



Optional Extractor-less Repairs

PPB2125 with ProDrill™ SSSC125 PPB2188 with ProDrill™ SSSC188 PPB2270 with ProDrill™ SSSC270 PPB2320 with ProTap™ PPT008



GM Gas Application

Congratulations on your purchase of a ProMAXX® engineered performance device! Our tools are manufactured to the highest standards of precision and quality right here in the United States of America. We are extremely proud of our products and as such we provide a limited lifetime warranty and technical support to assist you in obtaining the most benefit from them. The ProMAXX® ProPlate™ included in this kit was designed to assist in the removal of broken exhaust manifold mounting bolts in the GM V8 4.8L, 5.3L, 6.0L, 6.2L LS Generation III engine commonly found in the Silverado®, Sierra® pickups, Yukon®, Escalade®, Suburban®, Tahoe® SUVs, and cab and chassis configurations. Used properly, the device can significantly reduce repair times and risk associated with removal and subsequent replacement of exhaust manifold mounting studs.

Clean the cylinder head free from debris or carbon prior to mounting the ProPlate™. Once cleaned, attach the ProMAXX® ProPlate™ to the cylinder head in any one of the positions shown above using the included ProFast™ PPF211 precision stainless steel fasteners. Insert the proper ProBushing™ and corresponding ProDrill™ (see above) precision-machine tooling bit into an air-powered drill and use the drill depth gauge machined into the ProPlate™ to set the proper depth of the bit. Apply one drop of ProMAXX® ProLube PPL001 tap and drilling lubrication on the machine tooling bit prior to drilling. The use of penetrating spray or other lubricants is not recommended. Insert the mounted SSSC125 ProDrill™ first by slowly and manually turning the drill chuck by hand until the ProDrill™ slips into the bushing and contacts the surface of the damaged stud. While applying light pressure, activate your drill both on and off in one second intervals for approximately five to ten one seconds. This initial process is critical in that it creates a "seat" for the bit to rest and ensures that the bit will stay on the stud center and not follow the angular surface of the damaged stud. This reduces the probability of tooling bit breakage and drilling off center of the damaged stud. Retract the bit and clean the debris from the bit with a shop towel. This removes steel fragments that have been case hardened and extends the life and cutting action of the tooling bit. Re-apply one drop of ProMAXX® ProLube PPL001 tap and drilling on the machine tooling and reinsert the bit into the ProPlate™ manually as described above. While continuously running your drill, building pressure for ten second intervals and while the bit is turning, slowly extract the bit maintaining it in the bushing to allow the bit to "clean" cutting debris from this operation. Repeat this step for approximately every ten seconds progressively exerting more pressure until the drill chuck rests on the bushing mounted in the ProPlate™. Once the machining operation is complete, remove the ProPlate™ and replace the ProDrill™ with the optional arbor pin from the ProCutter™ into the hole machined in the damaged stud remnant created from the ProDrill™. Apply moderate pressure toggling your drill on and off for five to six one second intervals. This operation will remove the burr and corrosion that often restrict removal of the damaged stud thereby increasing your immediate success of extracting the damaged remnant. ProMAXX® recommends applying heat via a cutting torch tip installed in an acetylene and oxygen cutting torch in a circular pattern approximately 1/2" radius about the diameter of the tapped hole housing the broken stud. Continue to apply heat for a minimum of at least three to four minutes. Following these instructions softens the lockite® used when the engine is assembled, but will not expand the damaged stud if done properly as instructed. Using a high quality commercial grade ProTractor™ included with your kit, mark a line on the extractor approximately 1/4" from the end. ProMAXX does not recommend tapered and/or left handed operation extractors as they deform the stud increasing complexity of the repair. Tap the ProTractor™ in to the depth of the line. Place the included slip-nut over the PPT125 or PPT188 ProTractor™ (recommended for GM) and slide it up against the cylinder head. USE A GOOD QUALITY AND CALIBRATED TORQUE WRENCH AND DO NOT EXCEED 85 IN-LBS FOR THE PPT125 OR 180 IN-LBS FOR PPT188 OF TORQUE OR FAILURE MAY RESULT.. Slowly apply torque- first in the clockwise direction and then in the counter-clockwise direction. Repeat this motion several times slowly increasing applied torque being careful not to exceed safe torque limitations stated above. If the damaged stud fails to release, **STOP** and remove the extractor. For more challenging repairs, ProMAXX® offers and recommends using the optional ProDrill™ SSSC188 and PPB2188 ProBushing™ machine tooling bit followed by the ProMAXX® PPT188 ProTractor™ to complete the extraction process. In extreme cases, or for extractor-less repair, utilize the optional ProMAXX® SSSC270 and ProBushing™ PPB2270 machine tooling to machine the damaged remnant completely out. Insert the optional ProBushing™ PPB2320 and utilize the optional ProTap™ PPT008 to clean the threads of all debris. In the unlikely event an extractor fails, contact technical support at www.ProMAXXtool.com, or dial 412-347-4041 for recommendations and procedures.

Recommended minimum cutting speed: 350 RPM. Optimum cutting speed 500-700 RPM. Maximum cutting speed 900 RPM. Use a pneumatic ratchet only where access is restricted and where necessary. Some air ratchets may not generate sufficient RPM under load to be effective. Tools required: Pneumatic or electric drill, hammer, 3/8" box wrench, 1/4" box wrench, torque wrench, marker, blow gun, safety glasses. Use the optional ProPin™ where only one tapped hole is available. Mount ProPlate™ with one ProFast™ fastener in center.

SAFETY PROCEDURE: ALWAYS USE APPROPRIATE SAFETY EQUIPMENT INCLUDING OSHA APPROVED SAFETY GLASSES/GOGGLE AND PROTECTIVE GLOVES WHILE USING THIS DEVICE AND PERFORMING THIS OPERATION.

User Guide



www.ProMAXXtool.com



**ProMAXX engineered performance tools are
proudly made in the United States of America by
American craftsman using American materials.**

LIMITED LIFETIME WARRANTY

The ProMAXX® ProPlate™ included in this repair kit is a quality precision tool designed and manufactured in the USA and is backed by a LIMITED LIFETIME warranty. ProMAXX® warrants this product to the original purchaser for its useful life against deficiencies in material and workmanship. This LIMITED LIFETIME WARRANTY does not cover normal wear and tear, and if it is used incorrectly, abused, altered or repaired. Deficient products will be replaced or repaired. For more information about ProMAXX® and our line of precision machine tools and tooling, visit www.ProMAXXtool.com.