

Cessna 208B, Rudder Torque Tube Corrosion, ATA 5540

A repair station technician states, "This Hawaiian based aircraft arrived at our facility) for maintenance. The rudder was removed from the aircraft, and its skin (then removed) to allow access to the rudder torque tube (P/N 263066-3). This torque tube was scheduled to be replaced due to elongated holes in the bell crank. Severe corrosion was found on the upper part of the torque tube which is located under the skin, this area is not visible to any scheduled maintenance. The corrosion had reached the stage of 'blistered rust', and the 'L' angle on one side was easily separated with (minor) force (about 11 pounds; and wiggled twice)." "By design the rudder is not sealed on the top. The (torque tube top attach) bracket is located about a foot from the bottom, this cross member seems to pool water running down from inside the rudder (even though) there are drain holes in the design. Hawaii is listed as a 'moderate' corrosion environment.

"The operator had no way to inspect this location. A borescope would need to be used to (even) get an idea of the health of this part; however, it is better to remove and disassemble the rudder. The technician suggested a rudder inspection (hole be designed and implemented) so maintenance can easily inspect the torque tube for corrosion."



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Total Part Time: 18,045.0 hours