

STOMSKI RACING

SR067

BOXSTER 996/997 EXHAUST BOLT REPAIR KIT

With more and more broken exhaust bolts reported on the water-cooled engines, the headache of repairing a broken bolt is becoming epidemic. Tasks ranging from a simple exhaust system update through an engine removal, are consistently plagued by snapped, rusted, and broken exhaust manifold bolts. Rarely can an accurate removal of the broken bolt be performed with the engine in the car, and even after removal, the task is time consuming and if not done carefully can lead to a damaged head or faulty repair. STOMSKI RACING's answer to these problems is the SR067, a kit that easily, accurately, and flexibly allows you to drill out the broken bolts, saving time and headaches. A CNC milled plate indexes precisely off the broken bolts and/or bolt holes. Using our uniquely designed Thumb Screws, the SR067 plate is locked in place (by threading a Thumb Screw over a broken bolt or by using a supplied bolt threaded through the SR067 Thumb Screw). With the included pilot drills and drill guides, the faulty bolt can be drilled out, producing a perfectly perpendicular and centered hole that if necessary can be chased with an included M8x1.25 tap. Kit includes anodized aluminum fixture, drill bits, tap with extension, drill jigs/guides, Thumb Screws, and hardware in a sturdy storage case.

Kit Includes:

SR067 Fixture	8x1.25 tap
SR067 Thumb Screws (2)	Tap Extension
17/64" RH drill bit	17/64" drill jig/guide
3/16" RH drill bit	3/16" drill jig/guide
8mm tap jig/guide	M8x1.25 Socket Head Cap Screws (2)
Allen Key	Jig retaining screws (2)
Padded storage box	

The SR067 has been designed and manufactured so you may accurately remove and replace broken exhaust bolts in your Boxster/996/997 heads with the engine in place while in the car. You can also use the tool, as shown in the pictures accompanying these instructions, on a head while it is off of the engine, or on a head that is part of a complete engine out of the car.

The following instructions assume that you have general mechanical ability and understanding, and that you follow ALL safety measures, including, but not limited to securing the car on a lift and or jack stands, and that at all times you wear SAFETY GLASSES.

Instructions

After the exhaust has been removed and the broken bolt(s) isolated (Fig. 1), use a cut off tool or saw to square up the broken bolt and to get it as flush to the head surface as possible. (Fig 2)



Figure 1

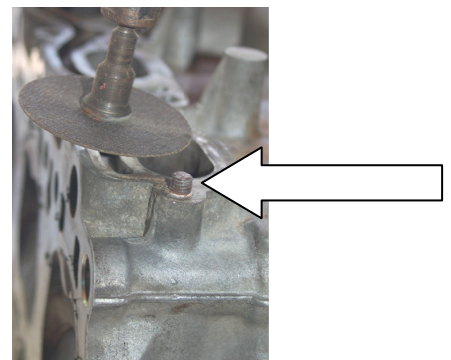


Figure 2

It is not necessary to have the bolt completely flush, but it is desirable to have it flat and somewhat square to the head. (Fig. 3) The shorter the bolt is, however, the less time it will take to drill it out.

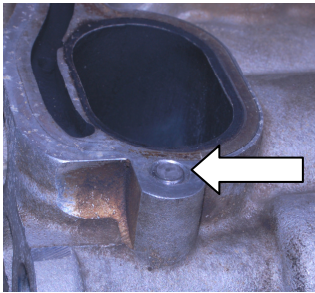


Figure 3



Figure 4

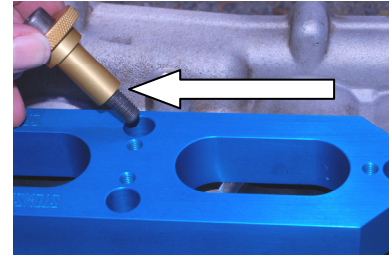


Figure 5

Clean the manifold mating surface of the head thoroughly, making sure it is smooth and flat. (Fig. 4)

Place the SR065 Jig Fixture in place over the clean head and align so the .5"/13mm holes are approximately over their corresponding bolts/holes. If you have left any portion of the broken bolt proud of the head surface, you may consider using the 8mm tap guide bushing (the black oxide one) to center the SR067 Fixture over that specific hole until the SR067 Jig Fixture is completely anchored. Using the SR067 Thumb Screws, either thread a supplied M8x1.25 socket head cap screw through the Thumb Screw and insert into a hole in the SR067 Jig Fixture and tighten until it is just short of snug. (Fig. 5) Thread another Thumb screw with or without a through-bolt (without a through-bolt, the thumb screw can be threaded over another existing broken bolt), to ensure the Fixture will remain indexed over the subject broken bolt. (Fig. 6) Tighten both Thumb Screws. While the SR065 Jig Fixture is symmetrical and very exact, occasional variances in heads, castings, or warpage may cause slight alignment issues, so it is suggested that you anchor the SR067 Jig Fixture using holes that are as close as possible to the bolt that is being removed. If necessary, remove the 8mm tap guide and insert the 3/16" drill jig and anchor with the supplied button head cap screw. (Fig. 6)

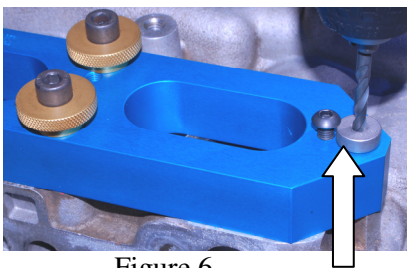


Figure 6

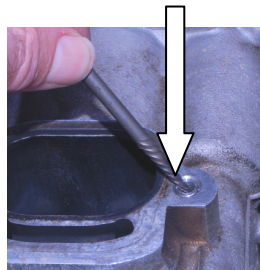


Figure 7

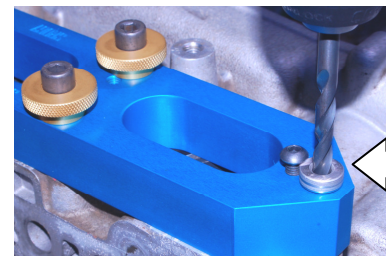


Figure 8

Use the supplied LH 3/16" drill bit to carefully drill a pilot/guide hole into the broken bolt, using some sort of lubricant to keep the bit cool and to help flush the shavings. (Fig. 6) **DO NOT DRILL TOO DEEPLY.** At this point, even if you drill only half way into the bolt, you are better off than over drilling and going through into the head. If you want, you can use a LH 3/16" drill bit instead of the supplied RH 3/16" bit. Occasionally you may be successful at this point to simply remove the fixture or the jig/guide and use an Easy-Out or bolt extractor (not supplied), to remove the broken bolt. (Fig. 7)

If the bolt is too stubborn, insert the 17/64" guide/jig into the SR067 Jig Fixture and use the supplied RH 17/64" drill to clean out the remaining bolt. (Fig. 8)

CAUTION- AT THIS POINT THE 17/64" DRILL BIT WILL CUT THROUGH THE BOLT MUCH MORE QUICKLY THAN THE 3/16" BIT DID. MARK THE DRILL BIT FOR DEPTH AND KEEP CHECKING TO MAKE SURE YOU DON'T DRILL INTO THE HEAD ITSELF.

After you have used the 17/64" drill, a mere shell of the bolt will be left in the head- only the threads of the bolt should remain. If everything has been centered properly, you can now use a dental pick and slowly unwind/extract the thread from the head. (Fig. 9)

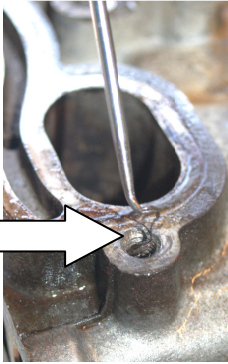


Figure 9



Figure 10

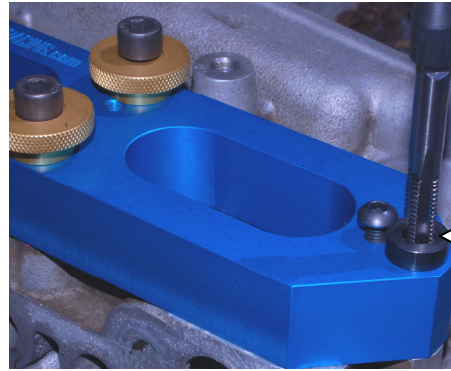


Figure 11

If you have successfully removed the threads as just described, congratulations, the hole and threads will be clean and you can pat yourself on the back. If, however, remnants remain, "manually" chase the threads with the supplied 8x1.25 tap (Fig. 10) or change the guide bushing to the 8mm jig/bushing, secure it in place, and use the supplied tap and extension to clean out the hole. (Fig. 11)