

## How to Make a Movable Deck Cleat



Proper tie up of a boat is difficult without a center dock cleat at the spreaders to attach spring lines to. Similarly the absence of a side cleat near the rear makes tie-ups at short docks difficult without line chafe. I solved these problems by creating two

sizes of deck cleats that I could install at any position I desired on the side decks.

This cleat design fits toe rails with  $\frac{3}{4}$ " holes on 3" centers. Boats put into production after 1979, IE W36, W32, W29, W25, W33 and W30 models have this toe rail. However the design could be easily adapted to fit the W27 toe rails with the slotted holes.

The cleats are mounted in such a way that no metal touches the aluminum railing to prevent galvanic action. All of the metal parts are stainless steel. Pressure treated wood was used as the body for ease of construction but aluminum could be machined or epoxy poured in a mold if you have those talents and equipment available.

The larger size uses an 8 inch cleat and the smaller one a 6 inch cleat. Nylon Spacers and washers are used to protect the aluminum toe rail.

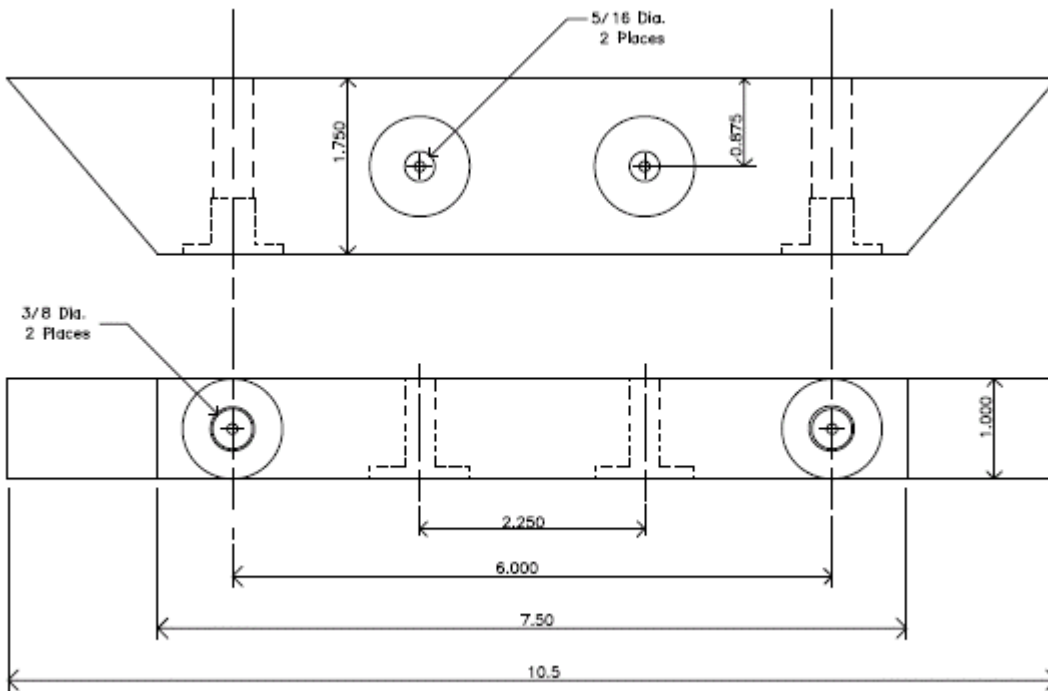
The SS weld nuts on the backside of the wood bracket add tremendous strength. This also allows more thickness of wood than if nuts and washers were recessed into the wood. However if you prefer to use local hardware stores which do not carry SS weld nuts then you may substitute SS Nylock nuts where are readily available however the recess will need to be deeper and thus weaker unless you also widen the base and use longer bolts. The most difficult task is drilling the 3 different diameter, stepped holes. The holes are stepped for the bolt diameter, the weld nut body diameter and the flange diameter on the weld nut.

This project evolved over a couple of years. Initially plated furniture nuts were used until the rusted, and much time was spent searching for the best SS parts to make this work. This is why materials came from various places. Almost everything except the cleat and the wood could be purchased from McMaster-Carr @ [www.mcmaster.com](http://www.mcmaster.com). Similarly if you were willing to change the design slightly and use Nylock nuts and standard bolts instead of button head cap screws, then everything could be purchased at a Lowes Home Improvement store. I really like the finished look of the button head cap screws and the lack of any sharp protruding object on the edge of the tow rail.

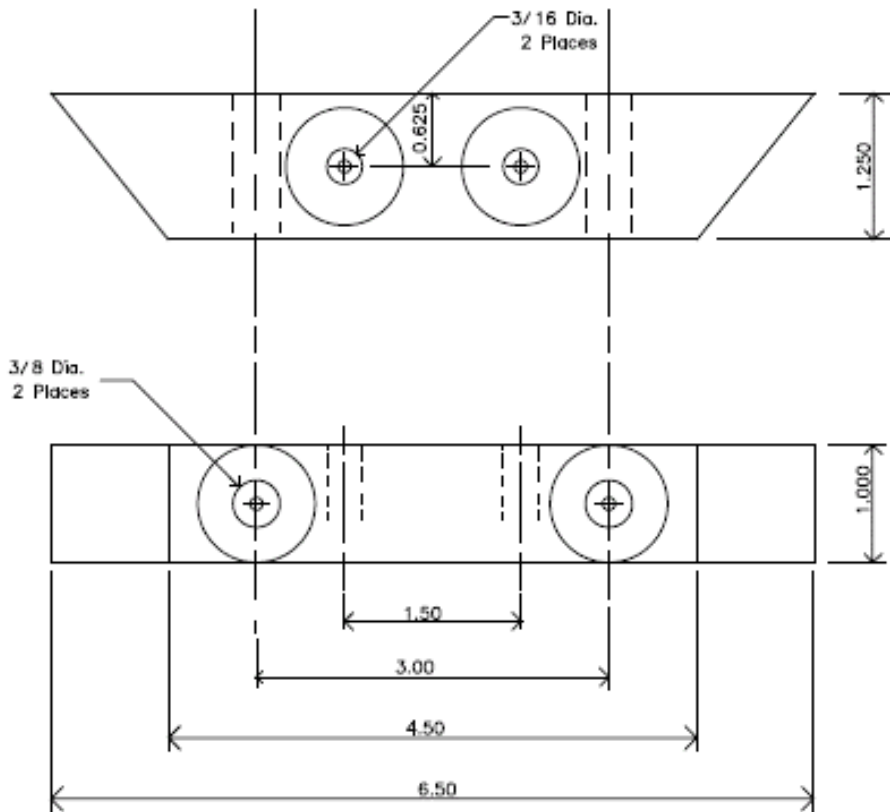


Moveable Cleat Parts List					
Qty.	Description	Part #	Mfg.	Supplier	
<b>LARGE DECK CLEAT ASSEMBLY</b>					
1	Large Deck Cleat 8" open base Black Nylon		Attwood or Others	WalMart,	Most Marine suppliers
2	3/8 - 16 x 2" Button head cap screw - SS	92949A632		McMaster-Carr	10 per box
2	5/16 - 18 x 2- 1/2 Oval head cap screw - SS	150322	Hillman	Lowe's	5 per package
2	Slab-base weld nut 18-8 SS 3/8 - 16 screw size 1" base LG, 7/16 barrel height	90572A600		McMaster-Carr	5 per package
2	Slab-base weld nut 18-8 SS 5/16 - 18 screw size 7/8" base Dia, 1/2 barrel height	90860A115		McMaster-Carr	5 per package
2	Nylon Spacer 3/4 OD, .385 ID, 13/64 thick	880446	Hillman	Lowe's	2 per package
2	3/8 Nylon flat washer ID .406" OD 1.00"	90295A173	Seastrom	McMaster-Carr	50 per bag, Also at Lowe's
2	3/8 ID .875 OD SS Flat washer	90107A031		McMaster-Carr	Pkg of 100 also at Lowe's
<b>SMALL DECK CLEAT ASSEMBLY</b>					
1	Small Deck Cleat 6- 1/2" Black Nylon	12113-3	Attwood	WalMart, Various	Most Marine supplies
2	3/8 - 16 x 1.5" Button head cap screw - SS	92949A628		McMaster-Carr	10 per box
2	#14x2 Oval head phillips sheet metal screw SS	150322	Hillman	Lowe's	5 pc per bag
2	Slab-base weld nut 18-8 SS 3/8 - 16 screw size 1" base LG, 7/16 barrel height	90572A600		McMaster-Carr	5 per package
2	Nylon Spacer 3/4 OD, .385 ID, 13/64 thick	880446	Hillman	Lowe's	2 per package
2	3/8 Nylon flat washer ID .406" OD 1.00"		Seastrom	McMaster-Carr	50 per bag, Also at Lowe's
2	3/8 ID .875 OD SS Flat washer			Lowe's	Various suppliers

Image below is the drawing for the Large Cleat adapter bracket



The Image below is for the small 6-inch cleat adapter bracket.



This was a fun project and added a lot to the ease of running spring lines and docking in unusual setting.

John Myers  
S/V Y KNOT, 1983, W25 #68