## Building a Motor Mount (Goes between 2 rigidly attached canoes)

Here is how someone made a motor mount for a 3-5 HP outboard. You may adapt these ideas to your needs.

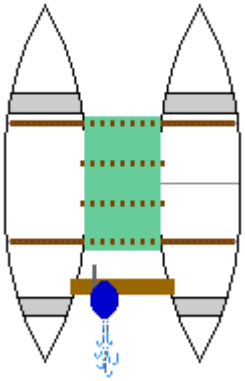
Don't add a motor mount to a canoe unless it's part of a catamaran or trimaran.

Do not build a motor mount unless you are confident in your abilities. At risk is injury and/or loss of the motor. Run a safety rope from the motor to the closest canoe. Use the stop-switch tether.

Hint: Outboard motors are heavy, vibrate a lot, and exert a continual twisting force on the motor mount.

Warning: Make sure swimmers don't go near a running motor or anywhere between canoes ahead of the motor.

This design assumes a normal "short shaft" motor. Avoid using a long shaft motor. The river is shallow. You'd need to somehow mount the motor several inches higher than this design allows.



Materials:

| | | |
|---|---|---|
| 1 | 8 foot 2x6 (pick a good one - free of major knots, splits & warp) | $4.89 |
| 5 | 4" drywall screws or #10 x 4" Philips head screws (fasten mounting plate to main brace) | 2.45 |
| 5 | 3/16" x 9/16" washers (use with above screws) | .98 |
| 2 | 12" metal straps (such as Strong-Tie # LSTA12 in the construction fasteners aisle) | .98 |
| 10 | #8 x 1" screws (fasten metal straps) | .98 |
| 4 | Heavy Duty 2" C-clamps (fasten mount to canoe gunnels) ($ 2.97 each at Home Depot; $1.99 at Harbor Freight Tools) | 11.88 |
| 6 | 3"x 5/16" carriage bolts (towing pins -- optional) | 1.44 |

Total (Home Depot prices): $ 23.60

1. Cut two sections from the 2x6: 48" and 15"

    48" assumes the canoes will be about 28" apart at the center braces, 32" apart at the rear braces and 40" apart at the motor mount, about 20" aft of the rear brace. Adjust for your catamaran design.

2. Drill and screw the 15" mounting plate to the 48" main brace.

    Simple right-angle attachment assumes your motor trim can be adjusted for a vertical mounting plate.

    Mounting plate should extend about 3" above the main brace. (Top will be about 15" above the water line.)

    Assuming the motor has its handle on the port side, and you will operate the motor from the port side canoe, the mounting plate begins about 9" from the port (left) side of main brace.

    Pre-drill all holes so the screws will not break and the wood will not split.

    Sink the screw heads and washers slightly into the wood. Or remember to position the motor so that it misses the raised screw heads.

3. Attach the metal straps

Because of the continual twisting force of the motor, the metal straps are crucial.

Fasten them securely, after drilling correctly sized pilot holes.

4. Fasten a carefully sized triangular piece of wood under one or both of the metal straps. (Protects the mount from forward twisting in case the motor runs aground.)

5. Polyurethane

With a couple coats of poly, the motor mount will hold up year after year.

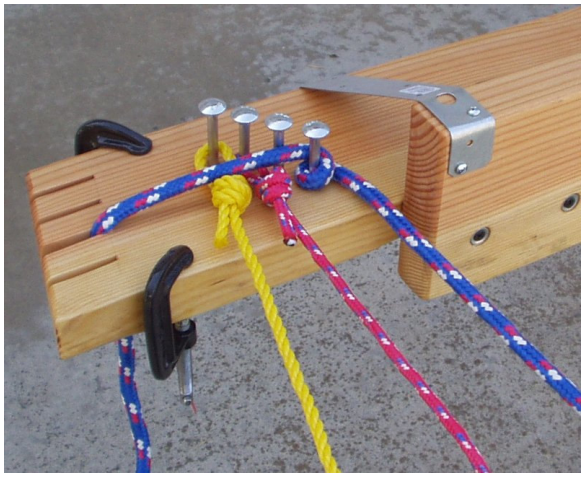
For Certified Geeks Only

Tow-rope Pins

Drill 1/4" pilot holes at carefully spaced intervals and screw the carriage bolts in 1-1/4". Rope should fit between the bolt heads, but just barely. Whether pushing 2,3,4, or 6 canoes, the motor will not be perfectly centered and your rig will tend to steer left or steer right. Tie towables to left or right side to improve motor balance.

Jam Cleats

Tapered slots in each end of the main brace help secure & organize tow lines of various size.



Fastening to Canoes

If you attach the motor mount to canoes with C-clamps, consider heavy duty 2" or 2-1/2" clamps. Do something to prevent vibrational loosening. The wall of the canoe may keep the tightening bars from rotating if you use a piece of tape to keep them from sliding back and forth. Check clamps frequently.

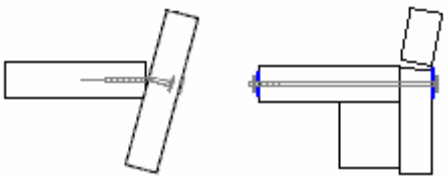
If the C-clamps are larger than 2-1/2" they may not seat well into the underside of the canoe gunnel. Wooden shims about 5/8" wide may help.

More Design Options

Use brackets instead of straps. Stanley corner braces -- 3-inch heavy duty -- sold at Home Depot. 1/4" bolts with large washers.

Make mounting plate from 2 layers of 3/4" plywood glued together. Resists splitting.

This mount hangs over the right edge of a canoe. Good for centering the motor on a 4-canoe barge. Mounting plate should be narrow -- about 10", leaving 7-1/2" clearance for motor.



Some **bad designs**: Without secure straps or brackets, the mounting plate will twist backward or might split.