

DIY - Snapped exhaust manifold stud removal

Here is a little write up on how to remove the ever-so-common broken exhaust manifold stud, but can be used to get out other broken bolts.

*****DISCLAIMER*****

The work and procedures shown and described in these world-wide web files are intended for use by people having average skill and knowledge of the subjects.

Caution: If you are inexperienced with using any of the tools or equipment depicted or any of the procedures described, or are in doubt that the work and procedures shown and described may not be safe in your chosen situation, consult a person skilled in the performance of the work or procedure. Throughout this information there are specific safety recommendations given, please pay careful attention to each of these. The creator of the information in these files disclaim any liability for injury or damage arising out of any failure or omission to perform the work or procedure shown and described. The creator of the information in these files disclaim any liability for injury or damage arising out of any unsuccessful or successful attempt to perform any of the modifications or "DIY" projects and tasks outlined within this thread.

Tools needed:

Safety glasses

Liquid penetrating oil

Center punch

Drill with 1/8" bit

No.1 screw extractor - \$2.99 at Sears

Hammer

Vice grips

Here is a pic of the broken stud.



1. Remove the exhaust manifold and soak the broken stud with liquid penetrant.

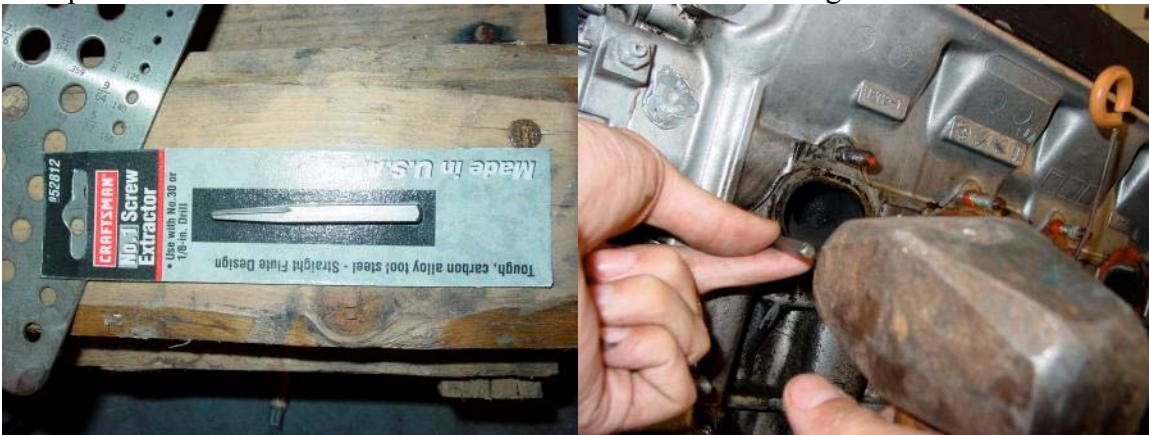
2. Use a center punch and tap a pilot hole in the broken stud.



3. Drill a 1/8" hole in the stud. Take your time and do not push too hard. Be sure to use a liquid penetrant as lubricant so the drill bit will not overheat.



4. Tap in the screw extractor with a hammer. Make sure it is snug.



5. Unscrew the broken stud with a pair of vice grips attached to the extractor. Use lubricant if needed. Here's a pic of the broken stud removed.



I hope this helps.