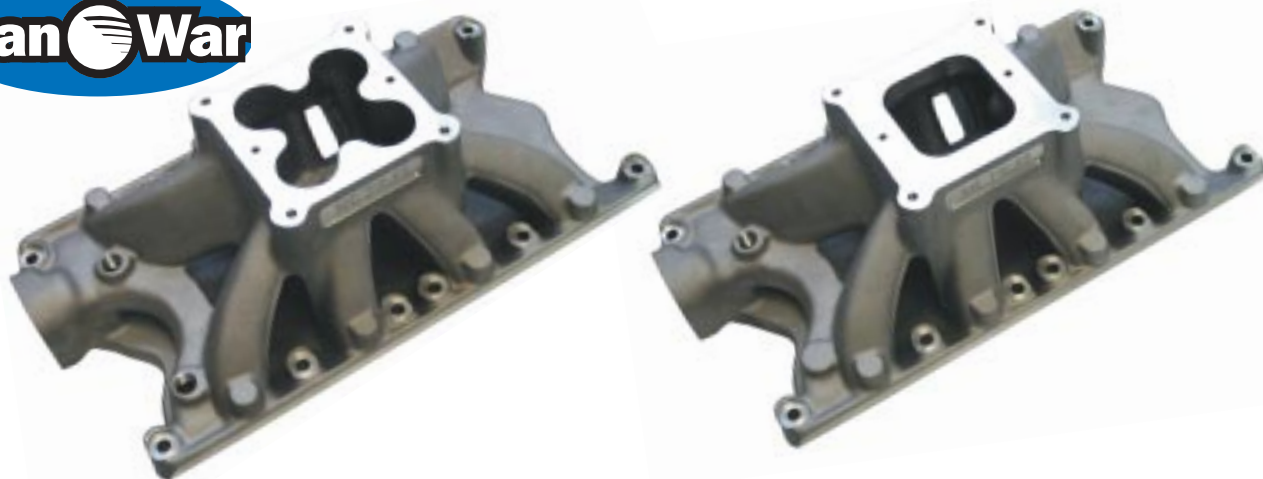


MAN O'WAR INTAKE MANIFOLDS

World Products has expanded its offering of intake manifolds for 302/351 Ford applications to include highly effective single plane designs for use with both raised roof and standard port heads. Developed in collaboration with CHI of Australia, the Man O'War intake for tall port (raised roof) heads provides

outstanding flow for these 9.500" deck applications. Also now available from World Products is a companion intake designed for use with standard port position heads. Both are offered in configurations for 4150 series or large 4500 (Dominator) carb flanges, and equipped with bosses for nitrous systems.



Part #	Plenum	Flange	Deck Hght	NOS Bosses	EFI	RPM Range	OAH	Notes
063415	Single	4150	9.500"	Yes	No	3500 - 8500	7.500"	E
063416	Single	4500	9.500"	Yes	No	3500 - 8500	7.500"	E
063417	Single	4150	9.500"	Yes	No	3500 - 8500	7.500"	D
063418	Single	4500	9.500"	Yes	No	3500 - 8500	7.500"	D

Notes:
 D = Fits standard port head
 E = Fits tall port (raised roof) head

AVAILABLE OPTIONS:

polishing (6 to 8 weeks lead time)
 Contact your World sales representative for details.

ACCESSORIES :

832901 Stainless steel intake manifold bolt kit for 302 engines (hex head)
 832902 Stainless steel intake manifold bolt kit for 351 engines (hex head)

SBF VALVE COVERS

Dress up your engine with the valve covers of your choice. Choose between chrome plated stamped steel or highly polished cast aluminum covers. New displacement-focused World polished aluminum covers let you show that size does matter. For a finishing touch, grab a set of stainless steel valve cover bolts. Similar hex-head bolts are also available for intake manifold installations. Finish your engine with World valve covers.

Part #	DESCRIPTION
070860	MAN O'WAR polished aluminum
070870	HARDCORE polished aluminum
07095-302W	302 WORLD polished aluminum
07095-347W	347 WORLD polished aluminum
07095-351W	351 WORLD polished aluminum
07095-371W	371 WORLD polished aluminum
07095-427W	427 WORLD polished aluminum
07095-460W	460 WORLD polished aluminum
07095-M	MAN O'WAR polished aluminum
07095-W	WORLD polished aluminum

Accessories :

832910 Stainless steel intake manifold bolt kit (hex head)
 832911 Stainless steel valve cover bolt kit (hex head) - Fits cast aluminum covers



#070870



#070860



#070895-W



#07095-371W



#07095-349W



#07095-427W



#07095-460W

WINDSOR JR./SR. SBF HEADS

CAST IRON CYLINDER HEADS

When it comes to high performance replacements for factory cast iron heads, World's Windsor series (Jr. and Sr.) has the market covered. The Jr. has 180cc intake runners and the Sr. boasts 200cc ports. These, plus the 64cc

exhaust port are substantially larger than OEM Ford heads. Add a highly efficient combustion chamber design and larger valves and you have big bolt-on power. These heads are also 50-state emissions legal factory replacements.



Manley stainless steel valves

Universal end pads accept both early and late model accessories

Bolts on to 1987-94 Mustang engines with no loss of compression



Raised valve cover rails to help eliminate oil leaks

Extra thick deck and walls

Exclusive RightCast® technology assures optimum port accuracy

SPECIAL MARINE HEADS NOW AVAILABLE!

Equipped with high temperature Inconel exhaust valves



Highly efficient combustion chamber design plus larger diameter valves



RightCast® ports provide superior "out of the box" performance

Technical Data:
Casting ID Number: I-056 (180cc), I-061 (200cc)
Material: High density cast iron
Valve Seats: Intake (integral), exhaust (hardened insert)
Valve Guides: Integral cast iron
Spring Seats: Machined for 1.560" and 1.250"
Valves: Manley stainless steel valves in assemblies
Guide Plates: Special World part #830460-8
Rocker Arm Studs: Screw-in style
Rocker Arms: Adjustable rockers recommended. 1.6 ratio (use of 1.73 ratio will require elongation of pushrod holes)
Intake Runner: Standard port location
Exhaust Ports: Standard location (dual exhaust bolt pattern to accommodate large custom headers)
Spark Plug: 14mm 5/8" .460" reach tapered style
Valve Job: Multi-angle intake and radiused exhaust
Valve Cover Rail: Raised
Valve Angle: Stock 20°
Accessory Bolt Holes: Stock
 50-State Emissions legal
Flow Numbers: Log on to worldcastings.com for detailed information.

Part #	Type	RUNNERS	Chamber	Valves	Plug	Spring	Spring Spec	Max Lift	Notes
053030	Bare	180 In / 64 Ex	58	1.940/1.600	11/32Std				
053030-1	Assembly	180 In / 64 Ex	58	1.940/1.600	11/32Std	1.250 S	100lb @ 1.810 300lb @ 1.250 CB @ 1.200	.570"	C
053030-2	Assembly	180 In / 64 Ex	58	1.940/1.600	11/32Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	C
053030-3	Assembly	180 In / 64 Ex	58	1.940/1.600	11/32Std	1.550 D	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E
053040	Bare	200 In / 64 Ex	64	2.020/1.600	11/32Std				
053040-1	Assembly	200 In / 64 Ex	64	2.020/1.600	11/32Std	1.250 S	100lb @ 1.810 300lb @ 1.250 CB @ 1.200	.570"	C
053040-2	Assembly	200 In / 64 Ex	64	2.020/1.600	11/32Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	C
053040-3	Assembly	200 In / 64 Ex	64	2.020/1.600	11/32Std	1.550 D	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E

MARINE NEW!

Part #	Type	RUNNERS	Chamber	Valves	Plug	Spring	Spring Spec	Max Lift	Notes
053030M-1	Assembly	180 In / 64 Ex	58	1.940/1.600	11/32Std	1.250 S	100lb @ 1.810 300lb @ 1.250 CB @ 1.200	.570"	D
053030M-2	Assembly	180 In / 64 Ex	58	1.940/1.600	11/32Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	D
053040M-1	Assembly	200 In / 64 Ex	64	2.020/1.600	11/32Std	1.250 S	100lb @ 1.810 300lb @ 1.250 CB @ 1.200	.570"	D
053040M-2	Assembly	200 In / 64 Ex	64	2.020/1.600	11/32Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	D

Assembly Includes: Head, valves, seals, springs, retainers, locks, rocker studs and guide plates

Notes:

C = 7° Stamped heat treated steel valve locks, Manley 4140 chrome-moly retainers and Nitrile umbrella seals
 D = 10° machined steel valve locks, Manley 4140 chrome-moly retainers, Nitrile umbrella seals and Inconel exhaust valves (Marine version)
 E = 10° machined steel valve locks, Manley 4140 chrome-moly retainers, Teflon seals and Manley Race Master valves

NOTE:

50 State Emissions Legal: Important note: Windsor Jr./Sr. cylinder heads carry C.A.R.B. EO #D-343-1

Accessories:

- 830460 5/16" SBF flat guide plate
- 830475 3/8" stock rocker arm stud
- 830480 7/16" stock rocker arm stud
- 830485 7/16" ARP® rocker arm stud
- 832585 Head bolt kit for Man O'War SBF cast iron/aluminum engine block
- 832552 Head stud kit for Man O'War SBF cast iron/aluminum engine block
- 832006 7/16" SBF stud girdle
- 832901 Stainless steel intake manifold bolt kit for 302 engines (hex head)
- 832902 Stainless steel intake manifold bolt kit for 351 engines (hex head)

- 832900 Stainless steel valve cover bolt kit (hex head)
- 832930 Stainless steel header stud kit

Recommended Installation Items:

- Head Gaskets: Felpro #1011-2 (CAUTION: Do not use Felpro #1011-1)
- Intake Gasket: Felpro #90361
- Exhaust Gasket: Felpro #1415
- Spark Plugs: 14mm 5/8" .460" reach tapered seat (Champion 670 or 802, Accel 416)
- Pushrods: Hardened pushrods are required with the use of guide plates

MAN O'WAR 18° ALUMINUM CYLINDER HEADS

Designed to provide serious horsepower for street/strip applications, the 18° Man O'War has excellent flow characteristics in its "as cast" form. You have a choice of 200 or 225cc intake runners to provide the optimum balance

of flow and velocity. Add our CNC porting option for even more flow and added combustion efficiency. With valves and rocker arm attachment parallel at 18°, they're compatible with OEM valve train. A powerful bolt-on for Mustangs!



Manley stainless steel valves

Raised valve cover rails to help eliminate oil leaks



Accepts multiple exhaust flanges

Exclusive Rightcast® technology assures optimum port accuracy

Universal end pads accept both early and late model accessories

Extra thick deck and walls

CNC PORTED HEADS!

"These ports are correct in size, shape and have really good flow numbers. Combined with an efficient chamber and plug location, these heads will easily make over 700 NA horsepower. All in all a really good choice!"

-Jim Kuntz



Highly efficient CNC-ported chamber and large valves boost performance



CNC-ported intake runners offered in both 228 and 242cc designs

Technical Data:	
Casting Number ID: WOR-080B (200cc), WOR-080A (225cc)	Intake Runner: standard port location
Material: 355-T6 alloy high density aluminum	Exhaust Ports: Standard location (dual exhaust bolt pattern to accommodate large custom headers)
Valve Seats: Intake (hardened), exhaust (hardened)	Spark Plug: 14mm .750" reach gasket style
Valve Guides: Manganese bronze	Valve Job: Multi-angle intake and radiused exhaust
Spring Seats: Machined for 1.560"	Valve Cover Rail: Raised
Valves: Manley stainless steel valves in assemblies	Valve Angle: 18°
Guide Plates: Special World part #830462	Accessory Bolt Holes: Stock
Rocker Arms: Adjustable rockers recommended. 1.6 ratio	Flow Numbers: Log on to worldcastings.com for detailed information.
Rocker Arm Studs: Screw-in style	

Part #	Type	Runners	Chmb.	Valves	Plug	Spring	Spring Spec	Max Lift	Notes
023005	Bare	200 In / 65 Ex	64	2.020/1.600 11/32	Std				
023005-1	Assembly	200 In / 65 Ex	64	2.020/1.600 11/32	Std	1.250 S	100lb @ 1.810 300lb @ 1.250 CB @ 1.200	.570"	C
023005-2	Assembly	200 In / 65 Ex	64	2.020/1.600 11/32	Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	C
023005-3	Assembly	200 In / 65 Ex	64	2.020/1.600 11/32	Std	1.550 D	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E
023010	Bare	225 In / 66 Ex	64	2.080/1.600 11/32	Std				
023010-2	Assembly	225 In / 66 Ex	64	2.080/1.600 11/32	Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	C
023010-3	Assembly	225 In / 66 Ex	64	2.080/1.600 11/32	Std	1.550 D	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E

Part #	Type	Runners	Chmb.	Valves	Plug	Spring	Spring Spec	Max Lift	Notes
CNC Ported (Ports designed by Kuntz & Co.)									
023005C	Bare	228 In / 73 Ex	72*	2.080/1.600 11/32	Std				
023005C-1	Assembly	228 In / 73 Ex	72*	2.080/1.600 11/32	Std	1.250 S	100lb @ 1.810 300lb @ 1.250 CB @ 1.200	.570"	C
023005C-2	Assembly	228 In / 73 Ex	72*	2.080/1.600 11/32	Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	C
023005C-3	Assembly	228 In / 73 Ex	72*	2.080/1.600 11/32	Std	1.550 D	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E
023010C	Bare	242 In / 75 Ex	72*	2.100/1.600 11/32	Std				
023010C-2	Assembly	242 In / 75 Ex	72*	2.100/1.600 11/32	Std	1.437 D	125lb @ 1.810 340lb @ 1.210 CB @ 1.160	.600"	C
023010C-3	Assembly	242 In / 75 Ex	72*	2.100/1.600 11/32	Std	1.550 D	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E

Assembly Includes: Head, valves, seals, springs, retainers, locks, rocker studs and guide plates

* Can be milled to achieve desired compression

Notes:

C = 7° Stamped heat treated steel valve locks, Manley 4140 chrome-moly retainers and Nitrile umbrella seals
 E = 10° machined steel valve locks, Manley 4140 chrome-moly retainers, Teflon seals and Manley Severe Duty valves

Available options:	832901	Stainless steel intake manifold bolt kit for 302 engines (hex head)
Polishing (6 to 8 weeks lead time)	832902	Stainless steel intake manifold bolt kit for 351 engines (hex head)
Contact your World sales representative for details.	832900	Stainless steel valve cover bolt kit (hex head)
	832930	Stainless steel header stud kit
Accessories:	Recommended Installation Items:	
830462	Head Gaskets: Felpro #1011-2, 1031L, 1031R	
830475	(CAUTION: Do not use Felpro #1011-1)	
830480	Intake Gasket: Felpro #1262R	
830485	Exhaust Gasket: Felpro #1415	
832585	Spark Plugs: 14mm .750" reach gasket seat (Accel 416)	
832552	Pushrods: Hardened pushrods are required with the use of guide plates	
832007		

MAN O'WAR 10° ALUMINUM CYLINDER HEADS

World's engineering team has developed what is the ultimate competition cylinder head for 302/351 Ford small block applications. It features a highly advantageous 10° valve angle (with parallel rocker arm mounting) and some homungous ports. The "as cast" intakes are available in 275 and 285cc intake

runners with huge 102cc exhaust ports. Add the CNC porting option with ports designed by Kuntz & Co. and a 310cc intake is yours. Designed for use with all power-adders, the 10° Man O'War comes with provisions to use s two extra head bolts per cylinder as is offered with the companion Man O'War block.



Manley stainless steel valves



Universal end pads accept both early and late model accessories

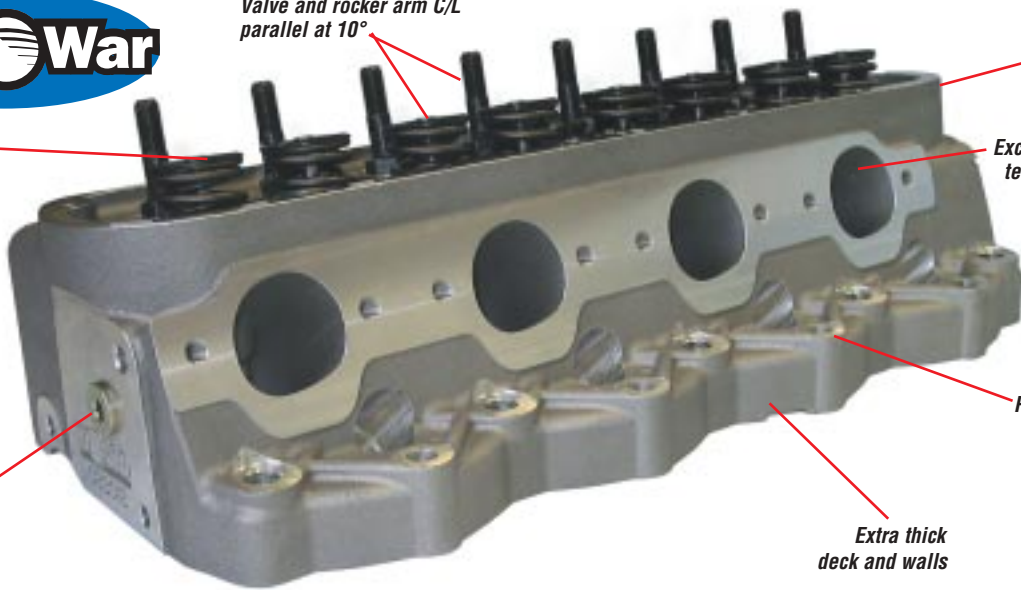
Valve and rocker arm C/L parallel at 10°

Raised valve cover rails to help eliminate oil leaks

Exclusive Rightcast® technology assures optimum port accuracy

Provisions for two extra head bolts per cylinder

Extra thick deck and walls



CNC-PORTED HEADS AVAILABLE FOR THE ULTIMATE IN FLOW AND PERFORMANCE!



CNC ported combustion chamber and ports designed by Kuntz & Co.



Big 310cc intake runners and 106cc exhaust ports deliver huge HP gains



Technical Data:	
Casting ID Number: WOR-081	Intake Runner: Standard port location
Material: 355-T6 alloy high density aluminum	Exhaust Ports: Standard location
Valve Seats: Intake (hardened), exhaust (hardened)	Spark Plug: 14mm .750" reach gasket style
Valve Guides: Manganese bronze	Valve Job: Multi-angle intake and radiused exhaust
Spring Seats: Machined for 1.560"	Valve Cover Rail: Raised
Valves: Manley stainless steel valves in assemblies	Valve Angle: 10°
Guide Plates: Special World part #830463	Accessory Bolt Holes: Stock
Rocker Arm Studs: Adjustable roller rocker, If T&D or Jesel Shaft system is to be used, a 5.700" valve may be required	Flow Numbers: Log on to worldcastings.com for detailed information.

Part #	Type	RUNNERS	Chamber	Valves	Plug	Spring	Spring Spec	Max Lift	Notes
023012	Bare	275 In / 102 Ex	64	No Valve Job	Std				
023012-3	Assembly	275 In / 102 Ex	64	2.200/1.600 5/16	Std	1.550 S	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E
023015	Bare	285 In / 102 Ex	64	No Valve Job	Std				
023015-3	Assembly	285 In / 102 Ex	64	2.200/1.600 5/16	Std	1.550 S	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E
Part #	Type	RUNNERS	Chamber	Valves	Plug	Spring	Spring Spec	Max Lift	Notes
CNC Ported (Ports designed by kuntz & co.)									
023015C	Bare	310 In/ 106 Ex	72*	2.200/1.600 5/16	Std				
023015C-3	Assembly	310 In/ 106 Ex	72*	2.200/1.600 5/16	Std	1.550 S	200lb @ 1.900 480lb @ 1.200 CB @ 1.150	.700"	E

Assembly Includes: Head, valves, seals, springs, retainers, locks

* Can be milled to achieve desired compression

Notes:

C = 7° Stamped heat treated steel valve locks, Manley 4140 chrome-moly retainers and Nitrile umbrella seals
 D = 10° machined steel valve locks, Manley 4140 chrome-moly retainers, Nitrile umbrella seals and Inconel exhaust valves
 E = 10° machined steel valve locks, Manley 4140 chrome-moly retainers, Teflon seals and Manley Severe Duty valves

Assembled heads have a 50° multi-angle intake and a 50° radius exhaust valve job

Available options:	832901	Stainless steel intake manifold bolt kit for 302 engines (hex head)
Polishing (6 to 8 weeks lead time)	832902	Stainless steel intake manifold bolt kit for 351 engines (hex head)
Contact your World sales representative for details.	832900	Stainless steel valve cover bolt kit (hex head)
	832930	Stainless steel header stud kit
Accessories:	Recommended Installation Items:	Due to the unique nature of the Man O'War 10° head, several manufacturers are developing products for this application. Since they will be released after the publication of this catalog, we ask that you check our website for details.
832585	Head bolt kit for Man O'War SBF aluminum or iron engine block (standard Ford bolt pattern)	
832552	Head stud kit for Man O'War SBF aluminum or iron engine block (standard Ford bolt pattern)	
832553	Head stud kit with extra studs for 10° heads on Man O'War block (Pro bolt pattern)	

MAN O'WAR ALUMINUM BLOCK

World's unique Man O'War aluminum block represents the state-of-the-art design in small block Ford technology. It incorporates many important features that leading Ford racers have asked for. The aluminum Man O'War tips the scales at only 90 lbs., is reinforced throughout, and has provisions for two

extra head bolts per cylinder (optional use) to provide superior clamping of the heads—essential for high combustion pressure applications. World's 10° Man O'War heads are similarly equipped Add 1045 billet steel splayed 4-bolt mains and ARP hardware for bottom end strength and bring on the power-adders!



Made of 357-T6 Aluminum (absolute strongest available)

Uses stock SBF cam bearings

Priority main oiling system for optimum reliability

1045 billet steel main caps utilized on Race blocks (unlike competitors' softer 1020)

1/2" ARP® and ring dowels used to locate main caps firmly into position (not antiquated standard OEM outside registers)

Provisions for two extra rod bolts per cylinder (optional use)

Blind tapped head bolt holes

100% compatible with OEM parts

Siamese bores

Expanded water jackets for maximum cooling

Precision CNC machined in two positions to cut down on stacked tolerances

Solid oil pan rails-stock spacing

Accepts stock mechanical fuel pump

Accessories:		Options Available:	
832665-2	Oil restrictors for Man O'War aluminum engine block	Cylinder boring	
832516	Freeze plug and pipe plug kit for Man O'War aluminum engine block	Lifter bushings	
832524	Dowel pin kit for Man O'War aluminum engine block	60mm cam bearings	
841102-DF	Replacement sleeve for Man O'War 8.200" SBF aluminum engine block (3.990" bore)	O-ring head decks	
841103-DF	Replacement sleeve for Man O'War 9.500" SBF aluminum engine block (3.990" bore)	Polishing (6 to 8 weeks lead time)	
832903	Stainless steel timing cover bolt kit (hex head)		
832904	Stainless steel oil pan bolt kit (hex head)		

Contact your World sales representative for details.



MAN O'WAR ALUMINUM BLOCK

There are many important reasons why World's Man O'War aluminum blocks are the most reliable of their kind on the market. It features a Priority Main Oiling System, which ensures that the crankshaft is lubricated first and the cylinder heads last. Water jackets are expanded over other block designs to improve cooling. And the block is reinforced in all critical areas, including bulkheads, mains and valley. It's a CAD-engineered masterpiece. The bottom end is anchored by splayed 4-bolt mains that are manufactured from 1045

alloy, which is considerably stronger than the 1020 alloy typically used by others. The Man O'War block has also been designed to allow use of two extra head bolts/studs per cylinder. This increased clamping force is essential when power-adders, like superchargers or turbochargers, are employed. World's 10th Man O'War aluminum heads likewise have provisions to use the two extra bolts per cylinder. Man O'War blocks have been used to win important racing titles, as well as the Engine Masters Challenge.



A look at the valley of the aluminum Man O'War block shows the reinforcing ribs and lifter pads. Lifter bores are indexed to assure optimum valve train geometry.



The bottom end of the aluminum Man O'War block is also a study in engineering excellence. Race blocks are equipped with billet steel splayed 4-bolt mains.



Technical Data:

Casting ID Number: WOR-352D (8.200"), WOR-352A (9.500")
 Material: 357-T6 aluminum (absolute strongest available)
Deck Thickness: .600" minimum
Cam Bearings: Standard small block Ford (can machine to 55mm)
Cam Location: Standard small block Ford
Maximum Bore: 4.155"
Cylinder Sleeves: Centrifugally cast ductile iron dry sleeves
Cylinder Wall Thickness: .100" dry sleeve w/.300" aluminum wall support @ 4.155"
Water Jackets: Expanded for better cooling
Lubrication: Priority main oiling system
Oil System Features: .500" feed; bosses for dry sump
Filtration: Mount for spin-on filter
Oil Pan Rails: Solid (stock width)
Main Cap Material: Sportsman block caps are made from nodular iron, Race blocks are made from 1045 billet steel (unlike competitors' softer 1020)
Main Caps: Sportsman and Race blocks have splayed 4-bolt caps (2, 3, 4) and straight 4-bolt caps (1, 5)
Main Cap Hardware: 1/2" ARP and ring dowels used to locate main caps firmly into position (not antiquated standard OEM outside registers)
Rear Main Seal: Two piece Fuel Pump; Stock location
Motor Mounts: Stock
Cylinder Head Bolt Holes: Blind tapped to prevent water leaks
Lifters Bosses: Clearanced for vertical bar lifters (can use standard height lifters)
Starter Mount: Stock location
Weight: Approximately 90lbs

THE BENEFITS OF ORDERING "RACE-PREPARED" BLOCKS

For the enthusiast who is planning to assemble an engine in their home garage, getting the block in a race-prepped state is almost a no-brainer. World's experienced staff performs important basic operations:

- Decks milled +/- .0025"
- Honed main journals +/- .0004"
- Plate honed cylinder bores .001" O.S. +/- .0005"
- Honed lifter bores +/- .0005"
- Block hot tanked
- Cam bearings installed
- Freeze plugs, installed
- Dowel pins and all pipe plugs are installed
- Block deburred
- Machined surfaces sprayed with rust prohibitor
- Protectively wrapped

More and more professional engine builders are also recognizing the benefits of ordering race-prepped blocks instead of endeavoring to perform these many tasks themselves. Many have realized that their time can be better spent doing critical assembly work such as degreasing in camshafts and setting up the valve train. By employing race-prepped World blocks the shop's through-put can be accelerated, and there are demonstrated savings in terms of personnel, shop equipment, space and cash flow. Do the math.



One of the key operations in race-prepping a block is honing the cylinders to the desired specifications using special plates to simulate the loads exerted on the block by the cylinder heads. World employs highly accurate Rottler Power Hones for the task.

Part #	Series	Type	Deck	Bore	Mains	Lifters	Main Caps	Max Stroke
087510	Race	Bare	8.200"	3.990"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087510-4000	Race	Prepped	8.200"	4.000"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087510-4030	Race	Prepped	8.200"	4.030"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087520	Race	Bare	8.200"	4.115"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087520-4125	Race	Prepped	8.200"	4.125"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087520-4155	Race	Prepped	8.200"	4.155"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087572	Race	Bare	9.500"	3.990"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087572-4000	Race	Prepped	9.500"	4.000"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087572-4030	Race	Prepped	9.500"	4.030"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087582	Race	Bare	9.500"	4.115"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087582-4125	Race	Prepped	9.500"	4.125"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087582-4155	Race	Prepped	9.500"	4.155"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"

Bare Blocks Include: Screw-in freeze plugs, cam plugs and dowel pin kit

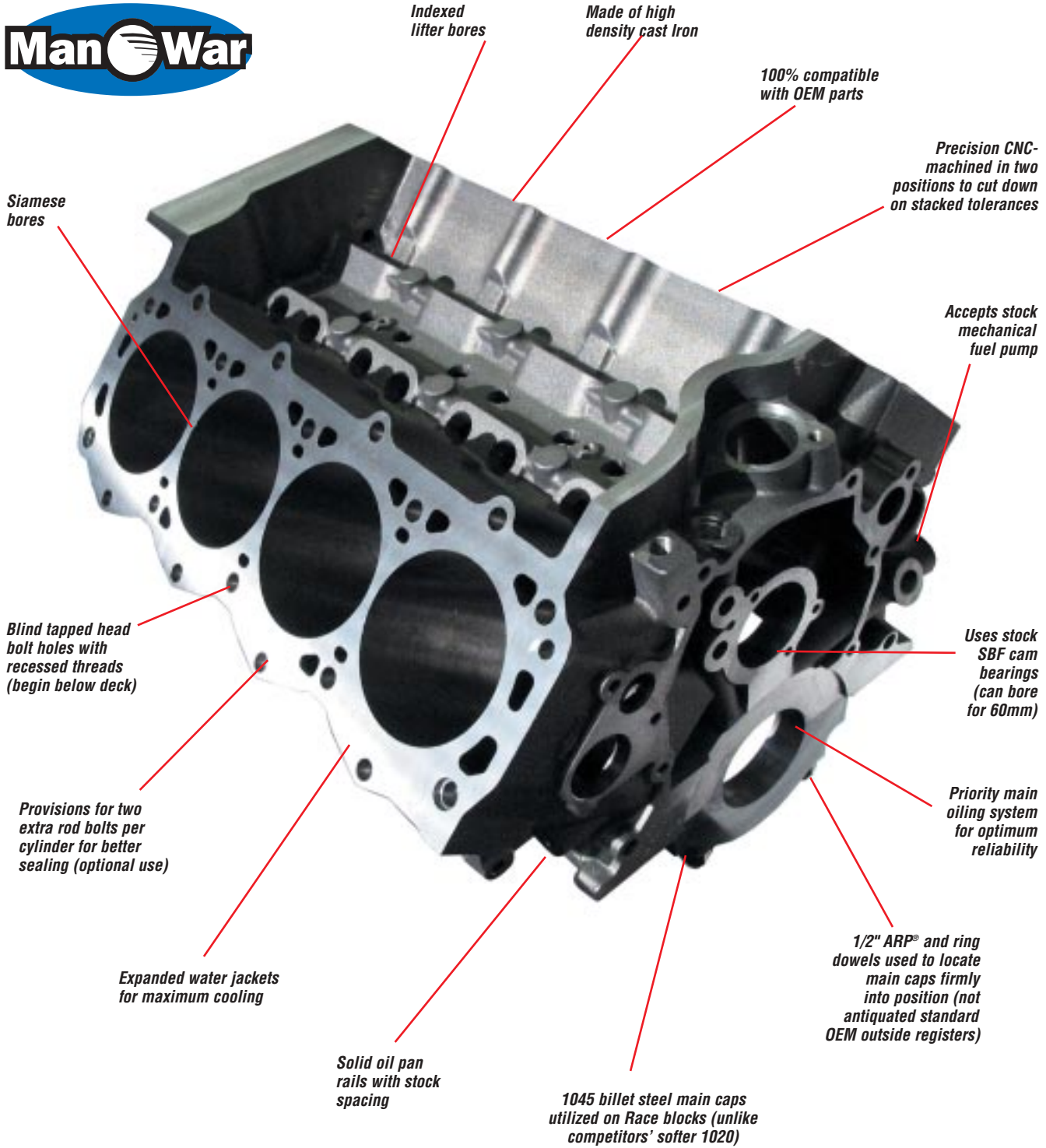
Prepped Blocks Include: Decks milled +/- .005"; honed main journals +/- .0004"; plate honed cylinder bores .001" O.S. +/- .0005"; honed lifter bores +/- .0005"; hot tanked, cam bearings, freeze plugs, dowel pins and all pipe plugs are installed, deburred sprayed w/ rust prohibitor and wrapped

Important Note: Due to varying engine builder preferences, the sleeves are not flush-milled with the deck and may vary.

MAN O'WAR CAST IRON BLOCK

From all measurable standards, World's trend-setting Man O'War cast iron block is the ultimate replacement for factory 302/351 blocks. It comes in various deck heights to match the application. The 8.2" block is a direct bolt-in for 5.0L Mustangs and compatible with OEM heads and exhaust systems. 9.2

and 9.5" deck blocks are also offered. You should know that the Man O'War block was used to win the Engine Masters Challenge, and that its design allows huge displacements. Add provisions for 2 extra head bolts per cylinder and you can see why it's a favorite of serious "Blue Oval" racers.



Indexed lifter bores

Made of high density cast iron

100% compatible with OEM parts

Precision CNC-machined in two positions to cut down on stacked tolerances

Siamese bores

Accepts stock mechanical fuel pump

Blind tapped head bolt holes with recessed threads (begin below deck)

Uses stock SBF cam bearings (can bore for 60mm)

Provisions for two extra rod bolts per cylinder for better sealing (optional use)

Priority main oiling system for optimum reliability

Expanded water jackets for maximum cooling

1/2" ARP® and ring dowels used to locate main caps firmly into position (not antiquated standard OEM outside registers)

Solid oil pan rails with stock spacing

1045 billet steel main caps utilized on Race blocks (unlike competitors' softer 1020)

Accessories:		Available options:	
832665-2	Oil restrictors for Man O'War cast iron engine block	Cylinder boring	
832533	Freeze plug and pipe plug kit for Man O'War cast iron engine block	Lifter bushings	
832524	Dowel pin kit for Man O'War cast iron engine block	60mm cam bearings	
832904	Stainless steel oil pan bolt kit (hex head)	O-ring head decks	
Contact your World sales representative for details.			

MAN O'WAR CAST IRON BLOCK

World Products has advanced small block Ford performance potential to the next level with the Man O'War block. This block was designed scratch (in collaboration with a leading NASCAR team) using CAD/CAM and 3D design technology. With the ability to design not only the part—but the tooling to

manufacture it—World's engineering team has come up with an elegant design that can be cast and machined to exacting specs. Like all other World blocks, the Man O'War is machined using only two fixturing operations, avoiding the tolerance "stacking" found in OEM production lines.



Superior lubrication is assured through Priority Main Oiling and large .500" feed passages.



The Man O'War's crankcase is designed to clear a 4.250" stroke crankshaft for big-inch engines.



The block also incorporates bosses for lifter cross-feeds (shown) as well as bosses for dry sump oiling.



Recessed threads (begin below deck) and blind tapped bolt holes assure proper clamping.

Available in 8.2, 9.2 and 9.5" deck heights to work with all 302/351 Ford engine combinations. It's the perfect foundation for any SBF engine!



Casting ID Number: WOR-351D (8.200"), WOR-351B (9.200"), WOR-351A (9.500")
Material: High density cast iron
Cam Bearings: Standard small block Ford (can machine to 60mm)
Cam Location: Standard small block Ford
Maximum Bore: 4.200"
Cylinder Wall Thickness: .250" @ 4.200"
Water Jackets: Expanded for better cooling
Lubrication: Priority main oiling system
Oil System Features: .500" feed; bosses for dry sump
Filtration: Integral mount for spin-on filter
Oil Pan Rails: Solid (stock width)
Main Cap Material: Sportsman block caps are made from nodular iron, Race blocks are made from 1045 billet steel (unlike competitors' softer 1020)
Main Caps: Sportsman and Race blocks have splayed 4-bolt caps (2, 3, 4) and straight 4-bolt caps (1, 5)
Main Cap Hardware: 1/2" ARP® and ring dowels used to locate main caps firmly into position (not antiquated standard OEM outside registers)
Rear Main Seal: Two piece
Fuel Pump: Stock location
Motor Mounts: Stock
Cylinder Head Bolt Holes: Blind tapped to prevent water leaks
Lifters Bosses: Clearanced for vertical bar lifters (can use standard height lifters)
Starter Mount: Stock location
Weight: from 170 lbs. for 8.2 deck block to 200 lbs for 9.5" deck block

Part #	Series	Type	Deck	Bore	Mains	Lifters	Main Caps	max Stroke
087010	Sportsman	Bare	8.200"	3.990"	2.248"	.875"	Nodular Splayed 4-Bolt	3.500"
087010-4000	Sportsman	Prepped	8.200"	4.000"	2.248"	.875"	Nodular Splayed 4-Bolt	3.500"
087010-4030	Sportsman	Prepped	8.200"	4.030"	2.248"	.875"	Nodular Splayed 4-Bolt	3.500"
087020	Sportsman	Bare	8.200"	4.115"	2.248"	.875"	Nodular Splayed 4-Bolt	3.500"
087020-4125	Sportsman	Prepped	8.200"	4.125"	2.248"	.875"	Nodular Splayed 4-Bolt	3.500"
087020-4155	Sportsman	Prepped	8.200"	4.155"	2.248"	.875"	Nodular Splayed 4-Bolt	3.500"
087052	Sportsman	Bare	9.200"	3.990"	2.479"	.875"	Nodular Splayed 4-Bolt	3.500"
087052-4000	Sportsman	Prepped	9.200"	4.000"	2.479"	.875"	Nodular Splayed 4-Bolt	3.500"
087052-4030	Sportsman	Prepped	9.200"	4.030"	2.479"	.875"	Nodular Splayed 4-Bolt	3.500"
087070	Sportsman	Bare	9.500"	3.990"	2.248"	.875"	Nodular Splayed 4-Bolt	4.250"
087070-4000	Sportsman	Prepped	9.500"	4.000"	2.248"	.875"	Nodular Splayed 4-Bolt	4.250"
087070-4030	Sportsman	Prepped	9.500"	4.030"	2.248"	.875"	Nodular Splayed 4-Bolt	4.250"
087072	Sportsman	Bare	9.500"	3.990"	2.749"	.875"	Nodular Splayed 4-Bolt	4.250"
087072-4000	Sportsman	Prepped	9.500"	4.000"	2.749"	.875"	Nodular Splayed 4-Bolt	4.250"
087072-4030	Sportsman	Prepped	9.500"	4.030"	2.749"	.875"	Nodular Splayed 4-Bolt	4.250"
087082	Sportsman	Bare	9.500"	4.115"	2.749"	.875"	Nodular Splayed 4-Bolt	4.250"
087082-4125	Sportsman	Prepped	9.500"	4.125"	2.749"	.875"	Nodular Splayed 4-Bolt	4.250"
087082-4155	Sportsman	Prepped	9.500"	4.155"	2.749"	.875"	Nodular Splayed 4-Bolt	4.250"
087110	Race	Bare	8.200"	3.990"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087110-4000	Race	Prepped	8.200"	4.000"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087110-4030	Race	Prepped	8.200"	4.030"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087120	Race	Bare	8.200"	4.115"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087120-4125	Race	Prepped	8.200"	4.125"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087120-4155	Race	Prepped	8.200"	4.155"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	3.500"
087170	Race	Bare	9.500"	3.990"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087170-4000	Race	Prepped	9.500"	4.000"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087170-4030	Race	Prepped	9.500"	4.030"	2.248"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087172	Race	Bare	9.500"	3.990"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087172-4000	Race	Prepped	9.500"	4.000"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087172-4030	Race	Prepped	9.500"	4.030"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087182	Race	Bare	9.500"	4.115"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087182-4125	Race	Prepped	9.500"	4.125"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"
087182-4155	Race	Prepped	9.500"	4.155"	2.749"	.875"	1045 Billet Steel Splayed 4-Bolt	4.250"

Bare Blocks Include: Dowel pin kit

Prepped Blocks Include: Decks milled +/- .005", honed main journals +/- .0004", plate honed cylinder bores .001" O.S. +/- .0005", honed lifter bores +/- .0005", hot tanked, cam bearings, freeze plugs, dowel pins and all pipe plugs are installed, deburred paint inside and out, sprayed w/ rust prohibitor and wrapped

MAN O'WAR

PARTIALS, SHORT BLOCKS AND ROTATING KITS

World Products makes it easy to add some big-inch power to most mid-60s and later Fords through its highly regarded Man O'War replacement for the venerable 302/351 Blue Oval offerings. With World's Partial engines you can employ your existing intake, exhaust and ignition systems—as well as the oil pan. This represents a cost-effective way to bolt in big-inch horsepower.

Do-it-yourselfers and professional engine builders are likewise provided a number of excellent options in the form of short block assemblies and kits, as well as rotating kits. As with World's engines, the rotating kits come with 4340 forged steel cranks, 4340 forged steel H-beam rods, forged aluminum pistons and high performance rings—all digitally balanced (internally) and ready to go!



The Best Way To Obtain Big-Inch Performance For Any Mustang, Cobra Or Other Ford Product. Replace Your 302/351 Engine With World Man O'War Power!



Like Ford, World Products is a primary manufacturer of engine blocks, cylinder heads and intake manifolds. But unlike the OEMs, World turns to the aftermarket for internal components instead of using "stock" parts. This enables World to produce engines that are so rugged and reliable that they're backed by a 2-year, 24,000-mile Limited Warranty.

World's Man O'War cast iron block was designed in collaboration with a leading NASCAR team. It has many key improvements over the OEM design—including reinforcement in all critical areas. What's more, it's manufactured to the industry's highest quality control standards, QS-9000, and is made using only two positions to eliminate the tolerance "stacking" that is common to engines that pass long many stations on an assembly line. And if that's not enough, many factory "crate engines" use ordinary 2-bolt main blocks, while the Man O'War has splayed 4-bolt mains and ARP hardware!

The crankshafts are 4340 forged steel (not cast), and the connecting rods are likewise forged from this race-proven alloy. You get forged pistons (not cast) and the entire rotating assembly is digitally balanced (internally) to fight harmonics. Do you think the OEMs take these important extra steps? We urge you to compare the extra features and benefits that are built in to every World engine, partial or short block.

World Now Offers Special "Power Adder" Partial Engine & Short Block Combos For Use With Superchargers And Turbos!



Part #	C.I.D.	Head	Application	Compression	Camshaft	Induction	Dome	Notes
Partial Engine (Stage II)								
120020	427	Aluminum	Street	10:1	Hydraulic Roller	None	-20cc	A
120120	427	Aluminum	Power Adder	8.8:1	Hydraulic Roller	None	-35cc	A
120025	460	Aluminum	Street	11.1:1	Hydraulic Roller	None	-16cc	B
Short Block Assembly								
102220	427		Street	10:1	None	None	-20cc	A
102219	427		Power Adder	8.8:1	None	None	-35cc	A
102221	427		Race	13.4:1	None	None	7cc	A
102225	460		Street	11.1:1	None	None	-16cc	B
Short Block Kit								
102320	427		Street	10:1	None	None	-20cc	A
102319	427		Power Adder	8.8:1	None	None	-35cc	A
102321	427		Race	13.4:1	None	None	7cc	A
102325	460		Street	11.1:1	None	None	-16cc	B
Rotating Kit								
102120	427		Street	10:1	None	None	-20cc	A
102119	427		Power Adder	8.8:1	None	None	-35cc	A
102121	427		Race	13.4:1	None	None	7cc	A
102125	460		Street	11.1:1	None	None	-16cc	B

A = Compression calculated using a 64cc chamber, .020" deck, and Fel-Pro 1031 gasket. Dome volume as per specified

B = Compression calculated using a 64cc chamber, .020" deck, and Fel-Pro 1134 gasket. Dome volume as per specified

MAN O'WAR

371 CID SBF STAGE 1 PARTIAL ENGINE

Here's the easy and economical way for a 5.0L Mustang owner to make it a 6-liter-plus powerhouse. Simply swap out the OEM short block and cylinder head "long block" in your Mustang for this 371 c.i.d. package. It features the highly regarded Man O'War cast iron block that contains a digitally balanced rotating assembly consisting of a 4340 forged steel crankshaft and 4340 H-

beam connecting rods, forged aluminum pistons and high performance rings. The 200cfm Windsor Sr. heads provide an excellent balance of flow and velocity for great throttle response and equally impressive top end power. The cam is specially designed for this combination and you should see close to 500HP with then right intake, exhaust and ignition systems. Go for it!



Horsepower For Your "Blue Oval"

Equipped with 200cc intake port World Windsor Sr. cast iron heads. A perfect compliment to a 5.0L Mustang's EFI or carburetor.



Cylinder heads equipped with Manley stainless steel valves, high performance springs, and aluminum roller rocker arms.

Heads can accommodate multiple exhaust flange patterns

Technical Data:
Engine Block: Man O'War cast iron
Deck Height: 8.200"
Bore/Stroke: 4.125" x 3.500"
Main Caps: 4-bolt nodular splayed
Cylinder Heads: Windsor Sr. 200cc cast iron
Valves: Manley stainless steel
Timing Chain: Double roller
Crankshaft: 4340 Eagle internally balanced
Connecting Rods: 4340 Eagle
Pistons: Mahle
Gaskets: Fel-Pro
Internal Hardware: ARP®
Exterior Hardware: Totally Stainless

The following parts are not included:
 Carburetor, intake manifold, ignition (distributor, coil, wires and spark plugs), damper, oil pan and pick-up

Man O'War cast iron block with splayed 4-bolt mains and ARP hardware

Rotating assembly digitally balanced (internally)

Got a 5.0L Mustang? Here's An Easy Way To Get An Extra 69 Cubic Inches of Displacement At No Extra Cost. Step Up To 6.0+L Man O'War Power!

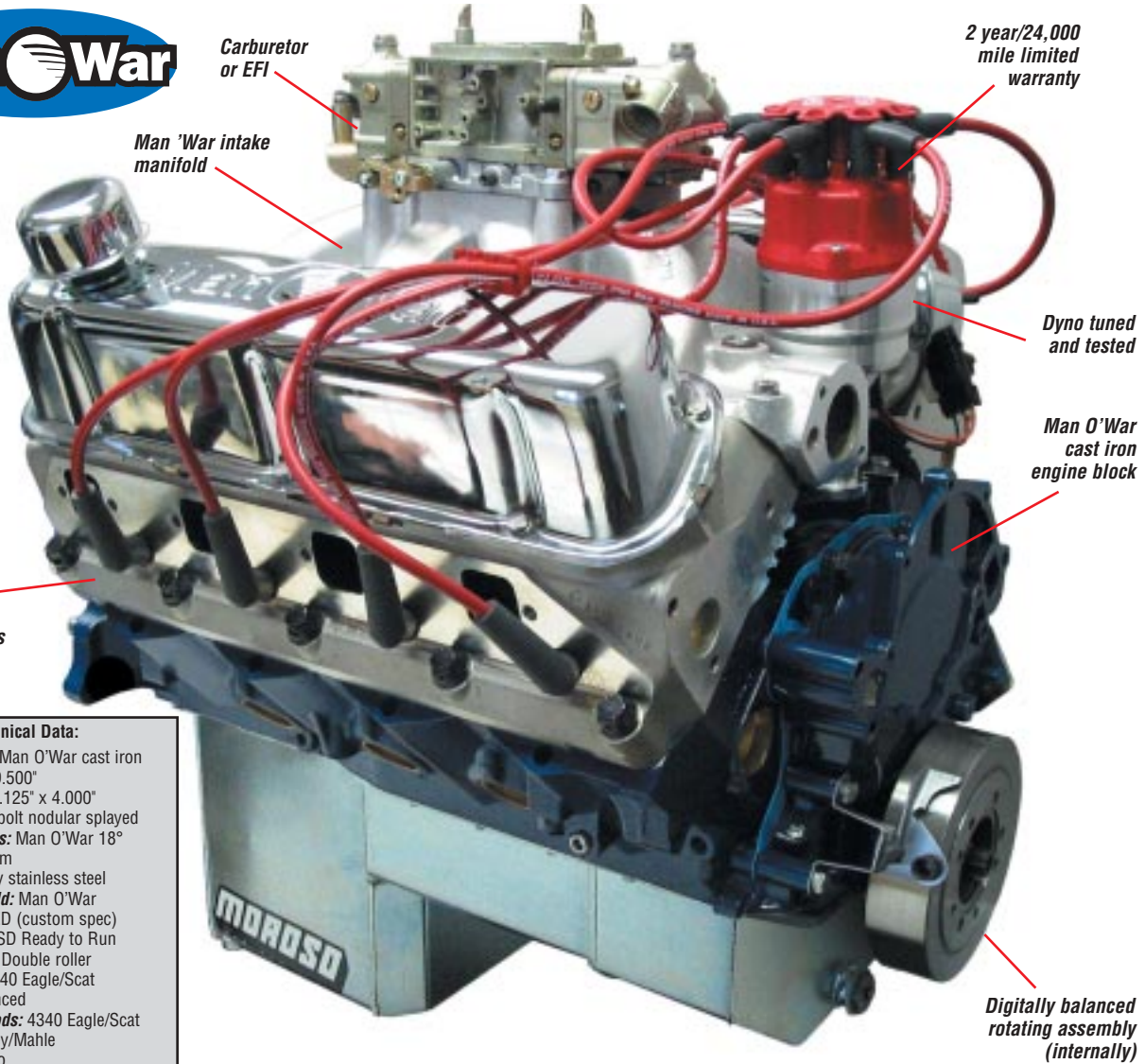
Partial Engines									
Part #	C.I.D.	Application	Heads	Compression	Camshaft	Induction	Dome	Notes	
120010	371	Street	Windsor Sr.	9.5:1	Hydraulic Flat Tappet	None	-13cc	A	

A = Compression calculated using a 64cc chamber, .020" deck, and Fel-Pro 1031 gasket. Dome volume as per specified

MAN O'WAR 427 CID SBF ENGINE

A big favorite with builders of Cobra kit cars, World's 427 c.i.d. Man O'War delivers 525 horsepower from an engine that weighs considerably less than the bulky Ford FE that came in some of Carroll Shelby's iconic sports cars. And it certainly out-powers garden variety 302/351 engines found in others.

The Man O'War 427 can certainly be employed in a variety of other Ford street rods and street machines with great success. It's also available in a 650 HP racing version. Partial engines, short block assemblies and kits, plus rotating kits for this 4.125" bore x 4.000 stroke combination are also available.



Carburetor or EFI

2 year/24,000 mile limited warranty

Man 'War intake manifold

Dyno tuned and tested

Man O'War cast iron engine block

Man O'War 18° 225cc aluminum cylinder heads

Digitally balanced rotating assembly (internally)

Technical Data:

Engine Block: Man O'War cast iron
Deck Height: 9.500"
Bore/Stroke: 4.125" x 4.000"
Main Caps: 4-bolt nodular splayed
Cylinder Heads: Man O'War 18° 225cc aluminum
Valves: Manley stainless steel
Intake Manifold: Man O'War
Carburetor: AED (custom spec)
Distributor: MSD Ready to Run
Timing Chain: Double roller
Crankshaft: 4340 Eagle/Scat internally balanced
Connecting Rods: 4340 Eagle/Scat
Pistons: Manley/Mahle
Gaskets: Felpro
Internal Hardware: ARP®
Exterior Hardware: Totally Stainless
Oil Pan: Moroso
Warranty: 2 year/24,000 mile limited (Street Series only)

525 Horsepower From 427 Cubic Inches!

Part #	Cu.In.	HP	Application	Type	Compression	Camshaft	Induction	Dome	Notes
Complete Engine									
120220	427	525	Street	Complete	10:1	Hydraulic Roller	4150 870cfm	-20cc	A
120320	427	525	Street	Complete	10:1	Hydraulic Roller	EFI	-20cc	A
102046	427	500	Street	Complete	10:1	Hydraulic Flat Tappet	4150 870cfm	-20cc	A
102091	427	650	Race	Complete	13.4:1	Solid Roller	4500 1050cfm	7cc	B

Complete Engine Includes: Pan to carb (or EFI), fully assembled, dyno tuned and tested and comes with a 2 year/24 month warranty (does not include starter, water pump or flywheel) pistons and connecting rods balanced within 2grms

Notes:

A = Compression calculated with a 64cc head, .020" deck, -20cc piston and a .041" gasket
 B = Compression calculated with a 64cc head, .020" deck, 7cc piston and a .041" gasket

Add "H" to part number for a front sump pan

Available options:	
Aluminum engine block	Cast iron cylinder heads
Polished aluminum engine block, cylinder heads and intake manifold (6 to 8 weeks lead time)	1 year/12,000 mile limited warranty (includes dyno break-in) Partial engine only
Polished cylinder heads and intake manifold (6 to 8 weeks lead time)	Contact your World sales representative for details.
CNC head porting (add 30 hp)	

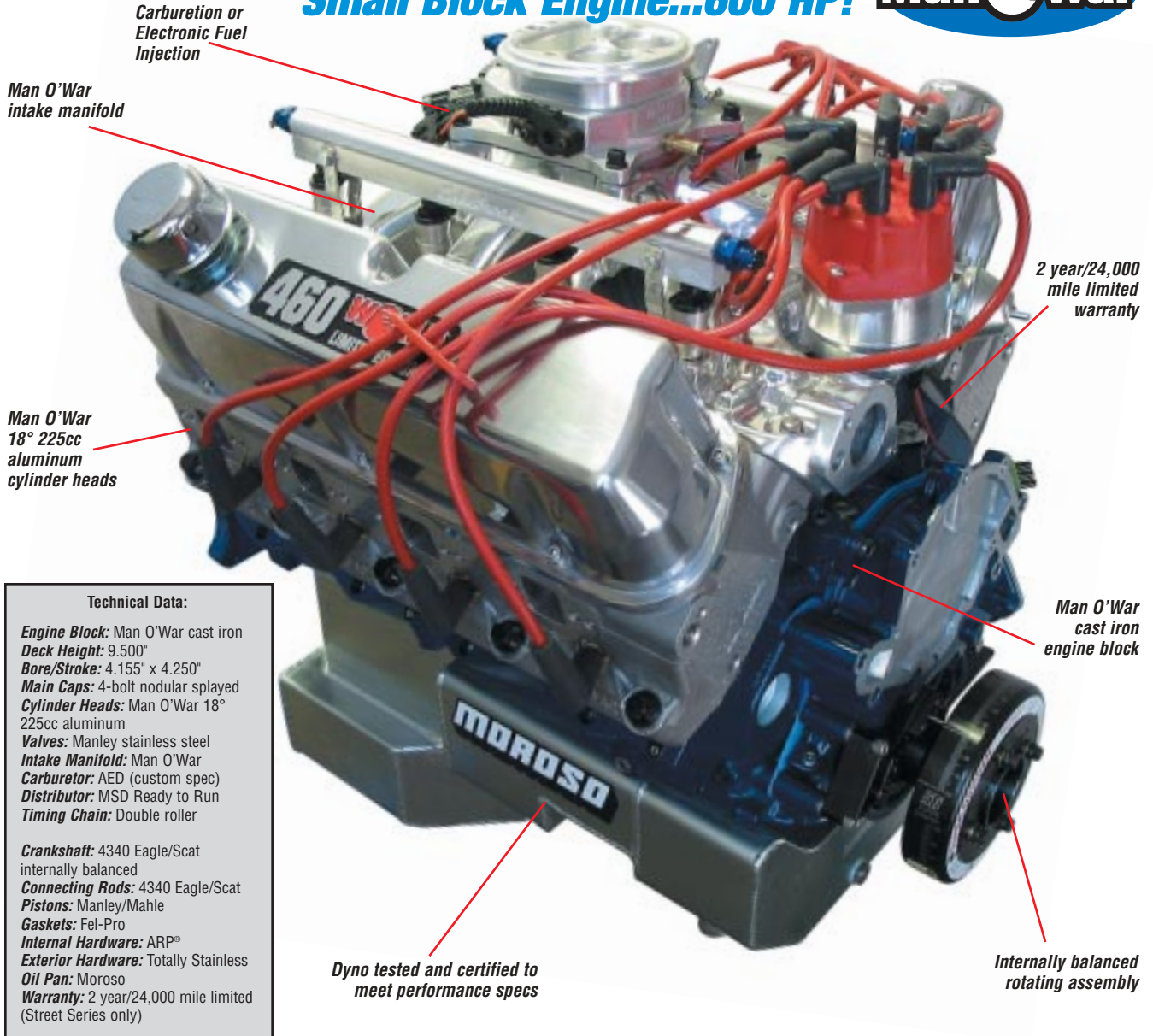
MAN O'WAR 460 CID SBF ENGINE

In the 460 c.i.d. Man O'War engines, World Products delivers the torque and horsepower of Ford's biggest big block in a small block package. This is possible because the Man O'War block was designed to accommodate a crank stroke of 4.250". Couple this with a 4.155" bore and you've got 460 cubic

inches of Blue Oval power. A pair of Man O'War 18° aluminum cylinder heads provide ample breathing, as does the Man O'War intake—which can be fitted with either a 4500 series carb or an Accel EFI. This 460-inch combination is also available as a partial engine, short block assembly and kit, or rotting kit.

SMALL BLOCK FORD

Get Big Block Performance In a Small Block Engine...600 HP!



Technical Data:
Engine Block: Man O'War cast iron
Deck Height: 9.500"
Bore/Stroke: 4.155" x 4.250"
Main Caps: 4-bolt nodular splayed
Cylinder Heads: Man O'War 18° 225cc aluminum
Valves: Manley stainless steel
Intake Manifold: Man O'War
Carburetor: AED (custom spec)
Distributor: MSD Ready to Run
Timing Chain: Double roller
Crankshaft: 4340 Eagle/Scat internally balanced
Connecting Rods: 4340 Eagle/Scat
Pistons: Manley/Mahle
Gaskets: Fel-Pro
Internal Hardware: ARP®
Exterior Hardware: Totally Stainless
Oil Pan: Moroso
Warranty: 2 year/24,000 mile limited (Street Series only)

Part #	Cu.In.	HP	Application	Type	Compression	Camshaft	Induction	Dome	Notes
Complete Engine									
120225	460	600	Street	Complete	11.1:1	Hydraulic Roller	4500 1050cfm	-16cc	A
120325	460	600	Street	Complete	11.1:1	Hydraulic Roller	EFI	-16cc	A
120275	460	600	Street	Complete	11.1:1	Solid Roller	4500 1050cfm	-16cc	A

Complete Engine Includes: Pan to carb (or EFI), fully assembled, dyno tuned and tested and comes with a 2 year/24 month warranty (does not include starter, water pump or flywheel)
Partial Engine Includes: All the same premium components as the complete engines, less intake manifold, induction system, ignition system and damper

Notes:
 A = Compression calculated with a 64cc head, .020" deck, -16cc piston and a .041" gasket
 Add "H" to part number for a front sump pan

Available options:
 Aluminum engine block
 Polished aluminum engine block, cylinder heads and intake manifold (6 to 8 weeks lead time)
 Polished cylinder heads and intake manifold (6 to 8 weeks lead time)
 CNC head porting (add 30 hp)
 Cast iron cylinder heads
 1 year/12,000 mile limited warranty (includes dyno break-in) Partial engine only
 Contact your World sales representative for details.