

YAMAHA MARINE

# HOT SHEET

New

EFFECTIVE NOVEMBER 1, 2009

## V MAX<sup>®</sup> SHO<sup>™</sup> Super High Output *four-stroke*

**Introducing the all-new Yamaha V MAX SHO – this changes everything.**

With class-leading 4.2 liters of displacement and game-changing Super High Output four-stroke outboard technology, Yamaha's new V MAX SHO has absolutely unbelievable hole shot and acceleration - performance even two-strokes of the same horsepower can't match - with equally-impressive top speed. Two-strokes of equivalent horsepower can't beat it on weight, either. It provides astounding power and performance, complete with Yamaha's signature four stroke smoothness, convenience, and reliability. The Yamaha V MAX SHO represents the absolute leading edge in high-performance outboard technology, purpose-designed and built as the ideal power for bass boats and in shore bay and flats boats.

- **4.2 Liter Big-Bore V6 Displacement** – using the first marine application of plasma-fused sleeveless cylinders, displacement is increased without enlarging the outer diameter of the cylinder, resulting in an outboard with the largest displacement in its class.
- **Lightest in Weight\*** – a full 34 pounds lighter than the V MAX Series 2 it replaces, no other production V6 bass outboard of equal horsepower is lighter, including two-strokes. For details, see the chart inside.
- **Fastest Hole Shot / Acceleration** – the naturally-aspirated, big-bore Yamaha V MAX SHO 250 has the fastest hole shot / acceleration in its class – even faster than the renowned V MAX Series 2. For details, check out the chart inside.
- **Remarkably Responsive** – instant throttle response, especially in the mid-range, for performance you can feel, with a top speed faster than a two stroke 250hp V MAX Series 2 outboard.
- **Outstanding Fuel Efficiency** – proven ignition and fuel injection systems combine with an all-new intake system. The V MAX SHO burns an average of 12 percent less fuel than the direct injection V MAX Series 2.
- **Smooth and Quiet Operation** – A straighter-tracking high performance lower unit with 81% larger water intakes is also standard. Cutting-edge Yamaha four stroke design and new technological advancements help you quietly approach your quarry.
- **Ease of Maintenance and Lasting Value** – advanced features like an ignition knock sensor and an easy to replace spin-on oil filter help protect your investment for years of trouble-free enjoyment.
- **Rugged Reliability** – from its extensive Engine Warning and Protection Systems to the computerized Yamaha Diagnostic System, the new V MAX SHO is purpose-built to Yamaha's exacting standards.



AVAILABLE MODELS: VF250LA • VF225LA • VF200LA

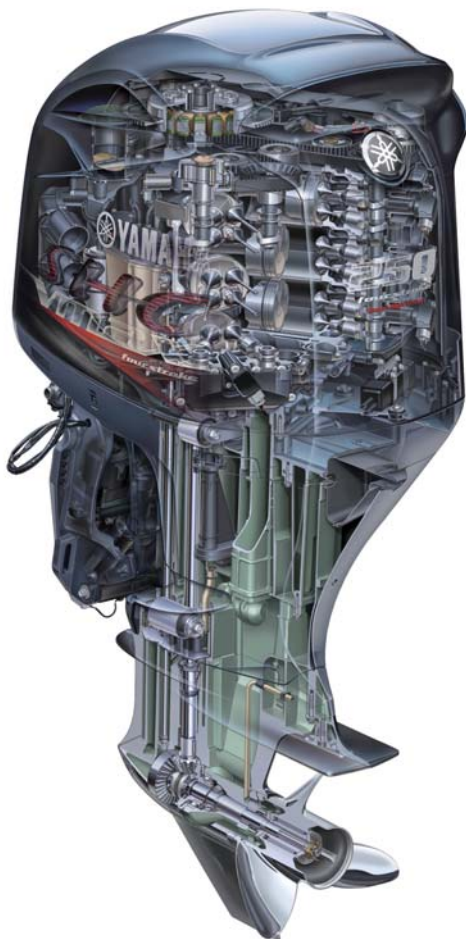
\*Published dry weight.

▲ Consult appropriate Yamaha rigging information and Yamaha Rigging Sheet (YMBS) for complete rigging compatibility and requirements information for particular configurations. All rigging items sold separately.



# V MAX SHO Super High Output Four Stroke

## FEATURES



### MODEL CODE CHART (EXAMPLE)

VF Series and Fuel Induction	250 Horsepower	L Shaft Length	Starting Method PTT	Control Method	A Generation
V = V MAX F = Four Stroke		S = 15" L = 20" X = 25" U = 30" J = Jet	Blank = PTT & E start P = PT & E start E = Electric Start M = Manual Start	Blank = Remote Control H = Tiller Handle C = Command Link Control	A = 1st change on motor B = 2nd change on motor C = 3rd change on motor Etc.



## RIGGING OPTIONS

### GAUGES<sup>▲</sup>

- Command Link<sup>®</sup>
- Yamaha Multifunction
- External NMEA-2000<sup>®</sup> Display
- Analog
- Command Link Plus Display

Compatible  
Compatible  
Compatible<sup>▲</sup>  
Compatible  
Not Compatible

### CONTROLS<sup>▲</sup>

- Mechanical (Cable)
- Command Link Plus Digital Electronic Controls
- Command Link Digital Electronic Controls

Compatible  
Not Compatible  
Not Compatible

### KEY SWITCHES AND LANYARDS<sup>▲</sup>

- Command Link
- Conventional
- Command Link Plus

Compatible  
Compatible  
Not Compatible

### MISCELLANEOUS<sup>▲</sup>

- Command Link Gateway
- Analog Gauge Interface
- Command Link Triducer<sup>®</sup>
- Variable Trolling RPM
- Y-COP<sup>™</sup> (Immobilizer)

Compatible  
Compatible  
Compatible  
Compatible  
Not Compatible

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# V MAX SHO Super High Output Four Stroke

## FEATURES

**Power/Performance**

- Large Water Separator with Water Sensor
- ECM Micro-Computer Control
- Electronic Single Throttle Valve
- Closed Fuel Vapor System
- Variable Trolling RPM
- Water Cooled Rectifier Regulator

**Reliability/Durability**

**Convenience/Control**

- Labyrinth Exhaust
- Lightweight Designed Bracket
- High Performance Lower Unit
- Exhaust Pressure Reduction System
- Propeller: V MAX<sup>®</sup> Ventless Series

- Plasma-Fused Sleeveless Cylinders
- VCT: Variable Camshaft Timing
- Multi-Point Electronic Fuel Injection
- Direct Coil-in-Cap Ignition
- 24-Valve, DOHC, 60-deg V6
- In-Bank<sup>™</sup> Exhaust
- Tuned Long Track Intake Manifold
- Blow-By Gas Re-burning System

- Water Draining Air Intake Duct
- Compact Super High Output Design
- Lightweight Polymer Lower Pan

### Convenience & Control

Command Link<sup>®</sup> System (Optional)

Command Link<sup>®</sup> Gauges

### Warning & Protection Systems

Over-Heat Warning

YDIS: Yamaha Diagnostic System

Over-Rev Limiter

Sensor Compensation System

Low Oil Pressure Warning

### Ultimate Corrosion Protection System

Special Aluminum Alloy: YDC30

Anodic Exhaust Coating (Alumite)

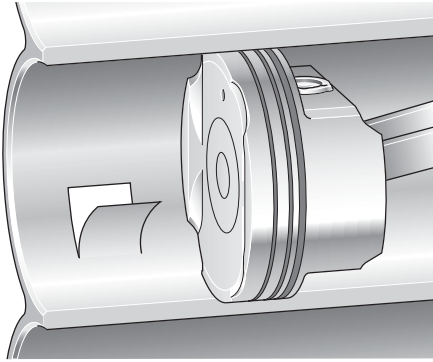
Self-Sacrificing Anodes

Freshwater Flushing Device

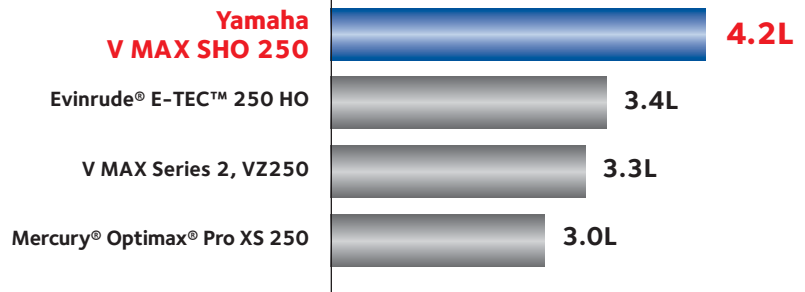
# V MAX SHO Super High Output Four Stroke

## PERFORMANCE TEST DATA

### 4.2 LITER BIG BORE DISPLACEMENT



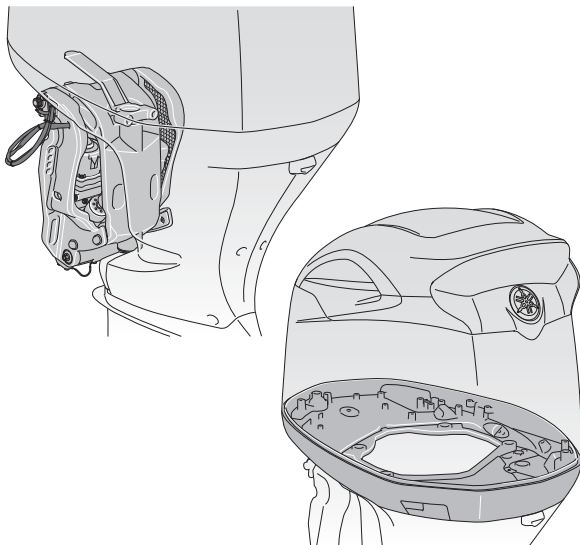
#### DISPLACEMENT COMPARISON\*



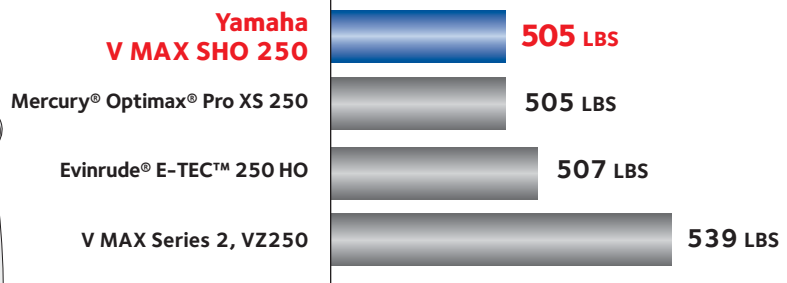
By using a highly-advanced thermally-applied plasma fusion process on the cylinder walls, the V MAX SHO has no conventional steel cylinder sleeves, yet the cylinder walls are 60% harder than steel. That means larger cylinder bores for increased displacement, resulting in more power and torque, without increasing outer cylinder dimensions. It also results in dramatically lighter weight, better cooling, and the “micro-textured” cylinder walls help reduce friction loss, further increasing performance and enhancing reliability.

\*Published data

### LIGHTEST WEIGHT IN CLASS



#### WEIGHT COMPARISON (Published dry weight)\*

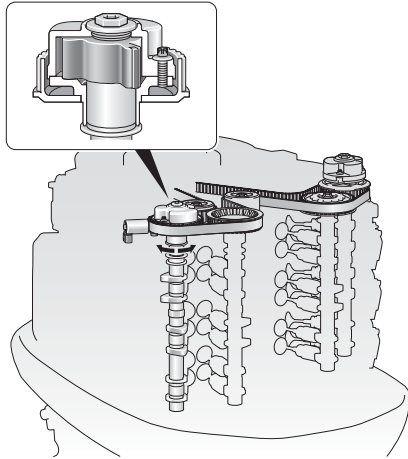


The Yamaha V MAX SHO is 34 pounds lighter than the V MAX Series 2 it replaces. In fact, no other equivalent-horsepower production V6 bass outboard is lighter, including two strokes. From the specially re-designed engine bracket to the new lightweight cowling, every ounce of weight-savings has been realized without sacrificing durability. There's even a new advanced polymer composite lower engine pan that helps reduce weight.

# V MAX SHO Super High Output Four Stroke

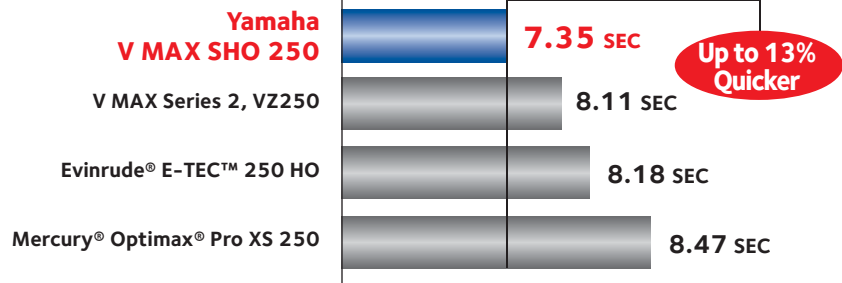
## PERFORMANCE TEST DATA

### HOLE SHOT / ACCELERATION



#### ACCELERATION COMPARISON (0-200 ft)

(Skeeter® ZX250)



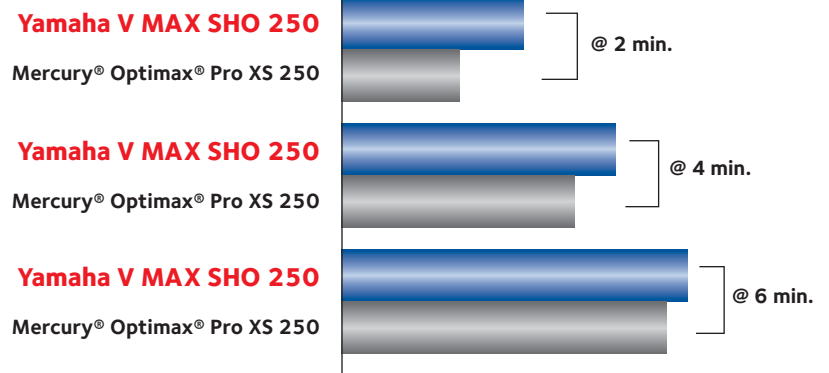
Yamaha's Variable Camshaft Timing system advances and retards the angle of the intake camshaft to dramatically increase power and throttle response in the low- and mid-rpm ranges. This feature helps Yamaha's new 4.2 liter big-bore V MAX SHO four stroke provide awesome hole shot and mid-range acceleration you have to feel to believe.

### SPEED / DISTANCE COMPARISON



#### DISTANCE OVER TIME

(Skeeter® 20i)

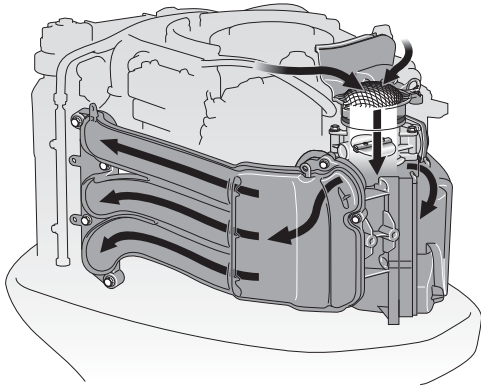


Yamaha's new V MAX SHO four stroke outboard utilizes an advanced sensor that allows maximum safe ignition timing. The resulting hole shot and acceleration is so amazing that it outperforms popular two stroke models, and excellent top speed performance gets you to your next spot fast - even if it's miles away. It's a difference you can feel.

# V MAX SHO Super High Output Four Stroke

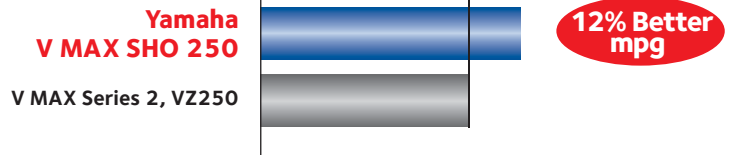
## PERFORMANCE TEST DATA

### OUTSTANDING FUEL ECONOMY



#### FUEL ECONOMY COMPARISON (Average)

(Skeeter® 20i)



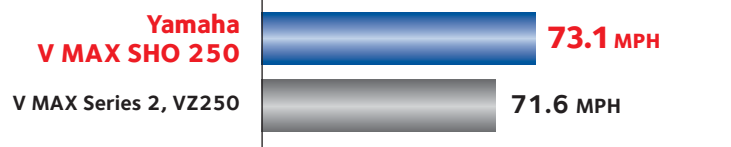
The 4.2 liter big bore V MAX SHO four stroke outboard averages 12% better fuel economy throughout the RPM range than our venerable 3.3 liter direct-injected 250 hp V MAX Series 2 two stroke. All air entering the engine block of the V MAX SHO is routed through a single 75mm electronically-controlled throttle valve. Working in concert with the Precision Multi-Point Fuel Injection System, they together help ensure the precise amount of air and fuel necessary for optimum power and fuel efficiency. The reduction in friction from the Micro-Textured Cylinder Walls further adds to this outboard's amazing fuel economy.

### TOP SPEED



#### TOP SPEED COMPARISON

(Skeeter® 20i Tournament Load)

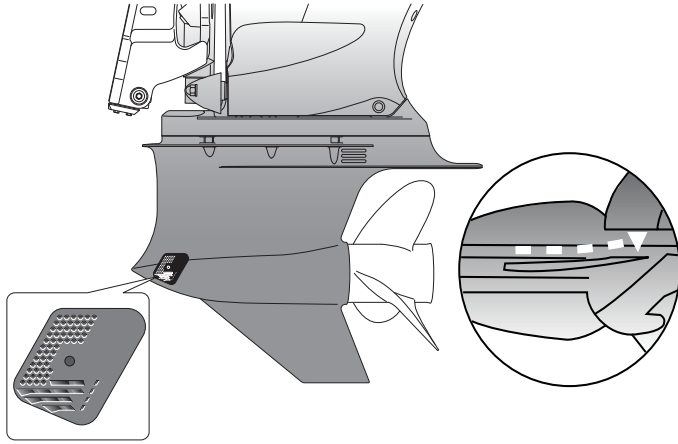


The Yamaha V MAX SHO is faster than even the vaunted V MAX Series 2 that it replaces. This means four stroke smoothness, convenience, and reliability; with top speed better than that of our direct-injected two-stroke of comparable horsepower.

# V MAX SHO Super High Output Four Stroke

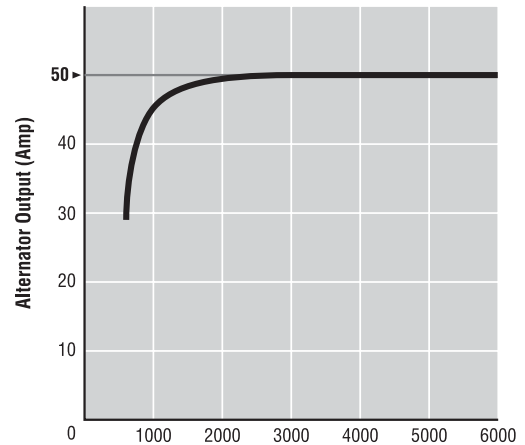
## POWER AND PERFORMANCE

### BETTER COOLING, STRAIGHTER TRACKING



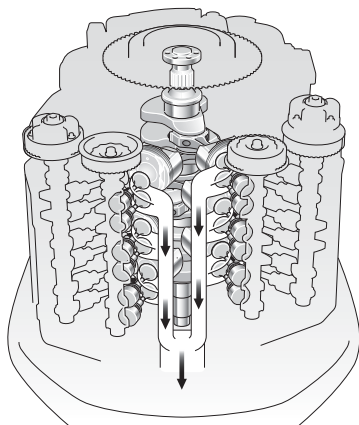
The specially-contoured high performance lower unit features a unique curved sked design for straighter tracking, while forward-mounted water inlets are 81% larger than V MAX Series 2 for increased cooling capacity. Inside are specially heat-treated gears for increased durability. These lower units are stock factory production, not an aftermarket add-on, so they're covered by Yamaha's 3-year limited warranty for pleasure or government use.

### POWERFUL CHARGING



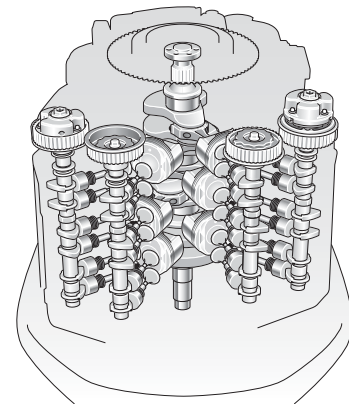
With 46 amps of total alternator power at 1000 rpm and a full 50 amps from 2000 ~ 6000 rpm, V MAX SHO outboards offer the kind of charging power needed to help operate today's wide array of on-board electronic devices.

### POWERFUL YET COMPACT



Yamaha's exclusive "In-Bank" exhaust system exits downward through the center of the engine between the "V" of the cylinders, rather than on the exterior side. This increases combustion efficiency for more power and torque, and also provides for a more compact shape.

### RESPONSIVE POWER

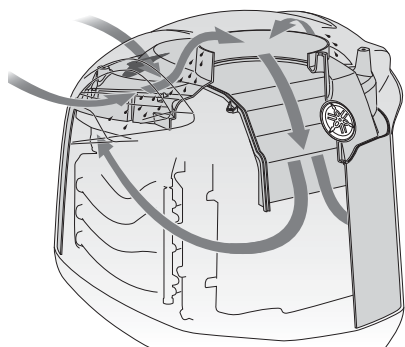


4.2 liters of class-leading displacement teams with individual intake and exhaust camshafts to provide more precise valve timing control with fewer moving parts than conventional rocker arm systems for increased reliability. This superior design also allows for use of 4 valves per cylinder which exchange intake and exhaust gases more efficiently for responsive power and increased fuel economy. Intake valves are 14% larger and exhaust valves are 10% larger than our 3.3L DOHC system.

# V MAX SHO Super High Output Four Stroke

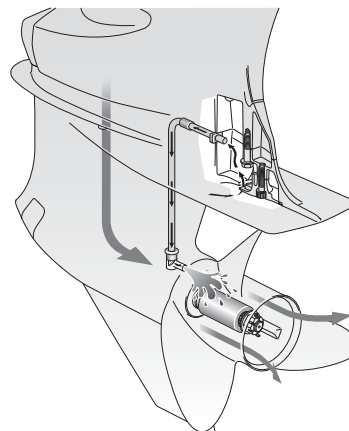
## RELIABILITY AND DURABILITY

### PROTECTION FROM THE ELEMENTS



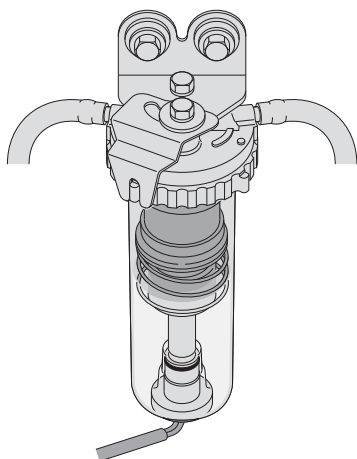
The V MAX SHO features an advanced cowling drain system, to easily and efficiently drain away any water that enters the cowling during normal engine operation. Incoming air is routed through a labyrinth of passages that trap and drain water before it enters the engine's intake, for maximum reliability.

### PROTECTION AND POWER



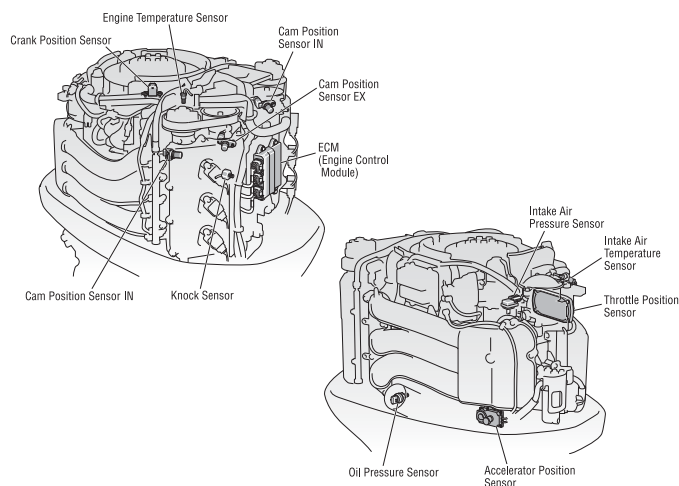
V MAX SHO outboards have an exhaust pressure reduction system, which not only helps keep the propeller hub cooled from hot exhaust gases, it also helps provide power by "forcing" those gases out of the engine during the critical hole shot and acceleration phases.

### CLEANER FUEL



All V MAX SHO outboards utilize a large, on-engine water separating fuel filter with a water sensor. Used in conjunction with Yamaha's 10-Micron Water Separating Fuel Filter, it helps separate water and contaminants from the fuel before they can reach the outboard's other filters and fuel injectors.

### RELIABILITY AND EFFICIENCY



A multitude of advanced sensors constantly provide vital atmospheric and engine conditions to the Engine Control Module (ECM), which instantly makes the precise adjustments for optimum performance, durability, and efficiency.



# V MAX SHO Super High Output Four Stroke

## CONVENIENCE AND CONTROL

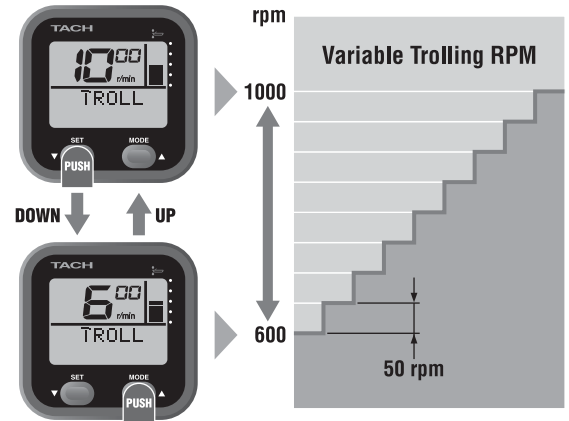
### MECHANICAL CONTROL



Yamaha V MAX SHO outboards are cable-actuated, allowing use of our 6X3 flush side-mount remote control. You can even add your own foot-operated throttle for additional convenience.▲

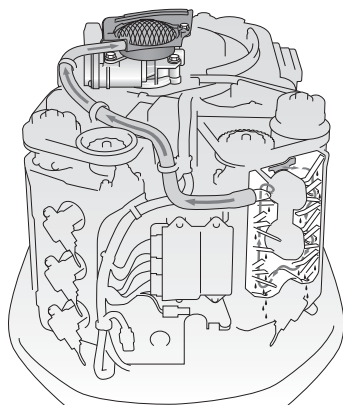
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### VARIABLE TROLLING RPM



By just pressing a button on the optional Command Link® tachometer, the operator can adjust the engine's trolling speed from 600 ~ 1000 rpm, in 50-rpm increments. This helps provide precise and consistent trolling speeds in a wide array of conditions.

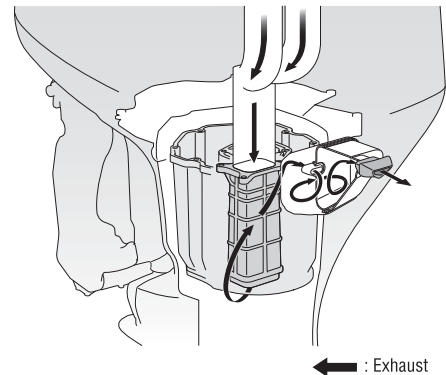
### CLEAN AND EFFICIENT



← : Blow-By Gas  
● : Oil

Yamaha V MAX SHO outboards feature a Blow-by Gas Re-Burning System. This separates any unburned combustion gases and re-routes them to the air intake system where they are burned again, helping maximize fuel efficiency and earn a CARB 3-star emissions rating.

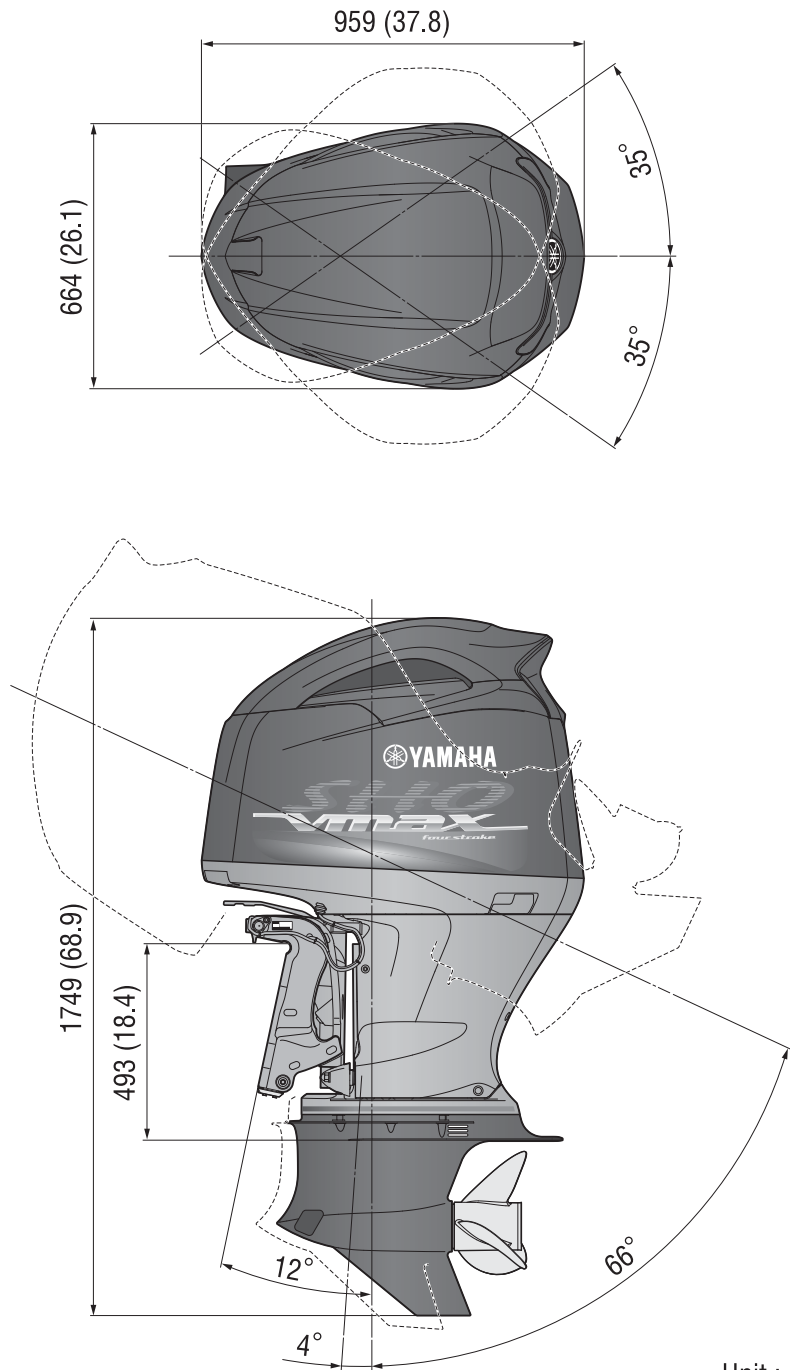
### SMOOTH AND QUIET



Engine exhaust is routed through a maze before exiting above the waterline through the idle exhaust relief outlet, for unbelievably smooth and quiet operation. A mufflerless design creates a more direct exhaust flow and a pleasing sound of power at idle.

# V MAX SHO Super High Output Four Stroke

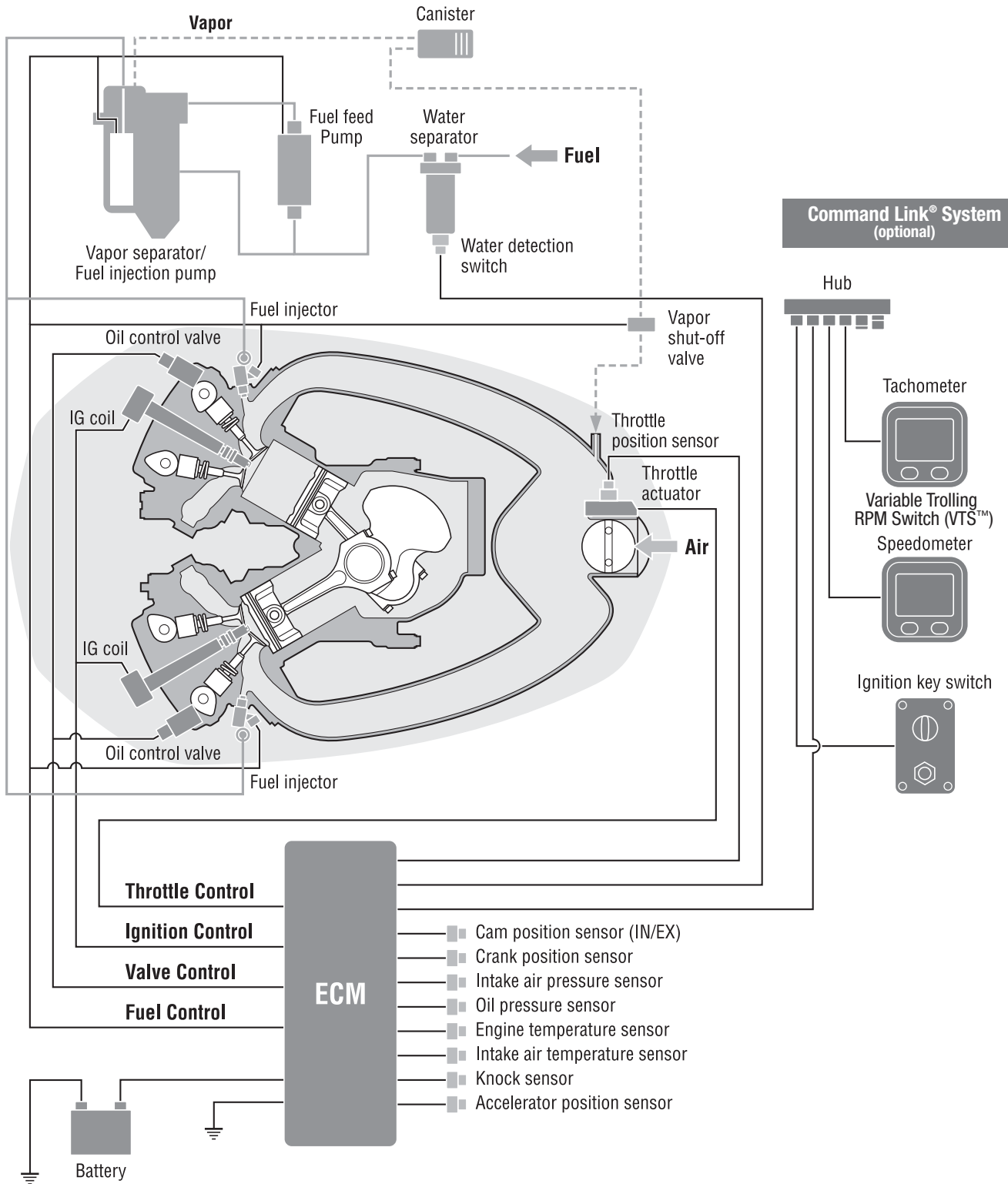
## DIMENSION SPECIFICATIONS



The break-through four stroke technology used in Yamaha's new V MAX SHO help keep exterior dimensions surprisingly compact, and the 35° maximum steering angle to the left or right gives you excellent control.

# V MAX SHO Super High Output Four Stroke

## V MAX SHO SYSTEM



# V MAX SHO Super High Output Four Stroke

## SPECIFICATIONS

### ENGINE

Type	60° V6
Displacement	4.2 liter
Bore x Stroke	96 x 96mm (3.78 x 3.78 in)
Full Throttle RPM Range	5000 ~ 6000
Horsepower Rating at Propshaft	250hp at 5500 rpm (VF250LA) 225hp at 5500 rpm (VF225LA) 200hp at 5500 rpm (VF200LA)
Compression Ratio	10.3:1
Fuel Induction/Scavenging	EFI/VCT/DOHC
Alternator Output	50 Amp (46 AMP @ 1000 rpm)
Starting Method	Electric w/ PTT
See Model Code	
Ignition	TCI Microcomputer
Lubrication	Wet Sump
Degree of Trim	-4° through +16°
Degree of Tilt	66°
Exhaust	Through Propeller
Cooling	Thermostatic Control

### DRIVE

Gear Shift	Forward, Neutral, Reverse
Gear Ratio	12:21 (1.75)

### SHAFT LENGTH

See Model Code	L = 20"
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### FUEL AND LUBRICATION

Recommended Fuel (for best performance)	VF250 (Min. PON 89) VF225 (Min. PON 89) VF200 (Min. PON 87)
Recommended Fuel Filtration	Yamaha 10-Micron Fuel/Water Separating Filter (external)
Ethanol Blend Limit	10% Maximum
Recommended Oil	Yamalube® 4M (See owner's manual)
Engine Oil Capacity	6.7L (7.1 qt) with filter

### WEIGHT (Dry)

VF250LA	229kg (505 lbs)
VF225LA	229kg (505 lbs)
VF200LA	229kg (505 lbs)

### LIMITED WARRANTY

Pleasure	Three Years
Government	Three Years
Commercial	One Year

## FEATURES

### POWER/PERFORMANCE

- Super High Output 60° V6 Design
- Mechanically Controlled Four Stroke V6 Outboard<sup>▲</sup>
- Plasma-Fused Sleeveless Cylinders
- Variable Camshaft Timing
- Long Track Induction System
- Electronic Multi-Point Precision Fuel Injection
- Ignition Knock Sensor
- 4 Large Radius Valves Per Cylinder
- High Intake Valve Lift
- Double Overhead Camshafts
- In-Bank™ Exhaust
- Exhaust Pressure Reduction System
- Compact, Lightweight Design
- California C.A.R.B. Ultra Low Emissions 3 Star Rating
- Meets all current Federal EPA Emission Standards

### RELIABILITY/DURABILITY

- TCI Microcomputer
- Electronic Single Throttle Valve (75mm)
- Direct Drive System
- Wet Sump Lubrication
- Engine Warning System
- Sacrificial Anodes
- Water Cooled Rectifier/Regulator
- Water Separator
- Direct Ignition
- YDC 30 Aluminum Alloy
- ACP 221 Paint Process (outboard exterior only)
- Top Mounted Electrical
- High Output Alternator
- SST Drive, Prop, Shift Shafts
- Magnetic Drain Plug
- Oversized Water Intake Screens
- Water Draining Air Intake Duct

### CONVENIENCE/CONTROL

- Command Link System<sup>▲</sup>
- Power Trim & Tilt
- Freshwater Flush
- Easy Maintenance
- Yamaha Diagnostic System
- Single Timing Belt System

Primary ID Prefix: VF200LA 6CDL  
VF225LA 6CCL  
VF250LA 6CBL

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The information and data contained herein is approximate and subject to many factors and variables, including but not limited to atmospheric, water, and equipment conditions, and operator ability. Therefore, such information and data is provided as a guideline only.

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