

Using a M.O.A.B. on an Explorer Box/Pod Style Trailer



(Mobile Outdoor Adventure Bedroom)

DIY Folding Tent Unit



Last revision 02/25/10

Using a MOAB on an Explorer Box / Pod style trailer.

MOAB tent bodies are designed to be installed on a folding platform with an open size of 56" wide x 84" long. With compact enclosed style trailers such as an Explorer Pod or Explorer Box, the top of the trailer box becomes one side of the folding platform.

The main platform portion (the half that is the top of your trailer box) should be 48" wide x 56" long for the travel cover to fit correctly. On the foldout side, this takes in account the extra thickness of up to a 3/4" ledger block for the edge of the folding portion of your platform to rest on. The travel cover snaps to the sides and ledger block.

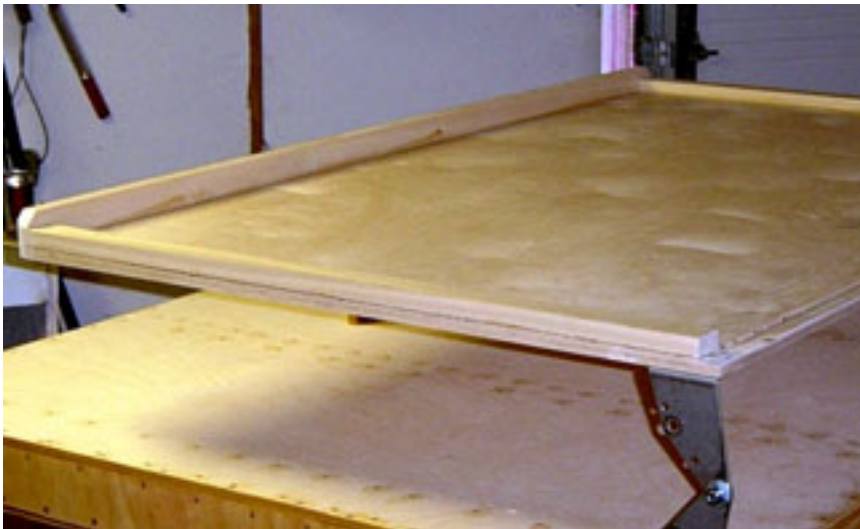


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Folding portion of platform:

I recommend using 5/8" Baltic Birch plywood for the deck and 1x2 Fir, Poplar or Pine for your solid wood reinforcing strips.

On the door end of the platform, stand your 1x2 on its side. Lay them flat on the sides. Make sure to cut the sides about 7/8" short of the end so they clear the ledger block when the platform is opened. Use the standard glue and screw method describe in the Explorer Box construction manual for attaching them. A simple butt joint where the end and sides met is fine.



Here is a platform being test fitted.

I like to trim the corners of the door end support at 45 degrees. It's also a good idea to put about a 1/2" radius on the corners.



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Ledger block info:

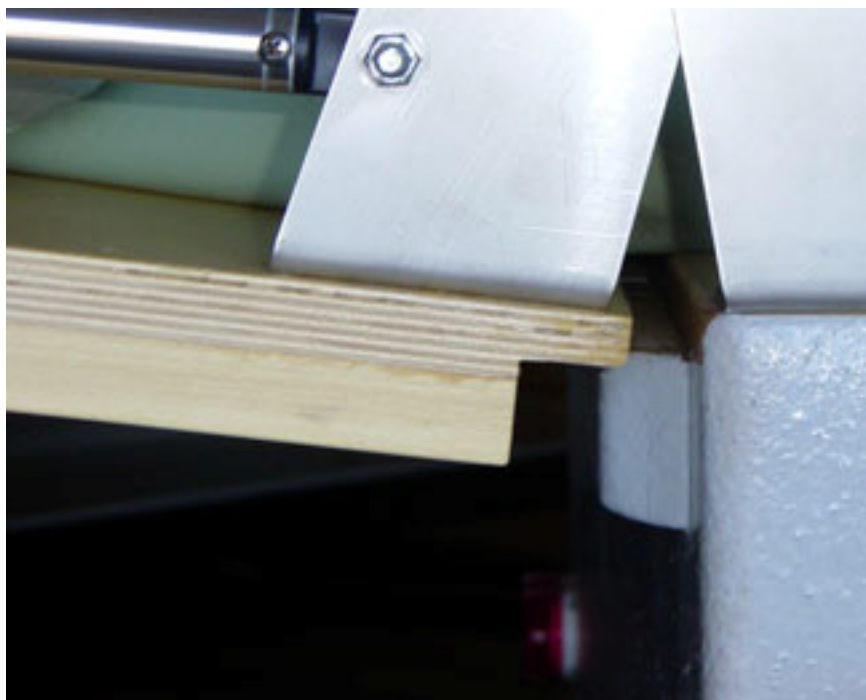
The folding portion of the platform requires a support surface along the edge where the two halves come together. Use 1x2 clear grain Fir, Poplar or Pine cut to a length of 53 1/2" for this. This will make it 1 1/4" from each end on a 56" long trailer box. Cut the ends off at 45 degree angles. For a smooth engagement of the platform edge with the ledge block, trim back 3/8" at a 10 degree angle. I find it looks more balanced to do the same on the bottom side. Attach it slightly lower than the thickness of your platform's floor panel.

Note the how it sits back from the end some and has the ends trimmed off at 45 degrees.



Note the 10 degree taper on top of the ledger block

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Profile Shot

Note how the side support stops 7/8" before the end.

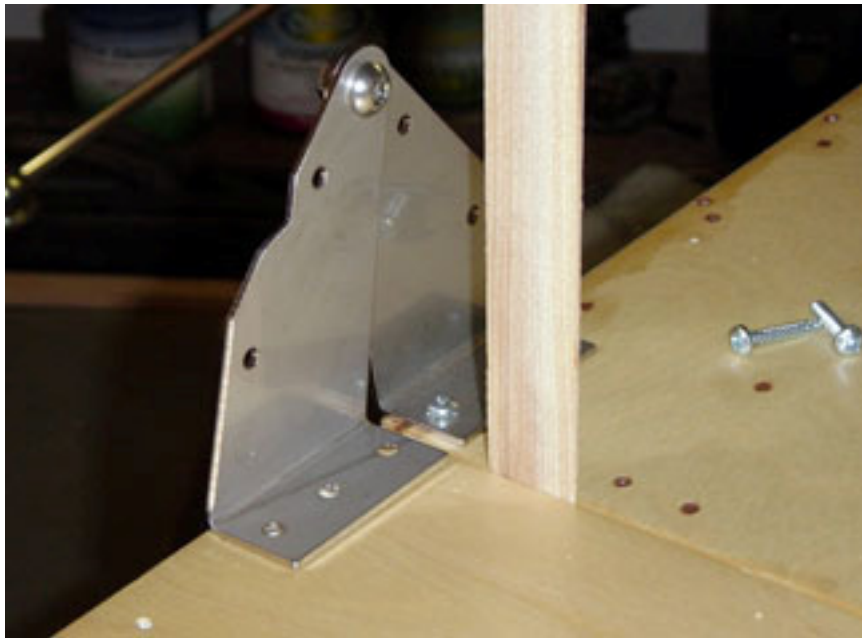


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Hinge mounting:

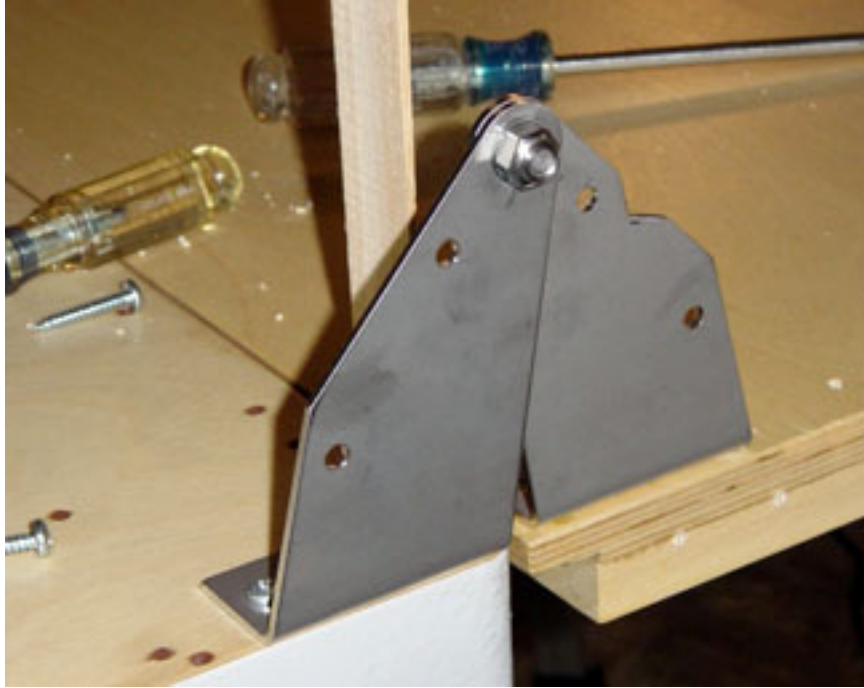
In most applications, the included #10 x 1 1/4" pan head wood screws are sufficient for attaching your hinges. I pre-drill the holes with a 1/8" bit. If you do much off-pavement, rough / wash boarded towing you may find it necessary to upgrade the screws on the folding portion of your platform to thru bolts. If you do, use nuts inserts so there is nothing extending pass the bottom of the platform perimeter that could damage your travel cover.

The side of the hinge with the notch on the upper hole attaches to fold over portion of your platform. To attach; rest platform on ledger block and support the door end so your platform is level. You want about a 1/16" gap between the platform halves, I use wooden door shims for this. On the trailer box side, use the outside mounting holes. On the folding side, use the two outside holes.



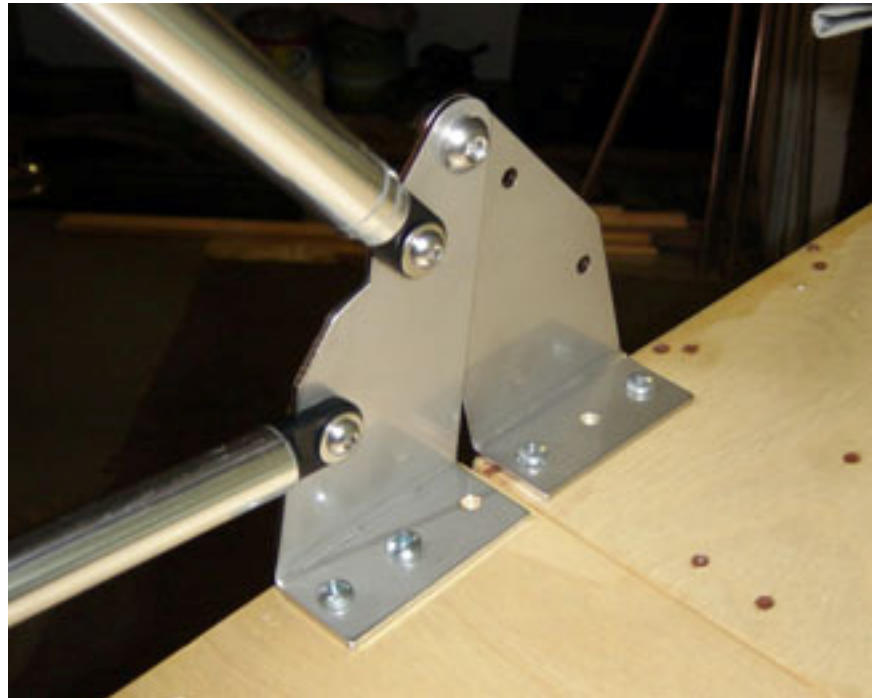
Note the folding platform side of the hinge has a notch on the upper hole and the wooden shim spacer.

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Note how the main platform side of the hinges lines up with the side of the trailer box and the folding side is in some.

Note which screw holes are used.



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Explorer Box necessary tweaks:

With an Explorer Box built to plans, the bottom flap of the MOAB would overlap the front / side doors and the taillights. The taillights are easily resolved by using surface mount ovals mounted farther down or bell jars on the side of the trailer box. For proper flap clearance and positioning of travel cover snaps the top of the doors needs to be reduced 1 1/4" or the trailer top needs to be stretched 1 1/4".

On an Explorer Box built to plans the tent bottom flap would overhang the door about 3/4". They actually work, although it's a pain to hold the flap up to open and close them. The travel cover snaps, although not a problem, end up on the doors.

I will be creating an addendum that details the dimensions and plywood map lay changes necessary to add 1 1/4" to the height of an Explorer box while leaving the door positions the same.

Distance between box top and top of door opening.

Per the standard Explorer Box plans, the top of the doors are 1 1/4" down from the top.

The tent bottom flap hangs down 1 7/8" with snaps mounted 1" down.

The travel cover hangs down 3 1/4" with snaps mounted 2 1/4" down.

This means the top of the doors should be a minimum of 2 1/2" from the top. At the minimum spacing, the travel cover will overhang the top of the doors some. By relaying out the plywood maps, the necessary 1 1/4" can be added to panels. The other option is reducing the height of the door opens by 1 1/4".

The 3"x8" style taillights shown in the manual will need to be replaced. Surface mounts ovals on the box or standard bell jars on the side of the box/frame will work nicely.