

Scratch Building Your Own Stuffing Boxes

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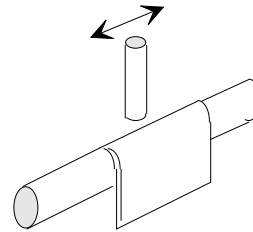
This technical presentation walks you through a very easy method of building your own Stuffing box tubes custom built for your model.

The first thing you need to know is the size of your prop shaft. There are several typical sizes 1/8" and 3/16". Based on your shaft diameter you'll need to purchase a brass tube that fits snugly around the prop shaft and another that fits around the first tube and finally another that fits around this one. (In summary you'll have three brass tubes that fit within each other, with the smallest one fitting around the prop shaft.

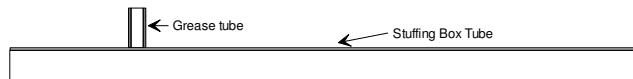
Here are the steps:

- 1) Cut to length your stuffing box tube. Measure back about 1" from one end of the biggest diameter tube (This will be the outside **stuffing box tube**). This will be for the grease tube

- 2) Using a brass tubing about 1/2 the diameter of the stuffing box tube, notch one end to the diameter of the outside tube by wrapping the outside tubing with 200 grit sandpaper and by sanding one end of the grease tube against the outside tube. By doing this you'll be able to notch the grease tube so this sanded end will match the diameter of the stuffing tube. This will make for a very clean matching edges so when soldering you'll have no big cracks to fill.



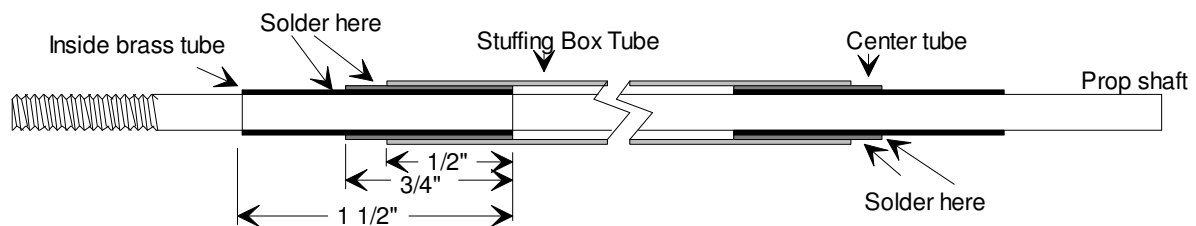
- 3) Once the grease tube is notched, position the grease tube on the mark made on the outside diameter tubing and solder the grease tube to the outside stuffing box tube. (I recommend silver soldering for strength)



- 4) Once the grease tube is soldered and cooled off, drill a hole in the stuffing tube using the grease tube as a guide. Once hole is drilled clean inside of tube so no metal burs remain



- 5) Next step is to solder the two inner brass tubes. To accomplish this slide the inner tube inside the center tube with one end flush and the other end leaving 1/2" of the inside tube sticking out. Place this assembly inside the stuffing box tubing leaving at least 1/4" of the center tube sticking out. Do the same for the other end of the stuffing box tubing and slide the prop shaft all the way through. (This will guarantee the correct alignment of the brass bearings (Two brass sections you are about to solder) Heat the tubing's and solder the two inner tubes inside the stuffing box at both ends. Do not over solder, as you do not want any solder getting inside to the prop shaft.



- 6) Once the tubes are cool you will cut the two inner tubes to be flush with the stuffing box tubing as pictured.



- 7) To break in your bearing lube up your prop shaft with regular automotive white grease, inserting one end in a drill run the prop shaft back and forth. After several minutes clean the prop shaft and the stuffing box and apply clean grease and repeat. Do this several times till you no longer get a gray color to the grease. Then thoroughly clean you shaft and stuffing box, install the shaft in your hull being sure to fill the tube with grease before running you boat.

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