



500R

MERCURY
RACING



R-SERIES

500R 4.6L - V8

ALL NEW V8 500R

Experience elevated power and technology created expressly for owners of the fastest luxury sport boats. The Mercury Racing V8 500R produces unrelenting thrust that establishes a new standard for all-out performance. A host of new components and technologies have been engineered by the pros at Mercury Racing to harness the raw power produced by this extraordinary engine. Wide Open performance boating has never been more exciting.



STOUT POWERHEAD

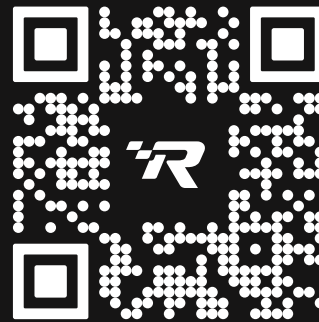
A 4.6-liter V8 powerhead is boosted by an exclusive Mercury Racing supercharger and tuned to deliver more than 500 eager horsepower, 50 more horsepower plus 10 percent more torque than the 450R model. This is the new benchmark in marine power density. All of this performance is available on pump fuel with a minimum 89-octane (95 RON) rating.

A new low-inertia flywheel allows the engine RPM to climb faster for improved acceleration. New internal components include a stout crankshaft with upgraded bearing oiling and 1-inch driveshaft splines. Connecting rods, rod bearings and pistons are strengthened to handle increased combustion pressure and a higher 6600 RPM redline.



UNDER PRESSURE

Supercharger boost pressure is increased by 26 percent compared to the 450R model. To accommodate increased airflow demand, the 500R features a new attenuator with a larger intake. Throttle body diameter is increased by 15 percent from 80mm to 92mm, and the shape of the supercharger inlet is redesigned to improve flow. The charge air cooler fin density and flow pattern are optimized to improve efficiency.



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HUMIDITY COMPENSATION TECHNOLOGY

The V8 500R is the first marine engine to be equipped to monitor the humidity level of incoming air, data the engine computer uses to maintain the most aggressive calibration to optimize performance under virtually all conditions – from the dry cold of desert lakes to the dripping humidity of the Gulf Coast. The result – up to 30 additional horsepower than would be available without this technology in the most challenging conditions. Heat and humidity just can't slow down the V8 500R.



ARC

ADVANCED RACING CORE (ARC)

The new Advanced Racing Core midsection is engineered to complement the extreme thrust and high-speed capability of the V8 500R outboard. This is the strongest, stiffest and most-durable midsection ever created by Mercury Racing, and it is exclusive to the V8 500R outboard.

TRIMMED TO PERFECTION

A new trim system features two main hydraulic rams plus two booster rams for added trim authority under full load. Slower trim speed permits very fine resolution for more-precise trim adjustment. The hydraulic power steering system has been upgraded to produce 18 percent more torque. A newly designed steering arm, stainless steel steering tube and steering cylinder are 20 percent stronger. The optional rear tie-bar bracket provides an ultra-light mounting point for rock-solid precision steering on catamaran and other high-speed applications.



CORE STRENGTH

A reinforced transom plate, precision-fit heavy-duty stainless steel guide plates and stiffened engine mounts are tuned to stabilize the engine for enhanced high-speed handling. Seven transom mounting holes accommodate three additional inches of vertical adjustment.



A CASE FOR SPEED

A new 5.9-inch R-Drive gearcase is exclusive to the V8 500R outboard. Its crescent leading edge and long aspect torpedo are shaped for speed and hydrodynamically engineered to thrive in submerged, semi-surfacing and full surfacing applications. The drive will accept a wide selection of Mercury Racing propellers up to 17-inch diameter.



R-DRIVE SPORT

The new R-Drive Sport gearcase is optimized for high-performance catamarans and center consoles capable of exceeding 100 mph top speed. Its longer, wedge-shaped skag maintains steering control while operating fully surfaced at high mounting positions. The propshaft is formed in high-strength aerospace stainless steel alloy to better endure the vibratory stress created by a surfacing propeller.

R-DRIVE

The R-Drive gearcase is designed to perform well in submerged and transition applications on boats capable of speeds between 85 and 100 mph, including high-performance center console models. A standard-length skag with a very efficient parabolic cross-section shape is offered with left- or right-hand camber to balance steering force with standard and counter-rotation props.





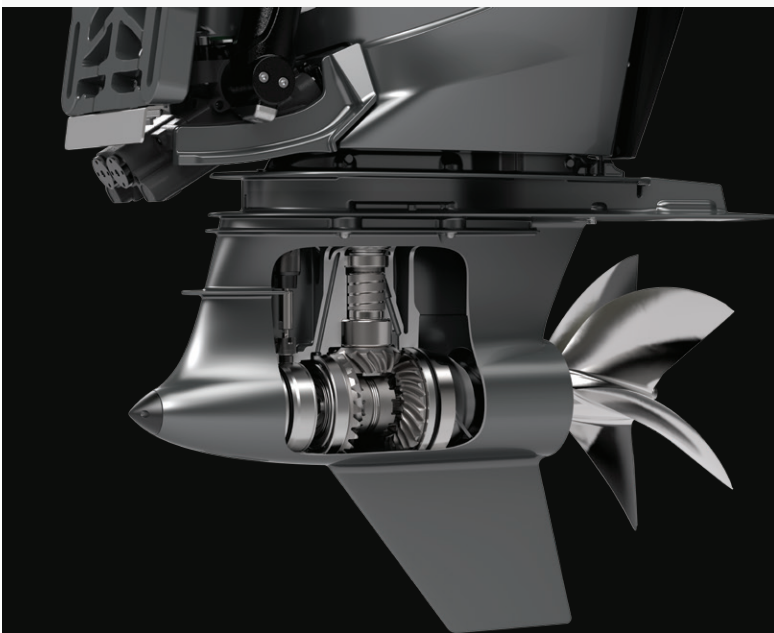
OPTIMIZED FLOW

Low water pickups located below the front of the torpedo plus a new adjustable nose cap inlet dial in ideal water flow for a specific application. The nose cones come in two shapes – one for submerged/semi-submerged applications with several water inlet hole variations, and another shaped to run in surfacing applications. A new water pump increases capacity 57 percent to ensure optimal flow to the cooling system.



R-DRIVE

R-DRIVE SPORT



GEARED FOR POWER

Robust internal components, including a new 1-inch diameter driveshaft and stout 1.5-inch diameter propshaft, are designed to withstand the massive torque produced by the V8 500R. Mercury Racing selected a 1.60:1 gear ratio for both the R-Drive and R-Drive Sport gearcase.

COLOR OPTIONS

Color options include Phantom Black or Cold Fusion White with Devil Red Eye trim. For custom paint application a version in Phantom Black with no applied graphics is available.

PHANTOM BLACK

COLD FUSION WHITE



500R - V8 4.6L SPECS

HORSEPOWER (HP/KW)	500 / 372
WOT RPM	6000 - 6600
ENGINE TYPE	V8 (64 Degree) with 32-Valve Dual Overhead Cam (DOHC)
DISPLACEMENT (LITER/CID)	4.6 / 281
INDUCTION SYSTEM	Supercharged with Charge Air Cooling & Electronic Boost Control
FUEL REQUIREMENTS	Unleaded Regular 89 Octane Minimum (R+M/2) or 95 RON
CHARGING (AMP/WATT)	115 / 1449
THROTTLE & SHIFT	Digital Throttle & Shift [DTS]
MIDSECTION	Advanced Racing Core [ARC]
INTEGRATED REAR TIE BAR BRACKET	Available
SHAFT LENGTHS (INCH)	20, 25, 30 & 35
GEARCASE	R-Drive, R-Drive Sport
GEAR RATIO	1.60:1
DRY WEIGHT¹ (LB/KG)	726 / 329
WARRANTY²	3-Year Limited

¹Lightest Model Available

²Up to 5 Years Mercury Product Protection Available



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