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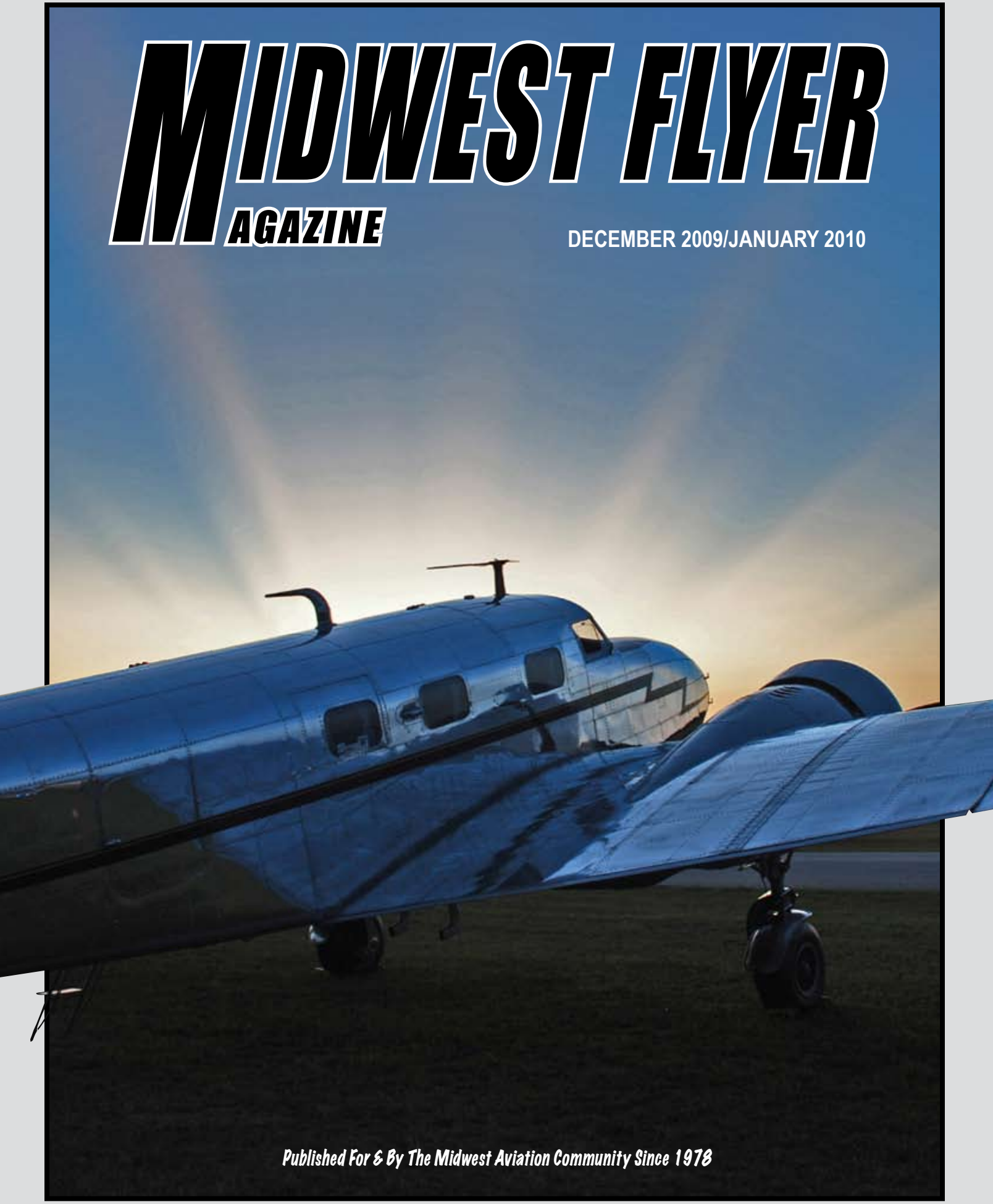

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# From The Hudson To Toulouse, From Right Seat To Left...

## Flying The World's Largest Commercial Airliner – The Airbus A380

Bruno Sarda

*by Jeff Skiles*

*"Ok, flaps full. When I tell you we'll pretend there is a helicopter in front of you, you'll pull the stick all the way aft and all the way to the left and hold it,"* said Airbus A380 test pilot, Terry Lutz.

*"Helicopter!"* Terry said.

I dutifully pull the stick all the way to the aft left.

The aircraft rolls to a 45-degree bank angle and assumes about a 25-degree nose-up attitude. As the speed slows to Vso, the auto-throttles automatically come in to take-off thrust and the giant plane pirouettes in the air, slowly gaining altitude at 16,000 feet. The rugged Pyrenees Mountains, separating France from Spain, give way to the placid Mediterranean as we rotate in the sky. This maneuver is designed to demonstrate one of the selling points of a fly-by-wire aircraft; it's impossible to stall. We're flying the *"Airbus A380,"* the largest airplane in the world! I was invited to Toulouse, France in October 2009, and given the opportunity to fly this grand aircraft with test pilots from the factory.

I arrived in this beautiful southern France city and met the man who would guide me through this process – Terry Lutz. Terry is an American citizen and a former Northwest Airlines Captain based in Detroit. A few years ago he was offered a job as an Airbus test pilot and he took it. Having seen the beauty of this area, I can see why. The U.S. Air Force trained Terry as a test pilot. All these years later, he has been putting that background to use at Airbus.

Dave Weiman


The Airbus A380 touches down on Runway 36 at EAA AirVenture-Oshkosh 2009, Wittman Regional Airport, Oshkosh, Wis.


After landing, the Airbus A380 taxis by AeroShell Aerobatic Team aircraft #1, en route to AeroShell Square at EAA AirVenture-Oshkosh 2009.

After a 45-minute *get-to-know-you-meeting* with the Director of Flight Tests, we spent about 2 hours in a Flight Training Device (FTD). I am familiar with FTDs from my airline training. They are basically a simulator that does not move, allowing you to get the feel for the aircraft and learn procedures without the expense of using a full motion simulator. In fact, this was the only preparation I would receive since their A380 simulator was down for modification.

While the A380 is designed with 25-year newer technology than the small Airbus I fly, it was so intuitive I had no problem mastering the computers and systems. One of the advantages of the Airbus family of aircraft is that they have very similar cockpits and procedures. This allows a pilot to easily transition from one aircraft type to another. My own airline (U.S. Airways) flies the A319, 320 and 321 (small bus equipment), and the much larger A330 intercontinental aircraft. The cockpits are so similar, it would take an Airbus pilot to see the differences.

The A380 is different from smaller Airbus aircraft, but I quickly felt at home. The FTD experience ended too soon, as we had to break for lunch with some of the Airbus people that worked on my accident investigation. (For those who do not remember, I was the U.S. Airways First Officer that made Captain Chesley B. "Sully" Sullenberger famous on January 15, 2009, on Flight 1549, when the Airbus A320 I was flying hit a flock of Canada geese, causing both engines to fail, and we made an emergency landing in the Hudson River.) The rest of the day was spent touring the manufacturing facilities for the A330 and looking at the "Belugas," a massive aircraft in its own right that transports aircraft assemblies around Europe.

The Airbus is made in many different locations. Fuselage components and entire wing assemblies are transported by various means to Toulouse where they are assembled. The advantage to this is that any large warehouse facility can become an assembly structure. The wings of the Airbus A380 are so large that they must be shipped up river, transferred to shallow draft barges to go further, and finally transferred to a truck. The choke point for the journey is an intersection in a small French village where the wing has only a one-foot clearance on either side. All the parts are brought to this series of massive hangars for assembly. At 4:30 pm, my car comes and takes me back to my hotel. Tomorrow will be my actual flight.

The new day dawns bright and clear skies as we brief for the flight. This will be a standard demonstration flight to display some of the A380's more unusual features. We will also be accomplishing an actual small test function while we are at it, so this flight does serve a purpose for Airbus.

Dave Weiman

Bruno Sarda

(L/R) Jeff Skiles and Terry Lutz in the cockpit of the Airbus A380 in Toulouse, France.

At the end of the flight, a request has been forwarded to deploy the RAT (Ram Air Turbine), and to verify its operation. This is a small hydraulic pump, which drops down from one of the wing nacelles to provide hydraulics and electrics, if needed.

As we approach the aircraft on the ground, its massive size becomes apparent. This is the same aircraft that flew to EAA AirVenture in Oshkosh, Wisconsin, this past summer. It takes many steps to get from the ramp up to the cabin, and another three steps up into the cockpit. I automatically head for the right seat until Terry says, *"Why don't you take the left…it'll look better in pictures."* I'm a little hesitant about this because frankly I want to do well and 15,000 of my 20,500 hours are from the right seat. But I climb in the left seat as ordered.

We load the computers with basic information for our local flight and Terry calls for the pushback. One of the advantages to test flying is that you work with one air traffic controller throughout the flight and he coordinates with the regular ground, tower and departure controllers as necessary.

After the pushback, it's time for engine start. The A380 has four really big 70,000 lb. thrust Trent engines, and you start two engines at a time. The two left engines and then the two right engines. After engine start, we conduct a brief checklist off of one of the glass cockpit screens. This is another difference from airline flying, in which we still use paper checklists.

In airline operations, the First Officer is never allowed to taxi the aircraft. Clearly, Terry is planning on me taxiing, so I point out to him that the biggest aircraft I have ever taxied is a Fokker 100, which I was once a Captain on about 10 years ago. He seems unconcerned and pushes the taxi button, which changes the Captain's Primary Flight Display (PFD) to a split screen TV picture. The bottom picture is from a camera hanging below the belly of the aircraft showing the nose wheel tires and the taxi stripe. The upper picture is from a camera atop the vertical fin, aimed forward showing the aircraft and the ramp environment. Magenta slashes on top of the wings represent the outermost gear trucks, invisible below the wings, for help with taxiing. If the magenta bars are inside the taxiway edge, so are the outboard main gear trucks.

We slowly taxi out to the runway. We *"position and hold,"* the taxi camera goes off, and we wait for takeoff clearance. The procedures are identical to the small bus, so I feel very comfortable. The Airbus "call outs" are slightly different than what we use at U.S. Airways, but they are still very easy to follow.

*"Cleared for Take-Off."*

I move all four throttles forward to the take-off power detent. The A380 accelerates down the runway. At the call *"rotate,"* I pull back on the side stick to 15 degrees of pitch and we're airborne. At 1500 feet, I pull the throttles back to the climb detent and command *"climb."* We retract the flaps and head out to the west.

Terry and I initially climbed to 20,000 feet to perform a few maneuvers. We try some turns and a few maneuvers to allow me to get the feel of the aircraft.

The big Airbus flies like a Piper Cub in the air, better than the small bus in my opinion. You don't feel the size difference at all. The largest Airbus I fly is the A321, which is about the size of a Boeing 757. The A321 has a maximum ramp weight of just over 200,000 lbs. In contrast, the A380 has a maximum ramp weight of 1.2 million lbs. But with the large wing, it flies like a pussycat. We head back to Toulouse for an approach and touch and go, just like we do in General Aviation, eh?

The airbus has a sort of mechanical landing procedure. In the small bus, you wait until the automated radio altimeter calls out *"30 feet,"* then you bring the throttles out of the climb detent to idle and raise the pitch a degree or two and let the airplane fly on. In the Airbus A380, you simply accomplish the same thing at the 40-foot call out. It lands

sweetly and I push the throttles up to half power. The cockpit is a whir of activity, as Terry and the engineer reset trim and flaps. Then Terry says, *"Go!"*

Take-off power again and we are in the air. Terry at this point pulls one of the outboard engines to idle, simulating an engine failure and shows me one of the new features on the A380. The aircraft's computers automatically compensate for an engine failure. The A380 gives you a little bit of yaw for engine identification and then adds rudder to compensate. I think back to my DC-9 days when we would practice engine failures at lift-off. The pilot would simply slam the rudder all the way to the floor to compensate for a failed engine, and even that wasn't enough. This airplane is a dream in the same situation.

We fly a pattern avoiding the city. This is a test flight, and Terry shows me how to set up for another new feature, *"Brake to Vacate."*

The Airbus can be set to automatically brake to a 10-knot speed at a taxiway that you designate. Once the aircraft has slowed to 10 knots, it will automatically knock off the auto-brakes and you can steer clear of the runway. Another easy approach and landing, auto brakes off, taxi camera on, and we taxi into the ramp and up to the flight test office. My once-in-a-lifetime flight in the A380 has come to an end. The A380 is a truly magnificent aircraft that is a huge step forward in aircraft design.

*EDITOR'S NOTE:* Jeff Skiles of Oregon, Wisconsin, is a First Officer with U.S. Airways. After successfully completing an emergency landing of an Airbus A320 in the Hudson River in New York City on January 15, 2009 with Capt. Chesley B. Sullenberger, Skiles and Sullenberger gained world notoriety, in part due to where the emergency landing occurred in the center of world news media… in part due to a successful water landing, which is rare… and in part because the event occurred at a time when the world was looking for good news in lieu of the downturn in the economy and conflicts in the Middle East.

Skiles is modest of their feat, and will be the first to admit that there have been many other pilots who he feels deserve equal recognition, but because their incidents occurred in the boonies of rural America, the news media did not pick up on them, as much as it did in New York. Skiles and Sullenberger are now giving back to aviation as co-chairmen of the EAA Young Eagles program, a torch recently passed by pilot/actor, Harrison Ford (www.midwestflyer.com). ❑

EDUCATION

# EAA Names U.S. Airways Flight 1549 Pilots Skiles & Sullenberger To Lead EAA Young Eagles Program

SANTA MONICA, CALIF. – Captain Chesley "Sully" Sullenberger and First Officer Jeffrey Skiles, known for their emergency landing on the Hudson River on January 15, 2009, were named co-chairmen of the EAA Young Eagles Program. In a news conference, September 29, EAA member, pilot, and actor, Harrison Ford, officially passed the baton after having served for 5 years as the chairman of the program, which introduces young people to flying.

EAA

Harrison Ford with two Young Eagles.

EAA Chairman/President Tom Poberezny, who launched the EAA Young Eagles Program in 1992, moderated the news conference. Later that evening, Poberezny hosted a special dinner recognizing Ford for his service and welcoming the program's new co-chairs.

"Harrison and I were delighted when Sully and Jeff agreed to co-chair the program. They were ideal candidates, not only because of the skill they demonstrated on that fateful day in January, but also, and perhaps more significantly, because of the leadership they've shown since that time," Poberezny added. "They've been excellent ambassadors on behalf of aviation."

Ford agreed. "For 5