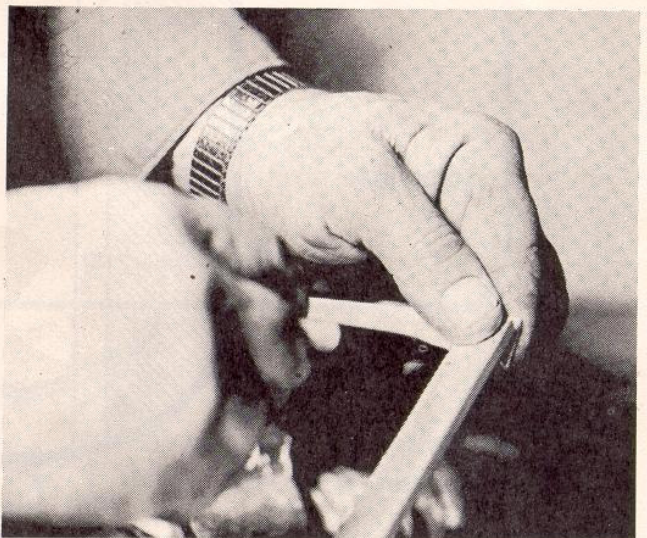
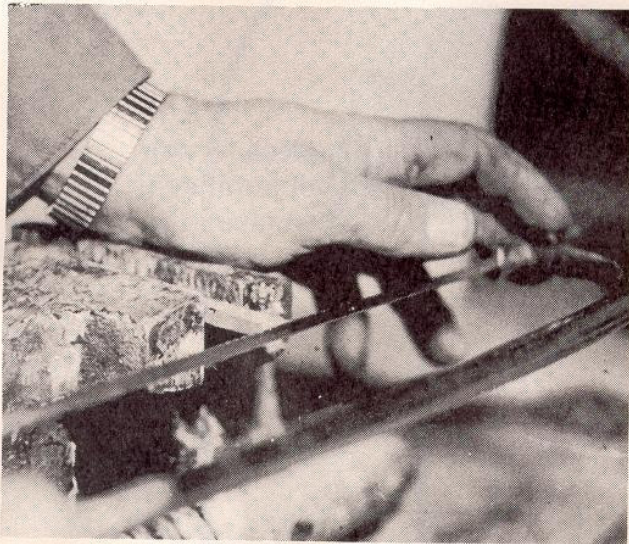
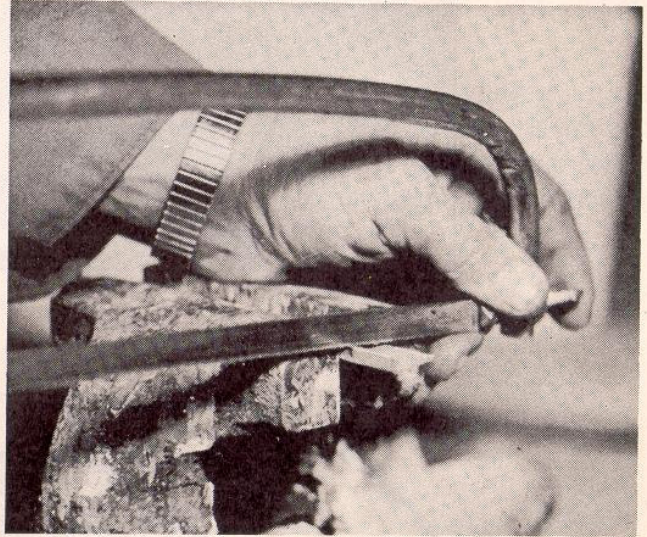
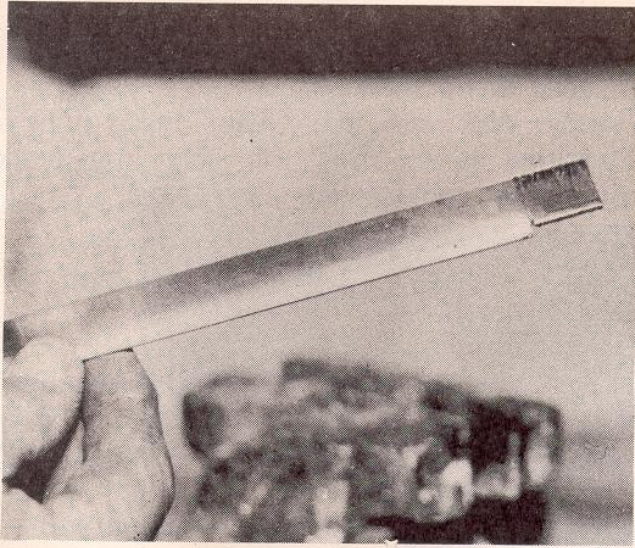


— Top vent opening must be caulked completely around. Use putty tape on frame of vent. Put vent in place and drill through pre-drilled holes. Secure to trailer with #46 rivets. Finish the inside with aluminum strips. It is necessary to cut the finished strips as per photos. Put strips in place with 46 rivets. Note - be sure when drilling holes for trim to stop when you feel the soft area of caulk underneath outside vent frame, or leaks will result.



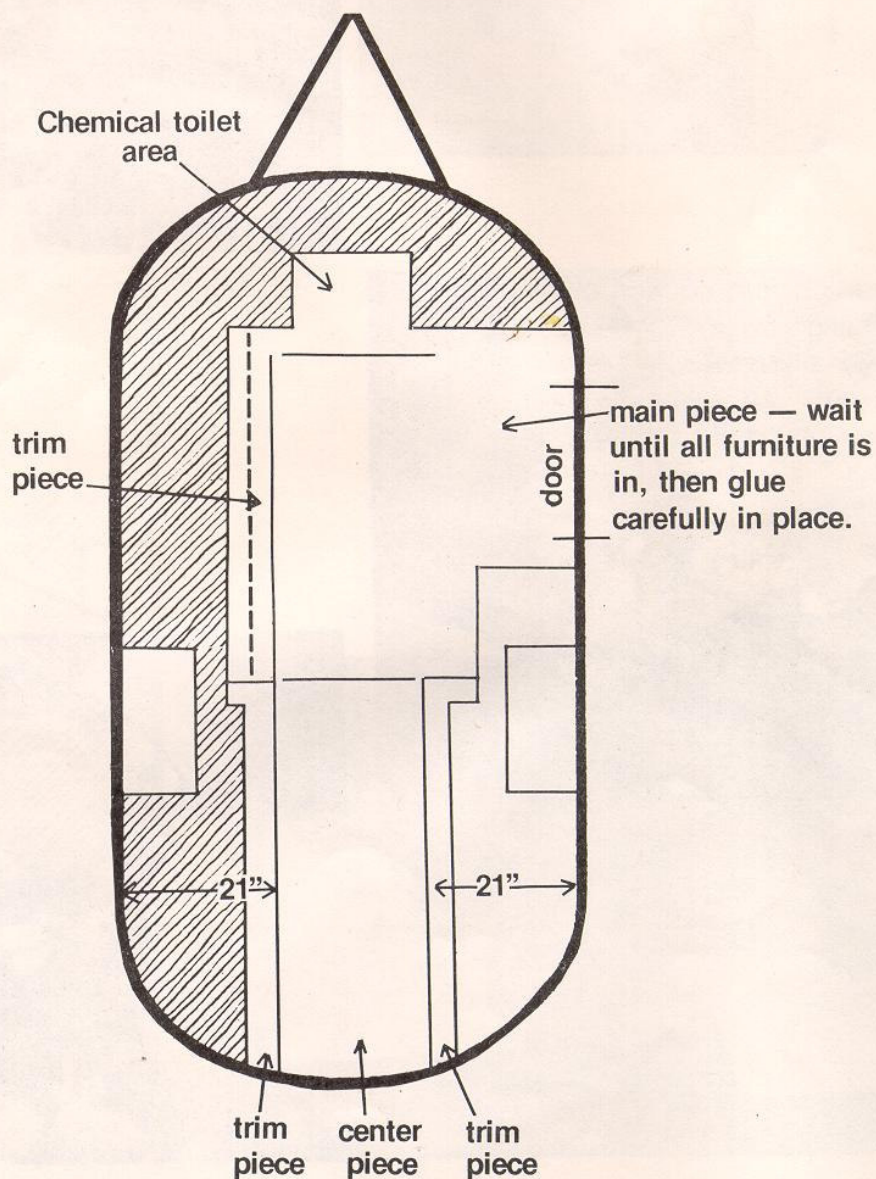
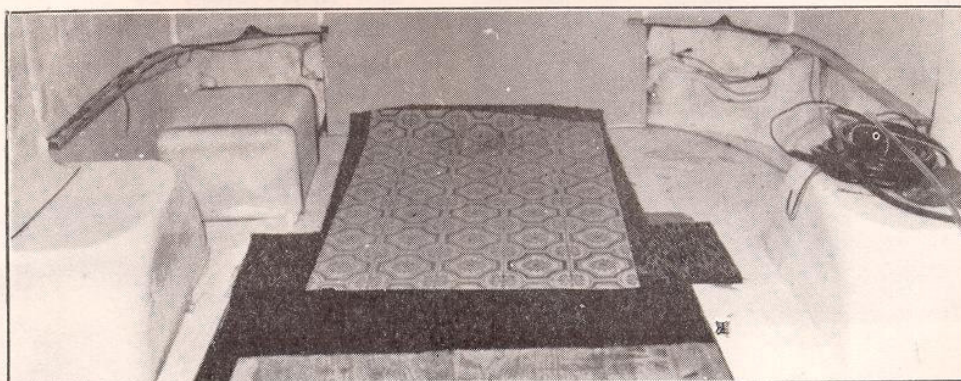
Carpeting should now be put in place. Before gluing down carpeting, you may paint the areas that will be covered with furniture, but exposed occasionally when used as storage areas. Examples as per photo. All area shaded may be painted white if desired. This is not necessary however.





Carpeting is all pre-cut, but still needs slight trimming as you install it. All pieces should fit well **before** gluing. Measure out 21" from the wall behind each wheel-well, at right angles to edge of floor. This will roughly establish the

main center piece area. Lay in place, cut trim pieces to fit, then glue in place when all is ready. Wait with final (main) piece until all furniture is in. This will keep the proper tolerances and assure a clean carpet.



— Furniture is now ready to be put in, and components are as listed.

- left and right rear bunk
- clothes closet
- sink cabinet
- over sink cabinet
- front bunk

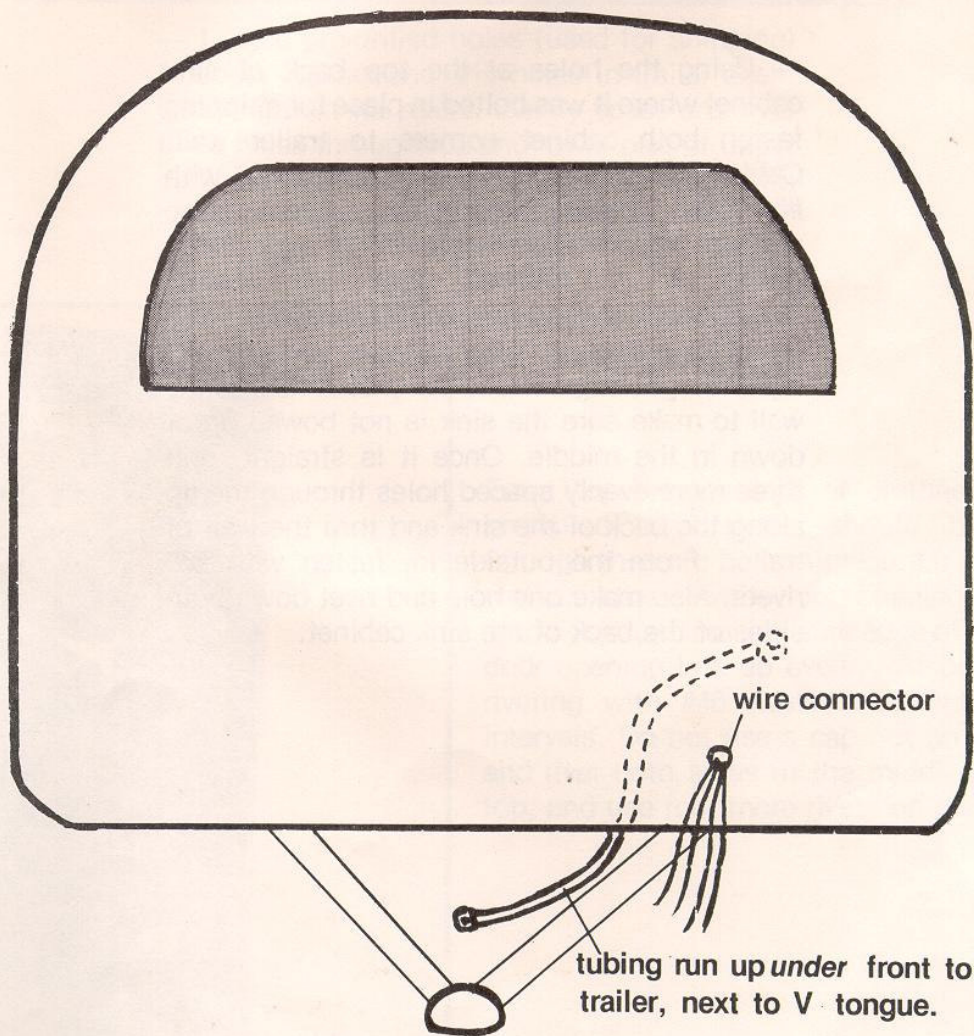
— All parts have been set in place and inspected before leaving the factory. It is advisable though to check them again by setting all components in place before final riveting occurs.

— Set the table in place between the rear two bunks. Make sure the bunks are in place so the

table fits properly in the offset built into the bunks.

— Fasten rear bunks - right one to clothes closet and left one to sink cabinet. Do this by laying a trouble light (or flashlight) on bunk so you can see outline of bunk thru the closet wall.

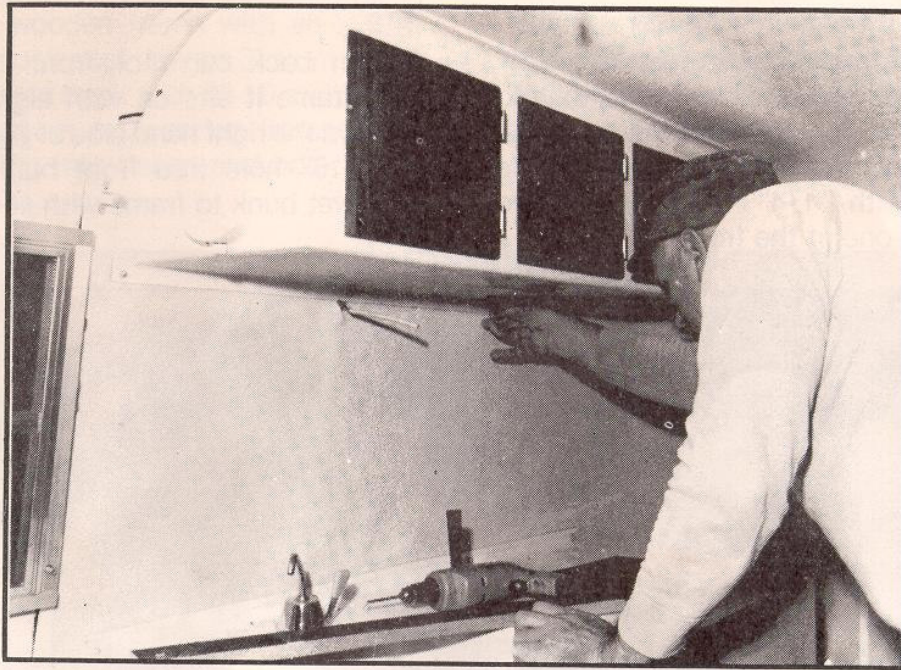
— Put in copper tubing for gas before furniture. This is run up through the floor to the left of the V tongue as per diagram, and up into trailer. Be sure to allow enough length on both ends for proper connections.



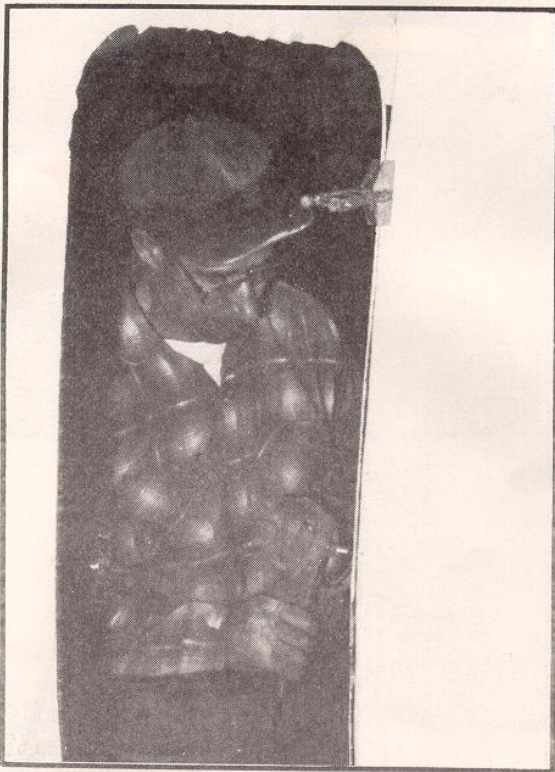
— Drill two 1/8" holes from the inside of the closet into the reinforcement wood just below top of bunk. Fasten closet to bunk with #8 x 3/4" phillips screws. Use same procedure to fasten left bunk from inside of sink cabinet.

— Fasten front end of sink cabinet to front bunk from inside of sink cabinet to bunk with 2 #68 rivets.

— Using the holes at the top back of sink cabinet where it was bolted in place for shipping fasten both cabinet corners to trailer wall. Cabinets and clothes closet are secured with #68 rivets pushed through from outside. Cap nuts are placed inside **before** rivet is popped off, giving it a finished look on inside. Occasionally a #6-10 rivet must be used if a #68 is not long enough. After corners are fastened, lay a straight-edge across top of sink next to the wall to make sure the sink is not bowed up or down in the middle. Once it is straight, drill three more evenly spaced holes through the lip along the back of the sink and thru the wall of trailer. From the outside in, fasten with #68 rivets. Also make one hole and rivet down both sides of the back of the sink cabinet.



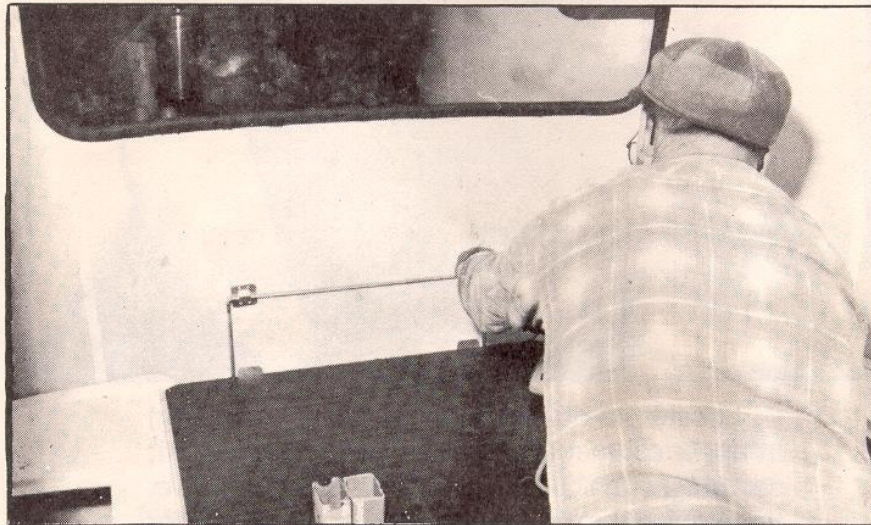
— Locate pre-drilled holes (used for shipping) in upper cabinet and drill holes in trailer shell, securing with #68 rivets. Evenly space and rivet three holes through top and lower part of upper cabinet. Also fasten with one rivet halfway down curve on sides in back of cabinet.



Front top two corners of clothes closet are predrilled, and rivets should be installed through these to hold in place. Line up side of clothes closet with door opening. Clamp in place, (picture) making sure edge of cabinet and door opening line up evenly. At bottom begin riveting with #46 rivets and continue at 4" intervals. Do not use a cap nut on these. Drill and rivet both sides in the middle of curve at top, and use four more rivets on bunk side.

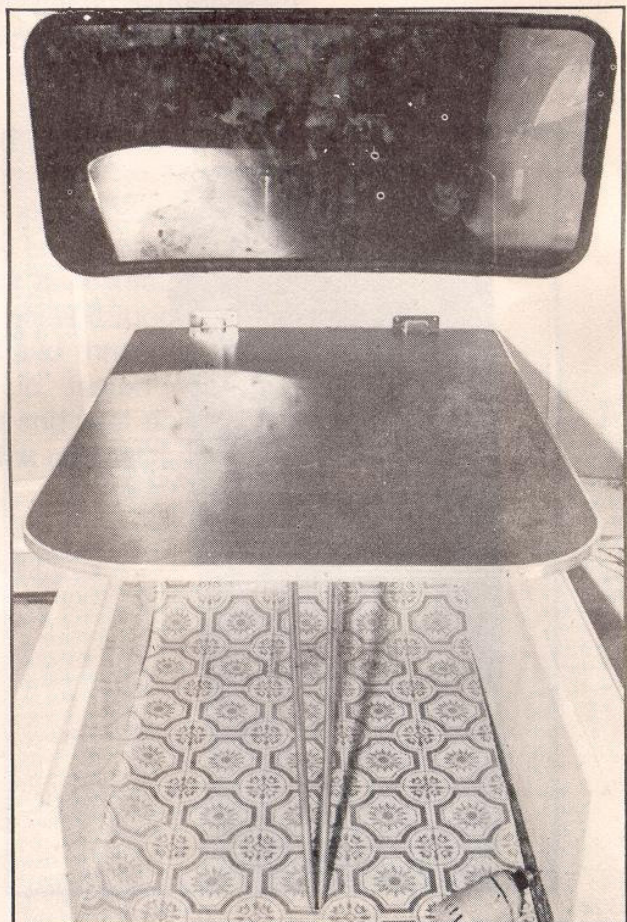
— With table still in place, use four #8 x 3/4" screws around back curved side of bunk to hold it in place. Do each bunk. On the inside of the bunk along the floor screw the wood lip on the bunk to the floor with 1 1/4" #8 screws. Put two on each side and one in the front.

— Fasten back curve of front bunk to the wooden frame it sits on with eight #8 x 3/4" screws. On the right hand side of the Porta-potti drill a 3/16" hole thru front bunk and metal frame. Rivet bunk to frame with #68 rivets.



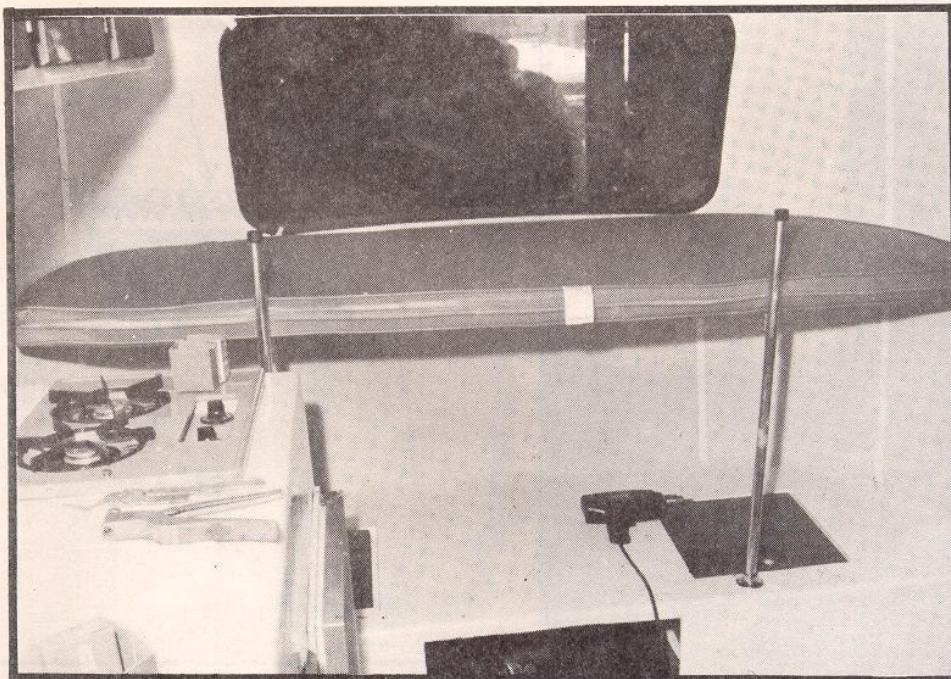
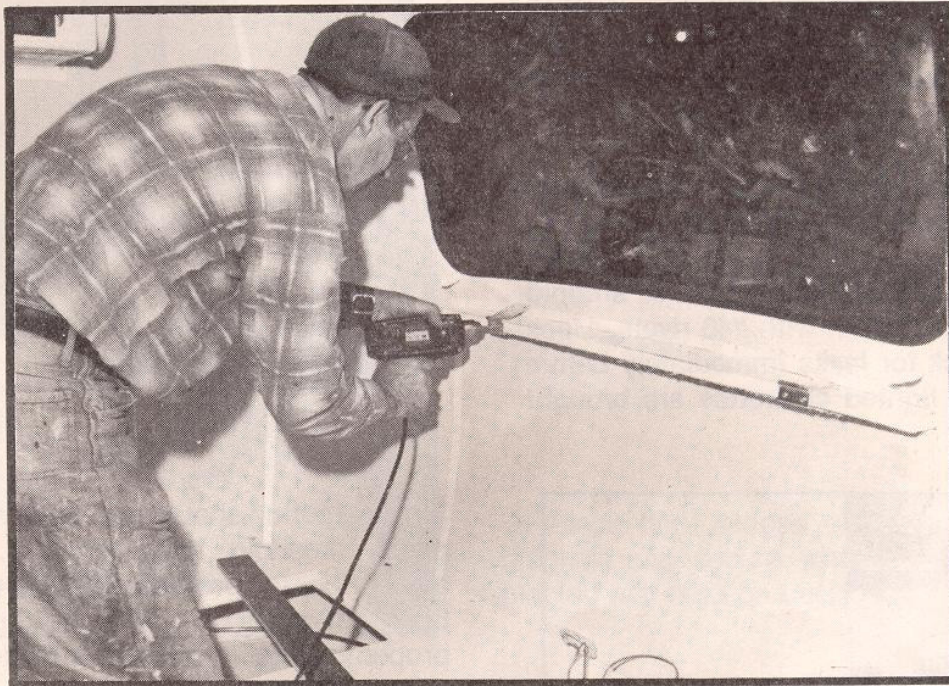
— Use 9' x 3/4" x 1/4" alum. moulding around table, holding in place with #48 rivets 6" from center. Center leg 4" in from edge of front and secure with 3/4" x #8 phillips screws. Measure in an equal distance from each side of the rear of the table and secure sling hinge under table with 3/4" x #8 phillips screws. See picture to assure proper placement of hinge.

— With table in place and hinge swing up snap hinge brackets on hinge. Slide bracket to outer edge of hinge and secure to wall with #8 x 3/4" screws. Swing table up and put leg down. Set 2 locking brackets on hinge brackets. Put in top 2 screws on each side. Drop table and put bottom 2 screws.



— 7" from each end of the front top bunk, screw offset hinge to wooden frame with #8 x 3/4" screws. Fasten bunk post flanges 3" from inside openings of bottom bunk with #6-10 rivets. Lay hard backed cushion on wooden frame under window. Put posts into flange and hook under

outer edge of cushion. On back side underneath cushion screw on hinges with #8 x 3/4" screws. **The protective plastic must be torn away before this is done, or else the plastic will wrap up in screws.** Use one #8 x 3/4" screw in front to secure post to frame.

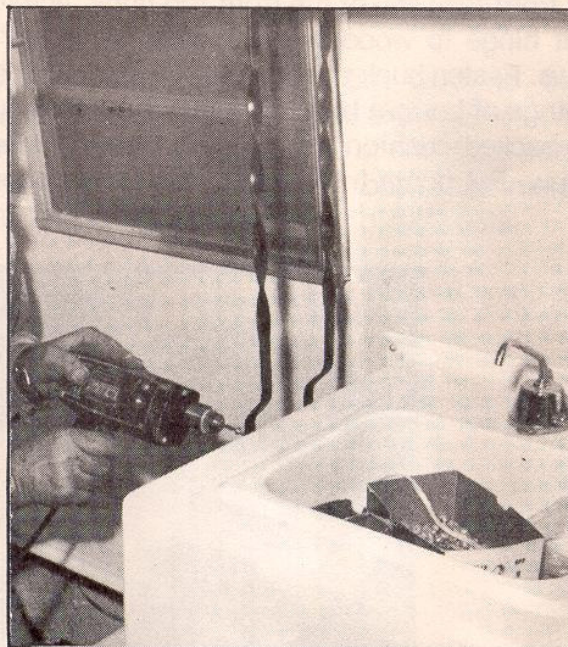


— Wrought iron support is secured to cabinets through pre-drilled holes to upper and lower cabinets with #10 x 1" screws. Iron should be at right angles to sink cabinet and the curve on bottom of iron should go to the outside of sink, as per picture.

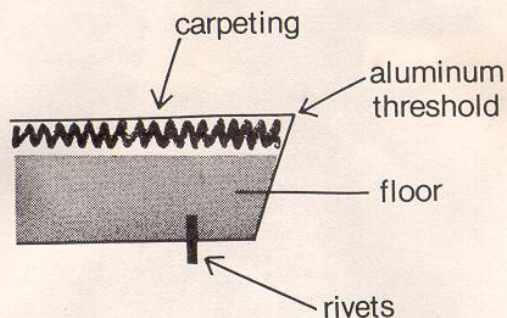
— Secure ice box in hole and rivet through pre-drilled holes with #6-10 rivets. At least two extra rivets should be used where convenient once the first two have been secured.

— Screw on spring loaded hinges (included with Scamp kit) to closet and cabinet doors.

— Set stove in hole, making sure it is straight with cabinet, and rivet in with #46 rivets. Hook up gas and **check for leaks immediately before any matches or lighted cigarettes are brought inside.**

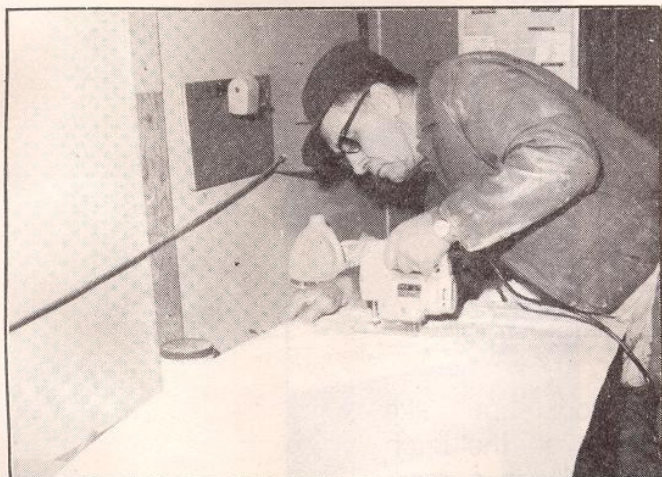


Final carpeting should now be installed. Once in place, threshold must be cut in. This fits over end of floor (as per diagram) between closet and bunks. It must be cut on bottom sides to fit properly. Once in place it is riveted underneath with #48 rivets.



— Before door installation, it is necessary to put on door bar. This is the reinforcing bar that is placed on the inside of the trailer on the right side (hinge side) back 1/2" from door opening. Clamp in place and secure with #56 rivets every 4".

Now the door is ready to be finished before hanging. Lay it outside up and locate prescribed lines for window with chalk bag. Cut out with sabre saw, following same procedure as with windows and vent.

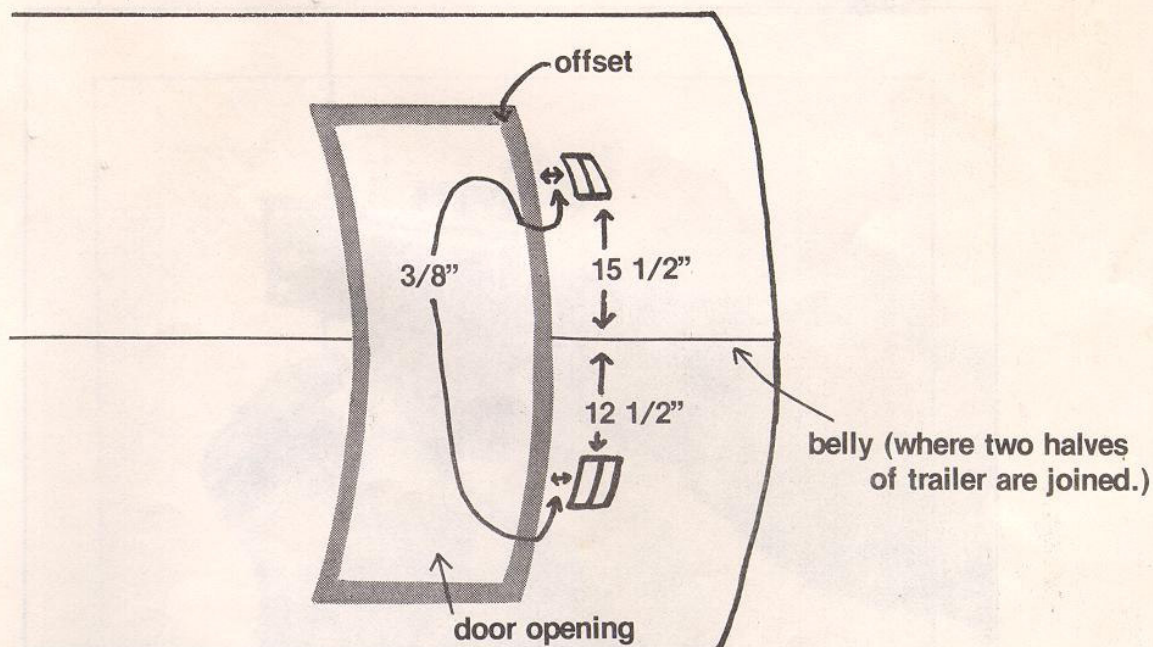


— Turn door on back and apply Web-tex #730 adhesive generously. Let dry for approximately 20 minutes.

— Lay Naugahyde upholstery on, rub out air bubbles, and seal. Let stand for 15 minutes, trim excess, and cut out for window.

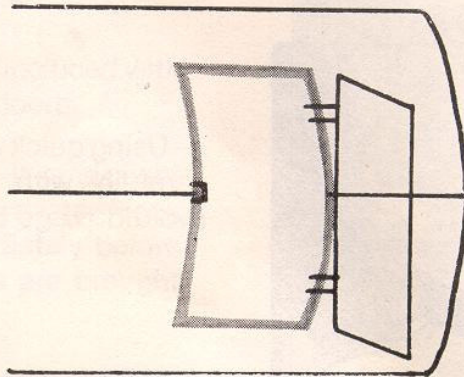
— Using quick edge; trim around door. Install it carefully with a putty knife, taking pains to avoid damage to upholstery.

— Place door hinges on trailer shell as per diagram and secure with 1/4" x 3/4" bolts, placing cap nuts on outside.

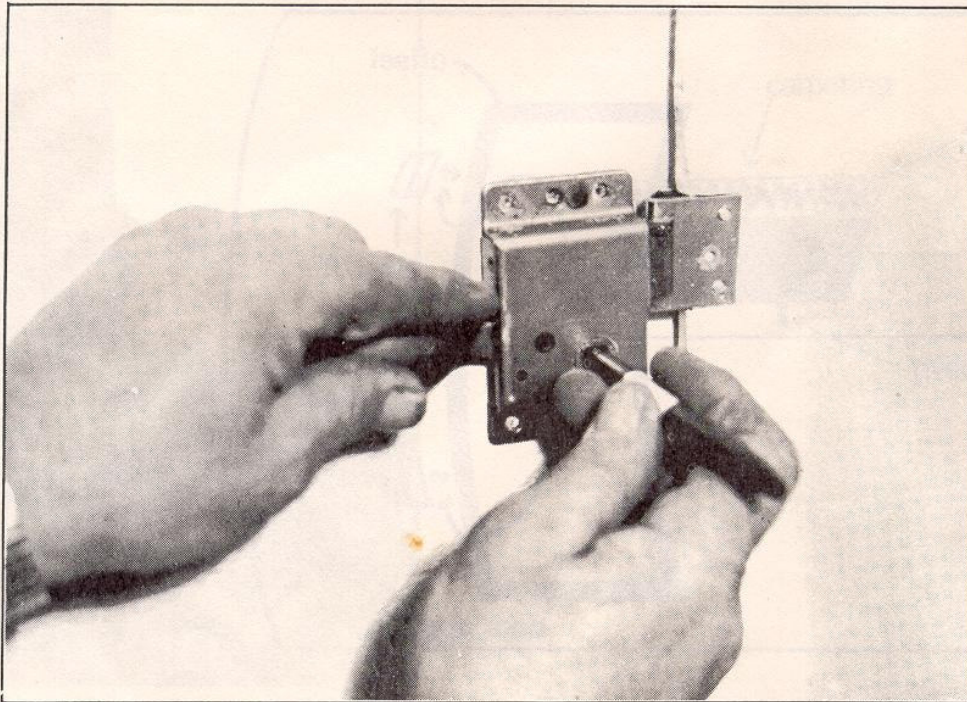


— Hold door in place, mark and drill holes for bolts, and install bolts on hinge the same way as before.

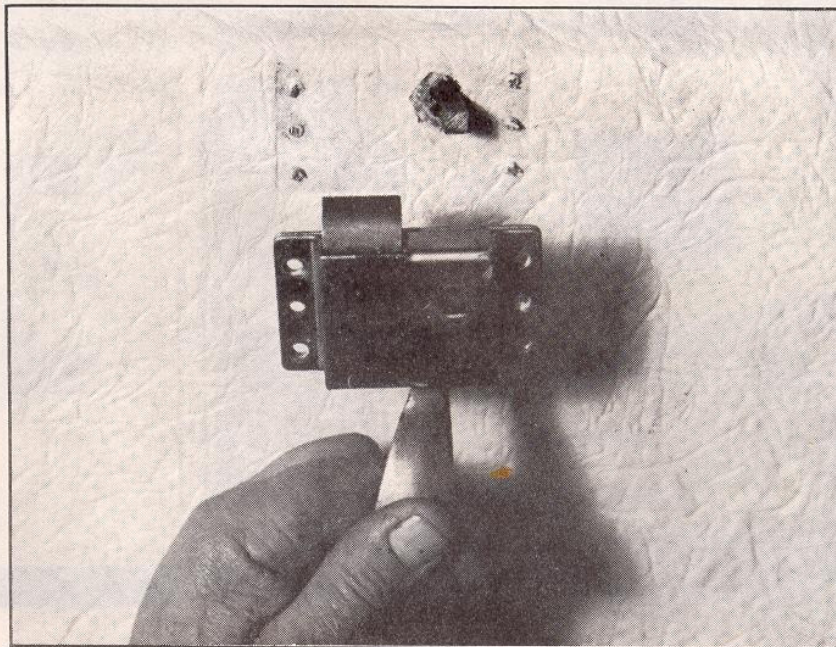
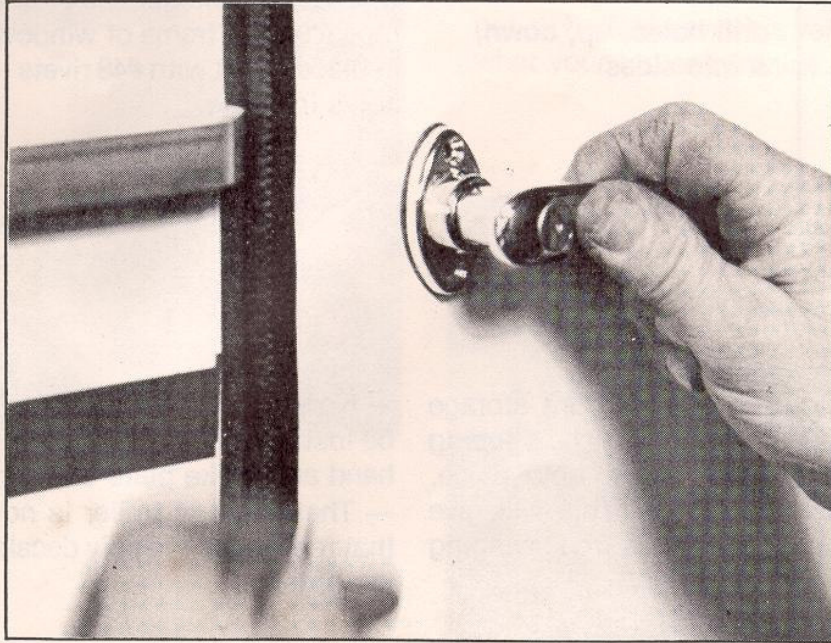
— Open door and install striker plate over edge of offset. It should be placed over belly band area; as in diagram. **Do not secure** in place yet, but make sure plate has enough purchase around shell so it will hold when completed.



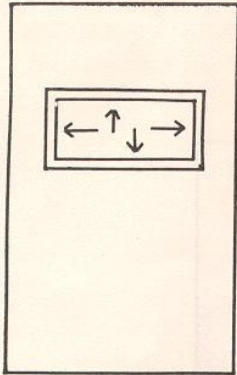
— Have a second party hold door shut. Take inside part of latch and hold it so the latch catches over the striker plate. Make a mark through square bolt hole and then drill a $\frac{5}{8}$ " hole through door.



Lock outside door handle and hold in position. Place inside latch mechanism over bolt. Screw latch (both inside and outside) in proper position with #8 x 3/4" phillips screws and then cut bolt with hacksaw. Unlock latch, go inside, and close door. Make final adjustment of striker plate and screw in place, cutting off ends of screws when done.



— Now cut alum. angle trim to fit around inside of window opening of door. The long ($3/4$ ") leg goes inside the opening, with short ($1/4$ ") leg covering edged of naughahyde upholstery. Cut and fit all pieces, then drill $1/8$ " holes down into door (as per diagram) and anchor with #48 rivets.



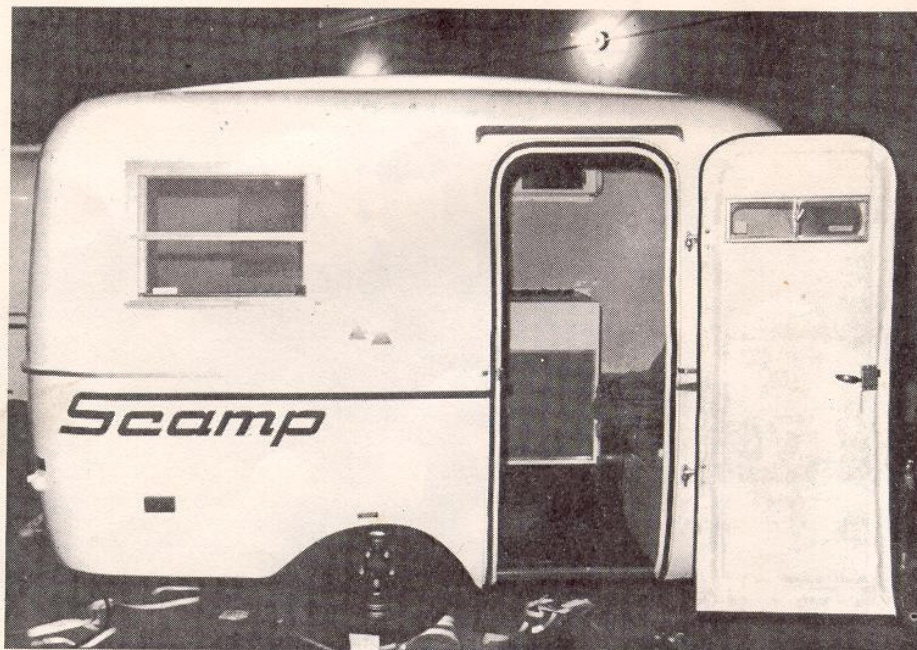
**drill holes, up, down,
& into sides**

— Caulk around outside of opening, apply putty tape to metal frame of window, and put window in place. Rivet with #48 rivets through pre-drilled holes in frame.

— Hang the door on the bottom front storage area. Lay two $1/4$ "- $3/8$ " spacers (such as tubing or pencils) on carpet under door, hold place, mark, drill, and screw in place. This will give necessary clearance that assures free swinging of door once installed.

— Now the weatherstripping (as per picture) can be installed in offset of door, right over ends of band and strike plate of door.

— The inside of trailer is now finished and all that remains is to apply decals and belly band to the outside.



— Start big Scamp decals with front edge (as in picture #1) even with front of window, holding in place with masking tape 2" down from belly to top of decal. Stop about 4" from front end with tape, and begin to peel paper back as shown in #2. It is good to use a fine bristle paint brush to smooth decal on backing as its peeled off.



1.

This keeps air bubbles from being trapped behind decal. Keep peeled 3" - 4" ahead of brush, and follow sequence as in #3 & #4 pictures. You should end up with #5 as the result.

— Next hold framing square as indicated in #6 and trim decal, removing cut part as in #7. Put in small section shown in #8, then measure same distance down on other side of vent. Note that not all trailers have this vent. Work according to what your trailer contains.



2.



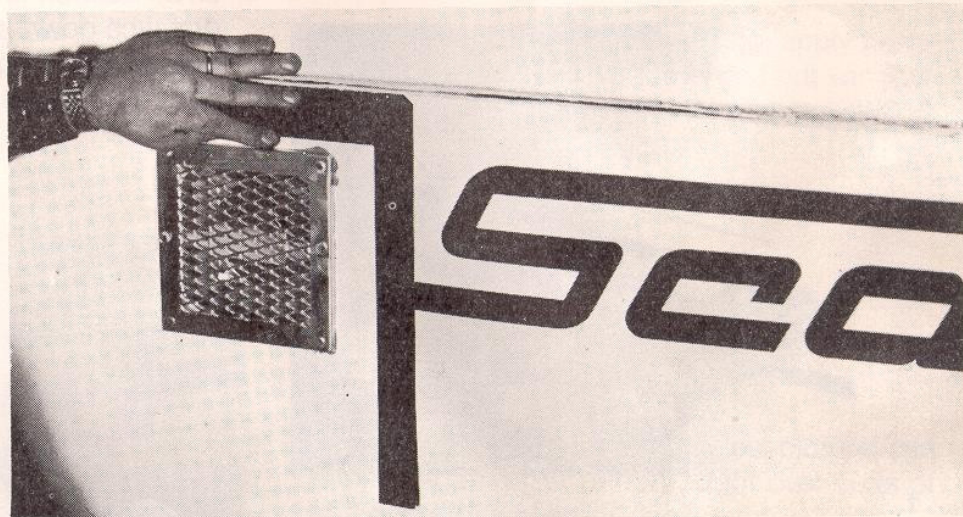
3.



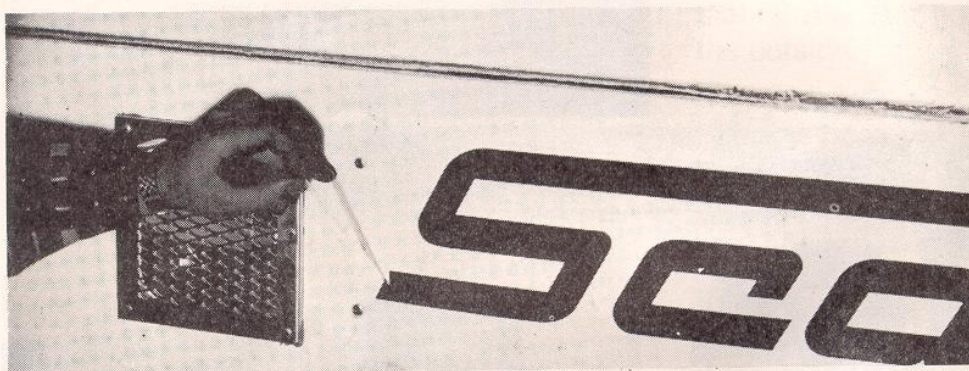
4.



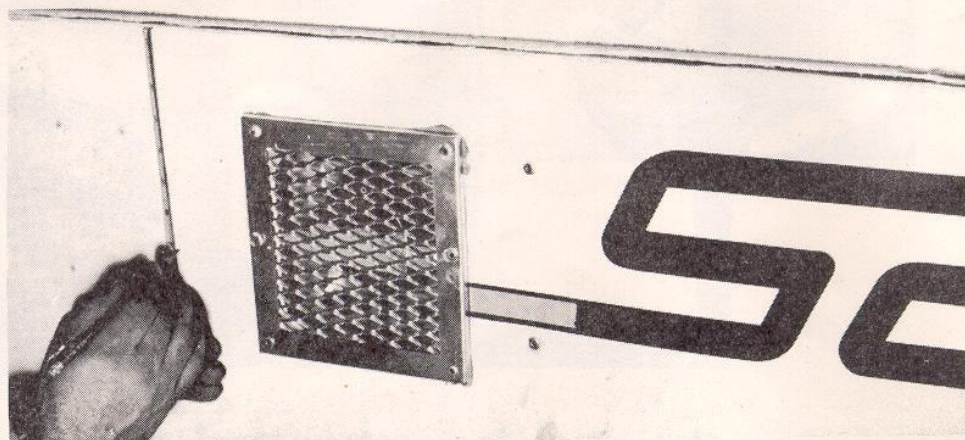
5.



6.



7.



8.

— Smooth on stripe, as in #9. Use 1" masking tape over decal to hold it straight, then remove tape when decal is on (#10). Stripe should extend to 4" past side marker lights.

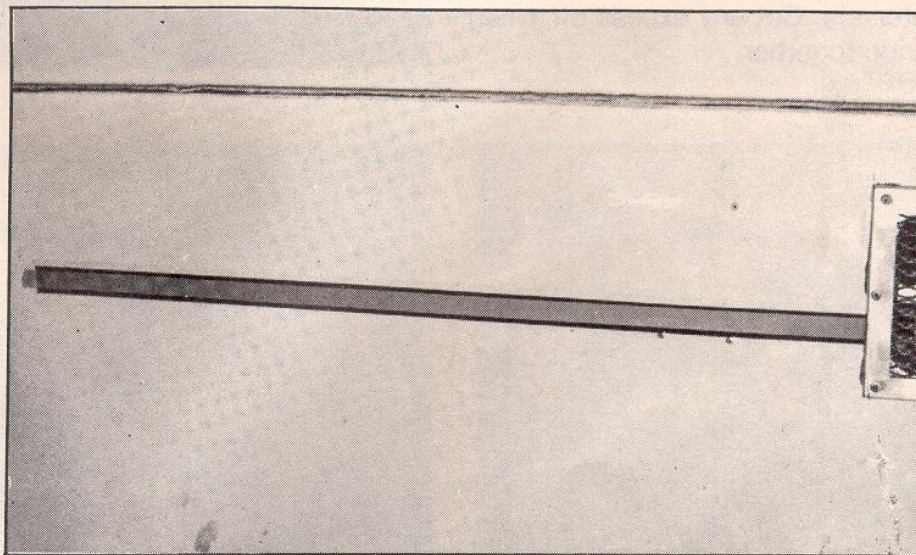
— Other decals go 3" in front of window and 3" up from belly band, as shown in #11.

— Center small **scamp** decal on back of trailer

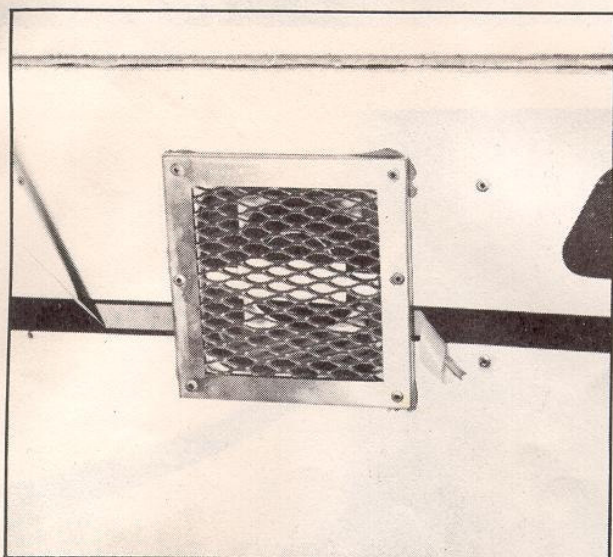
and place midway between belly and bottom of window.

— Now place appropriate labels above water inlet, LP gas tank, tires, and both electrical outlets.

— Finally, run aluminum belly band over joint of trailer shell, and you are done.



9.

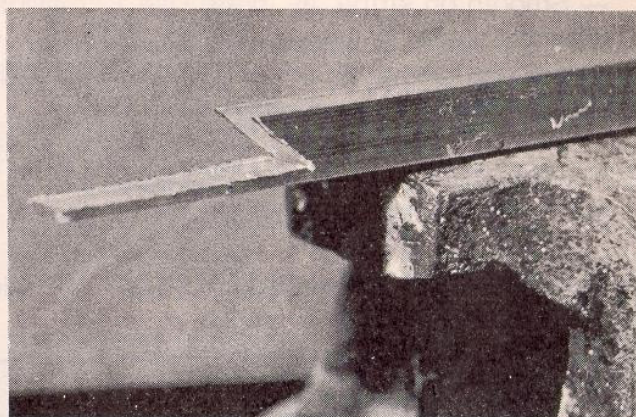


10.



11.

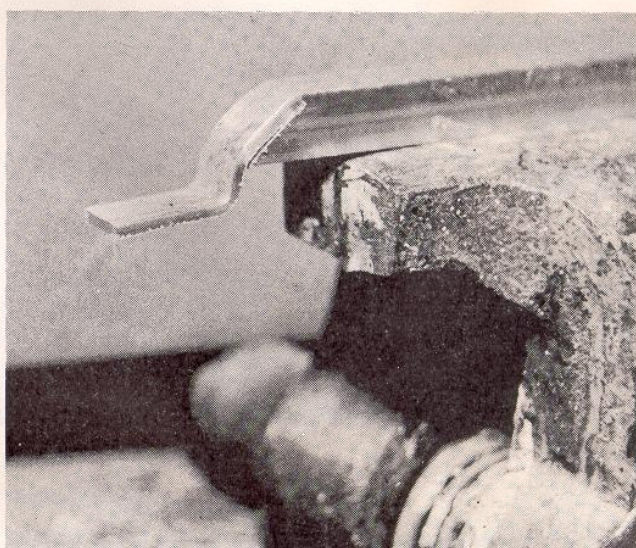
— Belly band is started on left of door as you face it. Cut out as shown in pictures, and put in #48 rivets about every 12", beginning as shown in picture. Bend 1st piece of band entirely around rear of trailer, securing it as you go. Two people make this job much easier. On the right side of door, start the same way, except for the rivet through the door bar. This should be a #68 rivet for extra strength. Then use #48 rivets at the same intervals. Cut any excess off when butting the bands together.



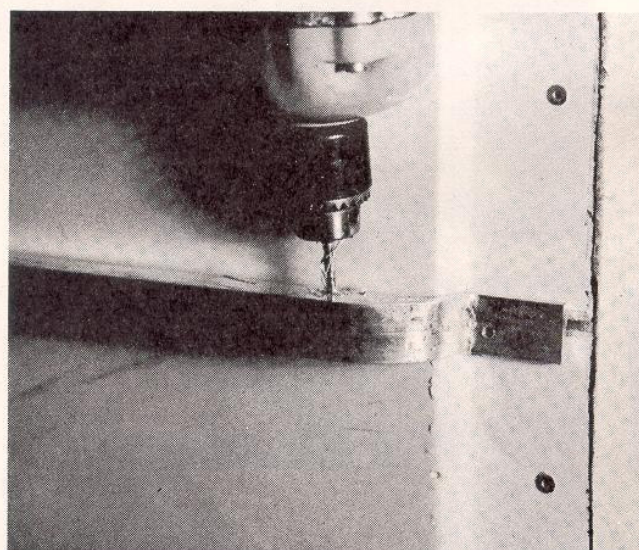
1.



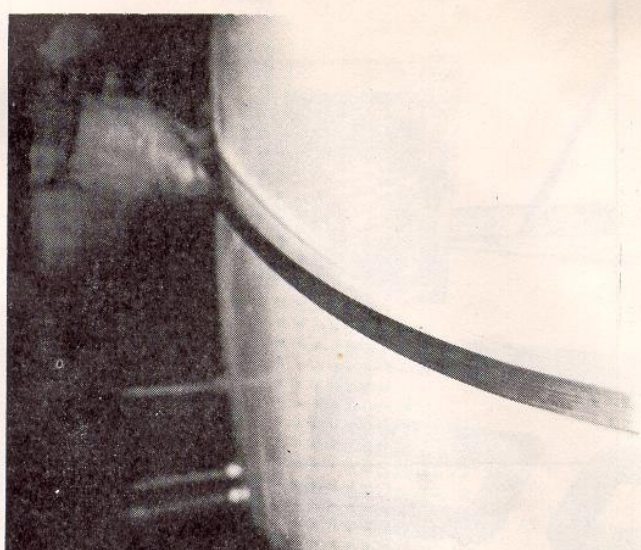
2.



3.



4.



5.

