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# We Can Only Count On 33 F-22s To Fight Tonight



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COLLEGE STATION, TX - SEPTEMBER 03: F22 Raptor jets fly over Kyle Field before a football game... [+] GETTY IMAGES

According to calculations by retired U.S. Air Force Lieutenant General David Deptula, the United States can count on just 33 F-22s to be ready to fight at any time.

Most Americans have no idea that barely two squadrons of the world's premier jet fighter would be able to go to war at moment's notice. Conversely, U.S. adversaries know that the Raptor is a significant but limited threat.

The crash of a U.S. Air Force F-22 Raptor last Friday morning at a training range about 12 miles outside Eglin Air Force Base in Florida has again brought the relatively small number of Raptors into focus. While the Air Force officially lists 186 jets (now 185) in its inventory and the airplane that crashed was one of 28 dedicated training F-22s, assessing the number of the combat capable, or combat ready, Raptors isn't as simple as subtracting (now 27) trainers from 185 airplanes.

Deptula, the dean of the Mitchell Institute for Aerospace Studies, sat down and ran through the numbers. They don't look good.

## The Fight Tonight Formula

The Air Force's Air Combat Command declined a request to provide the number of combat-coded (i.e. potentially combat ready) F-22s currently in the inventory. Deptula explains that he made his calculations using USAF numbers from 2017 which were as follows:

Primary mission aircraft inventory (PMAI): 123

Primary training aircraft inventory (PTAI): 28

Primary development aircraft inventory (PDAI): 16

Backup aircraft inventory (BAI): 19

Attrition Reserve: 0

"In 2018 the F-22 mission capable rate was 52 percent," Deptula observes. "So .52 x 123 = 64 combat capable F-22s ready to fight at any given time."

Sixty-four Raptors sounds few enough but it does not reflect operational realities.

"Real-time mission planning assumes 1/3 in the fight; 1/3 preparing to launch; 1/3 recovering [returning/landing]. So one could count on about 21 F-22s airborne in a fight at any one time...across the entire USAF F-22 inventory."

"A surge with adequate preparation could certainly increase this number," Deptula allows. "When deployed for combat, mission capable rates average well above 80 percent, so bump up the number to 98 mission capable aircraft available with about 33 in the fight at any one time."



GEELONG, AUSTRALIA - MARCH 01: F-22A Raptor performs during AVALON 2019 - the Australian ... [+] GETTY IMAGES

### **An Uncomfortable Position**

Given such low numbers of available aircraft (and not many more trained Raptor pilots), it's reasonable to assume that Air Force theater commanders or Combined Forces Air Component commanders may not feel confident of having airplanes that can effectively gain air superiority against a formidable foe in any of several regions of the world.

"We're already past the point of being uncomfortable with the numbers," Deptula says.

When F-22 production/buy decisions were being determined during the 2001 Quadrennial Defense Review, Deptula says he succeeded in convincing then-Air Force Chief of Staff John Jumper that the right number of F-22s to buy was 381 Raptors.

"That was based on an assignment of one combat-coded squadron per Air Expeditionary

Force (AEF). There were ten AEFs. Ten times 24 [jets per squadron] is 240 combat-coded jets.”

Deptula rounded out his calculation with a traditional equation for fighter aircraft: To meet training requirements, a number of Raptors equaling 25 percent of the combat-coded force was needed. The 60 additional F-22s would bring the total to 300 airplanes. Another five percent of the combat/training total (300) would be needed for test purposes, adding another 15 Raptors for a new total of 315.

Backup aircraft inventory is assumed at ten percent of the cumulative total, adding 32 more Raptors (for 347). Then Deptula says, you compute an Attrition Reserve, ten percent of the previous categories so 34 additional aircraft which gets you to total of about 381 aircraft. Thanks to [the decision](#) by Defense Secretary Robert Gates to truncate the buy to 187 – backed by President Barack Obama – in 2009, a cushion for F-22s does not exist.

“There are zero attrition aircraft in the current fleet fleet. Every airplane that is lost has a significant impact on the force,” Deptula says.

Quickly transitioning dedicated training Raptors, which lack updates to make them effective in combat, is currently not an option. The Air Force has been looking at the possibility of bringing those F-22s up-to-date, potentially adding another squadron of combat-capable airplanes. But defense budget issues from Sequestration to expected reductions due to COVID-19 have, and likely will, prevent the Service from following through.

“That’s all you can do with the exception of re-opening the [F-22 production] line. And they’re not going to re-open the line.”



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