

## **#1 BEST** Vertical Join Seam Down Center

This method is used by the F-22, and join seam is always under compression from external hydrostatic pressure and impact loads. Can be difficult to make with production hulls, but a new technique (as first developed for the F-33) has overcome this problem. Now easily the best system as the join is actually being forced together by all major external loads, with a neglible to zero risk of failure. Float shape can also be more flexible, with better access during construction, and a reverse taper is possible which allows more design freedom and more buoyant floats, particularly in the bows



# **#2 GOOD**

### Horizontal Join Seam Along Float Sides

This method was used for the F-24 F-27 and F-31 production boats, with the horizontal join seam being under shear from external hydrostatic pressure and impact loads. It is easy to make, and a good and acceptable system with join glue being put only under shear, for which glue is very suited. Join seam may be unsightly, but it can be covered by a rub rail which also provides a good practical purpose. Hulls need to have a positive taper however, and it can be difficult to access inside the bow area and along keel when laminating.



#3 GOOD



#4 POOR

### Vertical Join Seam Along Float Sides

The join seams with this system are also always under compression from external hydrostatic pressure and impact loads. Another good system mechanically, as the join is again being forced together by all major external loads.

Easy to make in a production system, and join flanges taper the correct way at the join area. However, the exposed vertical join flanges are not very attractive cosmetically, and this system can also increase risk of the float bows digging in as the scoop effect formed at deck level will not shed water as easily as rounded edges.

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### Vertical Overlapping Join Seam On Float Sides

The join seams are being pried apart by external hydrostatic pressure and impact loads. This is not a good system for trimaran floats, as the join is under peel, a situation in which glue is at its worst. Difficult to make as molds have to be very precise for a good fit, plus the join flanges taper the wrong way, and joining deck to hull tends to scrape the glue off. The join can be improved by fiberglass taping inside, but such tape will also be under a peel load, while access to apply is very poor or impossible in some areas. Mechanical fasteners are advisable with this method to back up glue and achieve a reliable join.

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