



Let the FMC Help Calculate Takeoff Data

I read Volker Pechau's suggestion on incorrect takeoff data (ASW, 11/10, p. 6) with interest, because a similar thing happened to me yesterday. For takeoff speed calculations, I added a 0.3 tonne QNH correction to the computed 66.7 tonnes takeoff weight and arrived at a figure of 70.0 tonnes!

My captain caught the simple mathematical error in time, and luckily, the error was on the positive side, so at worst we would have ended up offloading some cargo that didn't need offloading, but the incident drove home the potential for error.

I read both of Mr. Pechau's solutions and thought I'd add a suggestion

of my own: Why not use the computer provided on board? The flight management computer does all the calculations and takes inputs for those from various sensors.

Wouldn't it be simple to have a small load sensor that computes the aircraft's weight on ground and feeds that to the FMC? I can think of a number of ways to accomplish that, but I'm sure a mechanical solution already exists. Two such sensors would provide redundancy, and a third would provide a basis for comparison and determination of faulty sensor readings. Cross-check that against the load and trim sheet, and the margin for error is diminished.

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