

This statement is a recollection of events from Flight 9 in series of Certification Spin testing on the GA10 Airframe with a ventral cargo pod fitted. The aircraft was lost on event 3.2 on the test sequence.

Pre-flight events

The Day before;

- Following review of flight 8 event 10.2 by Colin, Myself, Dave W. A decision was made by CN,DW,DM to move to a more forward CG with 500L Fuel and as minimal weight as possible at that CofG position.
- The calculated result was approximately 4450lbs with 500L at approx 80.1" CG.
- A reduced matrix was discussed with the primary aim being to assess the "Critical cases" notably Flaps Up and take-off flap entries from level and left turning flight with the same following conditions; Power on (48PSI), Left Rudder, Right Aileron.
- The initial planned briefing and flight time for Monday was 9am brief and 11am flight, as planned the week prior. It was agreed by DW and DM after the conversation that this would likely have at least an hour delay as we needed to prepare ourselves for the configuration change and fly to burn fuel off prior to reconfiguring the aircraft.

The morning of;

- Time at car 6:30am local
- A morning flight was conducted to burn fuel down to 500L from 572L which it was filled to in preparation for full fuel flights. The flight departed at 7:22am and returned at approximately 8:03am.
- The aircraft was then reballasted and prepared for a Operational (Crew included) weighing. 3 Lead bars (Approx 25lb each) were removed from the containers in row 5 from the previous weighing.
- At approx 8:45am, Dan and Dave then went to find Greg L to brief him that there would be a delay and that we would require him for an operational weighing prior to briefing. We also briefed Greg of the rationale behind the chosen test points, weight & balance and details of the discussion with Colin. Greg, Dan and Dave decided to put in Landing flap spins as build up before the take-off flap and clean spins.
- The results of the operational weighing were 4475.9lbs, 80.3" and 497L of fuel at Take-off. The weighing was conducted by Dan, Dave W and Greg L.
- Following the weighing the spin recovery system was charged by Dan and crosschecked by Dave prior to briefing.
- While the system was charging Dan also showed NTPS Grad Assistant – Courtney Mills on how to start the cameras and ensure the different AHRS were running. – This was primarily conducted as dan was participated in flying chase and wanted to delegate more tasks as we progressed the campaign.
- The flight briefing was chaired by Greg Lewis with Dave Wheatland, Dan Murphy, Nigel Speedy (Chase Pilot in Command NTPS) and Courtney Mills attending.
- The brief took approximately 20 minutes and was conducted at approximately 10:00am
- The briefing ran as expected and was similar to the other previous briefings in nature. It was decided to have a walk-out at 10:30 and take-off approximately 11:15am. I stated I needed more time to prepare and that I would need till 10:35 to be ready to walk but should still be able to meet the 11:15 take-off time.
- Following the briefing I got changed into my flight suit and assisted with the final XMH preparations until 10:35 at which point I walked for the chase aircraft.

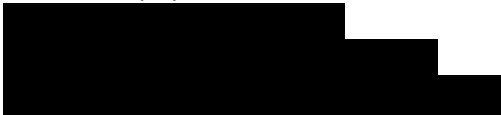
The Flight

- Both aircraft taxi'd and did run up checks together. The spin recovery system "pin" was pulled by Tim of FRI. Tim had been previously trained for checking the pressure in the spin recovery system and the action of pulling the safety pin.
- The chase aircraft departed first and conducted a circuit to join formation on VH-XMH shortly after take-off.
- A clean and dry inspection was conducted after take-off – The door pins were confirmed removed and the spin recovery parachute system pin was confirmed removed. No other abnormalities were noted.
- David Wheatland noted on the mission freq that the battery charger for the video cameras normally had flashing lights but this time it didn't. Dan responded to say keep going and that it was not an issue. This had been observed previously, but devices kept charging.
- Both aircraft climbed in formation until 11,000 AMSL. At 8'000 AMSL for chase oxygen was activated and at 10'000 AMSL for XMH the chute was confirmed armed and oxygen on.
- At 11'000 AMSL ft 3 power on stalls and trim checks were conducted. All 3 were uneventful and benign.
- Following that further climb was conducted until 14'500 AMSL.
- The first test point was conducted 3.1 Level flight entry with landing flap, power on, Left Rudder and Right Aileron.
- The entry appeared similar to other entries with a characteristic wing rock prior to departing to the left.
- It appeared to have a steep nose down attitude of approximate 45 deg nose down and medium turn rate. It was observed from chase to be 3 total turns (1 with pro-spin controls and 2 with recovery controls). Possibly 3 + 1/4. A 3 turn call was called out as per the briefing and the test cards by Nigel.
- Nigel advised test to take time as required prior to communicating.
- I advised Nigel that I was uncomfortable with the spin and unless they came back with some sound justification for messing up the recovery that it would be a knock it off.
- Greg replied that he had delayed the recovery rudder by ½ a turn and that they would like to repeat the point. Nigel asked my thoughts and after consideration I agreed to the repeat.
- The repeated 3.1 test point recovered in ¾ or 5/8 of a turn.
- I stated that this was a much more acceptable and expected result to Nigel .
- We then preceded to the next test point 3.2 which was the same as 3.1 except for the addition of a 30degree left hand banked turn during the entry.
- The entry appeared similar to other turning bank entries and was relatively slow moving to begin, within 1.5 turns its turn acceleration visibly picked up. No pitch oscillations were observed and the nose attitude was a similar 30-45 deg nose down. It stayed in this state for the entire event.
- Passing 3 turns the 3 turn call was made. Then a Chute Chute Chute call by Nigel. Approximately 5 turns I made additionally called "Tiger 9 Chute Chute Chute". Passing 10'000ft Nigel made a final chute chute chute call. No Spin recovery parachute was observed to have deployed.
Nigel then asked me to have eyes watching altitude. Chase was in a rapid descent and within 500-1000ft of the test aircraft. I counted to Nigel altitudes in 500ft increments from 10'000 to 8000. At approximately 8'500 ft both myself and Nigel called for Bail out bail out bail out on the radio.
- We observed the doors jettisoning and both pilots exiting and activating parachutes.
- "Sport" the local area frequency was advised that we had lost the test aircraft and we had both crew members in sight under canopy.

- I stated to Nigel to be careful of the jettison doors which were at our same altitude and tracking erratically.
- The test aircraft hit the ground approximately a minute before the two crew members.
- The crew members were observed to have bailed out at 8500ft and under canopy by 5000ft AMSL.
- Both crew members stood up within 2 minutes. Greg was observed walking to Dave. Dave stood up and waved as previously briefed during a different spin campaign. Dave raised his hands indicating he was okay and mobile. Chase stayed in the area for approx an hour and a half following the event to coordinate emergency services. Numerous radio calls with GPS coordinates and coordinating emergency services were made with air traffic control. We also advised that the aircraft was unsafe to approach prior to the spin system being checked. We also took many notes and swapped flying roles while the other thought of any details that could prove relevant. A car was departing from Edwards but after 15 minutes myself and Nigel agreed to request the huey which we (Myself and Nigel) had previously said might not be necessary to air traffic control if the car had already departed.
- After the huey had landed the chase aircraft departed back to Mojave and landed without incident at 13:01pm Local.

This statement represents my initial recollection of events. A formal report will follow based off the above comments and further information.

Daniel Murphy



Statement by Nigel Speedy regarding Spin Accident of GA-10 VH-XMH, 4 June 2018

This was Flight 9 of a cargo pod spin certification program in the accident aircraft GA10, Australian registration VH-XMH. The accident aircraft was crewed by Mr. Greg Lewis (NTPS) and Mr. David Wheatland (Gipps Aero). I was PIC of the chase aircraft (T-67, N123FR) and supported by copilot Dan Murphy (Gipps Aero). Greg provided data cards and briefed the flight at 1000 in the NTPS conference room. The brief followed the standard NTPS format of General Brief, Specific Brief, THAs and emergency procedures. Specific calls of "3 turns", "Chute, Chute, Chute" at 10,000' and "Bail Out, Bail Out, Bail Out" at 8,000' PA were reinforced. Following the formation brief Dan and I had a short brief to confirm crew duties and actions in our aircraft.

A normal start, taxi and runup was conducted for a takeoff on runway 26 at KMHV. After the runup checks we visually inspected the test aircraft to confirm their door egress pins and spin chute pin had been removed (they had been removed). After an airborne pickup we inspected the test aircraft for leaks, damage and again confirmed all the door and spin chute safety pins had been removed. After clearing the KMHV Class D airspace the test aircraft contacted SPORT and obtained clearance to enter R2515 and to operate in the "West Spin Area". Passing 10,000' PA we turned our supplemental oxygen system on and advised the test aircraft we were clear so that they could arm the spin chute. The test aircraft confirmed that the spin chute was armed and that their oxygen system was on and operating correctly.

The formation continued climbing to 11,000' to conduct Card 2: Trim Settings and Stall Checks. Serials 2.1, 2.2 & 2.3 were performed without incident. The test aircraft then climbed to 14,500' PA to begin conduct of Test Card 3: Spins – Flaps Landing, Power On. Test point 3.1 Level Entry with Left Rudder and Right Aileron was conducted and resulted in 3 turns from entry to recovery (i.e. 1 turn followed by recovery inputs and 2 more turns to effect recovery). Following this serial there was a discussion from test aircraft to chase about a delay in applying recovery rudder inputs. The test aircraft stated that they intended to repeat this point. This was discussed in the chase aircraft and I asked Dan if he felt confident repeating this point. He stated that he felt it was ok based on the feeling that the extended recovery was a result of the delay in rudder input. Chase reported ready for a repeat of test point 3.1. Test point 3.1 was repeated by the test aircraft resulting in 2 full turns (i.e. 1 turn with pro spin controls then 1 turn to recover). Following recovery from 3.1 the test aircraft climbed to ~14,700 PA, I positioned the chase aircraft slightly higher at 14,800' PA.

Test point 3.2: Left turning entry with left rudder and right aileron was briefed by the test aircraft. The test aircraft entered the spin in a similar fashion to what I had observed on previous sorties in this program. It quickly transitioned to an erect spin to the left, steep ~45° nose down, fast ~ 2 seconds per rotation. After observing 3 full rotations I called "3 Turns" on the mission frequency. After 6 turns I called "6 Turns". After 8 turns in the descent the Test aircraft was ~1,000' below me (despite diving with full power) and so passing 11,000' I called "Chute, Chute, Chute" estimating that the test aircraft had already reached 10,000'. As I passed 10,000' I again called "Chute, Chute, Chute" but did not observe the spin chute deploy. Passing 9,000' I called "Bail Out, Bail Out, Bail Out", I repeated the call passing 8,500'. Shortly thereafter the two pilot doors were observed departing the aircraft almost simultaneously. A couple of seconds later the two pilots of the Test aircraft were seen leaving the aircraft. One of the Test aircraft pilots (who I now know was Greg) opened his chute very soon after leaving the aircraft, the other (David) opened his chute about 3 seconds later. In the descent I was lucky not to hit one of the pilot doors that was fluttering to the ground slowly. The aircraft continued to spin all the way to the ground with no

apparent change in spin characteristics. David landed first approximately 300 yards downwind of the aircraft, Greg landed second, approximately 600 yards downwind of the aircraft. I continued to descent in the chase aircraft to approximately 500' AGL. Both pilots waved with both arms. Greg could be seen walking towards David's location. After determining both pilots were ok I climbed to 1,000' AGL and contacted SPORT to provide a situation report and commence rescue operations. I also contacted KMHV Tower and asked them to provide a report to the NTPS. I remained on station for approximately 1 hour until the Kern Fire/Rescue Huey Helicopter arrived on scene. Once the Kern rescue helicopter advised they were going to airlift David back to KMHV I departed the scene and commenced RTB KMHV.

Shortly after arrival at KMHV the Kern Fire/Rescue Huey Helicopter landed with David. I sent Dan to go with David in the ambulance to the Antelope Valley Hospital.

After reporting to management, I sat with the NTPS safety officer to make the initial report to the NTSB.

Later in the day I drove to the accident scene with Daniel to safe the spin chute system. It was not possible to insert the safety pin due to damage in the tail area, however Daniel was able to discharge the gas from the system. When we arrived at the crash site the spin chute system was fully charged. The ELT was activated but due to its location it was not possible to turn it off. Due to the large amount of fuel spilt and damage to the battery box I decided to turn off the "Engine Master" and "Airframe Master" switches to reduce the risk of fire. When we arrived at the aircraft both switches were in the "On" position.

If you have any questions please feel free to contact me via: Phone 661-824-2977 or email

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Nigel Speedy

Chief Flying Instructor

National Test Pilot School

5 June 2018