

## Pacific Performance Engineering 318034600

# PPE Head Stud Kit 318034600 Instruction Manual

Model: 318034600 | Brand: Pacific Performance Engineering

## 1. INTRODUCTION

This manual provides essential information for the PPE Head Stud Kit 318034600, designed for 2008-2010 Ford F-250/350/450 6.4L diesel engines. This kit is engineered to enhance engine fastener strength and precision, crucial for high-performance applications. Please read these instructions thoroughly before installation and use.

## 2. PACKAGE CONTENTS

The PPE Head Stud Kit 318034600 includes the following components:

- Precision-ground head studs
- Hardened parallel washers
- Nuts
- Specially formulated assembly grease



Image 1: Complete PPE Head Stud Kit showing all included components: multiple long, threaded studs, corresponding nuts, and flat washers, along with a small packet of assembly grease.

*Note:* Verify all components are present and undamaged upon receipt. Contact customer support if any items are missing or appear faulty.

### 3. KEY FEATURES

- **Enhanced Strength:** Each stud is center-less ground with precision and thread rolled to Mil-S-8879 specifications, increasing durability and reducing stress.
- **High Tensile Strength:** Independently tested and verified tensile strength exceeding 231,900 psi.
- **Complete Kit:** Includes all necessary hardware for installation, such as hardened parallel washers, nuts, and assembly grease.
- **Optimized Load Distribution:** Specially formulated assembly grease ensures uniform load distribution and accurate torque readings during installation.

### 4. INSTALLATION GUIDELINES

Installation of head studs requires specialized tools and expertise. It is highly recommended that this procedure be performed by a qualified automotive technician. Improper installation can lead to engine damage or failure.

#### 4.1 Pre-Installation Checks

- Ensure the engine block and cylinder heads are clean and free from debris.
- Inspect all components for any manufacturing defects or shipping damage.
- Confirm compatibility with your specific vehicle model (2008-2010 Ford F-250/350/450 6.4L).

#### 4.2 Installation Steps (General)

1. Carefully clean all threaded holes in the engine block.
2. Apply the provided assembly grease to the threads of each stud before installation into the block.
3. Install the studs into the engine block finger-tight, then torque to manufacturer specifications (refer to your

engine service manual for exact values).

- Place cylinder heads onto the engine block, ensuring proper alignment.
- Install washers and nuts onto the studs. Apply assembly grease to the nut threads and under the head of the nuts where they contact the washers.
- Follow the engine manufacturer's recommended torque sequence and specifications for tightening the head studs. This typically involves multiple stages and specific patterns.

**Important:** Always refer to the specific torque specifications and procedures outlined in your vehicle's official service manual for the 6.4L Power Stroke engine. The provided assembly grease is critical for achieving accurate torque readings and proper clamping force.

## 5. FUNCTION AND OPERATION

The PPE Head Stud Kit replaces factory head bolts, providing superior clamping force and resistance to stretching under high cylinder pressures. This is particularly beneficial in high-performance or heavily modified diesel engines, preventing cylinder head lift and maintaining head gasket integrity. Once installed and properly torqued, the studs maintain a consistent and reliable seal between the cylinder head and engine block.

## 6. MAINTENANCE

Once installed, PPE Head Studs generally require no specific maintenance beyond standard engine care. Regular engine maintenance, including oil changes and cooling system checks, contributes to the overall longevity of all engine components, including the head studs.

- Adhere to your vehicle manufacturer's recommended service intervals.
- Monitor engine temperatures to prevent overheating, which can stress engine components.
- If any engine work requires cylinder head removal, it is recommended to replace head gaskets and re-torque the studs according to specifications.

## 7. TROUBLESHOOTING

If you experience issues after installing the PPE Head Stud Kit, consider the following general troubleshooting steps. Always consult a qualified mechanic for diagnosis and repair.

- Coolant Leaks:** Check for proper head gasket installation and ensure studs were torqued correctly following the manufacturer's sequence and specifications.
- Oil Leaks:** Verify proper sealing of valve covers and other components removed during head stud installation.
- Engine Overheating:** This could indicate a head gasket issue. Re-check torque specifications and consider professional inspection.
- Unusual Engine Noises:** If new noises occur after installation, immediately cease engine operation and have the vehicle inspected by a professional.

*Note:* Many engine issues can mimic head gasket or head stud problems. A thorough diagnostic by a professional is essential.

## 8. SPECIFICATIONS

Attribute	Value
Model Number	318034600

Compatible Vehicles	2008-2010 Ford F-250/350/450 6.4L
Tensile Strength	Over 231,900 psi (independently verified)
Thread Specification	Mil-S-8879
Product Dimensions	9 x 11 x 3 inches
Item Weight	7257 pounds
Manufacturer	Pacific Performance Engineering
ASIN	B0B3PBPJ18
Date First Available	June 9, 2022

## 9. WARRANTY AND SUPPORT

For specific warranty information regarding the PPE Head Stud Kit 318034600, please refer to the official Pacific Performance Engineering website or contact their customer service directly. Keep your proof of purchase for any warranty claims.

For technical assistance or support, please contact Pacific Performance Engineering customer service:

- **Manufacturer:** Pacific Performance Engineering
- **Website:** [www.ppediesel.com](http://www.ppediesel.com)
- **Contact Information:** Refer to the manufacturer's website for current contact details.