



## INSTALLATION METHOD FOR PORSCHE CRANKCASE THRU-BOLT KITS

**Part Number: 204-5406 Application: 3.6L & 3.8L air cooled engines**

**Note:** The O-rings required to seal the crankcase thru-bolt holes (indicated in steps 7 and 8) are available from Porsche and many aftermarket suppliers and are typically supplied in most engine gasket kits. Also note that this is a Universal kit that fits all 3.6L & 3.8L engines produced from 1989-98. Early model engines typically use two M11X M10 studs on the No.1 main bearing journal and later model engines typically use two M10 bolts on the No.1 main bearing journal. Depending on the model year of your crankcase you will either install two M11 studs into the left hand case on the No.1 main bearing journal before you assemble the crankcase halves or install two M10 bolts through the right hand case after the crankcase halves have been assembled. Please check and verify the thread sizes of the fasteners on the No.1 main bearing journal prior to assembling the crankcase halves.

1. To ensure proper thread engagement and accurate torque readings, clean ALL threads in the engine case. Chase the threads if necessary with ARP Thread Chaser(s), part number 912-0005 (M11 X 1.5) or 912-0003 (M10 x 1.5).
2. Clean and inspect all hardware prior to installation. Look for obvious defects or shipping damages, plus proper fit, length and dimension.
3. On early model engines, install two 6.973 in. long (M11x M10) studs into the left hand case on the No.1 main bearing journal.
4. On all engines, install one 4.553 in. long stud into the lower hole of the right hand case on the No.7 main bearing journal.
5. Screw the studs into engine case "HAND TIGHT ONLY". **Note: Loctite may be used if permanent mounting of the stud is preferred.**
6. Assemble the case halves as described in the Porsche Factory Service Manual. Check for binding or misalignment.
7. a) On early model engines, working from the side of the right hand case, install one O-ring over each of the studs on the No.1 main bearing journal. Then install a stepped washer onto each of the studs on the No.1 main bearing journal making sure the large O.D. on the washer faces the nut.  
b) On later model engines, it will be necessary to install one stepped washer and one O-ring on the end of two 6.170 long (M10) bolts and slide them up to the bolt heads. Then apply a liberal amount of anti-seize compound to the bolt threads and install the bolts through the right hand case on the No.1 main bearing journal.
8. Assemble the thru-bolts as follows:
  - a) Install a stepped washer onto each thru-bolt and slide it up to the bolt head. The washers must be positioned on the bolt so that the large O.D. on the washer faces the bolt head. Install one O-ring over each bolt and position it up against the washer.
  - b) Install the eleven thru-bolts into position through the right hand case.
  - c) Working from the side of the left hand case, install one O-ring over the end of each thru-bolt. Be sure to push the O-rings up against the engine case. Then install a stepped washer over the end of each thru-bolt making sure the large O.D. on the washer faces the nut.
9. Lubricate the stud threads, bolt threads and nuts with **Permatex 133A Anti Seize compound. DO NOT USE ANY OTHER THREAD LUBRICANT AS GALLING MAY OCCUR.**
10. Install the standard (black oxide) 12 pt nut and washer onto the 4.553 in. long stud of the No.7 main bearing journal through the opening in the chain housing on the left hand case.
11. Install the nuts onto the eleven thru-bolts. On early models install two nuts on the studs securing the No.1 main bearing journal. Tighten the nuts hand tight.

### PRELOAD (TORQUE) RECOMMENDATIONS

**Torque values are based on 75% of the fasteners yield strength**

12. Following the manufacturers recommended torque sequence, tighten the nuts to 37 ft lbs with **Permatex 133A Anti Seize compound.**

**Note: Use only Permatex 133A Anti Seize compound or severe galling may occur**