



GULFSTREAM G280 VERSUS G200 – A SILENT VICTORY

News / Business aviation



The US Navy is called the Silent Service for two reasons. First few of its missions are reported. Second, when you are tracking an enemy submarine 800ft below the surface noise matters. It is literally a matter of life and death. Navies spend millions minimising the noise of propellers on submarines and in combat situations the 154 crew living on one of the US Navy's Ohio Class Trident Submarines live in silence.

Flying in the comfort of the **G280** is – of course – a complete contrast to a Trident submarine. But the two machines are actually sister ships, both made by General Dynamics companies. A team of acoustic engineers at submarine maker Electric Boat worked on the G280 to make it as quiet as possible, and it is arguably the quietest aircraft cabin of any business aircraft. You can actually whisper to the person next you.

The G280 is a result of lots of improvements like this. Although it shares some characteristics with the G200 it replaces, it is far more than just an upgrade.

“When we started on the G280 we assumed that it would be on the same type certificate as the **G200**,” says Lor Izzard, director of sales support and technical marketing at Gulfstream, who has been involved in Gulfstream mid-cabin projects for almost 15 years. “In the end we had a brand new aircraft.”

The G280 can fly more than 200 nautical miles further, and at a higher speed of Mach 0.80, than the G200 it replaces. It can carry 200lb more baggage, has four more cabin windows and requires considerably less runway length for operation. These may sound like small details but – like the sound proofing – they have taken hundreds of hours of engineering and research to accomplish.

“Pilots like the Performance; Passengers like the quiet cabin; CFO’s like the Economy of it!,” says Keith Evans, president of FAI, a G280 operator.

The G280 feels more like a Gulfstream aircraft than the G200. Gulfstream bought the G200 design from Galaxy Aerospace under the Galaxy name, a division of Israel Aircraft Industries in 2001. Gulfstream then invested considerable time and money improving the Galaxy to turn it into the Gulfstream G200.

“When we started work on the project one of the first things we did was spend time defining what a Gulfstream aircraft is,” says Izzard.

Brad Harris, president and CEO of Dallas Jet International agrees. “You need to see a G280 to understand it. It is a clean sheet design. I spent a few hours on one and came away with a completely different perception of the aircraft than before I saw it.”

Flying in a G280 vs G200

If you park a G200 next to a G280 you can see that they are two very different aircraft. The most obvious change is the tail. The G280 has a capital T – which is common with Gulfstream’s largest aircraft. But the most significant difference is the wing.

The new wing allows it to climb faster and fly further. G280s can climb faster than any other Gulfstream aircraft as well as being exhilarating for passengers it also allows pilots to quickly climb above bad weather and opens up shorter runways for the G280.

Most crucially the wing and engines enable the G280 to fly 200 nautical miles further at a higher speed. Izzard says: “3,600 nautical is the sweet spot for a super mid-cabin aircraft, it makes crossing the Atlantic easily doable with margin.” (G200s have crossed without re-fuelling but it is not possible in all wind conditions.”

Inside the cabin

The G280 cross section is the same as the G200 – “one of the best things about the G200 was the tube cross-section,” says Izzard – but the G280 cabin is one foot five inches longer. This may not sound like a lot but it is very noticeable. Taking advantage of the increased fuselage length, the G280’s passenger window count increased to 19, versus the G200’s 15.

The cabin experience has improved significantly. “I have had personal experience demoing the G280 cabin management system, and it’s truly the same DNA as the G650 cabin management system,” says Shawn Dinning, managing director and senior vice president of aircraft sales and acquisitions at Dallas Jet.

Although the G280 flies higher, the cabin pressurisation is equivalent to a maximum of 7,000 feet. This is 1000 feet lower than the G200 and most commercial aircraft, although not as low as large cabin Gulfstream aircraft like the G500 or G600 that can have a cabin altitude of as low as 3000 feet. Izzard says that with super mid-sized aircraft the trade-off between the extra weight and performance penalties (that lowering the cabin altitude requires), and the fact that stage lengths

are shorter, there was little benefit to pursuing cabin altitudes below 7000 feet. The maximum flight on a G280 is just over seven hours as opposed to more than fifteen hours in a large-cabin Gulfstream

Like other Gulfstream aircraft, the 100% fresh cabin air is refreshed every two minutes so passengers will arrive feeling refreshed.

Although the cabin is modern, Gulfstream have also not overcomplicated it. The seats, gaspers, console tables and window shades all operate without electricity (the window shades have a nice action), which reduces weight and maintenance concerns.

The baggage space is huge for a super mid-sized jet and can be accessed in flight.

All G280s are equipped standard with a forward galley and rear lavatory. The G280 has a vacuum lavatory whilst the G200 used a traditional blue “chem”-toilet. Vacuum toilets mean there is no risk of chemical smells from the toilet and simplified ground and cold weather operations.

Thanks to Electric Boat and the sound attenuation technology developed for the G650, flying in the G280 is quieter than the G200 – and other aircraft. “The G280 is the quietest aircraft I have ever been in,” says Harris. “The level of detail is amazing.”

Operating the aircraft

Although it has been overshadowed by the launch of the G650 (one of the few business jets that has created its own category), Izzard says “Sales momentum has built quickly for the G280.” “I have several clients who are operating the G280. They are all thrilled with the aircraft,” says Jay Mesinger, CEO and president, Mesinger Jet Sales. “Gulfstream have built another fine aircraft.”

After just two years Gulfstream has delivered more than 50 G280s and Izzard says, “The entry into service for the G280 has been fairly trouble free.”

FAI's Evans agrees. “It has been an in incredibly reliable aircraft,” he says.

Pilots also like the new cockpit and avionics equipment.

The verdict

Gulfstream has not just tweaked the G200 it has created a new aircraft. The G280 beats it on every measure. You can get a pre-owned G200 for \$10 million less, but they are very different aircraft.

Operator verdict

“Pilots like the Performance; Passengers like the Quiet Cabin; CFO's like the Economy of it.”

Keith Evans, president of FAI.

Broker verdict

“The G280 creates buzz as it brings fresh avionics, updated large cabin systems, new wing/tail, state-of-the-art cabin management and creature comforts, much better runway performance compared to the G200, and, of course, a more competitive environment to the Super-Mid category. Former G200 operators now flying in the G280 clearly see the enhancements.”

Shawn Dinning, managing director and senior vice president of aircraft sales and acquisitions at Dallas Jet

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Jay Mesinger, CEO/President, Mesinger Jet Sales

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