



By Ali Telling



Cessna



Aviation is a field that one doesn't get into without the passion to fly. There are numerous easier options to take career wise, both intellectually and financially, and many other hobbies to pursue to fill those leisure hours. So, if the passion isn't there, the challenge to learn to fly is usually abandoned fairly early on.

Personally, one of my other passions is the water and, if I'm not flying, then I am happiest sailing, cruising or jet-skiing on the river or ocean. So, being able to combine the two is my idea of heaven.

This I was able to do on a recent trip to beautiful Broome in the NW of Western Australia thanks to the generosity of the owners and crew at Horizontal Falls Adventure Tours. Based out of Broome Airport, owners Mary Cummins and ex-Ansett pilot Rhys Thomas have built a thriving aviation business which combines tourist adventure flights throughout this spectacular region, including the breathtaking Buccaneer Archipelago and the famous Horizontal Waterfalls, supplemented by charter operations throughout the year for the mining and pearling industries.

The company maintains, as part of the Adventure tours, a luxury sailing catamaran, a houseboat for overnight stays on the calm waters of Talbot Bay, a Jet Boat to experience the Horizontal Falls up close and personal and, if all that becomes a little too water based for an aviator's liking, there is the company Robinson R22 to check out the area from above.

However, the reason for my visit was to check the means by which the tourists are transported to and from Talbot Bay namely two amphibious Cessna 208 Caravans. Heaven – an aeroplane and boat combined.

Since entering service in 1985 the Cessna has been exported to 70 countries worldwide where its diversity has made it a leader for passenger transport, cargo, military use, surveillance and rescue. The combination of the additional safety of its turboprop engine with the ability to use rough, unimproved airstrips whilst carrying large payloads without compromising speed make it unique in the single engine category. Okay, we could start talking PC12s but they are hardly in the same price range and I've yet to see one on floats.

The current 208 models are the Caravan 625, the Grand Caravan, a stretched version capable of carrying fourteen passengers rather than nine, the Super Cargomaster, the all cargo version and the Caravan Amphibian fitted with Wipline 8000 amphibious floats.

I have seen many Caravans flying and parked up at airstrips around the place but I really hadn't realized just how big they are. Put it on floats and it becomes a veritable giant, in fact the largest single engine float plane manufactured today. Access, while obviously requiring a ladder, is simple with two front doors, an airstair door for passengers plus a cargo door. The cabin is large



Caravan

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and square with a standard configuration of single passenger seats down each side with a central aisle. Seating arrangements can be altered quickly and easily to accommodate differing cargo and passenger loads. The cabin is 1.57 metres wide and 4.57 metres in length, allowing spacious and comfortable passenger seats.

As for the exterior, it follows the traditional Cessna high wing design and manages to look elegant despite its size and the giant floats. The floats themselves contain storage compartments and six hydraulically operated retractable wheels. The two castoring front wheels act as fenders when retracted for safer docking and the two sets of rear double wheels have hydraulic brakes to assist with steering via the rudder pedals. The tapered main wings have enormous, electrically operated flaps and subsequently fairly tiny ailerons, a feature which in no way affected the responsiveness of the aircraft in turns.

Back in the cockpit with Dave Phillips, an experienced turboprop and

float plane pilot, we strapped ourselves into the fully adjustable seats (just as well as I'd neglected to take my cushion on holiday with me) with the standard five point harness. Visibility was excellent especially as we dwarfed everything we taxied past.

The instrument panel was a little different to what I'm used to in my piston engine world with the addition of additional engine gauges but it appeared to be a well thought out panel with electrical switches grouped together, circuit breakers easy to see and reach and the engine switches easily accessible on the left side panel.

At present, the 208 comes with traditional analogue gauges with a choice of either Bendix/King or Garmin avionics ensuring the aircraft has all the advantages of modern digital communication and navigation systems. From 2008 all 208s will come with a glass cockpit featuring the ever more popular Garmin G1000 system but, for now, the panel was uncluttered, easy to read and comfortably understandable.

The Caravan is powered by a single Pratt and Whitney PT6-144A turbo prop engine which drives a three bladed, constant speed, reversible pitch and feathering propeller. This famously reliable engine, with a timed life of 5000 hours, produces 675 hp. The original 208s were fitted with 600 hp engines but when Cessna introduced the 'stretched' Grand Caravan and the Super Cargomaster they also introduced the 675 engine and decided that all models should have the benefit of the additional power.

Dave ran through the pre-start checks and the famous engine fired up effortlessly and with a satisfyingly powerful growl to its purr. After I patronizingly enjoyed looking down on the rest of the aviating world while taxiing, Dave selected the 10° of take off flap required and commenced our take off run. Although I had prior knowledge of the Caravan's shortfield take off and landing capabilities, I had assumed the huge floats would



hinder that somewhat and was therefore very impressed that we used only a small portion of Broome's 2368 metre long runway. With only three of us on board and, even allowing for my friend and I having eaten far too much on our holiday, we were obviously operating far below the 208's maximum take off weight of 3629kg but, even so, it was an impressive take off distance and still the engine just purred with the hint of a growl.

The 208 has a boasted cruise speed of 160kt but Dave informed me that they generally operate at about 135kt and the floats only cost about 10–15kts in airspeed: not bad considering they each weigh as much as a Cessna 150. With a standard empty weight of 2259kg the 208 has a commendable useful load of 1370kg. However, a full fuel component would take up 1020kg of that load and give over six hours endurance so it does have to be a compromise between range and load.

We climbed out at 90kt and achieved our desired altitude of 1000ft while I was still admiring the take off distance. The Caravan can achieve rates of climb in excess of 1000 fpm but, as we were only cruising a short distance to find some sheltered water to land on, we didn't get the opportunity to test that theory out. I must admit though that the part that I did want to check out was the water landing. Dave set up the aircraft for an approach onto the waters of Roebuck Bay maintaining a steady, not too large rate of descent and a necessarily flattish approach. Having remembered not to put the gear down for landing, the Caravan smoothly touched down on the water and stopped in a very short distance – typical landing rolls are in the region of 300 metres. Dave shut the engine down and we all hopped out onto the floats to admire the Caravan in its guise as a boat before re-embarking to become an aeroplane again with another effortless start up before using the turbine power to slowly taxi along. Increasing the pitch to full increases the taxi speed with directional control

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being offered by the small rudders on the floats. Dave accelerated the aircraft to only 55kt during the take off roll, using the shortest distance possible as the water was becoming bumpy. A typical take off roll is about 600 metres but we appeared to take off in less than this and it was quite a strange sensation experiencing a bumpy take off, something I'm more used to on landing courtesy of student pilots.

After showing us what the 208 can do, Dave returned for a land landing, this time remembering to put the wheels down and approaching with full flap and an approach speed of 80kt. It is obvious that the Caravan is an excellent choice of aircraft for the operation run by this business; its flexibility, as regards load carrying and configuration for cargo and passengers, offers multiple uses to keep it flying year round. With a round trip averaging slightly less than 2.5 hours, taking a full passenger compliment is not a weight problem and the only other way to access the beautiful areas where these guys visit is with a lengthy boat trip – great if you have the time.

With a price tag of just over \$US2 million the Caravan is not a cheap aircraft but the reliability, economy and flexibility allowed by the turboprop engine and the multitude of uses it can be put to have obviously made sense to its owners around the world. And, with the Australian dollar so strong against the greenback, there's probably never been a better time to buy one. It must surely be the ultimate amphibian.