



90-02 HONDA/ACURA/ISUZU 2.2L F22 & 2.3L F23 SOHC HEAD BOLT THREAD REPAIR WITH M12X1.5 THREADS.

MUST BE USED WITH 2.3L F23 HEAD BOLTS!

FITS ENGINE CODES: F22A-B (1990-1997) & F23A (1998-2002) HONDA/ACURA/ISUZU

PLEASE READ BEFORE PURCHASEING HEAD BOLTS! For maximum strength, the inserts for these applications are 1 $\frac{3}{4}$ " (44.5mm) long and have an installation depth requirement that is shallower than the factory thread depth. **FOR THESE REASONS, HEAD BOLTS FOR THE 2.3L F23 MUST BE USED WITH THIS REPAIR SINCE THEY HAVE TWICE THE LENGTH OF USABLE THREADS AS THE HEAD BOLTS FOR THE 2.2L. OTHERWISE YOU WILL RUN OUT OF THREADS.** The 2.3 head bolt set use the same length head bolts as the 2.2L F22, but the head bolts for the 2.3L F23 has a thread length of about 3" (76mm) whereas the head bolts for the 2.2L only have a thread length that is less than 1 $\frac{1}{2}$ " (35mm).

11 M12x1.5 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.

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

Threads on the old head bolts are often stretched out of pitch, causing them to bind in the new inserts.

1. When mounting the drill/tap jig, follow the instructions on pages 3&4 using the TALL spacer provided (1 $\frac{1}{2}$ in. diameter x 2.62in. Long). The recessed end of the tall spacer should be facing upward when mounting the jig to one of the 9 holes that use the shorter head bolts, and the recessed end of the tall spacer facing downward when using the longer single head bolt in the odd single center hole on the intake side. If it is necessary to mount the jig to a hole that has just been repaired, make sure to use a new head bolt. Old head bolts may be stretched out of pitch causing them to tighten prematurely in the new insert.
2. Drill the holes the total depth of the original holes, making sure to remove all factory threads or a minimum of 4 $\frac{1}{4}$ " (108mm), for all 10 holes.
3. The inserts are to be installed 1 $\frac{1}{2}$ " inch (38mm) deep below the deck surface for all 10 holes. (see page 4, figure 4 of the Installation Guide). To accomplish this, the holes will need to be threaded 3 $\frac{1}{4}$ " (83mm) deep.
4. Since the inserts are installed shallower than the factory threads, back off 8ft. lbs. on the first pass.

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, M12x1.75 and 7/16-14