

STATEMENT REGARDING FUEL FILLER CAP PREVENTATIVE MAINTENANCE
ERA21LA170

The fuel cap o-rings for aircraft 2953L were replaced by Lee Babcock and David Singer on 4 Feb 2021 at College Park Airport. They were replaced in conjunction with the oil change that was logged into the airframe and engine logs on the same date. Inadvertently, no entry was made into the airframe log to describe the work to either fuel cap. The only technical data that was used to perform the work was the Mooney M20C parts manual, which was consulted to ensure that the parts numbers were correct.

The seals replaced were parts numbered MS29513-338 and MS29513-010. These part numbers were initially provided by a CFI who had familiarity with the Mooney M20 series aircraft and were verified as above. They were ordered from Aircraft Spruce and installed after verification that they matched the diameter and thickness of the seals that were found on the fuel filler caps.

During the replacement, cotter pins were noted to be installed into one of two holes in each of the fuel filler axes. The cotter pins were removed so that the fuel fillers could be disassembled to access the smaller seal which sits on the cap axis. After the replacement of the smaller seals, the cotter pins were reinstalled into the same holes that they were found in. The second holes in each axis were an existing condition at the time of the maintenance and were not drilled during the procedure. After the replacement was completed, the fit of the caps was tested in the fuel filler assemblies and the assemblies were checked for corrosion and/or deformities that would prevent a good seal. No significant corrosion or deformities were noted. No pressure testing of the fuel caps was performed prior to returning the aircraft to duty.

Aside from the suggestion from a CFI, no other supervision was provided for the replacement procedure. The mechanic who conducted the last annual inspection of the aircraft was not consulted. After the accident, the mechanic stated that he had not been aware of the water infiltration issue while working on the aircraft.

The replacement seals seemed to diminish the amount of water infiltration during rain events. Deploying aftermarket wing covers seemed to also diminish the water infiltration, but not stop it entirely. One pilot with experience with the infiltration noted that no more than three sumps were required to clear the tanks when he had flown the plane prior to the accident.

END OF STATEMENT



Lee Babcock