

ON BOARD POWER

BY ROGER MCAFEE



Aspen C90 Cruiser

This 28-foot cruising power cat offers outstanding fuel economy and stability in a spacious little package

ASPEN POWER Catamarans, of Snohomish, Washington, has produced a power catamaran so unique it has been presented with three prestigious innovation awards since 2009. Not surprising coming from a 28-foot powerboat capable of cruising at 12 knots while getting 2.6 miles per gallon and 4.1 miles per gallon at seven knots.

The Aspen C90 Cruiser is the first production cruiser from Aspen, and shares its

hull design with the 28-foot L90 Launch and F90 Fishing boat. Aspen currently has plans for a 36-foot and 48-foot cruiser in the works.

Design and Construction Aspen's designer is Larry Graf, who is the developer of the original Glacier Bay Catamarans. Boaters who follow marine design will remember that in 1988 the 2,200-pound Glacier Bay full scale prototype—with dis-

placement, wave piercing hulls and powered by a single 60-horsepower outboard—made 20 knots.

When Graf left Glacier Bay in 2007 he decided to return to his original dream to produce a non-planing power cat capable of running at 20 knots, powered by a single small engine. The Aspen is a manifestation of that dream.

While the Aspen has twin hulls, it is not a traditional cat. Its port hull has about 35 percent less beam than the starboard hull and carries a 24-gallon water tank and a 40-gallon fuel tank. The starboard hull houses the diesel engine, a 40-gallon fuel tank, a 26-gallon water tank, head/shower and access to the king bed sized stateroom.

Since the starboard hull is volumetrically larger than the port hull it is able to carry the extra weight easily. The two hulls have also been shaped differently, to keep the boat tracking in a straight line.

The basic hull and other glass components are produced for Aspen by Nordic Tugs of Burlington, Wash., one of the Pacific Northwest's premier builders. The hulls are solid glass below the water line with the glass overlapping 10 inches at the centre line for the entire length of the hull bottoms. The hull stems have kevlar reinforcing.

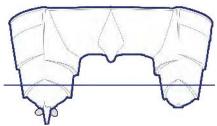
This construction method makes for strong, stiff hulls. The glass components are assembled and finished at Aspen's shop.

On Deck Access to the vessel is over the coaming from the dock onto the aft cockpit, which is large enough to handle four deck chairs comfortably, and spacious enough to satisfy ardent fishermen. Access to the substantial foredeck is along either side deck, with higher than normal stainless handrails fixed to the coaming and stainless grab rails fixed to the cabin roof. The cabin top also carries solar panels to help keep the house batteries topped up. The cabin top itself extends aft of the cabin's rear bulkhead so that rain will not pelt into the cabin when the door is opened.

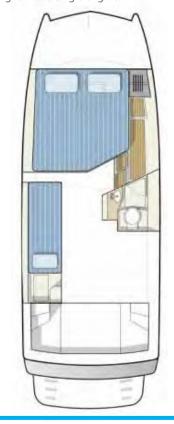
Inside Access to the interior is through a watertight, metal framed glass door in the aft cabin bulkhead. There are two additional windows in that aft bulkhead that combine with the glass door to provide a clear view from the helm to the cockpit.

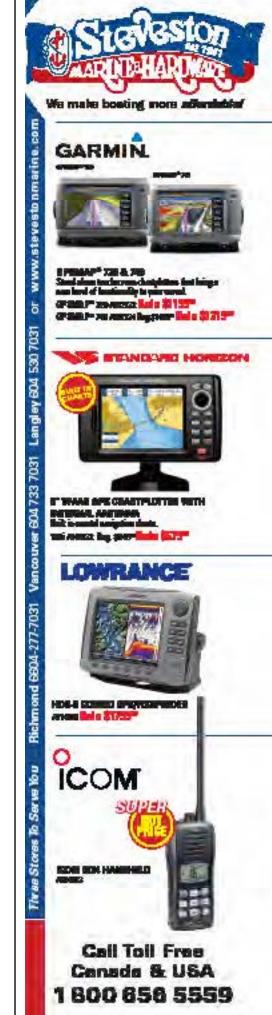
The galley and helm are located along the port side while a convertible dinette—convertible to a queen bed—and mate's seat sit to starboard. The galley itself contains a propane range, with oven, a good deep stainless steel sink, a fridge and ample storage.

Access to the fo'c's'le, is down a couple of steps from the starboard side of the deck house just ahead of the mate's seat. Forward is a king sized bed, complete with twin reading lamps, and aft, in the starboard hull is the head/shower combination. There is a reasonably sized hanging locker to starboard together with a step up to the bed. Aspen notes that since the bed is king sized, a couple can sleep awthwart ship and not have to crawl over each other getting in and out of bed.



Above These differently sized and asymmetrically shaped hulls are designed to track straight with a single engine.





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There is a quarter berth down a couple of steps from the aft port side of the deckhouse.

The interior features light coloured wood, carpet and upholstery, a large windshield and long deckhouse side windows, so it is bright and cheerful with plenty of room to move around. The use of some darker wood accents is a nice touch.

Underway The Cummins MerCruiser 2.0 litre fired up instantly without any smoke or smell. This four-cylinder, fourstroke engine weighs in at about 550 pounds, and is a good match for any vessel requiring diesel power in a small package. It's a modern engine with four valves per cylinder, turbocharged and aftercooled, and the counterbalanced shaft makes it silky smooth when running.

The QSD2.0 torque curve is fairly flat from 2,000 revs through to about 3,800. This means that the engine is producing its maximum power through a wide rev range and will help maintain boat speed even when the boat load varies.

With Graf at the helm we pulled out of the Mosquito Creek Marina, where the Aspen had been part of the Fifth Annual

[1] The helm station lies to port, while the single diesel engine sits in the starboard hull. [2] The linear galley sits just aft of the helm in the main saloon. [3] The dinette, on the starboard side, converts into a queen size

Mosquito Creek Boat Show. Vancouver harbour makes a good boat test location since there is so much traffic moving at high speeds with substantial wakes, so one can easily find a variety of sea conditions. We idled into the harbour at about three knots, burning 0.74L (0.2 gal) per hour. The noise level was 70dB, about the same as a normal conversation.

Once into the harbour we moved the throttle up to 1,500 rpm, made 5.1 knots, burned 3.4L (0.9 gal) per hour and our noise meter remained unchanged. Our speed went to 6.7 knots, with a fuel burn of 6L (1.6 gal) per hour at 2,000 revs. The sound level remained the same. At 3,000 RPM we made 10 knots, burned 15.5L (4.1 gal) per hour and the noise meter moved to 80 dB. Wide open throttle brought us to about 19 knots with a fuel burn of 33.3L (8.8 gal) per hour. The noise meter gave us 84 dB. All sound readings were taken almost directly

over the engine, with the meter lying on a hard surface.

All speeds were measured by an independent GPS and the fuel consumption figures were provided by the engine's onboard computer in US gallons. These computers don't actually measure flowing fuel, but rather are equipped with an algorithm—a small computer program—that monitors several aspects of the engine performance and then does a calculation of fuel consumption based on that information.

In fact, several Aspens taking part in a rendezvous during the summer reported covering 291 miles on about 58 US gallons of fuel. That's 5.02 miles per gallon.

The vessel tracked perfectly at all speeds and responded to the helm smartly. We cruised around the harbour at about 16 knots, throwing almost no wake. We crossed SeaBus wake without slamming or pounding. Tug and crew boat wakes were treated the same way. We lay abeam to crew boat wakes and the vessel stepped sedately, one hull at a time, over them.

One final test involved bringing the vessel to a complete stop, putting the helm hard over and slowly increasing power to wide open throttle. With the



helm to port the vessel leaned slightly to starboard and, as the engine speed increased, it leveled out and then leaned very slightly into the turn. There are a number of cats on the market that lean opposite the turn and never recover through the entire power range.

Conclusion The Aspen C90 Cruiser is an ingenious vessel designed from the outset to be sea kindly and economical. It cruises comfortably at speeds that similarly sized full displacement vessels, either power or sail, can only dream about. The single small diesel keeps the initial cost down and ongoing maintenance costs reduced. Since the Aspen can comfortably live on a trailer, ongoing boating costs can be further reduced.

Boaters who might hesitate to embrace this new type and style of boat should remember the guy who designed and developed Aspen is the same guy who designed and developed Glacier Bay. By the time he left Glacier he had turned it into one of world's largest power cat manufacturers.

At about \$200,000, depending on equipment, this Aspen 28-footer represents good value for the money. 40

PERFORMANCE **MAX SPEED CRUISE**

THE SPECS

ASPEN C90 CRUISER

LOA 9.22 m LOD 11.59m 38'2" Beam 3.04m 10' Draft 0.84m 33" (half tanks) Fuel 102.8 L 27 USG Water 189 L 50 USG Waste 98 L 26 USG **Dry weight** 1,583 kg 3,490 lbs Cummins Engine QSD2.0 1 x 150 HP

> BUILT AND SOLD BY

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www.aspenpowercatamarans.com



