

# **Cast Iron Cylinder Head 6.6L Duramax V8**

**2001-2004 LB7**

(110100100, 110100101, 110100111)

**2004.5-2010 LLY/LBZ/LMM**

(110100102, 110100103, 110100113)

**2011-2016 LML**

(110100104, 110100105, 110100115)

## ***Installation Guide***



## **NOTE:**

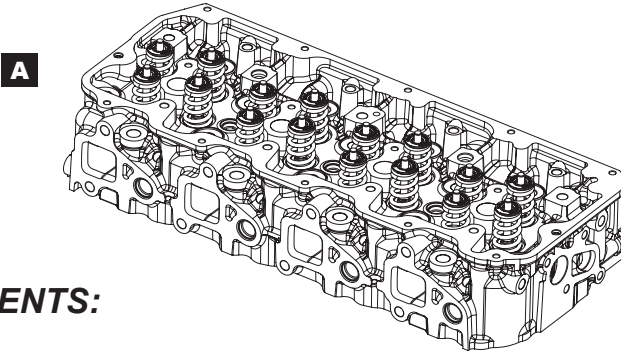
*It is not legal in California to install the product on vehicles with the following Test Groups or Engine Families: BGMXH06.6590, CGMXH06.6590, DGMXH06.6590, FGMXH06.6590, GGMXH06.6590.*

*For 2001-2004 LB7 and 2011-2016 LML applications, the product is only legal in California to be installed on vehicles with 8,501 to 14,000 pounds gross vehicle weight rating (GVWR).*

*For 2004-2010 LLY, LBZ, and LMM applications, the product can be installed on vehicles with any GVWR greater than 8,500 pounds.*

*Test Group or Engine Family can be found on the Vehicle Emission Control Information Label located under the hood.*

*GVWR rating can be found on the driver door jamb.*



## **CONTENTS:**

**A** (1) Cast Iron Cylinder Head

## **NOTE:**

*It is important to read and understand these instructions before installing your new PPE Cylinder Heads. If you have questions, call our performance specialists at (725) 238-2002 Monday through Friday 8:00 am to 5:00 pm PST.*

*This product installation should only be done by a qualified person. Correct installation of this product is the responsibility of the installer. Improper installation will void warranty and may result in poor performance, engine, or vehicle damage.*

---

## **PRODUCT DESCRIPTION:**

*Designed for use on unmodified or high-performance 6.6L Duramax diesel engines. These PPE Cast Iron Cylinder Heads provide bolt-on durability with no additional machine work necessary.*

*PPE Iron Cylinder Heads feature Alloyed grey iron construction, premium 21-4N Super Alloy, Stellite-reinforced exhaust valves, chrome-silicon alloy intake valves, fully nitrided intake and exhaust valves, powder metal valve seats provide superior wear and heat resistance, high-strength chromoly steel CNC machined spring locators and spring retainers, and upgraded conical valve springs to provide faster response and less chance of valve float*

---

## **PPE RECOMMENDS:**

*PPE Head Stud Kit GM 6.6L (118034300) for optimum performance. The PPE Head Stud Kit exceeds industry standards required by performance engines. PPE Head Studs are precision center-less ground for accuracy. Threads rolled to Mil-S-8879 specifications for increased strength while reducing stress at the threads.*

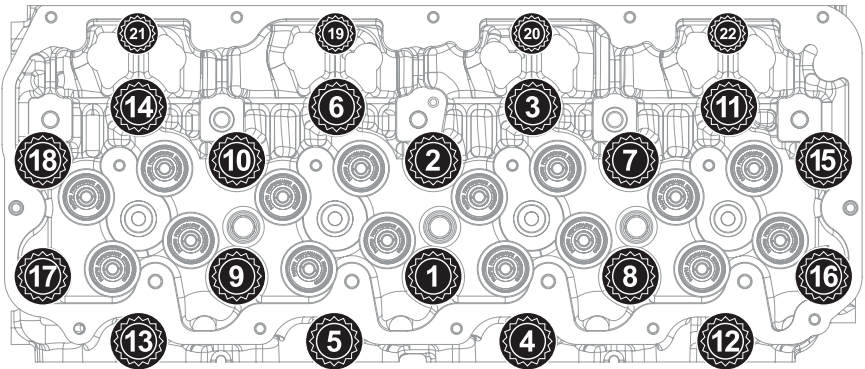
*With an independently tested and verified tensile strength of over 231,900 psi, these Studs out-perform even the most venerable manufacturer. Kits come complete with hardened parallel washers, nuts, and specially formulated assembly grease for uniform load distribution and accurate torque readings.*

## INSTALLATION:

**IMPORTANT NOTES:** You **MUST** use LBZ (GM '06-'07) factory glow plugs (GM P/N 1263970) on LLY (GM '04.5-'05) engines.

**Torque specs and procedures described are ONLY applicable when using new OEM head bolts. If the PPE Head Stud Kit (118034300) is used, then follow those instructions.**

1. Clean and inspect all hardware and parts for obvious defects or damage prior to installation. Be sure the surface of the block is properly prepared. Thoroughly clean the surface of the head using alcohol or lacquer thinner on a clean, lint-free rag.
2. To ensure proper thread engagement and accurate torque readings, clean all threads in the block. Chase if necessary with a M12 x 1.5 and M8 x 1.25 thread chasers.
3. Install the Cylinder Heads with gaskets and check for misalignment or binding. Thread bolts onto the block "hand tight only" for now.
4. Follow manufacturer's recommended torque sequence (**Fig.1**). Tighten in four equal steps to the following specification:



**Fig.1**

**NOTE:** These are factory specs for new OEM torque to yield bolts.

### **New Cylinder Head M12 Bolts (Bolts 1-18)**

- First step: 50Nn (37 lb ft)
- Second step: 80Nm (59 lb ft)
- Third step: 60 degrees
- Fourth step: 60 degrees

### **Cylinder Head M8 Bolts (Bolts 19-22)**

- 25Nm (18 lb ft)

***THIS PAGE LEFT INTENTIONALLY BLANK***

## **DISCLAIMER OF LIABILITY**

Performance products can increase horsepower above and beyond factory specifications. Additional horsepower creates more stress on the drive-train components, which could result in drive-train failure.

Note regarding emissions-related, non-E.O.-legal products: THESE PRODUCTS ARE LEGAL IN CALIFORNIA ONLY FOR RACING VEHICLES THAT MAY NEVER BE USED, OR REGISTERED OR LICENSED FOR HIGHWAY OR OFF-ROAD USE.

This agreement sets forth the terms and conditions for the use of PPE products. The installation of this product indicates that the Buyer has read and understands this agreement and accepts the terms and conditions. PPE (Pacific Performance Engineering) Inc., its distributors, employees, and dealers (the "Seller") shall not be responsible for the product's proper use and service. The buyer hereby waives all liability claims. The Buyer hereby acknowledges no reliance on the Seller's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description on the face hereof, and the Buyer hereby waives all remedies or liabilities expressed or implied, arising by law or otherwise (including without any obligation of the Seller with respect to fitness, merchantability and consequential damages), or whether or not occasioned by the Seller's negligence. The Seller disclaims any warranty and expressly disclaims any liability for personal injury or damages. The Buyer acknowledges and agrees that the disclaimer of any liability for personal injury is a material term for this agreement and the Buyer agrees to indemnify the Seller and to hold the Seller harmless from any claim related to the item of equipment purchased. Under no circumstances will the Seller be liable for any damages or expenses by reason of use or sale of any such equipment. The Seller assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt, contact the manufacturer. The Buyer is solely responsible for all warranty issues from the manufacturer.

## **LIMITATION OF WARRANTY**

The Seller gives Limited Warranty as to description, quality, merchantability, and fitness for a particular purpose, productiveness, or any other matter of Seller's product sold herewith. The Seller shall not be responsible for the products proper use and service and the Buyer hereby waives all rights other than those expressly written herein. This warranty shall not be extended, altered or varied except by a written instrument signed by Seller and Buyer.

Limited lifetime warranty on all PPE cast aluminum products, and PPE Transmission Coolers. Three (3) year limited warranty on PPE Manifolds and Up-Pipes Kits, and OEM-Length Up-Pipes. One (1) year limited warranty on all other PPE products from the date of sale to original buyer and limited solely to the parts contained within the products kit. All products that are in question of Warranty must be returned prepaid to the Seller and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by Seller. Under no circumstances will the Seller be liable for any labor charged or travel time incurred in diagnosis for defects, removal, or re-installation - of this product or any other contingent expenses. Under no circumstances will the Seller be liable for any damage or expenses incurred by reason of the use or sale of any such equipment. In the event that the buyer does not agree with this agreement: the buyer may promptly return this product, in a new and unused condition in its original packaging, with a dated proof of purchase to the place of purchase within ten (10) days from date of purchase for a full refund. The installation of this product indicates that the buyer has read and understands this agreement and accepts its terms and conditions.



*PPEpower.com*