



## 03-15 MERCEDES-BENZ 1.8L I4 TYPE 271 M10X1.5 HEAD BOLT THREAD REPAIR.

11 M10x1.5 inserts are supplied in this kit (Requires 10 for this application)

**IMPORTANT!** Please read the “*UNIVERSAL INSTALLATION GUIDE*” provided in the kit in their entirety before proceeding. Details specific to repairing this engine regarding drilling & tapping depths along with insert installation depths are provided below.

1. Mount the drill/tap jig following the instructions on pages 3&4 by using one of the head bolts and the tall head bolt spacer with the recessed end of the spacer facing up (see *FIGURE 1A*).  
(The spacer and jig together simulate the thickness of the cylinder head).
2. Align the drill & tap jig over the hole being repaired using the tap bushing (bushing with larger hole), and the larger diameter of the two supplied alignment pins (the smaller diameter pin will not be used for this application). After you aligned the jig over the hole, replace the tap bushing with the drill bushing. Drill the hole the full length of the original holes, removing all factory threads ( approx. 3.800” or 98mm). Failure to do so may cause the head bolt to stub on the old threads as the head bolt protrudes from the bottom of the insert.

**Caution!** The two end holes at the timing chain end of the engine block may be drilled through into the timing chain area of the block from factory. If this is the case, there will be nothing for the drill bit to stop against when it reaches the required depth, causing the drill bit to drill too deep. In this case, make sure to only drill 3.750” from the tip of the drill bit (marking the drill with a piece of tape or a permanent marker will help) Make sure to clean out any metal chips in the timing chain area if a through hole is present.

3. Install the inserts 2.200”(56mm) deep below the deck surface (see page 4, figure 4 of the Installation guide). To accomplish this, thread the holes 3.450” (88mm) deep from the deck surface (plus or minus 3mm is close enough). The hole above the threads is very close in diameter to the taps provided in the kit and the alignment jig may not be needed to keep the tap straight if the tap fits in the hole since the hole will keep the tap straight.

*Note: This kit is universal for many other engines as well since the outside thread size of the insert does not change. Inserts are also available with internal threads of M10X1.25, M11x1.25, M11x1.5, M11X2.0, M12x1.25, M12x1.5, M12X1.75 and 7/16-14.*