Fox Todd

From: HERAU Catherine [redacted]
Sent: Friday, November 29, 2019 9:24 AM
To: Sébastien DAVID; Fox Todd
Cc: SANTORO Philippe; DA-COSTA Jeanne; HERAU Catherine
Subject: RE: CEN20FA001 - NTSB Requests

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Hi Todd, Bonjour Sébastien,

Here are the answers to your requests :

(A) Pease ask the flight test department to verify/calculate/demonstrate what the aerodynamic stall speeds (clean, takeoff, landing) for a Socata TBM 700 C2 at the following weights and CG locations:
7,626.28 lbs and 196.18 inches (estimated accident flight takeoff weight and CG location)
7,150.28 lbs and 196.60 inches (estimated accident flight landing weight and CG location)

The weight and CG locations above for which stall speeds are requested are outside the weight and balance diagram – see POH page 9.41.70.

The aerodynamic stall speeds values are estimated values, they were obtained by calculation.

You will find an estimation of stall speed for the requested weight, first without any CG correction and then, with CG correction:

Weight [lb]	CG [in]	Conf	Stall speed [KCAS]	
			No CG correction	With CG correction
7 626.28	196.18	Clean	82.9	81.3
		Take Off	78.2	76.7
		Landing	65.6	64.3
7 150.28	196.60	Clean	80.3	78.7
		Take Off	75.7	74.2
		Landing	63.5	62.2

(B) Please ask the flight test department where the neutral point CG is located on the Socata TBM 700 C2, and whether flap extension and/or fuel burn would have moved the CG aft of the neutral point during the accident flight.

We have never done specific tests to determine this “neutral point” position. We have to check all development flights in line with weight & balance and will need a bit of time to be able to answer precisely to your question.

Best regards

DAHER
Catherine HÉRAU
Manager - ENGINEERING
Airplane Safety Officer
AIRPLANE BUSINESS UNIT