

N7336Z Accident CEN17LA317 BDW Inspector Report

On 09/28/2017 Piper PA-25-235, N7336Z while conducting agricultural 14 CFR Part 137 operations experienced a loss of power and landed in a pasture at [REDACTED], Westphalia, KS at approximately 17:16 CST. The aircraft stalled just prior to touchdown. The landing resulted in damage to the landing gear and left wing structure. No injuries were reported.

On 09/29/2017 I contacted owner and pilot Lynn Davison by phone at [REDACTED]. Mr. Davison provided a verbal statement of the event over the phone and agreed to email pictures of the aircraft for initial damage assessment.

During this phone conversation the following were noted:

- The engine didn't sound right.
- Then it really didn't sound right and began losing power. Sounded like it was lugging or fighting itself.
- Saw what seemed to be a little smoke from around the front of the engine
- Began looking for a place to land, weren't many options.
- Picked a spot to land.
- Held the aircraft 5-6 foot off the ground to bleed off airspeed because it looked like it was going to be a rough landing.
- The aircraft stalled and dropped to the ground, spreading the landing gear.
- The observable damage was to the landing gear and the last 3 feet of the left wing had wrinkles in the fabric.
- Mr. Davison confirmed the address was [REDACTED], about ½ mile south of the intersection of 1800 Road and Wayside Road southwest of North of Westphalia, KS.

On 09/29/2017 Mr. Davison submitted 3 pictures by email. A review of the pictures found the left wing appeared to have experienced substantial damage.

On 09/29/2017 The NTSB investigator on call (Craig Hatch) was contacted and notified of the damage and determination that this event was an accident. Mr. Hatch provided verbal authorization to allow the aircraft to be recovered to a location where examination could be conducted. Once recovered they would work to determine possible probable cause. I advised Mr. Hatch that it was my understanding that the owner was self-insured. So, there would be no insurance money to pay for further investigation. Mr. Hatch noted that the NTSB could provide funds to a local mechanic for work they may request.

I contacted Mr. Davison and advised him the NTSB had authorized recovery of the aircraft and to take care to preserve the aircraft condition during recovery to preserve evidence of potential cause of the event. Mr. Davison agreed and stated he was going to begin to call around to find someone to recover the aircraft.

On 10/02/2017 NTSB investigator Aaron Sauer contacted and advised me that he had been assigned to the investigation. He noted that he was trying to contact Mr. Davison would work with him to get details of the where the aircraft would be recovered to.

On 10/03/2017 NTSB Investigator Aaron Sauer called me and noted the aircraft had been moved to Kingsley Airfield in Miller, MO. Mr. Sauer will work with the Kansas City FSDO manager Allen Martins to see if one of their inspectors can go to Miller, MO as an observer for the investigation. I noted that to complete my -23 report I would probably only need a copy of that inspector's report with the findings of the inspection. Mr. Sauer also provided an accident number CEN17LA372.

On 10/03/2017 NTSB Investigator Aaron Sauer called me at approximately 2:00 pm. Mr. Sauer noted the following:

- Mr. Kiman Kingsley in Miller, MO had sent guys to recover the aircraft.
- During recovery they attempted to rotate the engine and notice it turned hard indicating internal issues.
- Mr. Kingsley noted that employee William Rhoden (apparently has some history with the KC FSDO) had started the overhaul and in the middle of the work, left the company and left it unfinished.
- Another Mechanic Gary Franks had disassembled and overhauled it again.
- The engine currently has approximately 212 hours on it.
- Mr. Sauer gave Mr. Kingsley permission to remove the engine and send it to Larkin Floyd of Berryville, AR for teardown inspection with Little Rock FSDO inspector for observation. Mr. Floyd's company is Tri-State Airmotive, LLC.

On 10/11/2017 I submitted email to Lynn Davison requesting copies of AD records and pilot log time for the FAA Form 8020-23. Mr. Davison responded noting the AD records were with the aircraft at Kingsley's in Miller, MO with the aircraft.

On 10/26/2017 NTSB Investigator Aaron Sauer emailed information and pictures from Little Rock FSDO ASI Bill Aldrich who had observed the engine teardown in Berryville, AR. The teardown inspection found a broken crankshaft and main bearing damage. The crankshaft will be sent to the NTSB lab for further evaluation.

I contacted the office of Kiman Kingsley to obtain a copy of the AD records. His office took a message and informed me that he was out until Monday 10/30/2017.

As of this time it has not been determined if there are any applicable AD's to this crankshaft. Mr. Aldrich of the Little Rock FSDO had noted in his message to NTSB that he would attempt to obtain the last FAA Form 8130-3 for the crankshaft. Crankshaft serial number is needed for AD applicability review.

On October 30, 2017 Little Rock FSDO ASI Bill Aldrich provided a copy of FAA Form 8130-3, dated 7/31/2012 for Lycoming crankshaft P/N 0540B2B5, S/N 36700S213752-1 repaired by Aircraft Specialties Services, Inc., repair station DD2R764K. Additionally, the engine model O-540-B2B5 and serial number L-10297-40 was provided as well.

On 11/01/2017 Kiman Kingsley returned my call. During this call Mr. Kingsley noted the following:

- He was not actually involved in the work on N7336Z.

- The work on the aircraft had been performed and signed off by Mr. Gary Franks who no longer worked there.
- The aircraft and engine logs were sent to Larkin Floyd at Tri-State Airmotive in Arkansas for the NTSB.
- He also noted that Mr. Rod McLaughlin was trying to get in contact with Gary Franks as well.

On November 1, 2107 I conducted an in-depth review of the airworthiness directives identified as applicable to crankshafts. The subject information was:

Lycoming engine model O-540-B2B5, S/N L-10297-40 and crankshaft P/N 0540B2B5, S/N S213752-1.

Engine AD review results:

- AD 98-17-11 is not applicable by engine series. Engine series O-540-B2B5 is not listed in the applicability section, and there is no record to indicate the crankshaft P/N 0540B2B5, S/N S213752-1 was repaired by Nelson Balancing Service, Bedford, Massachusetts, Repair Station Certificate No. NB7R820J.
- AD 2002-19-03 is not applicable by engine series. Engine series O-540-B2B5 is not listed in the applicability section.
- AD 2005-19-11 is not applicable by Engine serial number or crankshaft serial number.
 1. Regarding O-540 engine models, paragraph g(1) of this AD required action if the engine serial number was identified in Lycoming Mandatory Service Bulletin (MSB) No. 566 Table 1 or Table 2. The engine serial number model O-540-B2B5, S/N L-10297-40 was not identified in either table.
 2. Additionally, Table 4 provided a list of serial numbers prohibited from installation in any engine as required by this AD paragraph (i). The crankshaft serial number S213752-1 was not listed in MSB 566, Table 4.
- AD 2012-19-01 is not applicable by Engine serial number or crankshaft serial number.
 1. Paragraph (f)(1) of this AD required action if the engine serial number was listed in MSB No. 569A Table 1, 2, 3 or 4 and the crankshaft serial number was listed in Table 5. Neither the engine serial number model O-540-B2B5, S/N L-10297-40 nor crankshaft serial number S213752-1 were not identified in any listed table.
 2. Additionally, Table 5 provided a list of serial numbers prohibited from installation in any engine as required by this AD paragraph (h). The crankshaft serial number S213752-1 was not listed in MSB 569A, Table 5.

The aircraft records indicated a time since overhaul of approximately 212 hours for the subject engine. The aircraft total time is unknown as the record history indicates the aircraft had just completed refurbishment at the time of engine install. It appears that new log books were started at the time of refurbishment and engine install due to previous records were lost or destroyed.

This investigation found the loss of engine power was likely caused by failure of crankshaft P/N 0540B2B5, S/N S213752-1. The reason for crankshaft failure is undetermined at this time. The crankshaft will be sent for further evaluation by the NTSB. The investigation found no evidence of a violation of airworthiness directives with regard to the specific engine crankshaft P/N 0540B2B5, S/N S213752-1. The investigation found no evidence of concern for aircraft controllability or pilot competency regarding this event.