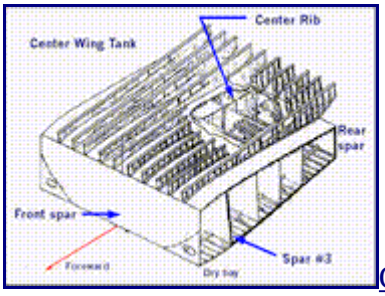
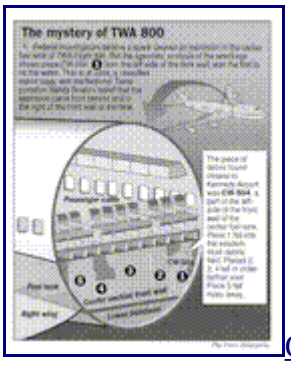
TWA 800 - THE MAGIC WINGBOX

The wing box exists to hold the wings in place and keep them cantilevered so that the lift on the wings doesn't fold them upward. This rigidity is based on three main structural elements that cross the wing box, the front and rear spars, plus spanwise beam #3. On the 747-131 (The TWA 800 aircraft) the bay between the rear spar and spanwise beam #3 is sealed and carries fuel. This is the center fuel tank. The bay between the forward spar and spanwise beam #3 is dry and used as a maintenance access way. On later model 747s, the forward bay is also sealed and used for fuel, but on TWA 800, it was an empty space filled with air. So, three main structural elements. The foreward spar is surrounded by air. The rear spar and spanwise beam #3 form the back and front walls of the Center Fuel Tank respectively. (There are three lighter structural elements, also called spanwise beams, within the area occupied by the fuel tank that help the tank hold it's shape).



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That the initiating event (whatever it was) damaged the wing box is proved by CW-504, a portion of the front spar from the wing box found very early (the west end) in the debris field.

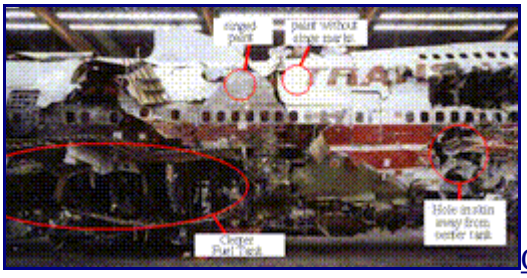


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But this is a portion of the wing spar which is surrounded by air, not fuel. The wreckage from the rear wing spar, and the remains of spanwise beam #3 are found with the fuel tank wreckage more than **two miles** into the debris field. This fact alone shows that the breakup sequencing began at the nose and was progressing *rearwards*. Had the fuel tank been the initiating event, one would expect spanwise beam #3 and the rear wing spar in contact with the fuel tank to either lie with or precede CW-504 in the debris field, not follow it by two miles.

Now the government contends that the center fuel tank exploded (no cause has yet been found) and that this started the sequence of events that brought down the 747.

In that sequence of events is the loss of the forward section of the aircraft. Oddly enough, the severe scorching and paint discoloration seen on the aircraft's skin stops cleanly at the break where the nose section pulled away.



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Seen by many as proof that the nose section had to pull away prior to the explosion, the government has tried to explain away this contradiction by suggesting that the center fuel tank exploded inside the airplane ONLY, blowing the nose off from within.

Now, according to Dr. Charles Wetli, the Suffolk County Medical Examiner, whatever fuel explosion did occur did not appear to reach the passengers.

On the PBS News Hour, Dr. Wetli said," The--so far, there have been no signs of fire injury, thermal injury on any of the victims. Dr. Stew Dawson, our deputy chief medical examiner was at the scene supervising the body recovery effort, and he informs me that the bodies that he's seen, which I think is probably the most of them, he's only seen some minor burn injuries, and this was probably from the fire of the burning fuel on the water more than anything else?

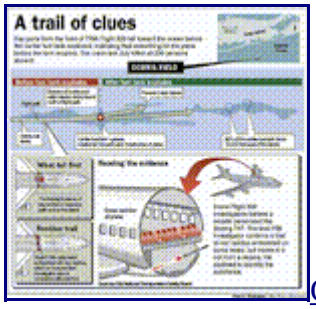
Newsday reported...

Investigators gave no hint of whether they are also focusing on seats from that area. But a source familiar with the investigation said that none of the bodies recovered from rows 18 through 22, which are above the center fuel tank and near where right wing joined fuselage, show any trace of the explosion.

And from the Fort Worth Star Telegram....

The medical examiner said he still could not understand why passengers were not burned even though investigators have determined that the center fuel tank somehow exploded, knocking the plane out of the sky.

The debris field also reveals that the bottom portion of the fuel tank and the air conditioning units are not found until two miles into the debris field. So if the Center Fuel Tank did explode as the initiating event, it did NOT punch downward through the belly of the plane, or that debris would have been hurled downward to lie at the very start of the debris field.

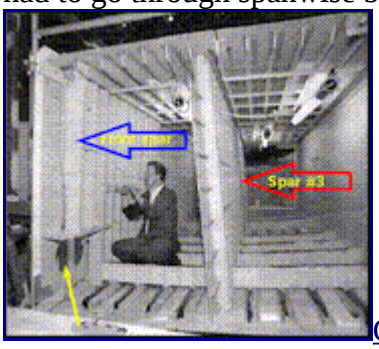
But it doesn't. 

Click for full size image (78.2K)Photo courtesy of the Riverside Press Enterprise.

Okay, so the Center Fuel Tank explosion postulated as the initiating cause by the government did not reach the nose from the outside of the plane, (no paint scorching) and it did not travel through the cabin (no burns on the passengers) and it didn't go downward through the belly (debris field and again the paint scorching).

That leaves just one path, straight forward through the front of the wing box. And we do know that the front spar, the one surrounded by air, WAS broken by the initiating event because of the portion, CW-504 found at the start of the debris field.

If, as the government suggests, the center tank exploded with enough force to break the front spar, it had to go through spanwise beam #3 (the one at the front of the actual fuel tank) to do so.



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An explosion capable of breaking the two main wing structural elements to the front will likely break the remaining wing spar to the rear.

For the claimed center fuel tank explosion to have been the initiating event that resulted in CW-504 being at the start of the debris field, then at least two of the three main wing structural elements were broken by that event, probably all three (not to mention the thinner spars inside the tank itself). The NTSB's report actually reports that the front spar and spanwise beam #3 spars *were* torn loose by the supposed initiating explosion.

According to my sources at Boeing, even if the rear spar was undamaged, the loss of the two forwardsupports makes the plane unflyable! The wings will fail under the loading of level flight, let alone a high G pitch up maneuver.

This makes the claim of a zoom climb of 3000 feet following the loss of the nose not only aerodynamically impossible, but structurally impossible as well.

More information on the flaws in the Center Fuel Tank theory can be found at Richard Hirsch's website.
