



1) Drill out the failed hole(s) to 7/16", then tap for 1/2" X 13 (course) threads. It's critically important to keep the tap straight as you work. A small carpenter square is helpful. It's usually possible to "adjust" the tap as you go, in the event that you discover that it's leaning a bit one way or the other.

2) Thread the bushing onto the end of a new stud, and dry run it into the hole a few times. You can double-nut the stud to make it easier to turn it in, but be very careful to not get the bushing stuck in the hole at this point. If it gets tight at all, go back in with the 7/16" drill and "worry" the hole a bit larger by wobbling the drill a small amount. Continue to check the bushing for fit, and when you can install it almost all the way in using your fingers, you're ready for the next step.

NOTE: It's good if repair bushings end up allowing a slight bit of movement, so that if the stud ends up being less than perfectly straight, the head or manifold can bring it into alignment (see step 7).

3) Spread JB Weld around the outside of the bushing, and around the inside of the 1/2" threaded hole in the block.

4) Turn the bushing in using a wrench on the double-nuts until only the small round shoulder is exposed outside the hole.

5) The bushings have 4 small slides around the outside, which get tapped in between the bushing and the block after the bushing is finally set in place to keep it from turning. Don't worry if one (or even two) of these slides break off. Any two slides should hold the bushing in place while you remove the stud.

6) Grind, or file, the top of the bushing flush with the surface of the block. If you can get your hands on a small handheld grinder, it makes this part of the job much easier.

7) After grinding the top of each repair bushing level with the surface of the block, and before the JB Weld has had a chance to set up, it's best to install four or five studs (including those in repair bushings), so that you can dry fit the head or manifold over the studs. It's good if repair bushings allow a small amount of movement, so that if the stud is less than perfectly straight, the head or manifold can bring it into alignment.

8) Hand-tighten nuts on the studs used to dry fit the head until the JB Weld has had a chance to fully cure (usually overnight).