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Boeing improved KC-767, but in doing so may have boosted the KC-30 chances

Boeing says size matters in the competition between its KC-767 Advanced Tanker and the Northrop Grumman KC-30 (based on the Airbus A330-200), but in creating an “advanced” airplane, has Boeing fumbled inside the 10 yard line?

In the campaign to promote the KC-767A, Boeing says this is the right-sized airplane for the mission and that the KC-30 is too big. Boeing even went so far as to compare the KC-767A to an SUV and the KC-30 to a recreational vehicle (RV) to illustrate the disparity in size.

One key disparity is the wing span. The wingspan of the A330-200 is 197 ft 10 in. The wingspan of the 767-200ER, on which the KC-767 was originally based (we’ll call this the KC-767 Standard), is 156 ft 1 in—a difference of approximately 27%. Boeing noted that parking the KC-30 would require substantially more ramp space than what it was then touting, the KC-767 Standard. This is an important point.

But things have changed. When Boeing finally submitted its proposal to the US Air Force for the KC-X tanker competition, Boeing created an “Advanced” airplane, but refused to say what constituted an Advanced aircraft compared with the Standard model.

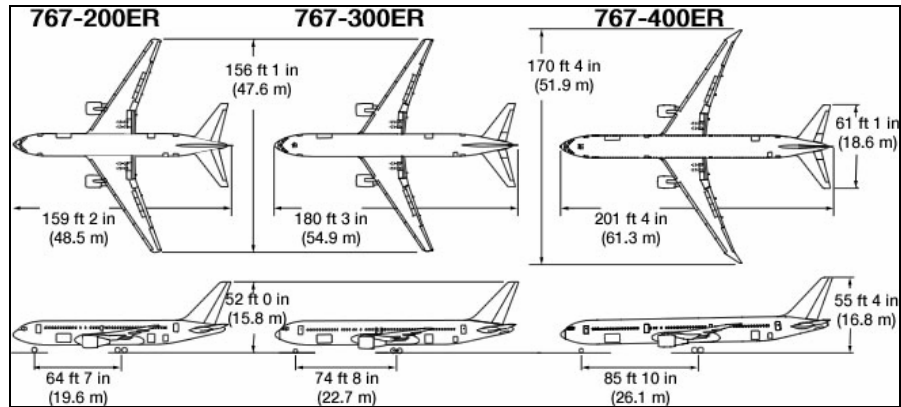
Out of the Paris Air Show comes some detail. *The Seattle Times* reports Boeing is putting a 767-400 cockpit on the Advanced, along with the wings from the 767-400. The 767-400 cockpit makes the KC-767A closer to a possible KC-777 tanker in the future competition for the KC-10/DC-10 replacement. Although not identical, the 767-400 and the 777 cockpits share some features, and this could be regarded as a plus in the KC-Y round of competition.

The 767-400 wings have a span of 170 ft 4 in, roughly 9% longer than the 767-200.

A Boeing spokesman confirmed *The Times* report that the 767-400 cockpit is going on the KC-767 Advanced, but declined to confirm—or deny—the wing replacement, adding, however, “that we’re not going to jeopardize the flexibility and size of the airplane.”

If *The Times* is correct, and there is no reason to doubt it since Boeing did not deny the story, this opens an entirely new element to the competition.

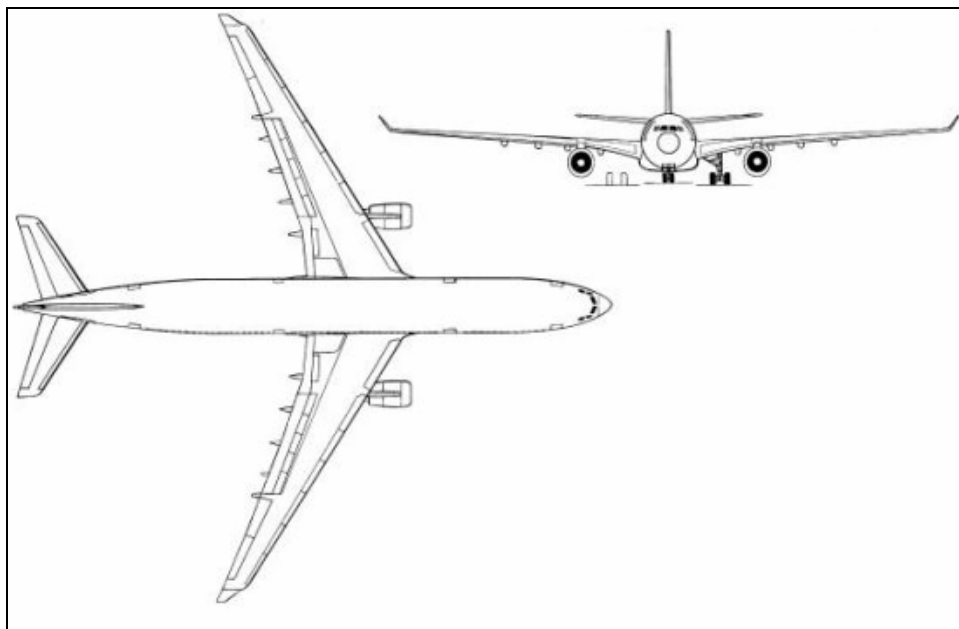
The KC-30’s wingspan is about 16% wider than the 767-400/KC-767 Advanced, or 27 feet—less than 10 yards, a standard measurement in American football.



The KC-30 essentially now only needs 14 more feet of clearance on each wingtip for ramp space. This is shorter than the length of a typical airport refueling truck (28 ft.).



28 ft long refueling truck.



A330-200: A330-200 wingspan 197 ft 10 in.; length 188 ft. 8 in.

With the parking “problem” of the KC-30 significantly reduced by Boeing’s addition of the 767-400 wing to the KC-767, the SUV-RV comparison becomes even sillier than it was when Boeing floated the idea, although Boeing at the Paris Air Show was quick to compare the KC-30 with the Boeing C-17 cargo transport for size, remarking “how big” the KC-30 is. Indeed, the planes were parked next to each other—and as it happens, an

aerial news photo of the Air Show illustrates the point. The wing span of the C-17 is 169 ft 10 in, basically the same as the 767-400 span. Thus, while Boeing made the comparison between the KC-30 and the C-17, the illustration demonstrates that pretty much where the C-17 can be parked, so can the KC-30.



AFP Photo

An official close to the KC-30 program comments:

I've heard that the wing is redesigned [using the 767-400 wing], for two reasons: the flutter problem [with the 767-200 wing] that may never be solved and the need for more fuel. The parking spot factor becomes a non-issue.

And they've acknowledged the cockpit.

So it raises the question of risk. On the one hand they claim that the current challenges on the Italian and Japanese tankers are helping them reduce risk on the USAF proposed tanker. On the other hand they say it's not the same tanker. So you really can't have it both ways—even if you're Boeing. Old tanker—old, more inferior capability (and still a lot of risk given what we've seen). New tanker—new capability and the risk, given what we've seen with current programs, and the 787 coming on line at the same time.

As the advantage—I believe the reason Boeing is working hard to add fuel is because in the end the KC-30 is the better tanker—not including the MRTT missions. The competition is first between tankers—and the last three major competitions have shown they're not competitive.

Really quite a dilemma.

The three major competitions referred to are those won by the KC-30: Australia, England and Saudi Arabia.

The wing change makes the superior capabilities of the KC-30 vs. the KC-767 even more significant. The KC-30 can carry more troops, cargo and fuel than the KC-767. The “right-sized” argument advanced by Boeing, largely on airplane dimensions, becomes less significant.

We've always felt that the KC-30 was the more capable aircraft, particularly if the USAF decided it wanted a Multi-Role Tanker Transport rather than "just" a tanker. With the dimensions in wingspan (the key to ramp space requirements) reduced to marginal differences, this only improves the case to be made for the KC-30. This also could make a political argument in Congress, where Boeing has very strong allies, much more difficult to overturn an Air Force decision in favor of the KC-30, should the USAF go this route.

The Air Force has said that it plans to issue a sole-source decision and not split the order, most recently at the Air Show. The USAF also repeated its statement that the loser of the competition can expect a future order.

A decision by the Air Force is due in October. If it's sole-source, the loser will appeal. Boeing might feel compelled to appeal a split decision if one is forthcoming, given what's at stake. Any appeal will kick the competition into 2008—a presidential and Congressional election year. As time gets closer, we'll take a new look at the political landscape. We've been convinced that Boeing had the lock on the politics, but this new element could have an impact.

Boeing may well have improved the KC-767 with its Advanced design—but it may possibly have fumbled inside the 10 yard line.

By Scott Hamilton, June 26, 2007