HYDROSTREAM
HST

In proper trim HydroStream's HST is a waterborne rocketship exhibiting good low-end and awesome mid-range throttle response.

In the late 1960's and early '70s HydroStream was the boat to beat in production V-bottom racing. To his credit, President Howard Pipkorn successfully turned those checkered flags into showroom sales. For many years, HydroStream was number one among the go-fast crowd whether you were boating in Minnesota, upstate New York, or on the Louisiana bayou.

Then the sport switched from V-bottoms to modified air-entrapment hulls and HydroStream failed to keep pace. Reluctantly, the company gave away a slice of its image to builders like Stoker, Eliminator and Summerford.

Last year, Pipkorn decided he'd had enough. After almost a decade it was time to get back into serious racing.

As he'd done the first time, Pipkorn broke with tradition and came up with something new and revolutionary. The newest and latest from HydroStream is called the HST. If it works Pipkorn is confident drivers like Al Stoker and Rusty Campbell will be seeing nothing but wake spray. If it doesn't . . . .

Actually, HydroStream flew into the air-entrapment market more than three years ago with its storied XT bottom design. Today the company offers seven models with air-entrapment running surfaces. The concept has worked extremely well. So good in fact, HydroStream won our Outstanding Outboard Performance award last year for its Valero Bowrider YT.

In pursuit of checkered flags.

As good as the XT bottom has proven in recreational applications, however, it has never been really competitive on the racecourse. In Pipkorn's mind his original design had three problems that had to be solved on the way to victory lane. First, the aerodynamics of the deck were hurting, not helping the boat at high speed. The cockpit was simply too wide and the contour of the deck to inefficient. Second, the running surface was competitive on top end but not in the corners where sprint races are won and lost. And finally, in rough water at speeds in excess of 100 mph the boat simply wouldn't stay down and hooked up.

Starting with a clean sheet of paper Pipkorn went to work. As usual, the design is uniquely HydroStream and very, very complex.

Actually, the HST is available with two sponson arrangements. The full-fledged race version is a $700 option HydroStream calls its Anti-Spin design. The company currently has a patent pending on the sponson design which starts with a chamfer in the front then moves to a vertical wall in the midsection of the hull. The aft third of the boat has a negative draft which forces the inside rear corner of the hull down in tight turns and provides the ideal pivot point. There are three lifting strakes on each side and the bottom is constantly changing angles for optimum performance.

The center pod has a V-section forward that converts into a rectangular pod in the rear. The pod has lifting strakes as do the outer sponsons which come down to a sharp point then veer out to the chine of the boat.

The HST's deck is part of the running surface because Pipkorn is convinced deck design plays a major role in han-

dling and efficiency at speeds in excess of 100 mph. The HST's topside is aerodynamically designed to lift the boat so you don't have to use an extended trim angle and fly the hull for speed. There's no way to measure just how much lift the deck is providing but it's true you don't have to float the HST like some boats to make it go.

Because the hull doesn't need excessive trim it's easier to drive and more suitable for neophytes. That's exactly what Pipkorn wanted because he knew the boat would only be profitable if it took off with Walter Mitty racers who like to compete without numbers, applications, turn buoys, helmets, start boats or pit docks.

HydroStream makes no apologies that this year's test boat is a race boat first and a pleasure boat second. The mission here is checkered flags but if the daring want to take advantage of the technology and outrun everything on the lake so be it.

PERFORMANCE

How fast is the HST? It depends on the horsepower. In racing applications the boat has been clocked at speeds well in excess of 100 mph. On the test track in Minnesota the boat ran 91 on radar. According to HydroStream by the time we got our hands on it, the new 200 horsepower Johnson was singing the blues. The best we saw was 84 mph at 6300 rpm.

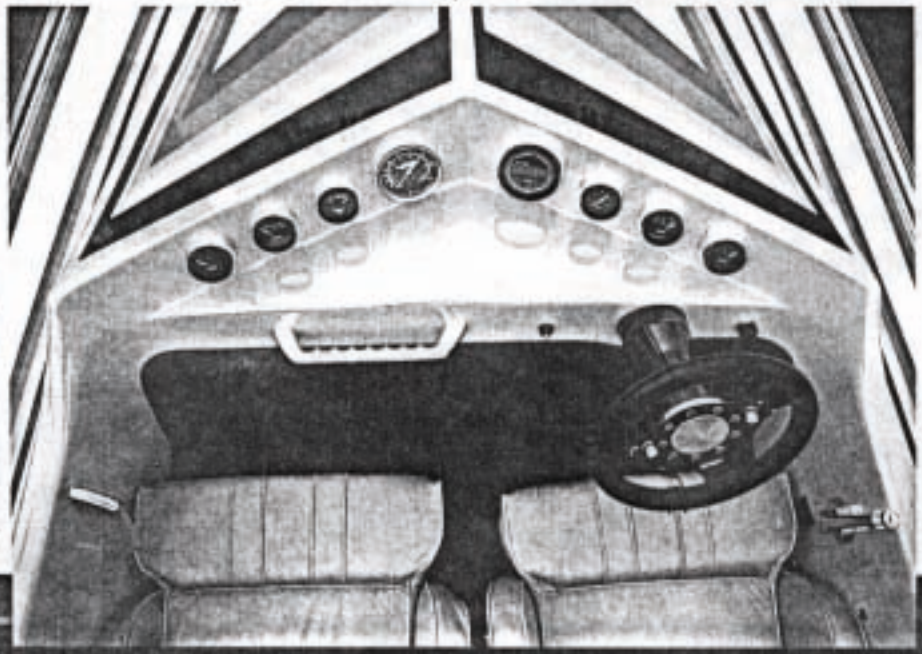
In proper trim the HST is a waterborne rocketship. The hull zips on plane in 1.3 seconds and accelerates from zero to 25 in three, zero to 34 in five and zero to 54 in 10. Throttle response is good on the low-end, awesome in the mid-range and it only falls off slightly upstairs.

HydroStream's patent-pending sponson design works. The hull turns more like a tunnel boat than a V-bottom. There's very little slippage through the turn. At high speed the boat is so responsive you can actually change your radius midway through the turn and the hull will recover without bobbling or breaking its arc.

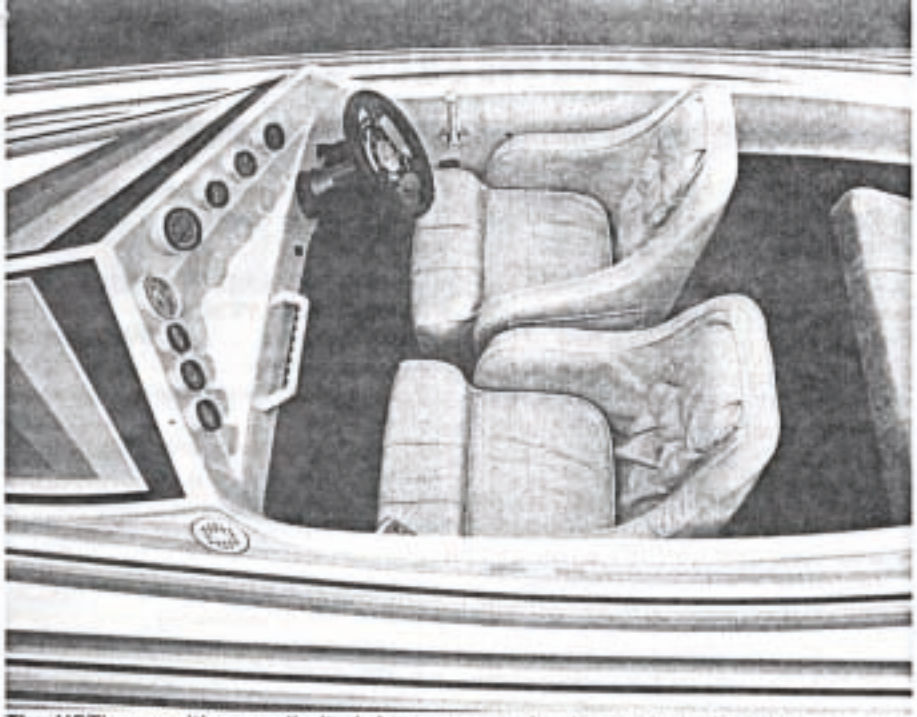
In the cruise zone you couldn't ask for better efficiency. At 4000 rpm the boat runs 41. At 5000 you'll be perking along at 54 mph.

Because it was designed to run in the 110 mph neighborhood, the HST handles

The HST comes complete with a full compliment of instruments and Morse controls.



After more than 20 years of building high-performance outboards the company understands the finer points of race-ready rigging.



The HST's amenities are limited, however, raceboats aren't designed for comfort.

like it's on cruise control at 80, 85 or even 90 mph. The boat is exceptionally stable in all types of water and seems unaffected by buffeting winds or mixed sea conditions. Big swells will prove its demise but the boat loves a slight wind chop. Even with power steering there's still some torque on the wheel but it's not overbearing in straightline operations.

As expected, the HST responds well to both up/down and in/out trim adjustments. The hull is sensitive to trim but when you're looking for that last elusive mile an hour you wouldn't want it any other way.

Although HydroStream was never satisfied that its test motor was operating at peak efficiency, the new 200 horsepower Johnson V-6 is something special. The motor is equipped with several override features that cause the engine to automatically shut down when oil and temperature levels don't meet minimum requirements.

"Nobody will ever accuse Howard Pipkorn of copying anything or following conventional design methods. The man has always beat to the tune of his own drum and it's about time he was given credit for being one of the most innovative minds in the business. Nobody tries harder. Over the years he's unleashed some colossal follies but he's also had some classic successes. I'd put the HST in the latter category. There are so many variables in racing it doesn't always tell the real story. The one thing I know for sure is that given the right driver and proper horsepower the boat has the potential to win. Recreational boaters with a bent for speed will find it exciting, easy to drive and amazingly forgiving."——Bob Nordskog

WORKMANSHIP

HydroStream will not sell its race layup to consumers. Fit for competition, the hull is just too light and expensive to build plus there's no need to spend the money if you're not working against the stopwatch.

Pipkorn learned years ago if you're going to win you can't copy the competition, you've got to do them one better. Looking for every edge he can get, Pipkorn has turned to several lesser-known vendors for help in the construction phase. Instead of using AME 4000 resin like everybody else, Pipkorn is working with a company called Commercial Resins on Corez CVE8000, a new vinylester resin that's designed specifically to compete head-on with Ashland's heavily advertised product. According to HydroStream, Corez CVE8000 has all the properties of AME 4000 yet isn't as sensitive to ambient temperature during the layup process which makes it easier to control.

HydroStream is also working closely with Brunswick on new weave fiberglass products that don't unravel as quickly as the unidirectional fabrics in vogue today.

The HST is offered standard with a two-tone paint job but we'd recommend the optional six-color graphics package. At $900 the option is a steal of a deal and HydroStream does gelcoat graphics as well as Southern California's finest.

In the interest of speed, there are several things the HST must do without. There are no cleats or grab rails and the rub rail is nothing more than a cosmetic extra to cover the seam between the deck and hull.

The fuel fill is situated on the starboard deck directly behind the passenger's seat in a good location.

"Hydrostream did a superb job on its gelcoat workmanship. The company once known for its gaudy metalflake designs is now state of the art. Look closely and you won't find any tape trim or paint graphics. Everything is done directly in the mold.

After more than 20 years of building high-performance outboards the company certainly understands the finer points of race-ready rigging. The trim pump is located behind the back seat in the well. The only glitch we uncovered was the battery was tied down with nothing more than a poorly knotted tattered rope. Clearly, the installation was done in a frenzied last second rush because HydroStream usually uses framing or a custom-made battery box."——Norm Teague

INTERIOR

Given time, HydroStream will try to make the HST more comfortable for the buying public but space restrictions prevent major improvements over and above what it has already come up with. The best alternative is an open cockpit version which is already on the drawing board.

Admittedly, the cockpit is cramped but what do you expect on a boat that was designed with American Power Boat Association rules, not creature comfort, in mind?

There is no passageway between the two front seats, no kickstands, ice chest, gunnel storage, glove box or stereo. Carry-ons will have to be stashed either under the deck or in two small pouches on the sides of the seats.

Inside, the HST's best selling point is its flat floor. Most boats in this class require you to trip through a maze of stringers and center pod braces. Agreed, the draft is rather shallow and there's not much room to move about, but we prefer a flat floor anytime there's more than one passenger on board.

When the pleasureboat version is complete there will be a ski locker built into the center cavity under the deck. The problem will be access because it's almost impossible to wiggle in between the front seats.

HydroStream mounts its Morse shift lever on the gunnel although many will prefer a foot throttle so both hands can remain locked on the wheel.

The Morse unit feels good in your hand and has positive click stops for forward, neutral and reverse. The kill switch is directly under the throttle in a convenient location.

The HST comes complete with a full compliment of instruments. Owners will find OMC's slick looking LCD digital tachometer much easier to read at high speed then a dial indicator gauge. The boat also comes standard with two temperature gauges so you can precisely monitor both banks on the engine.

"It's almost unfair to rate the HST's interior because raceboats were never designed for comfort. However, there are some things HydroStream could do to make life on the water more bearable. First the carpeting absorbs water too easily and the two small bucket seats aren't supportive enough. Secondly, the steering wheel blocks the temperature and water pressure gauges which usually is not cause for concern but on this boat both instruments are critical to safe operation. On the plus side the flat floor is a welcome addition and so is the back seat."——Dick DeBartolo

SKIING

The HST is a nifty ski boat. The wakes are small and easy to cross. Turbulence is minimal in the prop stream and the boat provides a surprisingly solid pivot point.

Boarding and debarking are a problem because there are no ladders or swim platforms and there never will be. In addition, the profile of the boat is so low it's impossible to sit on the back couch and monitor the progress of the skier when he's directly behind the boat because the engine blocks visibility aft.

As we mentioned previously, storage is severely limited,however, there is enough room under the bow for skis.

"In the scramble to get the boat tweaked out for the tests, HydroStream failed to install a ski eye. According to the company that's now standard equipment. And it's a good thing. When you're forced to mount the ski rope to a transom lifting ring you lose some torque as the rope drags through the water on take-off."——Wade Worley

OVERALL

"HydroStream introduced the HST midway through the 1987 IOGP racing season so the jury is still out about its performance potential. Its best performance to date was at the APBA Mod-VP Closed Course Nationals where Roger Mecham would've won if he hadn't jumped the gun and been disqualified. Certainly, the potential is there."
——Randy Scott

PERFORMANCE DATA

HULL SPECIFICATIONS:

Model	HST
Bottom configuration	Center pod tunnel
Deadrise at transom	N/A
Length	20'
Beam	90"
Hull weight as tested	1300 pounds
Base retail price	$7,140
Retail price as tested	$19,669

STANDARD EQUIPMENT: Dual Ride Guide mechanical steering, stainless steel two and life eyes, cockpit carpeting, two plus two seating.

OPTIONAL EQUIPMENT ON TEST BOAT: Custom gauge package ($350), engine control pre-rig package ($385), six-color custom let-down gel ($900), custom steering wheel ($160), trim tabs ($85), 19-gallon fuel tank ($200), Land & Sea Hydroelectric transom ($600), Land & Sea nose cone ($80), Johnson GT200 with power steering ($9,769).

OTHER OPTIONAL EQUIPMENT: Colored anodized shear molding ($170), windshield ($180), anti-spin sponsom option (patent pending) ($700).

INSTRUMENTATION ON TEST BOAT: Nordskog speedometer, tachometer, voltmeter, fuel, water pressure, trim, twin temperature gauges.

COLOR OPTIONS: Exterior: Any option up to six colors. Interior: Color coordinated to exterior.

ENGINE AND PROPULSION SPECIFICATIONS:

Make/model	Johnson GT200
Cylinder type	V-6
Maximum horsepower at rpm	200 @ 6000
Cubic inch displacement	183
Prop size	14 X 28
Prop material	Stainless steel
Prop type	Mach

MEASURED PERFORMANCE:

Top speed, calibrated speedometer	84 mph
Top speed, stock speedometer	84 mph
Top speed, radar	84 mph
Maximum rpm, calibrated tachometer	6300
Maximum rpm, stock tachometer	6300
Time to reach plane	1.30 seconds
Minimum planing speed	10 mph
Distance to stop from 35 mph	155 feet
Decibel reading, 35 mph at 50 feet	82 db(A)

FUEL CONSUMPTION: N/A

ADDRESS OF HULL MANUFACTURER:
HydroStream—Pipkorn
2211 W.C. Road D
New Brighton, MN 55112