



## CHRYSLER, MITSUBISHI, HYUNDAI, KIA 1.8/2.0/2.4L DOHC GEMA WORLD ENGINE M11x1.5 HEAD BOLT THREAD REPAIR

CALIBER 2010-2012  
CALIBER 2007 (exc SRT4), 2.0L, gasoline  
SEBRING 2007 (Sdn), 2.4L  
AVENGER 2008-2009 2.4L, (eng ID ED3)  
CALIBER 2007 (exc SRT4), 1.8L  
200 2011-2014 2.4L, eng ID ED3 (Fed)  
PATRIOT 2007-2014 2.0L and 2.4L  
CALIBER 2007 (exc SRT4), 2.4L  
CALIBER 2008-2009 2.4L, VIN B, VIN K (8th digit)  
CALIBER 2008-2009 2.0L, gasoline  
CALIBER 2008-2009 1.8L  
AVENGER 2010 2.4L, eng ID ED3  
AVENGER 2011-2014 2.4L, eng ID ED3 (Fed)

JOURNEY 2009-2013 2.4L  
COMPASS 2007-2014 2.0L and 2.4L  
SEBRING 2008-2010 (Conv, Sdn), 2.4L, (eng ID ED3)  
MITSUBISHI 4B11/4B11T  
HYUNDAI GENESIS COUPE 2010-2013  
HYUNDAI SANTA FE 2010-2013, 2015  
HYUNDAI SONATA 2006-2016  
HYUNDAI TUCSON 2010-2013  
KIA FORTE 2010-2013  
KIA FORTE Koup 2010-2013  
KIA FORTE5 2012-2013  
KIA MAGENTIS 2010  
KIA OPTIMA 2006-2015

KIA RONDO 2007-2012  
KIA SORENTO 2011-2015  
KIA SPORTAGE 2011-2015

*11 M11X1.5 Modified inserts are supplied in this kit. (This application requires 10)*

**IF USING STUDS SUCH AS ARP, PLEASE CONTACT US PRIOR TO INSTALLING INSERTS.**

***PLEASE READ THE INSTRUCTIONS FOR THE CADILLAC NORTHSTAR PROVIDED IN THE KIT IN THEIR ENTIRETY BEFORE PROCEEDING.***

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

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

The instructions supplied in the kit for the Cadillac Northstar should be followed for repairing the listed engines with the following exceptions:

1. When mounting the drill/tap jig, follow the instructions on pages 3&4 using the tall spacer provided (1½in. diameter x 2-5/8in. Long), with the recessed end facing upward along with a head bolt made for the engine being repaired. 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 old bolt may be stretched out of pitch.
2. Drill the holes 3.75 (95mm) minimum to 3.88 (99mm) maximum from the deck surface. To accomplish this, mark the drill, measuring from where the drill cuts the full diameter (not from the tip of the drill). This will be approximately at the transition point of the ½” shank of the drill. This drill depth is especially critical in the 2 corner holes on the intake side of the engine due to oil passages close to the bottom of these holes.
3. Install inserts 1 in. (26mm) deep from the deck surface (see page 4, figure 4). To accomplish this, you will need to thread the holes about 2¾in.(70mm) deep from the deck surface.
4. Since the threads will start about ¾ inch shallower than the original threads, back off 3 ft. lbs from the factory torque specification 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 M10x1.5, M10x1.25, M11x1.25, M11x2.0, M12X1.5 and 7/16-14.***