

Plastic Weld and Putty products

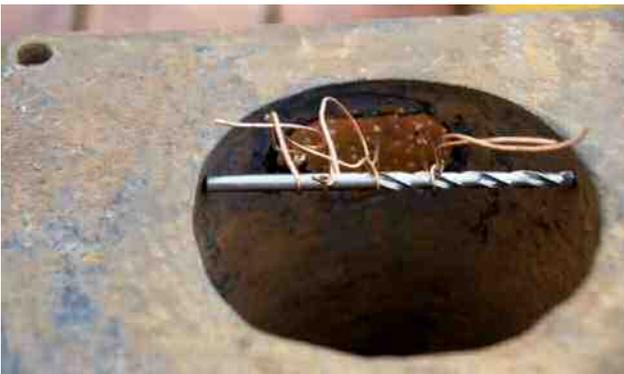
On a few occasions now I have had cast iron items which have holes corroded in them which are not amenable to welding because the hole is too large or the metal around it too thin to weld.

In these situations I now use 2 products in combination which I have found incredibly useful; they are JB Weld and Devcon Steel putty.

I know that other members are familiar with these products but I thought I would describe my method for any one that hasn't used them. I have some photos of a recent repair I performed on a Ronaldson Tippet hopper top which was definitely beyond welding. This was a bit easier than repairing a hole in a water jacket where you can not access the inside. (I will return to this problem later.) Unfortunately I had started the repair before I thought about an article and didn't photograph the original hole but it is possible to see the size of the hole in the inside view of the hopper top.

I used a piece of thin copper sheet as a backing which I dimpled with a punch, to provide a better key for the Devcon and also drilled a series of paired holes through which I threaded copper wire. I then applied the JB Weld around the edges of the copper sheet applied it to the cleaned up cast iron hopper top and tensioned it against the hole by twisting the wires around a bridge in this case a drill bit. I could not just compress the copper against the hopper top with wire or cable ties because of a protrusion on one side. When the JB Weld has set (24 hours) I then mixed the Devcon and applied it to the copper sheet.

To return to the problem of a hole in a water jacket, I use much the same method. Usually such holes are irregular in shape so I then measure the largest diameter and cut my copper patch to that size prepare it with the dimples, wire and JB Weld as above winkle it through the hole and tension it against the inside having prepared a bridge using 2 spacers and a drill bit or anything that's convenient. When set, I pack the repair with the Devcon. If in doubt about the overlap of the glue surface I would do this with the wires tensioned still in place.



Some information about the 2 products:

JB Weld Comes in 2 tubes which are mixed 1:1 producing grey glue.

Devcon comes in 2 parts, the black putty and a white gooey hardener. Mixing can be done by weight which in small amounts would not be practical, or volume, which is. The ratio is 2.5:1.

I find it easiest to roll the estimated amount of putty into a ball and then assess the required amount of hardener. The mixed Devcon can be given a smooth surface by working it with wet fingers. When set it is hard enough to be filed, drilled and tapped.

It is available in a rapid setting form but I feel that may be a disadvantage.

Unfortunately Devcon is expensive, the best price I could find in Australia was \$122 plus postage for a 500gram pack. I recently bought the same size pack on ebay from the US for about \$67 Australian including postage.

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