

Keel scratches in Epoxy - Recommended Procedure

1. First try sand off all antifouling on the cast iron ballast in order to properly inspect it
2. Buy a small amount of Epoxy and Solvent and make a test area on an undamaged area of the keel
3. Test the Solvent for compatibility by placing a heavily saturated shop towel with the Solvent on the area. Remember, solvent fumes are dangerous and very combustible.
4. In another area of the sanded area test the Epoxy for compatibility:
5. Mix a small batch of Epoxy and spread it on the sanded area. Spread it about $\frac{1}{4}$ " thick in at least an area of 3"x 3"
6. After the Solvent has evaporated in the Solvent test area and the Epoxy hardened in the Epoxy test area, look for bubbling or lifting around the edges.
7. If bubbling or lifting around the edges exists the Epoxy and Solvent brand are incorrect. Start over with another brand.
8. Next day, scrape firmly on the Solvent test area and the new Epoxy test area.
9. If there is any evidence of loss of adhesion or bubbling, you have two choices: Try the same process with another brand of replacement materials or remove ALL the coatings on the cast iron ballast, then replace all of it.



If the original and new Epoxy coatings are good, follow this procedure:

1. The damaged areas of the keel should be sanded, grinded, OR soda or sand blasted until ONLY BRIGHT SHINY iron is exposed.
2. No residual coatings or corrosion is to be tolerated. The iron should look like silver.
3. From the time the iron keel is prepared to its bright shiny state, you have at best a matter of a very few minutes to get the primer/sealer coat on the bright metal. THIS IS THE MOST IMPORTANT ELEMENT OF THIS REPAIR. If you wait more than a couple of minutes, rust begins at a microscopic level where you can't see it, but it is there. This will cause the spread of this rust/oxidation once the iron is coated and anti-fouled and will greatly reduce the life of the repair. It is recommended that you sand, prepare and Epoxy an area of about 1' X 3' before moving on to the next section of keel.
4. I know someone who sand blasted his keel in the afternoon and applied Epoxy the next morning. It ALL came unattached in three weeks time.