



## 03-12 YAMAHA 3.3L 4 STROKE F200, F225, F250 M10X1.5 HEAD BOLT HOLE THREAD REPAIR

*(17 M10x1.5x1.750" Modified inserts are supplied in this kit)*

**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.

**\*\*\* *DO NOT RE-USE OLD HEAD BOLTS* \*\*\***

*The threads of the old head bolts are often stretched out of pitch from torquing, causing them to tighten prematurely in the new inserts.*

1. When mounting the drill/tap jig, follow the instructions on pages 3&4 using the short spacer provided (1½in. diameter x 1.250in. Long), along with a head bolt. If it is necessary to mount the jig to a hole that has just been repaired, make sure to use a new head bolt, otherwise an old head bolt may tighten up prematurely in the new insert since the threads of the bolt may be stretched out of pitch.
2. Drill the holes the entire length of the original hole depths (aprox. 3.25” or 83mm), making sure to remove all factory threads. With regards to the alignment sleeves, you should be able to re-install them in a repaired hole. The alignment sleeves are slightly larger than the drill bit, but smaller than the tap. The tap will cut into the surface of the alignment sleeve holes, but the minor diameter of the hole should still be the same diameter as the outside diameter of the alignment sleeve.
3. The inserts are to be installed ¾ in. (19mm) deep from the deck surface to the top of the insert (see page 4, figure 4 of the Installation Guide). To accomplish this, you will need 2½ in. (64mm), of full threads from the deck surface. Always dry run an insert without thread lock to make sure they will thread in to the required depth. Remove the insert, add thread lock then re-install.

*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, M10x1.5, M11x1.25, M11x1.5, M11x2.0, M12x1.5, M12x1.75 and 7/16-14.*