

Mooney M20TN, Loose Engine Isolator Mount Bolts, ATA 7120

"(I) discovered all four engine isolator mount bolts loose during a 100 hour inspection, noting *(these bolts)* do not have a safety wire or locking provision. I also found several areas of chafing related to the engine not being secured to the engine bed mount. All engine isolators were removed and inspected. I found metal shavings between the upper and lower isolators, and the left aft engine mount bracket thread insert pulled and cross threaded. Both rear engine mount brackets were replaced with new, and the front engine isolator mounts replaced with a new kit. I reinstalled the existing rear isolator mount kit IAW IPC and AMM *(parts catalog and maintenance manual)*.

"I found installing the isolator mounts and bolts very difficult. The engine mount brackets do not align with the engine bed mount focal rings. With all the isolators installed and the bolts torqued, the isolators are displaced from centerline and are laterally loaded. The isolators do not seat on the full circumference of the focal ring. I removed all the isolator mounts for further inspection of the bed mount, and contacted the aircraft manufacturer about the alignment issues. I measured the mount and found the engine bed mount focal ring centerlines are too narrow by 0.2500 inches on all four corners. No deformities of the bed mount were noted." *(Mount P/N: 590030501. A Continental TSIO550G sits in this airplane's engine mount.)*



Part Total Time: 944.0 Hours

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