

On March 8, 2022, Inspectors from the CMH FSDO traveled to Midwest Corporate Air Inc., 3100 State Route 47 W, Bellefontaine, OH 43311. The purpose of the trip was to observe engine runs on N215BN, a 2007 Diamond Aircraft Industries, Inc. DA-42, serial no. 42.AC055. On 08/17/2021, at 21:15Z, N215BN lost power in both engines and crashed on departure at the end of the runway at KEDJ. There was 1 passenger on board and there were no injuries.

Regarding the engine runs, the right engine was the first start attempted. After several unsuccessful attempts, with no start, attempts were made to start the left engine and, that too was unsuccessful. It was decided by maintenance personnel to prime both engines fuel systems.

Once again, a start was attempted on the right engine but was unsuccessful. Maintenance personnel had previously observed that the bolt on the bottom of the right engine's Fuel Feed Pump (FFP) was not seated.



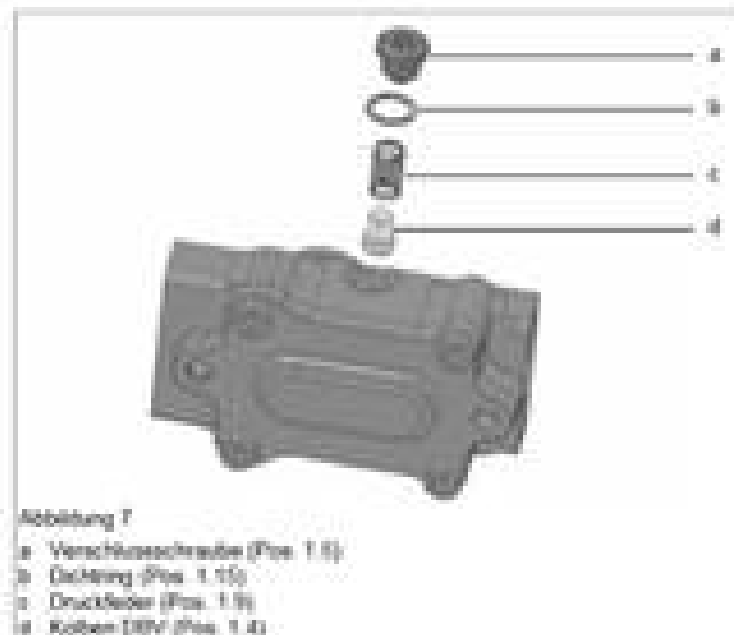
Right Engine Fuel Feed Pump prior to re-seating bolt.

After discussion, it was decided to re-seat the bolt. After the bolt was re-seated, the right engine started, and ran, normally.

Subsequent to the fuel system priming mentioned above, after several attempts, the left engine also started, and ran, normally.

Cowlings were then put on the engines. Both engines were restarted and run at high-power. No problems were noted.

In conclusion, it appears that after the FFP was replaced on the right engine and, prior to takeoff, the bolt on the bottom of the FFP, which fixes the position of the pressure reducing valve, worked loose and allowed air into the right engine's pressurized fuel system. A representative of Continental Aerospace Technologies GmbH was asked "When a FFP is shipped new, as a replacement part, is this bolt locked in any way?" The representative responded that "Yes the bolt is torqued with 12Nm during assembly."



Exploded drawing of Fuel Feed Pump bolt assembly.