

# TOO MUCH TORQUE

**Anonymous**

**The propeller mount bolts wouldn't torque up. They just kept turning, but the threads weren't stripped.**

I WAS ENGAGED IN COMPLETING A 100-hourly inspection on a light aircraft and was under some pressure to finish the job to allow training operations to commence.

I was offered assistance to complete some of the tasks by one of our flying instructors, who I thought would be able to carry out minor tasks like cleaning down cowls and putting on inspection panels after my clearance for security and FOD items.

I had reached the stage where I only had to finish the 100 hourly on the engine by installing the fuel filters and screens. I had already fitted the propeller ready to torque the mount bolts.

I asked the instructor to get the torque wrench and sockets for the job. He said he would torque the bolts. I instructed him to get the aircraft manual and set the torque setting on the wrench. He did this and I checked the setting stated in the book against the setting on the wrench. He started to torque the bolts.

I continued on the fuel system, intending to final check the torque of the bolts when he had finished. After some time he said, "Something's wrong. The bolts won't

torque up – they just keep turning".

My immediate reaction was that the threads were stripped. I checked the torque setting on the wrench against the book figure and took over the task. I completed about 30 degrees of rotation and 'bang' the bolt snapped!

I checked the setting and the manual, the wrench was at the correct setting. I removed the 3/8 inch diameter mount bolts from the propeller and found every bolt had stretched to the extent that a very visible neck was apparent on each one.

The reason for the failure was not the bolts or the torque setting. It was the application of information that was wrong. I found the book was a superseded manual that I had not discarded. There were two settings on the illustrated page, one for 7/16 inch bolts and another for 3/8 inch bolts.

I had allowed myself to be influenced by a quick look at the figure being pointed to on the illustration and did not read the application.

I shudder to think what would have happened if the bolts had reached the torque setting before failing and the aircraft flew. I have no doubt in my mind that the propeller would have separated from the aircraft in flight. I was taught a very valuable lesson which I did not have to learn through tragic events. To this day I still think of that event whenever I work on a propeller.



SANDY SPIERS