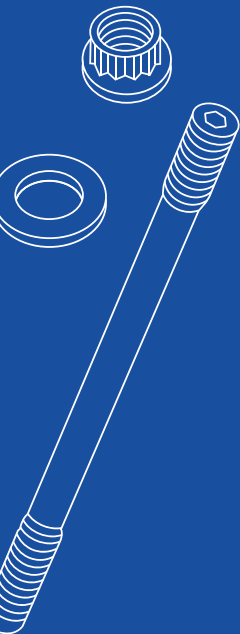








INSTRUCTION MANUAL

MAIN STUD KIT FOR CHEVROLET SMALL BLOCK 4-BOLT

PART NUMBER MP889 | 1967-1997



KIT INCLUDES

-  **16 X** MAIN STUDS
-  **16 X** NUTS
-  **16 X** HARDENED PARALLEL WASHERS
-  **1 X** FASTENER ASSEMBLY LUBRICANT
-  **1 X** SOCKET
-  **1 X** ALLEN WRENCH

XOTIC PERFORMANCE is a leading manufacturer of high-performance main studs for internal combustion engines. Our main studs are designed to replace the factory main bolts and provide superior strength, durability, and performance.

XOTIC PERFORMANCE main studs are engineered using premium steel alloys that offer superior tensile strength and durability compared to bolts. They are designed to provide a consistent and uniform clamping force on the main caps and engine block, which helps to distribute the load more evenly and reduce the risk of main bearing failure.

Our main studs are an essential component of high-performance engines, especially those that are subjected to high loads, high RPMs, or extreme conditions such as racing or towing. They are often used in conjunction with other performance upgrades such as forged internals, high-performance bearings, and upgraded oiling systems to ensure the engine can withstand the demands placed on it.

A COMMON MISTAKE TO AVOID

When torquing a fastener, do not stop short of the recommended torque until the desired torque is

reached (i.e. keep torquing without stopping until the desired torque is achieved). If by accident, you stop short of the recommended torque, loosen the fastener and retorquing.

When upgrading from factory main bolts to high-strength main studs, the increased clamping force can alter the geometry of the main bearing bores. We strongly recommend checking the bores for size and roundness after installing the studs. If necessary, perform an align hone with the same fasteners and lubricant that will be used during final assembly at the specified torque. This ensures optimal bearing clearance and long-term engine reliability.

VERIFY FIRST

Before installing any components, please verify whether this part number is compatible with the vehicle applications cited above. Inspect all package components, and clean as necessary to ensure accurate installation. Any obvious defects or shipping damages should be reported to us.

GET TO ACTION!

1. Clean threads in the block with a thread chaser prior to installing the studs to ensure accurate fitment and precise torque readings. You may purchase a thread chaser separately by searching **CS314** in our catalog.
2. Screw the main studs as tight as can be made by hand (no tool necessary). Do not apply torque. Loctite may be used for permanent stud installation, but the fasteners must be fully torqued before the Loctite sets.
3. Use a straightedge ruler to measure the distance from the mating surface (deck or main cap) to the top of each installed stud. Ensure all studs of the same length group sit level with each other (within 1 mm / 0.040"). Uneven height may indicate debris or incorrect thread engagement. Properly installed studs will bottom out smoothly and show uniform height across all positions. If a stud appears higher or lower than the others, remove it, re-clean the hole, and reinstall by hand. Do not use tools to force studs deeper. Incorrect stud seating can cause off-angle stress, uneven preload, or stud fracture during engine operation.
4. Install the main caps, and ensure appropriate alignment.
5. Using the fastener assembly lubricant included in the package, lubricate the threads of the main studs and nuts.
6. Thread the nuts onto the main studs as tight as can be made by hand.
7. Using the torque sequence below, tighten the **M11 studs** in three equal steps:
 - I. **STEP 1: 30 ft-lbs**
 - II. **STEP 2: 60 ft-lbs**
 - III. **STEP 3: 90 ft-lbs**



NEED HELP?

For technical support, please email:
tech@xotic-performance.com



WORKING ON AN EXCITING NEW PROJECT?

Show off your craft on Instagram and tag us
in your picture for a chance to be featured!

#XOTICPERFORMANCE