



MAN O'WAR Cast Iron Blocks

Specifications, Technical Data and Instruction Sheet

Part #	Bore Size	Main Size /Type	Deck Height	Stage
087010	3.995	2.248 Nodular	8.200	Bare Block
087020	4.120	2.248 Nodular	8.200	Bare block
087072	3.995	2.749 Nodular	9.500	Bare Block
087082	4.120	2.749 Nodular	9.500	Bare Block
087110	3.995	2.248 Billet	8.200	Bare Block
087120	4.120	2.248 Billet	8.200	Bare block
087172	3.995	2.749 Billet	9.500	Bare Block
087182	4.120	2.749 Billet	9.500	Bare Block
087182-55R	4.120	2.749 Billet	9.500	Bare Block
087150	3.995	2.248 Billet	9.200	Bare Block
087160	4.120	2.248 Billet	9.200	Bare block
087152	3.995	2.749 Billet	9.200	Bare Block
087162	4.120	2.749 Billet	9.200	Bare Block

- Block Applications:** The Man O'War blocks are designed to be a replacement for the small block Ford one piece seal applications, with dipstick located in timing cover. On rear pan seal it will be necessary to snip off nubs on ends of gasket so that it will fit flush against block.
- Block Material:** High density Cast iron
- Deck Height:** 8.200" or 9.500" also 9.200" (depending on part number)
- Deck Thickness:** Approximately .600"
- Cam Bearings:** DUR351HP These fit 8.200", 9.200" or 9.500" deck blocks. **Note:** When installing cam bearings **MAKE SURE** the oil hole in the bearings is inline with the oil feed hole to the main bearings. 55 Roller block uses PBM5520 No. 1 bearing. May require clearancing to distributor gear.
- Main Bearings:** Utilizes 2.248" or 2.749" Ford style main bearings. (Depending on main size of block)
- Main Caps:** All five main caps are four bolt nodular or billet caps with the center three being of the splayed design. The inner row of bolts are 7/16" inch thread, the outer row of bolts are 7/16 thread, and the outer 4 corner bolts are 3/8" thread. Nodular caps use bolts at all locations, while billet caps use studs on the straight locations and bolts on the splayed locations. Caps are located by deep stepped ends and ring dowels. Torque specs on main bolts are: 70 ft. lbs. inner and 70 ft. lbs. outer and 35 ft. lbs. on the outer 4 corner bolts with ARP lube. Due to supply and demand, nodular cap blocks may actually be fitted with billet caps, using bolts rather than studs.
- Lifter Bores:** Indexed (Lifter bore size is standard Ford diameter .8750")
- Maximum Bore:** All blocks can be bored safely to a maximum of 4.200"
- Cylinder Bores:** Cylinder bores are of a siamese design. Because of increased wall thickness, no steam holes are needed for street use.
- Cyl. Wall Thickness:** @ 4.200" bore cylinder wall thickness will be approximately .200"
- Head gaskets:** Must use Fel-Pro # 1031L and 1031R or equivalent to ensure water jacket coverage.
- Water Jackets:** Expanded for better cooling.
- Gear & Belt Drives:** **Due to the expanded water jackets, it is not recommended to run gear drives because of clearance issues with the backside of the idler gears and the cylinder block in the timing cover area. Jesel belt drives will work with minor grinding of the block and/ or belt drive cover.**
- Oil System Features:** Blocks are set up for OE style internal oil pump, with provisions to be converted to a dry sump oiling system. 8.200" deck blocks use 302 oil pump and distributor, 9.500" & 9.200" deck uses 351W oil pump and distributor
- Oil Restrictors:** Man O'War blocks use oil restrictors special to the block, part # Morroso 22016.
- Filtration:** Integral mount for spin on filter
- Oil Pan Rails:** Solid (stock width). Splayed cap blocks may have oil pan interference with the front and rear main caps.

It may be necessary to hand fit the oil pan.

- Clearance:** Man O'War blocks) are clearanced for 4.250" stroke on 9.500" deck, 4.000" stroke on 9.200" deck and 3.500" stroke on 8.200" deck H-beam style connecting rod.
- Camshaft:** STD. SBF camshaft with Strokes longer than 4.100" a small base circle or stroker rods may be required.
- Fuel Pump:** Uses stock style fuel pump and stock length fuel pump pushrod.
- Starter:** Starter mounting pad is drilled for standard bolt patterns.
- Motor Mounts:** Drilled and tapped for side mounts in OEM locations.
- Cyl. Head Bolt Holes:** Threads are 1/2" diameter on the standard ford bolt pattern the 8 extra bolts are 7/16x14. Head bolt holes are blind tapped and do not extend into the water jackets. **IT IS THE BUILDER'S RESPONSIBILITY TO DETERMINE WHAT BOLTS OR STUDS USED HAVE THE PROPER ENGAGEMENT TO PREVENT STRIPPING THE THREADS.**

Definitions and Dimensions:

Bare Block: Due to a vast difference of opinion among professional builders regarding specifications and procedures, all blocks, when purchased bare, are finished within Ford +/- tolerances. Blocks are supplied with the following specs:

- Deck Height:** 8.205, 9.205 or 9.505 +/- .005.
Cylinder Bore: 3.995 or 4.120 +/- .001.
Main Journals: 2.248 +/- .0005.** 2.9421 +/- .0005.**
Lifter Bores: .8755 +/- .0003.
Stroke Notch: 8.200 – 3.500, 9.200 – 4.000 and 9.500 – 4.250.

It is the responsibility of the engine builder to finish the block to his or the end user's preferences. Freeze plugs, oil galley plugs and cam bearings are not included or installed. However, stock Ford hardware can be used except freeze plugs which measure 1 5/8 inc

Before Final Assembly:

1. Before any machine work or assembly begins, thoroughly inspect the block for any defects. Remember you are the final inspector. Once machine work has begun, the block is **NON-RETURNABLE**.
2. Make sure block is free of debris. Clean block thoroughly.
3. Lifter bores are machined to the factory spec of .8750. Lifter diameters vary by manufacturer. Slight honing of the lifter bores may be needed for proper lifter to lifter bore clearance.
4. Long rod and stroker applications need to be dry assembled and checked for connecting rod to block interference. Grinding of the oil pan rail may be necessary. Clearance needs to be kept at a .050 minimum.
5. Man O'War blocks come with a deck height of 8.200, 9.200 or 9.500 depending on part number. If a lower deck height is desired, **PLEASE** measure the deck before any cutting is done. **REMEMBER: MEASURE TWICE AND CUT ONCE.**

WARRANTY TERMS:

World Products Inc. (World) manufactures parts to meet QS 9000 specifications. In addition, all parts go through several inspection procedures before shipping. However, **YOU ARE THE FINAL INSPECTOR**. Please note: Inspect all parts before doing any machine work or assembly. Remember the saying "measure twice and cut once." If any defects are found or suspected, call World before proceeding.

World will replace or repair at its option any defective part which has not been modified or misused within one year of INVOICE purchase date. Any modification or marine use of parts will void all warranties.

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WARRANTY CLAIMS:

Contact Customer Service to obtain a Return Material Authorization number directly from World Products for any warranty return. DO NOT CONTACT YOUR DEALER. DO NOT RETURN PARTS WITHOUT AUTHORIZATION. Returned product must be shipped prepaid. **Collect shipments will be refused.** Returned parts must have RMA number on the outside of the package, a copy of original bill of sale inside and a written explanation of the suspected defect. If the item is found defective, World Products will repair or replace it at its discretion and return it freight prepaid. No additional labor claims will be paid. There will be no exceptions to this rule.

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