



# OFFICIAL LICENSED PRODUCT



# ENERGY

Installation Instructions: RB Hemi Engine Block  
Part Numbers: P5160208AA, P5160210AA, P5160211AA

**Read all instructions before beginning installation**

**For technical assistance regarding the HEMI® Engine Block, please contact Callies Performance Products, Monday-Friday, 8:00am-5:00pm EST at 419-435-2711**



### Engine Block Components:

- (1) Engine block with main caps and rear oil seal retainer assembled.
- (1) Block plug kit (loose)
- (1) Camshaft bearing kit - #PD-17 (loose)
- (2) 0.040" Oil gallery restrictors (loose)
- (1) 1/2" Oil pickup tube adapter - #27931(loose)
- (4) AN10 Valley plugs (loose)
- (1) Bronze distributor bushing (loose)

### Motor Mounts:

Stock Hemi motor mount bosses are provided

### Cylinder Bores:

Blocks that are sold without hone must be **finish honed before use**. All blocks have siamese water jackets that accomodate a maximum overbore of 4.600". It is recommended that you sonic check each block if you plan to exceed as shipped bore diameters. Honing with a torque plate is recommended.

### Main Caps + Main Bearings:

#1, #2, #3 and #4 main caps are cross bolted. Blocks are machined for stock main bearings. Install main bearing caps with bearing tangs facing the driver's side of the engine. Seat the caps in the block and torque the vertical bolts to 55-65 ft-lbs first to maintain cap alignment and then torque the cross bolts to 35-45 ft-lbs. Finish by torquing the vertical bolts to 95 - 105 ft-lbs.

### Bell Housing Pattern:

Blocks are machined to stock Gen II Hemi bell housing pattern.

### Deck Height:

Blocks are machined to a stock RB deck height or 10.725". At this height the deck is .600" thick.

### Water Pump:

Stock water pump components can be used with these blocks. Torque the water pump to the housing to 30 ft-lbs and torque the housing to block bolts to 30 ft-lbs.

Part Number	Material	Delivered Bore Size	Cylinder Hone	Lifters .9061 .9055	Clearance
P5160208AA*	gray iron	4.492-4.495	No	Yes	Yes
P5160210AA*	gray iron	4.242-4.245	No	Yes	Yes
P5160211AA*	gray iron	4.242-4.245	No	No	No

**Previous PN    Previous PN    New PN**

P5153862AD → P5160150AC → **P5160208AA\***

P5153942AD → P5160151AC → **P5160210AA\***

P5153943AE → P5160152AC → **P5160211AA\***

**\*Cylinder bores and lifter bores are not honed.**

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\* Part numbers listed in this document are for reference only, and may not be available through MOPAR. Please check your block's part number against the features listed in the above chart before performing any machining or assembly prep.

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**Callies Performance Products - 419-435-2711 - www.callies.com**  
**Energy Manufacturing - www.energymanufacturing.com**



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#### **Oil Pan + Pickup:**

Blocks come with an adapter that accommodates the use of stock oil pickup tubes. Stock oil pans will fit as well. Torque oil pan attaching screws to 180 in-lbs.

#### **External Oil Pickup Passage:**

The block is prepped to run an externally routed oil pickup tube if crankcase clearance is improper. An AN-12 boss is machined on the front face of the block connecting directly to the inlet side of the oil pump. An AN-12 fitting can be installed here connecting externally to an oil pickup tube installed in your oil pan. You will need to plug the oil pick up tube adapter inside the crankcase with a 1/2" pipe plug (not provided) when making this modification.



**External Oil Pick up Passage**

#### **Oiling System:**

The oil feeds from the deck surfaces that connect to the cylinder heads have .040" restrictions included, but not installed, to control the flow of the oil to the valve train. It is recommended that these are always used. Stock oil pumps will bolt directly to these blocks. Torque oil pump attaching bolts to 30 ft-lbs.

#### **Distributor + Intermediate Shaft:**

Blocks are machined to accept stock distributors and related drive components. A bronze intermediate shaft bushing has already been included but not installed in each block and is finished to size.

#### **Camshaft and Front Drive:**

Blocks are prepped for stock cam bearings although the cam bearing bores can be machined oversize to allow use of 60mm roller bearings for racing applications. When installing journal bearings be sure to align the oil hole with the bearing shell with the block's oil feed hole. All stock cam drive components can be used with the standard cam height packages. Torque front cover bolts to 15-18ft-lbs.

#### **Lifter Bore Angle and Diameter:**

Blocks listed with lifter bores are machined to stock 0.905" diameter and 45° angle, but not honed. Sizing for aftermarket lifters may vary. Please check your specific application. Check your part's clearance. Clearance for tie bar roller lifter has been provided.

#### **Rear Seal Retainer and Seal:**

Blocks come with the rear seal retainer installed. Rear seal is offset and unique to this application. Retorque the seal cap retaining bolts to 30 ft-lbs.

#### **Fuel Pump and Drive Pushrod:**

Stock fuel pump and drive pushrod components can be used with these blocks. A block-off plate is available if a mechanical fuel pump is not required for your application. Torque fuel pump or block-off plate to 30 ft-lbs.



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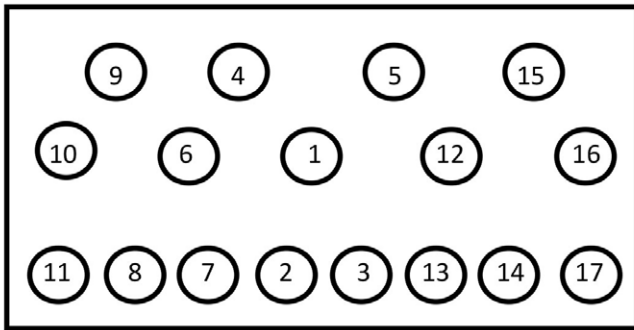


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### Cylinder Heads:

Stock cast iron and aluminum head assemblies will bolt directly on to these blocks. Head bolt holes are blind tapped and do not extend into the water jacket. It is the builder's responsibility to determine that mounting fasteners have the proper engagement to prevent stripping threads. **A longer than stock stud is needed for the valley attachment with this block.** Torque head bolts and nuts initially to 50 ft-lbs in sequence shown. Then repeat tightening to 65-70 ft-lbs for aluminum heads or 70-75 ft-lbs for cast iron heads.



Cylinder Head bolt Tightening Sequence

\* Recommended cylinder head stud kit ARP145-4005

### Head Stud Hole / Thread Dimensions:

13X Ø .373 X 1.27/1.29 DP      Ø .50/ .54 X 90°  
          .363

### No Parts Warranty - "As Is"

Mopar Performance parts starting with a "P" prefix are sold "as is" unless otherwise noted. This means that parts sold by Mopar Performance carry no warranty whatsoever. Implied warranties, such as warranties of merchantability, are excluded. (An implied warranty of merchantability means that the part is reasonably fit for the general purpose for which it was sold.) The entire risk to the quality and performance of such parts is with the buyer. Should such part prove defective following their purchase, the buyer and not the manufacturer, distributor or retailer, assumes the entire cost of all necessary servicing or repair. Chrysler, Dodge, & Jeep® vehicle and parts warranties are voided if the vehicle or parts are used for competition. The addition of performance parts does not by itself void a vehicle's warranty. However, added performance parts (parts not supplied on the vehicle from the factory) are not covered by the vehicle's warranty, and any failure that they may cause is also not covered by the vehicle's warranty.

### Other Recommended Components:

#### Callies Mopar Magnum Billet

Stroke:	Main:	Pin:	Cammed for Rod Length	Part #
4.150	2.750	2.200	6.700	GE262K-MB
4.250	2.750	2.200	6.700	GEP62K-MB
4.500	2.750	2.200	7.100	GEQ62K-MB
4.625	2.750	2.200	7.100	GER62K-MB
4.750	2.750	2.200	7.100	GES62K-MB

#### Callies Mopar Magnum

Stroke:	Main:	Pin:	Cammed for Rod Length	Part #
4.150	2.750	2.200	6.700	GE262J-MP
4.250	2.750	2.200	6.700	GEP62J-MP
4.500	2.750	2.200	7.100	GEQ62J-MP
4.625	2.750	2.200	7.100	GER62J-MP
4.750	2.750	2.200	7.100	GES62J-MP

#### Compstar Big Block Mopar Cranks

Stroke:	Main:	Pin:	Cammed for Rod Length	Part #
3.760	2.750	2.200	6.700	GE3-65L-CS
4.150	2.750	2.200	6.700	GE2-62L-CS
4.250	2.750	2.200	6.700	GEP-62L-CS
4.500	2.750	2.200	7.100	GEQ-62L-CS
4.625	2.750	2.200	7.100	GER-62L-CS

#### Callies Big Block Ultra I-Beam

Length:	Journal:	Typ. Wt:	Part #
6.700	2.200	826g.	U15114
6.800	2.200	829g.	U15116
7.100	2.200	848g.	U15270

#### Callies Big Block Ultra H-Beam

Length:	Journal:	Typ. Wt:	Part #
6.700	2.200	817g.	U16230
6.700	2.200	823g. (Ultra XD)	U19114
7.100-HW	2.375	905g. (Super Max)	U15275-MP

#### Compstar Big Block H-Beam

Length:	Journal:	Typ. Wt:	Part #
6.700	2.200	825g.	CSB6700ES3B9AH
6.800	2.200	842g.	CSB6800ES3B9AH
7.100	2.200	830g.	CSB7100ES3B9AH

