



## **INSTALLATION METHOD FOR PORSCHE CRANKCASE THRU-BOLT KITS**

**Part Number: 204-5405 Application: 3.0L-3.3L 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.**

1. To ensure proper thread engagement and accurate torque readings, clean ALL threads in the engine case. Chase if necessary with ARP Thread Chaser(s), part number 912-0005 (M11 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. Install two 6.835 in. long studs into the left hand case on the No. 1 main bearing journal.
4. 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. 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 double chamfered washer onto each of the studs on the No.1 main bearing journal making sure the large I.D. chamfer faces the engine case.
8. Assemble the thru-bolts as follows:
  - a) Install a double chamfered 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 I.D. chamfer on the washer faces the engine case.
  - b) Install one O-ring over each bolt and position it up against the large I.D. chamfer on each washer.
  - c) Install the eleven thru-bolts into position through the right hand case.
  - d) 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 double chamfered washer over the end of each thru-bolt making sure the large I.D. chamfer on the washer faces the engine case.
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 cap nuts onto the eleven thru-bolts and the two 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 **25 ft lbs** with **Permatex 133A Anti Seize compound.**

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