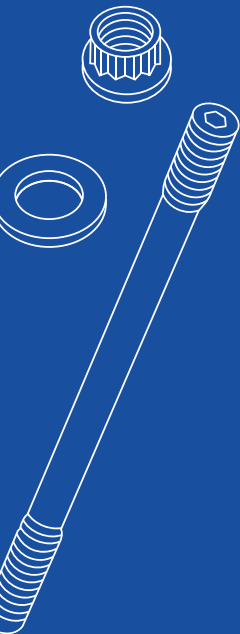








# INSTRUCTION MANUAL

## 6.0L FORD POWERSTROKE HEAD STUD KIT

PART NUMBER CP874



### KIT INCLUDES

-  **20 X** HEAD STUDS
-  **20 X** NUTS
-  **20 X** HARDENED PARALLEL WASHERS
-  **1X** FASTENER ASSEMBLY LUBRICANT
-  **1X** SOCKET
-  **1X** ALLEN WRENCH

In every diesel car, there are high cylinder pressures that can damage head gaskets. Factory OEM head bolts are torque to yield, meaning you torque the bolt to a specific torque with a final 90 degree rotation that will place the bolt at its' maximum stretch point.

Our observation through years of inspecting and repairing diesel trucks is that when you add parts that increase horsepower (turbocharger, injectors, chips etc.), you risk creating higher cylinder pressures lower than your RPM range, consequently leading to a blown head gasket.

In contrast to head bolts, head studs are engineered to not stretch. Xotic Performance head studs are created using premium steel alloys (XOTIC 7200) that are superior in tensile strength in comparison to a bolt. We take real pride in manufacturing fasteners that will last you a lifetime.

To ensure optimal head stud installation, accurate preload requirements must be met. Preload is the tension created in a fastener when it is tightened. This tensile force in the fastener creates a compressive force in the bolted joint known as clamp force.

Head gasket failures occur when clamping forces that hold the gasket, head and engine block are not

tolerable from high cylinder pressures. By choosing head studs over head bolts, these failures can be avoided.

To ensure accurate preload, it is necessary to clean and lubricate every component in the joint. While torquing each head stud, the same torque must be applied on every head stud – or else you risk unequal distribution of preload and possibly joint failure.

### 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 retorquer.

### VERIFY FIRST

Before installing any components, please verify whether this part number (CP874) 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!

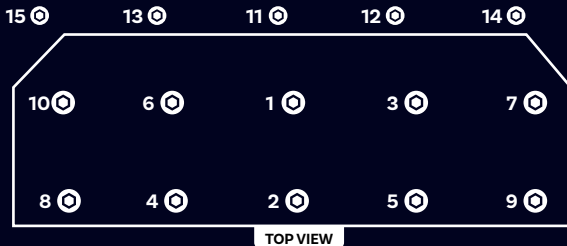
- 1 Clean the threads in the block prior to installing the studs to ensure accurate fitment and precise torque readings.
- 2 Use thread sealer to lubricate block threads of the head studs (only applies if the cylinder head studs extend into the water jacket).
- 3 Screw studs as tight as can be made by hand (no tool necessary), and install cylindrical head.
- 4 Using the fastener assembly lubricant included in the package, lubricate the threads of the head studs and the bottom surface of the nuts. Install the lubricated washers (both sides must be lubricated) over the head studs.
- 5 Thread the nuts onto the head studs as tight as can be made by hand until they are in contact with the washers.
- 6 Using the torque sequence below, tighten nuts in 3 equal steps:

## HEAD STUDS (1-10)

Torque each nut to 40 ft-lbs, then to 150 ft-lbs and finally to 210 ft-lbs.

## OEM BOLTS (11-15)

Torque to 23 ft-lb.



## NEED HELP?

For technical support, please email:

[info@xotic-performance.com](mailto:info@xotic-performance.com)



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