

# PUT UP OR



# SHUT UP

A photograph of three speedboats racing on a lake. The boats are moving from left to right, leaving white wakes behind them. The water is a deep blue-green color. In the background, there is a shoreline with green trees and bushes. The sky is not visible. The overall scene is dynamic and energetic.

It's a two-stroke vs.  
four-stroke  
showdown among  
Mercury, Suzuki  
and Yamaha

STORY BY JOHN TIGER, JR.  
PHOTOS BY STEVE QUINLAN

Editor Steve Quinlan and I met with the very accommodating folks from Ranger Boats on Arkansas' Bull Shoals Lake in mid-spring and conducted a shoot-out among 250-horsepower offerings from all of the major players (*sans* Evinrude, which was invited but declined) on identical Ranger 620VS multi-species boats. We had at our disposal for the weekend three four-strokes (a Suzuki DF250, Yamaha F250 and Mercury 250 Verado) stacking the deck against a lone two-stroke DFI (Mercury 250XS).

With four outboards comparing very closely in terms of weight, horsepower output, top-end rpm limits and torque, we expected the outcome to be pretty close. With the exception of top speed and acceleration, it was just that.



## THE SETUP

We chose Ranger's 620VS as a test platform for several reasons. Since the Suzuki DF250 is not available in a 20-inch-shaft length version — and we very much wanted to compare this engine against the other 250 offerings — we had to select a hull with a minimum 25-inch-transom height. That excluded all of the bass boats, and moved us over to a walleye/multispecies design. Unfortunately, it also meant having to exclude Yamaha's 250 HPDI, which, beginning this year, is no longer available in a 25-inch-shaft version.

We also wanted to see how the torque and hull-lifting abilities of these big engines would fare when fitted to a heavier hull more suited for bigger waters and bigger payloads. Finally, we know and understand that the speeds we reached will certainly not be considered “sexy and exciting” by those who want to see just how fast these behemoths can push a lightweight boat. But, the Rangers provided a very stable platform, and stable means repeatable, which is of paramount importance in testing.

While I personally would have loved nothing more than to test on a bevy of flyweights designed to reach 90-mph speeds, we elected to

■ The participants in our 250 shoot-out were (left to right) Mercury's 250XS; Mercury's 250 Verado; Suzuki's DF250; and Yamaha's F250.



■ Propshaft height as tested varied from 5 1/4 inches below the pad (Verado) to 6 inches below the pad (Yamaha), with the OptiMax and Suzuki coming in at 5 1/2 and 5 3/4 inches, respectively.

go for stability and repeatability instead. It worked; our test was easier to conduct. The people at Ranger were a delight to work with, all of the hulls were as close to identical as possible, and we obtained very “real-world” results. Our weather at Bull Shoals was not perfect — we dodged clouds, rainstorms, yet by our last day, were blessed with 80-degree temperatures and bright sunshine — but we were able to complete all of the tests in roughly identical water, temperature and wind conditions. In all, it was a very fair comparison — exactly what *BWB* readers look for.

## GAME ON!

Our procedure was the same as in past *BWB* tests. First, the factory reps are allowed time to set up and fine-tune the rigs to their liking. Ranger Boats' test crew, however, did a lot of the work beforehand for the engine reps, and consequently a lot of the setups ended up the same after the engine men completed their testing. When we arrived, we performed dry-land inspections on all of the boats, engines, setups and props, and took careful

## SPECIFICATIONS

	SUZUKI DF250 TX	MERCURY 250 VERADO XL	MERCURY 250XS	YAMAHA F250 LX
Base Price:	\$20,182	\$19,140	\$19,688	\$19,900
Type:	V-6 4-stroke	I-6 4-stroke	V-6 2-stroke DFI	V-6 4-stroke
Cylinder Arrangement:	55-degree Vee	6-cylinder in-line	60-degree Vee	60-degree Vee
Induction/Injection Type:	DOHC Multistage EFI	Supercharged EFI 24-valve DOHC	Optimax 2-stage DFI	DOHC Fuel Injection VCT
Displacement:	3.6L (220.5 cid)	2.6L (158.5 cid)	3.0L (185 cid)	3.3L (204.6 cid)
Horsepower:	250	250	250	250
Bore/Stroke:	3.74x3.35" (95x85 mm)	3.23x3.23" (82x82 mm)	3.50x2.65" (89x67 mm)	N/A
Lubrication:	Wet sump	Integrated dry sump	Electronic Multipoint oil injection	Wet sump
Gear Ratio:	2.29:1	1.85:1	1.75:1	2.00:1
Weight (Published):	580 lbs.	635 lbs.	505 lbs.	603 lbs.
Weight (Measured):	635 lbs.	690 lbs.	547 lbs.	650 lbs.
Recommended WOT RPM Range:	5500-6100	5800-6400	5300-5800	5000-6000
Recommended Fuel Octane:	87 pump posted	87 pump posted	87 pump posted	87 pump posted
Propeller:	16x24 1/2" Suzuki 3-blade stainless steel	14 5/8x23" Mercury Tempest Plus 3-blade stainless steel	15 1/4x24" Mercury Bravo I 4-blade stainless steel	14 1/2x23" Yamaha VX-Max 3-blade stainless steel
Warranty:	3 years	3 years	2 years	3 years
CARB Rating:	3 Star	3 Star	2 Star	3 Star



■ All of the rigs were weighed, then engine and trailer weights were subtracted to determine hull weights.

notes on each. We then removed each engine and recorded the weights with our digital load-cell scale setup, noting our figures, of course, contain oil and fuel in the engine, propeller installed, steering cylinder and hoses, and cowling. Hence, our figures reflect heavier weights than the factory brochures show, as the engine guys quote “dry weight.”

We then filled the 51-gallon fuel tank in each hull, and weighed the boats and trailers at a local scale. The empty trailers were weighed



■ The engines were weighed with cowlings, props, steering cylinders and hoses attached.

last so we could subtract those weights from the hull weights and arrive at a “hull only” figure (*sans* trailer, outboard and propeller, but including fuel, rigging and accessories). In this case, the Verado-powered boat was the heaviest, so it was tested “as is.” The Yamaha boat was the lightest by 100 pounds, so we handicapped it with a 100-pound bag of lead shot. We fitted the 250XS boat with 17 pounds of shot, and the Suzuki boat with 65 pounds. We



### MERCURY 250XS

Engine (rpm)	Speed (mph)	Fuel (gph)	(mpg)	Range <sup>1</sup> (miles)
1000	5.9	0.8	7.4	339
1500	7.8	2.1	3.7	171
2000	8.6	3.9	2.2	101
2500	11.1	5.5	2.0	93
<b>3000<sup>2</sup></b>	<b>24.9</b>	<b>6.0</b>	<b>4.2</b>	<b>191</b>
3500	32.5	8.2	4.0	182
4000	43.3	13.9	3.1	143
4500	48.4	15.0	3.2	148
5000	55.9	18.9	3.0	136
5500	62.0	21.2	2.9	134
5800 (WOT)	64.5	22.5	2.9	132

<sup>1</sup>Based on 90% fuel capacity

<sup>2</sup>Optimum cruise speed

#### ACCELERATION (seconds)

0-30 mph 6.2

#### SOUND MEASUREMENTS (dBa)

Idle at Helm 75

Idle at Transom 78

Cruise at Helm 98

WOT at Helm 105

don't handicap for outboard weights — only differences in hull weights.

After we recorded the weights, hull notes, engine notes, setup and propellers, we headed for the lake.

### SPEED AND PUNCH: TWO-STROKE BRAGGING RIGHTS

No sense dancing around it: In terms of speed and acceleration, Mercury's 250XS is clearly the champion of the 250-horsepower crowd, and by a very significant margin. We hit a best average top speed of 64.5 mph spinning a 24-inch-pitch lab-worked Bravo I four-blade wheel right at the manufacturer's recommended WOT limit (5800 rpm), trimming high into the wind while trying to eke out that last mph.

The next closest speed was achieved by the Verado, at 63 mph even (turning a 23-inch lab-finished Tempest Plus propeller) at 6140 rpm. The Yamaha finished third with a solid 60 mph clocking, turning a stock 23-inch-pitch Yamaha VX-Max three-blade prop at 6000 rpm. In the top speed wars, the Suzuki came up fourth, pushing the Ranger to 58.6 mph at 6100 rpm turning a stock Suzuki 16x24<sup>1</sup>/<sub>2</sub>-inch three-blade prop.

We must note, however, that Suzukis traditionally like to be run high. After some preliminary prop testing, Senior Product Develop-

ment Engineer David Greenwood raised the engine to the very top set of holes (which amounted to a propshaft height of 5<sup>3</sup>/<sub>4</sub> inches below the pad) and said he was disappointed he couldn't raise it any higher. He noted after his test runs that the engine never really felt like it had broken loose at that height.

Acceleration results put the two-stroke XS at the top of the pile, too. Merc's raspy "race production" engine pushed the stout Ranger to 30 mph from a dead stop in 6.2 seconds, a full four-tenths of a second quicker than the

second place finisher (again the Verado, at 6.6 seconds). The Suzuki came in a very close third this time, with a 6.7-second clocking, and the Yamaha pulled up fourth with a distant 7.7-second average.

Midrange punch (measured in seconds from a 30-mph cruise to 50 mph) told a slightly different story. Here's where the XS really put the smackdown on the others. It romped from 30 to 50 in 6 seconds flat, where the next closest competitor — Verado — could only muster an 8.1-second clocking. The Yamaha's



**MERCURY 250 VERADO XL**

Engine (rpm)	Speed (mph)	Fuel (gph)	MPG (mpg)	Range <sup>1</sup> (miles)
1000	5.5	0.9	6.1	281
1500	6.9	1.8	3.8	176
2000	7.8	3.0	2.6	119
2500	8.8	4.6	1.9	88
<b>3000<sup>2</sup></b>	<b>19.7</b>	<b>6.7</b>	<b>2.9</b>	<b>135</b>
3500	25.1	9.1	2.8	127
4000	34.2	12.6	2.7	125
4500	43.1	16.0	2.7	124
5000	51.4	19.5	2.6	121
5500	58.0	22.7	2.6	117
6000	59.9	25.9	2.3	106
6140 (WOT)	63.0	27.7	2.3	104

<sup>1</sup>Based on 90% fuel capacity

<sup>2</sup>Optimum cruise speed

#### ACCELERATION (seconds)

0-30 mph 6.6

#### SOUND MEASUREMENTS (dBa)

Idle at Helm 56

Idle at Transom 64

Cruise at Helm 85

WOT at Helm 97



### SUZUKI DF250 TX

Engine (rpm)	Speed (mph)	Fuel (gph)	Fuel (mpg)	Range <sup>1</sup> (miles)
1000	5.3	1.7	3.1	143
1500	7.1	1.9	3.7	172
2000	8.4	3.2	2.6	121
2500	11.8	4.9	2.4	111
<b>3000<sup>2</sup></b>	<b>24.7</b>	<b>5.8</b>	<b>4.3</b>	<b>196</b>
3500	31.3	7.4	4.2	194
4000	37.2	9.2	4.0	186
4500	41.9	11.3	3.7	170
5000	46.9	12.9	3.6	167
5500	52.8	17.1	3.1	142
6000	57.9	21.0	2.8	127
6100 (WOT)	58.6	21.2	2.8	127

<sup>1</sup>Based on 90% fuel capacity  
<sup>2</sup>Optimum cruise speed

**ACCELERATION** (seconds)  
 0-30 mph 6.7

**SOUND MEASUREMENTS** (dBa)  
 Idle at Helm 64  
 Idle at Transom 66  
 Cruise at Helm 88  
 WOT at Helm 96



### YAMAHA F250 LX

Engine (rpm)	Speed (mph)	Fuel (gph)	Fuel (mpg)	Range <sup>1</sup> (miles)
1000	4.7	1.5	3.1	144
1500	6.7	1.8	3.7	171
2000	7.9	3.0	2.7	123
2500	8.2	4.3	1.9	88
3000	11.1	5.4	2.1	94
3500	24.8	6.6	3.8	173
<b>4000<sup>2</sup></b>	<b>33.0</b>	<b>8.4</b>	<b>3.9</b>	<b>180</b>
4500	38.6	10.6	3.6	167
5000	42.1	12.4	3.4	156
5500	50.5	15.1	3.3	154
6000 (WOT)	60.0	18.9	3.2	146

<sup>1</sup>Based on 90% fuel capacity  
<sup>2</sup>Optimum cruise speed

**ACCELERATION** (seconds)  
 0-30 mph 7.7

**SOUND MEASUREMENTS** (dBa)  
 Idle at Helm 60  
 Idle at Transom 66  
 Cruise at Helm 90  
 WOT at Helm 98

midrange torque topped the Suzuki's, as it finished a full second (8.3 vs. 9.3) ahead to finish third. To those doubting Thomases, we used no fewer than four methods of speed measurement: two handheld Garmin GPS 12 units, a boat-mounted Lowrance GPS (which was a delight to use, by the way) and a calibrated Stalker Pro k-band handheld radar speed gun. For rpm readings, we used our own digital FloScan tach for all of the engines.

### FUEL ECONOMY: SURPRISE!

No surprise to us at *BWB* but probably a disappointment to tree-huggers everywhere, the two-stroke Mercury 250XS eked out a win in the fuel-economy challenge, too. With an average of 3.5 mpg across the entire rpm range, it bested the Suzuki by one-tenth of a gallon. The Yamaha came in a close third at 3.2 mpg, and the absolutely thirsty Verado finished a distant fourth with a 2.9 mpg average.

With today's fuel prices, this is a critical part of the test. We ran these numbers several times to be sure, and came up with the same results each time. We also checked our results against Yamaha's and Mercury's factory digital fuel-flow meters.

While the 250XS took top honors for overall average fuel economy, the Suzuki 250 actually achieved the highest mpg recording at cruise speeds. With a 4.3 mpg recording at 24.7 mph and 3000 rpm, it bested Merc's XS by a tenth of a mpg at the same rpm.

### WHAT ABOUT THE NOISE?

Years ago, we used to record sound output as a regular part of these tests, and our sister publication, *Trailer Boats*, still does. Since the four-strokes in this test were so quiet, we broke out our digital decibel meter and went to work, checking decibel readings at idle, 3500-rpm cruise, and full throttle. We took readings at the transom and at the helm at both idle and 3500-rpm cruise speeds, and at the helm while running wide open.

The Verado was the clear winner here. It is so quiet, it is literally impossible to tell if it's running or not at idle (especially if the wind is blowing or waves are slapping the hull). Though it's a cliché by now, we actually had to check the "pee indicator" (overboard water indicator) to see if it was running at the dock and out on the lake. At idle, the Verado registered 64 dBA on our meter at the transom, and an even more silent 56 dBA at the helm. It was significantly quieter than any of the other engines, even by the "naked ear." The power steering whine present in earlier Verados is gone, as promised by the Mercury engineers. It is just an amazingly quiet engine. When it's hammered, the Verado gives off a very high-pitched, high-rpm whine that sounds almost like a jet engine. That's partly due to the supercharger, and partly due to the Verado's advanced crank-train design.

### RANGER 620VS

As an ultra-high performance boat aficionado, I'm not used to hulls like the 620VS. After a weekend spent with four of them, however, I know I wouldn't mind owning one as a big-water, big-fish excursion hull. I get the impression that owning a Ranger is sort of like owning a BMW or a Mercedes: the level of fit and finish is up there so high, it's expected that the boat will perform



### Ranger 620VS

Base Price:	\$47,560
Construction:	Fiberglass
Console Type:	Dual
Length:	20' 3"
Beam:	8' 0"
Hull Weight:	2190 lbs.
Fuel Capacity:	51 gals.
Livewell Capacity:	23 gals.
Maximum Horsepower:	250

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and last for years to come. I'd suspect current Ranger owners would tell me I'm right.

These 620s ran well in calm water and in chop: didn't get us wet despite running them within 10 feet of each other (for the photo shoot), and didn't crossed broadside waves without jarring us to death. They just performed like champs during our entire test.

What's more, the professionalism and quality of workmanship was evident everywhere we looked. Our test hulls were nearly flawless, and everything worked on them as well. Will these boats win any speed records? Of course not, but they'll get you there and back in good time and in dry clothes. I enjoyed my time spent in the Ranger 620VS. It's a darn nice boat, and for the money, a great value.



■ Mercury's Verado took first in running quality, price and quietness, and second in holeshot, midrange and top speed.

The Suzuki is almost as quiet, but it's just not silent like the Verado. It has a very nice sound, however, and even when it's leaned on, it doesn't sound like it's laboring. The Yamaha has the most "truck-like" (automotive) sound of the group. It is audible at idle, and when the throttle is dropped, it sounds like a big-displacement diesel engine pulling.

As expected, the 250XS is the loudest of the group by far. It has the traditional two-stroke howl, even when only turning 5800 rpm at full bore. That's exacerbated by the open exhaust outlets at the top of the gearcase, but even at idle when those are buried beneath the waterline, it's loud.

### SUBJECTIVE JUDGEMENTS: RUNNING QUALITY

In this arena, it's our opinion only. We can only report what we observe: The Verado is the smoothest, best-running, best-operating and easiest-to-drive engine. It simply shines in all aspects. The fly-by-wire DTS throttle and shift is simply not going to be beat by traditional cable setups found on the other engines. Its integral power steering is smoother and

■ Yamaha's F250 didn't walk away with any firsts or seconds in terms of performance, but it was still a fine contender in terms of fuel economy, warranty and quietness.

easier to operate than the Teleflex SeaStar Pro setups on the others. It's easier to shift, throttle, steer, start and drive. No doubt about



■ Merc Racing's 250 XS ran away with top honors in terms of performance, finishing first in holeshot, midrange, top end and overall fuel economy.

it, this engine performs as Mercury advertises; it's a true "outboard drive system," as opposed to a simple outboard engine.

The Suzuki comes in a close second. While it shifts, steers and throttles traditionally, it's very smooth and predictable. The gearcase "snicks" into and out of gear, rather than clunks like the 250XS. The throttle response is smooth and linear. Overall, it was a genuine pleasure to drive the Ranger equipped with this engine.

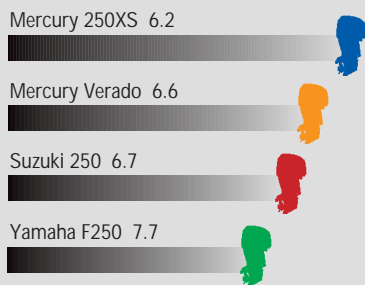
The Yamaha and Mercury 250XS both had a lot of "traditional outboard heritage" in the way they operated. Their shifting was not nearly as smooth. In fact, while the Yamaha was fairly quiet, the Merc really banged into gear. Other than that, the Yamaha's running quality was superior, just like anything else ever made by Yamaha. I just wish they could change the engine noise and exhaust note to a more pleasant, less-labored sound. Since it's a Yamaha, you know it's not going to hurt itself, but it sure could sound happier. The 250XS is just plain raspy, loud and rude. Like most (if not all) Mercury Racing products, it lets you know it's there, with authority.

It must be noted that the fit and finish on all

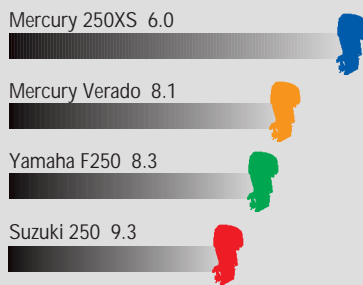
■ Suzuki's DF250 scored a virtual tie for first place in fuel economy, a solid second place in running quality and a very close third in holeshot.



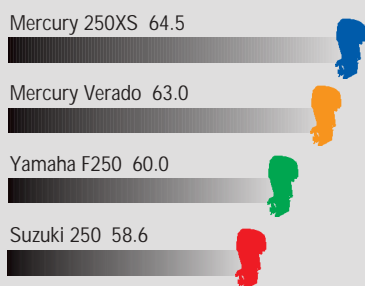
### Acceleration 0-30 mph (seconds)



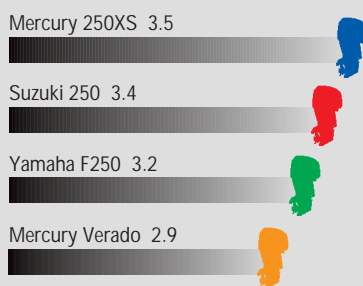
### Acceleration 30-50 mph (seconds)



### Top Speed (mph)



### Average Fuel Economy (mpg)



four engines was just fantastic. Though it's expected of the Yamaha, the others met Yamaha's standards easily. Even the 250XS was superb, and this is an engine we had faulted for being a little rough around the edges in past years. I'm guessing that the Verado assembly guys rubbed off a little on the Racing crew.

#### FINAL OBSERVATIONS

Clearly, four-strokes have a long way to go in the top speed, acceleration and even the fuel-economy wars before they can catch a well-tuned DFI two-stroke like Mercury's 250XS.

It's a shame we didn't have Evinrude's 250 E-Tec in the mix to compare — they were very conspicuous in their absence. In addition, Yamaha has since last season discontinued the 25-inch Saltwater Series version of its vaunted VMax 250 HPDI, so we sorely missed its two-stroke participation in this test. Perhaps in the future we'll do another two-stroke/four-stroke 250 shootout — on a bass boat — among 20-inch-shaft engines.

We neither added nor deducted points for pricing, yet the results were a bit surprising. Based on 2006 model-year MSRPs, the Verado

was actually the least expensive of the bunch at \$19,140, followed by the OptiMax XS at \$19,688, the Yamaha F250 at \$19,900 and the Suzuki DF250 at \$20,182. We dinged the OptiMax XS for warranty, however, as it carried a two-year warranty while the other three engines all carried three-year warranties.

The clear winner in this test, for those who primarily care about speed, acceleration and fuel economy, is the Mercury 250XS. The Verado would have finished a close second if not for its last-place fuel finish, but its overall performance, quietness and ease of operation earned it a solid — but distant — second place nonetheless. The Suzuki was not far behind, finishing neck-and-neck with the 250XS in terms of best fuel economy, and right there with the Verado for second in holedshot. The Yamaha turned in a good performance in midrange punch and fuel economy. In reality, any of these engines would fit the bill for a hull like the Ranger 620VS.

If fishing, reliability, fuel economy and ease of operation were my primary concerns, I would be happy with any of these outboards. It's when top speed, punch, and having the "big dog" are important (and I must ask, to what red-blooded American are these not priorities?) that the two-stroke Mercury 250XS becomes the standout. **BWB**

#### SOURCES:

##### Mercury Marine

Dept. BWB  
W6250 W. Pioneer Road  
P.O. Box 1939  
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[mercurymarine.com](http://mercurymarine.com)

##### Mercury Racing

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[mercurymarine.com](http://mercurymarine.com)

##### American Suzuki

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##### Yamaha Motor Corporation USA

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