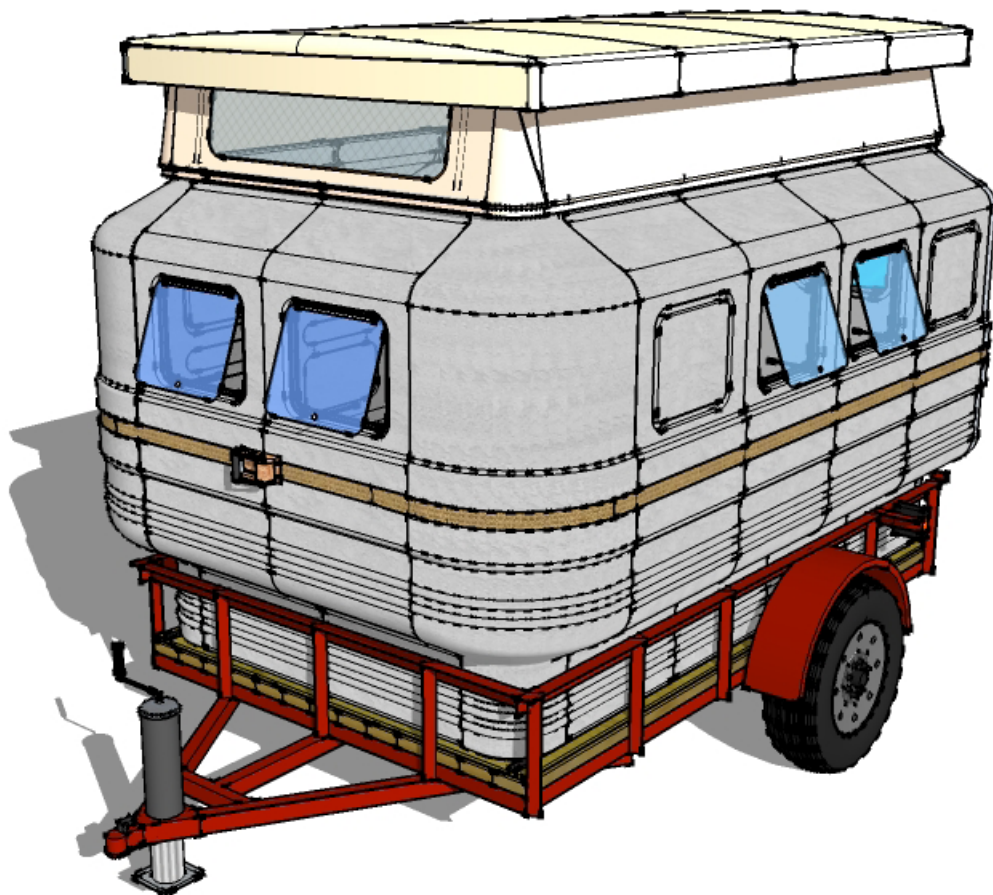


Teal Camper

OWNER'S MANUAL



Version 1.1 - 11/2011

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The TEAL CAMPER is a modular enclosure designed for utility trailers and may also be used in pickup beds. It is made up of panels and sub-components that nest together for compact storage and are easily assembled in the field by the consumer or end user with nothing more than a screwdriver. The end user supplies the floor of the camper and floor covering.

Because the camper is assembled by the owner and is not supplied with a utility trailer, it does not require licensing, title or a vehicle identification number. The camper is simply cargo.

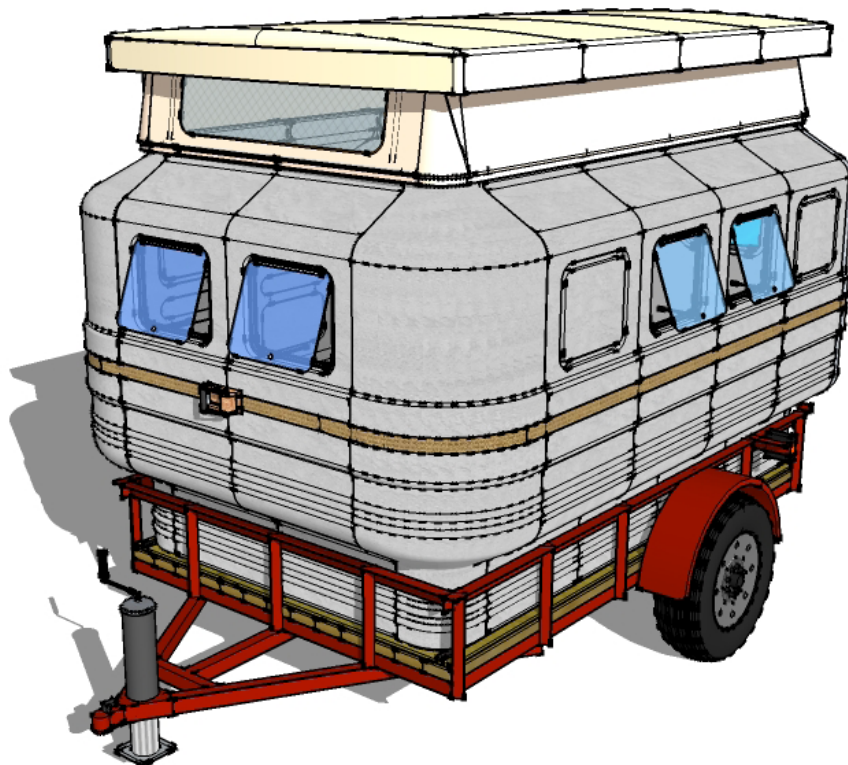
The Teal Camper can be carried on most utility trailers, but some are more suitable than oth-

ers. Many inexpensive, bolt-together folding kit trailers lack the rigidity to make a good platform for the camper. They can be reinforced, but it is better to use a welded frame trailer.

Teal Panels are made from UV stabilized tough polyethylene plastic that will provide many years of service. Cleaning with mild detergents is all that is required for maintenance. Do not use abrasive cleaners or brushes.

Camper windows are Plexiglas. Use a Plexiglas cleaner and soft cloth for cleaning for long life and scratch free windows.

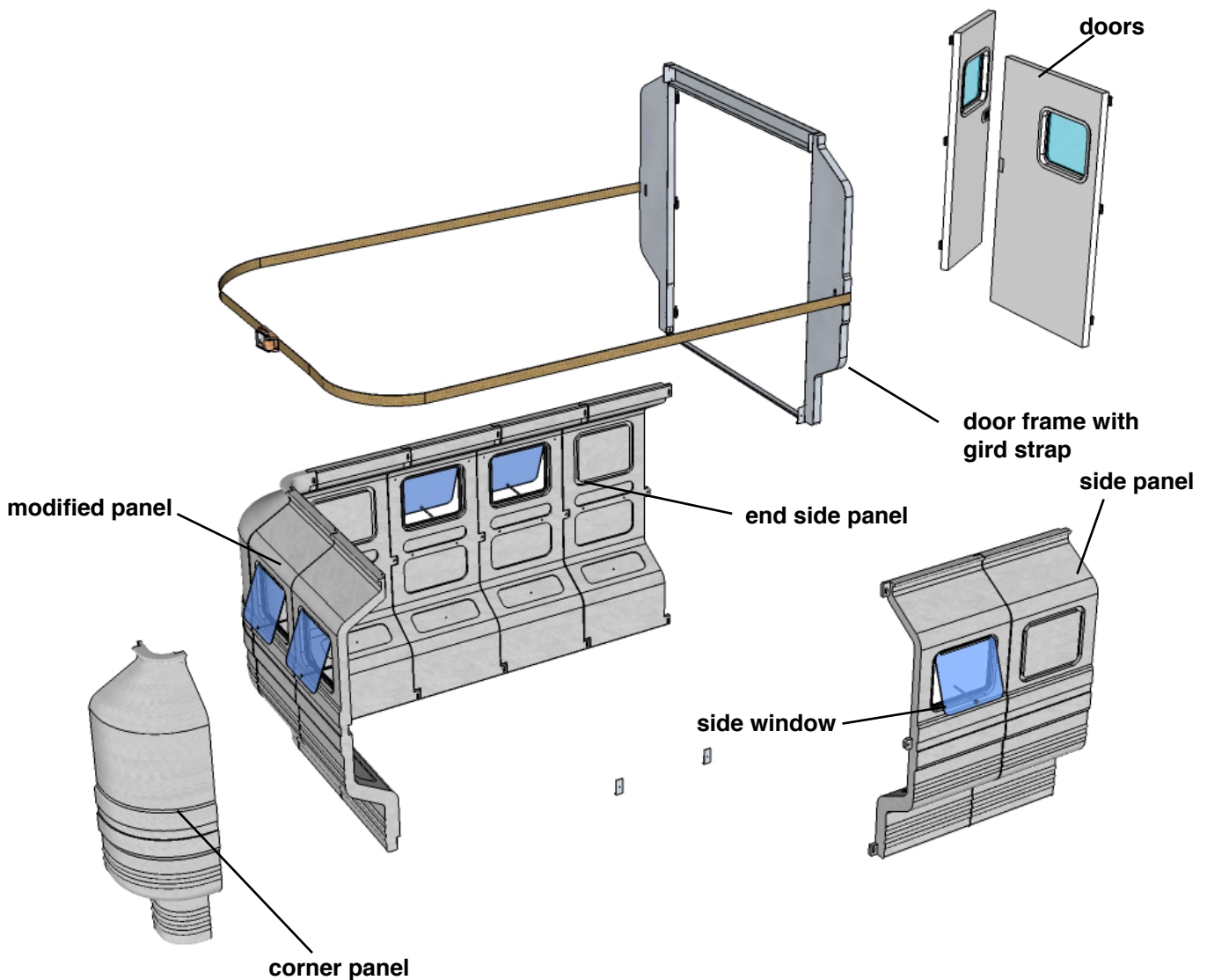
For any questions, please visit our website at www.TealCamper.com or contact us at info@tealinternational.com.



Teal Camper mounted on a 5' x 8' utility trailer

The camper shell may be assembled in place on the trailer or pickup bed, or on a floorboard and later slid into the vehicle. If it is to be slid into the vehicle, it is recommended that floorboard be elevated to the height of the vehicle bed, or in the case of a utility trailer, enough to allow the trailer to be tilted under the leading edge of the floorboard. (See the video on loading at www.TealCamper.com)

Read this chapter carefully before attempting to assemble the camper. Pay special attention to the “tips”, as they will make the assembly process go smoother. There are also assembly videos on www.TealCamper.com that can be helpful.



STEP - 1

FLOOR BOARD

The floor of the camper can be the existing floor of the trailer or pickup bed. More typically, a separate sheet of 3/4" plywood or OSB is used to allow the camper to be slide off and on the vehicle.



Basic Floor Board

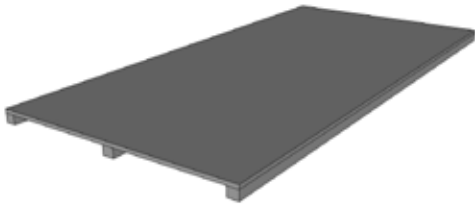
A single sheet of 3/4" x 4' x 8' exterior grade plywood can be used for the floor of a 4' x 8' camper shell.

Larger campers will require multiple boards pieced together. In this case, two layers of 3/8" plywood can be used with overlapping joints for stiffness. The boards can be screwed or nailed together, and glued.



Optional Runners

2" x 2" or 2" x 4" runners can be attached to the underside of the floor for additional strength, but are not necessary in most cases. The camper will actually slide easier without the runners.



Paint Floor Board

Painting the floor board with an exterior paint is highly recommended. This will extend the life of the floor and help prevent any mold or mildew from entering the wood.



Foam Tape

Apply 1" to 2" wide foam insulation tape to the perimeter of the floor board on three sides, leaving one end open where the door frame will mount. Keep the inside edge of the foam tape approximately 3" from the outside edge of the floor board. Foam tape designated for campers and pickup shells can be found at most hardware and home improvement stores. Common weather stripping can also be used.

STEP - 2

PANEL ASSEMBLY

Some side panels contain windows. These can be arranged in any order to fit your preference. Consider where wall cabinets are to be hung and use a panel without a window in that position.



End Panel

Lay the end panel(s) down on the floor board. For the 4' wide camper there is a single extra wide panel. The 5' wide camper uses two normal side panels.



Corner Panels

Attach the two corner panels to the end panel using the 1/4" machine screws with large fender washers for the top and bottom lugs, and the 3/8" machine screw and washer for the center lug. Leave screws slightly loose.

Tip 1: Attach the top and bottom lugs first and then push the panels together to insert the center screw.

Tip 2: If aligning screws is difficult, swap the corner panels and try again.



First Side Panels

Stack a side panel on each corner panel and attach them using the 1/4" machine screws and washers for the top and bottom lugs, and the 3/8" machine screw and washer for the center lug. Leave screws slightly loose.

Rotate the assembly to line up with the floor board.





Stand Up Panels

The panels are now ready to stand up. Lift at the top center of the end panel(s) and tilt the assembly up to the vertical position. Slide or “walk” the assembly over the foam tape so that the base of the panel assembly sits squarely on the foam tape.



Add Panels

Additional panels may now be assembled using the same 1/4” and 3/8” machine screws. Leave the screws slightly loose. The seal between the panels may need to be somewhat compressed and may require manually squeezing the panels together to align the screw holes.

Tip 3: Install the top screw first, followed by the bottom screw, and finally the center screw.

Tip 4: Grasp the top of the panel and pull down to flex the panel to assist in aligning the screw holes if necessary.



Align Panels

Adjust the panels so that the outer surface of the panels align with the outer edge of the floor board. Measure the distance from the end panel to the end of the floor board and shift the panels to make both sides uniform.

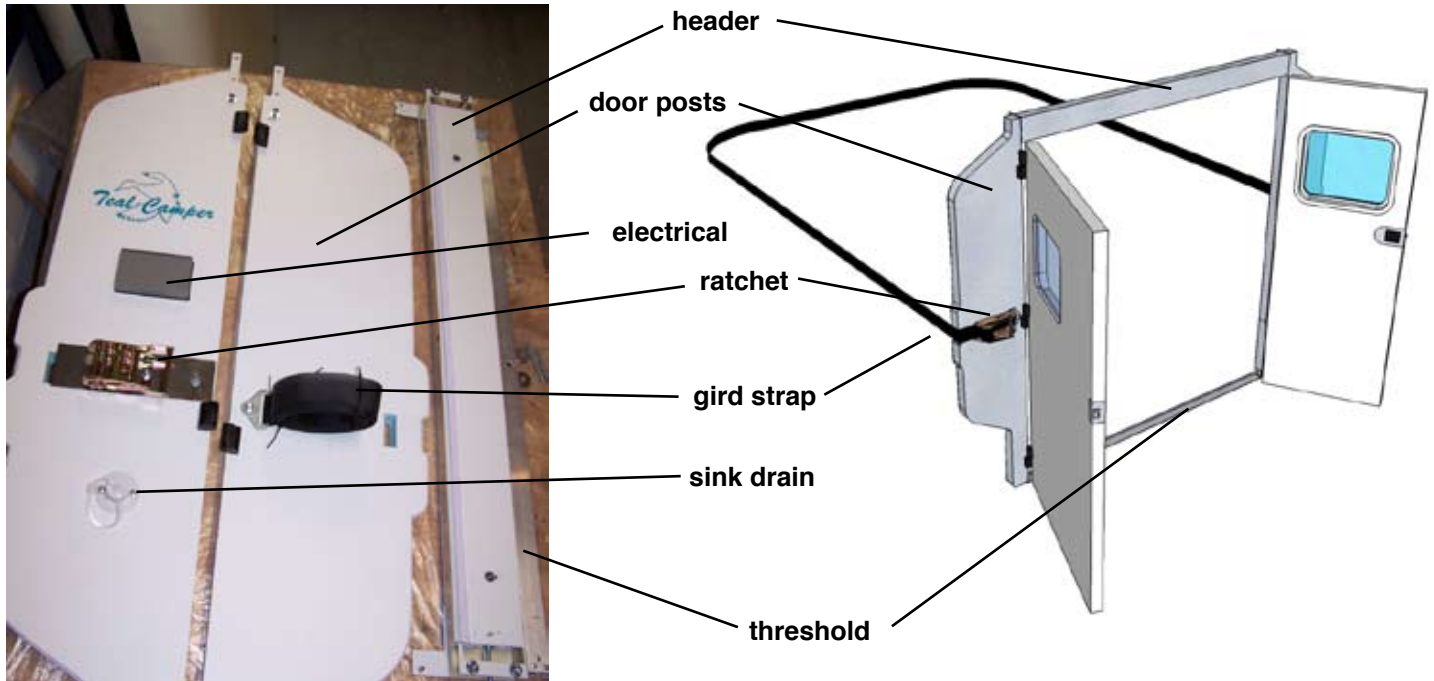


Note: The tops of the panels may be irregular in height. This will be corrected later by pulling down on the top of the high panel and flexing it into position before tightening the screws.

STEP - 3

DOOR FRAME ASSEMBLY

The door frame assembly is a frame that not only supports the doors, but provide rigidity for the rear of the camper shell and provides the attach points for the gird strap. It also contains the electrical hookup and sink drain options. Further, it provides the rear support for the popup roof.



Header Assembly

Select a flat surface on which to assemble the header. A long table that allows access to both sides of the header is recommended. Lay the door posts flat with the ratchet and gird strap facing up, spacing them apart the approximate distance of the camper width.

With screws removed from the header, slide the header onto the top of one of the door posts with the reinforcing plate facing up, as shown in the photos at the left. Align the three screw holes on the reinforcing plate with the holes on the door post.

Insert the two "T" nuts into the top two holes on the back side of each door post. Insert the long 1/4" machine screws into the top two holes on the front side and tighten while holding the "T" nuts in place on the back side.

Insert the short 1/4" machine screw in the bottom hole and tighten.

Repeat this process on the other door post.



Lug Extensions

The panel lugs key into the door frame. Since the end panel on the left hand side of the camper does not have lugs, lug extensions are added. Using the 1/4" machine screws and washers, install the top and bottom lug extensions as shown. Use a 3/8" screw and washer for the middle lug extension.

Note that the lug extension is marked with an arrow indicating the top of the lug.



Mounting The Door Frame

The door frame has slots on the back side facing the camper shell to accommodate the panel lugs. Align the lugs to the door frame and push the door frame onto the lugs until it seats against the panels.

Install the long screw on each side of the header to engage the top lug. Do not overtighten.

Tip 5: You may have to flex the side panel to get all the lugs to line up.





Install Threshold

Install foam tape on the floorboard between the door posts.

(Important - The proper orientation is marked on the bottom of the threshold.)

Place the threshold on the floorboard over the foam tape and align the holes of the mounting brackets with the slots on the bottom panel lugs.

If spacer washers are included with the threshold, place the washers between the mounting bracket and the panel lug. Insert the screw through the bracket, panel lug, and into the embedded “T” nut in the door post.

Tip 6: Hold the back of the “T” to prevent it from pushing out when inserting the screw.

Tip 7: Additional spacer washers may be added if the doors do not close properly.



Floor Brackets

Mount the “L” shaped floor brackets to the bottom of the side panels using the lug screw. There are typically four brackets for an 8’ camper and six brackets for a 10’ camper. The brackets are spaced about two feet from each end of the camper, two on each wall.

Use wood screws to attach the bracket to the floorboard.



Gird Strap and Ratchet

The purpose of the gird strap is to compress the seals between the panels before tightening the joining screws.

Important: Make sure all the screws joining the panels are loose.

Unroll the 2" gird strap and walk it around the camper. Keep tension on the strap as you walk and make sure the strap stays in the track on the side and corner panels.



Thread the loose end of the strap into the slot in the ratchet spool. Hold the strap while working the ratchet handle back and forth to tighten the strap.

Tighten the strap to the point that the strap snaps back to the side of the camper when pulled away.

Walk around the camper and snap the strap in numerous places to even out the tension and then use the ratchet to snug up the strap. Excessive tightening is not necessary and may deform the corner panels.

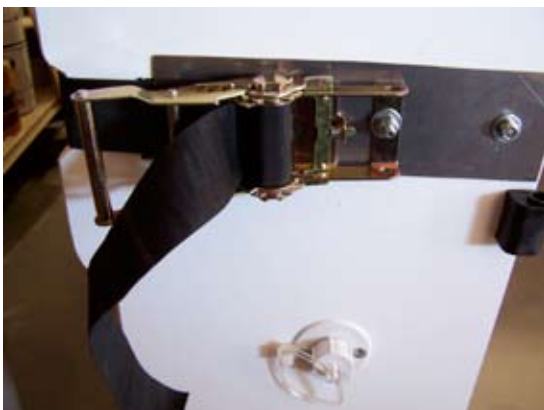


View the joints between the panels from inside the camper. If any light is seen between the panels, tighten the strap further. Shaking the walls may also help set the seals.

TIGHTEN ALL PANEL SCREWS !

SPECIAL NOTE TO MEGA MOTEREN

Do not overtighten the strap. See special instructions for adding weather stripping to the seals on the prototype camper.



To Loosen Strap

To loosen the strap or to disassemble the camper, use the release bar in the handle to open the handle all the way as far as it will go. The strap can then be pulled free of the ratchet.



Mount Doors

To mount the doors, simply slide the hinge pin into the hinge socket.

Tip 8: If the doors do not close properly, you may need to add a shim to the threshold bracket.



Sliding Door Bolt

The left hand door contains sliding door bolts at the top and bottom of the door. These bolts slide into locking holes in the header and threshold.

The bolt is slid into the locking position and then the handle turned into the inside to lie flush with the edge of the door. This ensures that the bolt will remain in the locked position during travel. This also prevents the right-hand door from being closed without locking the left hand door first.



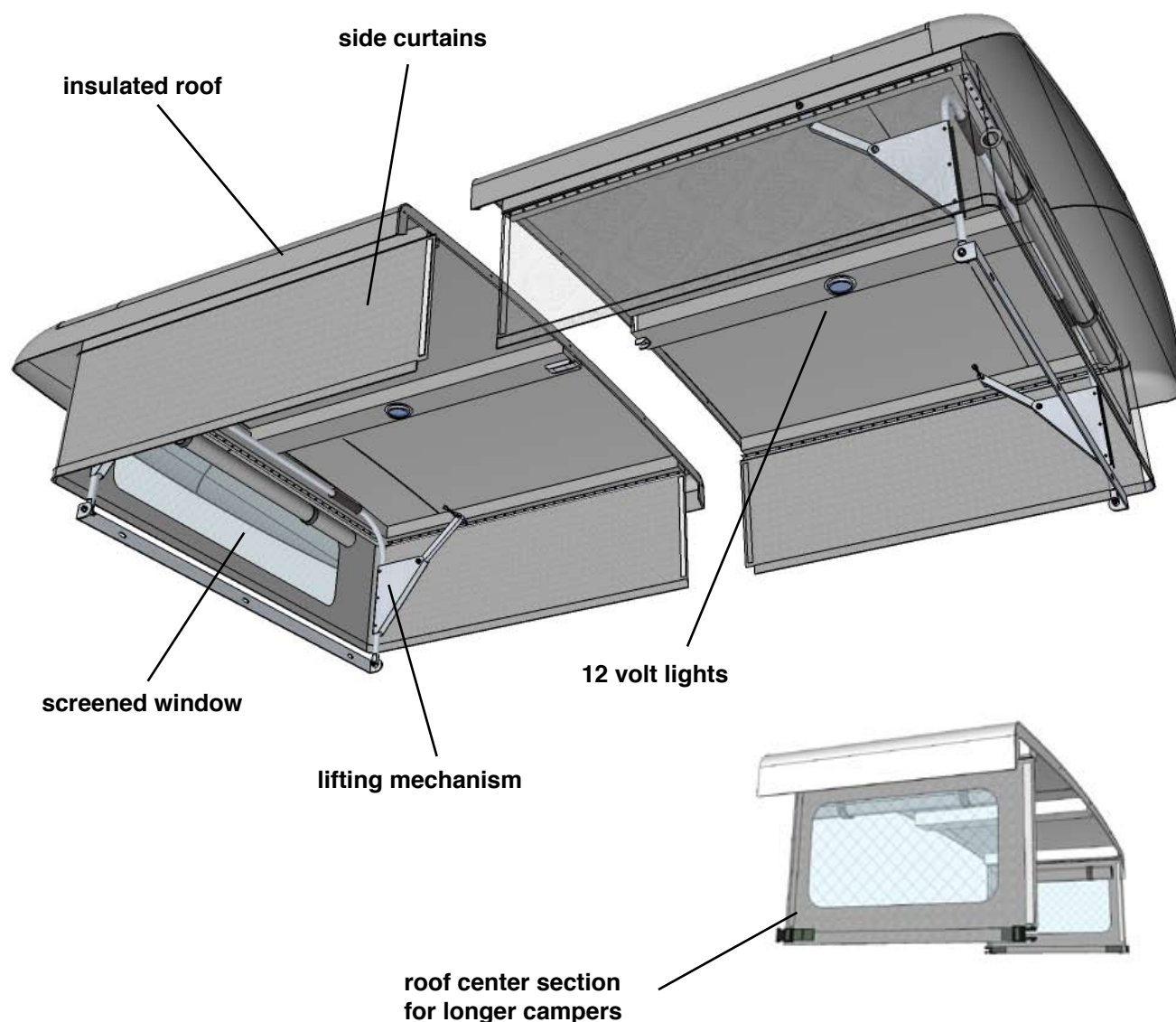
Tip 9: If the bottom sliding bolt does not align with the locking hole, the threshold may have been installed in the wrong orientation. Remove the threshold and rotate it 180 degrees, and reinstall.

Tip 10: Once you have confirmed that the doors close properly, remove them and set them aside until the camper is completely assembled.

The Teal Camper popup roof comes in two sections for the 8' long camper. It can be extended to 10' for longer campers using a center section insert. The roof contains 12 Volt lights and a chord for plugging into a 12 volt battery or transformer.

The roof is designed so that, once installed, it can be raised, lowered and secured entirely from the inside.

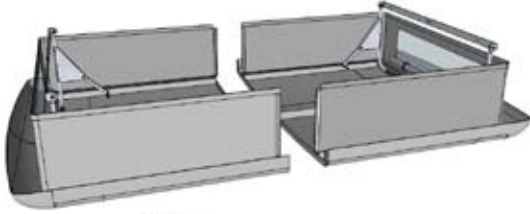
Tip: 11 - While the roof is designed to be assembled and disassembled, for ease of handling and storage it is recommended that it be suspended from the ceiling of a garage so that it can simply be lowered into place on the camper when needed and raised for storage.



STEP - 4

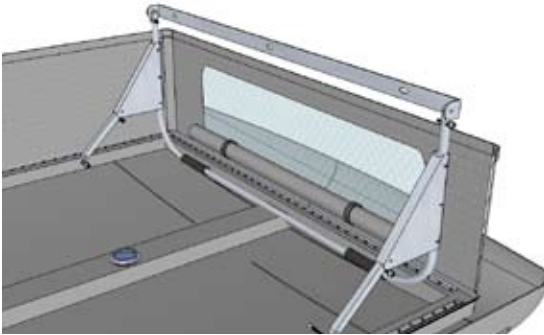
ASSEMBLE ROOF

The roof sections are fairly light, but bulky to handle. It is recommended that at least two people be involved in the lifting and setting of the roof on the camper.



Join roof sections

Place the roof sections upside down on a flat surface. Align the sections with the aligning pins in the joining edge of the roof sections. Push the sections together until they meet.



Tip 12: The mounting bar for the lifting mechanism may be attached to the roof frame with Velcro for shipping. Undo the Velcro and position the lifting bar to the raised roof position. Secure the lifting bar with the Velcro strap.



Engage the latch at the center of the roof and draw the two sections together.

Plug the 12 volt lighting wires together, which are located next to the latch.



Install the four screws on the outside mating flange located near the edge on each side of the roof.

STEP - 5 INSTALL ROOF

Take care when handling the roof. DO NOT carry the roof upside down as this may damage the outer overhangs.



Roof Placement

Carefully turn the roof over so that it is right side up. Carry the assembled roof to the camper and set it in place in the lowered position with the lifting mechanism hanging inside the camper.

Do not worry about the placement of the side skirts at this time. Just keep them out of the way so that the lifting mechanism brackets may be attached.

Tip 13: - Make sure that the roof section with the 12 volt wire, plug and switch is facing the door frame end of the camper.



Attach Lifting Mechanism

Position the black lifting mechanism support bar so the brackets align with the top panel joining screws at the front of the camper.

Remove those screws and align the support bar brackets with the panel screw holes and re-install the screws through the support bracket and tighten.

In a similar fashion, mount the rear support bar to the door frame header.





Roof Tie Down Straps

Clasps are installed on the roof frame for locking down the roof for travel, in high wind or for security. Locate the position of each clasp and install the matching tie down strap using the top panel screw located below each clasp.



strap in roof 'up' position

strap in locked down position



Attach Side Curtains

Push up on the lifting bar on one end of the roof to lift it into the 'up' position. Push the bar all the way to the Velcro strap and secure it with the strap. (Allow the bar to roll on the black foam cushion located at the center of the bar.)

Repeat the lifting process on the other end of the roof. The roof will not be fully stabilized until the side curtains are attached.

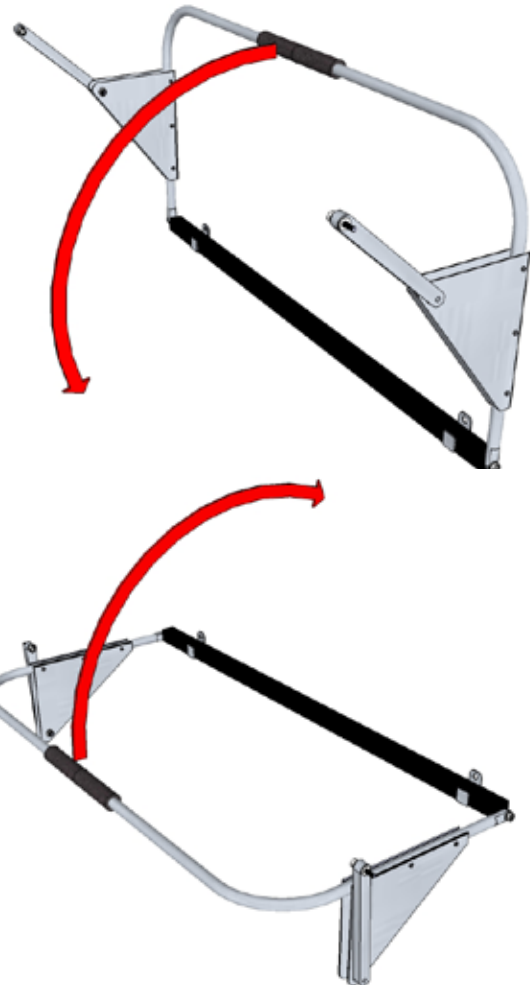


Arrange the side curtains so that they are on the outside of the camper panels. Join the curtains with the Velcro seam and the belt clip on each side.



Side Curtain Strap

Make sure that the side curtain extends over the top lip of the camper panels. Locate the side curtain over-the-center buckles at the front and rear of the camper. Pull on the loose end of the strap until snug and then rotate the buckle handle to the closed position and push in on the handle until it clicks into the locked position. This adds additional tension to the strap. The side curtain should now be taught.



Roof Operation

The roof lifting mechanism is designed to have an over-the-center lock. That means that the lifting arms are slightly over center when in the up position, locking the roof in place.

To lower the roof, pull the lifting bar towards you and down. Be prepared to support the weight of the roof as the bar is lowered.

To raise the roof, push up on the lifting bar and move it all the way to the roof frame where it will pop into position as the lifting arms go over center.

A Velcro strap is attached to the roof frame that can be wrapped around the lifting bar to secure the bar in the up position.

Tip 14: - When raising the roof, use two hands to lift the bar and allow the foam cushion on the bar to roll against the ceiling.

Tip 15: - Lowering the front bar first will put the roof in the best position for traveling. This shifts the roof back and minimizes the gap between the camper shell and the leading edge of the roof at the front of the camper.

STEP - 6

FLOOR FINISHING and ELECTRICAL

The finished floor and floor liner is usually supplied by the owner since both are readily available locally.



Floor Liner

To prevent any moisture or dust that might find its way under the wall panels, a floor liner should be installed. This can be a heavy polyvinyl sheet such as a PVC shower liner or 6 mil polyethylene plastic. These can be obtained at almost any hardware or home supply store.

Cut the liner at least two inches larger than the exposed floor plan. Lay the liner on the floor and extend the edges up the inside walls about one inch.



Floor Covering

Cut a piece of indoor/outdoor carpet or vinyl floor the size of the exposed floor. Lay the floor covering on top of the floor liner, making sure that the floor liner edges extend up the inside walls. A rubber mat cut to size also makes an excellent floor covering.

Electrical

The left door post has a 120VAC electrical hookup on the outside with a 120VAC outlet with a ground fault protector on the inside.

A plug-in 12VAC transformer is supplied with the camper to power the ceiling lights. The light chord can also be plugged into a battery. (not supplied)





Dinette/Bed Set

The dinette/bed set consists of two bench locker seats and an end shelf that also serve as storage bins. A bed board that bridges the space between the bench lockers when the bed is in place is stored in one of the lockers. The table has a quick release bracket attached to the wall and a folding leg. When configured as a bed in the 4' wide camper, the table spans between the camper sides at the end of the bench seats to extend the bed to over six feet.

STEP - 7 BENCH LOCKERS

The bench lockers and end shelf can be easily assembled and disassembled for storage or shipping.



Assemble Bench Lockers

Each bench locker comes in four pieces; a front, two sides, and a hinged lid. The screw holes and threaded inserts are labeled with letters. Match the letter labels with the corresponding parts and assemble them using the machine screws supplied with the kit.





End Shelf

The end shelf is hinged for storage. Rotate the front panel 90 degrees and insert the two screws near each end of the hinge from the front side of the panel.

Place the end shelf at the front end of the camper allowing the shelf to rest on the side panel ledge as shown.

Note that the vertical panel supporting the shelf has two threaded inserts midway near both outside edges. These inserts correspond to holes in the ends of the bench lockers for securing the end shelf assembly to the bench lockers.



Installing Bench Lockers

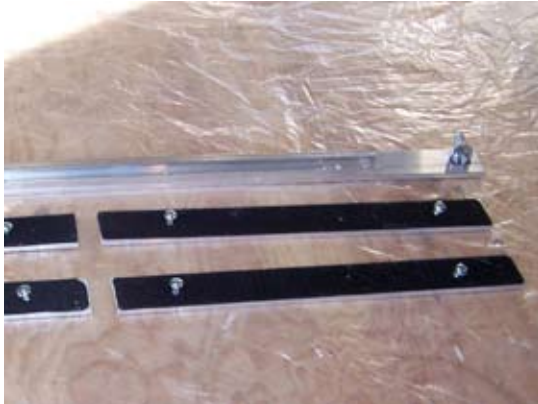
Place a bench locker on each side of the camper and butt them up against the end shelf. Match the screw hole in the end of the bench locker with the threaded insert on the face of the end shelf and screw the pieces together using the machine screws supplied.

Each bench locker has two 'U' shaped attach points with Velcro straps. Use these straps to secure the bench locker to the 'D' ring tiedowns on the side of the camper.

Tip 16: The bench locker with the bed board goes on the left hand side of the camper.



STEP - 8 SUPPORT BARS



Install Support Bars

Each sidewall panel has molded in threaded inserts midway up the panel. These are provided to attach furnishings like cabinets and cushions.

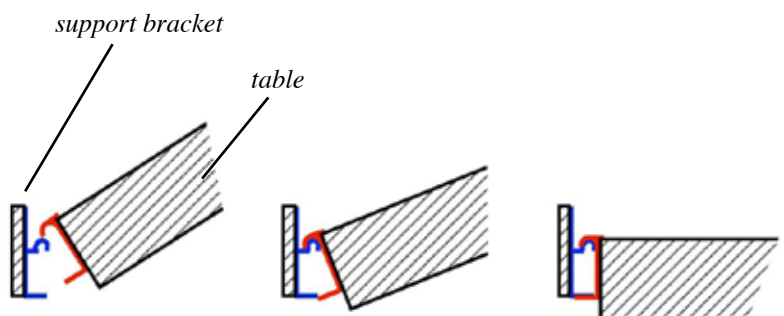
There are four bars with Velcro for attaching the dinette cushions to the wall. Mount the four bars on the side-wall panels above the bench lockers using the supplied machine screws.



Table Support Bracket

The table support bracket (4' wide camper only) mounts on the end wall of the camper. Remove the 3/8" panel joining screws and replace them with the screws that are supplied with the table support bracket.

Tip 17: - Make sure the table support bracket bar is mounted with the riveted bracket at the bottom. Note that the table must be held at a steep angle to properly engage the support bracket.



STEP - 9

INSTALL CABINETS

page 22

The wall and side cabinets are collapsible for easy storage and installation. The side cabinet can include a sink and faucet or a blank counter top. A sink cabinet must be mounted on the left hand side of the camper next to the door frame where there is a hookup for the drain.



Install Wall Cabinet

Using the wood screws supplied with the cabinet, mount the two metal hangers at the top of the cabinet.

Unfold the cabinet by carefully pushing the hinged shelving towards the back of the cabinet. It may be necessary to work the fabric around the corners of the shelf as it is moved into place.



Generally, the wall cabinet is mounted on the right wall next to the door frame although it may be mounted on any wall panel that does not have a window. Hang the cabinet on the top lip of a side wall panel by the metal hangers.

With the short machine screws supplied with the cabinet, screw the mounting brackets on the middle shelf to the corresponding threaded inserts in the wall side panel.



Tip 18: - If the cabinet is mounted next to the door frame, the cabinet doors must be closed when lowering the roof. The lifting mechanism will prevent the doors from opening during travel or whenever the roof is lowered.



Install Side Cabinet With Sink

Mount the support bracket to the side wall panel using the supplied screws.

Unfold the side cabinet and tilt the top at a steep angle while engaging it in the mounting bracket

Place the middle shelf in the cabinet with the metal lip facing out so that it will rest on the cabinet face cross piece.

Secure the middle shelf to the side wall panel tie down ring with the supplied Velcro strap.

Push the black drain hose fitting over the bottom of the sink drain until tight. (Use PVC cement to permanently attach drain hose) Fit the sink counter top into the top cabinet frame and secure it with the two screws supplied with the cabinet.

Connect the black drain hose to the hose fitting on the door frame.

Place the water jug in the bottom of the cabinet and insert the water tube from the hand pump into the jug.

Tip 19: - Remove water tube and put the lid on the water jug when traveling.

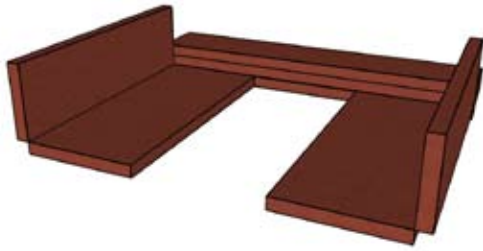


STEP - 10

CUSHIONS, CURTAINS and ACCESSORIES

page 24

The cushion and bed configurations shown here are for the 4' wide camper. The 5' wide camper is slightly different.



Cushion In Seating Configuration

When set up in the dinette configurations, the backs of bench locker cushions are attached to the side wall panels by a Velcro strip that corresponds to the Velcro bar installed on the side wall panel. The long, narrow, hinged cushion for extending the bed is folded and stored on top of the shelf cushion.

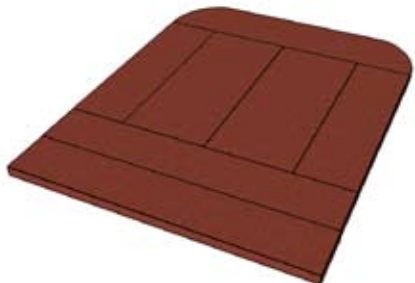


Cushions In Sleeping Configuration

Remove the table by lifting up on the unattached end of the table to a steep angle to disengage the wall mounting bracket. Fold the leg and set the table aside.

Remove the bed board from the left hand seat locker and place it on the support rails between the seat lockers.

Place the table across the camper at the near end of the bed platform with each end resting on the wall panel.



Pull the seat cushions from the Velcro bars and slide them together to make the bed cushion.

Place the long bed extension cushion over the table.





Curtains

The curtain rod is a simple bent rod that fits into holes molded near the top corners of each window. The rod has a clear section of vinyl tubing slipped over each end to fit the hole and hold the rod in place.

Tip 20: - Remove the vinyl tubing from the rod and push it into the curtain rod hole first, then insert the curtain rod.

**Utility Trailer Mount**

The Teal Camper is light enough that it can be slid on and off most utility trailers. A light duty winch can make the job much easier. As mentioned before, the floorboard without runners will slide easier than one with runners unless the runners have a skid surface applied to the bottom.



Have the camper on blocks or on a simple dolly on wheels. Back the trailer up to the front of the camper and lift the trailer tongue until the tail end of the trailer will fit under the floorboard. If using a winch, crank the camper onto the trailer bed. (If a winch is not being used, block the wheels of the trailer and have one person push down on the tongue of the trailer while another pushes the camper onto the trailer from behind.)

Once on the trailer, use the tiedown rings on the side to secure the camper to the trailer. 1" cargo straps work well for this purpose. Use at least two straps per side. Make the straps snug, but do not over tighten.



Tip 21: - Use plastic furniture moving plates or strips on the trailer bed to allow the camper to slide easier.

Tip 22: - For an insulated floor, lay a 1" to 2" sheet of insulated foam board on the trailer or pickup bed before sliding in the camper. (For floorboards without runners)



PICKUP MOUNTED CAMPER



Modify Tiedowns For Pickup Beds

The Teal Camper was designed primarily for a utility trailer but can be used as a pickup camper. The tiedown rings located on the outside of the camper may be too low to properly secure the camper to the pickup box. Tiedown rings may be relocated higher on the side panel to accommodate tiedown points on the pickup.



Unbolt the existing ring. Drill a new 3/8" bolt hole in the side panel approximately 2 inches below the gird strap and push a 3/8" x 3" bolt with washer through the hole from the inside. Mount the tiedown ring on the bolt with a 3/8" locking nut and washer.

With two or more people, lift the front end of the camper and place it on the pickup tailgate. Lift the back end of the camper and slide the camper into the pickup box.

Tip 22: - Place a 2x4 plank or strong pipe under the camper floorboard long enough to extend out each side for a suitable handhold.



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